Annual Health Report
2081/82

Government of Nepal
Ministry of Health and Population
Department of Health Services
Kathmandu, Nepal

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ACRONYMS

Abbreviations	Full Forms
AA	Anesthesia Assistants
AEFI	Adverse Event Following Immunization
AEM	AIDS Epidemic Modelling
AES	Acute Encephalitis Syndrome
AFP	Acute Flaccid Paralysis
AHA	Ayurveda Health Assistant
AHIMS	Ayurveda Management Information System
AHR	Annual Health Report
AIDS	Acquired Immunodeficiency Syndrome
AMR	Antimicrobial Resistance
ANC	Antenatal Care
ANM	Auxiliary Nurse Midwife
API	Annual Parasite Incidence
ARI	Acute Respiratory Infection
ART	Antiretroviral Therapy
ARV	Anti-Retroviral
ASBA	Advanced Skilled Birth Attendant
ASRH	Adolescent Sexual and Reproductive Health
ASVS	Anti-Snake Venom Serum
ATAC	Assistive Technology Capacity Assessment
AWPD	Annual Work Plan and Budget
BAMS	Bachelor of Ayurveda Medicine and Surgery
BCC	Behavior Change Communication
BCD	Behavior Centered Design
BCG	Bacillus Calmette–Guerin
BEmONC	Basic Emergency Obstetric and Neonatal Care
BHS	Basic Health Services
BMET	Biomedical Equipment Training
BMI	Body Mass Index
BPKIHS	BP Koirala Institute of Health Sciences
BRP	Basic Rehabilitation Package
BTSC	Blood Transfusion Service Centre
CAC	Comprehensive Abortion Care
CAMH	Child and Adolescent Mental Health

CB	Community Based
CCU	Critical Care Unit
CDD	Control of Diarrheal Disease
CEmONC	Comprehensive Emergency Obstetric and Neonatal Care
CHIS	Community Health Information System
CHISS	Child Health and Immunization Services Section
CHN	Community Health Nurse
CHO	Community Health Officer
CHT	Community Health Toolkit
CHX	Chlorhexidine
CITC	Client-Initiated Testing and Counselling
CKD	Chronic Kidney Disease
CL	Cutaneous Leishmaniasis
CME	Continuing Medical Education
CNE	Continuing Nursing Education
CNR	Case Notification Rate
CNSI	Comprehensive Nutrition Specific Interventions
COPD	Chronic Obstructive Pulmonary Disease
CPD	Continuing Professional Development
CPR	Contraceptive Prevalence Rate
CRS	Congenital Rubella Syndrome
CS	Cesarean Section
CSD	Curative Service Division
CSDS	Climate-Sensitive Disease Surveillance
CTEVT	Council for Technical Education and Vocational Training
CVD	Cardiovascular Disease
CVS	Central Vaccine Store
DALYS	Disability-Adjusted Life Years
DDA	Department of Drug Administration
DHF	Dengue Haemorrhagic Fever
DHIS	District Health Information System
DIN	Drug Information Network
DMC	Designated Tb Microscopy Center
DMR	Disability Management and Rehabilitation
DoAA	Department of Ayurveda and Alternative Medicine
DoHS	Department of Health Services
DOTS	Directly Observed Treatment Short Course
DPT	Diphtheria, Pertussis, Tetanus
DSS	Dengue Shock Syndrome
DVS	District Vaccine Store
ECD	Early Childhood Development

ECP	Emergency Contraceptive Pills
EDCD	Epidemiology and Disease Control Division
EHCS	Essential Health Care Services
EHR	Electronic Hospital Records
EHS	Essential Healthcare Service
EID	Early Infant Diagnosis
EmONC	Emergency Obstetric and Neonatal Care
EMR	Electronic Medical Record
ENAP	Every Newborn Action Plan
ENT	Ear, Nose and Throat
EOC	Essential Obstetric Care
EOMS	Epidemiology and Outbreak Management Section
EPI	Expanded Programme on Immunization
EPMM	Ending Preventable Maternal Mortality
EQAS	External Quality Assurance Scheme
ERB	Ethical Review Board
ETAT	Emergency Assessment and Treatment
EVT	Elimination of Vertical Transmission
EWARS	Early Warning and Reporting System
FAS	Financial Administration Section
FCHV	Female Community Health Volunteer
FID	Full Immunization Declaration
FIPV	Fractional Dose Inactivated Polio Vaccine
FMIS	Financial Management Information System
FP	Family Planning
FSW	Female Sex Worker
FWD	Family Welfare Division
FY	Fiscal Year
GBV	Gender-Based Violence
GCP	Ground Crossing Point
GHG	Greenhouse Gases
GIS	Geographic Information System
GIZ	Gesellschaft Für Internationale Zusammenarbeit
GMP	Good Manufacturing Practice
GMP	Growth Monitoring And Promotion
GoN	Government of Nepal
GPS	Global Positioning System
HAI	Healthcare-Associated Infection
HCCIN	Hypertension Care Cascade Initiative Nepal
HCWM	Healthcare Waste Management
HDP	Health Development Partner

HEOC	Health Emergency Operation Centers
HF	Health Facilities
HI	Health Insurance
HIB	Health Insurance Board
HIIS	Health Infrastructure Information System
HIP	Health Insurance Program
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
HO	Health Office
HPV	Human Papilloma Virus Vaccine
HR	Human Resource
HRH	Human Resource in Health
HTC	HIV Testing and Counselling
HTS	HIV Testing Services
HURIS	Human Resource Information System
IBD	Invasive Bacterial Disease
ICD	International Classification of Diseases
ICT	Immune Chromatographic Test
ICT	Information and Communication Technology
IDA	Iron Deficiency Anaemia
IDD	Iodine Deficiency Disorder
IEC	Information, Education and Communication
IFA	Supplementary Iron Folic Acid
IHIMS	Integrated Health Information Management Section
IHP	International Health Partnership
IHR	International Health Regulations
ILI	Influenza-Like Illness
IMAM	Integrated Management of Acute Malnutrition
IMCI	Integrated Management of Childhood Illness
IMIS	Insurance Management Information System
IMNCI	Integrated Management of Neonatal and Childhood Illness
IMR	Infant Mortality Rate
INGO	International Non-Government Organization
IOM	Institute of Medicine
IPC	Infection Prevention and Control
IPD	Inpatient Department
IPV	Inactivated Polio Vaccine
IRC	Institutional Review Committee
IRS	Indoor Residual Spraying
IT	Information Technology
IUCD	Intrauterine Contraceptive Device

IVM	Integrated Vector Management
IYCF	Infant and Young Child Feeding
JE	Japanese Encephalitis
KAHS	Karnali Academy of Health Sciences
KMC	Kangaroo Mother Care
KYP	Know Your Pharmacist
LAMA	Leave Against Medical Advice
LARC	Long Acting Reversible Contraceptive
LBW	Low Birth Weight
LDC	Least Developed Country
LF	Lymphatic Filariasis
LIS	Laboratory Information System
LLG	Local Level Government
LLIN	Long Lasting Insecticidal (Bed) Nets
LMIS	Logistic Management Information System
LPEP	Leprosy Post-Exposure Prophylaxis
MA	Medical Abortion
MAM	Management of Acute Malnutrition
MBAHS	Madan Bhandari Academy of Health Science
MBBS	Bachelor of Medicine, Bachelor of Surgery
MBFHI	Maternal Baby Friendly Hospital Initiative
MCH	Maternal and Child Health
MCL	Mucocutaneous Leishmaniasis
MD	Management Division
MDA	Mass Drug Administration
MDG	Millennium Development Goal
MDGP	Medical General Practitioners
MDIS	Malaria Disease Information System
MDR	Multi-Drug Resistant
MDT	Multi-Drug Therapy
MEC	Medical Education Commission
MH	Mental Health
MIS	Management Information System
MIS	Maternity Incentive Scheme
MLM	Male Labor Migrants
MMDP	Morbidity Management and Disability Prevention
MMR	Maternal Mortality Ratio
MNCH	Maternal, New-Born and Child Health
MNH	Maternal and New-Born Health
MNP	Micro-Nutrient Powder
MoEST	Ministry of Education, Science, and Technology

MoHP	Ministry of Health and Population
MPDSR	Maternal and Perinatal Death Surveillance and Response
MR	Measles/Rubella
MSAP	Multi-Sector Action Plan
MSC	Matri Suraksha Chakki
MSM	Men Who Have Sex With Men
MSNP	Multi-Sector Nutrition Plan
MSS	Minimum Service Standards
MUAC	Mid-Upper Arm Circumference
MWRD	WHO-Recommended Rapid Diagnostic
NAHD	National Adolescent Health and Development (Strategy)
NAIHS	Nepal Army Institute of Health Science
NAMC	Nepal Ayurveda Medical Council
NAMS	National Academy of Medical Sciences
NBBD	Newborn Birth Defect Surveillance
NBBT	National Bureau for Blood Transfusion
NBMS	National Board of Medical Sciences
NCASC	National Center for AIDS and STD Control
NCCS	National Cancer Control Strategy
NCD	Non-Communicable Disease
NCDR	New Case Detection Rate
NDHS	Nepal Demographic and Health Survey
NDWQS	National Drinking Water Quality Surveillance
NEQAS	National External Quality Assurance Scheme
NGO	Non-Governmental Organization
NHEICC	National Health Education, Information and Communication Center
NHPC	Nepal Health Professional Council
NHRC	Nepal Health Research Council
NHSP	Nepal Health Sector Program
NHSS	Nepal Health Sector Strategy
NHSSP	Nepal Health Sector Strategic Plan
NHTC	National Health Training Center
NIAC	National Immunization Advisory Committee
NIC	National Influenza Center
NICU	New-Born Intensive Care Unit
NIP	National Immunization Programme
NMC	Nepal Medical Council
NML	National Medicine Laboratory
NMNR	Non-Measles Non-Rubella
NMR	Neonatal Mortality Rate
NMSP	National Malaria Strategic Plan

NNC	Nepal Nursing Council
NNT	Neonatal Tetanus
NPC	Nepal Pharmacy Council
NPHL	National Public Health Laboratory
NRC	Nutrition Rehabilitation Center
NSSD	Nursing and Social Security Division
NTD	Neglected Tropical Disease
NTP	National Tuberculosis Control Program
NTPMIS	National Tuberculosis Program Management Information System
NTRL	National Tuberculosis Reference Laboratory
OCMC	One Stop Crisis Management Center
OOP	Out-Of-Pocket
OPD	Outpatient Department
OPV	Oral Polio Vaccine
ORC	Outreach Clinics
ORI	Outbreak Response Immunization
ORS	Oral Rehydration Solution
OST	Opioid Substitution Therapy
OT	Operation Theater
PAC	Post Abortion Care
PAFP	Post Abortion Family Planning
PAHS	Patan Academy of Health Sciences
PAPL	Priority Assistive Product List
PAS	Personnel Administration Section
PB	Paucibacillary Leprosy
PCCS	Post Campaign Coverage Survey
PCL	Proficiency Certificate Level
PCR	Polymerase Chain Reaction
PCV	Pneumococcal Conjugate Vaccine
PEM	Protein Energy Malnutrition
PEN	Package of Essential Non-Communicable Disease
PF	Plasmodium Falciparum
PHC	Primary Health Care
PHD	Provincial Health Directorate
PHEIC	Public Health Emergencies of International Concern
PHTC	Provincial Health Training Center
PITC	Provider-Initiated Testing and Counselling
PKDL	Post-Kala-Azar Dermal Leishmaniasis
PLAMAHS	Planning and Management of Assets in Health Care System
PLG	Province Level Government
PLHIV	People Living With HIV

PMTCT	Prevention of Mother To Child Transmission
PNC	Postnatal Care
PoAHS	Pokhara Academy of Health Sciences
PPH	Postpartum Haemorrhage
PPHL	Provincial Public Health Laboratory
PV	Plasmodium Vivax
PVS	Provincial Vaccine Store
PWID	People Who Inject Drugs
QC	Quality Control
QI	Quality Improvement
QoC	Quality of Care
RAHS	Rapti Academy of Health Sciences
RDT	Rapid Diagnostic Tests
RH	Reproductive Health
RR	Rifampicin-Resistant
RRT	Rapid Response Team
RTI	Reproductive Tract Infection
RTI	Road Traffic Injuries
RUTF	Ready-To-Use Therapeutic Food
SAM	Severe Acute Malnutrition
SARI	Severe Acute Respiratory Infection
SAS	Safe Abortion Services
SBA	Skilled Birth Attendant
SDG	Sustainable Development Goals
SDP	Service Delivery Point
SHNP	School Health and Nutrition Program
SHNP	School Health Nurse
SHP	Skilled Health Provider
SIMH	Special Initiative for Mental Health
SNCU	Special New-Born Care Unit
SORMAS	Surveillance Outbreak Response Management and Analysis System
SRH	Sexual and Reproductive Health
SSNB	Small and Sick Newborns
SSU	Social Service Unit
STI	Sexually Transmitted Infections
SWAP	Sector Wide Approach
SWOT	Strengths, Weakness, Opportunities, and Threats
TAP	Training for Assistive Product
TAS	Transmission Assessment Survey
TB	Tuberculosis
TCV	Typhoid Conjugated Vaccine

TD	Tetanus and Diphtheria
TFR	Total Fertility Rate
TG	Transgender
TGCS	Ten Group Classification System
TIMS	Training Information Management System
TPT	TB Preventive Treatment
TSR	Treatment Success Rate
TT	Tetanus Toxoid
TWG	Technical Working Group
UHC	Universal Health Coverage
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
VAD	Vitamin-A Deficiency
VBDRTC	Vector Borne Disease Research and Training Center
VBD	Vector Borne Disease
VCT	Voluntary HIV Counselling and Testing
VL	Visceral Leishmaniasis
VPD	Vaccine-Preventable Disease
VSC	Voluntary Surgical Contraception
WASH	Water, Sanitation and Hygiene
WFP	World Food Program
WHO	World Health Organization
WPV	Wild Poliovirus
WRA	Women of Reproductive Age
XDR	Extensively Drug Resistant

निशा मेहता
मन्त्री
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Neesha Mehta
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Message

It is a privilege to present the 31st Annual Health Report for the fiscal year 2081/82. The Ministry of Health and Population is committed to providing high-quality, accessible healthcare to every citizen. Our main goal is to turn the constitutional right to health into real services for everyone in Nepal.

In the past year, we have focused on building a strong health system across all 753 local levels. As Nepal prepares to graduate from Least Developed Country (LDC) status in 2026, we are making great progress toward our 2030 Sustainable Development Goals. We have seen significant advancements in maternal and neonatal health, and we are working on eliminating diseases like Rubella.

Our mission is to achieve Universal Health Coverage to ensure that financial barriers never stop anyone from seeking care. We are strengthening social health insurance and following our 2023-2030 roadmap to work toward national self-reliance. We aim to reduce dependency on aid and make sure that our health improvements are sustainable for the long run.

This report offers essential data needed to create effective policies and hold ourselves accountable to the public. I am confident that it will be a valuable tool for all involved. I extend my sincere gratitude to our health professionals, staff, and development partners for their ongoing support in strengthening Nepal's health system.

22 April, 2026

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PREAMBLE

It is with great pleasure that we present the Annual Health Report for the fiscal year 2081/82 (2024/25) highlighting the progress and accomplishments of the healthcare sector of Nepal over the past year. This report stands as a testament of the combined commitment and continuous efforts of the Department of Health Services (DoHS), provincial and local governments, healthcare professionals, policy makers and developmental partners who have relentlessly worked to strengthen the country's health system.

Over time, Nepal's healthcare sector has achieved notable improvements in health service delivery, expanded access to essential health services, and addressed key public health challenges. Despite facing various constraints, the sector remains firmly committed to achieving Universal Health Coverage, ensuring that all individuals receive quality healthcare services regardless of their geographic location or socioeconomic background.

This report offers an in-depth analysis of health service utilization, disease patterns, and policy outcomes. It serves as a valuable resource for policymakers, researchers, and program managers by identifying successful interventions that can be replicated, as well as areas that require further improvement. Additionally, it helps in building evidence-based decisions and contributes to informed policy development and effective program implementation.

The achievements outlined in this report reflect the dedication and commitment of all stakeholders involved in health service delivery from national, provincial, and local authorities to policymakers and frontline health workers, including Female Community Health Volunteers. Their crucial role in reaching underserved populations has significantly contributed to improving health outcomes across the country, and their efforts deserve sincere recognition and appreciation.

On behalf of the Ministry of Health and Population, I extend my heartfelt gratitude to the Department of Health Services team, all contributors, and partner organizations involved in the preparation of this report.

Dilli Ram Sharma

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PREMBLE

It is a privilege to present the annual health report of the department of health services for the year 2081/82 at anticipated time. The report has been published consistently over past thirty years and provides a comprehensive overview of all major activities and achievements of the department of health services along with other departments under the Ministry of Health and Population. It also highlights the contributions of external development partners, non-governmental organizations and private sectors.

This report is the official record of the provided services and the achievements accomplished within the last year in the health sectors. This report provides information as per the federal structure of the country. The information included in this report will thus be instrumental for newly formed provincial and local level governments to understand prevailing health sector issues and to plan for the delivery of high-quality services to their populations in the coming year. For researchers, academics and students, this report aims to provide a learning opportunity that encourages innovation and the development of new approaches to improving health services quality in Nepal. Furthermore, the report acts as an important reference for identifying best practices worth replicating and also learning lessons from the programs that were less successful. I appreciate the dedicated efforts of department of health services and provincial health directors, health offices, hospitals and all health personnel including Female Community Health Volunteers (FCHVs) working at various levels of health systems for achieving these outcomes. The achievement documented in this report would not have been possible without their commitment and hard-work.

Finally, I extend my sincere thanks and congratulations to the Director General of Department of Health Services, Director of Management Division and his team, especially the IHIMS section team and all Directors of divisions, centers and other concerned personnel who contributed to this report.

.....

Dr. Bikash Devkota

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FOREWORD

As the Director General of Department of Health Services (DoHS), I am pleased to share the 31st edition of Annual Health Report for the fiscal year 2081/82. This document serves as the primary tool for monitoring and evaluating our performance across all 753 local levels as well as the outcomes of annual performance review workshops conducted at various levels.

This report provides comprehensive information regarding health policies, strategies, plan activity, service coverage and achievements made in the last three to five consecutive years as well as program issues that emerged during the fiscal year 2081/82. The health sector remains one of the Government of Nepal's priority sectors, and the DoHS continues to play a central role in advancing national health goals through a decentralized health system, strengthened coordination with provincial and local governments, and effective implementation of health programs.

The report is primarily based on routinely collected data from multiple health information and reporting platforms including Health Management Information System (HMIS). The report emphasizes on data quality, timeliness and analytical rigor to support evidence-based decision making. The findings of the report serve as an essential resource for strategic planning, monitoring and informed policy formulation by all stakeholders.

Furthermore, the report also highlights the achievements of various health programs implemented by different divisions and centers of DoHS. This achievement would not have been possible without the commitment and dedication of health care professionals, program managers and field workers who are working in remote and challenging environments.

While acknowledging the substantial progress made, sustained efforts and strategic interventions remain critical to ensuring the health services are aligned with the National Health Policy, 2076 and the Nepal Health Sector Strategic Plan 2079/80-2087/88. It requires continued collaboration across all levels of government and with the development partner.

I extend my sincere appreciation to the DoHS team, Ministry of Health and Population, provincial and local governments, developmental partners, and all stakeholders for their collective dedication to strengthening Nepal's health system. I would like to express my special gratitude to Keshab Raj Pandit, Director of Management Division, Ritu Pantha, Chief of the IHIMS Section, and the entire IHIMS team for their technical expertise and commitment in compiling and publishing this report with accuracy and professionalism.

.....Keshar

Dr. Keshar Bahadur Dhakal
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FOREWORD

It is with great pride and pleasure that we present the Annual Health Report 2081/82 (2024/25), the 31st edition in this series. This report offers a comprehensive review of healthcare service delivery, key achievements, and ongoing challenges in Nepal over the past fiscal year.

As Director of the Management Division, I am deeply proud to have worked closely with my dedicated team to produce this important document. It serves as a vital resource for evidence-based policy formulation, healthcare resource planning, and strategic improvements across the sector. The Management Division remains firmly committed to ensuring that reliable health information is effectively used to monitor the quality of services and strengthen coordination at all levels of government.

The report presents the annual performance of major components of the healthcare delivery system and highlights significant activities carried out by health facilities at every level. It shows cases trends and patterns in service coverage and utilization, while also spotlighting the major accomplishments of various health programs. All data in this report are drawn primarily from information submitted by health facilities through the Health Management Information System (HMIS) and other official reporting platforms. This ensures the report's accuracy and makes it a valuable and reliable reference for researchers, healthcare professionals, and policymakers.

I would like to express my sincere gratitude to the Honorable Minister of Health and Population, Neesha Mehta; the Secretaries, Dr. Bikash Devkota and Dilli Ram Sharma, for their exemplary guidance and leadership. I am also grateful to Shree Krishna Shrestha, Additional Secretary of the Ministry of Health and Population, for her invaluable support. My deepest appreciation goes to Dr Keshar Bahadur Dhakal, Director General of the Department of Health Services, for his visionary leadership and thoughtful guidance. I extend warm thanks to all Chiefs, Directors, and staff from the various Divisions and Centers for their tireless efforts in compiling the data that forms the foundation of this report.

I am especially thankful to the IHIMS team, led by Mr. Ritu Pantha, IHIMS Chief, for their outstanding hard work and significant contributions in compiling and publishing this report, which plays a crucial role in supporting data-driven policy decisions. Furthermore, I am deeply indebted to all health workers across the country from Female Community Health Volunteers (FCHVs) at the grassroots level to national-level policymakers for their unwavering dedication to delivering quality healthcare services.

Without their persistent commitment to accurate data recording, reporting, compiling, and analysis, this publication would not have been possible. I also wish to extend my heartfelt gratitude to all national health stakeholders and development partners for their continued support in strengthening Nepal's healthcare system.

I sincerely hope that this report will contribute meaningfully to the ongoing efforts to enhance and improve healthcare services for all people across Nepal.

Keshab Raj Pandit
Director, Management Division

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ACKNOWLEDGEMENT

The Annual Health Report 2081/82 represents the 31st publication in this long-standing series and stands as a primary reflection of the collective efforts of the Integrated Health Information Management Section (IHIMS) under the Management Division of the Department of Health Services (DoHS). This report presents a comprehensive overview of the performance and achievements of Nepal's health system over the past year, integrating data from federal, provincial and local levels. It stands as an outcome of sustained dedication, collaboration, and commitment from health program managers, service providers, and Female Community Health Volunteers (FCHVs), whose invaluable contributions form the backbone of our health system.

I would like to express my sincere gratitude to the Hon'ble Minister of Health and Population, Dr. Neesha Mehata; Secretaries Mr. Dilliram Sharma, Dr. Bikash Devkota; and Additional Secretary Shree Krishna Shrestha for their continued guidance, leadership and support. I am deeply grateful to Dr. Keshar Bahadur Dhakal, Director General of DoHS, for his leadership and encouragement throughout the preparation of this report. I also acknowledge the role played by Keshab Raj Pandit, Director of the Management Division, whose consistent direction and coordination greatly contributed to the timely and successful publication of the report.

Our sincere appreciation goes to the Chiefs and Directors of all divisions and centers within DoHS, as well as to the Ministry of Health and Population, for their essential contributions in data generation, compilation, verification, and validation. I extend my appreciation to section chiefs, program managers, and policymakers at federal, provincial, and local levels whose dedicated efforts ensured the availability of accurate, reliable, and high-quality health data that form the foundation of this report.

I would also like to sincerely acknowledge the dedicated team of IHIMS; Statistical Officers Krishna Raj Tiwari, Shesh Kanta Ranabhat, Tika Prasad Nepal, Computer Officers Nabina Pradhananga, Prabin Chauhan; Public Health Officers Kripa Thapa Mager and Lisasa Poudal for their technical expertise, hard work, and unwavering commitment throughout the report preparation process. Furthermore, I greatly appreciate the continued technical assistance and collaboration of our development partners, including WHO, UNFPA, UNICEF, GIZ and other key stakeholders, whose support has been vital to this achievement.

I am confident that this report will serve as a valuable reference for health planners, managers, researchers, academicians, service providers, and students. The evidence, analyses, and insights presented herein are intended to support informed decision-making and evidence-based planning across all tiers of government federal, provincial, and local; towards strengthening health systems and advancing the delivery of high-quality healthcare services in Nepal.

Ritu Pantha

Chief, Integrated Health Information Management Section (IHIMS)

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Executive Summary

Nepal is a land locked country in South Asia with a population of over 29 million people living across mountain hill and terai regions. The 2015 Constitution established the nation as a federal parliamentary republic divided into seven provinces and 753 local levels to ensure the fundamental right to health for every citizen. This administrative structure is designed to provide equitable health services from urban centers to remote reaches of the country. Public health achievements include an average life expectancy of 71.3 years which represents a gain of nearly 22 years over a 40 year period. Despite this progress the country currently faces a triple burden of disease comprising the persistent challenge of communicable diseases the rising tide of non-communicable conditions and the growing impact of injuries. This shift has led to an increase in disability adjusted life years and underscores the need for a data driven healthcare framework. The health system has evolved from centuries of traditional ayurvedic practices to modern medicine following the institutionalization of Bir Hospital in 1889. Nepal adopted the primary health care approach in 1978 and achieved significant progress during the millennium development goal era particularly in reducing child and maternal mortality. Infant and under five mortality rates dropped significantly and the maternal mortality ratio declined from 850 in 1990 to 258 by 2015. The health sector has demonstrated resilience against challenges such as the 2015 earthquake and the COVID 19 pandemic. Current efforts are guided by the national health sector strategic plan 2023 to 2030 which provides a transformative framework to accelerate progress toward universal health coverage and the health related sustainable development goals. This plan aims to address emerging health challenges and guarantee the constitutional right to free basic health services. Service delivery is inclusive of allopathic ayurvedic homeopathic and other indigenous practices across a mix of public and private sectors. At the federal level the ministry of health and population manages the policy framework and standards while provincial and local governments are responsible for health service availability and delivery. This annual health report for fiscal year 2081/82 utilizes data from the integrated health information management section to monitor sector performance and provide evidence based insights for future planning.

Department of Health Services

The Department of Health Services is the main implementation branch of the Ministry of Health and Population and functions as the foundation of the health care system in Nepal. It is responsible for delivering promotive, preventive, curative, rehabilitative and palliative care services throughout the country and facilitates the implementation of service delivery standards. The health post serves as the foundation entry point for basic health services with a referral hierarchy that includes primary health care centers, district and provincial hospitals and specialty tertiary care centers. The department is headed by a director general and operates through five divisions and five centers; including Family Welfare Division, Epidemiology and Disease Control Division, Curative Service Division, Nursing and Social Security Division, and Management Division alongside National Tuberculosis Control Center, National Health Training Center, National Health Education Information and Communication Center, National Center for AIDS and STD Control, and National Public Health Laboratory, along with two sections: Personnel Administration Section and Financial Administration Section. Since its establishment in 1933 the department has undergone several restructuring processes to reach its present organizational structure. Major functions include providing technical advice for policy development and strengthening health institutions as well as supporting provincial and local levels in implementing health strategies. The department manages human resource planning, personnel administration and the procurement and supply of medicinal products and equipment. It also oversees program development, international collaboration, stakeholder engagement and systematic data management through various information systems. Furthermore the department conducts surveillance and research for diseases, manages health emergency and disaster risk management and implements international health regulations. Through its financial administration section the department coordinates budget preparation and disbursement to ensure the effective management of health related activities and the delivery of high quality services to the public.

Maternal and Newborn Health (MNH) Services

Maternal and newborn health remains a priority program for the Government of Nepal and is integrated into the Basic Health Services package. The strategic journey began with the adoption of the Safe Motherhood Policy in 1998 and was further strengthened by the National Policy on Skilled Birth Attendants in 2006. Over the decades, Nepal has achieved significant progress, with institutional deliveries increasing from 10 percent in 1996 to 80 percent in 2022. This progress is reflected in the maternal mortality ratio, which fell from 539 per 100,000 live births in 1996 to 151 in 2021. With a current annual rate of reduction of 5.8 percent, the country is on track to achieve the Sustainable Development Goal targets for 2030, which include reducing the maternal mortality ratio to less than 70 per 100,000 live births.

During the fiscal year 2081/82, maternal and newborn health services received substantial human resource support through the Family Welfare Division, including significant budget allocations for recruiting staff at local levels and in provincial hospitals. However, a

decline was observed in several key service indicators compared to previous years. The proportion of pregnant women completing eight antenatal care visits as per the revised protocol fell to 57.13 percent, and national institutional delivery coverage decreased to 73.39 percent. Significant provincial variations persist, with Lumbini Province reporting the highest institutional delivery coverage at 87.7 percent, while Gandaki Province recorded the lowest at 54.57 percent. Similarly, the proportion of deliveries attended by skilled health personnel declined to 69.89 percent nationally, suggesting challenges in sustaining recent gains in service coverage.

Assessments of health facility readiness in 2081/82 revealed unequal performance across essential signal functions and quality domains. While the availability of parenteral antibiotics and uterotonics was generally high at over 80 percent, serious deficiencies were identified in assisted delivery readiness and newborn resuscitation capabilities. Quality domain scores highlighted strengths in demand management and referral systems, but critical areas such as infection prevention, equipment readiness, and medicine availability require urgent improvement. To address these gaps, the government has continued implementing onsite clinical coaching and mentoring programs and has expanded the use of the Quality Improvement dashboard to monitor facility performance in real time.

The Maternal and Perinatal Death Surveillance and Response program was expanded to 130 hospitals and 57 districts, identifying 148 maternal deaths and 2,630 perinatal deaths during the fiscal year. Obstetric hemorrhage and non-obstetric complications were the leading causes of maternal mortality, while low birth weight and prematurity remained the primary causes of early neonatal deaths. In response to newborn health needs, specialized units managed over 26,000 admissions, and Kangaroo Mother Care was utilized for over 6,000 sick newborns. Additionally, safe abortion services saw a continued upward trend in utilization, with medical methods remaining the dominant choice for 70.56 percent of users.

Key programmatic achievements for the year included the expansion of Comprehensive Emergency Obstetric and Neonatal Care services to 76 districts and the initiation of maternal mental health services. The adoption of the Robson's Ten Group Classification system in 38 hospitals further strengthened the monitoring and management of caesarean section trends, which rose to a national rate of 29.75 percent. Moving forward, the national roadmap emphasizes the need for high-quality, equitable maternal and newborn health services. Achieving the 2030 targets will require targeted interventions to address regional disparities, strengthen the continuum of care from pregnancy to the postnatal period, and improve emergency referral mechanisms across all provinces.

Child Health and Immunization Services

The child health and immunization services section of the family welfare division focuses on reducing child morbidity and mortality through the national immunization programme and the integrated management of newborn and childhood illness programme.

The immunization programme provides free services against 14 pathogens and reached a major milestone in 2081/82 by introducing the HPV vaccine, which covered 1.45 million girls representing 94% of the target population. Although all 77 districts have achieved full immunization declaration status and the country has been polio free since 2010, routine coverage for several antigens fell below the 95% national target in 2081/82, including BCG at 88%, DPT-HepB-Hib1 at 87%, DPT-HepB-Hib3 at 86%, and MR1 at 87%. Maternal immunization coverage for Td was low at 64%. Other coverage rates include TCV at 95%, Rota1 at 86%, Rota2 at 85%, PCV3 at 87%, OPV3 at 86%, and fIPV-II at 86%. High vaccine wastage remains a significant challenge, with rates for BCG at 82%, MR at 52%, JE at 46%, Td at 42.20%, fIPV at 35%, and TCV at 34%, all exceeding indicative targets. High population density areas like Madhesh province showed over 100% coverage for some antigens, while Bagmati province reported the lowest coverage for DPT-HepB-Hib3 at 73%.

Surveillance efforts identified a non-polio acute flaccid paralysis rate of 7.2 per 100,000 children, 33 measles cases, and 1842 cases of acute encephalitis syndrome including 183 confirmed japanese encephalitis cases and 30 deaths. Maternal and neonatal tetanus remains eliminated with a national incidence rate of 0.002 per 1,000 live births.

Under the integrated management of newborn and childhood illness programme, the incidence of acute respiratory infections was 616 per 1,000 under five children and the pneumonia incidence was 30 per 1,000. Diarrhea incidence reached 318 per 1,000 children, with 97.68% of cases treated with zinc and oral rehydration salts.

Furthermore, ward level analysis shows significant inequities in service utilization, particularly in metropolitan areas where median full immunization rates were 64% compared to 95% in rural municipalities. The nationwide full immunization percentage dropped to 92% in 2081/82 from 96% in the previous year. Nepal's cold chain capacity has expanded 5 folds since the pandemic, now totaling 540,897 liters for 2-8 degree celsius storage and 163,102 liters for frozen storage.

Nutrition Program

The Nutrition Section of the Family Welfare Division is responsible for improving Nepal's human capital through cost-effective interventions focused on children under five, pregnant and lactating women, and marginalized communities. Guided by the Nutrition Strategy 2077 and the Multi-Sector Nutrition Plan III (2023–2030), the program aims to reduce malnutrition in line with Sustainable Development Goals by 2030. Between 1996 and 2022, Nepal made significant progress, reducing child stunting from 57% to 25% and wasting from 15% to 8%. However, challenges remain as the prevalence of underweight in children under five is 19%, and anemia affects 43% of children and 23.1% of women.

Growth monitoring and promotion (GMP) efforts show that 92.04% of children aged 0–11 months

were registered in the fiscal year 2081/82, although registration for the 12–23 month age group was considerably lower at 21.69%. The average number of growth monitoring visits per child increased nationally from 4.8 in 2079/80 to 7.81 in 2081/82. Despite these efforts, the national percentage of underweight children registered for monitoring rose to 2.7% in 2081/82, suggesting a stagnation in progress compared to the 2.12% recorded the previous year. Screening of over 4.2 million children by female community health volunteers revealed that 1.66% had moderate acute malnutrition (MAM) and 0.16% had severe acute malnutrition (SAM).

Maternal and infant health metrics indicate that 87.97% of newborns initiated breastfeeding within one hour of birth, and exclusive breastfeeding for the first six months reached 65.78% in 2081/82. For micronutrient support, 54.04% of children aged 6–23 months received at least one cycle of Baal Vita powder, but only 15.42% completed the full three-cycle regimen. Iron Folic Acid (IFA) coverage was 63.86% for pregnant women and 82.91% for postpartum mothers. While 60.76% of adolescent girls received IFA for at least 13 weeks, only 47.22% completed the full 26-week regimen, highlighting significant adherence challenges.

The national Vitamin A and deworming campaigns remain robust, and iodine deficiency control has seen substantial success, with 98% of households now using adequately iodized salt, up from 55.2% in 1998. Management of malnutrition generally meets global SPHERE standards, with a national recovery rate of 84.38% and a low mortality rate of 0.1% for treated cases. However, the program faces systemic weaknesses including frequent stockouts of therapeutic foods and micronutrients, a heavy reliance on external donor funding, and high staff turnover.

Emerging threats include the “triple burden” of malnutrition, where persistent stunting coexists with a 3% annual increase in overweight and obesity. Other risks include the aggressive marketing of ultra-processed foods and climate shocks that worsen food insecurity. Future priorities for 2081/82 include ensuring the sustainability of 24 Nutrition Rehabilitation Centers, expanding the Mother-Baby Friendly Hospital Initiative to private institutions, and preparing for a National Micronutrient Status Survey in 2025/26.

Family Planning (FP) and Reproductive Health (RH) Program

Nepal family planning and reproductive health program is a fundamental component of the national health strategy, aimed at empowering individuals to make informed reproductive choices. This program is established as a fundamental right under the Constitution of Nepal and is further supported by the Public Health Service Act 2075 and the Safe Motherhood and Reproductive Health Act 2075. The current strategic direction is guided by the Nepal FP2030 commitment, which emphasizes a rights based, client centered approach to achieve universal access to services. Key objectives include ensuring equitable access to a full range of modern contraceptives, reducing unmet need, and prioritizing marginalized groups such as adolescents and postpartum women.

The national modern contraceptive prevalence rate currently stands at 29.4 percent, showing a slight decline from the previous year. Despite this, the government has set ambitious targets to reach a contraceptive prevalence rate of 60 percent and reduce unmet need to 10 percent by 2030. As of the latest fiscal year, there are 1,106,162 current users of permanent family planning methods nationwide, consisting of 856,037 females and 250,125 males. Female sterilization remains the most preferred method at 34.10 percent, while implants lead as the primary long acting reversible method at 21.36 percent. Regional disparities are significant, as Madhesh province accounts for 35.7 percent of permanent method users, whereas Karnali province accounts for only 3.4 percent.

Among the 611,480 new acceptors of modern contraceptive methods in the last fiscal year, short acting methods continue to dominate the method mix. Depo is the most preferred at 37.99 percent, followed by pills at 26.72 percent and implants at 18.12 percent. Permanent methods see low uptake among new users, with female sterilization at 4.27 percent and male sterilization at just 0.5 percent. District level data highlights a wide gap in utilization, with Parsa recording the highest prevalence rate at over 50 percent and Kathmandu recording the lowest at 14.8 percent. Postpartum family planning uptake within 48 hours of institutional delivery has seen a gradual increase to 2.40 percent nationally, with Gandaki province leading at 4.12 percent.

Adolescent sexual and reproductive health remains a priority, as individuals aged 10 to 19 make up 24 percent of the population. Currently, 13.1 percent of adolescent girls have experienced pregnancy, and the adolescent fertility rate is 71 per 1,000 women. The program has scaled up adolescent friendly health services to 2,335 facilities across all 77 districts to improve access. However, only 14.2 percent of married adolescents use modern contraceptives, highlighting a critical gap. The government aims to reduce the adolescent birth rate to 30 per 1,000 by 2030. In terms of service utilization, approximately one in ten safe abortion users are adolescents, and the national proportion of adolescents completing eight antenatal care visits has reached 5 percent.

The management of reproductive health morbidities has expanded significantly, focusing on cervical cancer, breast cancer, and pelvic organ prolapse. Cervical cancer screening reached 318,076 women in the most recent fiscal year, with 190,136 of those using visual inspection with acetic acid and 33,634 receiving the newly expanded HPV DNA testing. The national positivity rate for cervical cancer screening is 3.58 percent. Breast cancer screening also saw a substantial rise to 87,386 women. For pelvic organ prolapse, screening coverage grew to 153,398 women, though the percentage of those undergoing surgery declined to 4 percent. Fistula screening has increased nearly fourfold to 39,978 women, resulting in 152 successful surgeries, primarily in Karnali province.

The program’s success is supported by strong government leadership, a nationwide network of facilities, and a dedicated cadre of female community health volunteers. Opportunities for growth include

leveraging the federal governance structure for local prioritization and utilizing digital health systems for better data tracking. Nevertheless, challenges persist, such as high dependence on external donor funding, limited male participation in family planning, and sociocultural barriers that lead to delayed care seeking. To address these issues and ensure financial sustainability, the second costed implementation plan for 2024 to 2030 is currently in the process of endorsement to serve as a roadmap for the future.

Cross Section Program of Family Welfare Division (FWD): PHC/ORC Program

The PHC/ORC program, launched in 1994, delivers monthly essential healthcare within 30 minutes of isolated communities in Nepal. In FY 2081/82, national clinic conduction reached 95.95 percent, an increase from 93.31 percent in FY 2080/81 and 86.9 percent in FY 2079/80. Gandaki Province achieved the highest conduction rate at 99.76 percent, while Karnali Province improved to 91.53 percent despite remaining the lowest nationally. Total service utilization rose to 2,814,281 users, led by Madhesh Province with 603,783. Conversely, utilization fell in Karnali to 141,913 and Sudurpashchim to 359,274.

Service data indicates a significant shift toward curative care, which rose 10 percent to 1,463,577 cases. Simultaneously, preventive maternal health services declined, with antenatal check-ups falling to 120,787 and postnatal check-ups to 27,263. Family planning remains a core output, accounting for 29.74 percent of national pill cycles (52,599), 6.9 percent of depo-doses (78,718), and 4.4 percent of condoms (424,309).

Program strengths include its priority government status, local ownership, and active involvement of female community health volunteers. However, challenges such as frequent medicine stock-outs, inadequate supervision, and a lack of private counseling space persist. The rising demand for curative services and budget constraints at the local level pose ongoing threats to the program's primary focus on preventive and promotional health.

Nursing and Social Security Services Programs

The Nursing and Social Security Division, founded in 2075 B.S., oversees nursing capacity development, geriatric care, gender-based violence management, and social health security across Nepal through its three specialized sections. In the 2081/82 fiscal year, the division facilitated a thirty-day skill exchange program for eight critical care nurses from hospitals such as Bir and Koshi and finalized the National Midwifery Roadmap 2025–2030 to enhance specialized care. Implementation of the National Infection Prevention and Control Guideline 2079 led to assessments across eight core components, while baseline surveillance in five federal hospitals revealed healthcare-associated infection incidence densities ranging from 3.26 to 23.7 per 1,000 patient days.

The School Health and Nursing Service Program expanded to 1,407 schools, with the division supporting 261 schools and provinces supporting 1,146 others. Simultaneously, the Community Health Nursing Program reached 73,397 households and a population of 680,271 across five municipalities, utilizing 64 nurses and 4 officers to screen 38,296 people for mental health issues and 23,570 for hypertension. The national network of 50,404 Female Community Health Volunteers, including 9,230 in Bagmati Province, provided critical maternal and neonatal support by facilitating 21,773 skin-to-skin contact cases and 21,847 postnatal visits on the third day of birth. These volunteers receive annual financial support including a 10,000 NPR dress allowance and 12,000 NPR for travel, alongside a 20,000 NPR retirement appreciation grant for those over 60 years of age.

Social health security is provided through 99 public hospitals equipped with Social Service Units, which served 59,677 cases in the latest fiscal year, while One-Stop Crisis Management Centers in 93 sites across 77 districts assisted 13,502 new survivors of violence. Reported incidents of violence included 27.33 percent emotional and 27.11 percent physical violence, with 11,993 survivors receiving psychosocial counseling. Geriatric health services served 65,808 senior citizens in 65 hospitals, identifying cardiovascular conditions as the most prevalent morbidity among a demographic that now makes up 10.21 percent of the national population.

The Bipanna Nagarik Aushadhi Upachar Program provides financial assistance for eight chronic diseases across 147 health facilities, spending a total of 4.42 billion NPR in the 2081/82 fiscal year. A total of 53,228 patients received free treatment in the previous year, with cancer patients representing the highest volume at 28,678 individuals and kidney disease treatment consuming the largest share of funds at 50.79 percent. Specialized services are widely distributed, including haemodialysis in 119 hospitals and cancer treatment in 34 facilities, ensuring that underprivileged citizens can access life-saving medical care for conditions like heart disease, head injuries, and sickle cell anemia.

NCDs and Mental Health Programs

Non-communicable diseases have become the primary health challenge in Nepal, accounting for 70.2 percent of total deaths in 2023, which is a notable increase from 66.87 percent in 2019. Within this category, cardiovascular diseases are the leading cause of mortality at 27.36 percent, followed by chronic obstructive pulmonary disease at 15.97 percent and neoplasms at 9.47 percent. These diseases also represent 62.05 percent of total disability-adjusted life years, with cardiovascular diseases specifically contributing 14.11 percent. The economic impact is severe, as the nation spent 64,414.2 million Nepalese rupees on these conditions in fiscal year 2019/20, representing 31.5 percent of the total national health expenditure. Households are also heavily burdened, as non-communicable diseases accounted for 40.3 percent of out-of-pocket health spending, totaling 199.7 billion Nepalese rupees. Lifestyle-related risk factors among adults have increased significantly between 2008 and 2019, including a rise in insufficient physical activity from 3.5 percent to 6.5 percent, high blood sugar from 3.6 percent to 8.5 percent, and elevated body mass index from 17.1 percent to 24.3 percent. To

combat these trends, the government implemented the Multisectoral Action Plan for 2021 through 2025 with the goal of reducing premature deaths from major non-communicable diseases by 25 percent.

Key initiatives include the Package of Essential Non-Communicable Diseases, which trained 221 providers in fiscal year 2081/82, and the Hypertension Care Cascade Initiative Nepal, which has reached 51 municipalities and enrolled over 40,000 patients in protocol-based management. Furthermore, the PEN-Plus program has been launched in multiple districts to address severe chronic conditions in children and young adults, training 15 medical officers and 82 health professionals in the most recent fiscal year.

The scale of service utilization has grown rapidly, with the number of hypertension cases on treatment reaching 1,681,953 in fiscal year 2081/82, alongside 800,726 cases of diabetes, 325,135 cases of chronic obstructive pulmonary disease, and 98,080 cases of cancer. Simultaneously, mental health has emerged as a significant component of the national disease burden, with the proportion of disability-adjusted life years rising from 1.43 percent in 1990 to 5.9 percent in 2023. Approximately 10 percent of adults have experienced a mental disorder, and self-harm and violence have climbed to the 9th leading cause of death. Financial investment in mental and neurological conditions reached 2,647.1 million Nepalese rupees in fiscal year 2019/20. The government is addressing these issues through the National Mental Health Strategy and Action Plan, the establishment of a suicide registry, and the training of 916 professionals under the mental health gap action program. By fiscal year 2081/82, a total of 281,570 individuals were receiving treatment for mental health issues, with Bagmati Province reporting the highest number of cases at 78,885.

Epidemiological Surveillance, Research and Outbreak Management

The Disease Surveillance and Research Section and the Epidemiology and Outbreak Management Section serve as the primary agencies for communicable disease surveillance and emergency response in Nepal. The Early Warning and Reporting System, established in 1997, currently operates through 134 sentinel sites across seven provinces, including 94 government hospitals, 16 private hospitals, 14 medical colleges, 6 missionary hospitals, and 4 community hospitals. In the fiscal year 2081/82, the system was expanded with 17 new functional sentinel sites to enhance national coverage. The system monitors six priority diseases with outbreak potential: Acute Gastroenteritis, Cholera, Severe Acute Respiratory Illness, Dengue, Kala-azar, and Malaria.

Technological advancements include the implementation of SORMAS, a digital tool for real-time public health event reporting, which has expanded from Gandaki and Sudurpaschim to Koshi and Bagmati provinces. In the 2081/82 fiscal year, SORMAS recorded 41,493 Dengue cases, 27,343 Acute Respiratory Infection cases, 13,345 Scrub Typhus cases, and 1,891 snakebite incidents. Additionally, the Hello Health 1115 Call Center received 27,225 calls during this period, answering 24,431 of them to support public health surveillance. Media monitoring through Epidemic Intelligence from Open Sources identified 1,496 news items related to potential outbreaks, leading to the verification of 17 public health events including mushroom poisoning and viral hepatitis.

Epidemiological data from 2023 to 2025 indicates significant disease trends, with Dengue cases peaking at 27,881 in 2024 before declining to 6,701 in 2025. Acute Gastroenteritis cases showed a rise to 25,265 in 2025, characterized by a recurring seasonal peak between May and July. Scrub Typhus has emerged as a major concern, with national cases increasing from 5,086 in 2023 to 10,192 in 2025, primarily affecting Lumbini province. Malaria cases also increased from 100 in 2023 to 251 in 2025, with Sudurpaschim province reporting the highest burden. Kala-azar cases remained relatively stable at 196 in 2025, with the highest numbers consistently reported from Bagmati province.

Cholera control efforts were bolstered by over 43,000 rapid diagnostic kits provided as a grant from GAVI, which were distributed to sentinel sites and other hospitals. In 2025, 1,505 tests were reported through the surveillance system, resulting in 198 positive cases for the O1 or O139 strains. These tests were critical in detecting a major outbreak in Birgunj that affected approximately 2,000 people. Climate-sensitive disease surveillance is also being piloted at four locations, including Karnali Academy of Health Sciences and Pokhara Academy of Health Sciences, to correlate health data with meteorological parameters like temperature and precipitation.

The Epidemiology and Outbreak Management Section maintains 17 health desks at ground crossing points, with 15 located along the Nepal-India border and 2 at the Nepal-China border. Air crossing health desks are functional at Tribhuwan International Airport and Pokhara International Airport to conduct syndromic screening of travelers. Recent capacity-building efforts included the 1st National Conference on Field Epidemiology, which hosted 400 participants and presented over 70 scientific papers. Despite these strengths, the surveillance system faces challenges such as limited sentinel site coverage, an outdated Infectious Disease Act of 2020, and a reliance on external funding for technical support.

Communicable Diseases, IHR and One Health

Nepal has established a national target to eliminate malaria by 2030 and achieve zero indigenous cases by 2026. In fiscal year 2081/82, the total number of positive cases reached 1,164, which is a significant increase from 533 cases in 2079/80. This burden is primarily driven by 1,125 imported cases, while indigenous cases remained low at 39. The annual parasite incidence rose to 0.104 per 1,000 population, and micro-stratification identified 25 high-risk wards, with 14 of these located in Lumbini province. Prevention efforts included the distribution of 12,876 long-lasting insecticidal nets and the management of 27 active transmission foci.

Scrub typhus has seen a nearly threefold increase in reported cases over a three-year period, rising from 9,243 in 2079/80 to 25,494 in 2081/82. Lumbini province

reported the highest number of cases at 7,862, followed by Sudurpaschim with 4,956. Dengue is now endemic in all 77 districts, following a major 2022 outbreak that resulted in 54,784 cases and 88 deaths. In the 2081/82 fiscal year, Bagmati province recorded 23,969 cases, the highest in the country, and DENV-2 has been identified as the currently predominant serotype.

The national kala-azar elimination program aims to maintain an incidence rate of less than 1 case per 10,000 population to sustain elimination as a public health problem by 2026. In 2081/82, there were 227 new cases reported, with Karnali province accounting for the highest number at 48. For lymphatic filariasis, the elimination goal is set for 2030, with 64 districts identified as endemic. Morbidity mapping has identified 47,866 total cases so far, including 32,659 cases of hydrocele and 14,776 cases of lymphoedema. Mass drug administration remains ongoing in specific municipalities like Banke where transmission thresholds have not yet been met.

Leprosy transmission continues despite national elimination in 2010, with 2,409 new cases detected in 2081/82. While the national prevalence rate is 0.88 per 10,000 population, 16 districts still exceed the threshold of 1 case per 10,000, with Nawalparasi-West reaching 2.2. Of the new cases, 3.78 percent were children and 6.39 percent presented with grade 2 disability. The government is implementing the zero leprosy roadmap 2021-2030, focusing on post-exposure prophylaxis and active case detection in high-burden provinces like Madhesh and Lumbini.

Zoonotic disease control is managed through a one health approach, prioritizing 10 specific diseases. In 2081/82, there were 213,366 animal bites reported, leading to 12 deaths and the issuance of 211,947 anti-rabies vaccine vials. Snakebite management involved 10,144 total cases, of which 1,746 were poisonous bites, treated at 103 centers. Nepal's core public health capacities under international health regulations have shown progress, with the state party annual report score increasing from 44 percent in 2021 to 55 percent in 2025 across 15 essential capacities.

National TB Control and Management Program

Tuberculosis remains a significant public health issue in Nepal with an annual prevalence estimated at 117,000 cases and an incidence of 69,000 cases. According to the Global TB Report 2025, the country faces a burden of approximately 67,000 cases with an incidence rate of 227 per 100,000 population. The mortality burden is substantial, involving 16,000 deaths among HIV-negative individuals and 160 deaths among HIV-positive individuals. Economic impacts are severe, as 51.1 percent of all tuberculosis-affected households and 75.6 percent of drug-resistant tuberculosis households face catastrophic costs.

The national strategy aims to reduce the incidence rate from 238 per 100,000 population in 2020/21 to 181 per 100,000 by 2025/26, alongside a reduction in the mortality rate from 58 to 23 per 100,000. The long-term vision is to eliminate the disease by 2050. To support this, the TB Free Nepal Initiative has expanded significantly from 25 local levels in 2021/22 to 149 local levels in 2081/82. In 2024, the program transitioned to all-oral, shorter six-month BPaLM and BPaL regimens for treating drug-resistant cases to improve patient outcomes and adherence.

The service delivery network has achieved extensive coverage with 6,241 DOTS centers, 31 multi-drug resistant treatment centers, and 98 sub-centers nationwide. Diagnostic capacity includes 785 microscopy centers and 141 molecular WHO-recommended rapid diagnostic centers utilizing GeneXpert and Truenat technologies. The program has also deployed seven artificial intelligence-based X-ray units across all provinces to enhance active case detection among high-risk populations. In the current reporting period, 2,516 children under five years old were initiated on tuberculosis preventive treatment.

In the fiscal year 2081/82, the total case notification rate reached 133 per 100,000 population, totaling 39,151 notified cases. Of these, 72.4 percent were pulmonary cases and 58.3 percent were bacteriologically confirmed. Data indicates that 61.1 percent of notified cases were men, 38.9 percent were women, and children aged zero to 14 years accounted for 5.6 percent. The national treatment success rate remains strong at 92.3 percent for all forms of tuberculosis, though it is currently lower at 76 percent for drug-resistant cases.

Despite progress, a significant gap remains in addressing drug-resistant tuberculosis, as only 625 cases were detected out of an estimated 2,400, representing a 74 percent detection gap. Currently, 400 individuals are enrolled in drug-resistant treatment. Financially, the program operated with a total budget of 1,067,425,000 Nepalese Rupees for the 2081/82 period. The Government of Nepal contributed 687,925,000 Rupees while the Global Fund provided 375,500,000 Rupees, resulting in an overall financial progress rate of 77 percent.

HIV and STIs Control and Management Program

Nepal began its structured national response to HIV and STIs following the first documented case in 1988, eventually establishing a policy framework in 1995 and initiating free antiretroviral therapy in 2004. The current National HIV Strategic Plan for 2021 to 2026 aligns with global goals to end the AIDS epidemic by 2030 by targeting the 95-95-95 benchmarks and a 90 percent reduction in new infections relative to the 2010 baseline. In the fiscal year 2081/82, national testing efforts reached 428,640 individuals, identifying 2,272 positive cases for an overall positivity rate of 0.53 percent. Regional data shows that Bagmati province had the highest burden with 733 cases and a 1.4 percent positivity yield, whereas Karnali province reported the lowest number of cases at 39. To manage the epidemic, the government operates 100 antiretroviral therapy sites and 20 dispensing centers, currently providing treatment to 27,054 people living with HIV. The distribution of patients on treatment is concentrated in Bagmati at 26 percent, Lumbini at 19 percent, and Madhesh at 17 percent, while Karnali accounts for 3 percent of the total treatment load.

The elimination of vertical transmission remains a priority, evidenced by the testing of 602,175 pregnant and postpartum women in the latest fiscal year, which identified 62 positive cases and resulted in 132 mothers receiving treatment. Early infant diagnosis was performed for 125 children under eighteen months of age, with 96 of those tested within the first two months of life and only three infants diagnosed as positive. Additionally, the national program conducted 40,666 assessments for sexually transmitted infections and provided harm reduction services through oral substitution therapy to 1,525 clients, including 1,280 on methadone and 245 on buprenorphine. Current progress reports indicate that Nepal has achieved 94 percent of the target for status knowledge, 87 percent for treatment enrollment, and 74 percent for viral suppression. While these figures exceed the Asia-Pacific regional average, the program identifies significant weaknesses such as a heavy reliance on external donors, limited human resources in government settings, and persistent social stigma that hinders the achievement of the final viral suppression targets.

Curative Services and Medico-legal Services

The Curative Service Division (CSD) of the Department of Health Services is responsible for monitoring and strengthening hospital services to ensure the constitutional right to free basic and emergency health services. In the fiscal year 2081/82, hospital service readiness was evaluated using the Minimum Service Standards (MSS) across 133 hospitals. The national average scores for these assessments were 62 percent for primary hospitals, 79 percent for secondary A level hospitals, 64 percent for secondary B level hospitals, 67 percent for tertiary level hospitals, and 48 percent for specialized hospitals. Tertiary level hospitals showed the most significant improvement with a 23 percent increase in scores between fiscal years 2077/78 and 2081/82. Among tertiary institutions, Bharatpur Hospital achieved the highest score at 88 percent, followed by Bheri Hospital at 83 percent. Nationwide, 41 percent of assessed hospitals achieved a high performance rating in the green color code category with scores ranging from 85 to 100 percent.

Outpatient Department (OPD) utilization reached a total of 65,510,817 client visits in fiscal year 2081/82, representing a steady increase over the last three years and a national average of 1.6 visits per person. Bagmati province reported the highest average at 2.0 visits per person, while Sudurpaschim had the lowest at 1.3 visits. There were 34,479,027 new OPD morbidity cases reported, with the highest share occurring in Bagmati province at 24.69 percent. The most common reasons for seeking outpatient care were gastritis, fever, upper respiratory tract infections, headache, and hypertension. Specifically, gastritis accounted for 1,941,149 visits, while fever accounted for 1,716,843 visits.

Utilization of specialized services also showed significant volume, with 12.06 percent of the population using emergency services and 6.57 percent utilizing inpatient services. Bagmati province saw the highest emergency utilization rate at 22.25 percent, and Koshi province recorded the highest inpatient utilization at 10.44 percent. Total hospital discharges for the fiscal year numbered 1,939,575, with a recovery and cure rate of 86.72 percent, totaling 1,682,042 successful outcomes. Cataracts were the leading cause of inpatient admission with 37,603 cases, followed by various types of spontaneous and emergency caesarean deliveries. Surgical procedures have trended upward to a total of 982,428 in the current fiscal year, rising from 686,556 two years prior. Major surgeries accounted for 480,862 of these procedures, while outpatient minor surgeries totalled 191,124.

Hospital efficiency indicators show a national bed occupancy rate of 52.55 percent, with Koshi province reaching a high of 62.55 percent and Karnali reporting a low of 42.50 percent. The national average length of stay in hospitals was 3.35 days, ranging from 4.45 days in Bagmati province to 1.64 days in Sudurpaschim province. Medico-legal and forensic services reported 3,178 cases and 13,820 post-mortem examinations during the fiscal year. Furthermore, 7,979 individuals were recorded as brought dead to health facilities, a majority of whom were male.

The curative service sector identifies strengths in its established standard treatment protocols and regular monitoring frameworks for both public and private sectors. However, significant weaknesses persist, including a shortage of human resources for effective monitoring and the absence of forensic laboratories at the provincial level. There is also a lack of legal frameworks for reporting local and provincial government expenditures. Opportunities for improvement include expanding digital health infrastructure like electronic medical records and standardizing protocols for smaller healthcare institutions such as clinics and nursing homes. Coordination between different levels of government and the private sector remains a critical area for ensuring uniform health service delivery across the country.

Federal Level Health Academia and Hospitals

The federal health landscape in Nepal has undergone significant restructuring under the federalization process, placing tertiary and specialized care under the authority of the Ministry of Health and Population. There are currently seven federal-level medical academia, including the National Academy of Health Sciences, B.P. Koirala Institute of Health Sciences, and Karnali Academy of Health Sciences, with an additional institution currently proposed. These academies operate as autonomous, not-for-profit entities and are supported by a network of federal hospitals that include six tertiary hospitals, twelve disease-specific hospitals, and three hospitals dedicated to security forces. Academic production is led by the B.P. Koirala Institute of Health Sciences with 1,811 students, followed by the National Academy of Health Sciences with 1,450 students and the Karnali Academy of Health Sciences with 917 students. Smaller enrollments are seen at the Patan Academy of Health Sciences with 261 students and the Pokhara Academy of Health Sciences with 141 students.

Service utilization data for the 2081/82 fiscal year shows that the Patan Academy of Health Sciences served the highest number of clients at 728,144, followed by the Tribhuvan University Teaching Hospital with 687,694 and the B.P. Koirala Institute of Health Sciences with 670,116. On a daily basis, Patan Hospital averaged 1,995 clients, while Tribhuvan University Teaching Hospital averaged 1,884 and the B.P. Koirala Institute of Health Sciences averaged 1,836. Surgical volume also varied, with the B.P. Koirala Institute of Health Sciences recording the highest average of 96 major operations per day compared to 14 at the Rapti Academy of Health Sciences. Efficiency indicators show that the average length of stay was exceptionally high at the College of Medical Science at 45.43 days, while Bir Hospital averaged 10.68 days. Overcrowding is evident in bed occupancy rates, which reached 121.93 percent at Birat Medical College Teaching Hospital and 117.12 percent at National Medical College.

Financial reports indicate that the B.P. Koirala Institute of Health Sciences generated the highest revenue at 3,067,615,877 Nepalese Rupees with an expenditure of 2,943,787,514. The Rapti Academy of Health Sciences generated 1,982,760,009 Nepalese Rupees in revenue, while the National Academy of Health Sciences generated 843,781,660. Despite these revenues, the system faces systemic challenges such as low budgets for free basic services and frequent changes to health insurance rules that lead to undervalued or delayed claims. Technical innovations have included the expansion of super-specialty services in cardiology and neurosurgery at the Pokhara Academy of Health Sciences and the establishment of a 3D Gait Lab and Milk Bank at the B.P. Koirala Institute of Health Sciences. However, infrastructure gaps remain, particularly regarding inadequate intensive care unit spaces and the lack of dedicated systems for liquid and cytotoxic waste management.

The strategic way forward involves standardizing referral protocols and moving toward a unified national social protection framework that integrates existing programs like the Aama and social security units with health insurance. Human resource shortages, particularly among nurses and specialists, require new recruitment and retention incentives for remote sites. Digital health remains a priority, with plans to implement integrated electronic medical records and unique patient identification systems to automate insurance claims and inventory management. Strengthening clinical governance through functional death audit systems and expanding maternal and neonatal care are also essential components of the future health strategy for federal institutions.

Disability and Rehabilitation

An estimated 1.3 billion people, representing 16 percent of the global population, experience significant disability, and approximately 2.4 billion people worldwide live with health conditions that could benefit from rehabilitation services. In Nepal, the 2022 NDHS indicates that 23 percent of the population aged five and older experience some functional difficulty, while 6 percent face severe difficulty or are unable to function, with vision and walking being the most reported challenges at 15 percent and 12 percent respectively. Throughout fiscal year 2081/82, the government conducted various training programs including the Training on Assistive Products in Madhesh and Sudurpaschim provinces and a Disability Management and Rehabilitation program that trained 120 medical officers nationwide. Additionally, 21 master trainers were developed through a specialized training session held from March 30 to April 4, 2025, to support provincial implementation of rehabilitation services.

The national priority list for assistive products was expanded from 40 to 54 items following a comprehensive revision process using the Delphi method and multi-sectoral consultations. Service utilization data for fiscal year 2081/82 shows a total of 575,683 rehabilitation users, consisting of 274,371 new users, 294,022 follow-up users, and 7,290 foreign users. Bagmati Province saw the highest utilization with 363,469 users, while other provinces like Lumbini and Koshi recorded 64,095 and 54,611 users respectively. The total number of rehabilitation sessions reached 659,072, and 13,291 assistive devices were delivered to patients, with mobility aids such as crutches and walkers accounting for 9,018 of those units, or 67.85 percent of the total.

The health system faces challenges such as an uneven distribution of the rehabilitation workforce, which is primarily centralized in Bagmati Province and the private sector, along with a high dependence on external partners for service provision. Road safety remains a critical concern, as road crashes are the leading cause of death globally for children and young adults aged 5 to 29 and kill 1.19 million people annually. In Nepal, road traffic injuries represent a significant portion of mortality, and the country recorded 70,832 injury cases in fiscal year 2081/82, with Bagmati Province reporting 19,376 cases and Karnali reporting 2,421 cases. The Ministry of Health and Population continues to work within a five-pillar road safety action plan to reduce deaths by 50 percent by 2030 by establishing a comprehensive trauma care system and improving post-crash response across all levels of government.

Public Health Laboratory Services

The National Public Health Laboratory serves as Nepal's national reference center for diagnostic services and disease surveillance, operating under ISO 15189:2022 accreditation. During the fiscal year 2081/82, the institution served 172,782 patients and performed a total of 832,491 tests, which marks a steady increase from the 795,293 tests conducted in 2080/81 and 600,099 tests in 2079/80. The laboratory is organized into specialized sections including non-communicable diseases, infectious diseases, quality control, and regulatory departments for laboratory and blood transfusion services.

The non-communicable disease section handled 462,642 biochemistry tests, 136,823 immunology and endocrinology tests, and 100,886 hematology tests during the reporting period. Specialized molecular diagnostics within this section included 4,454 HPV DNA PCR tests, which identified 36 cases of HPV type 16 and 23 cases of HPV type 18, as well as 19 HLA typing tests for renal transplant recipients and donors.

The department also introduced advanced testing capabilities such as next generation sequencing for breast cancer, immunofluorescence assays for anti-nuclear antibodies, and BCR-ABL quantitative and qualitative assays.

In the area of infectious disease surveillance, the microbiology unit processed 8,977 bacteriology samples with 807 showing growth and 178 fungal culture specimens with 35 positive results. Antimicrobial resistance surveillance is now conducted across 26 sites monitoring 12 organisms, with 382,507 total tests yielding 53,740 positive samples for a 14 percent overall positivity rate. Vaccine-preventable disease monitoring included 2,128 tests for measles and rubella which identified 72 and 88 positive cases respectively, while 930 samples were tested for Japanese Encephalitis with 80 positives. Environmental polio surveillance involved 197 samples, and rotavirus surveillance conducted 1,110 tests with 123 positive findings.

The National Influenza Centre performed 5,144 total tests, dominated by 3,653 influenza-SARS-CoV-2 multiplex assays and 478 respiratory syncytial virus tests specifically for children under two years of age. Diagnostic influenza testing of 967 samples identified 59 cases of H1N1, 122 cases of H3, and 31 cases of influenza B Victoria lineage. The HIV Reference Laboratory performed 17,654 viral load tests, achieving an 83.15 percent viral load suppression rate among 14,679 patients, and conducted 177 early infant diagnosis tests resulting in 17 positive cases. Additionally, the unit performed 1,776 hepatitis B and 10 hepatitis C viral load tests.

Regulatory and quality control activities involved the registration of 18 Category A and 96 Category B laboratories, with onsite inspections conducted for 45 laboratories and 16 blood banks. The national blood transfusion program recorded 114,961 blood transfusions with 201 minor reactions and no major reactions, while the use of blood components increased to 78 percent compared to 22 percent whole blood usage. National External Quality Assurance Programs reached 879 enrolled laboratories in the most recent cycle. To support future research, a biorepository unit established in 2023 systematically stores clinical specimens and microorganisms using specialized tracking software. New infrastructure installed during the year includes a BSL containment unit, digital PCR, and an Abbott Alinity system.

Human Resource Capacity Building

The National Health Training Center, established in 2050 BS, serves as the central agency for health workforce development in Nepal by managing a network of six provincial training centers, one human resource development center in Karnali, and 67 accredited clinical training sites, including the recently added Trishuli Hospital. Its mandate involves policy formulation, curriculum design, and quality assurance to enhance the technical and managerial capacity of health service providers across the country.

In the fiscal year 2081/82, the center conducted 188 training programs reaching a total of 13,068 participants, which included 5,868 nursing staff, 3,790 Health Assistants and Auxiliary Health Workers, 1,896 Medical Officers, and 251 Public Health Officers and administrators. Since its inception in 2022, the Field Epidemiology Training Program has produced 185 frontline graduates and 81 mentors. Furthermore, the Biomedical Equipment Training unit increased its enrollment in the Diploma in Biomedical Engineering to 30 students and successfully repaired all 91 pieces of medical equipment it received during the year.

The center also focused on curriculum development by creating new training packages for General Training Skills, cold chain equipment repair, and Basic Emergency Care, while revising seven existing materials such as those for gender-based violence response and adolescent sexual and reproductive health. Strategic progress includes the drafting of the National Health Training Strategy 2081 to 2087 and the Field Epidemiology Training Program Strategic Roadmap 2025 to 2030. Additionally, an online electronic library was launched and a virtual learning platform is currently under development to improve access to educational resources.

The Vector Borne Disease Research and Training Center, which was established in 1979, achieved a 92 percent physical achievement rate and a 63.10 percent budget absorption rate in fiscal year 2081/82, spending 14.9 million rupees out of a 23.61 million rupee budget. For the upcoming 2082/83 fiscal year, the center plans to integrate medico-legal training into pre-service education and conduct new training sessions for geriatric care, antimicrobial resistance, and disability management.

Significant challenges remain, including a lag in adopting technology-based education like self-paced online learning and a lack of systematic coordination with local and provincial governments. There is also a recognized need to shift from theory-based instruction to practical skill development and to address the high demand for training with limited resources for monitoring and quality assurance. These issues are complicated by inadequate follow-up mechanisms and a focus on curative services rather than prevention and promotion.

Health Education, Information and Communication

The National Health Education Information and Communication Center (NHEICC) was established in 1993 as the federal government entity responsible for health promotion in Nepal. Operating under the National Health Communication Policy 2012 and the National Health Policy 2019, the center manages its mandates through four specialized sections focusing on health promotion, material development, communication coordination, and administration. It serves as the national focal point for tobacco and alcohol regulation as well as Risk Communication and Community Engagement, aiming to achieve Sustainable Development Goals through evidence-based health literacy and social behavior change communication.

In the fiscal year 2081/82, Nepal significantly advanced its tobacco control measures by endorsing the Graphical Health Warning Directive 2082, which

mandates 100 percent pictorial health warnings on packaging. The center also launched the national tobacco Quit Line 1132 on 19 Jestha 2082, providing counseling to 50 users within the first two months of its operation. Furthermore, the NHEICC facilitated Brief Tobacco Intervention workshops in Nepalgunj and distributed Nicotine Replacement Therapy at Bir Hospital to strengthen cessation services. Parallel efforts in alcohol control included the implementation of a 24-month SAFER roadmap endorsed in February 2023, the drafting of a comprehensive Alcohol Control and Regulation Bill for the Cabinet, and the organization of provincial advocacy workshops in Dharan and Pokhara.

The center utilizes the Risk Communication and Community Engagement Guideline 2021 to manage public health emergencies and reaches diverse populations through multi-language health messages. These outreach efforts included developing audio messages for HPV vaccines and breast cancer in 22 different languages, immunization messages in 15 languages, and extreme heat warnings in 5 languages including Awadi, Bhojpuri, and Maithali. All health communication materials were broadcasted through the provincial network of Radio Nepal and various national television channels to ensure inclusivity for marginalized and disabled groups.

Statistical data for fiscal year 2081/82 shows that a total of 100,732 health education sessions were conducted across the country, attracting 2,997,935 attendees in total. Lumbini province recorded the highest level of participation with 847,780 attendees across 28,196 sessions, while Karnali province saw the minimum engagement with 114,504 attendees and 4,153 sessions. At the federal level, the NHEICC achieved a 83 percent physical achievement rate and a 83 percent financial achievement rate for its program activities. Despite these successes, the center faces challenges such as limited human resources at the local level, inadequate budget allocation compared to health policy targets, and external threats like social media misinformation and interference from companies producing unhealthy commodities.

Logistics and Health Information Management Program

The Management Division of the Department of Health Services serves as the central secretariat for Nepal's health administration and manages three vital systems: the Health Management Information System, the Logistics Management Information System, and the Health Infrastructure Information System. The Health Management Information System has successfully transitioned to an open-source District Health Information System 2 platform that is now operational across all 753 Local Level Governments and utilizes a suite of 68 recording tools and 5 reporting tools. For the fiscal year 2081/82, the system maintained high reporting integrity with 100 percent of Basic Health Service Centers and 97 percent of public hospitals providing data, while Female Community Health Volunteers reported at 98 percent and non-public hospitals at 67 percent. Digital health infrastructure is expanding, with 55 percent of facilities now equipped with computers and internet access and 26 percent having communication equipment, supporting a roadmap that has already mapped the geo-locations of 6,008 health facilities.

The logistics landscape is managed through the electronic Logistic Management System which currently oversees 6,809 live sites, including 5,857 service delivery points, 772 local level stores, and 149 district health offices. National logistics reporting for the current fiscal year reached 98 percent, with timely reporting showing a significant improvement from 89 percent in the previous year to 94 percent currently. Real-time stock visibility indicates that paracetamol has a low stock-out rate of 4 percent, while essential commodities like Zinc Sulphate and contraceptive pills face higher stock-out rates of 11 percent and 12 percent respectively. The Department of Health Services managed a procurement budget of 1,974.35 million Nepalese Rupees for the fiscal year 2081/82, with the Management Division receiving the largest allocation at 55.01 percent for hospital equipment. Procurement performance remains robust with 92.59 percent of the 54 planned packages being initiated and 90 percent of those initiated being successfully completed.

Environmental health and infrastructure standards are increasingly prioritized, with 12,500 inventory stickers recently distributed to label biomedical equipment across federal and provincial hospitals. According to the 2024 Joint Monitoring Programme report, Nepal has achieved 83 percent coverage for basic water supply and 70 percent for basic hand hygiene in healthcare facilities, though sanitation remains low at 21 percent. Waste management is a critical area for improvement, as only 13 percent of facilities have basic healthcare waste management and the sector produces between 0.99 and 1.73 kilograms of waste per bed daily. Climate resilience efforts are being tracked through studies showing the health sector contributes 1,164,719 tons of carbon dioxide equivalent, or 4.1 percent of Nepal's total greenhouse gas emissions. To address these environmental challenges, the WASH FIT program has been expanded to 36 district hospitals to ensure they meet the national standards for water, sanitation, and hygiene

Management Division (MD) administers comprehensive management functions within DoHS and functions as secretariat to DG, DoHS under which HMIS, LMIS, and HIIS are the three vital systems being smoothly implemented. Integrated Health Information Management Section (IHIMS) plays a crucial role in managing health-related routine service data and information from FCHVs to federal level. HMIS conducted series of activities in FY 2080/81, notably, data verification and validation, onsite coaching at hospitals, annual reviews and contribution to NJAR (including health fact sheets) were the major highlights. IHIMS Roadmap 2022-2030 AD has emphasized the establishment of a comprehensive dashboard for all local, provincial, and federal levels. Under which review meetings with LLGs, orientation program to staffs of LLGs and regular supervision, monitoring and technical support were provided. IHIMS also provided eLMIS support activities across the nation including toll free helpline, troubleshooting guidelines, onsite coaching and training, and forecasting and quantification workshops at central and provincial levels. In FY

2080/81 HPs and PHCCs had 100% reporting status with reporting status of FCHVs being 99.6% and for public hospitals it was 90.4%. There were total 5,425 health facilities reporting through LMIS. The total reporting percentage was 99% while timely reporting percentage was 89%.

Human Resources for Heath and Health Finance Management

Human resource in health (HRH) is an essential Human resource in health constitutes an essential building block of Nepal's health system, comprising two-thirds service providers and one-third management and support staff. Registration data indicates a distribution of 9.04 doctors, 21.08 nurses, 20.67 auxiliary health workers, 11.81 auxiliary nurse midwives, 10.27 laboratory personnel, and 5.97 health assistants per 10,000 population. However, these figures do not fully reflect actual enrollment, as only 73.4 percent of all sanctioned posts within the Ministry of Health and Population are currently filled. Cadre-specific fulfillment rates reveal significant gaps, with paramedics at 75.7 percent, nurses at 74.3 percent, medical officers at 53.9 percent, and physicians or general practitioners at a low of 37.9 percent. Geographically, Karnali Province faces a critical shortage with no consultants, physicians, or general practitioners in sanctioned positions. Systemic issues such as low basic pay scales, reliance on contract workers, and increasing emigration further challenge the workforce, despite efforts like the two-year service bond for medical graduates under the Medical Education Policy 2080 and various strategic plans spanning from 2021 to 2030.

Health finance management in Nepal aims for universal health coverage and sustainable development goals, though the system remains burdened by a high out-of-pocket expenditure rate of 54.2 percent. The national health financing strategy for 2023 to 2034 focuses on expanding fiscal space and ensuring social protection through risk pooling. For the 2081/82 fiscal year, the Department of Health Services network was allocated a total budget of 12,713,138,000 Nepalese rupees, achieving an overall absorption rate of 80.18 percent. The budget distribution across government levels shows the federal level holding 57.8 percent, local levels 35.9 percent, and provinces 6.3 percent. Specifically, the Nursing and Social Security Division managed the highest share of the budget at 36.83 percent and achieved a 98.66 percent absorption rate with 100 percent physical progress. Conversely, the Curative Service Division reported the lowest absorption rate at 31.47 percent. Fiscal transfers indicate a 5.09 percent decrease in conditional grants to provinces, while local levels saw a 1.86 percent increase, led by rural municipalities at 3.11 percent. Financial accountability remains a challenge, with total irregularities reaching 4,977,980,000 Nepalese rupees by the 2080/81 fiscal year and only 16 percent of previous irregularities cleared by the end of the 2079/80 period.

Department of Ayurveda and Alternative Medicine (DoAA)

The Department of Ayurveda and Alternative Medicine (DoAA) serves as the apex body under the Ministry of Health and Population in Nepal, overseeing a traditional healthcare system that relies on over 400,000 practitioners. The current institutional framework consists of 6 federal-level facilities, including the National Ayurveda Research and Training Center and Pashupati Homeopathy Hospital, along with 4 provincial hospitals located in Jhapa, Dang, Surkhet, and Kailali. The network further extends to 75 district-level Ayurveda health centers, 305 Ayurveda Aushadhalaya, and 300 newly established Nagarik Arogya Kendra (Citizen Wellbeing Centers) to improve local access. In the fiscal year 2081/82, a total of 2,405,977 individuals utilized Ayurveda services across the country, with Lumbini province recording the highest engagement at 539,900 users. Key service indicators show that per 10,000 population, there were 2,288 users of Purba-pancha karma, 837 users of yoga services, and 203 postnatal women who received Satawari powder.

The clinical data reveals that abdominal disorders were the most frequent morbidity among users with 143,522 cases, followed by osteoarthritis at 140,899 cases and respiratory cough at 107,201 cases. Other significant health issues addressed included hemorrhoids with 92,403 cases, rheumatoid arthritis with 90,293 cases, hypertension with 75,326 cases, and lumbago with 63,595 cases. Additionally, 56,979 individuals sought treatment for diabetes (Madhumeha), reflecting a growing preference for Ayurveda in managing chronic and non-communicable diseases. In the homeopathy sector, the Pashupati Homeopathy Hospital provided clinical services to 52,792 users, while the total number of users for basic health homeopathy services reached 26,462. The most common homeopathic treatments included 7,800 cases of arthritis and 7,150 cases of acidity or gastritis, with specialized health camps serving an additional 1,030 users.

Financial management for the sector included a budget allocation of NPR 3,37,45,000 for homeopathic services, which achieved a 97 percent expenditure rate totaling NPR 3,27,36,632. A separate allocation of NPR 1,300,000 was designated for health camps, which saw an 87.25 percent utilization rate. For quality assurance, the department developed and implemented Minimum Service Standards (MSS) across four institutional levels and maintained an overall reporting rate of 80.5 percent in the Ayurveda Health Management Information System. Bagmati province achieved the highest reporting efficiency at 98.3 percent. Strategic priorities under the sixteenth plan include the development of health tourism and the integration of traditional medicine into the broader health system, though progress is currently hindered by insufficient budget allocations, limited employment opportunities for specialized human resources, and the absence of health insurance coverage for these services.

Department of Drug Administration (DDA)

The Department of Drug Administration was established on Kartik 1st, 2036 B.S. as the central authority responsible for implementing the Drug Act 2035 and the National Drug Policy 1995. Its core mandate is to ensure the availability of safe, effective, and quality-assured medicines while regulating the production, import, and distribution of allopathic, ayurvedic, homeopathic, and veterinary products. The department operates

through three major divisions and is supported by the National Medicines Laboratory and three branch offices in Biratnagar, Birgunj, and Nepalgunj. Current regulatory tools used for enforcement include the Drug Registration Regulation 2038, the Drug Sales and Distribution Codes 2080, and the National Codes on Good Manufacturing Practices 2082.

Performance data from the fiscal year 2081/82 shows significant activity, with the department conducting 2,791 inspections of retailers and wholesalers, which represented a 121.3 percent achievement of its original target. During this period, the department renewed 15,059 pharmacy registrations, registered 2,064 new pharmacies, and de-registered 1,158 outlets. Legal enforcement resulted in 97 court cases filed for violations of the Drug Act and the recall of 28 inferior quality medicines from the market. The department also processed 315 new foreign medicine registrations and 16 new foreign industry registrations. Public information efforts reached 153 percent of the set target, while drug sample analyses reached a total of 648 tests.

Strategic goals for the department include elevating its regulatory status from the current WHO Maturity Level 1 to Maturity Level 3 by the year 2027. Domestic production of essential medicines currently sits at 51.84 percent, but the department has set targets to increase this to 60 percent by 2027 and 70 percent by 2030. Currently, 65 percent of domestic pharmaceutical industries are WHO Good Manufacturing Practices certified, with a projection to reach 90 percent by 2027 and 100 percent by 2030. These targets aim to reduce import dependency and strengthen the national pharmaceutical sector through improved compliance and technical capacity.

Despite these objectives, the department faces critical resource challenges, operating with a total of only 115 staff members and fewer than 24 drug inspectors for the entire nation. A SWOT analysis identifies strengths in the existing legal framework and laboratory infrastructure, but highlights major weaknesses such as outdated facilities, the lack of an integrated digital regulatory system, and the absence of a dynamic price regulation mechanism. External threats include rising antimicrobial resistance, illegal drug trafficking across open borders, and the proliferation of unregulated online pharmacies. Future priorities focus on establishing a fully digital e-DDA system, achieving international accreditation for the National Medicines Laboratory, and expanding regulatory services to provincial and local levels.

Health Insurance Programs

The Health Insurance Program in Nepal, managed by the Health Insurance Board, serves as a primary mechanism to achieve universal health coverage and reduce the financial burden of catastrophic health expenditures. In the fiscal year 2081/82, the program implemented several key legislative and operational updates, including the first amendments to the Health Insurance Act 2074 and the Health Insurance Regulation 2075. It also saw the development of the Health Insurance Strategic Roadmap for the period of 2081/82 to 2086/87 and provided NPR 12,815,442,993.00 for reimbursement of claims evaluated in the previous year. To improve operational efficiency, the program trained 342 human resources from 156 service providers on the Insurance Management Information System and empaneled 32 new health facilities.

The national status of active insuree enrollment has grown steadily from 16 percent in 2079/80 to 20 percent in 2081/82, which accounts for 5,970,403 individuals. At the provincial level, Gandaki province maintains the highest active population coverage at 36 percent, followed by Koshi province at 35 percent, while Madhesh province has the lowest coverage at only 8 percent. Household coverage has also increased to 32 percent nationally, representing 2,128,830 households. Similar to the population trends, Gandaki province leads with 47 percent active household coverage, whereas Madhesh province reports the lowest at 21 percent.

Policy renewal rates suggest a positive trend in perceived value, with the national renewal rate reaching 79 percent in 2081/82. Out of the total active insurees, 4,742,416 individuals renewed their policies during this period. Koshi province recorded the highest renewal rate at 84 percent, while Madhesh province had the lowest at 67 percent. Service utilization among active insurees was recorded at 42 percent nationally, meaning 2,511,405 individuals utilized health services. Bagmati province saw the highest service utilization at 52 percent, while Madhesh province had the lowest at 30 percent.

Cumulatively, the program has reached 3,024,288 families, which is 43 percent of the total families in the country, and 9,874,415 individuals, representing 33 percent of the total population. The health service delivery network has expanded to include 486 empaneled health facilities as of 2081/82, an increase from 454 in the previous fiscal year. This network consists of 409 government hospitals, 31 community hospitals, and 46 private hospitals. Bagmati province has the highest concentration of providers with 118 facilities, while Sudurpashchim and Karnali provinces currently have no private health service providers empaneled under the program.

The program is supported by a strong legal framework and government commitment, yet it faces significant challenges such as a lack of permanent organizational structure and unfilled staff positions. Supply-side constraints including shortages of drugs and diagnostics, along with delays in claim settlements, impact provider trust and service delivery. Additionally, the voluntary nature of enrollment leads to risks of adverse selection. Moving forward, the program looks to capitalize on opportunities such as international commitments to universal health coverage and the integration of digital health governance for strategic purchasing.

Councils for Health Professionals and Health Research

The Ministry of Health and Population manages five health professional councils and one health research council as autonomous bodies to ensure quality treatment and ethical practices through regulation and quality assurance. The Medical Education Commission,

established in 2019 and chaired by the Prime Minister, serves as the apical body to integrate and regulate health professional education, managing integrated entrance examinations, seat allocations, and tuition fees. Prior to this commission, individual councils held the mandate for quality control of their respective educational fields.

The Nepal Medical Council functions with a nineteen member board and oversees a cumulative total of 39,486 registered medical practitioners and 12,063 specialist doctors as of the latest fiscal year. In the most recent reporting period, the council registered 1,719 new MBBS doctors, 403 BDS doctors, and 1,168 specialist doctors. Licensing examination pass rates reached 61.6 percent for bachelor levels and 83.85 percent for special examinations, while the council issued 2,681 good standing certificates, with 587 destined for the United States and 550 for the United Kingdom. Additionally, the council handled 51 ethical investigation complaints and issued verdicts for 23 cases during the year.

The Nepal Ayurveda Medical Council regulates a total of 6,512 professionals, including 4 PhD holders, 187 postgraduate doctors, 1,125 BAMS practitioners, and 3,374 auxiliary Ayurveda health workers. Meanwhile, the Nepal Nursing Council manages a workforce of 86,358 registered professionals, of which 37,852 are auxiliary nurse midwives. Recent nursing registrations include 1,689 PCL nurses and 503 B.Sc. nurses, with the council issuing 6,172 good standing certificates and transitioning all licensing streams to computer based examinations.

The Nepal Pharmacy Council oversees 24,004 registered pharmacy professionals, consisting of 8,053 pharmacists and 15,951 pharmacy assistants. During the latest licensing examinations, 1,960 out of 6,138 bachelor level candidates and 3,671 out of 9,285 diploma level candidates passed. The Nepal Health Professional Council acts as an umbrella for 37 categories of allied health professionals and conducted exams for 16,508 total candidates with an overall pass rate of 46.14 percent. This included 6,223 successful PCL level candidates, 1,191 at the bachelor level, and 202 at the master level.

The Nepal Health Research Council serves as the national body for research coordination and approved 655 out of 816 health research protocols through its Ethical Review Board. The council oversees 64 institutional review committees across the country and organized a national summit that attracted over 1,200 in person participants. Major challenges across these regulatory bodies include inadequate budget allocations, limited physical infrastructure such as examination halls, and the need for further digital transformation to manage growing workloads and complex disciplinary investigations.

Health Development Partners

Since 2002, the Government of Nepal has utilized a Sector-Wide Approach to align external aid with national priorities to achieve Universal Health Coverage and the Sustainable Development Goals. This coordination is governed by the Foreign Aid Policy 2002 and the Development Cooperation Policy 2014, ensuring that Health Development Partners integrate their investments into the Nepal Health Sector Strategic Plan 2023-2030 and the Annual Work Plan and Budget. The World Bank provided one of the largest financial contributions by dispersing NPR 1,786,439,447.2 into the national treasury to improve healthcare readiness and biomedical equipment maintenance specifically in Koshi and Gandaki Provinces. The World Health Organization committed NPR 1,259.01 million for nation-wide programs focusing on immunization surveillance, the elimination of communicable diseases like tuberculosis and malaria, and the development of non-communicable disease and mental health policies.

Other major contributors include FHI 360 Nepal, which managed a budget of NPR 1,456.50 million across all 77 districts to address HIV, procurement supply chains, and global health security. Care Nepal invested NPR 1,024.75 million in the Madhesh, Lumbini, and Karnali provinces for nutrition and maternal health services. The Nick Simons Foundation International allocated NPR 786.63 million with a 94 percent absorption rate to support 40 hospitals with curative services and 127 hospitals with system strengthening. UNFPA dedicated NPR 733.997 million for nation-wide reproductive health and gender-based violence response, while UNICEF achieved a 100 percent absorption rate of its NPR 506 million budget for vaccine procurement and maternal care in four provinces.

Bilateral agencies also played a significant role, with the German Development Cooperation through KfW providing NPR 286.18 million for infrastructure reconstruction and NPR 301.24 million for rural maternal and child care. KOICA utilized NPR 345.45 million for maternal health projects in five provinces, and GIZ allocated EUR 2.2 million to support health insurance and digitalization. International non-governmental organizations like Marie Stopes International contributed NPR 416.09 million for social marketing and reproductive health, while Save the Children invested NPR 342.67 million in TB, HIV, and malaria programs across all seven provinces. One Heart Worldwide focused NPR 261.32 million on birthing center renovations and clinical training in multiple districts.

Despite these extensive investments, the sector faces key issues including limited reporting of private sector delivery, funding gaps, and the low prioritization of mental health and neglected tropical diseases. Operational delays in project approvals from the Social Welfare Council and challenges in integrating digital health systems also persist. To address these, the strategic way forward involves strengthening inter-governmental coordination, integrating private sector engagement into national systems, and implementing standard operating procedures to ensure the sustainability of health initiatives across Nepal.

1 Introduction

Nestled in the heart of South Asia, Nepal is a land-locked country defined by its breathtaking diversity, spanning the heights of the Himalayas to the fertile plains of Terai. Home to more than 29 million people, Nepal stands as multi-ethnic, multi-lingual and multi-religious identities, all coexisting in enduring harmony within its three main ecological regions: Mountain, Hills, and Terai. The Constitution of Nepal 2015 AD (2072 B.S) upholds the country into a federal parliamentary republic nation, and sub-divided into provinces and local levels. Today the health sector operates across a decentralized landscape consisting of seven distinct provinces (Koshi, Madhesh, Bagmati, Gandaki, Lumbini, Karnali, and Sudurpaschim) and 753 local levels (also known as 'Palikas'), ensuring that the fundamental right to health reaches every citizen, regardless of their ecological or social standing. This administrative evolution is central to the nation's mission of providing equitable health services from the urban centers of capital to the remote reaches of the country.

Nepal has achieved a milestone in public health, with average life expectancy now reaching 71.3 years, with women (73.8 years) outliving men (68.2 years). This reflects a remarkable gain of almost 22 years in 40 years period, and is a great achievement for Nepal. However, this longevity brings new complexities. Nepal now faces a 'triple burden' of disease: the persistent challenge of communicable diseases, the rising tide of non-communicable conditions, and the growing impact of injuries. This shift has led to an increase in Disability-Adjusted Life Years (DALYs), underscoring an urgent need for a more comprehensive, accessible, and data-driven healthcare framework to address the evolving needs of its population.

1.1 Health System in Nepal

The role of the health system has transcended traditional clinical care to modern medicine to become a cornerstone of national stability and individual well-being. However, in an increasingly interconnected world, health system is more than just a network of facilities; it is a dynamic ecosystem of people, resources and activities designed to safeguard the lives of the nation's citizens. Outlined as the sum of all organizations, institutions, resources and actions whose primary intent is to improve health, the health system is the means through which national prosperity is achieved. As we move through fiscal year 2081/82, Nepal recognizes that improving the health indicators requires more than just medical advancement; it demands a system capable of equitable service delivery with operational efficiency across all levels of governance.

1.1.1 Before the Primary Health Care (PHC) Movement

The history of the healthcare system in Nepal has evolved over many centuries, with traditional medical practices rooted in herbal remedies coexisting alongside contemporary medicine. These practices persisted, especially for medical conditions lacking effective modern alternatives. However, prior to the expansion of medical knowledge in the modern era, there were limited means to prevent diseases and treat ailments.

Until 935 BS (879 AD), Nepal's health system was primarily based on traditional medicine, especially Ayurveda. Health promoting practices such as safe motherhood and the immediate cutting of the umbilical cord after childbirth were introduced, along with a code of conduct aimed at ensuring non-discrimination in healthcare services.

Throughout the 104-year duration of the Rana regime (1903 – 2007 BS / 1847-1951 AD), a significant amount of effort was dedicated to the strengthen traditional medicine system, and development and advancement of Nepal's modern healthcare system. In the year 1872/73 BS (1816 AD), smallpox vaccination was introduced, and the rulers-initiated efforts to establish modern hospitals and Ayurveda health facilities for accessible services. The establishment of the Bir Hospital in 1947 BS (1889 AD) marked the institutionalization of the modern healthcare system in Nepal. To further advance healthcare services, the Civil Medical School was founded in Kathmandu in 1934 AD, with a primary focus on training dressers and compounders. By 1951 AD, each of the then thirty-five districts in Nepal had been equipped with at least one hospital or dispensary, significantly strengthening the country's healthcare infrastructure. This period witnessed the establishment of numerous hospitals and dispensaries, contributing to the growth of Nepal's healthcare system.

Before 1972 AD, Nepal lacked medical institutions, requiring aspiring physicians to seek education abroad. The landscape changed significantly with the inception of the Institute of Medicine (IOM) under Tribhuvan University in 1972 AD. In 1975 AD, the Government of Nepal took a significant step toward providing fundamental health services nationwide by announcing plans to establish 1462 health posts. Subsequently, in 1978 AD, the government adopted the health for all strategy as part of the primary healthcare system. Vertical public health programs were continuously implemented alongside the establishment of the health facilities for curative services (Box 1.1)

Box 1.1 Important milestones in the health system of Nepal before 1978 AD

Year BS (AD)	Major milestone
935 (879)	Traditional medicine based
1698-1731 (1641-1674)	Ayurveda dispensary in Hanuman Dhoka Royal Palace complex
1872/73 (1816)	Introduction of smallpox vaccine
1906/1907 (1850)	Khokana Leprosy Asylum
1946/47 (1889/90)	Bir hospital- first institutionalization of modern health care system
	Cholera Hospital, Teku
	Singhadurbar Vaidyakhana
1974/75 (1918)	Naradevi Ayurvedic Hospital was established
1980/81 (1924)	Lalitpur Hospital in Patan (Present Patan Academy of Health Sciences)
1981/82 (1925)	Tri-Chandra Military Hospital
1989/90 (1933)	Establishment of Department of Health Services (DoHS)
1990/91 (1934)	Civil Medical School was established
1991/92 (1935)	Tokha Tuberculosis Sanatorium (40 bed) came in operation
1992/93 (1936)	Rajkiya Ayurvedic Vidhyalaya
1993/94 (1937)	Leprosy department and treatment center
2010/11 (1954)	Launch of Nepal Malaria Control Program
	Tansen United Mission Hospital
2012/13 (1956)	First General Health Plan in five-year development plan
2013/14 (1957)	Civil Medical School
2014/15 (1958)	Nepal Malaria Eradication Program was launched
	One health center in each 105 electoral constituency
2015/16 (1959)	Paropakar Maternity and Women's Hospital
2018/19 (1962)	Kanti Children Hospital
	Family planning and maternal child health program
2019/20 (1963)	Anandaban Leprosy Hospital
2020/21 (1964)	Regionalization of health services- establishment of zonal hospitals,
	ICU/CCU opened in Bir Hospital
2028/29 (1972)	Institute of Medicine (IoM) under the Tribhuvan University
2030 (1974)	Nepal Eye Hospital established as first eye hospital
2031/32 (1975)	Declared to establish 1462 health posts throughout the country

1.1.2 PHC movement to commitment for Millennium Development Goals (MDGs)

Amidst the decentralization of country's healthcare delivery system and the formulation of its initial long-term health plan 2034/35 – 2046/47 BS (1978-1990 AD), the Government of Nepal (GoN) committed to the Primary Health Care (PHC) approach in 1978 AD and adopted the health for all strategy. This commitment facilitated community engagement and participation.

The establishment of the first regional hospital in Pokhara in 1986 AD marked a pivotal moment, followed by the establishment of similar hospitals in other regions. Additionally, in 1988 AD, the Female Community Health Volunteer Programme was launched, further contributing to Nepal's evolving healthcare landscape. Specifically, the formalization of modern health services took place with the establishment of the Department of Health Services (DoHS) in 1989/90 (1933).

In response to public expectations following the 1990 AD political transition, Nepal approved and implemented its first National Health Policy, 1991, resulting in the establishment of modern healthcare facilities at the local level. Specialized hospitals were also founded to address non-communicable diseases. The government's adoption of a liberal economic policy in the same year paved the way for the establishment of private medical colleges and hospitals, which have since become significant players within the Nepalese health system. Likewise, the National Drug Policy was formulated in 1995 AD.

To strengthen healthcare infrastructure, all 75 districts were equipped with district health offices, and the government established regional health directorates in five regions. In 1996, legislation was introduced to establish hospitals as autonomous bodies, with the BP Memorial Cancer Hospital being the first hospital established under this legislative framework. Subsequently, a new perspective plan was formulated and endorsed as the Second Long-Term Health Plan 2053/54- 2073/74 BS (1997-2017 AD), focusing on providing quality essential health care services (EHCS) and ongoing restructuring of health services, strengthening the district health system.

Aligned with the Poverty Reduction Strategy Paper, MDGs and Tenth Five-Year Plan 2058/59- 2063/64 BS (2002-2007 AD), GoN formulated the Health Sector Strategy: An Agenda for Reform 2060/61- 2065/66 BS (2004-2009 AD) to provide an equitable, high-quality healthcare system.

A Sector-Wide Approach (SWAP) in health was developed in the early 1990s in response to widespread dissatisfaction with fragmented donor-sponsored projects. The implementation of a sector-wide approach (SWAP) under the Paris Declaration and joining the International Health Partnership (IHP+) in 2063/64 BS (2007 AD) addressed coordination challenges, fostering establishment of health facilities nationwide, including multispecialty centers and domestic health workforce production.

The mass movement (Jana Andolan) in 2062/63 BS led to revolutionary changes, a peace agreement, and the formation of an interim government, making Nepal a Federal Democratic Republic. Furthermore, aligning with the principles outlined in the Nepal interim constitution of 2007, the National Health policy, 2014 prioritized inclusive, cost-free fundamental health services. As a result, Nepal went on track to achieve MDGs related to child health (MDG4) and maternal health (MDG5). The health sector efforts resulted in effectively controlling communicable diseases and country's progress towards MDG6 (HIV/AIDS and TB). This success resulted from policy reforms, partnerships, SWAP adoption, and a health sector reform strategy, leading to improved health outcomes and increased resources.

Building on lessons from the first sector strategy, Nepal Health Sector Program II (NHSP-II) 2066/67-2072/73 (2010-2015) prioritized health and nutrition improvement, poverty reduction through equitable healthcare access, and reduced catastrophic health expenses. During NHSP-II, the EHCS package expanded to address Nepal's health care needs, incorporating mental health, oral health, environmental health, community-based new-born care, community-based nutrition care, and support. NHSP-II also included a NCDs control component to address demographics and disease transition. Public-private partnerships, governance, accountability, inter-sectoral coordination, and sustainability were emphasized.

Under coordinated actions, Nepal achieved all targets for child health, reducing infant mortality rate (IMR) and under-five mortality rate (U5MR), and increasing measles immunization. IMR dropped from 64 in 2056/57 BS (2000 AD) to 33 per 1,000 live births in 2071/72 BS (2015 AD), achieving the MDG target early. U5MR declined from 91 in 2000 to 38 in 2071/72 BS (2015 AD). Maternal health achievements were notable, with a decline in maternal mortality ratio (MMR) from 850 in 2047 BS (1990 AD) to 258 in 2071/72 BS (2015 AD). However, progress has been uneven across ethnic groups and geographical regions. Challenges include emerging issues (birth defects, child violence, injuries, accidents), climate change, and inequitable improvement in maternal, new-born and child health related outcomes. Also, in the limited fiscal space designated for health sector, to complement governments' efforts there remains need of health development partners' (HDPs) focused efforts for further improvement.

Amidst a gradual, steady and notable progress in health outcomes, additional challenges such as natural disaster crippled the health system, impeding further to progress in health status of the country. Nepal faced a powerful earthquake in Baishak 2072 BS (April 2015 AD). The Health Emergency Operations Center (HEOC), established in 2071 BS (2014 AD), played a crucial role in disaster response, ensuring coordinated delivery of health services. The earthquake resulted in 8,962 deaths, 22,302 injuries, and damage to infrastructure, including health facilities. Despite challenges, the health sector demonstrated resilience, emphasizing the importance of a robust health system. The agenda of post-disaster recovery and resilience was henceforth added in the next health sector strategy.

1.1.3 Nepal Health Sector Strategy and Sustainable Development Goals (SDGs)

Between 2047 and 2071 BS (1990 and 2014 AD), Nepal witnessed significant advances in healthcare, characterized by remarkable reductions in under-five and infant mortality rates, along with notable progress in maternal mortality. Achievements in disease control initiatives, such as advancements toward polio eradication and leprosy elimination, were evident. However, persistent health challenges, including stagnated neonatal mortality, malnutrition, and gender inequality, necessitated a nuanced approach to address financial, socio-cultural, geographical, and institutional barriers to healthcare access and utilization.

Nepal entered the federal structure of governance after the promulgation of the new constitution in 2015. The Constitution of Nepal establishes health as a fundamental right for the people. As the nation undergone a transformation, the health sector is significantly affected in its operation and management. In Nepal, the three tiers of government have been provided with specific areas of rights and duties to plan their independent but coordinated action in the health sector. Local and state governments have also started delivering health services after the implementation of federalism in Nepal. Furthermore, the basic health services (BHS) are guided by Public Health Service Act 2075 BS and Public Health Service Regulation 2077 BS. Nepal's equity-based approach and aspirations for rapid, sustainable development resonate strongly with the SDGs.

In 2072 (2015), Nepal Health Sector Strategy (NHSS) 2071/72-2077/78 BS (2015-2020 AD) was endorsed under the National Health Policy 2071 BS (2014 AD), alongside insights from the 2072 BS (2015 AD) earthquake and alignment with the newly promulgated constitution of Nepal in 2015 AD. This strategy focused on ensuring universal health coverage (UHC) through equitable access, quality health services, health systems reform, and multi-sectoral approaches. In advancing UHC, NHSS has outlined service delivery arrangements, highlighting BHS and social health protection. In Chaitra 2072 BS (April 2016 AD), the GoN initiated health insurance program to offer social protection among its citizens.

In 2017 AD, there was a definitive transfer of basic health services to local governments, further reshaping the healthcare landscape in Nepal. To enhance the quality of services, several regulatory bodies/councils have been active in ensuring quality and regulating human resources, health services, and health researches.

The resilience of Nepal's health sector was rigorously tested during the COVID-19 pandemic. The response, characterized by the rapid activation of the Health Emergency Operation Center (HEOC) and an efficient vaccine rollout, demonstrated the adaptability and commitment of the healthcare system. Despite initial challenges, Nepal succeeded in swift resumption of the health services and vaccinating a significant proportion of the population to halt the spread of the disease. Additionally, there were initiatives taken amidst pandemic, from the government to establish hospitals in each LLGs to ensure access and availability of health services in the LLGs. However, effectively managing the necessary resources for operations and securing an adequate workforce to provide services pose significant and thoughtful challenges

Under the leadership of MoHP, a comprehensive National Action Plan on SDG3-Global Action Plan 2076/77- 2078/79 (2020-2022) was formulated and presented at the United Nations in September 2019. Focused on enhancing the quality of basic health care services, evidence-based decision-making, response to social determinants of health, and capacity building across government levels, this plan sought to institutionalize the quality of care and a national health care quality framework (endorsed in 2079). In these difficult times, MoHP strategically took the rapid result initiative approach and endorsed National Health Financing Strategy (NHFS) 2080-2090 (2023/24-2033/34) guiding the health sector investments in two major areas ensuring equitable access to quality health services and reducing financial hardship of the population and managing financial resources for health and their effective financial management.

As the first sector-wide strategy in Nepal's federal era, the National Health Sector Strategic Plan (NHSSP) 2023–2030 provides a transformative framework to sustain past gains, address emerging health challenges, guarantee citizen's constitutional right to free basic health services, accelerate progress toward Universal Health Coverage (UHC), and offers a unified direction for achieving the health-related Sustainable Development Goals (SDGs) by 2030. The current Nepal Health Sector Strategic Plan (NHSSP) was developed in alignment with Nepal's federal structure, considering the health-related constitutional mandates and provisions outlined in the Public Health Service Act 2075 BS, National Health Policy, periodic plans, and other related policy documents. The NHSSP is envisioned as an instrument to achieve universal health coverage, especially as Nepal transitions from a Least Developed Country (LDC) to a developing country. It emphasizes a strengthened Sector-Wide Approach (SWAp) by aligning domestic and international resources across all three tiers of government; federal, provincial, and local. It aims to continue and strengthen the SWAp, as outlined in the development cooperation policy, to address the major unfinished health agendas. The primary focus of the strategic plan is to improve the health status of all citizens by creating an environment that enables every individual to access optimal health services.

1.2 Health Service Delivery in Nepal

Nepal's health system is formed on the foundation of comprehensive and inclusive approach that ensures accessibility, quality assurance and responsiveness to the growing health concerns. The continuous commitment to UHC and alignment with global development goals places Nepal's healthcare system on a path of continuous improvement and resilience.

The Constitution of Nepal 2015, recognizes health as a fundamental right of its citizens. As outlined in the article 35 of the constitution, Nepali citizens have

rights to exercise the provision of free basic health services from the state, emergency health services, information about his/her medical treatment, equal access to health services and access to clean drinking water and sanitation.

Health service delivery systems in Nepal encompasses Allopathic, Ayurvedic, Homeopathic, Unani, Naturopathy, Amchi, Acupuncture/Acupressure, Yoga and other indigenous practices, with a mix of both public and private sectors. The health system underwent and is in continuous restructuring at the federal, provincial, and LLGs, adapting to exercise authority and fulfil constitutional mandates at each level of government.

At the federal level, MoHP has five divisions (The Policy, Planning & Monitoring Division; the Health Coordination Division; the Quality Standard & Regulation Division; the Population Management Division and the Administration Division) and one unit (Health Emergency and Disaster Management Unit) which are responsible for managing the policy framework, planning, setting standards, coordination, monitoring, and supervision. Immediate implementation and further planning of MoHP activities are conducted through three departments, viz. the Department of Health Services (DoHS), Department of Ayurveda and Alternative Medicine (DoAA), and Department of Drug Administration (DDA).

These three departments are responsible for formulating and implementing programme, use of financial resources and accountability, and monitoring and evaluation. Furthermore, these departments, through their respective entities viz. divisions, centers, and laboratories, provide guidance to their provincial counterparts under the provincial ministries, which in turn support health offices at the district and health coordination units at the LLGs.

Public institutions, including BHS units/centers and hospitals at the LLGs, primary and secondary hospitals, academia/teaching hospitals at the provincial level, and tertiary, super-specialized, and academia/teaching hospitals at the federal level, are mandated to deliver health services. The structure encompasses both allopathic and Ayurvedic and alternative medicine health service provisions, extending beyond curative aspects to include promotive, preventive, rehabilitative and palliative health care services.

Similarly, the private health facilities operate at all levels, complementing public institutions. Each institution is mandated to allocate 10% of free beds for poor and impoverished citizens to access health facilities as needed. Additionally, development partners in health either collaborate with these public institutions or work through local non-government organizations to strengthen the health system using the SWAP approach to management.

The service provision extends further into communities through FCHVs, school health nurses, and community health nurses. Moreover, there is an expansion of the health insurance program to cover services beyond BHS, aiming to reduce out-of-pocket expenses and protect against catastrophic health expenditure. This comprehensive network, now inclusive of academia/teaching hospitals and super-specialized hospitals at the federal level, contributes to the holistic and community-centric nature of Nepal's health service delivery. (Fig 1.1)

In addition to the institutional structures of service delivery, regulatory bodies and professional councils are in place to ensure the quality-of-service provision and safeguard the rights of health professionals and citizens. These entities play an indirect yet crucial role in the health service delivery system. All these structures work together guided by the framework of the plans, policies and commitments of the country and sector specific policies and strategic plans.

Furthermore, all health facilities/programs bear the responsibility of documenting and reporting program/service statistics through standardized platforms for Management Information Systems (MIS). These platforms include Health Management Information System (HMIS), the Logistics Management Information System (LMIS) / electronic LMIS (eLMIS), the Financial Management Information System (FMIS), the Health Infrastructure Information System (HIIS), the Planning and Management of Assets in Health Care System (PLAMAHS), the Human Resource Information System (HuRIS), the Training Information Management System (TIMS), the Ayurveda Health Management Information System (AHMIS), Early warning and Reporting System (EWARS), Surveillance Outbreak Response Management and Analysis System (SORMAS), Malaria Disease Information System (MDIS) and the Drug Information Network (DIN). Additionally, these facilities contribute data to various health surveillance systems, such as disease surveillance, vital registration, censuses, sentinel reporting, surveys, rapid assessments, and research initiatives. DoHS takes the lead in managing information system except for DIN and AHMIS, which are overseen by the DDA and DoAA respectively.

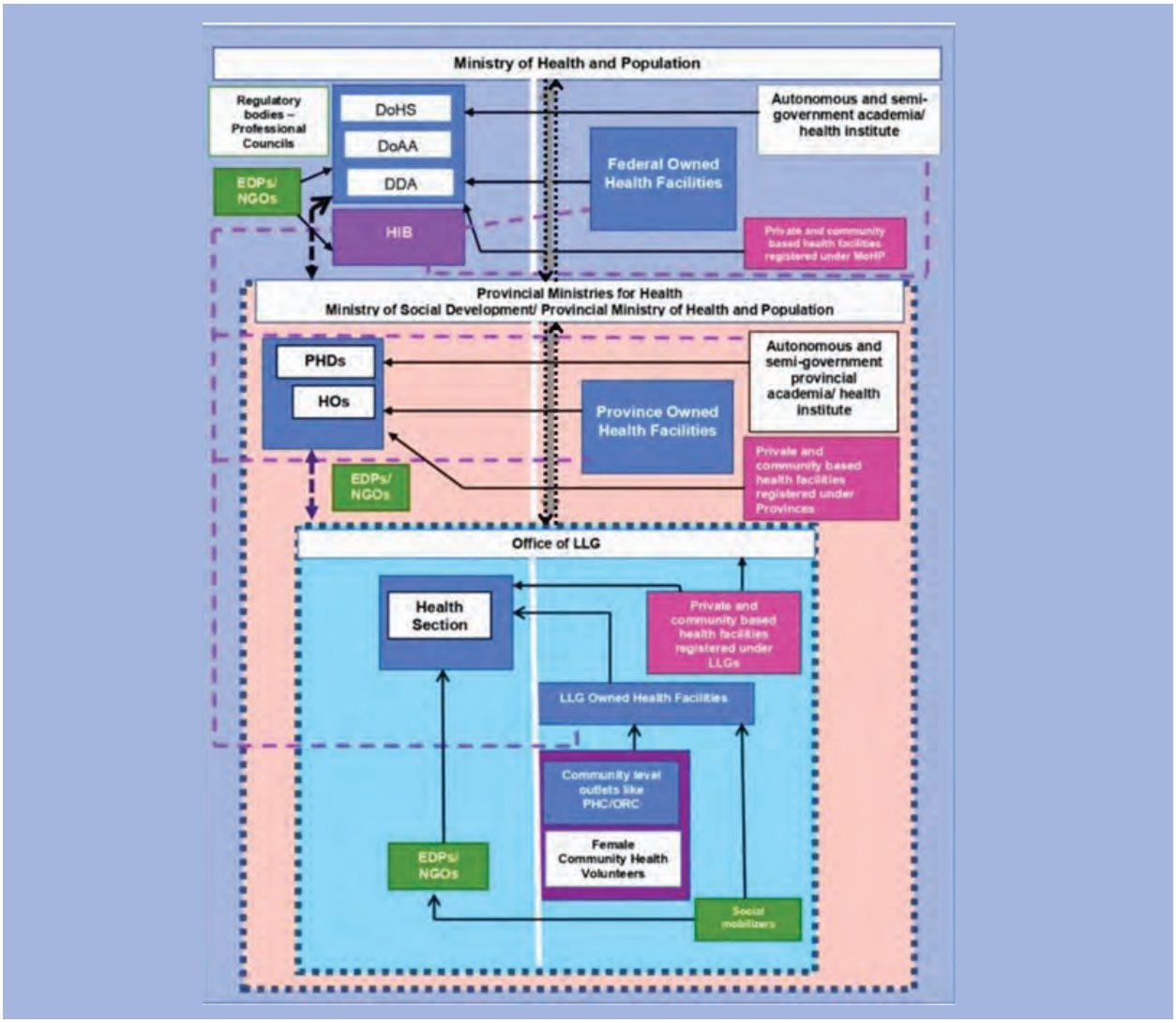


Figure 1.1 Organization of healthcare delivery system in Nepal

1.3 Sources of Information and Data Analysis

The Integrated Health Information Management Section (IHIMS) provided the major source of information for this report. Similarly, data provided in the chapters are curated from respective programs/ entities. Majority of the data are downloaded from the DHIS-2 software and analyzed and explained by the respective programs/entities. A technical working group ultimately finalized each section and chapter of this report.

1.4 Rationale for the Report

The Constitution of Nepal, 2015 guarantees the right to demand and receive information on any matter of his/ her interest or of public interest. Clause 41 of the Good Governance Act 2008, specifies that each department and other government agencies at the central level is obligated to prepare an annual report every year and submit it to the Office of Prime Minister and Council of Ministries within the specified timeframe. As required by the Constitution of Nepal and Good Governance Act, Department of Health Services (DoHS) under MoHP has crafted this Annual Health Report (AHR) for the FY 2081/82 BS (2024/25 AD). This marks the 31st consecutive publication of its kind and the 9th Annual Report since the reorganization of MoHP.

The Annual Health Report 2081/82 serves as the principal document, serving as a systematic monitoring and evaluation of health sector's performance, analyzing shifts in service utilization and disease patterns across different geographical regions. This report not only offers a snapshot of the health sector's advancements but also traces the progress of various health programs against set targets. It provides evidence- based insights for policymakers, planners and international development partners for the upcoming planning and budgeting cycle.

The report serves a dual purpose, functioning as both an annual program monitoring report and a comprehensive document covering various aspects, including:

- Health Scenario: An overview of the prevailing health issues at the federal and provincial level.
    - The local level details are included in the respective provincial level annual reports,

needful information at programmatic level for local levels have also been included as per need felt by the respective programs

- Guiding documents and milestones: Salient features of the key guiding documents and milestones relevant to health programs.
- Major activities in FY 2080/81 BS: A comprehensive account of the significant activities carried out in health sector and related programs/services during the fiscal year
- Status of program/service indicators: Monitoring of the status of the pertinent program/services providing insights into achievements and areas that require attention
- SWOT Analysis: A strategic analysis covering the strengths, weaknesses, opportunities, and threats (SWOT) pertaining to the programs and services.

The timely release of the annual report assumes crucial importance, as it establishes a vital link between service delivery and evidence-informed decision-making and planning for future programs. This dynamic and insightful report not only reflects the health sector's current standing but also guides future initiatives towards more effective and impactful healthcare strategies.

2 Department of Health Services (DoHS)



2.1 Overview of Department of Health Services (DoHS)

The Department of Health Services (DoHS), the main implementation branch of Ministry of Health and Population (MoHP) is the foundation of Nepal's health care system and is responsible for delivering promotive, preventive, curative, rehabilitative and palliative care services throughout Nepal. The DoHS is one of the three departments under the Ministry of Health and Population, Nepal. DoHS plays a crucial role in ensuring health service delivery by developing and facilitating the implementation of the service delivery standards from the service delivery outlets throughout the country. According to the institutional framework of the DoHS and MoHP, the health post (from an institutional perspective) is the foundation entry point for every citizen for basic health services. Nonetheless, the health posts are the referral center of the volunteer cadres as well as venue for community-based activities such as Primary Health Care Outreach Clinics (PHC ORC) and Expanded Programme on Immunization (EPI) clinics. Each level above the health post is a referral point in a network from health post to primary health care centers, on to district, provincial, and finally to specialty tertiary care centers. This referral hierarchy has been designed to ensure access and availability of health needs of the people at the cost they can afford. Furthermore, it functions as an intermediary between the MoHP (federal) and other tiers of government (provincial and local level) by providing logistical, financial, supervisory and technical support from the center to the periphery. It ensures that the service delivery standards are not just formulated but effectively realized across the diverse landscape of the country by bridging the gap between federal policy and local action. Nevertheless, it facilitates the formulation and implementation of policies, rules, regulations, plans, and programs as well as provision service delivery and effective management of health-related activities. Likewise, it focuses on developing and facilitating the implementation of services delivery standards across all health institutions.

The DoHS, headed by the Director General has five divisions and five centers. The DoHS is responsible for maintaining functional viability and coordination of all health systems building blocks, with the primary objective of guaranteeing the delivery of high-quality services to the public. (Fig 2.1)

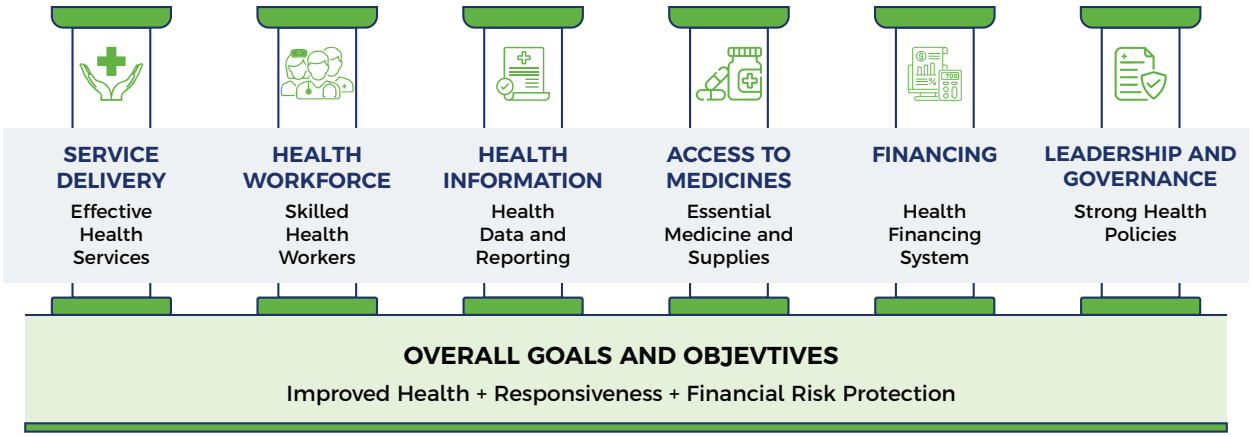


Figure 2.1 Health system building blocks

Since its establishment in 1933, the DoHS has undergone multiple restructuring processes, influenced by concurrent political, administrative, and policy changes within the country. These adjustments have collectively shaped the department into its present organizational structure. Significant historical events contributing to this evolution is represented in box 2.1.

Box 2.1 Major milestones in evolution of DoHS organizational structure

Year	Events
1989/90 (1933)	Department of Health Services was established
2024/25 (1968)	Division of Indent, Procurement and Supply was Established under Department of Health Services and it was later changed to Logistic Management Division in 1993.
2049/50 (1993)	National health training center was established along with five regional health training centers
2050/51 (1994)	Integrated health management information system (HMIS) was initiated under Policy, Planning and Monitoring Division of Department of Health services
2052/53 (1996)	System for making hospital as an autonomous body by legislation was started and the first hospital, BP Memorial Cancer Hospital was established
2055 (1999)	De-concentration of health management started and some management authorities delegated to municipalities and village development committees
2060/61-2072/73 (2004-2017)	Continuous comprehensive devolution of basic health services to local levels • DoHS had six divisions*-MD, CHD, FHD, LMD, EDCD, PHCRD) and five centers- NHEICC, NHTC, NCASC, NTCC and NPHL
2074 Chaitra till present	DoHS organogram restructured to the present form in March 2018 • Five Divisions whose personnel and financial management is completely governed by DoHS: FWD, MD, EDCD, CSD and NSSD • Five Centres with a certain degree of autonomy in personnel and financial management: NHEICC, NHTC, NCASC, NTCC and NPHL • Two sections- Administration Section and Financial Administration Section

[*Abbreviations: Management Division (MD), Child Health Division(CHD), Family Health Division (FHD), Logistic Management Division (LMD), Epidemiology and Disease Control Division (EDCD), Primary Health Care Revitalization Division (PHCRD) and five centers- National Health Education, Information and Communication Centre (NHEICC); National Health Training Centre (NHTC); National Centre for AIDS and STD Control (NCASC); National Tuberculosis Control Centre (NTCC); and National Public Health Laboratory (NPHL); Family Welfare Division (FWD), MD, EDCD, Curative Service (CSD) and Nursing and Social Security Division (NSSD)]

Sources: Publications on history of health system[1] and annual reports of different fiscal years

2.2 Major Functions of DoHS

Policy formulation and health institution/ facilities development:

- Provide necessary technical advice to the GoN/ MoHP for the development of health-related policies, strategies, and plans.
- Develop and strengthen health institutions and service delivery outlets in accordance with existing Acts, Regulations, policies, and plans.

Liaison and Support to provincial and local levels

- Provide technical support to the Provincial Health Directorate (PHD) and LLGs for the contextualization and implementation of policies, strategies, and plans.
- Develop and implement capacity building initiatives in collaboration and coordination with stakeholders.

Human resource planning and development

- Determine the human resource requirements for health institutions.
- Develop short and long-term human resource development plan to support the MoHP to produce need-based human resource for the country.

Personnel management

- Manage the employees working under DoHS.
- Facilitate inter-directorate transfers, initiate departmental actions, and provide rewards.

Medicinal products' procurement, supply and quality control

- Ensure standard process for procurement, storage and supply of medicinal drugs, equipment, instruments, and materials at all levels.

- Coordinate with provincial directorates and line ministries for health in matters related to procurement.
- Forecast medicine, equipment and instruments required at federal level for health facilities across the country.

Program development and implementation

- Prepare annual work plan and budget specific to each program as per the overarching guidance provided by MoHP.
- Provide technical assistance to sub-national governments through mobilizing existing internal and external resources.
- Identify issues and challenges through monitoring, evaluation and research and address them through efficient and effective interventions.

International collaboration

- Establish relationships with foreign countries and international institutions (external development partners) to enhance the health care delivery and program development and implementation.
- Identify the priorities area of cooperation and assist the MoHP in receiving foreign aid.

Stakeholder engagement

- Liaise with the key stakeholders including line agencies, private sector, non-governmental organizations, health development partners and community for their engagement in planning and implementation of health program.

Data management and publication

- Systematically maintain & update data, official declarations, and information regarding health services.
- Integration of technology or functionalizing the existing MISs, building interoperability among the systems and its technological advances in health system
- Utilization of evidence to programmatic update and policy making
- Update and publish relevant information as required
- Provide regular routine data of health sector progress to the MoHP and other stakeholders.
- Update and disseminate key indicators and statistics of healthcare system.
- Update and publish annual health report and other health related documents.

Surveillance and Research

- Conduct surveillance of communicable and non-communicable diseases and health event for timely detection to facilitate early response.
- Develop and institute event based and indicator-based surveillance as per the need of the program.
- Carry out operations research specific to solve the operational problems of health care delivery.
- Ensure the water quality surveillance across the country.

Health Emergency and Disaster Risk Management

- Develop and implement strategies, plans and interventions for preparedness and response to communicable disease outbreaks, various health emergencies and disasters, aligning with the broader goal of enhancing health security.
- Serve as the primary entity for implementing the International Health Regulations (IHR), 2005 playing a key role in strengthening the IHR's core capacities and reporting progress regularly.

Audit oversight

- Take needful initiative to regulate audit irregularities of federal-level DoHS entities/offices and programs/projects.

The DoHS performs its responsibilities through five divisions, four centers and one public health laboratory. Details on Terms of Reference for each of the divisions and centers within DoHS is available on MoHP website (https://dohs.gov.np).

- **Family Welfare Division (FWD):** Child Health and Immunization Section; Maternal and Neonatal Section; Family Planning and Reproductive Health Section; Nutrition Section
- **Epidemiology and Disease Control Division (EDCD):** Neglected Tropical Diseases (NTDs) and Vector Borne Disease Control Section; Zoonotic and Other Communicable Disease Control Section; Disease Surveillance and Research Section; Epidemiology and Outbreak Management Section; Non-Communicable Disease and Mental Health Section; Leprosy Control and Disability Management Section
- **Curative Service Division (CSD):** Essential and Emergency Services Management Section; Eye, Ear Neck and Throat (ENT) and Oral Health Section; Hospital Service Strengthening Section
- **Nursing and Social Security Division (NSSD):** Geriatric and Gender-based Violence Management Section; Social Health Security Section; Nursing Capacity Development Section
- **Management Division (MD):** Integrated Health Information Management Section; Infrastructure Development Section; Logistic Management Section; Environmental Health and Healthcare Waste Management Section; also works as secretariat to DoHS
- **National Health Training Center (NHTC):** Training Material Development Section; Training Accreditation and Regulation Section; Skill Development Section; Administrative Section

- **National Health Education, Information and Communication Center (NHEICC):** Health Communication Coordination Section; Health Promotion and Tobacco Control Section; Administrative Section
- **National Tuberculosis Control Center (NTCC):** Monitoring, Evaluation, Surveillance and Research Section; Tuberculosis Treatment Section; Drug-resistant Tuberculosis Treatment Section; Administration and Supply Management Section
- **National Center for AIDS and STD Control (NCASC):** Prevention, Treatment, Care and Coordination Section; Monitoring, Evaluation, Surveillance and Research Section; Logistic Management and Administration Section
- **National Public Health Laboratory (NPHL):** Non-Communicable Disease Laboratory; Infectious Disease Laboratory; Laboratory and Transfusion Services Regulatory Section; Quality Control and Training Section; Administration and Supply Management Section
- **Personnel Administration Section and Financial Administration Section:** Oversee the overall administrative and financial management of DoHS.

3 Maternal and Newborn Health Services

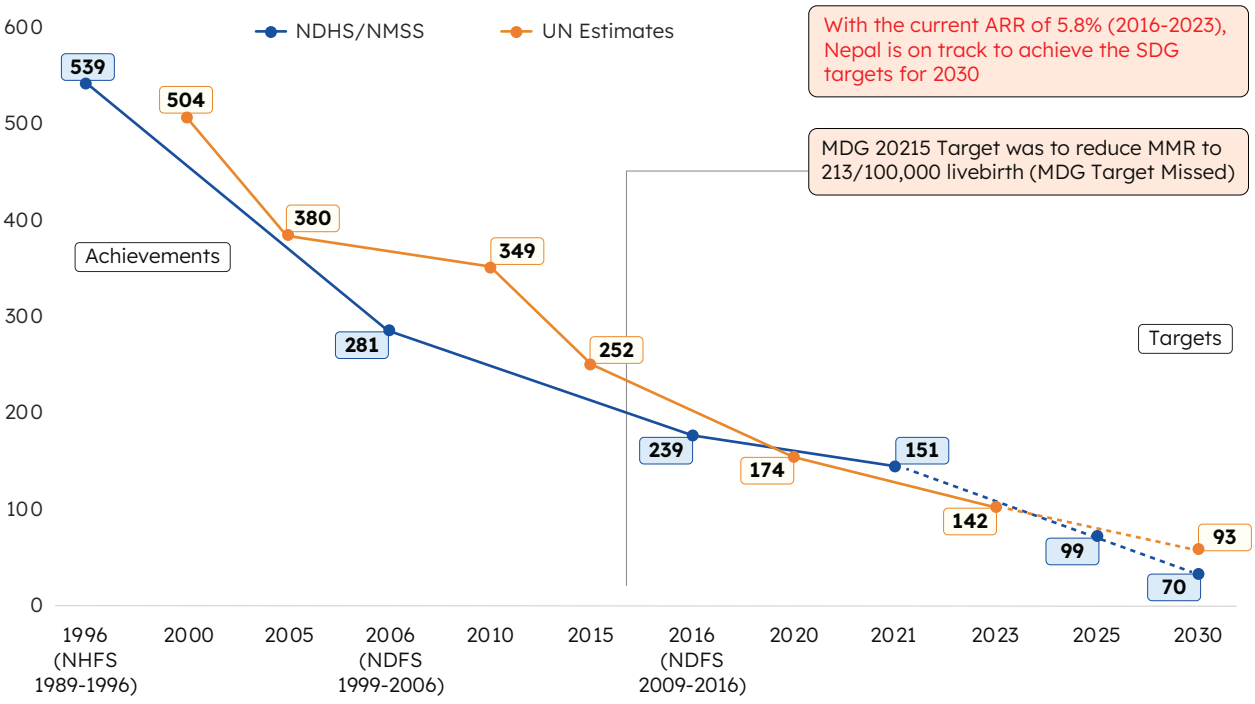
Family Welfare Division

Maternal and Newborn Health Section

3.1 Introduction

Maternal and Newborn health (MNH) is a priority programme for Government of Nepal, and had made it a part of the Basic Health Services (BHS) package. When the Safe Motherhood Policy[1] was adopted in 1998 (2054/55), the investment journey in MNH was underway. This was later strengthened in 2006 AD (2062/63 BS) by the National Policy on Skilled Birth Attendants (SBAs)[2].

Nepal showed notable socioeconomic and geographic differences, with 89% of urban households and only 41% of rural households living within 30 minutes of a health facility. Similarly, 57% of households in the wealthiest quintile had access to a health facility within 30 minutes, compared to only 29% of households in the poorest quintile. In response to these challenges, the Government of Nepal has highlighted institutional births as a fundamental strategy to enhance MNH. As an effort to remove financial obstacles that deterred women from seeking deliveries in facilities, and promote institutional deliveries, the Maternity Incentive Scheme (MIS) was launched in Nepal in July 2005. The initiative initially offered financial incentives of NPR 1,500 in Himalayan regions, NPR 1,000 in hilly regions, and NPR 500 in the Terai to women giving birth at public health facilities. The percentage of institutional deliveries in Nepal has significantly increased over the years, with the proportion of live births assisted by a skilled provider rising from 10% in 1996 to 80% in 2022[3]. Similarly, the maternal mortality ratio (MMR), which was 539 per 100,000 live births in 1996, has significantly decreased as a result of these initiatives, falling to 151 in 2021[4]. (Fig 3.1)



MMR has been measured using pregnancy related deaths

Source: Data for 1996 from Nepal Health Facility Survey (NHFS), rest of the data from succeeding Nepal Demographic and Health Survey (NDHS)

Figure 3.1 Trend of MMR in Nepal 2052/53 -2078/79 (1996-2021)

[1] Ministry of Health, Safe Motherhood Policy 1998. His Majesty's Government, Nepal

[2] Ministry of Health, National Policy on Skilled Birth Attendants 2006. His Majesty's Government, Nepal

[3] Ministry of Health and Population, Nepal Demographic and Health Survey 2022. New Era.

[4] Ministry of Health and Population, Post-Census Maternal Mortality Study 2021.

This achievement is credited to the adoption of progressive policies, strategies, and standards that guarantee MNH care that are high-quality, affordable, and accessible, especially for marginalized and underserved populations (Fig 3.2). Nepal is committed to achieving the Sustainable Development Goals (SDGs) and the goals set forth in the Global Strategy for Women's, Children's, and Adolescents' Health (2016–2030). However, in order to achieve the SDG targets by 2030 which include bringing the MMR down to less than 70 per 100,000 live births and the neonatal mortality rate (NMR) to less than 12 per 1,000 live births, greater efforts are required. The 2018 Global Strategy Monitoring Report emphasizes that, both internationally and regionally, progress toward accomplishing the SDGs has been slowed in a number of crucial action areas. It highlights the necessity of strengthening multi-sectoral and multi-stakeholder initiatives throughout the lives of women and children.

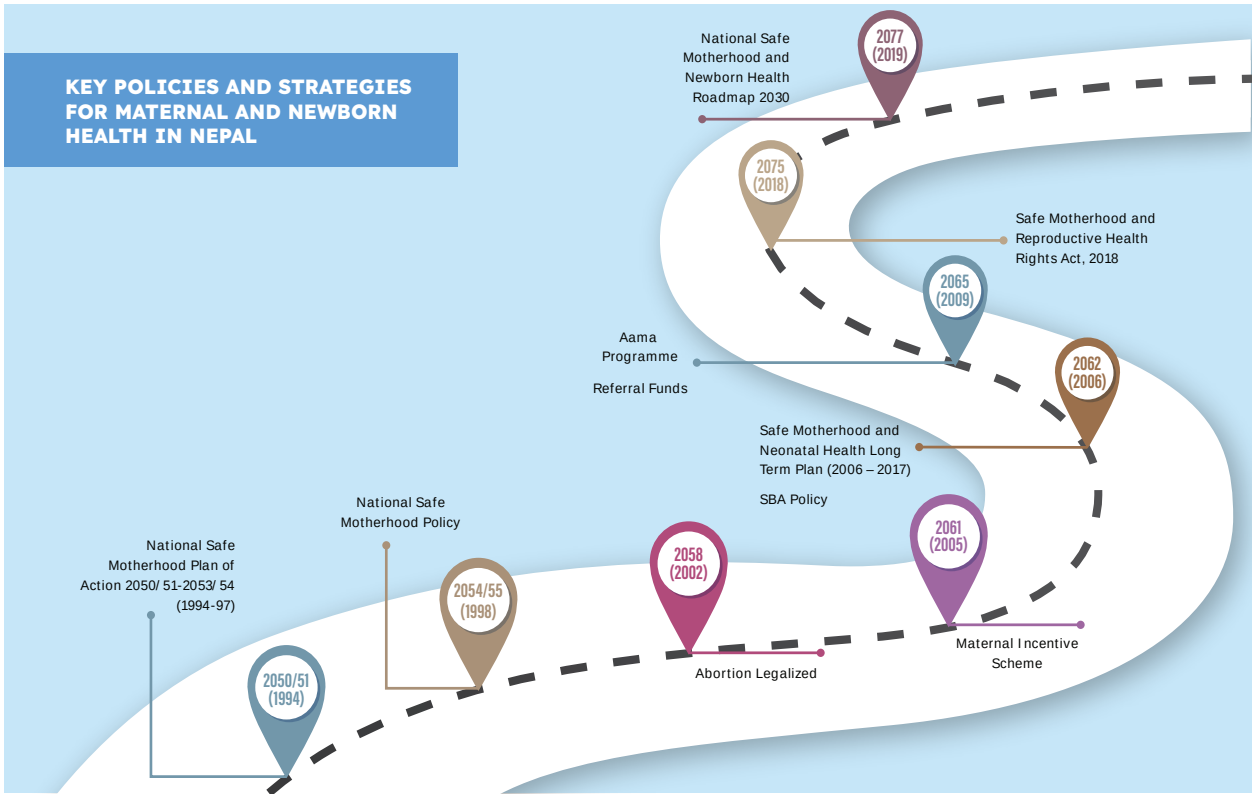


Figure 3.2 Key policies and strategies for maternal and newborn health in Nepal

Box 3.1 National Safe Motherhood and Newborn Health Roadmap 2087/88 (2030)

Goal

Ensuring healthy lives and promoting wellbeing for all mothers and newborns.

Five Outcomes

- Increased availability of high-quality maternal and new-born health services leaving no one behind.
- Increased demand for and utilization of equitable maternal and new-born health services.
- Improved governance and ensured accountability of maternal and new-born health services.
- Improved monitoring and evaluation of maternal and new-born health services.
- Strengthened emergency preparedness of maternal and new-born health services.

Quality is a cross cutting theme across all the five outcomes in the National Safe Motherhood and Newborn Health Roadmap 2030.

In order to promote MNH programmes, the Family Welfare Division (FWD) has continued to allocate funds for necessary human resources. In FY 2081/82, maternal and newborn health (MNH) services received significant human resources support from the Family Welfare Division (FWD). When it came to hiring ANM staff, Local Level Governments (LLGs) were given NPR 519.33 million, while hospitals were given NPR 152.69 million. NPR 112.2 million was also given to provincial hospitals and Emergency Obstetric and Neonatal Care (EmONC) facilities in order to hire different cadres of human resources that are necessary for full-scope MNH services. In order to hire essential experts, such as pediatricians, anesthesiologists, gynecologists, and anesthesia assistants, overcrowded hospitals were given funding. NPR 32.087 million was also given to LLG CEmONC facilities in order to improve their ability to provide essential maternity and newborn care (figure 3.3).

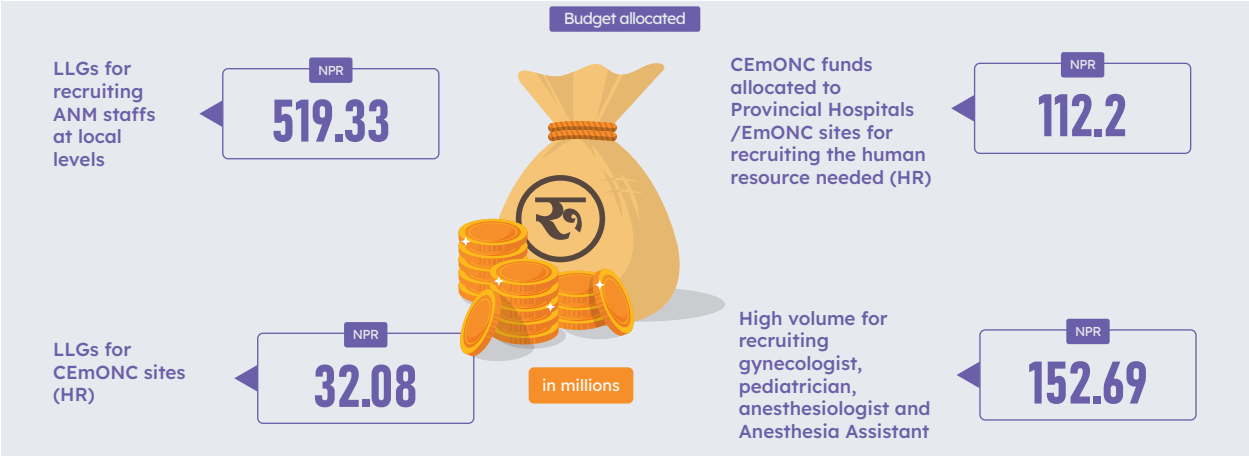
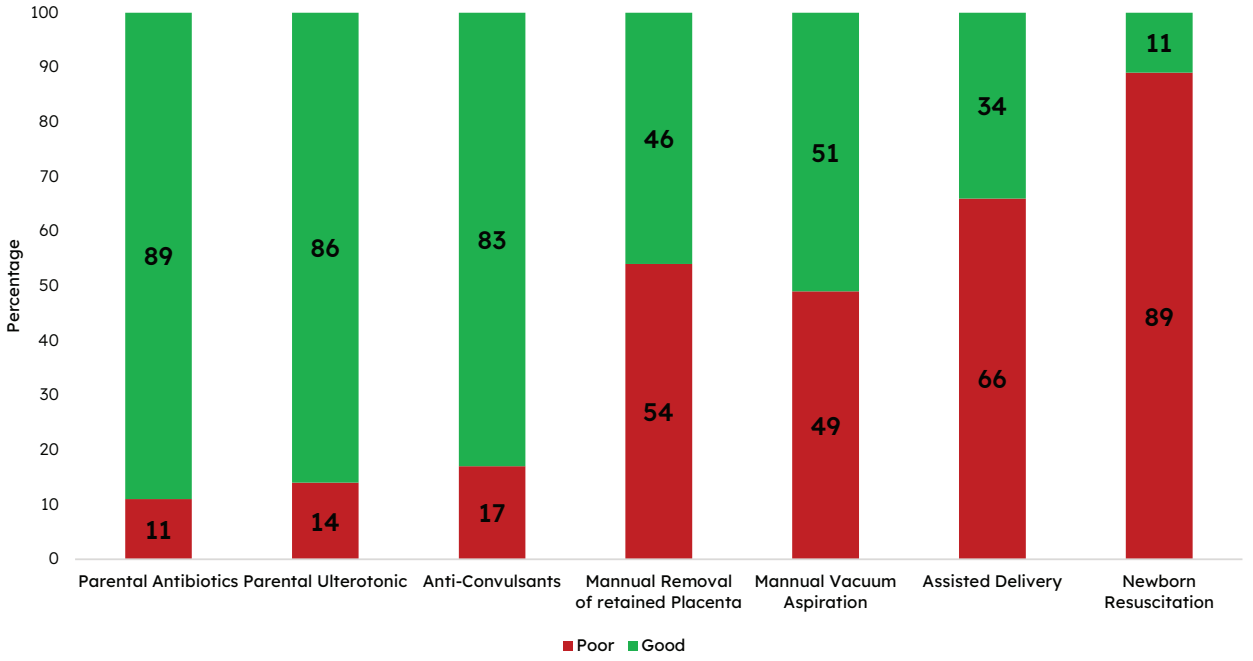


Figure 3.3 HR support for MNH services from FWD in FY 2081/82

3.1.1 Signal function readiness at BC/ BEmONC sites

In FY 2081/82, evaluation of signal function readiness at birthing center (BC) and basic emergency obstetric and neonatal care (BEmONC) sites showed unequal readiness. Among the signal functions, parenteral antibiotic availability was good at 89%, and parenteral uterotonic preparedness was good at 86%, and 83% of sites were well-prepared to deliver anticonvulsants. However, just 34% of sites received satisfactory rating for aided delivery readiness, and 11% sites for newborn resuscitation, indicating serious deficiencies in these crucial function (figure 3.4).

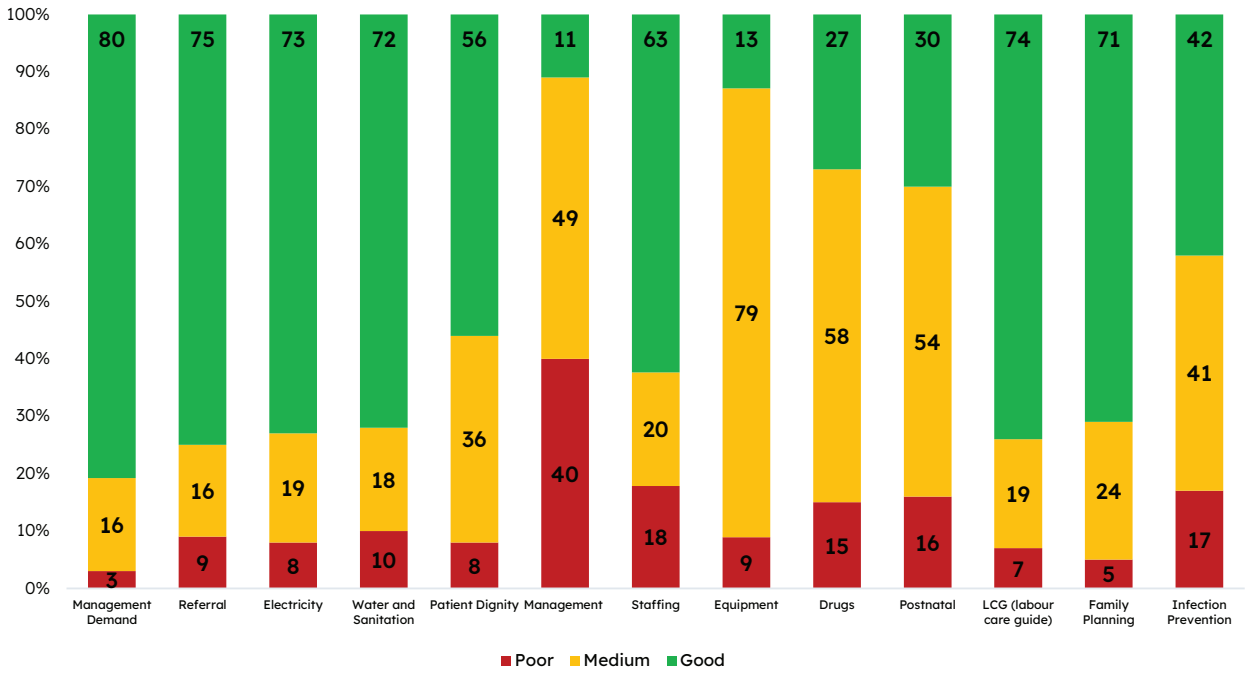


Source: FWD/DoHS

Figure 3.4 Signal Function readiness at the BC/BEmoNC Sites

3.1.2 Quality domain scores at BC/ BEmONC sites

An assessment of quality domain scores at BC/ BEmONC locations during the fiscal year 2081/82 revealed inconsistent performance across important metrics. Demand management (80%), referral systems (75%), electricity (73%), and LCG usage (74%), all received the highest ratings for “Good” performance. Likewise, with 73% rating for family planning services, and with 71% rating for water and sanitation as good, they also performed well. Nonetheless, there was considerable opportunity for improvement in areas including patient dignity (56%), staffing (63%), and infection prevention (42%). Notably, just 13% and 27% in domains like equipment readiness and medicine availability, respectively had high ratings. With only 28% of locations evaluated as good and 63% performing at a medium level, postnatal care also gets affected (figure 3.5).



Source: QI Dashboard FWD, 2080/81

Figure 3.5 Quality Domain Scores at BC/BEmONC Sites

3.1.3 Capacity Building and Personnel Deployment

The National Academy of Medical Sciences (NAMS) and the National Health Training Center (NHTC) collaborate to provide pre-service and in-service training as part of the human resources capacity-building process. Training is provided by NHTC and Provincial Health Training Centers (PHTC) in areas such as safe abortion services (SAS), operation theater (OT) management, family planning (FP) techniques, rural obstetrics ultrasound, and skilled birth attendant (SBA) and advanced skilled birth attendant (ASBA). Anesthesia assistant training is also provided by NHTC and NAMS.

The FWD regulates the deployment of physicians, such as Medical General Practitioners (MDGP), Obstetricians and Gynecologists (OBGYN), ASBAs, and Anesthesia Assistants (AAs) in order to facilitate transfers and improve the functioning of CEmONC services. It also provides updates regarding the MNH programmes. However, difficulties in placement of AAs and ASBAs continue to be a major challenge.

3.2 Major Activities in FY 2081/82

3.2.1 Community level maternal and new born health interventions

Matri Suraksha Chakki (MSC)

The distribution of Matri Suraksha Chakki (MSC), which contains misoprostol to prevent postpartum hemorrhage (PPH), was initiated by the Government of Nepal (GoN) during the fiscal year 2066/67. Female Community Health Volunteers (FCHVs) were trained to give 600 mcg of MSC to pregnant women in their eighth month of pregnancy (three 200 mcg tablets). Especially during home deliveries, these women are advised to take the tablets orally as soon as possible after giving birth and prior to the placental removal in order to prevent PPH.

Rural Obstetrics Ultrasound (ROUSG) Programme

Rural Obstetrics Ultrasound Programme aims for timely identification of pregnant women with risks of obstetric complication in remote districts and timely referral to CEmONC sites. Obstetric ultrasound trained SBA nurses are mobilized to scan pregnant woman at rural PHCCs and health posts using portable ultrasound machine. Women with detected abnormalities such as abnormal fetal lie or presentation, congenital anomaly, and placenta praevia are referred to a CEmONC site. In FY 2081/82, FWD allocated programme implementation budget to 372 local levels of 48 districts. Additionally, provincial governments of Koshi, Lumbini, Karnali and Sudurpaschim provinces have taken the lead in this programme and expanded to other local levels by allocating budget for training HR and implementing the programme on their own.

Emergency Obstetric and Newborn Care (EmONC) Prioritization and Network Mapping

Nepal made a significant achievement in implementation of EmONC and in the generation and use of data related to emergency obstetric and newborn care service provision. In leadership of Family Welfare Division, UNFPA Nepal through the support of DFAT and Norway government, successfully completed EmONC prioritization process in Gandaki, Lumbini, Madesh, Karnali and Sudhurpaschim using GIS/Accessmod. With these five out of the seven provinces completed generating compelling evidence for advocacy and resource allocation for the improvement of quality of emergency care and referrals. As described in the table below the prioritization process across five provinces

found that, by focusing on improving quality of care-including ensuring 24/7 facility operations and better geographic access through GIS/Access mod only 165 EmONC facilities, rather than the currently designated 230, would be sufficient to deliver the same level of coverage and service quality. When provinces focus on the prioritized facilities instead of investing in all the designated hospitals, the coverage, which is an estimated maximum of 2 hours travel time, won't change significantly.

Province	Designated*	Prioritized**	Difference	Coverage before***	Coverage after***	Difference
Gandaki	52	29	23	95.1	93.7	1.4
Lumbini	66	48	18	99.1	98.9	0.2
Madhesh	45	34	11	99.2	97.9	1.3
Sudurpaschim	36	30	6	97	96.9	0.1
Karnali	31	24	7	86.7	84	2.7
Total	**230**	**165**	**65**	**-**	**-**	**-**

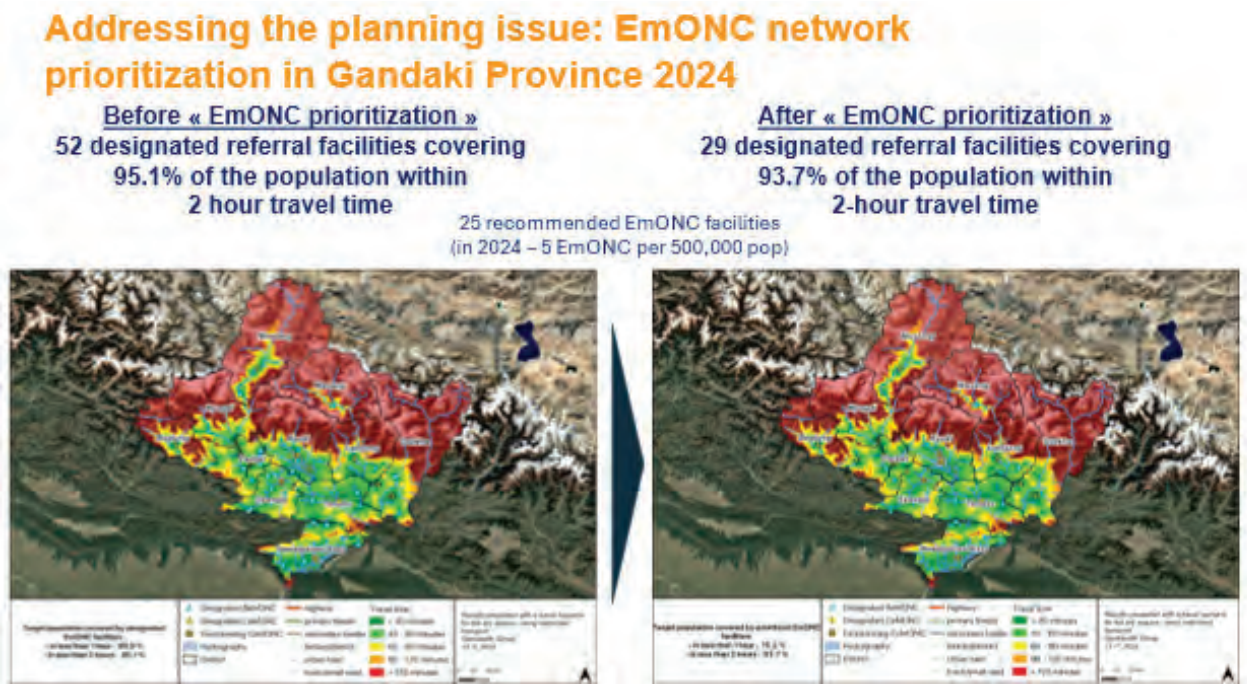
Source: HMIS/DoHS

***Designated:** Hospitals assigned by the government to serve as Basic or Comprehensive EmONC sites without evidence including population catchment and travel scenarios.

****Prioritized:** Basic and Comprehensive EmONC sites prioritized based on consensus using population data and analysis of travel time.

*****Coverage before/after:** Maximum 2 hours travel time to reach EmONC facility during emergency.

The EmONC prioritization and network mapping was conducted through a rigorous assessment of 298 Emergency Obstetric and Newborn Care (EmONC) facilities using a light assessment tool. The tool is integrated into the FWD dashboard https://fwd.gov.np/, which provides key monitoring indicators on EmONC facility functionality, as well as the availability of essential drugs, equipment, and human resources. 11 national experts have been trained in GIS/Accessmod in collaboration with UNFPA and University of Geneva to support ongoing analysis and prioritization, transitioning away from dependency on international experts. Provinces, e.g. Gandaki, and development partners are already using the data generated through the prioritization exercise to make an informed decision and support selected EmONC hospitals. Gandaki Province drafted its Provincial Safe Motherhood and Newborn Health (SMNH) Roadmap in 2025 adopting a health facility optimization approach.



SNCU Level II Assessment

The Functionality Assessment of Special Newborn Care Units (SNCUs) is the first comprehensive assessment conducted under the leadership of the Maternal and Newborn Health (MNH) Section, Family Welfare Division (FWD), Department of Health Services (DoHS), Ministry of Health and Population (MoHP). Supporting organizations included WHO, UNICEF, Jhpiego/MCGL, One Heart Worldwide, and New ERA. Data collection was carried out by UNICEF, Jhpiego/MCGL, and One Heart Worldwide, while WHO organized training sessions. New ERA provided technical assistance throughout all phases of the assessment, including tool design, training of enumerators, data analysis, and report writing.

The assessment was designed to examine the readiness, functionality, and quality of services including experience of care at level II SNCUs, with the aim of informing actions for quality improvement. To provide a comprehensive picture of the strengths and weaknesses of the service delivery environment, the assessment collected information through a census of all government-managed level II SNCU facilities across all seven provinces of the country. Overall, the assessment provides rich supply-side information on the health system, which complements findings from population-based surveys (demand side) to help explain health outcomes and service utilization.

Availability of Services

The assessment reveals strong overall availability of essential newborn care services across SNCU level II facilities in Nepal, with 94.1% offering free newborn care and 96.5% functioning as Comprehensive Emergency Obstetric and Newborn Care (CEmONC) sites. Provincial and local-level hospitals outperform federal hospitals in free newborn care provision (97.3% vs. 72.7%), while mountain and rural areas achieve universal coverage for both services, contrasting with slightly lower rates in Terai and urban settings. However, SNCU capacity is constrained, with a mean of only 4.7 beds per facility, varying provincially from highs in Madhesh and Bagmati to lows in Karnali and Koshi. A critical gap exists in triage infrastructure, as only 17.6% of facilities have a designated receiving room with an examination area, with no such spaces in Madhesh Province and better availability in Bagmati and Gandaki. These findings underscore robust service coverage but highlight infrastructure limitations that could impede quality newborn care delivery.

Service Readiness: Basic Facility Infrastructure

Basic amenities are generally well-established, with all facilities (100%) reporting regular electricity and improved water sources, and 97.6% having client latrines. Communication equipment, computers with internet, and emergency transport are available in 80.0%, 88.2%, and 88.2% of facilities, respectively, though only 36.5% have all key amenities excluding internet access. Federal hospitals excel in communication equipment, while provincial/local hospitals lead in emergency transport. Provincial disparities are evident, with Bagmati achieving 100% communication equipment coverage compared to 50% in Madhesh.

For 24/7 services, 94.1% of facilities offer SNCU care around the clock, supported by high electricity (94.1%) and water (84.7%) availability. However, dedicated medical personnel are limited, with only 57.6% having an exclusive SNCU doctor, higher in federal hospitals and provinces like Karnali and Sudurpashchim, but low in Koshi and Gandaki.

Infection Prevention and Control (IPC) items in toilets show strong compliance, with 95% having running water and 100% meeting minimum requirements (running water with soap or hand sanitizer). Soap availability is higher in provincial/local hospitals (68%), with provincial highs in Bagmati and Lumbini. In service delivery areas, sterilization equipment (98.8%) and waste segregation (92.9%) are nearly universal, but hand hygiene infrastructure lags, with only 54.1% having both soap and running water. PPE gaps are notable, especially eye protection (25.9%), and IPC guidelines are available in just 30.6% of facilities. Federal hospitals perform better overall, with ecological lows in Koshi and Gandaki.

Waste management reveals limited color-coded bins (averages of 0.9–1.6 for key colors), with federal hospitals slightly ahead. Cleaning frequency is adequate in 82.4% of facilities (at least daily), though 9.4% skip disinfectants, with better practices in federal hospitals. At SNCU entrances, IPC items like basins (60.0%) and gloves (51.8%) are moderately available, higher in federal hospitals.

3.2.2 Expansion and quality improvement of service delivery sites

FWD continued to expand 24/7 service delivery through birthing centers, BEmONC and CEmONC sites. The expansion of service sites is possible mostly due to the provision of funds for hiring staff locally on contract basis. There has been a rapid expansion of public CEmONC sites in districts with an increase in number of sites from 43 in 2066/67 (2010) to around 122 in 2081/82 (2025) covering 76 districts, except Manang.

The expansion continues at local levels with 29 LLGs also now offering CEmONC services. Expansion of the CEmONC sites has also met with the challenge of maintaining the functionality and quality of CEmONC services at the service delivery sites especially in the remote areas with human resource constraints being the most common reason for non-functionality. A study by FWD showed that establishment of CEmONC sites in 15 bedded hospitals in accessible areas of terai and the hills can potentially drive human resource shortages in the remote areas in absence of appropriate incentive mechanisms for remote areas.

Mapping exercise for EmONC services for 15 bedded hospitals has been completed in five provinces (Madhesh, Gandaki, Lumbini, Karnali and Sudurpashchim). It's also prudent to complete it in the remaining two provinces to ensure plannig for quitable access to high quality EmONC services across the country. It's very important to note that the sanction possitions for these sites should correspond to the expected serivce delivery at these sites which is not the case currently.

Furthermore, with 57% of the maternal deaths happening at the health facilities , it's needful to have multispecialty teams at the referral sites to manage maternal complications.

3.2.3 Onsite clinical coaching and mentoring

Effective coaching and mentoring are essential for improving mentees' abilities, competence, self-assurance, and drive while building professional networks for their growth and future leadership. In order to improve the standard of care at birthing centers, BEmONC, and CEmONC facilities, the FWD has implemented a coaching and mentoring approach. Though the National Health Training Center (NHTC) offers Advanced Skilled Health Personnel (ASHP), Skilled Health Personnel (SHP) and Skilled Birth Attendant (SBA) training, evidence suggests that training alone is not enough to guarantee high-quality healthcare. An enabling environment, ongoing capacity building, and follow-up assistance are crucial.

3.2.4 MNH readiness of hospital and BC/ BEmONC for quality improvement

Improving the quality of care (QoC) in health facilities is a two-step process. The first step is to ensure that facility has the required infrastructure, tools, drugs, and HR. Implementing focused quality improvement initiatives is the second step in providing high-quality care. To minimize avoidable maternal and newborn deaths and stillbirths and achieve the SDG targets by 2030, global initiatives such as Every Newborn Action Plan (ENAP) and the Strategies for Ending Preventable Maternal Mortality (EPMM) are in line with the Sustainable Development Goals (SDGs). It will take targeted improvements in QoC during pregnancy, labor, and the postpartum period to meet these goals.

3.2.5 Emergency referral funds

It is estimated that around 15% of pregnant women will develop potentially life-threatening complications that needs skilled health care. Women may need immediate referral from BC/ BEmONC to nearby CEmONC sites. An effective referral system is important for ensuring the timely and efficient transfer of patients to higher levels of care, especially during obstetric emergencies. The government has established this programme to support emergency transport during referral of women and newborns from disadvantaged population (Poor, Dalit, Janajati and Socially Marginalized Group).

3.2.6 Aama Surakshya Programme and Free Newborn Programme

Initiated as Maternity Incentive Scheme in 2005 AD by providing transport incentives to women to deliver in health facilities, the programme gradually covered user fees for all types of delivery care in 25 low human development index (HDI) districts in 2006 AD and was expanded nationwide as the Aama Suraksha Programme in 2065 (2009). In 2068 (2012), four ANC incentives programme was merged into it and in 2073/74 (2017) free newborn programme was also merged with Aama Suraksha Programme.

The programme incentivizes the women and the health facilities for health service utilization the cost for which is covered by the programme. Health facilities get reimbursement by unit cost; Rs. 2,500 for normal delivery, Rs. 4,000 for complicated delivery, Rs. 10,000 for caesarean section, Rs. 5,000 for Anti-D and Rs. 7,000 for Molar pregnancy. For newborn care, the health facility gets additional reimbursement based on unit cost for providing free newborn services.

3.2.7 Maternal and Perinatal Death Surveillance and Response and Newborn Birth Defect Surveillance Programme

Maternal and Perinatal Death Surveillance and Response

The Maternal and Perinatal Death Surveillance and Response (MPDSR) is a systematic process of identification, reporting, analyzing, and determination of the causes of maternal and perinatal deaths and their prevention (figure 3.6). The primary goal is to use this information to guide public health actions, monitor their effectiveness, and ultimately eliminate preventable maternal and perinatal mortality.

The National MPDSR Committee, which is chaired by the Director General of the Department of Health Services (DoHS), and the MPDSR Technical Working Group (TWG), which is headed by the Director of the Family Welfare Division (FWD), are operating in accordance with the MPDSR guidelines.

The provincial health directorate, health office, health facility, and local level governments are required to establish MPDSR committees according to the national guidelines. Following a maternal death, the MPDSR committees at respective hospitals must meet within 72 hours of maternal deaths and hospital committees meet once a month for perinatal deaths (figure 3.6). At community level, in the event of a maternal death, verbal autopsy should be conducted within 30 days followed by assignment of cause of death and MPDSR committee meeting. The TWG are required to meet on a quarterly basis or more frequently as needed. The process of MPDSR adopted in Nepal is shown in figure 3.7.

[5] MoHP, NSO. (2022). National Population and Housing Census 2021: Nepal Maternal Mortality Study 2021. Kathmandu: Ministry of Health and Population; National Statistics Office.

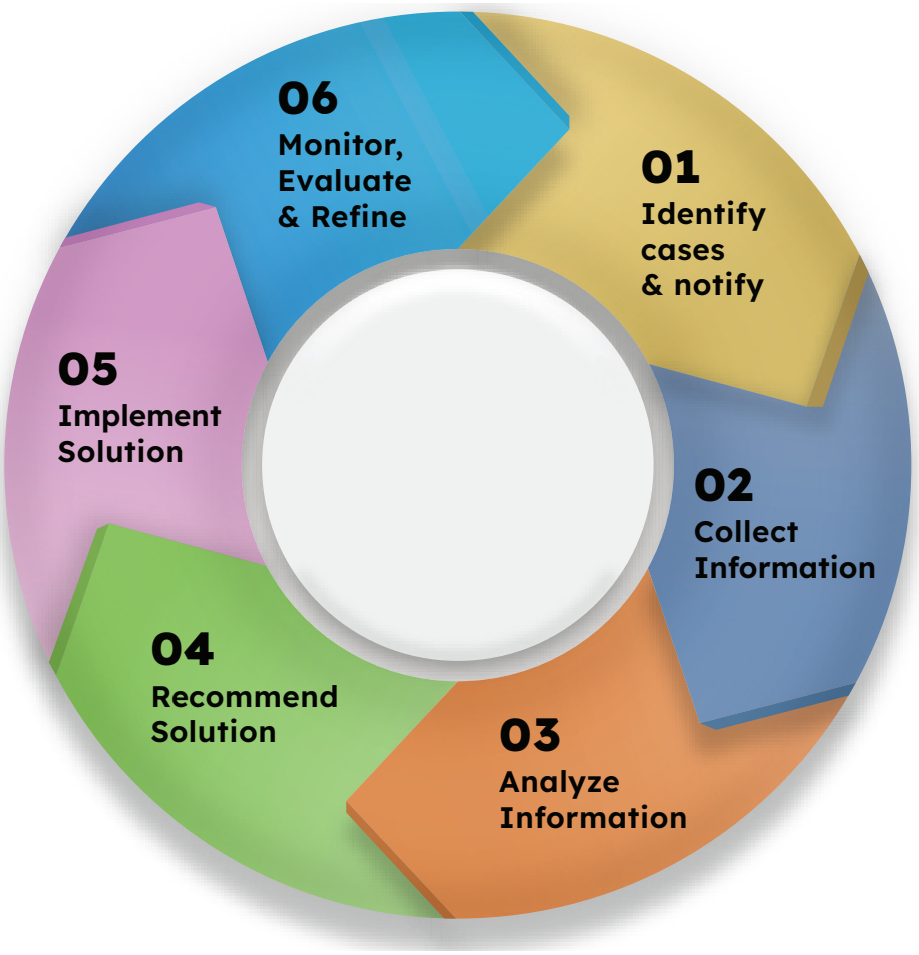


Figure 3.6 Process of MPDSR

Maternal Death Surveillance and Response (MDSR) in Health Facilities
Service provider (Doctor/Nurse) on duty will identify maternal death and notify all maternal deaths to the MPDSR committee.
Notify maternal death within 24 hours to the focal person of the concerned body (Health office/Province/Centre) via phone, email, fax, etc.
Service provider on duty will fill the Maternal Death Review form and assign the cause of death.
MPDSR committee meeting to be conducted within 72 hours for death review.
MPDSR committee to prioritize the response/action plan.
Online entry in the web-based system, if there is no maternal or perinatal death in a month, "0" reporting for both deaths to be done every month.
Make action plan for recommendations from the MPDSR committee, implement them and follow-up.

Perinatal Death Surveillance and Response (PDSR) at Health Facilities
Identify perinatal deaths (Stillbirth and Early Neonatal Death, including IUFD) (Death of infant from 28 or more weeks of gestation up to 7 days after birth).
Service provider on duty (Doctor/Nurse) to fill Perinatal Death (PDR) Review form.
Physician to review PDR form and assign the cause of death.
Fill the monthly PDR summary form and present it in the MPDSR committee meeting every month.
Facility-based MPDSR committee to review Perinatal Death Summary form every month.
Identify gaps and recommend solutions.
Formulate action plans based on recommendations, prioritize and implement them.
Enter the PDR summary form in the web-based system every month.
MPDSR committees in facilities, local level, Health office, province, and federal level to formulate action plans and implement them.

Nepal MPDSR Process

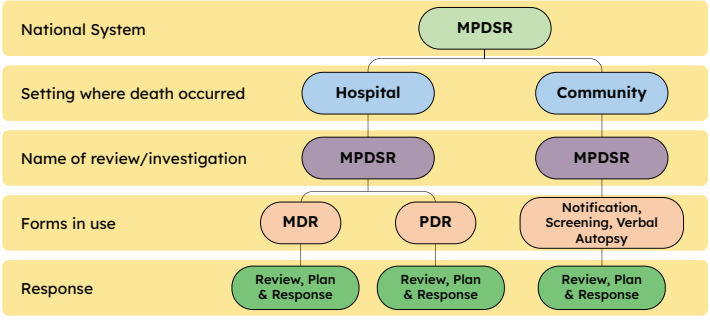


Figure 3.7 Process of Maternal and Perinatal Death Review and Response in Health Facilities and Maternal Death review in Community

New-born Birth Defect Surveillance

One of the main causes of child mortality, birth defects, also known as congenital anomalies, are structural or functional abnormalities that arise during pregnancy and can be identified either before or after birth. Prompt care and treatment can prevent disability, improve outcomes, and save lives. In such birth defect surveillance helps in timely tracking the trends in the occurrence of the birth defects providing quantitative estimates of their prevalence so that we can make timely intervention. The surveillance for newborn birth defect (NBBD) was initiated in 2071/72 in 10 hospitals and has now been implemented in 27 hospitals in FY 2081/82.

3.2.8 Special Newborn Care Unit (SNCU)

Special Newborn Care Unit (SNCU), is a specialized hospital unit that offers specialized treatment for sick and small babies and are staffed by medical officer, nurses, and paramedics. Premature birth, low birth weight, or medical conditions including jaundice, low blood sugar, or respiratory problems can all cause babies to need SNCU care.

As indicated in Free Newborn Care Guidelines 2016, district level hospitals should have four bedded SNCUs for sick and small newborn care. In order to meet the target of bringing newborn mortality rate down to less than12 per 1,000 live births by 2030, Ministry of Health and Population has launched a targeted programme to offer specialized care through three levels - newborn corners at delivery rooms/operation theatres, special newborn care units (SNCUs) and neonatal intensive care units (NICUs).

A customized mentoring programme that focuses on critical clinical skills for managing SSNBs at every point of contact has been piloted by FWD for all healthcare professionals working in SNCU Level-II facilities. The introduction of an orientation package, and the development of a Nepal-specific model of care for small and sick newborns (SSNBs) at Level-II health facilities are other initiatives. This orientation package functions as a supplemental, condensed tool to offer crucial information and mentor decision-making while the nationwide comprehensive newborn care training is still in progress. It will be crucial in preparing medical staff at Level II hospitals to handle typical SSNB problems and consequences.

The WHO-UNICEF ten-component of level of care, which covers topics like vision, political commitment, financing, human resources, infrastructure, equipment, data systems, referral networks, maternal-newborn care linkage, community support, and post-discharge follow-up, serves as the foundation for Nepal's care for SSNB model. Following workshops and consultations, the model was modified to fit the Nepali environment, resolving any shortcomings and difficulties in scaling up each element. To operationalise the model, FWD has developed an SNCU orientation package and piloted in Dhading, Trishuli, Sindhuli and Hetauda Hospitals of Bagmati province.

Based on the early lessons learnt from piloting, a phased scale up has been initated which included expansion to 3 sites of Koshi Province in 2081/82 with subsequent expansion planned to all SNCU sites in the country.

Box 3.2 Criteria for Birth Defects Surveillance

- Online Hospital based at birth surveillance
- Passive reporting system: passive reporting of cases from hospitals
- Gestational age: All births from ≥ 28 weeks of gestation (if gestational age not known: birth weight ≥1000 gms)
- Pregnancy outcome: Live births and Still births
- Age at Diagnosis: At birth and until 7 days of age
- Inborn cases: only babies born in the BD Surveillance implementing hospital
- Mandatory to report: eight major externally visible birth defects
  - Neural tube defects,
  - Oro-facial clefts,
  - Talipes equinovarus,
  - Limb reduction defects,
  - Hypospadias
  - Exomphalos/Omphalocele
  - Gastroschisis
  - Imperforate anus
- All external/internal birth defects based on the ability to detect

3.3 Key Indicators of MNH Programme

3.3.1 Antenatal Care (ANC) service utilization

ANC is a key entry point towards essential maternal health care and interventions to ensure positive pregnancy outcomes. The government of Nepal has prioritized completion of 8 ANC visits as per protocol. Till FY 2078/79 the focus was on 4 ANC visits which was transitioned to 8 ANC visits as per the recommendation from World Health organisation (WHO) from 2079/80 onwards.

Data of three fiscal years portrayed in table 3.1 show an improvement in FY 2080/81 followed by a decline in FY 2081/82 for 8 ANC visits.

Table 3.1 Percentage of Pregnant women who attended 8 ANCs and 4 ANCs

FY	8 ANC visits %	4 ANC visits %
2079/80	43	93.5
2080/81	61	88.4
2081/82	57.13	84.49

Source: HMIS/DoHS

Note: ANC protocol (complete ANC visits) was revised from 4 ANC visits to 8 ANC visits in FY 2079/80.

Table 3.2 Province wise distribution of percentage of pregnant women who attended 8 ANCs and 4 ANCs

Percentage of Pregnant women who attended	8 ANCs	4 ANC visits	SDG target for 2030
Province		Percentage	
Koshi	45.45	78.56	90
Madesh	60.07	89.96	90
Bagmati	63.96	80.33	90
Gandaki	66.83	125.26	90
Lumbini	59.18	82.28	90
Karnali	61.95	90.62	90
Sudurpashchim	42.31	61.53	90

Source: HMIS/DoHS

Likewise, the proportion of pregnant women who had 4 ANCs visits showed a declining trend over past three FYs. This trend highlights the need to sustain service uptake and address potential disruptions affecting continuity of care.

The eight ANC visits and 4 ANC visits depict a substantial provincial variation in FY 2081/82. Gandaki Province reported the highest coverage, with 66.83 percent of pregnant women completing 8 ANC visits, and 125.26% completing 4 ANC visits. In contrast, Koshi (45.4%) and Sudurpashchim (42.31%) recorded comparatively lower coverage for both 8 ANC visits and 4 ANC visits indicating gaps in sustained ANC contact in these provinces.

3.3.2 Delivery Care Services

- For deliveries that take place in a facility, attended by a skilled health provider (SHP) or skilled birth attendant (SBA)
- Early identification and treatment of complicated cases, followed by referral (after administering obstetric first aid) to a medical facility offering round-the-clock emergency obstetric care

Institutional delivery remains a core strategy of Nepal's maternal and newborn health program. It enables access to skilled birth attendance and timely management of obstetric and newborn complications. Analysis of data from FY 2079/80 to 2081/82 indicates that, while institutional delivery coverage remains relatively high at the national level, notable year-to-year fluctuations and significant inter-provincial variations continue. At the national level, the proportion of institutional deliveries declined from 83.43 percent in FY 2079/80 to 77.92 percent in FY 2080/81 and further to 73.39 percent in FY 2081/82. The reduction observed in FY 2081/82 suggests challenges in sustaining recent gains and highlights the need for continued attention to both demand and supply related factors influencing delivery at health facilities.

Provincial trends also show considerable variation with Lumbini Province consistently reporting high institutional delivery coverage across the period and the highest in FY 2081/82 at 87.7 percent, followed by Karnali (84.79 percent) and Sudurpaschim (74.47 percent) provinces. Madhesh Province demonstrated a steady increase over time, rising to 69.5 percent in FY 2081/82, indicating gradual improvement in access to and utilization of institutional delivery services. In contrast, Bagmati Province, which recorded very high coverage in earlier years, showed a marked decline in FY 2081/82, reaching 70.04 percent, compared to 91.1 percent in FY 2080/81. A similar downward trend was observed in Gandaki Province, where institutional delivery coverage decreased from 74.49 percent in FY 2080/81 to 54.57 percent in FY 2081/82, the lowest among all provinces. Koshi Province also experienced a decline, falling to 70.47 percent in FY 2081/82.

The observed provincial and temporal variations may reflect differences in reporting practices, population movement, service utilization patterns, and access to functional birthing facilities. They may also indicate disruptions in service continuity or shifts in care seeking behavior. These findings underscore the importance of strengthening routine monitoring, ensuring consistent service quality, and addressing province specific barriers to institutional delivery.

Overall, while institutional delivery coverage in Nepal remains relatively high, the decline observed in FY 2081/82 highlights the need for renewed efforts to withstand and further increase facility-based childbirth, particularly in provinces demonstrating declining trends. Targeted interventions focusing on service availability, quality of care, referral mechanisms, and community engagement will be critical to maintaining progress toward national and global maternal and newborn health targets.

Table 3.3 Percentage of institutional delivery among the expected live birth in FYs 2079/80 – 2081/82

Province	2079/80	2080/81	2081/82
Koshi	86.05	79.28	70.47
Madesh	64.81	63.14	69.5
Bagmati	100.41	91.1	70.04
Gandaki	67.88	74.49	54.57
Lumbini	96.38	93.06	87.7
Karnali	83.36	71.98	84.79
Sudurpashchim	85.81	72.88	74.47
National	**83.43**	**77.92**	**73.39**

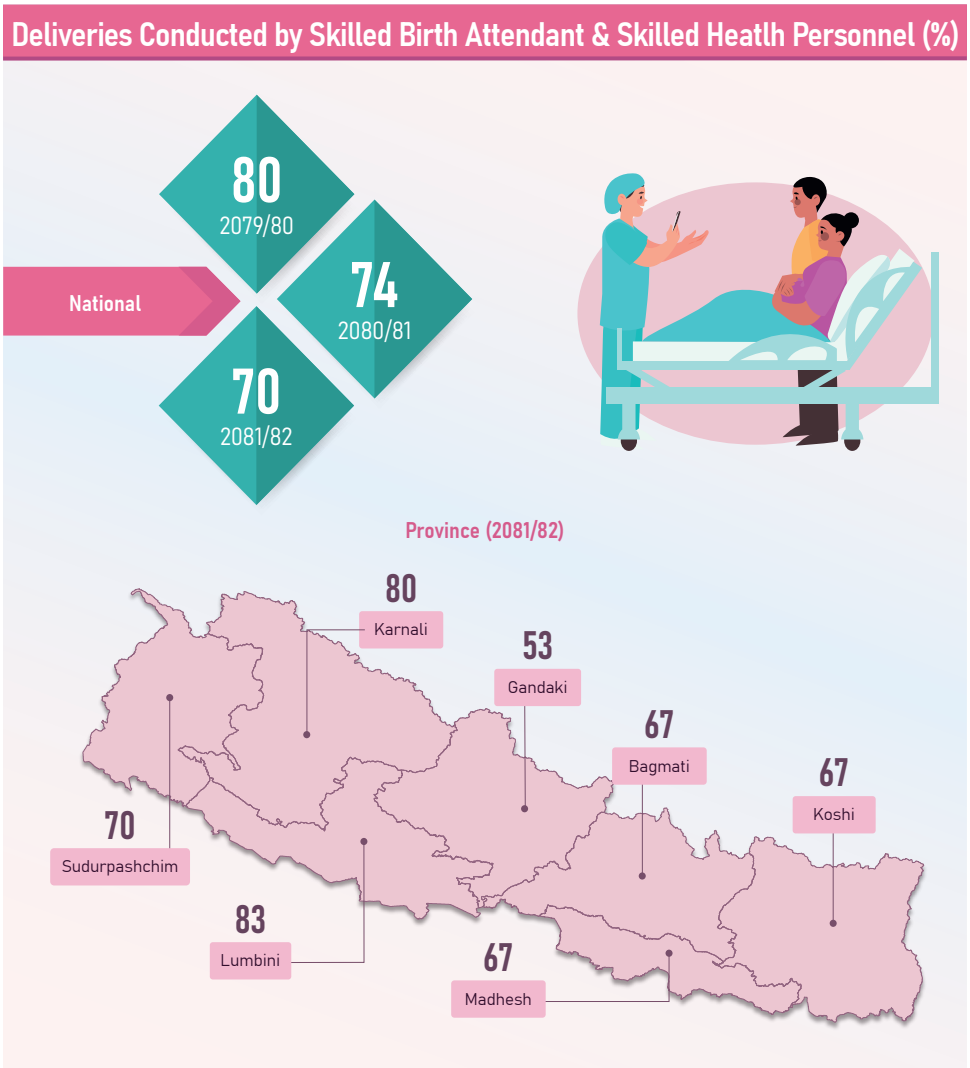
Source: HMIS/DoHS

One of the important interventions for reducing maternal and neonatal morbidity and mortality is to ensure that child birth is attended by skilled health personnel. According to the recent definition adopted by WHO, Health professionals such as midwives, doctors and nurses who have been educated, trained and regulated to national and international standards and are competent to manage normal pregnancies and childbirth, identify, manage or refer complications in newborns and women are called Skilled Health Personnel (SHP). Skilled Birth Attendants (SBA) are the doctors, staff nurses and Auxiliary nurse midwives (ANMs) who have received Skilled Birth Attendant training and are deployed within the health system.

National trends in Table 3.3 indicate a gradual decline in the proportion of deliveries conducted by skilled health personnel in recent fiscal years. At the national level, skilled birth attendance was 80 percent in FY 2079/80, which declined to 74 percent in FY 2080/81 and further to 69.89 percent in FY 2081/82. The reduction observed in FY 2081/82 suggests challenges in sustaining skilled birth attendance coverage despite continued policy emphasis on institutional delivery and skilled care.

Provincial analysis from figure 3.8 for FY 2081/82 demonstrates a marked variation in deliveries attendance by skilled birth attendance and skilled health personnel. Lumbini Province reported the highest coverage, with 83.23 percent of deliveries attended by skilled health personnel, followed by Karnali (79.62 percent). Sudurpaschim (69.96 percent) and Bagmati (67.15 percent) provinces reported moderate coverage levels, while Madhesh (66.87 percent) and Koshi (66.61 percent) recorded slightly lower proportions. Gandaki Province reported the lowest coverage at 52.58 percent, indicating substantial gaps in skilled attendance during childbirth.

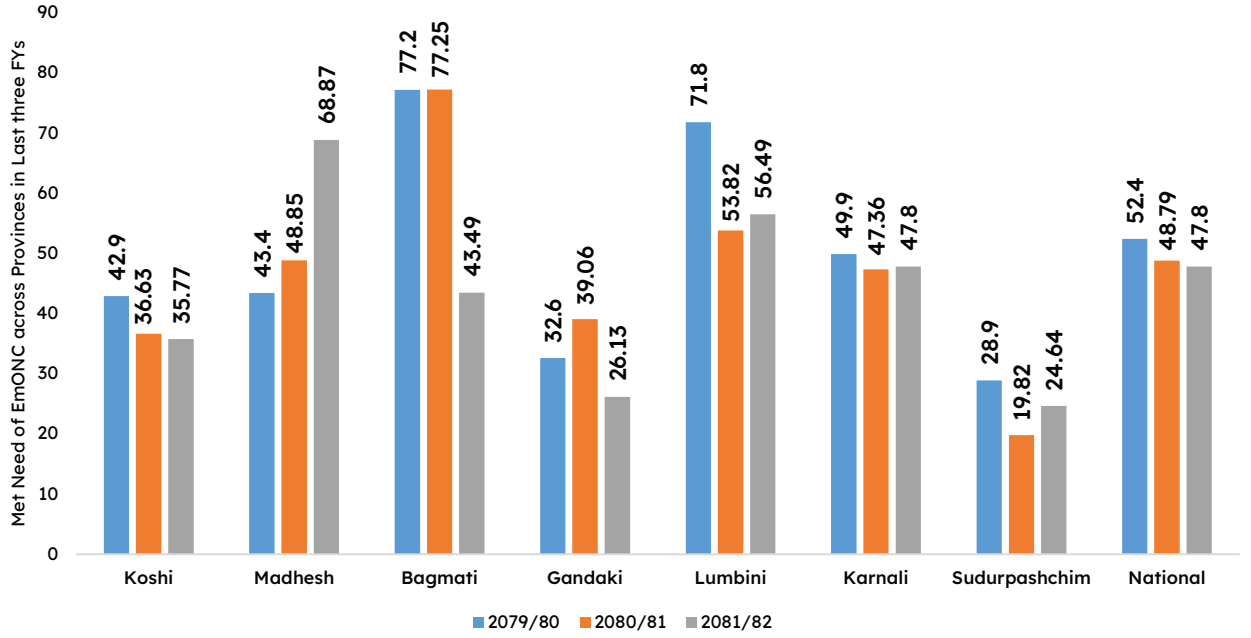
The observed provincial differences may reflect variations in the availability and deployment of SBAs, functionality of birthing centers, referral practices, and access to higher-level facilities. In provinces with difficult geography or dispersed settlements, challenges related to human resource availability and service continuity may further affect skilled attendance coverage at birth. Additionally, discrepancies between institutional delivery and skilled attendance at birth suggest that not all facility-based deliveries are consistently supported by appropriately trained personnel, underscoring concerns related to quality of care.



Source: HMIS/DoHS

Figure 3.8 Delivery Conducted by Skilled Birth Attendants and Skilled Health Personnel among the expected live birth

Figure 3.9 presents the trend in the met need of EmONC across provinces over the last three fiscal years, with particular emphasis on FY 2081/82. At National level, the met need of EmONC stood at 47.8% in FY 2081/82, reflecting a marginal decline compared to FY 2079/80 (52.4%) and FY 2080/81 (48.79%). Madhesh Province demonstrated a marked improvement, with met need increasing sharply from 48.85% in FY 2080/81 to 68.87% in FY 2081/82, the highest among all provinces. Bagmati Province, which had consistently recorded high met need in previous fiscal years (77.2% in FY 2079/80 and 77.25% in FY 2080/81), experienced a significant decline to 43.49% in FY 2081/82. Lumbini Province maintained a relatively high level of met need at 56.49%, showing retrieval compared to FY 2080/81 (53.82%), although still below the peak observed in FY 2079/80 (71.8%). Karnali Province recorded a stable but moderate performance at 47.8%, generally unchanged from the previous years. On the contrary, Koshi, Gandaki, and Sudurpaschim Provinces continued to report low met need of EmONC, with FY 2081/82 figures of 35.77%, 26.13%, and 24.64%.



Source: HMIS/DoHS

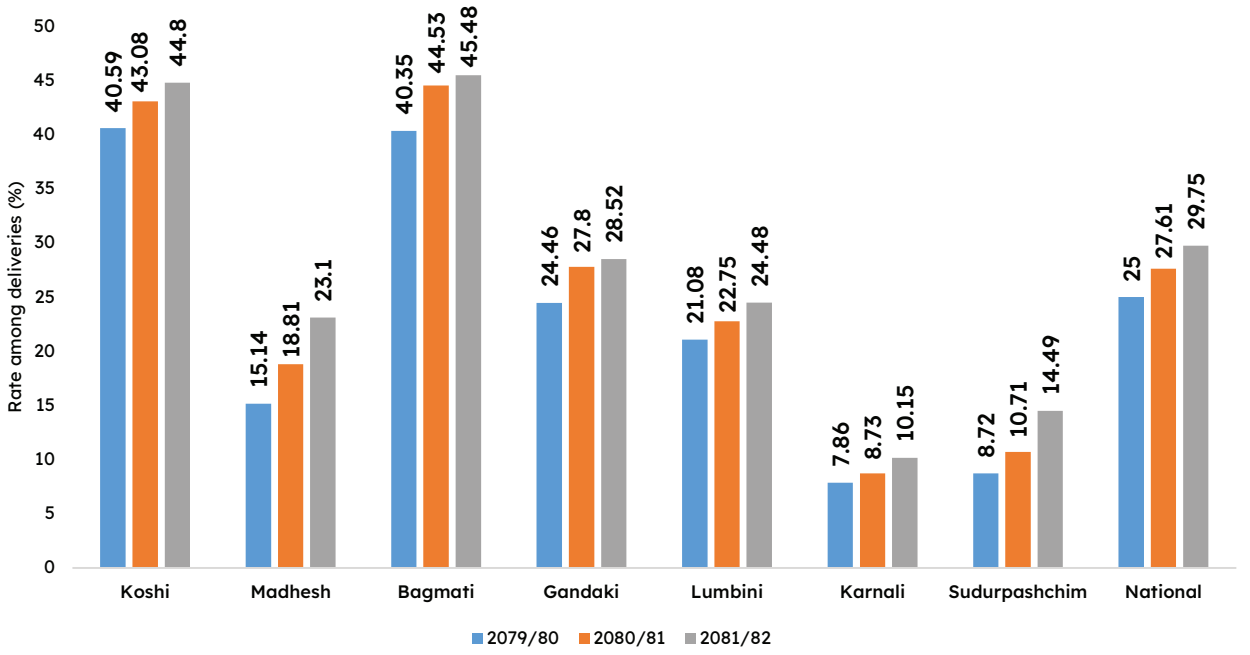
Figure 3.9 Met need of EmONC across provinces in last three FYs 2079/80 – 2081/82

Table 3.4 Percentage of cases managed for obstetric complications among estimated pregnancies in FY 2081/82

Complications managed among estimated pregnancies (%)	Koshi	Madhesh	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	National
Eclampsia	0.17	0.29	0.13	0.06	0.20	0.11	0.11	0.18
Pre-eclampsia	0.32	0.51	0.55	0.15	0.45	0.13	0.26	0.40
Puerperal Sepsis	0.07	0.35	0.08	0.02	0.13	0.08	0.06	0.14
Hemorrhage	0.94	0.98	1.45	0.61	1.43	1.15	0.80	1.11
Obstructed labor	1.01	3.61	0.81	0.42	1.82	2.11	0.71	1.72
Retained Placenta	0.35	0.22	0.17	0.16	0.29	0.45	0.27	0.26
Ruptured uterus	0.02	0.04	0.04	0.01	0.02	0.03	0.01	0.03

Source: HMIS/DoHS

Table 3.4 shows the proportion of major obstetric complications among estimated pregnancies managed at provincial and national level in FY 2081/82. Overall, the data indicate that obstructed labor (1.72%) and hemorrhage (1.11%) were the most frequently managed complications, together accounting for the largest share of emergency obstetric case management nationwide. Other complications, including retained placenta (0.26%) and ruptured uterus (0.03%), were reported at lower levels nationally. The table also shows provincial variation in distribution of obstetric problems.



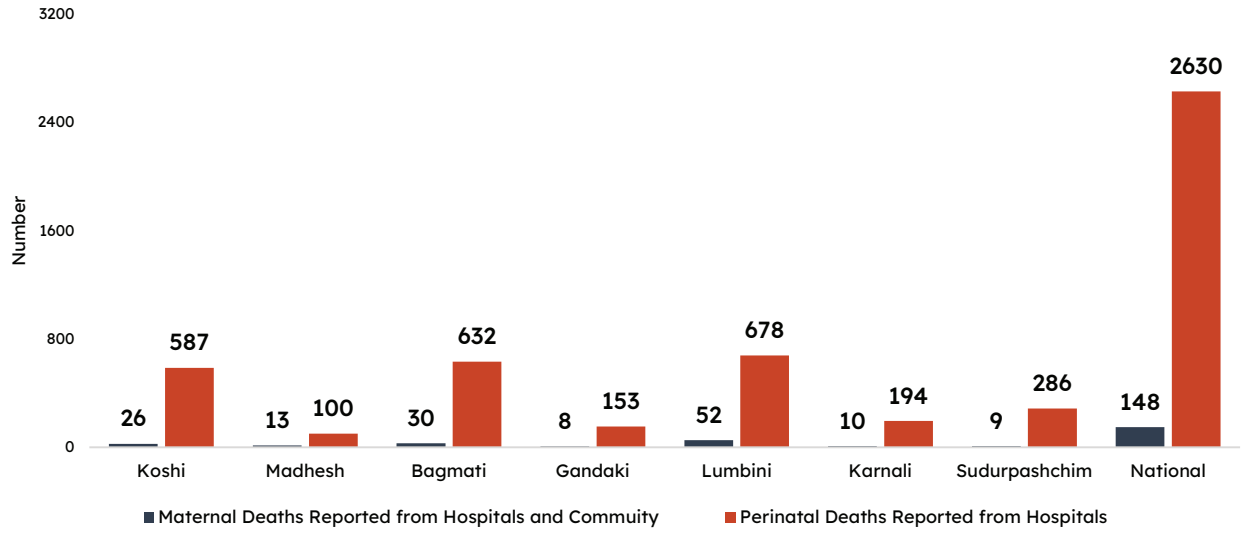
Source: HMIS/DoHS

Figure 3.10 Caesarean Section Rate among total institutional deliveries in FYs 2079/80 – 2081/82

Figure 3.10 illustrates the national and provincial caesarean section (CS) rate among deliveries for last three FYs. In FY 2081/82, the rate of CS increased to 29.75 percent at national level continuing the upward trend observed over recent fiscal years. Compared to FY 2080/81, the rate of CS is in increasing trend in FY 2081/82 in all seven provinces indicating a sustained expansion in the utilization of surgical delivery services within the national maternity care system. Bagmati Province reported the highest CS rate at 45.48%, narrowly followed by Koshi Province (44.8%), both remaining considerably above the national average. In contrast, Karnali Province continued to record the lowest CS rate at 10.15%, although a gradual increase was observed compared to previous years. Other provinces, including Gandaki (28.52%), Lumbini (24.48%), Madhesh (23.1%), and Sudurpashchim (14.49%), demonstrated moderate but steady rise in CS rates.

Maternal and Perinatal deaths in FY 2081/82

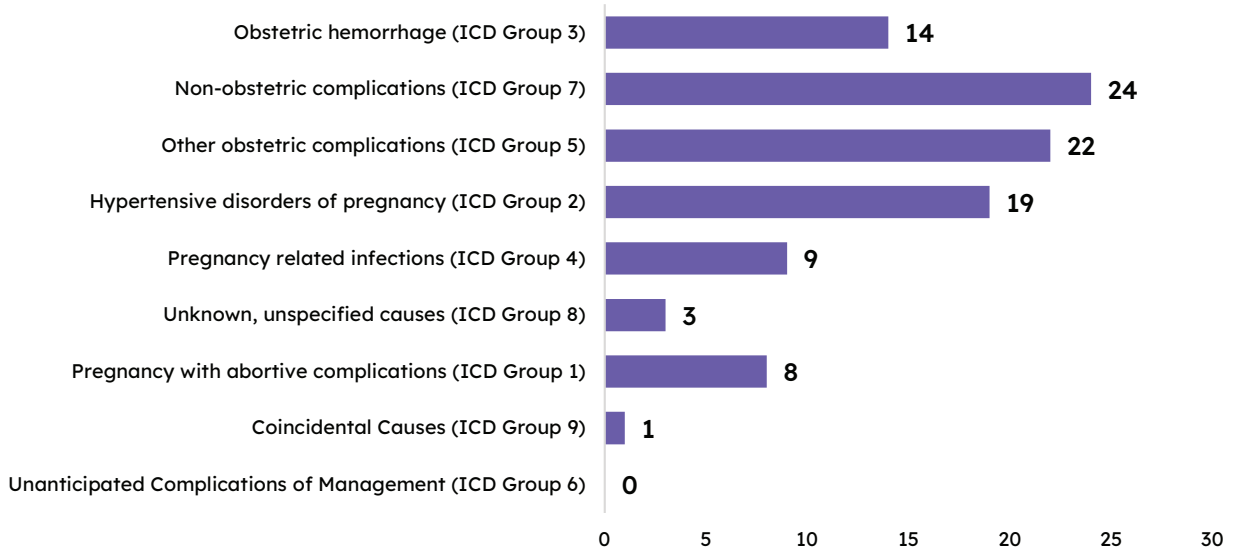
The MPDSR data was obtained from 128 hospitals in 52 districts. For analysis, the maternal and perinatal deaths with complete information are included in this report. Deaths with incomplete information have been excluded. Nationally, there were 148 maternal deaths and 2,630 perinatal deaths reported in FY 2081/82, with notable provincial variations. Lumbini province reported highest maternal deaths (52 deaths) as well as perinatal deaths (678 deaths). While Gandaki province reported the least maternal fatalities (8 deaths), perinatal fatalities were reported least in Madhesh province (100 deaths). These distributions highlight the urgent need for region-specific approaches to address province specific maternal and perinatal health issues. (Fig 3.11)



Source: MPDSR/DoHS

Figure 3.11 Province - Wise distribution of Maternal and Perinatal deaths in FY 2081/82

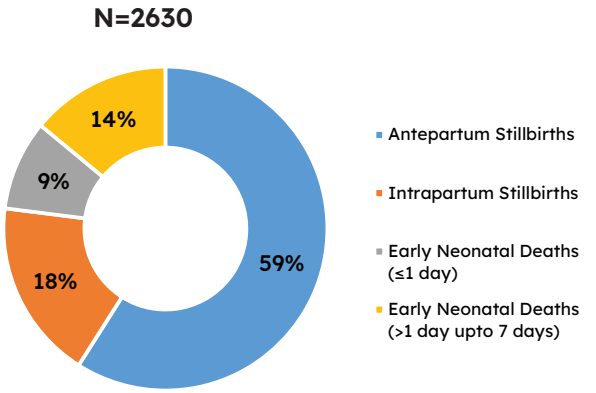
Out of the 148 maternal deaths, obstetric hemorrhage (14%), non-obstetric complications (24%), other obstetric complications (22%), and hypertensive disorders of pregnancy (19%) shared the major proportions (figure 3.12).



Source: MPDSR/DoHS

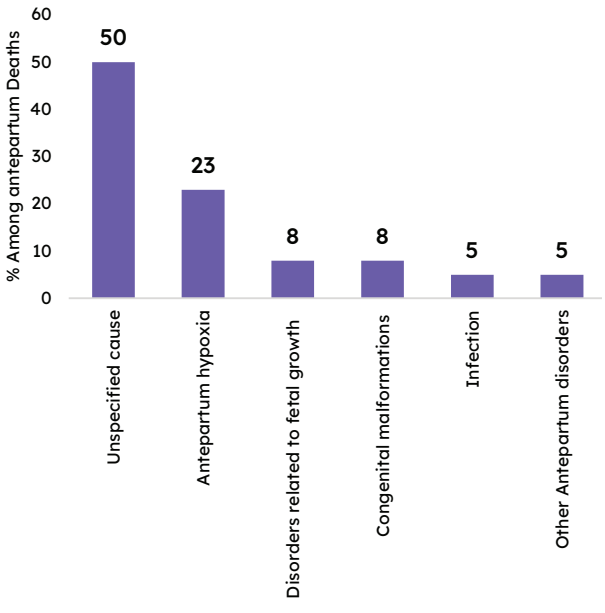
Figure 3.12 Causes of Maternal Deaths Reported in FY 2081/82

Among 2,630 perinatal deaths, 59% (1,555 deaths) were antepartum stillbirths, and 18% (463 deaths) were intrapartum stillbirths. Early neonatal deaths (612 deaths) were dichotomized; 9% deaths (233) occurred within first day of birth, while 14% deaths (379) occurred after the first day and within the first seven days of life (Fig 3.13).



Source: MPDSR/DoHS

Figure 3.13 Timing of perinatal deaths

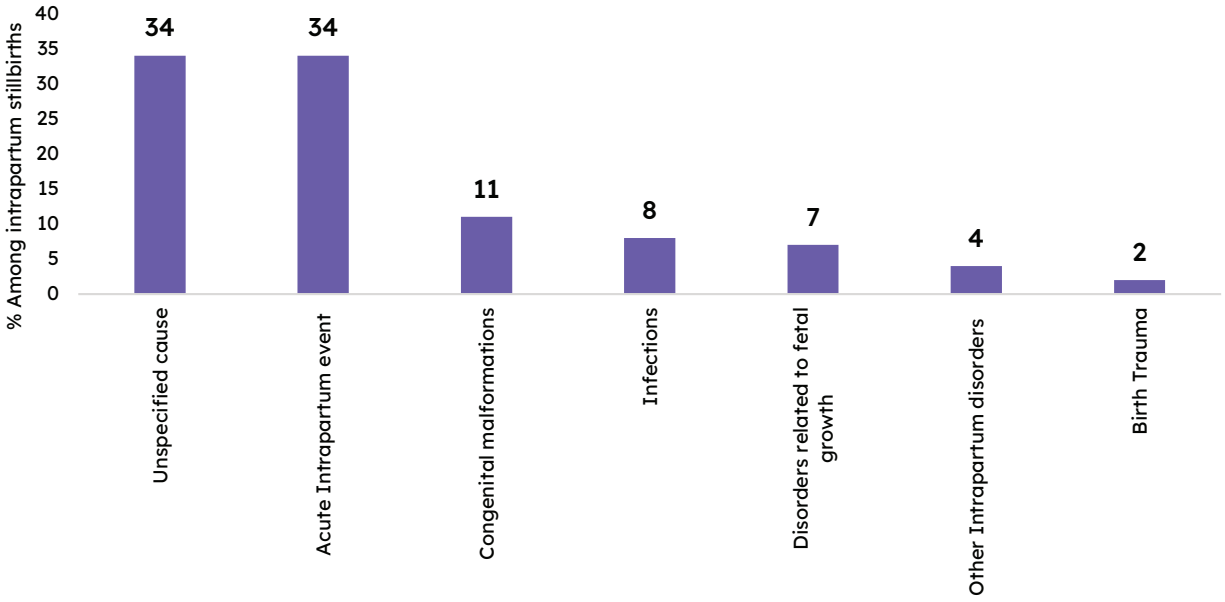


Source: MPDSR/DoHS

Figure 3.14 Causes of antepartum stillbirths

Out of the 1,555 antepartum stillbirths, half (50%) of them had unidentified causes, suggesting that there were either diagnostic or documentation gaps. Twenty-three percent of the cases were due to antepartum hypoxia, indicating that prenatal oxygen deprivation plays a major role in stillbirths (figure 3.14).

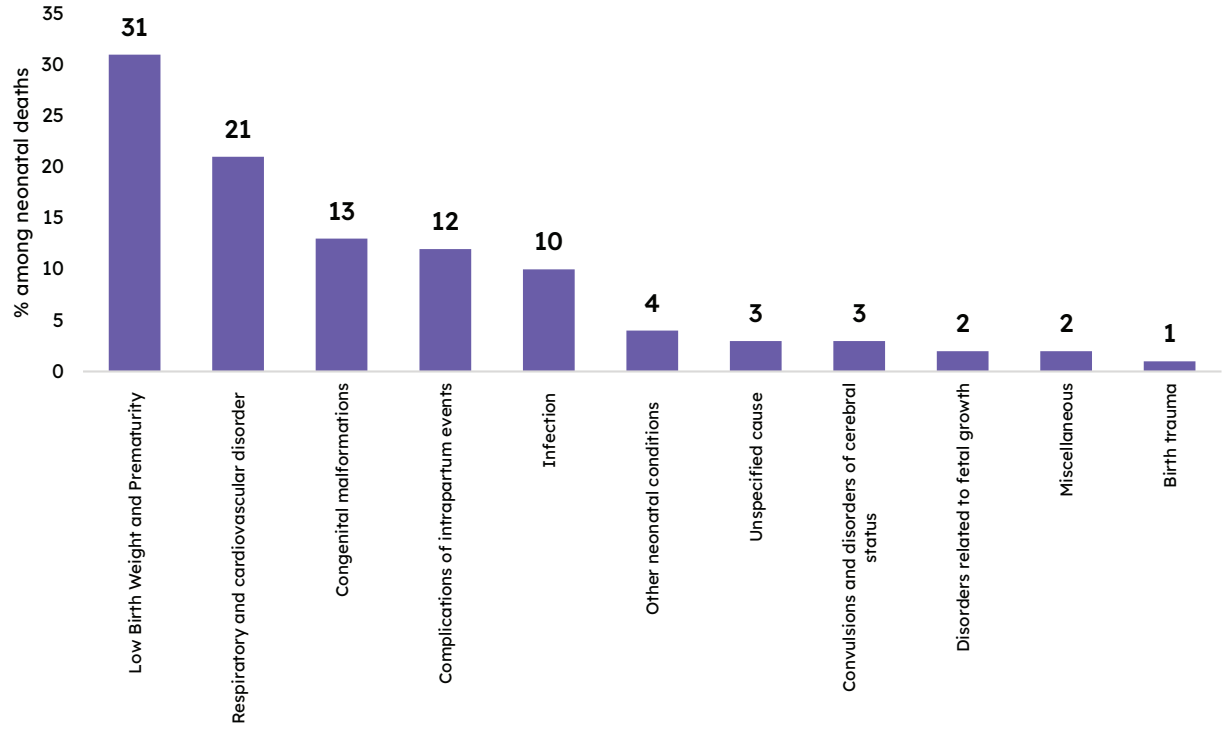
Among 463 intrapartum stillbirths, 34% had unidentified causes, 34% had acute intrapartum events while the least common cause identified for intrapartum stillbirths was birth trauma (2%). (figure 3.15)



Source: MPDSR/DoHS

Figure 3.15 Causes of intrapartum stillbirths

Figure 3.16 shows the causes of early neonatal deaths (0-7 days of birth) among 612 neonates in FY 2081/82. Low birth weight (LBW) and prematurity were the most common cause accounting 31 percent of deaths. Twelve percent of the deaths were due to complications of intrapartum events, highlighting the need and importance of quality intrapartum care.

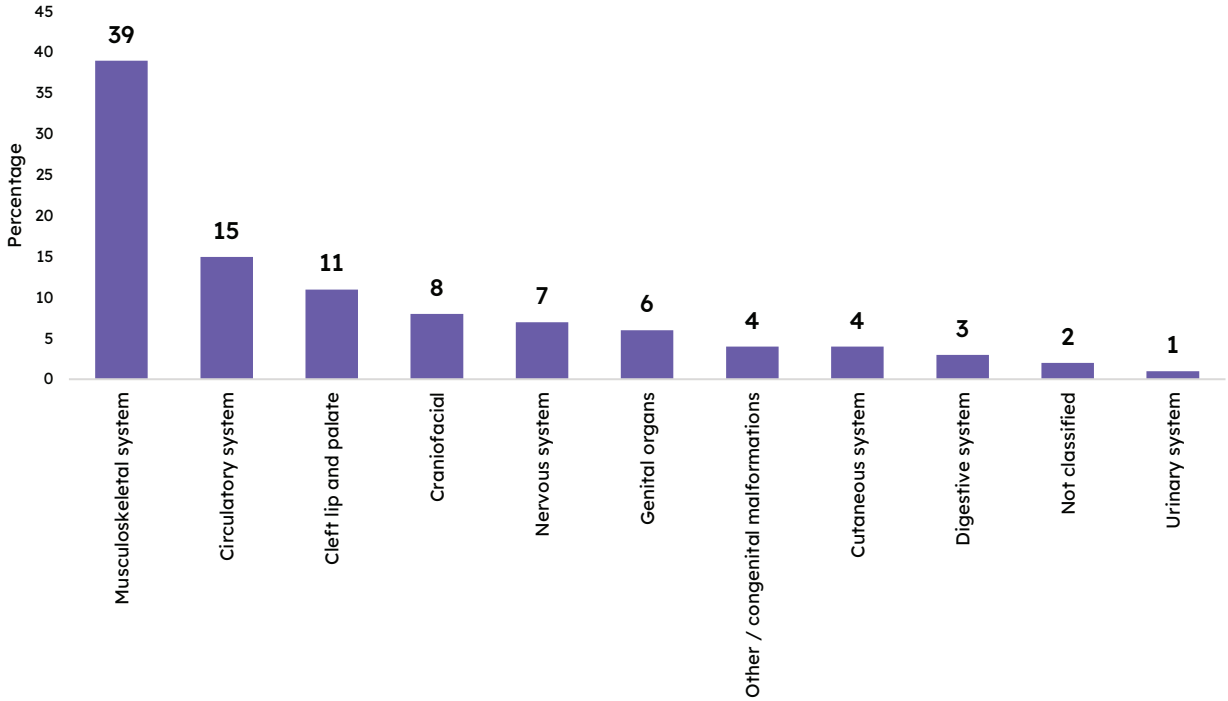


Source: MPDSR/DoHS

Figure 3.16 Causes of Early Neonatal deaths FY 2081/82

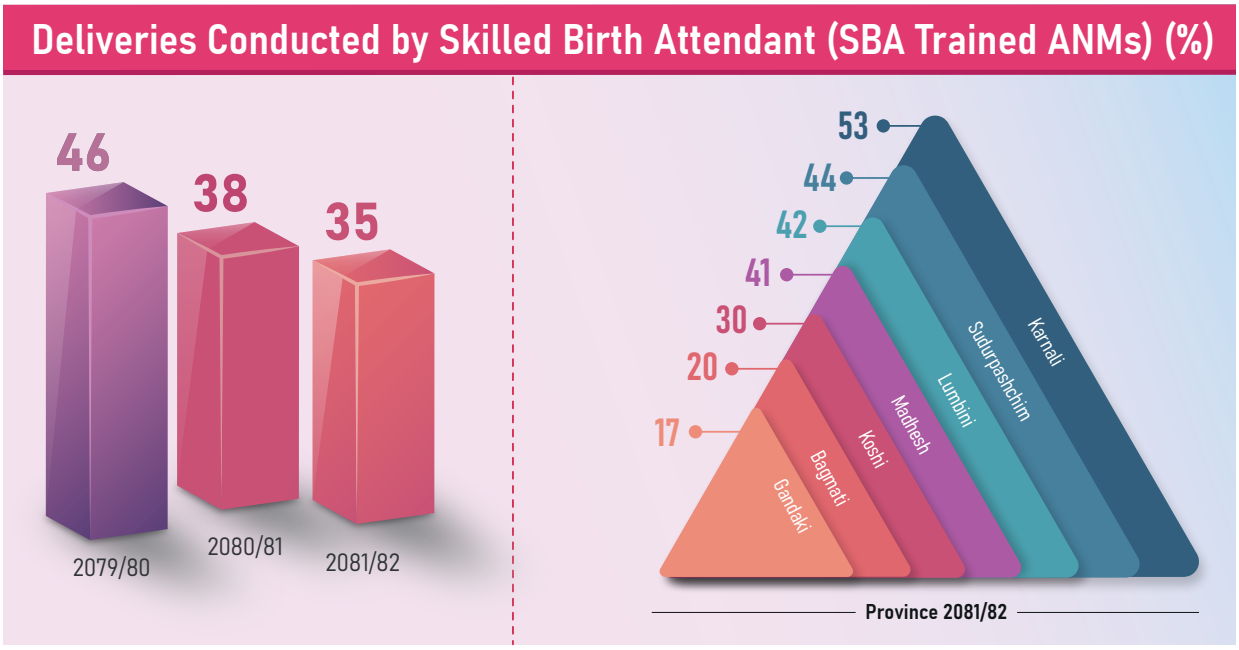
Newborn Birth defects in FY 2081/82

Data from the New-born birth defect (NBBD) surveillance was obtained from 27 hospitals across the country implementing NBBD surveillance. A total of 320 birth detects were reported in NBBD surveillance system. Figure 3.20 shows the distribution of significant birth defects by system affected in FY 2081/82. The major system affected was musculoskeletal system (39%), followed by circulatory system (15%). About 2% of the new-born defects were not classified / no information reported. Prioritizing interventions like folic acid supplementation and improving nutritional status of mothers during their antenatal periods can help in reducing such events.



Source: NBBD Surveillance

Figure 3.17 Percentage distribution of birth defects by system affected in FY 2081/82



Source: HMIS/DoHS

Figure 3.18 Mothers Who had Four PNC Checkup as per protocol (%)

The PNC protocol (complete PNC check-ups) was revised from three to four visits starting FY 2079/80. The proportion of mothers completing four PNC checkups increased from 26.5% in 2079/80 to 37.8% in 2080/81, and further to 42.88% in 2081/82. This upward trend indicates continued progress in postnatal service utilization and follow-up care, although overall coverage remains below half of all mothers.

Provincial disparities persist in PNC checkups. Lumbini (60.0%), Karnali (57.4%), and Sudurpashchim (52.6%) reported the highest coverage, demonstrating comparatively strong adherence to the revised protocol. In contrast, Bagmati (27.0%), Koshi (32.0%), and Gandaki (33.2%) recorded lower coverage levels. These differences highlight the need for targeted efforts to strengthen postnatal follow-up and service uptake in lower-performing provinces.

3.3.3 Gap in Continuum of Care Utilization from Pregnancy to Postnatal Phase

Table 3.5 Gap in continuum of care utilization from pregnancy to postnatal phase

Gap in continuum of care utilization (%)	2077/78	2078/79	2079/80	2080/81	2081/82
Four ANC visits	55.4	79.2	93.5	88.42	84.49
Eight ANC visits as per revised protocol	NA	NA	43	61	57.13
Women who received 180 days of IFA during Pregnancy	44.8	60	75	65.49	63.86
Institutional Deliveries	64.9	79	83.4	77.92	73.39
Postpartum women who received IFA for 45 days	40.7	52.6	74.5	81.93	82.91
Mothers Who had Four PNC Checkup as per revised protocol	NA	NA	26.5	37.8	42.88

Source: HMIS/DoHS

Table 3.5 shows the gap in continuum of care utilization from pregnancy to postnatal phase over the course of past five FYs. In FY 2081/82, there is an eminent gap between utilization of 4 ANC visits (84.49%) vs. women who received 180 days of IFA during pregnancy (63.86%), indicating concerns of either irregular supply or error in recording/reporting. Similarly, there is notable gap between proportion of institutional deliveries (73.39%) vs. mothers who had 4 PNC check-ups (42.88%). The denominator for indicators of above table was expected live births.

Additionally, the proportion of postpartum mothers who received IFA for 45 days, and who had four PNC check-ups showed an increasing trend compared to previous FY, suggesting gradual improvement in PNC adherence. However, a decline in proportion was observed among pregnant women who had 4 ANC visits, 8 ANC visits, who received 180 days of IFA, and who had institutional deliveries compared to previous FY. These patterns points to a mixed performance, with advances in postpartum care services and setbacks in ANC visits and deliveries.

3.3.4 Utilization of Safe Abortion Service (SAS)

A total of 104,153 women utilized safe abortion services in FY 2081/82, continuing an upward trend in service users observed in recent years. The number of women accessing services has increased overall, with the most marked rise seen in FY 2080/81. Growth continued in FY 2081/82, though at a slower rate, suggesting gradual stabilization following earlier expansion. Additionally, the trend demonstrates continued predominance of medical abortion in Nepal. In FY 2081/82, medical abortion remained the dominant method, accounting for 70.56 percent of all safe abortion services, although with a slight reduction compared to the previous year. Similarly, the share of surgical abortion escalated marginally to 29.44%. Overall, the pattern indicates a sustained preference for noninvasive medical methods. (figure 3.19)

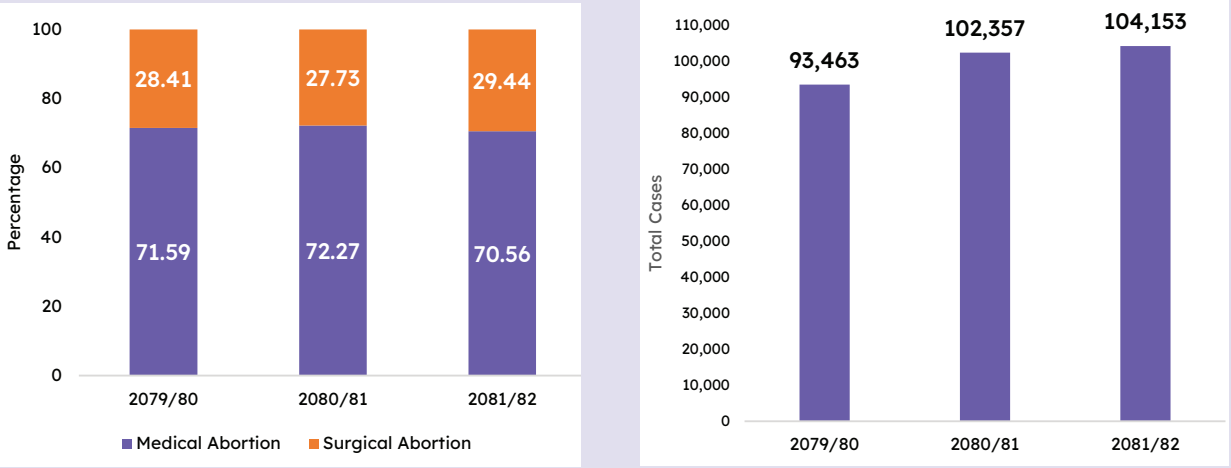
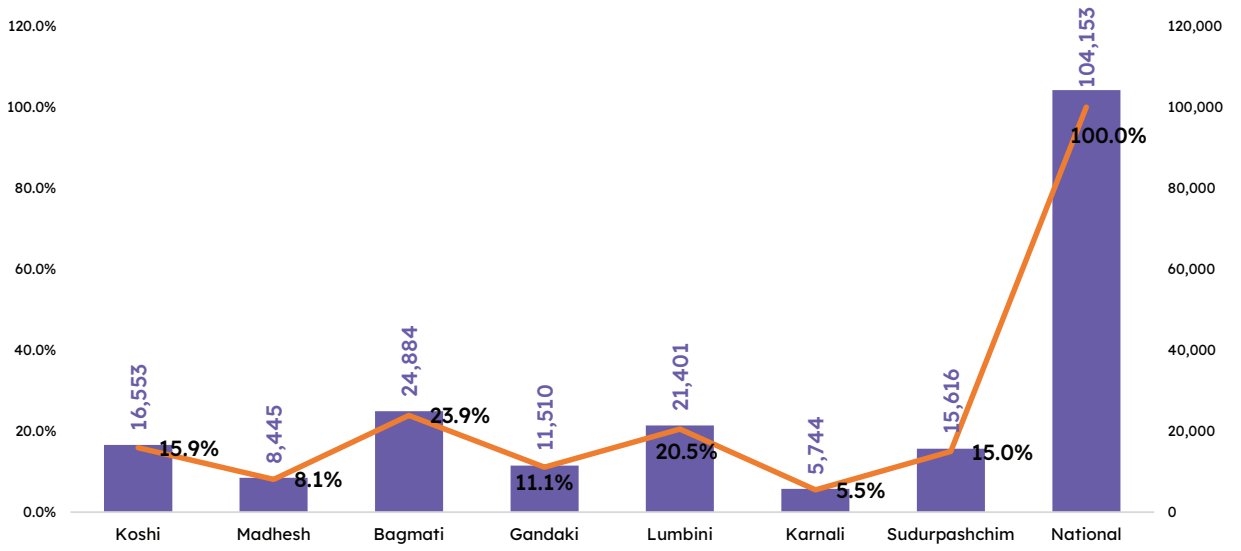


Figure 3.19 Types of safe abortion services among total cases in FY 2079/80 – 2081/82

Source: HMIS/DoHS

In FY 2081/82, Bagmati Province accounted for the largest share of total safe abortion services cases (23.9%), followed by Lumbini (20.5%). Karnali Province reported the smallest share (5.5%). The distribution reflects differing population sizes, service availability, and access to safe abortion care across provinces.

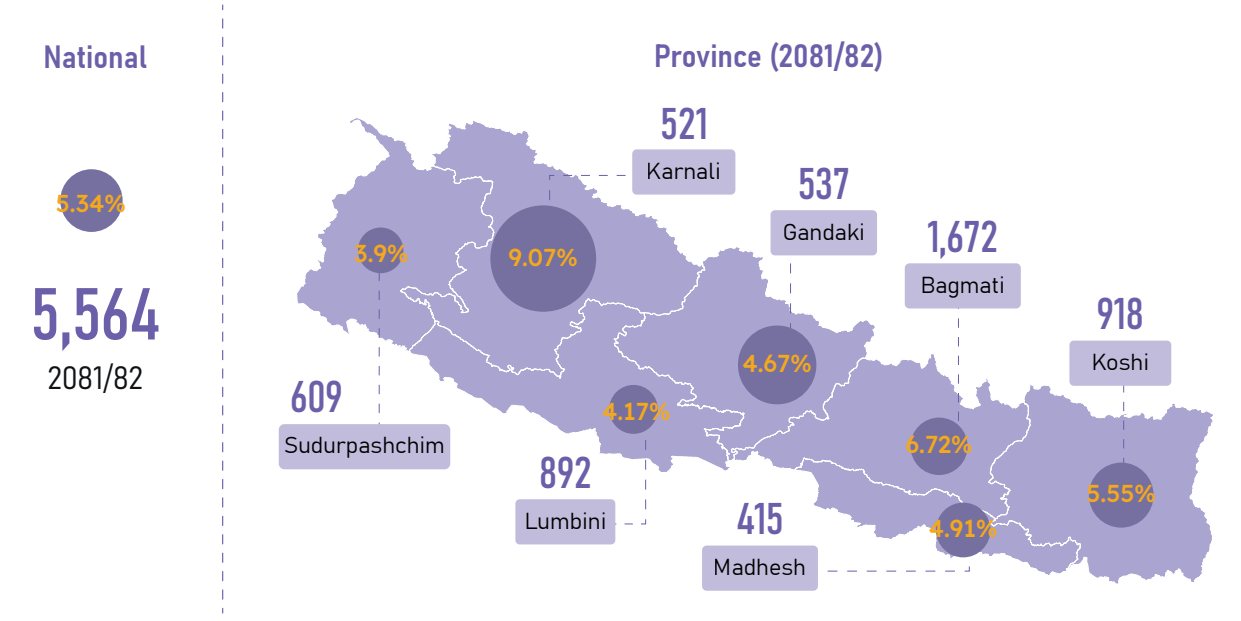
Overall, the sustained increase in service utilization indicates continued demand and improved access to safe abortion services nationwide.



Source: HMIS/DoHS

Figure 3.20 Province-wise number and percentage of safe abortion service utilization in FY 2081/82

In FY 2081/82, among the total SAS users, 5.34% users (5,564 women) were under 20 years of age, and with the notable variation across provinces. Highest proportion of under 20 years women utilizing SAS services was from Karnali province (9.07%). Koshi (5.55%) and Bagmati (6.72%) provinces also had higher proportion than national percentage of under 20 years women utilizing SAS services among total SAS service users. (Figure 3.21). The given data only depicts the registered cases of SAS users, the tip of an iceberg.



Source: HMIS/DoHS

Figure 3.21 National and provincial distribution of women under 20 years utilizing safe abortion services in FY 2081/82

The table 3.6 presents national and provincial data on abortion complications, post-abortion care (PAC), and safe abortion service (SAS) -in FY 2081/82. PAC services were used for 8.64 percent of induced abortions and 6.06 percent of spontaneous abortions. Nationally, a total of 104,153 safe abortion services were reported. Highest number of safe abortion service was utilized in Bagmati province (24,884). Nationally, 1.2 percent of safe abortion complications were reported among total safe abortion cases while 7 percent of MNH-Obstetric/ Abortion complication were referred out.

Table 3.6 Number of SAS, percentage of PAC and safe abortion complications among total safe abortion cases in FY 2081/82

National/ Provincial	Total Safe abortion Service	% PAC services (Induced)	% PAC services (Spontaneous)	% of safe abortion complications among total safe abortion cases	% MNH-Obstetric Complication-Abortion complication-Referred Out
National	**104,153**	**8.64**	**6.06**	**1.2**	**7**
Koshi	16,553	9.42	6.28	1.6	5
Madhesh	8,445	9.34	8.57	2.6	1
Bagmati	24,884	4.71	4.41	0.6	6
Gandaki	11,510	8.18	3.87	0.6	21
Lumbini	21,401	12.06	7.20	0.8	10
Karnali	5,744	16.50	10.52	3.2	7
Sudurpashchim	15,616	6.49	5.53	1.4	8

Source: HMIS/DoHS

3.3.5 New-born Service Utilization

Nationally, a total of 26,627 newborns were admitted to SNCU/NICU/KMC services in FY 2081/82, relatively an increase from last FY 2080/81 (total of 17,859). Highest number of cases were recorded from Lumbini Province (7,046). While sepsis was the leading cause of admission in most provinces, Lumbini Province reported an exceptionally high number of hypothermia cases (1,591) and also had the highest burden of hyperbilirubinemia (970 cases). Another notable remark was of Sepsis in (1,541) Madhesh Pradesh (Table 3.7)

Table 3.7 Causes of Newborn Admission across provinces reported in FY 2081/82

National/ Provincial	Asphyxia	Congenital Anomalies	Hyper bilirubin	Hypothermia	LBW	Preterm	Seizure	Sepsis	Other	Total
National	**2,665**	**259**	**4,623**	**2,120**	**3,029**	**2,761**	**1,036**	**6,269**	**3,865**	**26,627**
Koshi	314	53	474	71	502	557	105	842	316	3,234
Madhesh	595	57	784	348	727	566	491	1,541	342	5,451
Bagmati	248	11	595	4	372	351	27	614	483	2,705
Gandaki	164	29	962	59	227	253	36	832	1,024	3,586
Lumbini	763	38	970	1,591	765	608	225	977	1,109	7,046
Karnali	153	23	190	24	70	153	24	544	270	1,451
Sudurpashchim	428	48	648	23	366	273	128	919	321	3,154

Source: HMIS/DoHS

Table 3.8 Newborns managed by KMC for preterm, LBW and/or hypothermia reported in FY 2081/82

Treatment Outcome	Koshi	Madhesh	Bagmati	Gandaki	Lumbini	Karnali	Sudurpaschim	National
Newborn care-Managed with KMC-Hypothermia	5.09	12.98	2.37	14.95	18.03	7.41	2.63	10.36
Newborn care-Managed with KMC-LBW	38.91	33.98	34.55	35.94	31.69	20.37	30.21	32.61
Newborn care-Managed with KMC-Preterm	28.18	22.31	30.89	39.15	26.23	37.04	22.88	26.78
Newborn care-Managed with KMC-Preterm/LBW/ Hypothermia	27.82	30.73	32.19	9.96	24.04	35.19	44.28	30.25

Source: HMIS/DoHS

A total of 6,323 sick newborns were managed with Kangaroo Mother Care (KMC) in FY 2081/82, the largest shares were managed for low birth weight (n=2,062; 32.6%), followed by preterm newborns (n=1,693; 26.8%). Management for hypothermia alone accounted for 10.4% of cases (n=655). Nearly one-third (n=1,913; 30.3%) of newborns were managed for combined conditions (preterm/LBW/hypothermia). In Koshi province, the highest proportion were managed for low birth weight (38.9%) among total KMC care given. Similarly, highest proportion of care in Madesh (33.98%), Bagmati (34.55%) and Lumbini (31.69%) province was also for low birth weight. In Gandaki (39.15%) and

Karnali (37.01%) the highest proportion of KMC was for preterm birth. While in Sudurpaschim province the highest proportion of KMC care was for Preterm/LBW/ Hypothermia (44.28%). (Table 3.8).

These findings highlight continued expansion of KMC services, particularly for LBW and preterm newborns, while also demonstrating geographical differences in service utilization, with Lumbini and Sudurpashchim showing comparatively higher uptake across key newborn risk categories.

Table 3.9 Treatment outcomes of the newborns reported in FY 2081/82

Treatment Outcome	Koshi	Madhesh	Bagmati	Gandaki	Lumbini	Karnali	Sudurpaschim	National
Sick babies admitted (%)	12.59	22.53	13.57	12.73	19.09	7.62	11.84	100
LAMA/Absconded (%)	4.73	28.37	2.79	2.55	3.87	5.23	5.74	9.51
Referred (%)	7.23	8.11	5.01	6.77	8.67	4.52	10.36	7.51
Death (per 1,000)	16.42	22.95	10.52	17.79	38.95	27.11	37.85	24.92

Source: HMIS/DoHS

The table 3.9 shows the treatment outcomes of newborns admitted to inpatient newborn care services in FY 2081/82. Nationally, a total of 20,304 sick newborns were admitted, highest proportion being admitted in Lumbini province (19.09%). Overall, 9.5 percent of admitted newborns were reported as LAMA/ absconded, indicating a notable proportion of families discontinuing care before completion of treatment. The highest rates were observed in Madhesh Province (28.4%), followed by Sudurpashchim (5.7%) and Karnali (5.2%), suggesting the need to better understand barriers to continued facility-based care in these areas.

Approximately 7.5 percent of admitted newborns were referred to higher level facilities. Referral rates were highest in Sudurpashchim (10.4%) and Lumbini (8.7%), which may reflect both the severity of cases and the functioning of referral linkages. The national mortality rate among admitted newborns were 24.9 deaths per 1,000 admissions. Mortality was highest in Lumbini (39.0 per 1,000 LB) and Sudurpashchim (37.9 per 1,000 LB), followed by Karnali (27.1 per 1,000 LB) and Madhesh (23.0 per 1,000 LB). Lower mortality rates were reported in Bagmati (10.5 per 1,000 LB) and Koshi (16.4 per 1,000 LB). These findings indicate important provincial differences in newborn treatment outcomes. Strengthening quality of care, improving timely referral, and addressing factors contributing to high LAMA and mortality rates remain critical, particularly in provinces with pitiable outcomes.

3.4 Key Achievements of MNH programme in FY 2081/82

- QI Dashboard developed and linked with FWD websites
- Expansion and strengthening of CEmONC programme to 76 districts.
- Facility based MPDSR programme has been expanded to 130 hospitals and community level MPDSR has been expanded to 57 districts in FY 2081/82
- Robson's Ten Group Classification system for monitoring caesarean section has been expanded and strengthen to 38 hospitals
- Coaching mentoring programme for S.NCU level II care facilities developed and being piloted
- Level II newborn care orientation package development and orientation to SNCU workers
- Value clarification and attitude transformation training conducted for MNH and safe abortion service providers
- First Reproductive Health Coordination Committee meeting was conducted
- Orientation of Reproductive, Maternal, Newborn, Child, Adolescent Health and Nutrition (RMNCAH) database to health workers across country
- Updated SAS trained and listed providers and sites Data in the Database
- Continue Orientation to service providers on management of postpartum hemorrhage and non-pneumatic anti-shock garment and labor care guide.
- Facilitation guide on Maternal Mental Health (Aama ko Mann) developed and maternal mental health services initiated at Paropakar Maternity and Women's Hospital
- Development of Birth Defect Surveillance, Prevention and Management- National Implementation Guidelines 2025-2030

Box 3.3 SWOT analysis of MNH Programme

Strengths	Opportunities
• Real-time monitoring of QI assessment of health facilities through QI dashboard • Coaching mentoring programme for continuous improvement of quality of care • Expansion and strengthening of CEmONC programme in 76 districts • Regular death auditing through MPDSR programme has been expanded • Monitoring for CS and its indication using Robson Ten Group Classification being expanded • Integration of Maternal Mental Health in MNH services is initiated. • Provision of essential newborn care packages including immediate thermal care, resuscitation and newborn immunization • Continuous capacity building and HR support • Integration of Mental health into Maternal and Newborn Health services	• Implementation of Respectful Maternity Care (RMC) • Initiation of companionship in labor • Integrating MNH QI tools with other programme/tools for integrated supervision • Availability of development partners working in MNH • Coordination among three tiers of government • MNH is a priority program of federal, provincial and local level governments • MNH is a priority program of federal, provincial and local level governments
Weaknesses	**Threats**
• Inadequate Budget for supervision and monitoring • Inefficient implementation of Data Quality Self-Assessment (DQSA) • Insufficient budget emergency transport system • Weak referral mechanism	• Reduction of preventable Maternal/newborn deaths at health facilities • Timely referral from remote areas and execution of emergency referral funds / airlift • Self-referral and crowding at the CEmONC sites and less uptake of delivery services from birthing centers

4 Child Health and Immunization Services

Family Welfare Division > Child Health and Immunization Services Section

The Child Health and Immunization Services Section (CHISS) of Family Welfare Division plays a critical role in Nepal's efforts to reduce child morbidity and mortality. At the federal level, the section bears responsibility for the strategic planning, execution, monitoring, and evaluation of child health and immunization services with close coordination and collaboration with the provincial and local level governments as well as with various centers and sections of different divisions of the Department of Health Services (DoHS), Ministry of Health and Population (MoHP), including MD (IHMIS, LMS), NHEICC, EDCD, NPHL, PHDs, and HOs. Through a combination of immunization, vaccine preventable disease (VPD) surveillance, and other child health program, including Integrated Management of Neonatal and Childhood Illness (IMNCI), this section strides towards child health, survival, and well-being. CHISS implements targeted interventions to address the leading causes of child deaths, ensuring accessibility to essential health services across all levels with a focus on hard-to-reach and high-risk communities.

Major programs of CHISS are the National Immunization Programme (NIP), explained in section 4.1, and the Integrated Management of Newborn and Childhood Illness (IMNCI) programme, explained in section 4.2 of this chapter.

4.1 National Immunization Programme

Nepal initiated immunization in the late seventies with a smallpox vaccine. NIP was first introduced as the Expanded Programme on Immunization (EPI) in 2034 B.S. and is the priority programme of the Government of Nepal (GoN). It has played a significant role in lowering the morbidity, mortality, and disability caused by diseases that can be prevented by vaccination. The programme offers free vaccination services against 14 pathogens, such as Tuberculosis, Diphtheria, Pertussis, Tetanus, Hepatitis B, Hemophilus influenza type B, Polio, Rotavirus, Streptococcus Pneumoniae, Measles, Rubella, Japanese encephalitis (JE), Typhoid and HPV. Nepal introduced the HPV vaccine in FY 2081/82 as an effort to accelerate the elimination of cervical cancer. The country has maintained its polio-free status since 2010 (regional certification in 2014) and eliminated maternal and neonatal tetanus due to its strong immunization efforts. Even in rural locations, the programme is accessible because of its wider network in medical facilities, outreach clinics, and community health volunteers. Since FY 2069/70, Nepal's 'Full Immunization Declaration (FID)" initiative aims to combat social inequities, ensuring complete immunization for every child within administrative boundaries. As of Ashadh 2082, all 77 districts have achieved and sustained 'full immunization' status. The National Immunization Programme (NIP) will significantly contribute to achieving SDG 3, particularly Indicator 3.2.1 (under-five mortality rate) and Indicator 3.2.2 (neonatal mortality rate), by reducing vaccine-preventable diseases. (See Table 4.1 for major milestones of the programme and Box 4.1 for key guiding strategies.)

Nepal, the first country in the South-East Asia Region with Immunization Act, 2072, Immunization Regulation 2074, and the first country to adopt Full Immunization Declaration Initiative. Provinces adopting their own acts demonstrate the government's commitment to recognizing immunization as a fundamental right for all children. Alongside global, regional, and national guiding documents, the NIP also has a Comprehensive Multi-Year Plan (cMYP) 2017–2021. National Immunization Strategy (2023-2030) (draft version), aligned with the Nepal Health Sector Strategic Plan (2023-2030), will be the primary guiding document for NIP.

Table 4.1 Major Milestones of National Immunization Programme, Nepal

Fiscal Year BS (AD)	Achievements/Milestones
2034/035 (1977)	- Eradicated smallpox - BCG and DPT vaccines started in Dhanusha, Sindhupalchowk, and Rupandehi districts
2035/036 (1978)	- Started TT vaccination for pregnant women
2045/046 (1988)	- Nepal's commitment to eradicate Polio in World Health Assembly - BCG and DPT vaccine were introduced all districts - OPV and Measles vaccine were introduced in routine immunization
2053/054 (1996)	- First nationwide Polio vaccination campaign - Integration of VPD surveillance in EWARS
2055/056 (1998)	- Polio Eradication Network established to conduct AFP surveillance
2056/067 (1999)	- The first case of Polio detected in Nepal
2059/060 (2002)	- Hepatitis B vaccine introduction in phase wise manner
2060/061 (2003)	- AD syringe introduced - Measles surveillance started - Neonatal Tetanus (NT) surveillance started
2061/062 (2004)	- Measles campaign conducted - AES surveillance started
2062/063 (2005)	- Maternal Neonatal Tetanus (MNT) Eliminated - Inclusion of Measles Rubella (MR), Japanese Encephalitis (JE) and NNT surveillance into VPD surveillance - Hepatitis B vaccine integrated in DPT and started to provide DPT-HepB vaccine - TT vaccine for grade 1, 2 and 3 students in 8 districts
2063/064 (2006)	- JE vaccination campaign started in multiple phases (JE vaccine introduced in high-risk districts in phase wise manner)
2066/067 (2009)	- Hib component was integrated in DPT-HepB vaccine as Pentavalent vaccine
2067/068 (2010)	- Last Polio case detected in Nepal
2069/070 (2012)	- Full Immunization Declaration Programme started
2070/071 (2013)	- Rubella vaccine component was integrated in routine immunization as 'MR vaccine'
2071/072 (2014)	- IPV introduced in routine immunization - Nepal declared "Polio-Free" by WHO Regional Certification Commission - TT vaccine replaced by Td
2072/073 (2015)	- Second dose of MR vaccine started in Nepal - Pneumococcal Conjugated Vaccine (PCV) introduced in routine immunization
2073/074 (2016)	- Immunization Act 2072 enacted and published in Nepal Gazette - Initiation of Congenital Rubella Syndrome (CRS) surveillance with elimination goal - MR sub-national lab expansion at BPKIHS, Dharan - JE vaccine campaign and JE vaccine included in routine immunization all over Nepal - Trivalent OPV switched to bivalent OPV - HPV demonstration conducted in Kaski and Chitwan
2074/075 (2017)	- Environmental Surveillance of polio virus started in Kathmandu Valley
2075 (2018)	- Switched from IPV to fIPV - Nepal was certified as Rubella and CRS control nation
2075/076 (2019)	- Nepal was certified as Hepatitis B controlled nation among children through vaccine
2076/077 (2020)	- Introduction of Rotavirus vaccine in routine immunization - Integration of Hygiene Promotion activities in routine immunization - Introduction of delay schedule (Ceiling for routine immunization services for missed children expanded to under 5 years)
2077/078 (2021)	- COVID-19 vaccine introduced in Nepal
2078/079 (2022)	- TCV vaccine introduction in Routine Immunization
2079/080 (2023)	- Environmental surveillance expanded in Madhesh and Koshi Provinces - MoHP endorsed the VPD Surveillance Plan (Polio Transition Plan (2023-2030)
2080/081 (2024)	- Environmental surveillance expanded in Gandaki Province - MR sub-national lab expanded in Sudurpashchim Province - HPV Demonstration conducted through 7 hospitals of 7 provinces - MNT elimination validation
2081/082 (2025)	- HPV integrated in Routine Immunization - FID in 77 districts and 7 provinces - Rubella Elimination Certification - The VPD (Polio) Transition Implementation Framework developed

Box 4.1 Key Guiding policies, strategies, and guidelines for immunization programme in Nepal

- Reaching Every District Strategy 2068 BS (2002 AD)
- Immunization Act, 2072 BS (2016 AD) and Immunization Regulation 2074 BS
- Comprehensive Multi-Year Plan for immunization 2073-2077 BS (2017 – 2021 AD)
- Global Vaccine Action Plan (2011-2020 AD)
- Full Immunization Sustainability Guideline (2077 BS)
- Immunization Agenda 2030: A Global Strategy to Leave No One Behind

Vision, Strategic Priority and Goal of Immunization programme

Vision: Nepal, a country where everyone, everywhere, at every age fully benefits from vaccines for good health and well-being.

Strategic Priority:

1. Immunization for PHC and UHC within the Health System
2. Commitment and Demand
3. Immunization Coverage and Equity
4. Life Course Immunization and Integration
5. Surveillance of Vaccine Preventable Diseases (VPDs)
6. Outbreaks and Emergencies Response of VPDs
7. Vaccine Regulation, Safety, Security and New Vaccine Introduction
8. Financing Immunization and Sustainability

Strategic Goals:

1. Effective, efficient and resilient immunization services are accessible to all people as an essential part of primary health care, and thereby contribute to universal health coverage
2. Immunization is valued and actively sought by all people, and health authorities commit to ensure immunization is available as a key contributor to the enjoyment of highest attainable standard of health as a fundamental right
3. Full protection of immunization is realized by everyone regardless of location, age, sex, socioeconomic status, or gender-related barriers
4. All people benefit from recommended immunizations throughout the life course, effectively integrated with other essential health services
5. To maintain and sustain the comprehensive, and sensitive surveillance system for vaccine-preventable diseases that ensures timely detection, confirmation, reporting, and response to VPD cases through case-based surveillance, early detection and laboratory confirmation, and epidemiological analysis and risk assessment.
6. Immunization programs can - (1) anticipate, prepare for, detect, and rapidly respond to vaccine-preventable and emerging disease outbreaks, and (2) ensure immunization service delivery during acute emergencies and among communities affected by conflict, disaster and humanitarian crisis
7. New vaccines are proposed to the population accordingly to disease burden and financing capacity, and reliable supply of appropriate and affordable vaccines of assured quality is continuously ensured
8. The immunization program is fully financed and the country plan for its future sustainable financing

Key Activities adopted for identification and vaccination of zero doses and under-immunized children.

- Search and vaccinate during Immunization Month (Baishakh) including global initiative of Big Catch-Up program.
- Screening of children for missed routine vaccination.
  - During Vitamin A campaigns for under 5 years children (Biannual)
  - Screening of under 5 years children at the time of school enrollment (through vaccination card)
- Yearly house-to-house visit (Magh to Chaitra) to identify zero dose and under-immunized children, with additional sessions during Immunization Month to vaccinate zero dose and under-immunized children.
- Zero dose and under-immunized children screening through campaigns, surveys, and real-time monitoring.
- Yearly micro-plan update focusing on high-risk areas/population.
- Mass media and social mobilization for vaccination
- Use VPD surveillance data analysis as proxy indicator of inequitable service delivery and for identifying areas of zero dose and under immunized children.
- Use of immunization monitoring charts to monitor the coverage and identify dropouts by health facilities

4.1.1 Major Activities Conducted in FY 2081/82

- Procurement of vaccines and vaccine-related supplies (syringes, diluents, etc.)
- Surveillance and outbreak control of vaccine-preventable diseases.
- Capacity enhancement of health workers at provinces, local levels for immunization and cold chain management through workshop, training, supportive supervision, onsite coaching.
- Reviewing of immunization programs, micro-planning updates, full immunization declaration and sustainability planning, and orientation workshops on hygiene promotion.
- Workshops to revise and update immunization and cold chain guidelines,
- National review meeting on measles elimination progress.
- Introduction of HPV vaccine in
- National Immunization Program through routine introduction and multi age cohort (MAC) vaccination campaign
- High-level advocacy meetings and workshops for polio transition planning, resource mobilization, and implementation
- Post-validation assessment, results dissemination, and review of Maternal and Neonatal Tetanus (MNT) elimination
- Depositing of funds into the Immunization Fund to ensure sustainable financing.
- Dissemination of coverage survey results and experience sharing of Measles-Rubella campaign.
- Initiation of electronic recording of immunization micro-plans.
- Geographic mapping of vaccination and cold chain centers using GIS software
- Micro-planning, readiness assessment, and contingency planning with mobilization and onsite coaching of federal and provincial staff.
- Urban Immunization strengthening strengthening activities (coordination meetings and capacity building of private sector health workers to enhance immunization service delivery, reporting, and adherence to national policies in underserved urban areas, as well as consultative meetings with elected representatives to assess urban immunization status, identify gaps, and map immunization clinics in metropolitan and sub-metropolitan cities).
- Province level immunization coordination committee meetings in all provinces focusing on catch up vaccination and polio transition
- Initiation of piloting of geo-enabled microplanning of NIP

Table 4.2 Number of children reached during extensive search and vaccination Campaign (Immunization Month) (FY 2081/82)

Number of missed children identified and vaccinated	Number
Zero dose vaccinated (Baisakh month)	548
Drop-out vaccinated total (Baisakh month)	18,790
Total Saturday sessions conducted (Baisakh month)	392
Total sessions conducted on 31st Baisakh	2255

Source: HMIS/DoHS

4.1.2 Key Programme Indicators for NIP

Routine Immunization Coverage

Based on the data reported from Nepal's National Immunization Program (NIP), there has been a significant declining trend in antigen coverage from the FY 2079/80 to 2081/82, with most of the vaccines falling below the national target of 95%. In FY 2079/80, coverage of most vaccines remained high with BCG (102%), DPT-HepB- Hib1 (101%), and DPT- HepB-Hib3 (99%). However, during the FY 2081/82 there occurred a great decline across all antigens with BCG coverage to 88 %, DPT-HepB-Hib1 to 87 % and DPT-HepB-Hib3 to 86%. MR1 coverage dropped to 87 % and MR2 and JE vaccines although comparatively higher at 96 % and 92 % respectively still reported a reduction compared to previous FY. The Td vaccination coverage showed a consistent declining trend with drop from 72% in FY 2079/80 to 64% in FY 2081/82 indicating a low service utilization in maternal immunization. (Figure 4.1)

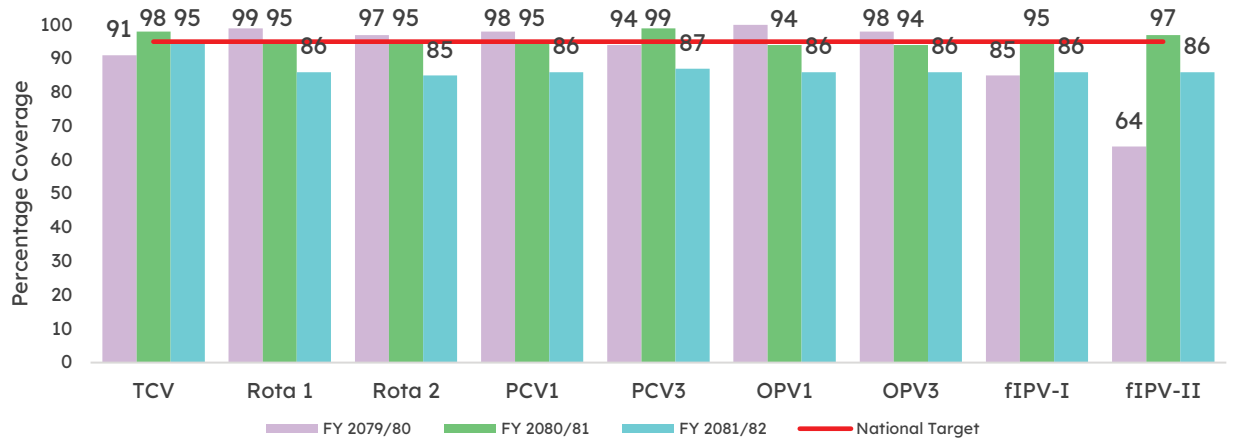


Source: HMIS/DoHS

Figure 4.1 Coverage of Td, BCG, and DPT-HepB-Hib, MR and JE (FY 2079/80 - 2081/82)

The TCV coverage increased from 91% to 98% in FY 2079/80 to 98% in FY 2080/81 where as this year it declined to 95%. Similarly, the Rotavirus vaccine (Rota) showed a substantial decrease to 86% for Rota1 and 85% for Rota2 indicating disruptions in service delivery or reporting.

Similarly, the Pneumococcal Conjugate Vaccine (PCV) exhibited strong coverage in previous year with PCV3 at 99% in FY 2080/81 which have declined to 87% in FY 2081/82, while PCV 1 decreased from 95% to 86%. The trend in polio immunization also decreased with both OPV1 and OPV3 declining to 86% in FY 2081/82 from 94% in FY 2080/81. The fractional IPV (fIPV) coverage also showed a decreasing trend as compared to the last fiscal years: fIPV-I coverage decreased from 95% in FY 2080/81 to 86% in FY 2081/82. Similarly, fIPV-II coverage also declined from 97% in FY 2080/81 to 86% in FY 2081/82. (Figure 4.2)

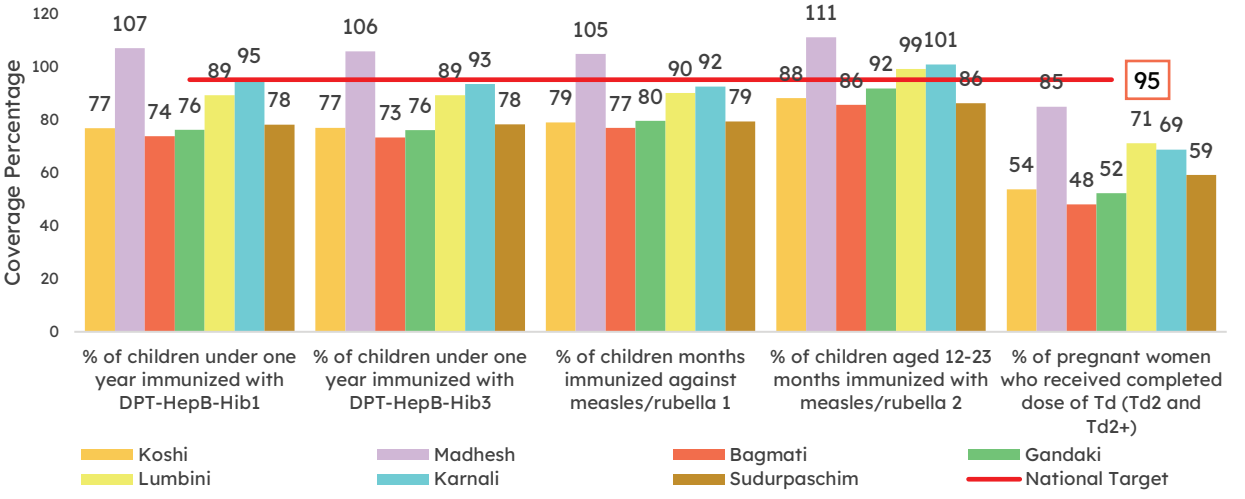


Source: HMIS/DoHS

Figure 4.2 Coverage of TCV, Rota, PCV, OPV and fIPV (FY 2079/80 - 2081/82)

Vaccination coverage by province

In FY 2081/82, there were notable variations in the national and provincial coverage of key antigens under the NIP. The DPT-HepB-Hib1 and DPT-HepB-Hib3 vaccination coverage among children under one year old was 87% and 86% nationwide respectively. The coverage in Madhesh Province exceeds 100% (107% for DPT-HepB-Hib1 and 106% for DPT-HepB-Hib3). Bagmati Province reported the lowest coverage 74% (DPT-HepB-Hib1) and 73 % (DPT-HepB-Hib3). (Figure 4.3). MR1 coverage was 87 % nationwide with provincial coverage varying from 77% in Bagmati to 105 % in Madhesh province. MR2 coverage reached to 96% at national level with the highest coverage in Madhesh (111%) and Karnali (101%), while Sudurpashchim (86%) and Bagmati (86%) reported poorer performance. The Td vaccination coverage among pregnant women reported lowest, with only 64% of the country's Td doses (Td2 and Td2+) being completed. Significant inadequacies in maternal vaccination services were highlighted by the vast variation of provincial coverage, which varied from 48% in Bagmati and 52% in Gandaki to 85% in Madhesh (Figure 4.3). These figures highlight the provincial disparities in immunization coverage, underlining the need for targeted interventions to improve access in lower-performing areas.

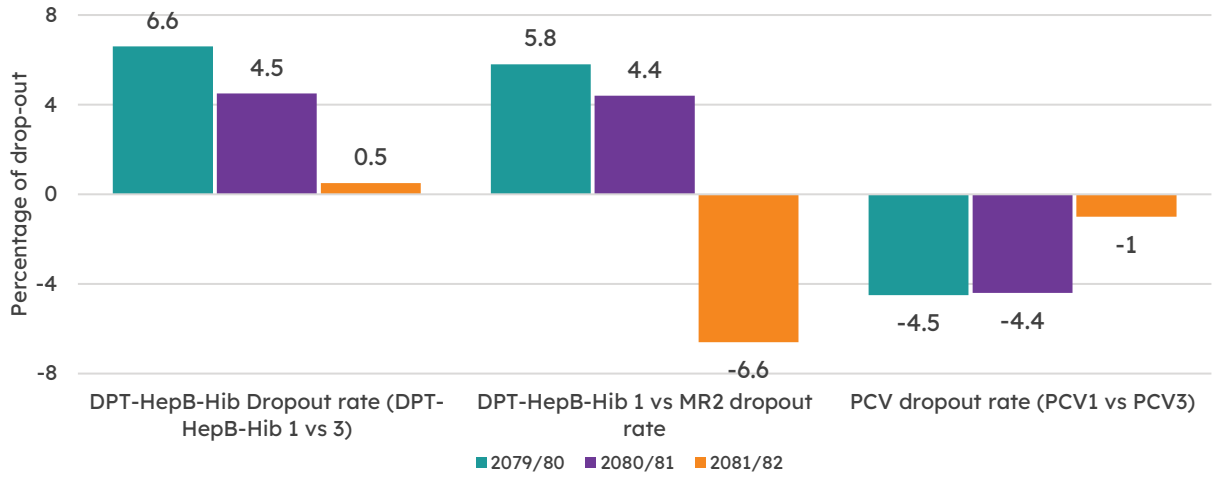


Source: HMIS/DoHS

Figure 4.3 National and provincial coverage of DPT-HepB-Hib1 and 3, MR1 , MR2, and TD (FY 2081/82)

Drop-out rates (%) of vaccination

Nationwide, the dropout rates for key antigens under the NIP showed a sharp drop in FY 2080/81 compared to FY 2081/82. The drop-out rate for DPT-HepB-Hib1 vs DPT-HepB-Hib3 was 6.6% in FY 2079/80 which declined to 0.5% in FY 2081/82 showing a marked improvement in completion of three dose and better follow up mechanism. The dropout rate for DPT-HepB-Hib1 vs. MR2 was -6.6 %, indicating that the immunization program has been able to catch up routine MR2 missed children. Similarly, the PCV dropout rate (PCV1 vs. PCV3) remained consistently negative at -1% for the third consecutive fiscal year. These trends indicate positive progress in reducing dropout rates for these vaccines. (Figure 4.4).



Source: HMIS/DoHS

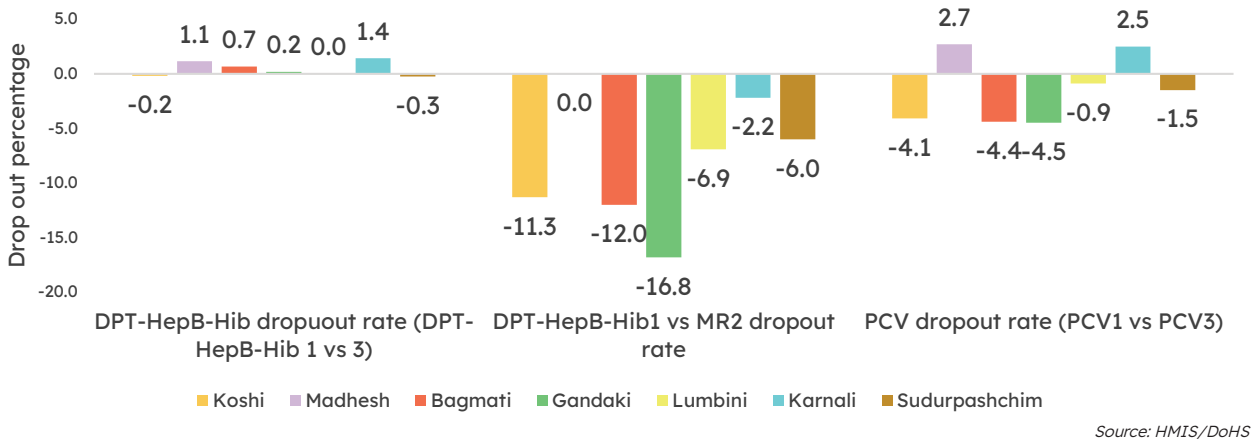
Figure 4.4 National dropout rates for reference antigens (2079/80 – 2081/82)

National and provincial vaccination drop-out in FY 2081/82

In FY 2081/82, Nepal witnessed significant variations in vaccination dropout rates at both the national and provincial levels, with several provinces reporting negative dropout rates—an encouraging sign of improved retention. (Figure 4.5)

- DPT-HepB-Hib1 vs. DPT-HepB-Hib3: The national dropout rate was 0.5 %, with Koshi (-0.2%) and Sudurpaschim (-0.3%) reported negative drop-out rates demonstrating strong retention. In contrast, Madhesh with 1.1 % and Karnali with 1.4% had a slightly higher positive dropout rate but within the acceptable limit.
- DPT-HepB-Hib1 vs. MR2: The national dropout rate stood at -6.6%, with Gandaki (-17%) and Bagmati (-12%) and Koshi (-11%) showing the highest retention gains reflecting improved completion of measles-rubella second dose.
- PCV1vs PCV 3: The data revealed that the national dropout rate was -1% with all the province exhibiting negative dropout rate except for Madhesh (2.7%) and Karnali (2.5%).
- MR1 vs. MR2: The national dropout rate was -5.7%, with Gandaki (-11.9%) and Koshi (-8.5%) again showing higher retention rates than other provinces.

These figures highlight provincial disparities in vaccine retention, showcasing commendable progress in certain regions while underlining the need for targeted interventions in provinces with positive dropout rates. Strengthening outreach, addressing logistical challenges, and promoting community engagement will be key to ensuring sustained improvements in immunization coverage across Nepal.



Source: HMIS/DoHS

Figure 4.5 National and Provincial vaccinations drop out (FY 2081/82)

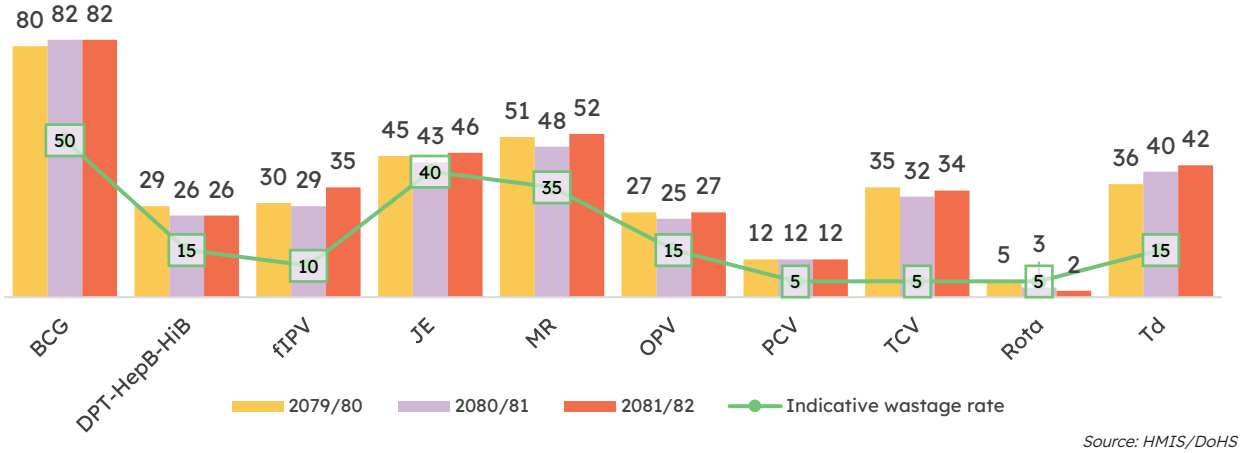
Vaccine wastage rates

Vaccine Wastage Trends: Progress and Challenges

An analysis of vaccine wastage rates in FY 2081/82 compared to previous years reveals mixed trends across various antigens:

- BCG Wastage: Continued its upward trajectory, increasing from 80% in FY 2079/80 to 82 % in FY 2081/82, highlighting an urgent need for intervention.
- DPT-HepB-Hib Wastage: Although it decreased slightly from 29% in FY 2079/80 to 26% in FY 2080/81 and 26% in FY 2081/82, DPT-HepB-Hib wastage was still more than the indicative wastage rate of 15%. This implies some increase in vaccine usage efficiency, however further strengthening of the multi-dose vial strategy is required.
- fIPV Wastage: fIPV waste increased significantly from 30% in FY 2079/80 to 29% in FY 2080/81 and then to 35% in FY 2081/82, surpassing the indicated objective of 10%.
- JE wastage Rate: JE wastage showed a modest fluctuation, reducing from 45% in FY 2079/80 to 42% in FY 2080/81 but rising again to 46% in FY 2081/82.
- MR Wastage: MR waste continued to be greater, rising from 48% in FY 2080/81 and 52% in FY 2081/82. Low attendance, session scheduling procedures, and one vial per session policy may all contribute to high wastage rate
- OPV Wastage: OPV waste varied little, falling from 27% in FY 2079/80 to 25% in FY 2080/81 and rising to 27% in FY 2081/82. This suggests that OPV use has moderate inefficiency.
- PCV Wastage: PCV waste remained constant at 12% in FY 2079/80 to FY 2081/82, being reasonably constant and lower than other vaccinations.
- TCV wastage: In FY 2079/80, 2080/81, and 2081/82, the TCV wastage rates were 35%, 32%, and 34%, respectively
- Rota Wastage: From fiscal year 2079/80 to 2081/82, Rota wastage steadily declined from 4.79% to 3.21% and then to 2.38%, showing continuous improvement.
- Td wastage: In FY 2079/80, 2080/81, and 2081/82, TD wastage increased from 35.57% to 40.38% and further to 42.20%, indicating a rising trend

From FY 2079/80 to FY 2081/82, vaccination wastage rates are continually above the indicated targets despite slight improvements in selected antigens. One-vial-per-session procedures and low session attendance are the main causes of the high waste of BCG, MR, JE, Td and fIPV. Reducing vaccine waste and increasing the effectiveness of immunization programs depend on strengthening session planning, enforcing multi-dose vial policies, improving demand forecasts, and improving health worker training.



Source: HMIS/DoHS

Figure 4.6 Vaccination wastage rate against indicative wastage rate (FY 2079/80 - 2081/82)

Integration of Hygiene Promotion in Routine Immunization

MoHP, in coordination with WaterAid Nepal, started hygiene promotion activities integrated with routine immunization (RI) in 2077/78. The programme has been crucial to improving mothers' and guardians' hygiene practices and raising vaccination rates. Targeting 530,000 people yearly, the government expanded the integration of hygiene into routine immunization across 77 districts. To provide quality vaccination services integrated with hygiene promotion, the child health and immunization service section works with other relevant departments and partners, including Gavi, WHO, UNICEF, and Water Aid. Using the Behavior Centered Design (BCD) approach as a guide, mothers of children under two years who attend routine immunization sessions participate in interactive, 30 to 35-minute sessions that promote full immunization and five important hygiene behaviors: exclusive breastfeeding, food hygiene, water treatment, hand washing, and toilet use. These sessions, conducted concurrently with immunization sessions (static, outreach, and mobile clinics) by trained health workers, supported by FCHVs. In FY 2081/82, a total of 230,956 immunization sessions were conducted nationwide, of which 221989 hygiene promotion sessions were implemented throughout provinces. Many mothers and caregivers were benefited from these sessions on multiple occasions during vaccine appointments. Among the provinces, Madhesh Province conducted the maximum number of immunization sessions (53,273),

with 49,768 hygiene promotion sessions, benefiting 829,481 people, demonstrating high population density and service delivery volume. In Koshi Province 488,634 people benefited from 39,159 immunization sessions of which 38,422 were hygiene promotion session. Bagmati Province conducted 38,846 immunization sessions, with 36,023 hygiene promotion sessions, benefiting 433,235 people. Lumbini Province performed well, including 631,182 people in the 37,831 hygiene promotion sessions out of 37,895 immunization sessions. Similarly, Gandaki, Karnali, and Sudurpashchim Provinces conducted hygiene promotion workshops in more than 95% of immunization sessions, benefiting 273,894, 242,248, and 291,714 people, respectively. (Table 4.3)

Table 4.3 Hygiene Promotion Sessions by Provinces in F/Y 2081/82

Province	Immunization sessions conducted	Hygiene promotion sessions among conducted immunization sessions	People benefitted from hygiene session (exposed multiple times)
Koshi	39,159	38,422	488,634
Madhesh	53,273	49,768	829481
Bagmati	38,846	36,023	433235
Gandaki	22,504	21,741	273894
Lumbini	37,895	37,831	631182
Karnali	17,007	16,592	242248
Sudurpashchim	22,272	21,612	291714
Total	**230,956**	**221,989**	**3,190,388**

Source: HMIS/DoHS

Vaccine Preventable Disease (VPD) Surveillance

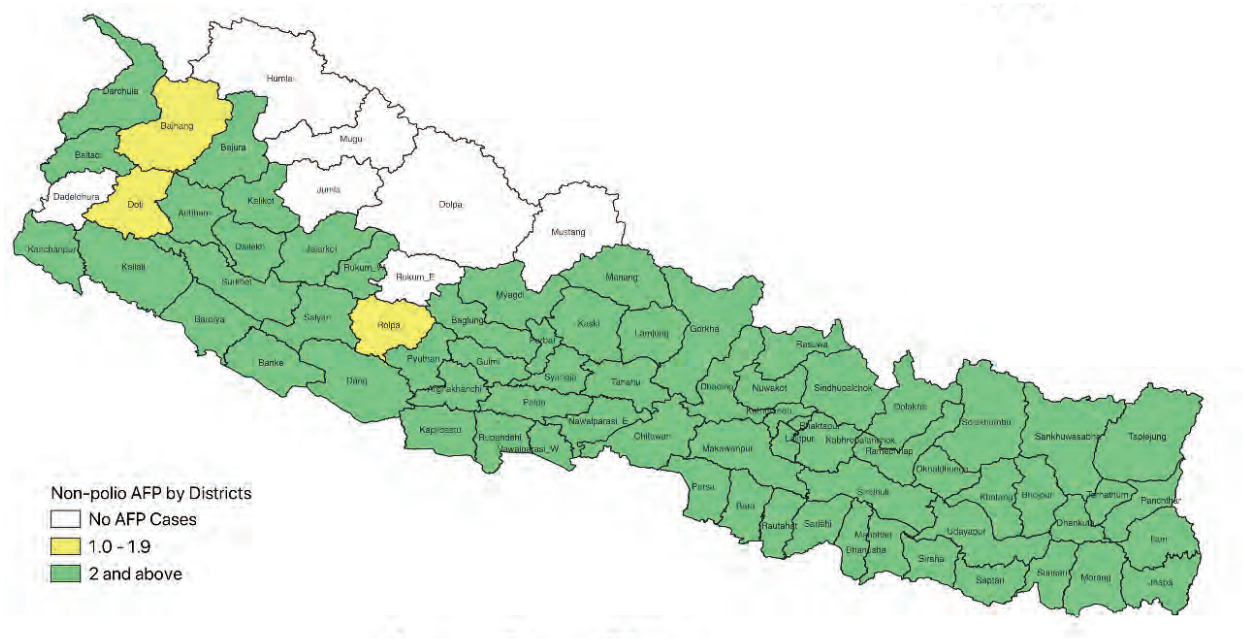
VPD surveillance started in Nepal since 1998 with AFP surveillance. Following it, neonatal tetanus, Measles and AES surveillance was started in 2003, 2003 and 2004 respectively. Maintaining robust VPD surveillance, coupled with high coverage in routine immunization, ensures the attainment of the goals and strategic objectives of NIP. The VPD surveillance includes – Acute Flaccid Paralysis (AFP), Measles Surveillance, Acute Encéphalites Syndrome (AES), Neonatal Tetanus (NNT) Surveillance, Congenital Rubella Syndrome (CRS) Surveillance, Poliovirus Environmental Surveillance, Rotavirus Sentinel Surveillance and Invasive Bacterial Disease (IBD) Sentinel Surveillance.

Acute Flaccid Surveillance

Two critical indicators of sensitive polio surveillance include: i) A non-polio AFP rate of at least 2 per 100,000 among children under 15 years (SEAR standard) and ii) A stool specimen adequacy rate of 80% or more. In FY 2081/82, Nepal reported a total of 564 AFP cases across 77 districts. The national non-polio AFP rate stood at 7.2 per 100,000, surpassing the regional benchmark. A number of districts, including Manang (122.9), Dolakha (24.0), Kavrepalanchok (21.9), Baglung (22.5), and Makwanpur (19.8), had unusually high detection rates. The majority of districts revealed AFP rates significantly above the target of 2 per 100,000. However, AFP rates in a few districts like Rolpa (1.4), Bajhang (1.6), and Doti (1.4) were lower than the standard, indicating the need for improved case detection in these regions.

The majority of districts achieved ≥80% adequacy, indicating strong surveillance quality and laboratory confirmation capabilities. The stool specimen adequacy rate remained extremely high nationally. Numerous districts demonstrated outstanding field and laboratory performance, achieving 100% stool adequacy. Some districts, such as Jajarkot and Salyan (75%), Surkhet (86%), Rupandehi (96%), Kapilvastu (90%), Dang (90%), Banke (94%), Kanchanpur (89%), and Rautahat (86%), recorded stool adequacy below the objective, suggesting locations where sample collection and timeliness might be further improved. (Figure 4.7)

Note: Several districts, including Mustang, Dolpa, Mugu, Humla, Jumla, Rukum East, and Dadeldhura, reported no occurrences of Acute Flaccid Paralysis (AFP) in FY 2081/82. There are comparatively fewer children under the age of fifteen in the majority of these districts, which are geographically isolated and poorly populated. For excellent AFP monitoring, at least one AFP case per year is expected from any district with an under-15 population of 50,000 or more to assure adequate surveillance sensitivity. The absence of recorded AFP cases in districts such as Rukum East and Dadeldhura, which have high under-15 populations (16,683 and 40,607 respectively), may reflect potential surveillance gaps or under-detection of cases. On the other hand, districts like Mustang and Manang that have relatively few children may naturally report fewer or no occurrences because of their small population. The national non-polio AFP rates are still over the goal threshold overall, but the zero reporting in several districts emphasizes the need to improve active monitoring, community-based case detection, and health facility reporting, especially in isolated and difficult-to-reach locations.



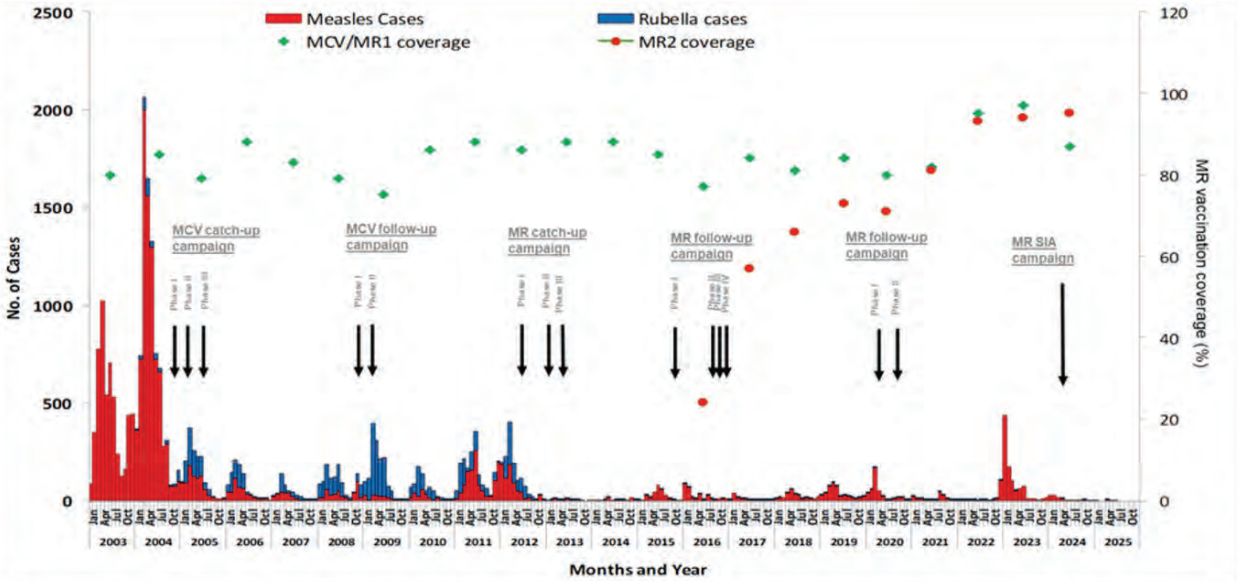
Source: FFWD/WHO-IPD, Nepal

Figure 4.7 Non-Polio Acute Flaccid Paralysis (NP AFP) rate by district, FY 2081/82 (2024/25)

Measles-Rubella Surveillance

Nepal has made significant strides in rubella control, achieving a 97% reduction in rubella cases in 2017, with reported cases dropping from 786 in 2008 to just 22. This remarkable achievement exceeded the 95% reduction target set for rubella elimination. As a result, Nepal was certified in Bhadra 2075 (August 2018) for successfully controlling rubella and congenital rubella syndrome (CRS).

Despite this success, measles elimination remains a challenge, as achieving zero reported cases is the key target. In FY 2081/82, Nepal recorded 33 measles-positive cases, including laboratory-confirmed, epidemiologically linked, and clinical cases, as identified through case-based measles surveillance sites. Among these, 29 cases were lab-confirmed, with all provinces reporting at least 2 cases, indicating continued transmission across the country .These findings highlight the need for intensified immunization efforts, strengthened surveillance, and rapid outbreak response to achieve measles elimination and sustain rubella control in Nepal. As a result, one Sub-National MR Surveillance Labs each were established in Sunsari and Kailali in in previous fiscal year 2080/81. This graph shows that the Measles cases have been drastically reduced compared to 2003 following successful implementation of campaign and routine immunization. In every 4 years, MR campaign/SIA were conducted to vaccinate the missed cohort. In 2022-2023, there was a large measles outbreak in different parts of the country, a peak as shown in the graph. The measles cases have declined dramatically after the recent MR SIA campaign in Q1 (2025). (Figure 4.8)



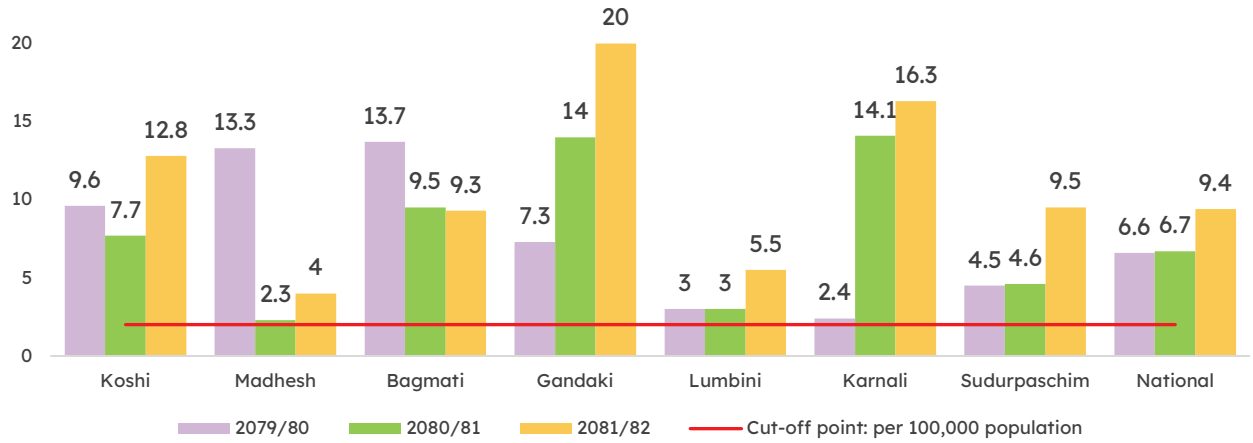
Source: FWD and WHO-IPD, Nepal

Figure 4.8 Confirmed Measles Rubella cases and Measles Containing Vaccine (MCV)/MR1/MR2 coverage, Nepal, 2003-2025

Non-Measles Non-Rubella rate (NMNR rate)

Nepal's NMNR rate has increased from 6.7 per 100,000 in FY 2080/81 to 9.4 per 100,000 population in FY 2081/82, exceeding the WHO standard of ≥2 per 100,000 population, which is a positive indicator of the quality of MR surveillance. At the provincial level, all provinces met and exceeded the standard NMNR threshold in FY 2081/82, showing significant improvement compared to FY 2080/81, when Koshi Province had a lower NMNR rate of 1.9 per 100,000 population. During the FY 2081/82, Madhesh Province had the lowest NMNR rate of 2.3 per 100,000 population while Gandaki Province had the highest NMNR rate (20.0 per 100,000) in FY 2081/82, followed by Karnali (16.3), Koshi (12.8), Sudurpashchim (9.5), and Bagmati (9.3), all of which showed strong surveillance sensitivity. Though comparatively lower than other provinces, Madhesh (4.0) and Lumbini (5.5) likewise maintained NMNR rates above the norms. (Figure 4.9)

Note: One of the cardinal indicators for measles-rubella surveillance is the non-measles non-rubella rate (NMNR rate) which should be at least 2 per 100,000 populations i.e. at least 2 suspected measles cases (which after laboratory tests are Non-Measles Non-Rubella) per 100,000 populations should be reported for quality measles-rubella surveillance.



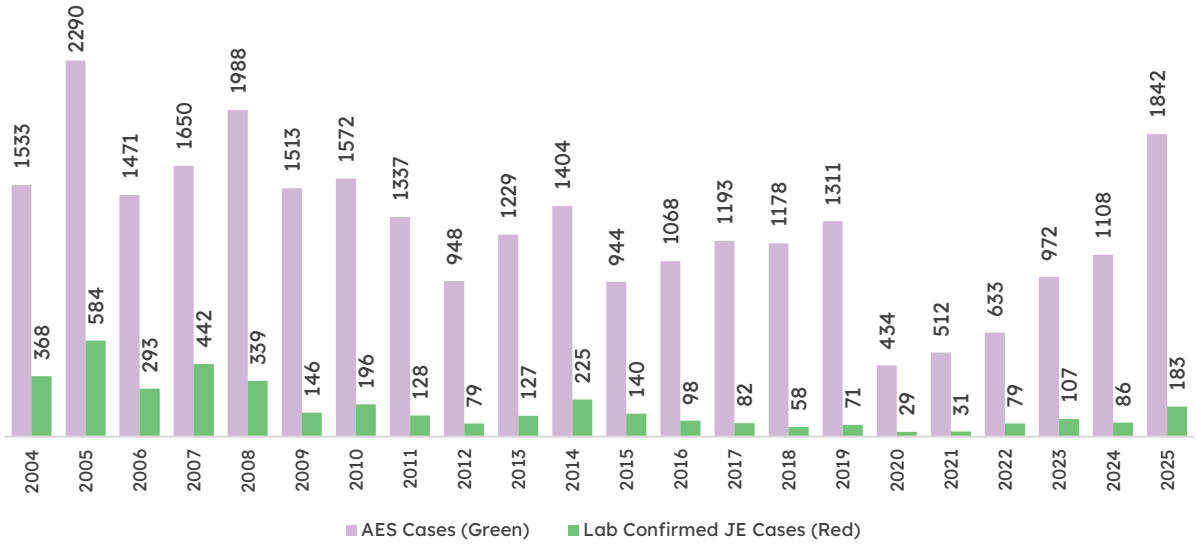
Source: FWD/WHO-IPD, Nepal

Figure 4.9 NMNR rate per 100,000 population, FY 2081/82

Acute Encephalitis Syndrome surveillance

In 2025 AD, Nepal recorded a total of 1842 cases of Acute Encephalitis Syndrome (AES) marking an increase from the 1108 cases reported in 2024 AD. Similarly, the number of laboratory-confirmed JE cases among them also increased from 86 confirmed JE cases in 2024 AD to 183 cases in 2025 AD.

This trend suggests a potential shift in the causes of AES, emphasizing the need for continued surveillance, accurate diagnostics, and targeted interventions to prevent and control JE and other AES-related illnesses across the country. (Figure 4.10).



Source: FWD/WHO-IPD, Nepal

Figure 4.10 Reported AES and lab-confirmed JE cases, Nepal (2004 – 2025 AD)

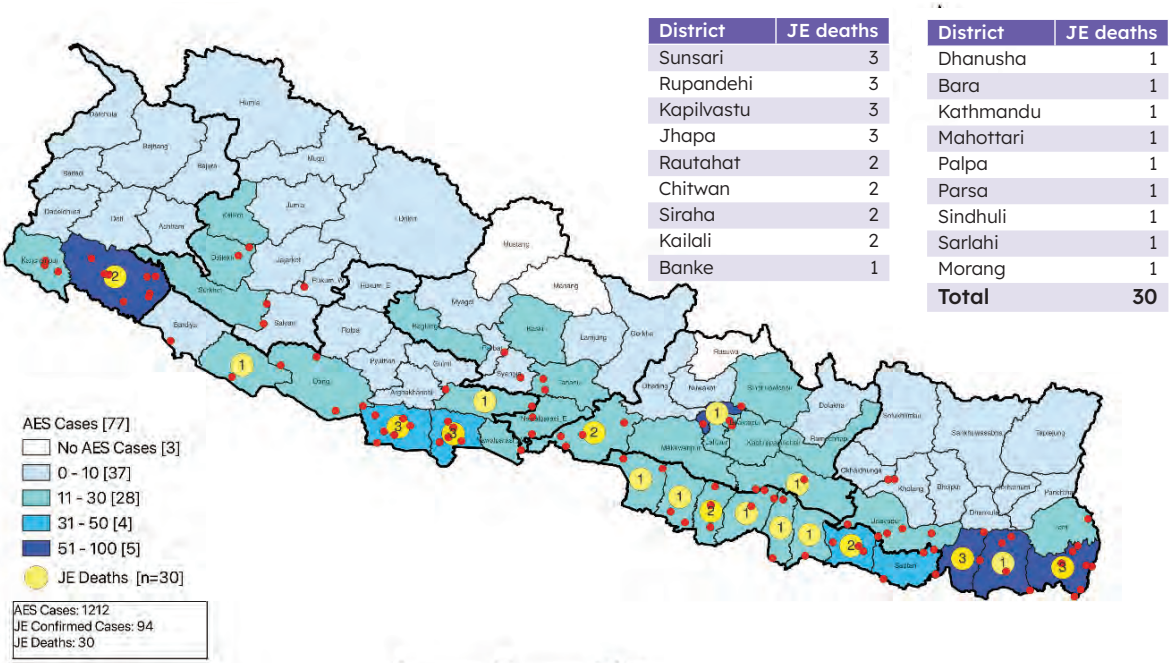
Geographical Distribution of AES and JE Cases in FY 2081/82

In FY 2081/82, a total of 75 districts across Nepal reported AES cases, indicating widespread occurrence of the disease. Among these, 33 districts had laboratory-confirmed cases of JE, highlighting ongoing transmission and the need for targeted interventions in affected areas.

This data underscores the importance of continued surveillance, vaccination efforts, and vector control measures to mitigate the spread of JE and other encephalitic diseases in Nepal. (Figure 4.11)

District	JE deaths
Sunsari	3
Rupandehi	3
Kapilvastu	3
Jhapa	3
Rautahat	2
Chitwan	2
Siraha	2
Kailali	2
Banke	1

District	JE deaths
Dhanusha	1
Bara	1
Kathmandu	1
Mahottari	1
Palpa	1
Parsa	1
Sindhuli	1
Sarlahi	1
Morang	1
Total	**30**



Source: FWD, NPHL and WHO-IPD, Nepal

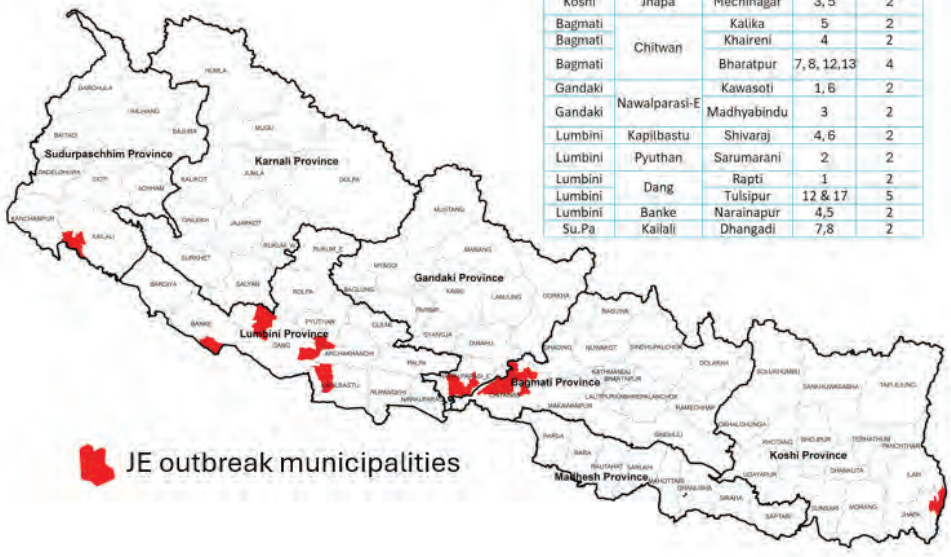
Figure 4.11 Reported AES, laboratory-confirmed JE cases and JE deaths by district (Jan-Dec. 2025)

JE Outbreak Response in 2025:

Before the peak season of Japanese Encephalitis, FWD with support of WHO developed AES/JE surveillance manual and "Clinical case management protocol for Acute Encephalitis Syndrome (AES)/JE". This manual defines the Japanese Encephalitis outbreak as "An occurrence of two or more lab confirmed JE cases in a ward or adjoining wards of a municipality within a 14-day period of time."

Further, FWD in coordination with NPHL, EDCD, NHEICC and partners (WHO, UNICEF) to strengthen laboratory capacity and developed JE related IEC materials and radio jingles in different local languages.

JE Outbreak, 2025				
Province	District	Municipality	Ward	Confirm JE cases
Koshi	Jhapa	Mechinagar	3, 5	2
Bagmati	Chitwan	Kalika	5	2
Bagmati		Khaireni	4	2
Bagmati		Bharatpur	7, 8, 12,13	4
Gandaki	Nawalparasi-E	Kawasoti	1, 6	2
Gandaki		Madhyabindu	3	2
Lumbini	Kapilbastu	Shivaraj	4, 6	2
Lumbini	Pyuthan	Sarumarani	2	2
Lumbini	Dang	Rapti	1	2
Lumbini		Tulsipur	12 & 17	5
Lumbini	Banke	Narainapur	4,5	2
Su.Pa	Kailali	Dhangadi	7,8	2



Source: FWD, NPHL and WHO-IPD, Nepal

Figure 4.12 Spot map of JE outbreak affected municipalities in 2025

Around 3,500 medical doctors and health professionals from 51 major hospitals and JE-affected districts across Nepal were oriented on the updated clinical management protocol.

In addition, FWD enhanced AES surveillance, supported case follow-up and field investigations through local and district rapid response teams in one health approach at local level. All outbreaks are promptly investigated and responded.

JE awareness orientation being conducted in the schools and community of JE affected municipalities. Oriented more than 1800 female community health volunteers (FCHV) on Japanese encephalitis on early detection and reporting from community.

NNT Surveillance

Nepal successfully eliminated maternal and neonatal tetanus in 2005, and this achievement has been maintained till date. However, in FY 2081/82, two NNT cases were reported, one from Lamjung and the other from Bara districts. Despite this, the national incidence rate of NNT in FY 2081/82 remains very low at 0.002 per 1,000 live births, reflecting Nepal's continued success in maintaining the elimination status. These cases emphasize the need for ongoing vigilance and vaccination efforts, particularly in high-risk areas.

Vaccine Preventable Disease (Polio) Transition:

During FY 2081/82, Nepal advanced the phased transition of core Vaccine Preventable Disease (VPD) surveillance functions toward strengthened government ownership under the leadership of the Ministry of Health and Population and the Department of Health Services. This reporting period focused on institutional readiness, operational continuity, and financial sustainability while maintaining core surveillance performance standards.

1. Governance and Policy Alignment

- Provincial consultation meetings conducted in all 7 provinces.
- Federal strategic review workshops held to finalize the VPD (Polio) Transition framework and the framework is ready to be endorsed by MoHP.
- Transition milestones incorporated into provincial AWPBs in all 7 provinces.

These engagements strengthened governance mechanisms and clarified roles, responsibilities, and timelines for transition.

2. Institutional Readiness Assessment

Structured readiness assessments of Provincial Health Directorates were completed across provinces to evaluate governance, human resources, data management, supervision mechanisms, and financing readiness.

3. Human Resource Transition and Capacity Building

4. **More than 500 VPD Investigation Officer were identified by all 3 levels planned to be oriented or trained on VPD surveillance standards.**

5. Laboratory System Strengthening

Quarterly coordination meetings between epidemiology and laboratory units were conducted in provinces.

6. Data Management and Quality

- A draft of Transition monitoring dashboard was prepared for federal level.
- Technical consultations for integration of surveillance data into SORMAS initiated.

7. Financial Planning and Sustainability

Financial planning work focused on ensuring sustainability through budget integration and progressive reallocation of resources at all 3 levels of governments.

8. Community-Based Surveillance Integration

Community surveillance outcomes:

- Pilot implementation
- Suspected VPD cases identified through FCHV reporting

HPV Vaccine as a Routine Vaccination Programme

Nepal's National Immunization Program marked a historic public health achievement by vaccinating more than 1.45 million girls representing 94% coverage within just 14 days during the nationwide Human Papillomavirus (HPV) vaccination campaign. The HPV multi-age cohort (MAC) campaign, alongside the formal introduction of the HPV vaccine into the routine immunization schedule, was officially launched on World Cancer Day, 4 February 2025, by Rt. Hon'ble Prime Minister at a school in Kathmandu. Conducted from 4 to 18 February 2025, the campaign specifically targeted adolescent schoolgirls from Grade 6 to Grade 10, as well as out-of-school girls aged 10 to 14 years, ensuring equitable access to vaccination services across the country. The large-scale operation was implemented through approximately 18,902 school-based vaccination booths and 8,200 additional health facility-based booths to reach both school-going and out-of-school girls. The campaign was supported by more than 27,000 trained vaccinators, 51,483 Female Community Health Volunteers (FCHVs), and 18,902 schoolteachers, reflecting strong intersectoral coordination between the health and education sectors. Through well-coordinated planning, community mobilization, and nationwide collaboration, the campaign successfully reached over 1.45 million girls within a short period, demonstrating exceptional logistical capacity and community trust in immunization services. This achievement represents a major step forward in protecting adolescent girls against HPV-related diseases, particularly cervical cancer, and significantly strengthens Nepal's commitment to expanding and sustaining routine immunization services for long-term public health impact.

Table 4.4 Province-wise coverage of HPV Vaccination in FY 2081/82

Province	Target Population		Total	Achievement (Total vaccinated adolescent girls)	
	Routine Immunization (RI)	Multi-age Cohort (MAC)		Number	% Achievement
Koshi	42500	184479	226979	237986	105
Madhesh	84949	314608	399557	353789	89
Bagmati	56184	242721	298905	258359	86
Gandaki	19090	86464	105554	103130	98
Lumbini	53738	222114	275852	261815	95
Karnali	18815	85910	104725	99963	95
Sudurpaschim	28391	122668	151059	146612	97
Total	**303667**	**1258964**	**1562631**	**1461654**	**94**

Source: FWD/DoHS

Nationally 94% of the adolescent girls were vaccinated with HPV vaccine. In Koshi 105% of the adolescents girls against the target number were vaccinated. The lowest vaccination coverage was seen in Bagmati (86%) and Madhesh (89%). The details of the vaccination coverage across provinces is given in Table 4.4. Total 15,941 areas and 92,094 household were visited for the HPV vaccination campaign. The details of province wise distribution of number of area visited and number of household visited is given in Figure 4.13.

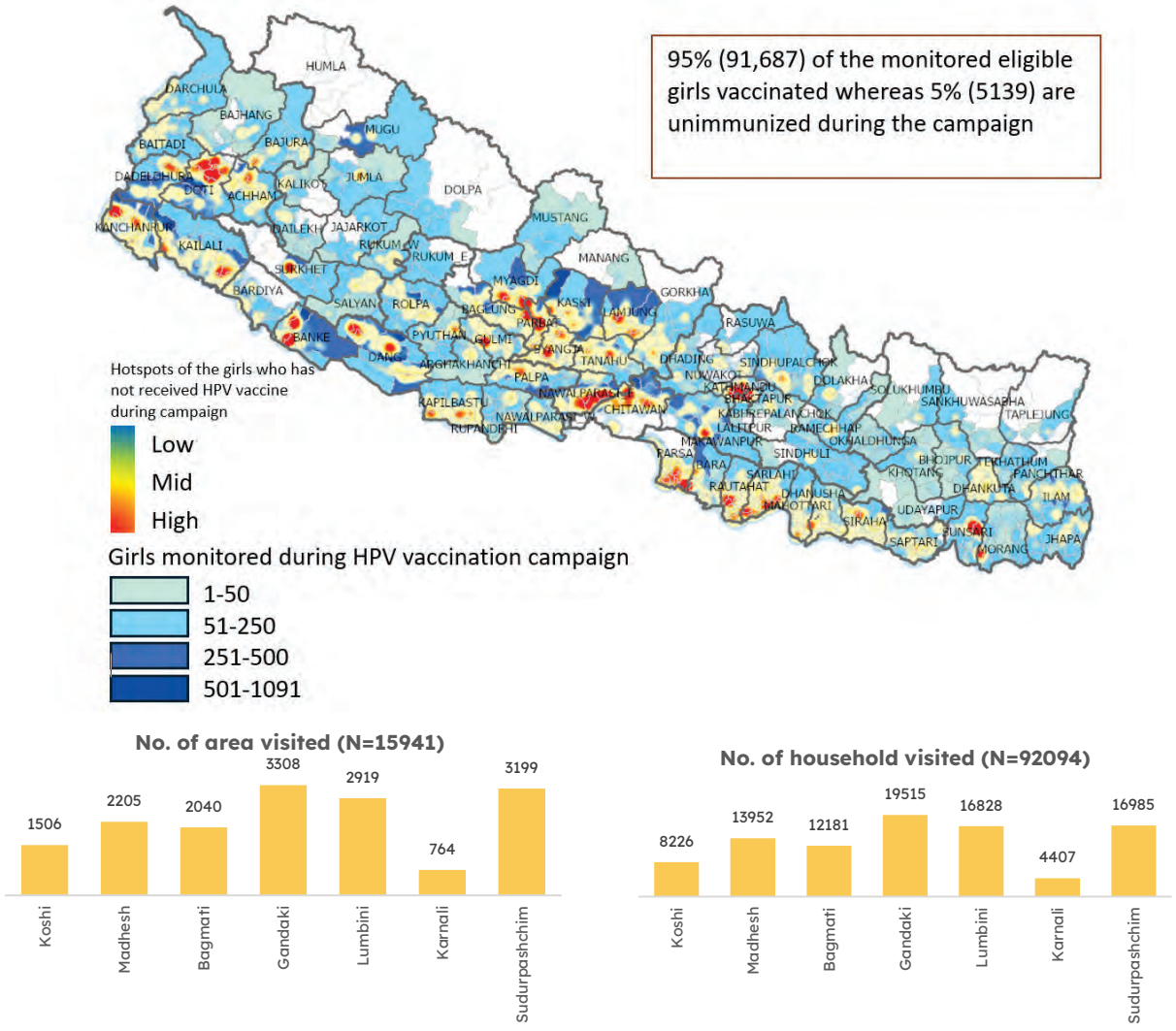
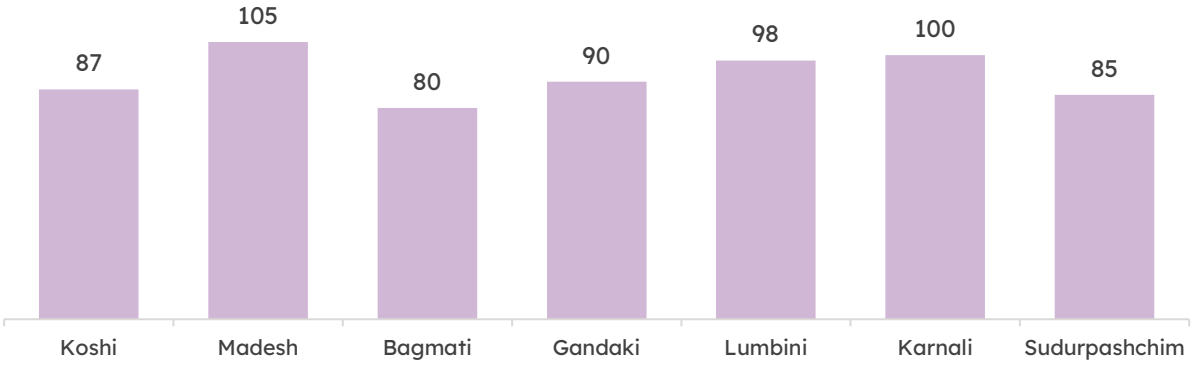


Figure 4.13 Map of Nepal with bar diagrams showing the status of Rapid Convenience Monitoring during HPV Campaign by Health Workers from MoHP and supporting partners.

According to the GoN guidelines, full immunization refers to the complete administration of all vaccines recommended under the NIP. A child is considered fully immunized if they receive all vaccines as outlined in the national immunization schedule, ensuring protection against a range of preventable diseases. This comprehensive vaccination coverage plays a critical role in reducing child mortality and protecting public health across the country. In 2016, the government promulgated the National Immunization Act (NIA), the first country in the WHO Southeast Asia Region to have such an Act, which provides a legal mandate to immunization as a citizen's right. This is a pivotal concept in the Act, signifying a change to a rights-based approach for immunization services, obligating a parent or guardian to vaccinate children or others in their care if there is no medical contraindication.

In 2012, Nepal launched the Full Immunization Declaration (FID) initiative, a bold commitment to ensuring every child receives life-saving vaccines. Rooted in community ownership and local leadership, the initiative mobilizes resources at every administrative level—starting from wards—to drive nationwide immunization coverage. With the powerful slogan: "With local participation, ownership, and resource mobilization, our commitment is to ensure full immunization", FID shifts the responsibility to local governments, making them the driving force behind immunization success. More than just a health initiative, it is a pledge to equity and inclusion, ensuring that no matter how remote or marginalized- is left behind. In FY 2081/82 nationwide full immunization percentage dropped to 92% from 96% in the FY 2080/81.

The provincial coverage for full immunization for FY 2081/82 ranged from 85% (Sudurpashchim) to 105% (Madhesh) (Figure 4.14)



Source: HMIS/DoHS

Figure 4.14 Fully Immunized Children as per NIP schedule (FY 2081/82)

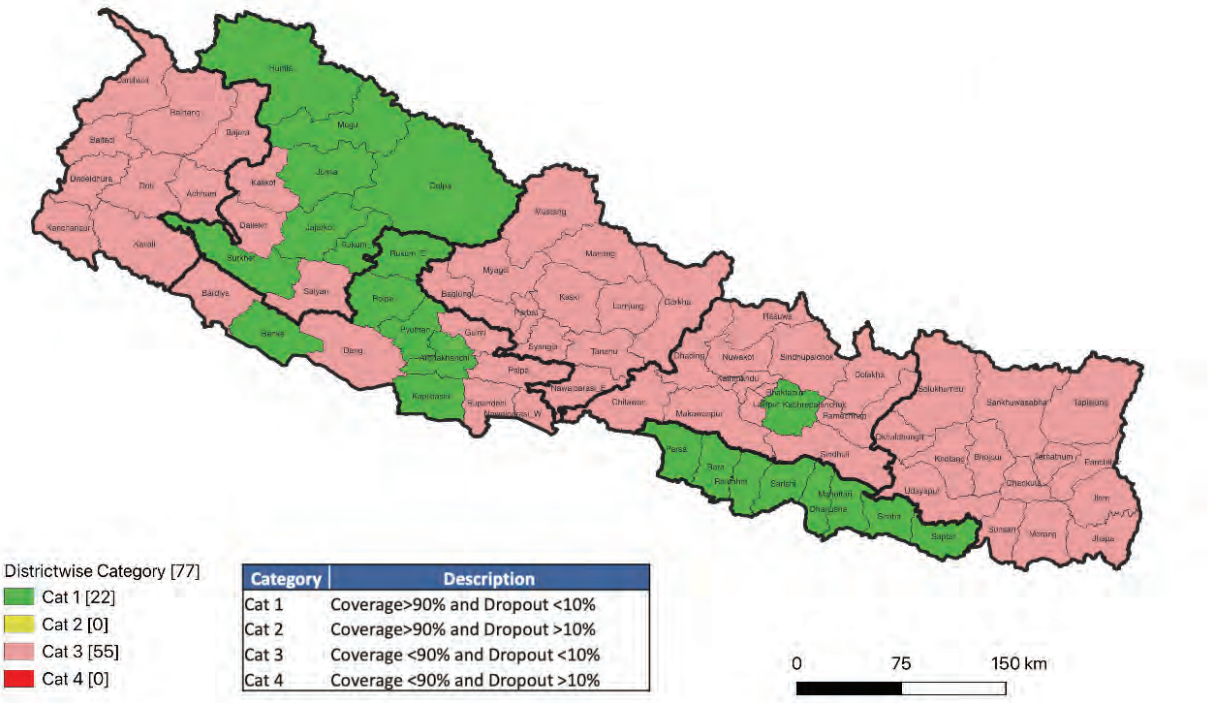
Access and utilization of immunization services

The NIP monitors district-level immunization performance by assessing accessibility and utilization of immunization services. Districts are categorized into four groups based on:

- DPT-HepB-Hib1 coverage, which indicates accessibility to immunization services
- The dropout rate between DPT-HepB-Hib1 and MR2, which reflects utilization of vaccination services

In FY 2081/82, a total of 22 districts demonstrated both good access and good utilization, indicating strong immunization service delivery in these areas. However, 55 districts faced challenges in access but had good utilization rates, suggesting that while services were effectively used where available, access to immunization sites remains a barrier (Figure 4.15).

These findings highlight the need for targeted interventions in districts with poor access, ensuring that all children, especially those in remote and underserved areas, receive timely and complete immunization.



Source: HMIS/DoHS

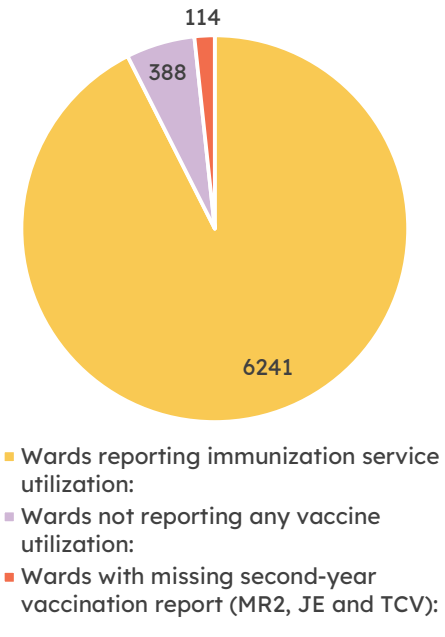
Figure 4.15 District categorization based on access and utilization (FY 2081/82)

Ward Level Immunization Reporting Status

The annual immunization coverage data for FY 2081/82 was analyzed across 6743 wards at the local level to assess immunization status. The prime focus of this analysis was to investigate coverage of different antigens and status of JE Coverage (%), MR2 Coverage (%) and full immunization |(FI) status. A total of 388 wards (5.7%) did not report any vaccine utilization throughout the year (Table 4.5). Similarly, 114 wards (1.7%) missed at least one or all of JE, MR2 and TCV service utilization. Hence, detail analysis was carried out for 6241 wards (92.6%).

Table 4.5 Province wise wards not reporting any vaccine uptake, 2081/82

Province	Number	Percentage
Koshi	80	21
Madhesh	93	24
Bagmati	47	12
Gandaki	30	8
Lumbini	53	14
Karnali	68	18
Sudurpashchim	17	4
Total	**388**	**100**



Province	Number of wards	Percentage
Wards reporting immunization service utilization	6241	92.6
Wards not reporting any vaccine utilization	388	5.7
Wards with missing second-year vaccination report (MR2, JE and TCV)	114	1.7
Total	**6743**	**100**

Coverage rates for MR2 and Full immunization (FI) were classified into four categories (category a, category b, category c, and category d), distinguishing between High Coverage (above the median), and Low coverage (below the median).

Source: iHMIS 2081/82

Figure 4.16 Reporting Status of Immunization Service Utilization at Ward Levels FY 2081/82.

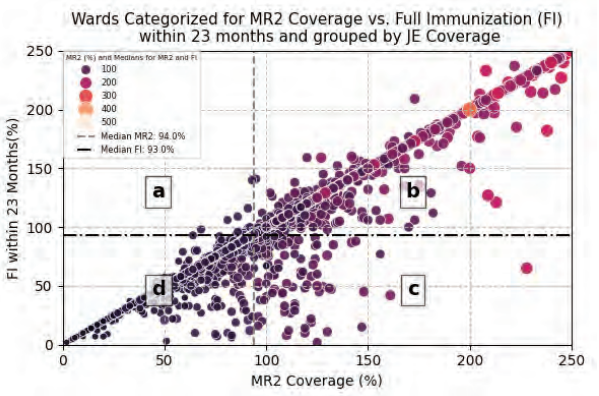


Figure 4.17 Scatter plot categorizing 6743 wards into 4 categories* (1 dot= 1 ward) (FY 2081/82)

*a, b, c, d denotes categories based on coverage

The scatter plot, exploring the relationship between MR2 and FI grouped by JE coverage, shows a strong dependence of FI on MR2 and JE. The medians value of MR2 (94%) and FI (93%) and JE (90%) (Figure 4.17).

Median coverage calculated for different municipality types shows inequity among urban and rural immunization service utilization rates. Among all municipal wards, 50% had MR2 coverage below 68.5% and full immunization rate below 64%, however, other municipalities (rural municipality, urban municipality and sub-metropolitan city) had median MR2 coverage rates 96%, 94% and 89% respectively.

Table 4.6 Median Ward Level MR2 and Full Immunization Coverage (%) by Municipality type

Municipality Type	Median Ward MR2 coverage	Median Ward Full Immunization <
Metropolitan City	68.5	64
Sub-Metropolitan City	89	86
Urban Municipality	94	92
Rural Municipality	96	95

Further analysis was conducted to identify the proportion of wards falling into 4 different categories by FI and MR 2 coverage.

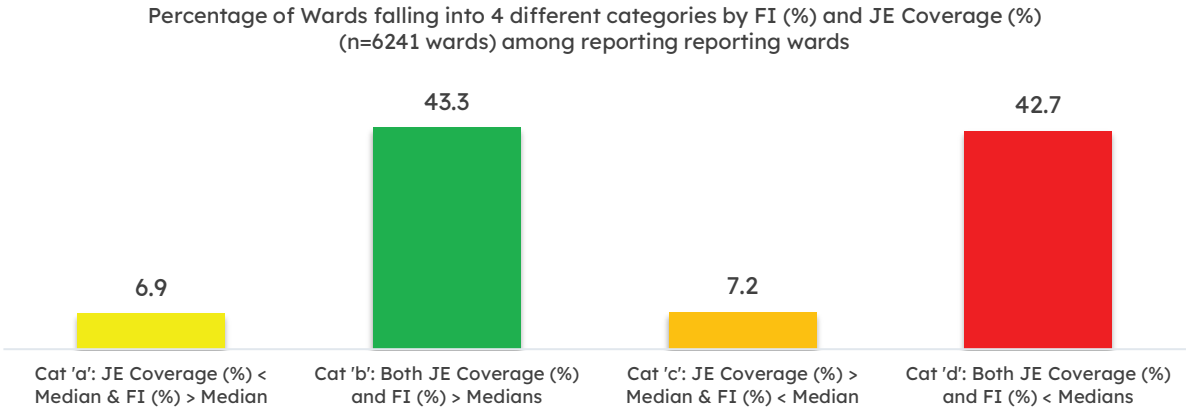


Figure 4.18 Wards by Category

Districts falling into the Low coverage category (category d) were further analyzed for identifying disparities among different municipality types.

Municipality type: further category d (about 43% wards) are clustered at 'Category d' signifying low FI status and low JE coverage rates. (Figure 4.18) were analyzed by municipality type. (Figure 4.18). Municipal disaggregation in the immunization of children showed equity issues especially with 76% and 55% for Metropolitan and Sub-Metropolitan wards falling under category 'd', indicating need for immediate policy adjustments focusing urban immunization. (Figure 4.19)

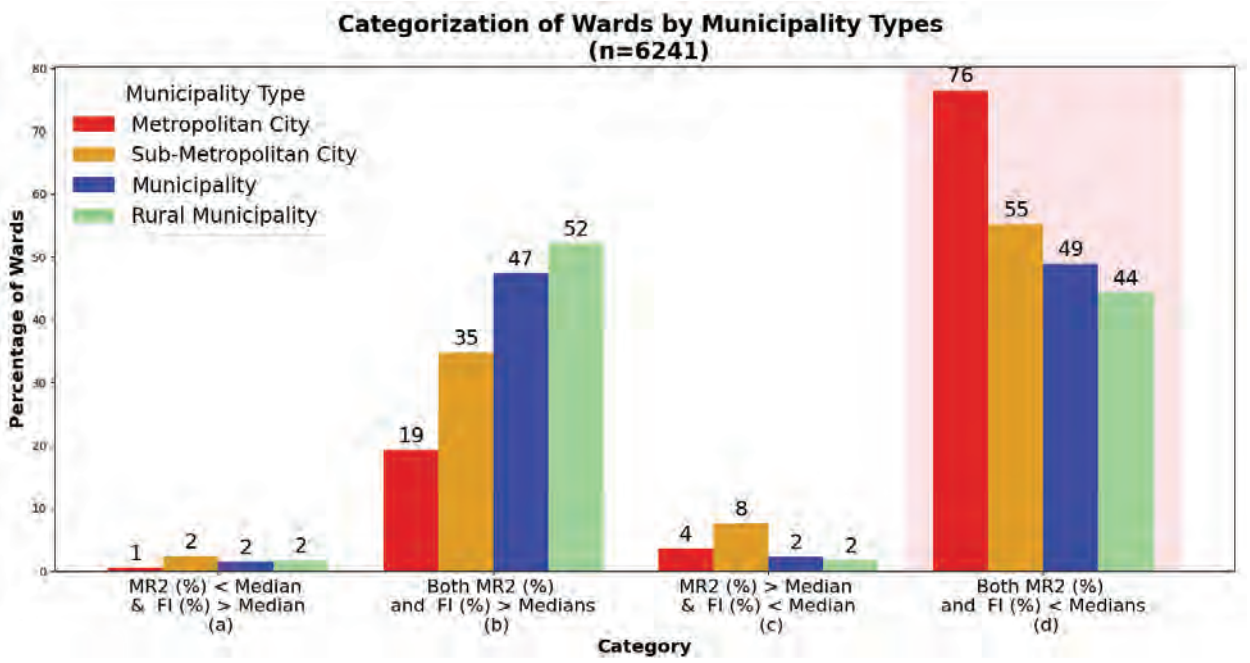


Figure 4.19 Proportion of ward falling under category 'd' by municipality type (FY 2081/82)

Regarding provincial distribution of 'category d' wards, Bagmati province has the highest proportion (65%), followed by Sudurpaschim (63%), while lowest were in Madhesh province (4%). (Figure 4.20) Hence, it is strongly recommended for targeted MR campaigns for category 'd' followed by enhanced immunization monitoring along with micro-planning for immunization to boost up the FI rates for these municipalities and finally contributing to provincial and national FI rates.

Municipal disaggregation in the immunization of children showed equity issues especially with 76% and 55% for Metropolitan and Sub-Metropolitan wards falling under category 'd', indicating need for immediate policy adjustments focusing urban immunization. (Figure 4.19)

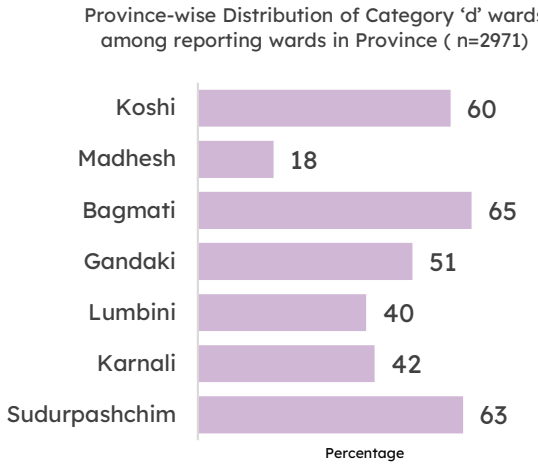


Figure 4.20 Percentage distribution of Category 'd' wards at provinces (FY 2081/82)

Cold Chain Management

Nepal's vaccine cold chain system is essential for maintaining vaccine quality and ensuring nationwide immunization coverage. The system includes 749 cold chain points, consisting of one Central Vaccine Store (CVS), seven Provincial Vaccine Stores (PVS), 77 District Vaccine Stores (DVS), and 664 distribution centers. Together, these facilities provide a total storage capacity of 540,897 liters for 2-8°C vaccines and 163,102 liters for -15 to -30°C vaccines. The Central Vaccine Store in Teku, the country's largest storage facility, holds 103,086 liters at 2-8°C and 21,799 liters at -25°C, while the Central Store in Pathalaiya has 31,902 liters at 2-8°C and 5,355 liters at -25°C. The provincial vaccine stores add significant capacity, ensuring vaccines reach all regions efficiently. (Table 4.7).

Table 4.7 Cold Chain capacity by types of vaccine stores

Supply Chain Levels	Cold chain capacity available at different cold chain points (liters)								Total Capacity (Liters)	
	Central Vaccine Store (CVS)		Provincial Vaccine Stores (PVS)		Districts Vaccine Stores (DVS)		Distribution Centers			
	(2-8°C)	(-25°C)	(2-8°C)	(-25°C)	(2-8°C)	(-25°C)	(2-8°C)	(-25°C)	(2-8°C)	(-25°C)
Central vaccine store, Teku	103,086	21,799							103,086	21,799
Central Store Pathalaiya	31,902	5,355							31,902	5,355
Koshi			29,917	1,407	23,212	11,238	8,112	7,868	61,241	20,513
Madhesh			28,571	1,162	20,493	6,958	8,333	10,571	57,397	18,691
Bagmati			22,074	1,557	24,356	9,947	18,371	10,977	64,800	22,482
Gandaki			27,121	1,162	19,968	8,669	6,248	8,317	53,336	18,148
Lumbini			30,479	1,738	25,411	11,702	11,993	12,756	67,883	26,196
Karnali			20,245	1,458	14,817	6,793	4,591	4,706	39,653	12,957
Sudurpashchim			30,511	1,257	19,109	6,648	11,979	9,057	61,599	16,962
Total	134,988	27,154	188,918	9,741	147,366	61,955	69,625	64,252	540,897	163,102

Source: FWD/DoHS

To maintain the required storage conditions, Nepal has deployed 2,388 cold chain units, including walk-in coolers (WICs), walk-in freezers (WIFs), ice-lined refrigerators (ILRs), and deep freezers. Each unit is equipped with fridge tags to monitor temperature, ensuring vaccines remain safe. Additionally, 100 Remote Temperature Monitoring Devices (RTMDs) have been installed with support from UNICEF, allowing real-time tracking and quick response to temperature fluctuations. Since the COVID-19 pandemic, Nepal's cold chain capacity has expanded 5 folds, with 2-8°C storage increasing from 115,500 liters to 540,897 liters and the introduction of 8,474 liters of ultra-cold storage (-60 to -90°C). All equipment are powered by renewable energy, with 95% of the equipment powered by electricity and remaining 5% by solar energy. These improvements have strengthened Nepal's vaccine distribution network, ensuring safe, reliable, and efficient immunization across the country.

After COVID-19 pandemic, the national cold chain capacity, including DVS, PVS, and CVS, saw a significant expansion across all temperature ranges. The refrigerated storage (2-8°C) increased from 115,500 liters to 540,897 liters, adding 425,397 liters. Frozen storage (-15 to -30°C), which was not available before, expanded to 163,102 liters. Ultra-cold storage (-60 to -90°C), essential for mRNA vaccines, increased from 0 to 8,474 liters. In total, 596,973 liters of additional cold chain capacity were introduced, highlighting a major improvement in vaccine storage and distribution infrastructure. (Table 4.8)

Table 4.8 Total Net Cold Chain Space (National including DVS, PVS & CVS)

Before COVID-19 (2-8°C) in Liters	After COVID-19 (2-8°C) in Liters	Expanded Space after COVID-19	Before COVID-19 (-15 to -30°C) in Liters	After COVID-19 (-15to -30°C) in Liters	Before COVID-19 (-60 to -90°C) in Liters	After COVID-19 (-60 to -90°C) in Liters
115,500	540,897	425,397	NA	163,102	0	8,474
Total Volume Expanded (in Liters) after COVID-19 pandemic					596,973	

Source: FWD/DoHS

Box 4.2 SWOT analysis of NIP

Strengths	Opportunities
• Strong Government Commitment: Immunization is a P1 programme of Gov Nepal, which is provided free of cost to all eligible target populations. • Strong Immunization Policy and Law (Immunization is mandated as a fundamental right in the Immunization Act, 2072, and Immunization Regulation 2074) • Expert committees (NIAC, ICC, AEFI, NCCPE, NVCMRE, etc.) to guide and oversee NIP. • Immunization coordination committee at all levels (i.e., up to ward level) to guide and support the immunization programme. • Support from donors and partners (Collaboration with GAVI, WHO, UNICEF, WaterAid, and other health organizations). • Extensive network and accessibility (services are available in all 77 districts through over 16,000–19,000 immunization sites and outreach clinics, which ensures vaccine access in remote and rural areas). • Full immunization sustainability declaration initiative ensuring full immunization of every child. • Strong AEFI surveillance system • Well-established VPD surveillance system with laboratory support • Well-established integrated Health Management Information System HIMS, • Well-maintained and robust cold chain infrastructure and supply chain management. • Community engagement and reach through a cadre of FCHVs.	• Integration with Maternal and Child Health Services. • Expansion of cold chain management and supply chain by Provincial Health Logistics Management Centers (PHLMC). • Decentralized governance for resource mobilization, smooth service delivery, and accountability. • Strong inter-ministerial collaboration, for example, the use of school platform for vaccine delivery and demand generation activities (e.g., HPV). • New vaccine introduction campaigns (HPV) and supplementary immunization campaigns (SIAs) provide an opportunity to strengthen the routine immunization programme. • Public-private partnership for vaccine service delivery and surveillance. • VPD Surveillance system integration and focal person at all 3 levels through VPD and polio transition. • VPD Surveillance system integration and focal person at all 3 levels through VPD and polio transition. • Improved monitoring and supervision using structured checklists at all levels with a regular feedback mechanism. • Digitalization of routine immunization microplans and immunization records.
Weaknesses	**Threats**
• Limited internal resource mobilization (high dependency on external funding and no plans for long-term sustainability). • Limited local resource allocation and mobilization • Human resource constraints (high turnover and inadequate capacity) • Paper based routine immunization recording and microplanning. • Inadequate documentation of monitoring/supervision and feedback mechanisms • No dedicated immunization focal person at sub-national level after federalization • Vaccine wastage exceeding WHO standards increases costs and reduces efficiency. • No dedicated VPD Surveillance system integration and focal person at all 3 levels.	• Gradual reduction of funding from Gavi, and partners like World Health Organization and UNICEF during transition phases (including VPD and polio transition). • Outbreaks of VPDs • Rapid and unorganized migration and urbanization • Vaccine hesitancy (pockets of high-risk population having vaccine hesitancy due to religious, cultural, and social beliefs). • Geographical Barriers (hard-to-reach areas with difficult terrains (e.g., mountainous regions)

4.2 Integrated Management of Neonatal and Childhood Illness (IMNCI)

4.2.1 Overview of IMNCI Programme

The Community-Based Newborn Care Programme (CB-NCP) and the Community-Based Integrated Management of Childhood Illness (CB-IMCI) have been merged into the Community-Based Integrated Management of Neonatal and Childhood Illness (CB-IMNCI) programme. Following the MoHP decision on October 14, 2015 (2071/6/28), this programme was implemented nationwide with the aim of addressing critical health issues among under-five children. The CB-IMNCI programme aims to provide targeted services to 90% of the estimated population by 2030 as outlined in "Vision 90 by 30". This programme focuses on addressing major health conditions in newborns (0-59 days) children such as low birth weight, bacterial infections, jaundice, hypothermia, birth asphyxia, and breastfeeding counseling. It also offers comprehensive approach to treating major childhood diseases like Pneumonia, Diarrhea, Malaria, Measles, and Malnutrition in children aged 2-59 months.

The CB-IMNCI programme, focuses on major childhood illnesses, to improve healthcare-seeking behaviors at the household level and significantly lower the rates of diarrhea and pneumonia. The programme is conducted by the CHIS Section, thereby ensuring equity and accessibility while also providing coaching, supervision, and monitoring. The treatment chart booklet was revised in FY 2079/80 in accordance with WHO guidelines to help health professionals classify and treat childhood illnesses in children upto five years of age. In this programme Female Community Health Volunteers (FCHVs) distribute Zinc, ORS, and report cases with danger signs, and promote maternal, neonatal, and child health.

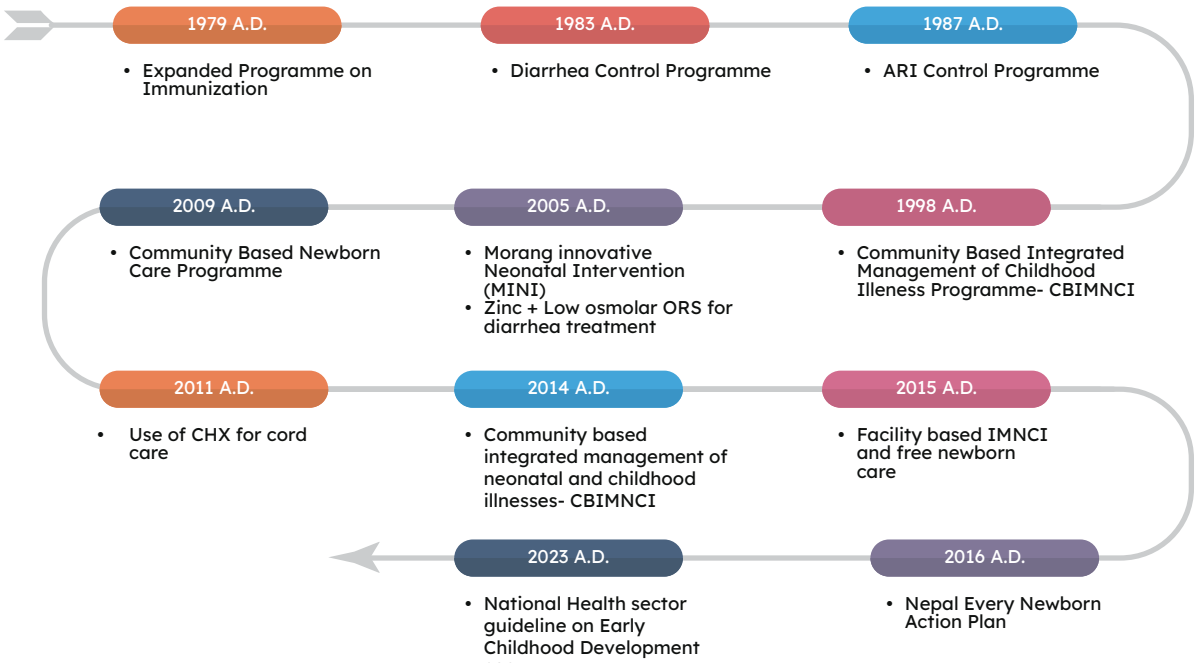


Figure 4.21 Milestones in management of childhood illness in Nepal

FWD initiated Facility Based Management of Neonatal and Childhood Illness (FB-IMNCI) programme to address gaps in managing cases referred from peripheral health institutions in 2073 BS. Linked with CB-IMNCI, it uses Emergency Triage Assessment and Treatment (ETAT) at the hospital level. The thematic approach covers systematic and standard management of new-born care, cough, diarrhea, fever, malnutrition, and anemia as well as other common childhood illness. The goal is to equip secondary and tertiary level hospital teams for effective management of complicated under-five and neonatal cases. Training session has been conducted for three days for Paramedics and Nursing staff, and six days for Medical Officers, working at secondary and tertiary level hospitals.

4.2.2 Major Activities in FY 2081/82

In the fiscal year 2081/82, CHIS Section of the FWD achieved major milestones in advancing child health services. FWD, DoHS celebrated the achievements of more than 25 years in child health where major contributors and institutions were felicitated for their endeavors from the Honorable Health Minister (Figure 4.26). Similarly, A capacity building package on Promoting Nurturing Care for Early Childhood Development for health workers was developed in line with the national Health Sector Guideline on Early Childhood Development (ECD). with the aim of enhancing knowledge and skills of health workers for the holistic development of children (0-8 years) (Figure 4.22). Recording and reporting forms and formats for FB-IMNCI were developed, with ongoing efforts to integrate them into the HMIS/DHIS-2 platform. Additionally, capacity-building efforts resulted in the development of 150 provincial-level trainers on FB-IMNCI and 100 provincial-level trainers on CB-IMNCI, expanding technical expertise and ensuring effective implementation at the provincial and local level. Moreover, provinces conducted the capacity building FB-IMNCI training for health workers while performing onsite coaching, monitoring and supervision and local levels conducted CB-IMNCI programme along with immunization services.



Figure 4.22 Capacity building package on Promoting Nurturing Care for Early Childhood Development

4.2.3 Key Indicators of IMNCI Programme

Indicators of CB-IMNCI Programme

The monitoring indicators of CB-IMNCI programme in the three fiscal years (2079/80 to 2081/82) are presented in Table 4.9-4.10.

There is a gradual increase in the national proportion of infants aged 0–2 months diagnosed with Possible Severe Bacterial Infection (PSBI), rising from 8.74% in the FY 2079/80 to 10.24% in the FY 2081/2082. While this upward trend reflects a growing burden of neonatal infection, it may also indicate there is an improvement in early identification and reporting of the cases. However, substantial provincial disparities are evident. The national coverage for treatment of PSBI cases with complete dose of Inj. Gentamycin declined to 48.3% in the FY 2081/2082.

The percentage of infants aged 0–2 months diagnosed with jaundice in Nepal shows a fluctuating but overall increasing trend in the last three fiscal years. Nationally, it increased from 3.27% in the FY 2079/80 to 4.25% in the FY 2080/81, and slightly to 4.30% in the FY 2081/82, indicating a modest upward trajectory despite minor year-to-year variation. At the provincial level, the pattern is non-linear and variable.

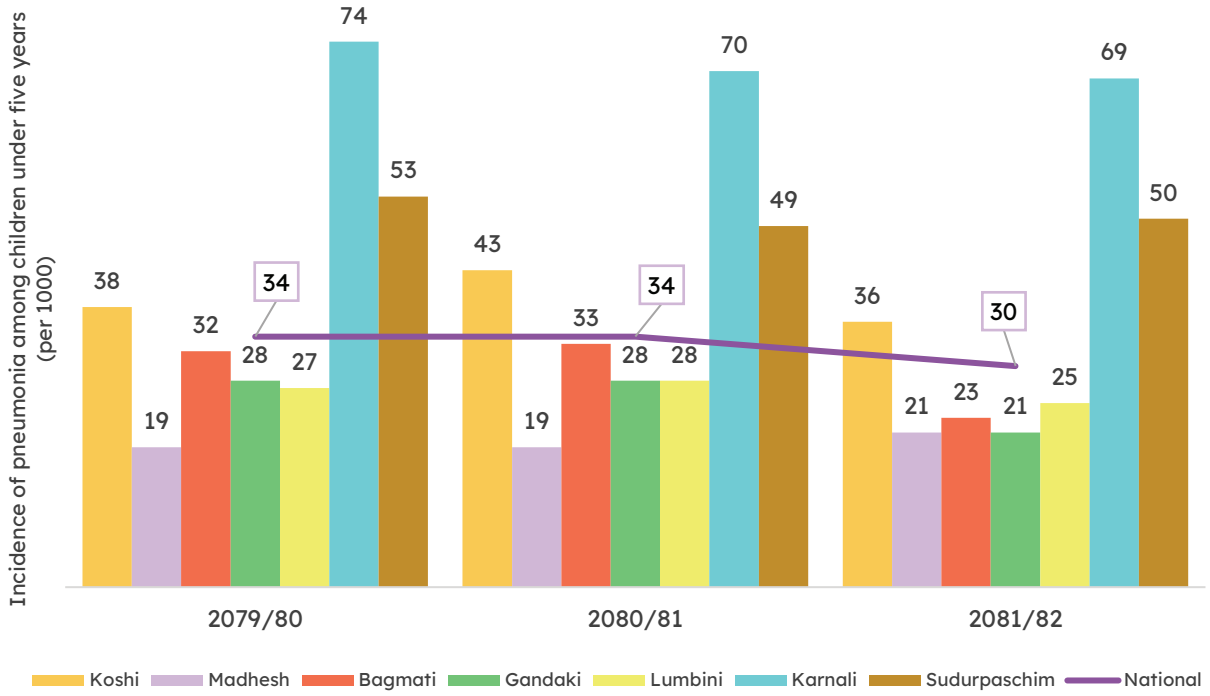
The incidence of ARI was increased from 290 per 1000 under five children in FY 2080/81 to 616 per 1000 under five children in FY 2081/82 while incidence of pneumonia declined from 34 to 30 per 1000 under five children from the FY 2080/81 to 2081/82. Karnali province had the highest ARI incidence (992 per 1000 under five children) as well as highest pneumonia incidence (69 per 1,000 under five children) while Bagmati had the lowest ARI (468 per 1000 under five children), pneumonia incidence was low at Madhesh (21 per 1000 under five children) and Gandaki (21 per 1000 under five children). The national rate of antibiotic-treated pneumonia remained above 100% for all the three consecutive fiscal years. (Table 4.9)

Table 4.9 Status of CB- IMNCI Programme monitoring indicators by Province in Three FYs 2079/80-2081/82

Indicators	Year	Koshi	Madhesh	Bagmati	Gandaki	Lumbini	Karnali	Sudurpaschim	National
% of infants aged 0-2 months with Possible Severe Bacterial Infection (PSBI)	2079/80	5.89	7.89	3.68	5.04	9.19	16.92	12.05	8.74
	2080/81	5.85	10.71	2.95	4.2	7.37	25.12	8.48	9.82
	2081/82	6.73	9.55	3.16	3.23	15.49	21.34	8.38	10.24
% of PSBI Cases received complete dose of Inj. Gentamycin	2079/80	40.0	41.0	39.0	25.0	36.0	89.0	60.0	54.0
	2080/81	33.6	19.0	14.1	60.0	69.0	71.5	70.6	55.1
	2081/82	32.9	24.6	21.7	38.8	31.4	92.4	78.0	48.3

Indicators	Year	Koshi	Madhesh	Bagmati	Gandaki	Lumbini	Karnali	Sudurpaschim	National
% of infants aged 0-2 months with Jaundice	2079/80	3.40	3.23	4.79	6.07	2.34	2.49	2.41	3.27
	2080/81	4.33	4.24	7.62	5.60	5.00	1.46	1.75	4.25
	2081/82	4.75	4.69	6.40	7.51	3.13	1.82	3.26	4.30
ARI incidence rate among children under five years (per 1000)	2079/80	290	210	231	275	245	406	357	266
	2080/81	344	242	245	304	260	433	348	290
	2081/82	647	572	468	567	575	992	857	616
% of pneumonia cases treated with antibiotics	2079/80	100	116	99	102	100	99	101	102
	2080/81	100	103	100	101	100	100	102	101
	2081/82	101	102	103	100	100	100	103	101

Source: HMIS/DoHS



Source: HMIS/DoHS

Figure 4.23 Province wise distribution of incidence of pneumonia among children under five years

Incidence, Case Fatality and Management of Diarrhea <5 years' children

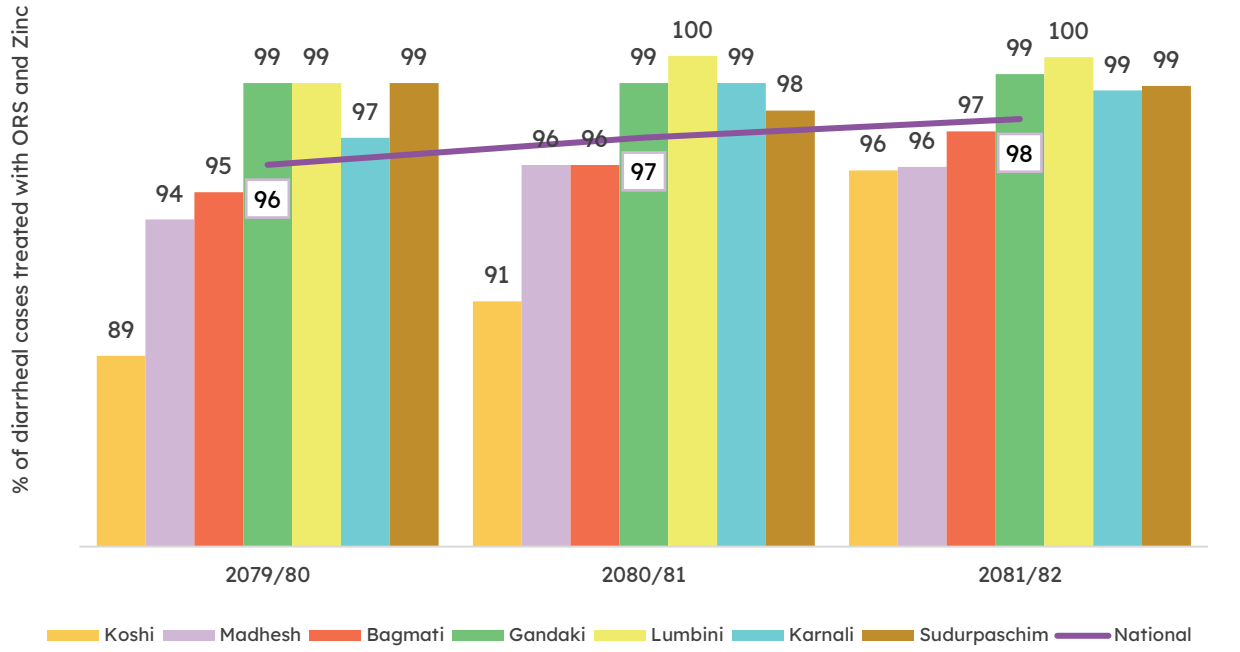
In FY 2081/82, the incidence of diarrhea was increased from 127 per 1,000 children under 5 in FY 2080/81 to 318 per 1,000 children under 5 years nationwide, with the highest rates recoded in Karnali Province (2647), while Bagmati had a comparatively lower rate of 201 per 1000 under five children. There were 1 diarrheal deaths occurred in Karnali Province. A total of 97.68 diarrheal cases were treated with zinc and ORS at national level, with the highest numbers reported from Lumbini (99.95%) followed by Gandaki (99.33%). (Table 4.10)

Table 4.10 Incidence, deaths and management of diarrhea < 5 years' children by province FY 2079/80-81/82

Indicators	Year	Koshi	Madhesh	Bagmati	Gandaki	Lumbini	Karnali	Sudurpaschim	National
Incidence of Diarrhea /1000 U5 Population	2079/80	79	129	79	82	110	216	162	115
	2080/81	86.05	140.51	79.56	90.43	135.25	250.59	160.84	127.11
	2081/82	247	368	201	203	320	647	439	318
% of children under five years with diarrhea suffering from Severe dehydration	2079/80	0.21	0.14	0.16	0.09	0.04	0.41	0.52	0.22
	2080/81	0.21	0.13	0.16	0.15	0.12	0.24	0.37	0.19
	2081/82	0.11	0.08	0.4	0.02	0.06	0.3	0.45	0.19

Indicators	Year	Koshi	Madhesh	Bagmati	Gandaki	Lumbini	Karnali	Sudurpaschim	National
Diarrheal Deaths	2079/80	0	1	1	0	0	1	1	4
	2080/81	0	6	2	0	3	3	0	14
	2081/82						1		1
% of children under five years with diarrhoea treated with IV fluid	2079/80	1	0.56	0.47	0.44	0.07	0.68	0.67	0.54
	2080/81	0.88	0.81	0.32	0.6	1.2	0.58	1.1	0.84
	2081/82	0.85	0.18	0.95	1.76	9.03	0.89	1.88	2.31

Source: HMIS/DoHS



Source: HMIS/DoHS

Figure 4.24 Percentage of diarrheal cases treated with ORS and zinc by province

Box 4.3 SWOT Analysis of IMNCI Programme

Strengths

- **Comprehensive Approach**
  - Integrates management of major childhood illnesses (pneumonia, diarrhea, malaria, measles, malnutrition).
  - Covers preventive, promotive, and curative aspects.
- **Standardized Protocol**
  - Uses evidence-based guidelines.
  - Color-coded classification system (Pink, Yellow, Green).
- **Focus on Under-Five Mortality**
  - Targets major causes of child deaths.
  - Supports global child survival goals.
- **Capacity Building**
  - Trains health workers in assessment, classification, and treatment.
  - Improves clinical decision-making at primary care level.
- **Community Involvement**
  - Promotes home-based newborn care.
  - Encourages caregiver counseling and health education.
- **Cost-Effective**
  - Reduces unnecessary referrals.
  - Rational drug use decreases wastage.
  - Ongoing training for both CB-IMNCI and FB-IMNCI programmes, enhancing community-based and facility-based care.
  - Addresses key health issues like, diarrhea, pneumonia, malnutrition, and new-born care to reduce child morbidity and mortality.
  - Strong coordination and support from developing partners
  - Collaboration of FCHVs for child survival.
  - Adherence to standardized protocols to ensure quality of care.

Opportunities

- **Integration with Other Programs**
  - Can be linked with immunization, nutrition, and maternal health programs.
- **Digital Health Support**
  - Mobile-based IMNCI tools for assessment and reporting.
  - Electronic monitoring systems.
- **Government Commitment**
  - Alignment with Sustainable Development Goals (SDGs).
  - National child health strategies.
- **Community Health Worker Expansion**
  - Task shifting to trained community health volunteers.
- **Global Funding Support**
  - Support from international donors and partners.
  - Involvement and ownership of private sectors in government programmes.
  - Improving health-seeking behaviour and practices through community education and engagement.

Weaknesses

- **Training Intensive**
  - Requires long-duration training (6 days).
  - Refresher training often lacking.
- **Implementation Gaps**
  - Inadequate supervision and monitoring.
  - Poor adherence to guidelines in busy facilities.
- **Logistic Constraints**
  - Frequent stock-out of essential drugs.
  - Lack of equipment (weighing scales, timers, job aids).
- **Time-Consuming**
  - Full IMNCI assessment takes longer than routine OPD consultation.
- **Limited Coverage**
  - Rural and remote areas may have limited trained staff.
  - Age limit till 5 years of age

Threats

- **Health Workforce Shortage**
  - Migration of trained staff.
  - High turnover.
- **Funding Instability**
  - Budget cuts.
- **Emerging Diseases**
  - New infections not covered in standard IMNCI algorithm.
- **Poor Referral System**
  - Weak transport facilities.
  - Delayed referral leads to complications.
- **Antimicrobial Resistance**
  - Overuse or misuse of antibiotics.
- **OTHERS;**
  - Deep rooted social barriers and stigma existing in our community that negatively influence the health service utilisation
  - Childhood programmes being overshadowed by other health programmes.

5 Nutrition Program

Family Welfare Division | Nutrition Section

5.1 About the Program

Nutritional interventions has been proved to improve human capital through increased productivity and are very cost-effective for socioeconomic development. Improving the nutritional status of the people in Nepal is a major responsibility of the Nutrition Section of Family Welfare Division (FWD), Department of Health Services (DoHS). Nutrition section focuses especially on vulnerable populations such as marginalized communities, pregnant and lactating women, elderly and children under five. Implementing national nutrition policy and coordinating with the Ministry of Health and Population (MoHP) to include nutrition-specific and nutrition-sensitive initiatives into the health system are among its duties. The Nutrition Strategy, 2077 (Box 5.1) serves as the overall framework for the initiatives, and numerous nutrition programs are presently in varying phases of piloting, scaling up, and attaining national coverage.

Under the Multi-Sector Nutrition Plan III (MSNP 2023-2030) (Box 5.2), the section supports multi-sectoral activities by designing and managing interventions to address micronutrient deficiencies, stunting, wasting, and malnutrition. It assures the efficacy of interventions and makes the required modifications by routinely monitoring and assessing important nutrition parameters. The unit also ensures timely purchase and distribution of key nutrition commodities, including micronutrient powders, vitamin A, iron and folic acid supplements, and therapeutic foods. It places a strong emphasis on behaviour change communication (BCC) initiatives that engage the community, raise knowledge of healthy eating habits, and motivate proactive community involvement for long-lasting gains.

Box 5.1 Key components of nutrition strategy 2077

Vision

To prepare well-nourished, healthy, happy and capable citizens

Mission

To build a nutrition friendly society

Goal

To reduce the current problem of malnutrition in line with the Sustainable Development Goals by 2030

Objectives

- Improving the nutritional status of newborns, children, adolescents and women by increasing their access to nutritionally specific and nutrition-sensitive services
- Enhancing the quality of nutrition specific and nutrition sensitive services and enhancing the capacity of service providers to provide nutrition services
- Increase the demand for nutrition specific and sensitive services by raising public awareness at the community level, promote positive behaviours related to nutrition and eliminate negative habits.
- To increase the scope of nutrition services in accordance with time.

Strategies

- Multi-sectorial nutrition policy and programs including food security will be updated and implemented with high priority.
- Short-term, medium-term, and long-term measures will be adopted at all levels with an emphasis on food diversification and balanced diet to improve the micro-nutrition status of different age groups including women and children.
- Programs will be developed and operated by strengthening school health programs and nutrition education.

Box 5.2 Multisectoral Nutrition Plan 2023 - 2030

Vision

Ending malnutrition, building human capital, and overall socio-economic development.

Goal

To improve nutritional status throughout the human life cycle by ensuring the availability and accessibility of quality nutrition services.

Objectives

- Ensure equitable access and consumption by improving the availability and quality of nutrition-specific services.
- Ensure equitable access and consumption by improving the availability and quality of nutrition-sensitive services.
- To enhance the engagement, accountability and institutional capacity of the three tiers of government and stakeholders to institutionalize nutrition-friendly systemic approaches
- Promote good practices related to health, nutrition, and water, sanitation, and hygiene through social behaviour change.

Outcome

- Equitable access to and improved utilization of quality nutrition-specific services.
- Equitable access to and consumption of quality nutrition-sensitive services and adequate consumption of safe, healthy and nutritious food.
- Nutrition-friendly systemic approaches institutionalized across the three levels of government.
- Positive changes in knowledge, attitudes and practices related to health, nutrition, drinking water, sanitation and hygiene.

Nepal made significant advances in lowering the rates of severe stunting and wasting in children under five between the fiscal years 2052–2053 and 2078–2079, going from 57% to 25% and 15% to 8%, respectively. Even with these developments, there are still many obstacles to overcome. The prevalence of underweight in children under five years is still 19%, and anaemia, affects about 43% of children under five years and 23.1% of women aged 15 to 49 years; these all raises serious public health concern. The high prevalence of anaemia in children aged 6–23 months (> 65.7%) is especially worrisome.



Box 5.3 Phases of implementation of different nutrition program/services

Nationwide programme	Scale up programme	Pilot programme
Growth Monitoring and Promotion	Mother Baby Friendly Hospital Initiative (MBFHI)	Model Nutrition Specific Program
Maternal, Infant and Young Child Nutrition (MIYCN)	Nutrition Rehabilitation Center (NRC)	
Micro-Nutrient Powder (MNP) supplementation Program	Comprehensive Lactation Management Center (CLMC)	
Biannual distribution of Vitamin A and Albendazole	Lactation Management Unit (LMU)	
Control and Prevention of Iodine Deficiency Disorders (IDD)		
School Health and Nutrition Program		
Integrated Management of Acute Malnutrition (IMAM)		

5.1.1 Growth monitoring and promotion (GMP)

GMP is a vital public health procedure that aims to continuously evaluate a child's growth and development in order to guarantee their general health and nutritional well-being. This includes regularly measuring important indicators, mainly height and weight, and comparing the results to standardized growth charts or World Health Organization (WHO) growth guidelines in order to identify early markers of undernutrition or growth flattering. GMP makes it possible for prompt interventions to avoid long-term health concerns by promoting the early detection of problems like stunting and wasting. The approach also incorporates nutrition counselling, the supply of necessary supplements, and early disease identification and treatment. Children between the ages of 0 - 23 months registered under GMP are regularly observed for general health, developmental milestones, and anthropometric measurements. The program is guided by Growth Monitoring and Promotion Guideline, 2079. (figure 5.1)

5.1.2 Integrated Management of Acute Malnutrition

In Nepal, the Integrated Management of Acute Malnutrition (IMAM) program is a thorough method for detecting, treating, and preventing acute malnutrition in children, especially those under five. It targets both severe acute malnutrition (SAM) and moderate acute malnutrition (MAM) and provides services through facility-based and community-based therapies. It uses basic indicators such as weight-for-height, mid-upper arm circumference (MUAC), and the presence of bilateral oedema, and focuses on early screening and the detection of malnourished children. Ready-to-Use Therapeutic Food (RUTF) for SAM and supplemental feeding for MAM cases are provided as part of treatment services, which also include medical management of infections and other problems.

Nutrition Rehabilitation Centres (NRCs) help malnourished children regain their health; these homes typically offer a combination of medical care and therapeutic feeding. They also educate and support families on proper nutrition and healthcare practices in order to prevent future malnutrition (figure 5.2).

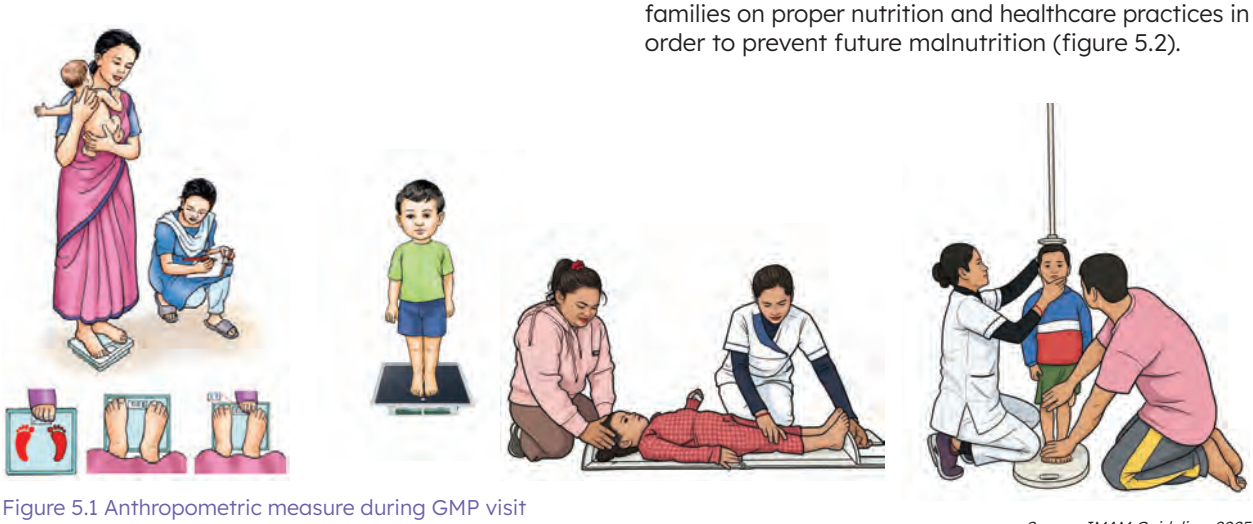


Figure 5.1 Anthropometric measure during GMP visit

Source: IMAM Guideline, 2025

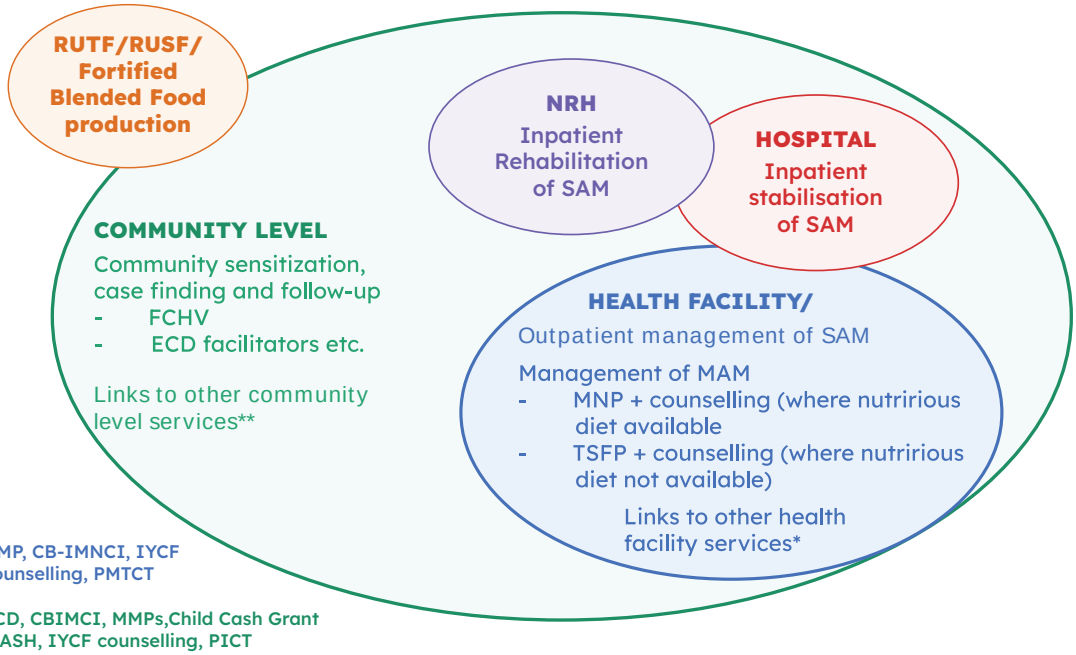


Figure 5.2 Components of IMAM in Nepal

5.1.3 Integrated Infant and Young Child Feeding (IYCF) and Multiple Micronutrient Powder (MNP) (Baal Vita) Community Promotion Program

In 2065/66, to address anaemia in children aged 6–23 months, the Government of Nepal, Ministry of Health and Population (MoHP) partnered with UNICEF and the US-CDC Atlanta, implemented an Integrated IYCF and MNP project" at the community level as a pilot program in six districts. The intervention targeted children aged 6-23 months, distributing 60 sachets of Baal Vita every six months (Fig 5.3).

Single sachets of Baal Vita provide a combination of vital vitamins and minerals in powdered form that can be readily incorporated into semi-solid foods. Baal Vita contains 15 micronutrients, including iron and zinc, which helps addressing iron deficiency anaemia.

Through at-home or point-of-use fortification of their meals, they are an efficient way to increase the micronutrient intake of children under two. Families are instructed to mix one sachet into the child's food daily for two months, returning every six months for a new batch. Distribution occurs through local health institutions or female community health volunteers.



Source: NHEICC

Figure 5.3 Baal Vita Micronutrient Powder

5.1.4 Control and Prevention of Iron Deficiency Anemia

Iron deficiency anaemia (IDA) prevention and control is a major public health concern in Nepal, with a focus on vulnerable populations such children under five, adolescents, and expected and nursing mothers. The initiative aims to boost iron intake by distributing iron and folic acid (IFA) supplements, fortifying basic foods, and encouraging dietary diversity. Efforts are coordinated with maternal and child health services, emphasizing behaviour modification communication, school-based supplementation programs, and prenatal care to raise knowledge of iron-rich foods and healthy eating. The prevalence of IDA and the related health effects are reduced through routine monitoring and community-based interventions. Iron deficiency anaemia is addressed through multifaceted approach: mandatory fortification of staple foods, supplementation programs and health education.

5.1.5 Control and Preventions of Vitamin-A Deficiency Disorders and Helminth Control

The Nepal National Vitamin A Program (NVAP) was launched in 1993. The program initially focused on eight of the 75 districts in the nation. Expanding to 32 districts by 1997, the program reached countrywide coverage by 2003. Under this program, Albendazole is used to address soil-transmitted helminth infections, which can cause anaemia and stunt growth, and Vitamin A supplements are given to avoid deficiencies-related problems like night blindness and impaired immunity. The distribution of vitamin A and albendazole occurs twice a year on Baisakh 6th and 7th and Kartik 2nd and 3rd to children of age 6 to 59 months, and by Female Community Health Volunteers (FCHVs) through targeted campaigns.

5.1.6 Control and Prevention of Iodine Deficiency Disorders (IDD)

In early 1970s, Nepal recognized iodine deficiency illnesses as a serious public health issue, and in 1973, it started its first nationwide control initiative. These included salt iodization programs including the Goitre Control Project and the Goitre and Cretinism Eradication Project, which distributed iodized oil injections and capsules. Since 1998, the only method to treat iodine deficiency has been salt iodization. The introduction of iodized salt standards in 2001 required a minimum of 50 parts per millions of iodine at the production level and 30 parts per million at the retail level. GoN employs the Two-Child-Logo to certify adequately iodized salt, and DoHS utilizes a social marketing system to enhance awareness and promote household usage.

5.1.7 School Health and Nutrition Program

School Health and Nutrition Program is initiated in 2063 in Nepal. The program is a key initiative aimed at improving the health, nutrition, and overall well-being of school-age children. It is implemented through the collaborative efforts of the Ministry of Health and Population (MoHP) and the Ministry of Education. The program focuses on delivering essential health and nutrition services in schools. By addressing both health and nutrition needs, this initiative aims to enhance school attendance, academic performance, and overall child development, contributing to long-term improvements in the health outcomes of Nepal's younger population. Recognizing the connection between health, nutrition, and educational attainment, the MoHP, in collaboration with World Food Program (WFP) and UNICEF, has initiated various programs to address these issues through SHNP. The school health and nutrition program comprise of following major intervention programs: Mid-day meal programme, Annual physical check-ups, First aid service, Deworming program, Child club mobilization, Iron and folic acid distribution program, one school-one health worker program and WASH. The program also integrates health education to raise awareness about nutrition, personal hygiene, and disease prevention among students, teachers, and parents. One school- one health worker program is being implemented through NSSD

and provinces, elaborated in Chapter 7 of this report under school health nursing service program.



Figure 5.4 Strategic objectives of SHNP

As part of SHNP, Iron-Folic Acid (IFA) supplementation programs for adolescent girls have been implemented in Nepal since the FY 2072/73 targeting 10-19 years old from schools for school going adolescent girls and form health facilities for out-of-school adolescent girls. As part of SHNP, the supplements are typically given one tablet of IFA per week for 13 weeks, then stopped for another 13 weeks before starting again for the next 13 weeks. In a year, one adolescent girl should take 26 tablets of IFA.

5.1.8 Comprehensive Nutrition Specific Interventions Training Programme

Nepal has implemented a Comprehensive Nutrition-Specific Interventions Training Program to improve the ability of frontline staff and health workers to provide efficient nutrition services throughout the nation. The CNSI Training covers nine major topics, all of which are related to nutrition-specific programs offered across the country into single comprehensive package of seven days. It has led to remarkable reduction of number of days for training with CNSI development (27 days to 7 days). The main goal of the program is enhancing knowledge and abilities of health care providers to implement important nutrition-specific interventions, such as micronutrient supplementation, growth monitoring and promotion, management of acute malnutrition, maternal, infant, and young child nutrition (MIYCN), and nutrition counselling. The program had been undertaken in partnership with the Ministry of Health and Population (MoHP) and development partners. The program gives trainees useful skills to recognize, prevent, and treat malnutrition in the community and in medical facilities.

5.1.9 Maternal Baby Friendly Hospital Initiative (MBFHI)

The "Mother-Baby Friendly Health Initiative (MBFHI)" in Nepal is a national adaptation of the global initiative aimed at promoting maternal and child health through breastfeeding and baby-friendly practices. It seeks to integrate supportive healthcare practices into hospitals, ensuring that new mothers and their infants receive optimal care. With Nepal's commitment to the Sustainable Development Goals (SDGs), particularly those focusing on reducing neonatal and maternal mortality, MBFHI serves as a cornerstone for advancing breastfeeding, promoting bonding, and ensuring the health of mothers and their newborns (Box 5.4).

Box 5.4 Maternal Baby Friendly Hospital Initiative (MBFHI)

General objective

To provide mother-baby-friendly services through the implementation of MBFHI in hospitals.

Goal

To improve nutritional status throughout the human life cycle by ensuring the availability and accessibility of quality nutrition services.

Specific objectives

- To provide training to the staff regarding mother and baby-friendly services to provide services in a dignified manner.
- To help the clients receive services by informing them about the services provided by the institution.
- To prepare the action plan to make it compatible with the annual program and budget of the health institution.
- To develop mechanisms for effective monitoring and collaborative supervision.

Major activities in the MBFHI program

- Two days orientation and self-assessment for the initiation of mother-baby friendly initiatives in health facilities.
- One-day review of mother-baby friendly initiatives program using self-assessment tool.

WHO and UNICEF started the BFHI, a global initiative to adopt policies that safeguard, encourage, and support breastfeeding. The initiative's two primary objectives are to: a) execute the Ten Steps to improve hospitals and maternity facilities, and b) stop the practice of giving out free or inexpensive supply of breast milk replacements to hospitals and maternity wards. BFHI has adopted the International Code of Marketing of Breast-milk Substitutes (1981) to safeguard and encourage breastfeeding. Nepal developed guideline for MBFHI in 2073. This was based

on FIGO SMNH 2014 and BFHI. After the development of MBFHI guideline in 2073, Family Welfare Division initiated the orientation through five hospitals in FY 2076/2077, and further 5-5 hospitals in FY 2077/78 and FY 2078/79. Nepal's MBFHI guideline 2073 was revised to align with the WHO/UNICEF revised Implementation Guideline of Baby Friendly Hospital Initiative 2018.

It reached 12 additional hospitals in FY 2081/82 (initiation by Federal, Provincial, and Development Partner).

5.2 Major Activities for FY 2081/82

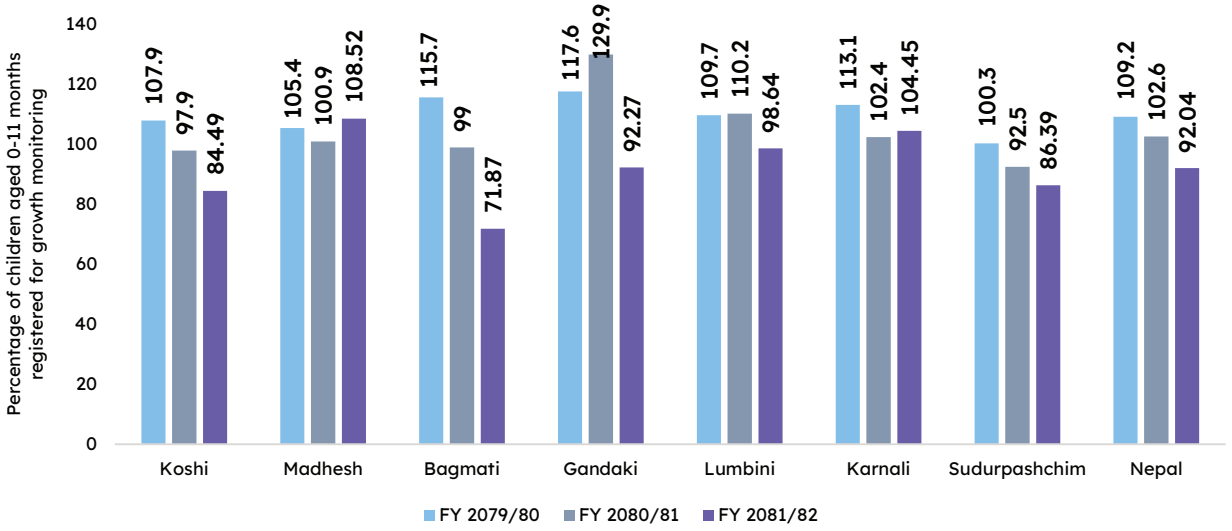
1. **Sustainability of Nutrition Rehabilitation Centers (NRC):** Implementing programs to ensure the long-term operation and service delivery of NRCs.
2. **Strategic Planning and Costing (2082/83 – 2087/88):** Workshops for the five-year cost estimation and action plan formulation for the National Nutrition Strategy.
3. **Comprehensive Nutrition Specific Interventions (CNSI):** Training health workers on the full package of nutrition-specific services.
4. **Integrated Management of Acute Malnutrition (IMAM):** Identifying implementation barriers, expanding services, and providing on-site coaching.
5. **Maternal and Infant Feeding Advocacy:** Updating the Mother's Milk Substitutes Act (2049) and training breastfeeding counselors in federal/provincial hospitals.
6. **Procurement of Nutritional Commodities:** Supplying Vitamin A, RUTF, MNP, F-75, F-100, ReSoMal, and anthropometric equipment (weighing machines, MUAC tapes).
7. **National Micronutrient Status Survey (2025/26):** Preparatory workshops, implementation, and continuation of the nationwide survey.
8. **School Health and Nutrition (SHN):** Promoting SHN programs and finalizing the draft of the National School Health and Nutrition Strategy.
9. **Mother-Baby Friendly Hospital Initiative (MBFHI):** Reviewing current status and expanding the campaign to private health institutions.
10. **Iodine and Salt Strategies:** Implementing programs to control iodine deficiency disorders and formulating strategies to reduce excessive salt intake.
11. **Adolescent, Maternal, and Child Nutrition:** Conducting national workshops focused on the specific nutritional needs of these target groups.
12. **Model Nutrition Program Support:** Providing technical assistance to local levels to facilitate the implementation of "Model Nutrition" programs.
13. **Nutrition in Emergency (NiE):** Planning and preparedness for nutritional interventions during humanitarian crises or disasters.
14. **Monitoring and Supervision:** Regular field visits and tracking of nutrition program performance across all levels.
15. **NuTeC Strengthening:** Managing and strengthening the Nutrition Technical Committee (NuTeC) and its regular meetings.
16. **Capacity Building for Inpatient Care:** On-site training for doctors and nurses to strengthen services in Inpatient Treatment Centers (ITC).
17. **Resource Material Development:** Designing and printing Job Aids, guidelines, and training manuals for nutrition-specific programs.
18. **Awareness and Behavior Change:** Developing audio-visual materials to discourage unhealthy eating and celebrating nutrition-related national/international days.
19. **Annual Progress Reviews:** Conducting seminars to review the progress of the Nutrition Program, SHN, and NRCs and to formulate upcoming action plans.
20. **Guideline Harmonization:** Updating national nutrition guidelines and materials to align with global standards.

5.3 Key Performance Indicators for Nutrition Services

Registered for growth monitoring and promotion

In previous years AHR, children registered for growth monitoring and promotion data were reported for children aged 0–23 months. However, in current AHR report, the comparison of growth monitoring among children is based on the reporting age group as 0-11 months, and 12–23 months.

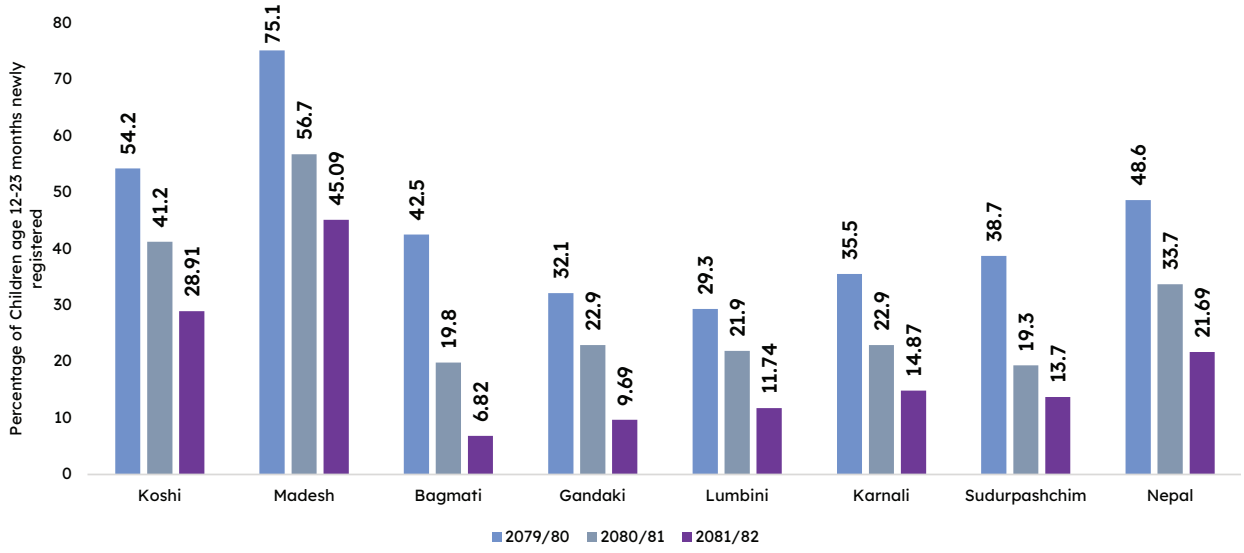
In FY 2081/82, the percentage of children aged 0-11 months registered for growth monitoring was 92.04%, indicating significant decline compared to previous years. The highest percentage of children were registered in Madhesh province (108.52%) and lowest in Bagmati province (71.87%). Gandaki province recorded a dramatic drop in registration, falling from 129.90% in FY 2080/81 to 92.27% in current FY. (figure 5.5)



Source: HMIS/DoHS

Figure 5.5 Percentage of children aged 0-11 months registered for growth monitoring

Similarly, the percentage of children aged 12-23 months newly registered for growth monitoring for the FY 2081/82 are illustrated in figure 5.6. About 21.69 % of the children aged 12-23 months were registered for growth monitoring, indicating decline by about 12 percentage point compared to previous FY. The highest proportion of children were registered in Madhesh province (45.09 %) while lowest proportion in Bagmati province (6.82 %). All the provinces have recorded significant drop in the registration of growth monitoring in this year compared to previous years.

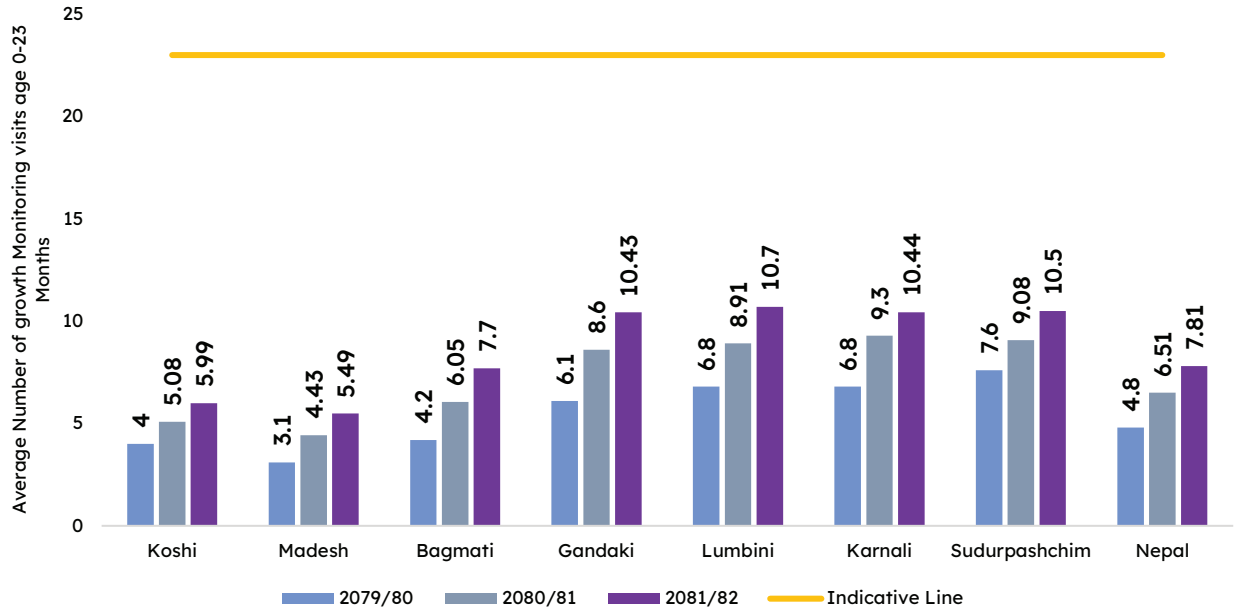


Source: HMIS/DoHS

Figure 5. 6 Percentage of children aged 12-23 months newly registered for growth monitoring

Average number of visits for growth monitoring per child

Average number of growth monitoring visits per children during the last three fiscal years (2079/80 to 2081/82) is shown in figure 5.7. There has been a steady increasing trend in the average number of growth monitoring visits for children across all provinces and at the national level indicating improved utilization of child health services over time. At National Level the average number visits increased from 4.8 visits in FY 2079/80 to 7.81 visits in FY 2081/82. The provinces with the higher average visits in FY 2081/82 were Gandaki, Lumbini, Karnali and Sudurpashchim (10.43 visits), Lumbini (10.7 visits), Karnali (10.44 visits), and Sudurpashchim (10.5 visits), indicating enhanced monitoring efforts in these areas. On the other hand, other provinces had relatively lower but still rising averages over time. The rising average number of growth monitoring visits per child indicates progress in child health service delivery and improved follow-up of children under two years of age, but regional differences show that specific interventions are required to guarantee uniform access to growth monitoring in every province.

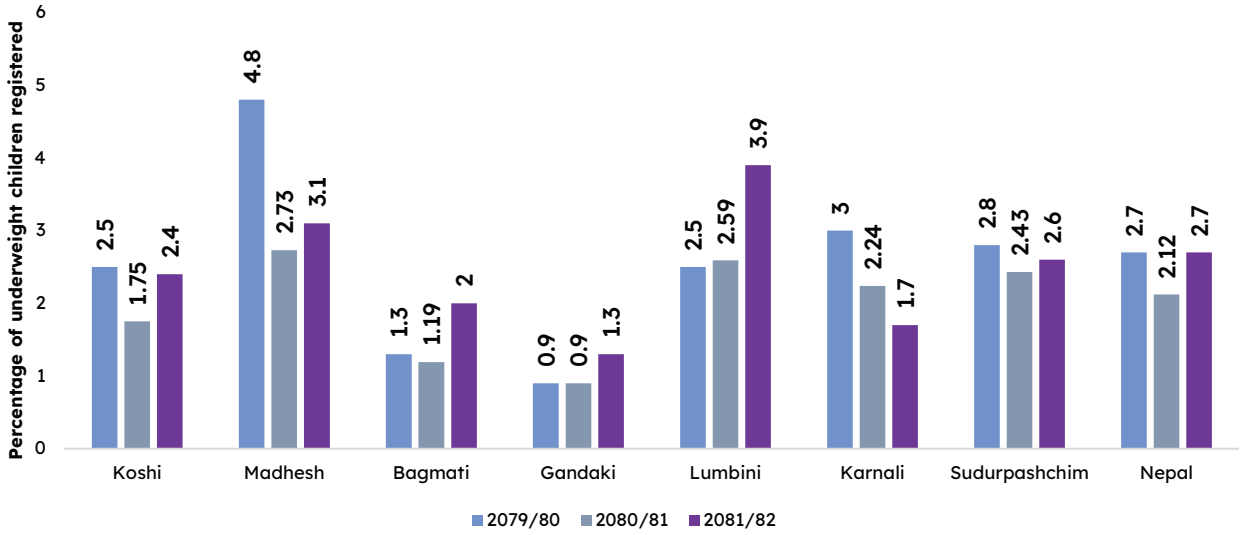


Source: HMIS/DoHS

Figure 5.7 Average number of growth monitoring visits per child in last three FYs 2079/70 - 2081/82

Percentage of children aged 0-23 months registered for growth monitoring who were underweight

The percentage of children aged 0–23 months registered for growth monitoring who were underweight over the three FYs (2079/70 – 81/82) is illustrated in figure 5.8. The data showed there are variations in the national pattern with the percentage of underweight children nationwide fell from 2.7% in FY 2079/80 to 2.12% in FY 2080/81, but then increased to 2.7% in FY 2081/82, suggesting that efforts to lower the incidence of underweight have stagnated. Gandaki Province continuously recorded the lowest percentage of underweight children, with 0.9% in FY 2079/80 and FY 2080/81 and a minor increase to 1.3% in FY 2081/82, indicating relatively better nutritional outcomes for children. Bagmati Province maintained comparatively low levels, rising to 2.0% in FY 2081/82 after falling from 1.3% in FY 2079/80 to 1.19% in FY 2080/81. Madhesh Province's rate decreased from 4.8% in FY 2079/80 to 2.73% in FY 2080/81 before rising to 3.1% in FY 2081/82, indicating ongoing issues with child nutrition. Lumbini Province's underweight prevalence worsened in the most recent fiscal year, rising slightly from 2.5% to 2.59% and then noticeably to 3.9%. The percentage of underweight children in Koshi Province decreased from 2.5% in FY 2079/80 to 1.75% in FY 2080/81 before rising to 2.4% in FY 2081/82. Karnali Province's nutritional status improved somewhat, as seen by a declining trend from 3.0% to 2.24% and then to 1.7%. Additionally, Sudurpashchim Province showed a modest improvement to 2.6% after declining from 2.8% to 2.43%. The reversal of downward trends in numerous provinces and at the national level in FY 2081/82 indicates ongoing gaps in child nutrition interventions and service delivery, even if several provinces showed advances in lowering the prevalence of underweight. These results emphasize the necessity of improved nutrition programs, focused provincial interventions, and ongoing multisectoral initiatives to lower the prevalence of underweight in young infants.



Source: HMIS/DoHS

Figure 5.8 Percentage of underweight children registered for growth monitoring

Status of IYCF Practices

Early initiation of breast feeding

The proportions of new-borns initiated with breastfeeding within one hour of birth was 87.97 % in FY 2081/82. Bagmati province had the lowest proportion (71.38%) among all provinces (table 5.1)

Exclusive breastfeeding for six months

The rate of exclusive breastfeeding among children aged below 6 months registered for growth monitoring gradually increased from 50.26% in FY 2079/80 to 60.41% in FY 2080/81 to 65.78% in FY 2081/82, and similar trends were observed across all provinces (table 5.1)

Timely introduction of complementary foods

The trend of timely introduction of complementary foods (solid, semi-solid or soft foods) was irregular which demonstrates an increment in the FY 2080/81 with intermittent decline in the FY 2081/82 (table 5.1). This suggest that initiatives to increase breastfeeding and complementary feeding practices still require more focus across all provinces.

Table 5.1 IYCF Practices' Indicators FYs 2079/80 - 81/82

Percentage of newborns who initiated breastfeeding within 1 hour of birth								
FY	Nepal	Koshi	Madhesh	Bagmati	Gandaki	Lumbini	Karnali	Sudurpaschim
2081/82	87.97	84.02	88.33	71.38	96.58	95.9	98.9	97.77
Percentage of children below 6 months exclusively breastfed among registered for growth monitoring.								
FY	Nepal	Koshi	Madhesh	Bagmati	Gandaki	Lumbini	Karnali	Sudurpaschim
2081/82	65.78	65.1	58.23	64.08	67.65	76	70.92	66.37
2080/81	60.41	52.56	50.54	60.73	66.15	72.14	67.76	67.17
2079/80	50.26	43.66	39.01	49.24	53.23	61.24	61.92	60.18
Percentage of children aged 6–8 months registered for growth monitoring who received solid, semi-solid or soft foods								
FY	Nepal	Koshi	Madhesh	Bagmati	Gandaki	Lumbini	Karnali	Sudurpaschim
2081/82	60.25	54.21	62.7	46.13	62.58	74.41	75.13	56.86
2080/81	62.01	52.92	49.21	60.1	89.97	79.95	69.65	61.68
2079/80	54.96	45.25	42.03	55.35	61.99	67.6	75.15	60.48

Source: HMIS/DoHS

Screening of under-five children by FCHVs

The table 5.2 shows the screening of under-five children by female community health volunteer (FCHVs) using Mid-upper arm circumference (MUAC) tape and their malnutrition status in FY 2081/82. Among 4,267,286 under-five children screened, 1.66 % children were found to have moderate acute malnutrition (MAM), while 0.16 % had severe acute malnutrition (SAM). Lumbini provinces showed considerably higher MAM and SAM percentages, at 2.21 % and 0.23 %, respectively, indicating a higher burden of both moderate and severe malnutrition. SAM rates was significantly lower in Gandaki province (0.02%). Also, Karnali with 0.20 % and Madhesh with 0.21 % cases showed higher SAM cases than national level with 0.16 %. The screening results show that MAM is a major concern, particularly in Madhesh, Lumbini and Karnali provinces necessitating focused interventions.

Table 5. 2 Screening of the under-five children by FCHVS using MUAC Tape and their malnutrition status FY 2081/82

Province	Normal		MAM		SAM		Total screened
	Number	Percent	Number	Percent	Number	Percent	
Koshi	456,096	98.24	7,303	1.57	874	0.19	464,273
Madhesh	925,227	97.67	20,068	2.12	1,999	0.21	947,294
Bagmati	666,270	99.14	5,303	0.79	452	0.07	672,025
Gandaki	220,357	99.51	1,045	0.47	47	0.02	221,449
Lumbini	893,196	97.56	20,227	2.21	2,098	0.23	915,521
Karnali	302,822	97.63	6,731	2.17	622	0.20	310,175
Sudurpaschim	725,618	98.52	10,158	1.38	773	0.10	736,549
Nepal	**4,189,586**	**98.18**	**70,835**	**1.66**	**6,865**	**0.16**	**4,267,286**

Source: HMIS/DoHS

Children newly admitted in IMAM program and NRCs

The number of children under-five years newly admitted in integrated management of acute malnutrition (IMAM), and National Rehabilitation Centres (NRCs) over the last three FYs (2079/80-81/82) is shown in table 5.3. A total of 23,441 children were admitted in IMAM program, indicating a significant increase in the number of cases compared to previous FY (21,925), while the number of children admitted in NRCs was decreased to 1909 in current FY compared to 2193 in previous FY. Lumbini province showed a significant increase in the children admitted in IMAM program, and Madhesh province showed significant increase in the children admitted in NRCs.

Table 5. 3 Children under-five years newly admitted in IMAM program and NRCs in last three FYs- 2079/80-2081/82

Province	Total number of children newly admitted in IMAM program			Total number of children newly admitted in NRCs		
	FY 2079/80	FY 2080/81	FY 2081/82	FY 2079/80	FY 2080/81	FY 2081/82
Koshi	7,121	2695	2475	210	200	191
Madhesh	18,049	7361	5200	153	582	461
Bagmati	1,152	1174	821	170	339	261
Gandaki	799	610	455	110	190	138
Lumbini	3,506	7018	11672	362	236	401
Karnali	2030	1080	795	209	238	153
Sudurpaschim	3,693	1987	2023	434	408	304
Nepal	36350	21925	23441	1648	2193	1909

Source: HMIS/DoHS

Sphere standard and management of malnutrition

The SPHERE standards[1] are an expansion of the fundamental rights related to life with dignity. The indicators and minimum requirements are set to collectively assess the needful action for the negative impact on the population on meeting these set of indicators in different domain. One of such domains is the assessment and management of malnutrition.

Table 5.4 shows the comparison of SPHERE benchmarks and the performance of the nutrition management in FY 2081/82. The mortality rate among malnourished cases at national level (0.1%) and across provinces are within the SPHERE benchmark (<3%) which suggested that there was better management and healthcare supply, guaranteeing that patients are less likely to succumb to severe nutritional problems. The rate of defaulters at the national level (6.72) was also within the SPHERE benchmark (<15 %) showing the good treatment adherence, it is a matter of concern in Koshi province (10.17 %) which suggests potential challenges in follow up, care giver compliance or service accessibility. Most provinces: Madhesh with 86.35 %, Lumbini with 85.69 %, Gandaki with 83.88 %, Koshi with 82.58 %, Karnali with 80.02 % and Sudurpashchim with 80.74 % surpassed the benchmark. Bagmati with 71.06% did not meet the recovery benchmark indicating the need for targeted intervention to improve the program effectiveness and case management.

Table 5. 4 Sphere Standards and management of malnutrition in FY 2081/82

SPHERE Benchmark	Death %	Defaulter %	Recovered %
Province	**<3%**	**<15%**	**>75%**
Koshi	0.03	10.17	82.58
Madhesh	0.13	3.89	86.35
Bagmati	0.57	9.08	71.06
Gandaki	0	3.49	83.88
Lumbini	0.05	7.13	85.69
Karnali	0	7.08	80.02
Sudurpaschim	0.35	6.65	80.74
Nepal	**0.1**	**6.72**	**84.38**

Source: HMIS/DoHS

Baal vita community promotion program

The table 5.5 shows information on the use of Baal Vita (Micronutrient Powder, MNP) in Nepal for the fiscal year 2081/82 among children ages 6–23 months. Nationwide 54.04% of children in this age group received at least one cycle (60 sachets) of Baal Vita, which is a notable rise over prior years. With the greatest usage rate of 84.34 %, Madhesh Province was followed by Sudurpashchim (54.60%) and Gandaki (54.38%). The province with the lowest utilization rate, Bagmati, reported 30.04%. In terms of full use (three cycles or 180 sachets), the highest rates were seen in Madhesh (21.16 %) and Lumbini (20.92 %), where 15.42 % of children nationwide finished the regimen. These numbers demonstrate gains in MNP uptake and distribution, but provincial differences point to the necessity of focused approaches to improve coverage and adherence in areas that aren't reaching to the average.

Table 5.5 MNP Utilization among 6-23 months' infants in last three FYs 2078/79-2080/81

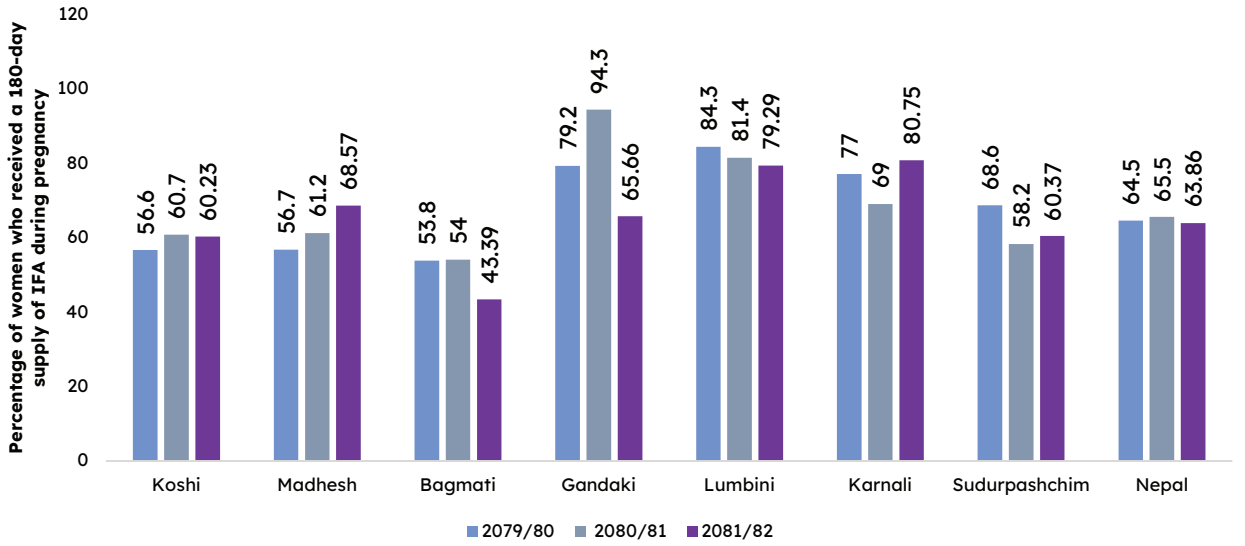
MNP Utilization Indicators	% of children aged 6-23 months who received at least one cycle (60 sachets) Baal Vita (MNP)			% of children aged 6-23 months who received 3 cycle (180 sachets) Baal Vita (MNP)		
Provinces	**2079/80**	**2080/81**	**2081/82**	**2079/80**	**2080/81**	**2081/82**
Koshi	32	35.51	41.88	2.5	6.14	9.89
Madhesh	53.1	78.75	84.34	5.8	12.4	21.16
Bagmati	27.7	40.52	30.04	4.2	7.46	7.61
Gandaki	34.6	51.71	54.38	3.8	12.16	16.99
Lumbini	48.7	54.77	53	6.6	15.96	20.92
Karnali	29.5	29.7	50.76	2.7	5.75	11.62
Sudurpaschim	44.3	59.86	54.6	8.8	12.14	18.42
Nepal	**40.9**	**53.98**	**54.04**	**5.1**	**10.62**	**15.42**

Source: HMIS/DoHS

[1] https://handbook.spherestandards.org/en/sphere/#ch002

Coverage of 180-day supply of Iron Folic Acid during pregnancy

In the fiscal year 2081/82, the country's overall coverage of a 180-day supply of Iron Folic Acid (IFA) during pregnancy was 63.86%, which is nearly 2 less than that in 2080/81 (65.5%). With the highest coverage of 80.75 %, Karnali Province showed notable improvement over prior years. Gandaki province reported a heavy decline to 65.66 % from 94.3 % from FY 2080/81. Koshi with 60.23 and Sudurpashchim with 60.37 % demonstrated consistent progress. The data in the Bagmati Province showed that coverage fell significantly, from 54 % in 2080/81 to 43.39 % in 2081/82. The inequalities highlight the need for region-specific initiatives to promote equitable access to critical maternal health services. (Fig 5.9)

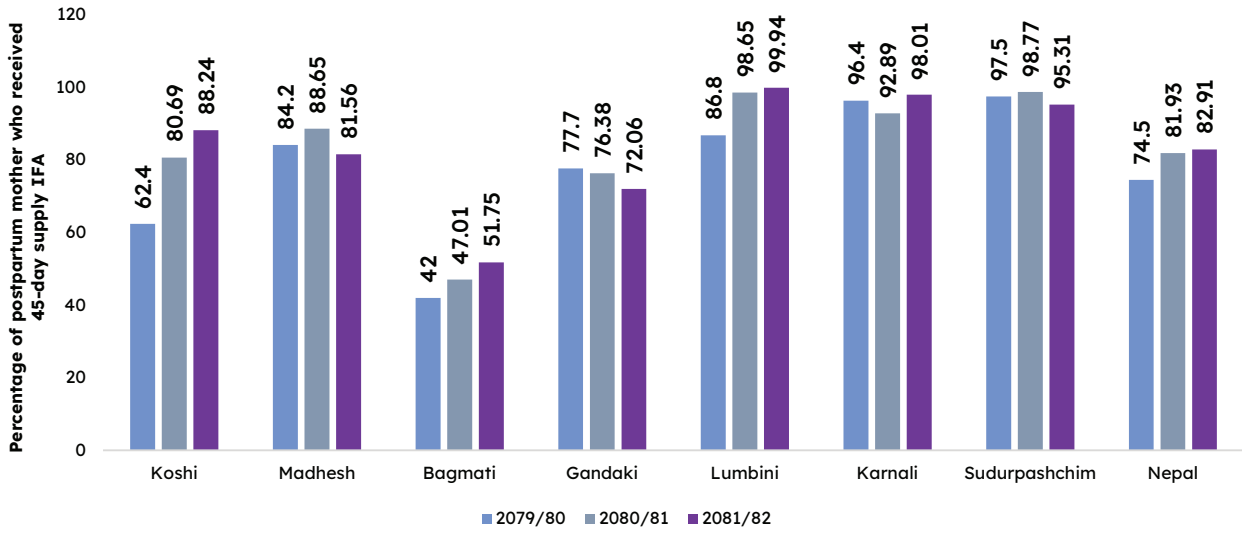


Source: HMIS/DoHS

Figure 5.9 Percentage of women who received a 180-day supply of IFA during pregnancy in FY 2079/80-81/82

Coverage of 45-day supply IFA to postpartum mother

According to the figure, nationwide 82.91% of postpartum mother received a 45-day supply of Iron Folic Acid (IFA) in fiscal year 2081/82, which has increased slightly from 81.93 % in 2081/82. Lumbini Province has the highest coverage of 99.94 %, closely followed by Karnali (98.01%) and Sudurpashchim (95.31%). Madhesh and Gandaki Province showed significant decline from 88.65 % to 81.56 % and 76.38 % to 72.06 % from the year 2080/81 to 2081/82 respectively. Koshi showed significant progress, rising from 80.69% to 88.24 %. On the other hand, Bagmati's coverage increased to 51.75%, demonstrating a more moderate growth rate that suggests potential for focused intervention. Though differences between provinces show the need for fair resource distribution and targeted measures to maintain and increase coverage in underperforming areas, overall, except two provinces, the data shows a positive trend in postpartum nutritional supplementation. (Fig 5.10)

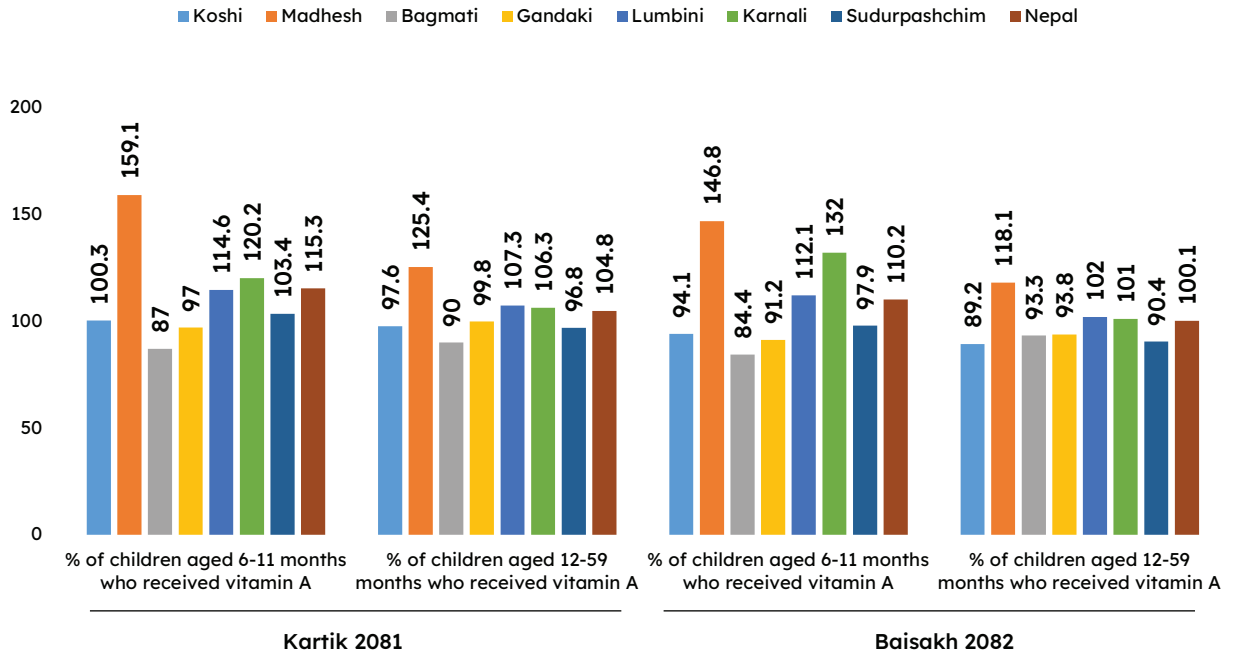


Source: HMIS/DoHS

Figure 5.10 Percentage of postpartum mother who received 45-day supply IFA in FYs 2079/80-2081/82

Control and Prevention of Vitamin-A Deficiency Disorders

The figure 5.11 shows the national and provincial performance of Vitamin A program for children aged 6–11 months and 12–59 months during Kartik 2081 and Baishakh 2082. Nationwide, the number of children aged 6–11 months who received vitamin A was 241, 076 in Kartik and 230, 446 in Baishakh, but the number of children aged 12–59 months was 11,965,306 in Kartik and 1,877,003 in Baishakh. The highest coverage was seen in Madhesh Province for children aged 6 to 11 months as well as children aged 12-59 months, both in Kartik 2081 and Baisakh 2082.

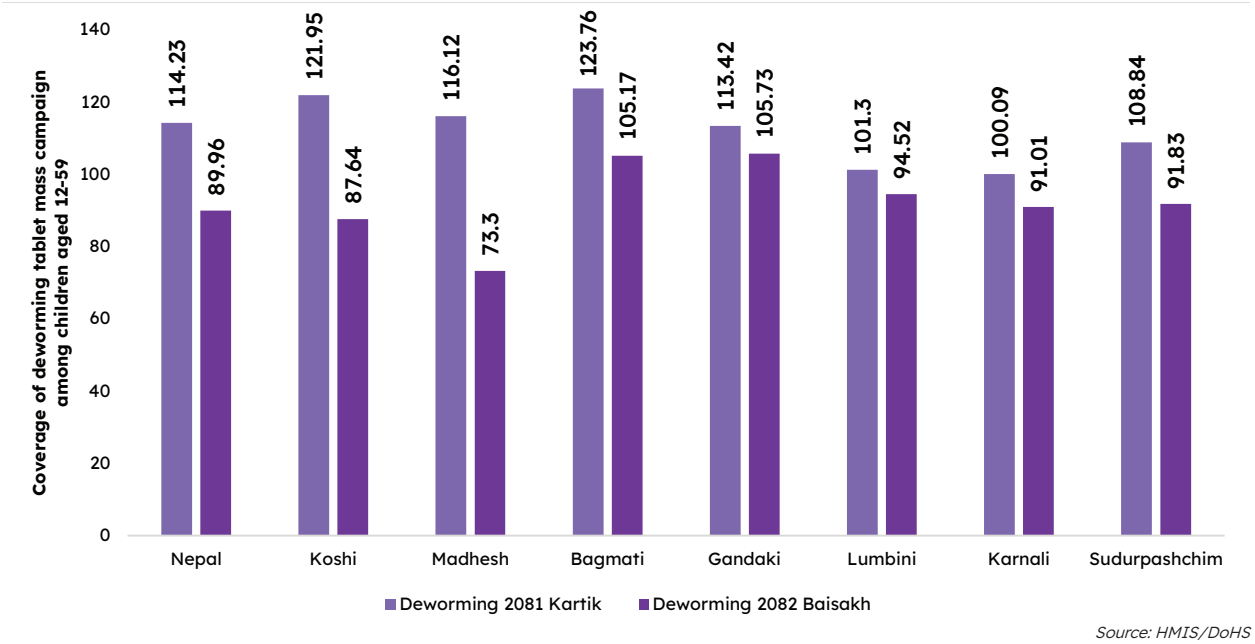


Source: HMIS/DoHS

Figure 5.11 Vitamin A mass campaign among children (6-11 months, & 12-59 months) across provinces in FY 2081/82

Control of Intestinal Helminths Infestations

The coverage of deworming tablets during the Vitamin A mass campaign for children aged 12 to 59 months in Baishakh 2082 is presented in figure 5.12. The national coverage decreased from 114.23% in Kartik 2081 to 89.96% in 2082 Baisakh. Most provinces showed a decline in coverage from Kartik 2081 to Baisakh 2082. Madhesh Province showed the largest decline from 116.12 % in Kartik to 73.3% in Baisakh 2082. Gandaki (105.73%) and Bagmati (105.17%) recorded the highest coverage rates among the provinces, suggesting that the campaign was well-executed in these areas. Other provinces with coverage percentages between 87.64% and 94.52%, including Koshi, Lumbini, Karnali, and Sudurpashchim, performed moderately.

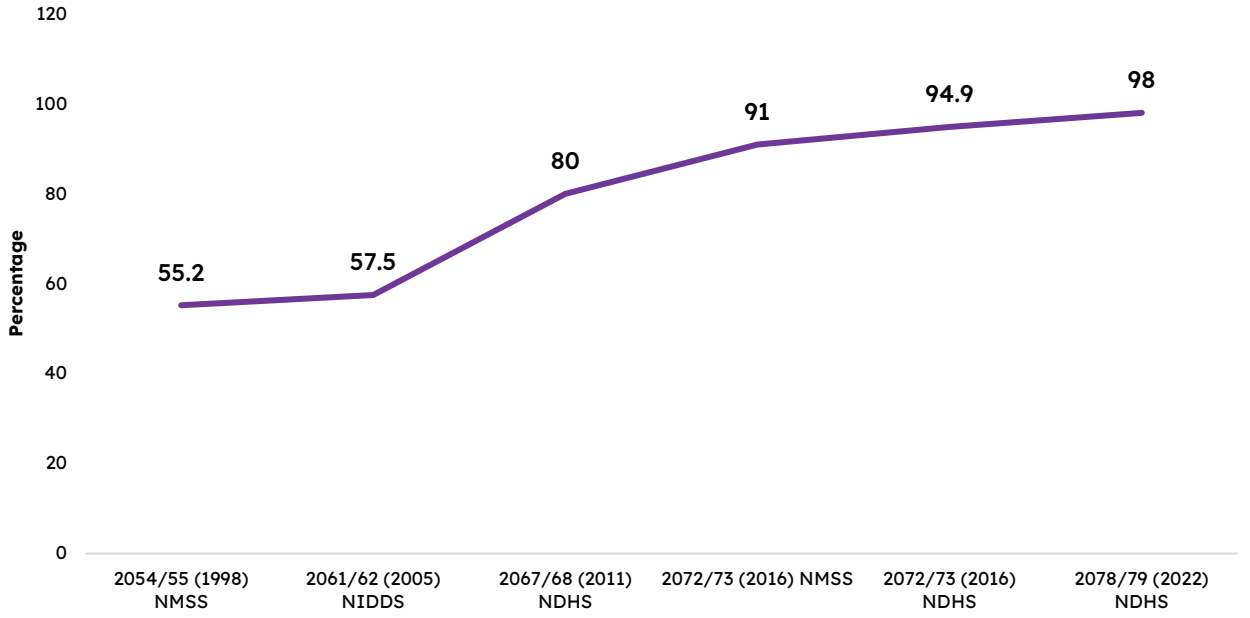


Source: HMIS/DoHS

Figure 5.12 Coverage of deworming tablet mass campaign among children aged 12-59 in FY 2081/82

Control and Prevention of Iodine Deficiency Disorders

National survey reports reveal a substantial increase, with the percentage of households using adequately iodized salt rising from 55.2% in 2054/55 to 98% in 2078/79. (Fig 5.13) This substantial improvement resulted from collaborative efforts in public health education, policy implementation, and awareness campaigns, reflecting commendable progress in combating iodine deficiency and promoting enhanced health and well-being across Nepal.

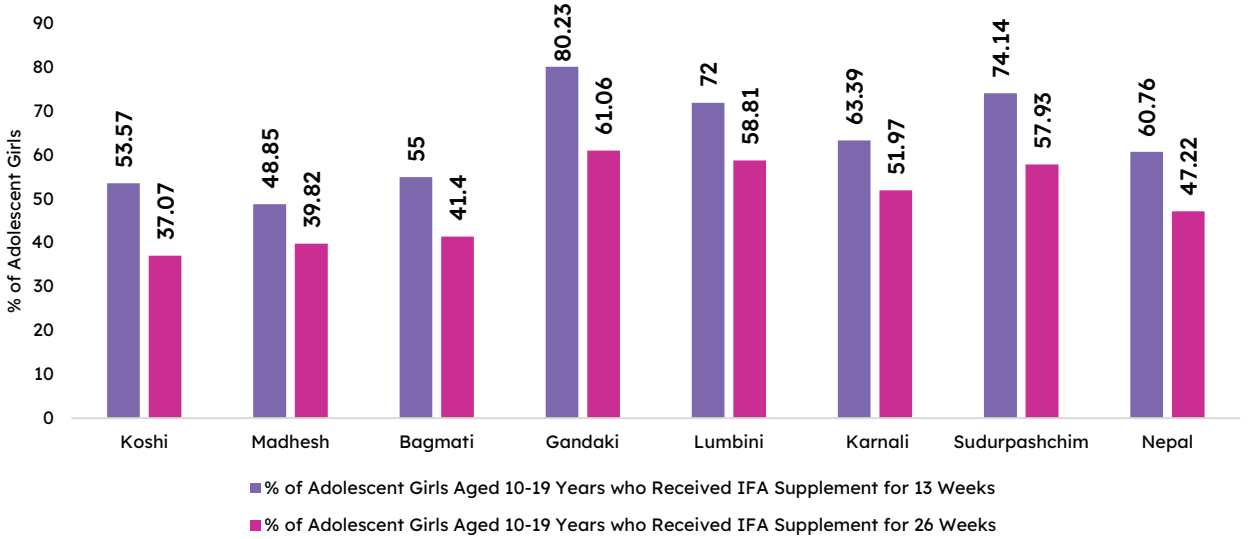


Source: NDHS

Figure 5.13 Trend in percentage of households using adequately iodized salt

IFA distribution to adolescent girls in school

Figure 5.14 presents the percentage of adolescent girls between the ages of 10 and 19 who were given iron and folic acid (IFA) supplements for 13 and 26 weeks. Nationwide 47.22% of adolescent girls finished the 26-week regimen, despite 60.76 % receiving IFA for 13 weeks, suggesting a sharp decline in adherence. Given that 80.23 % of the provinces received IFA for 13 weeks and 61.06 % for 26 weeks, Gandaki province performed better than others in terms of program retention however, the decline in adherence is sharp in this province also. Lumbini and Sudurpashchim showed relatively well performance with Lumbini reporting 72 % coverage for 13 weeks and 58.81 % for 26 weeks and Sudurpashchim reporting 74.14 % and 57.93 % respectively. Koshi and Madhesh province reported lower coverage and Bagmati province had moderate coverage with 55% adolescent girls receiving IFA for 13 weeks and 41.4 % completing 26 week course. All the province showed decline in performance indicating dropouts and adherence challenges in IFA program focusing the need for counselling and follow up mechanism.



Source: HMIS/DoHS

Figure 5.14 Percentage of adolescents who received supply of IFA

Box 5.5 SWOT Analysis of Nutrition Programs

Strengths	Opportunities
Program and Outcomes • Sustained decline in stunting (57% in 1996 »»» 24.8% in 2022), demonstrating long-term multisectoral impact. • High micronutrient intervention coverage (Vitamin A >85%, iodized salt ~98%), indicating strong national delivery platforms. • Institutionalized Comprehensive Nutrition-Specific Interventions (CNSI) with nationwide trained health workforce and fchvs. • Established 24 Nutrition Rehabilitation Centers (nrcs) and operational Human Milk Bank, strengthening facility-based nutrition care. ***Systems and Governance*** • Strong policy framework under MSNP-III (2023–2030) with federal, provincial, and local mandates. • Growing integration of nutrition into local government annual plans (53% Palikas). • Expanding digital health architecture (WBRS linked with HMIS/DHIS-2) enabling real-time monitoring. • Established multisectoral coordination mechanisms across health, agriculture, WASH, and education.	***Program and Outcomes*** • Slowing pace of stunting reduction with persistent provincial and wealth inequities (e.g., Karnali, Madhesh). • Declining exclusive breastfeeding (66% »»» 56%) linked to weak enforcement of Breastmilk Substitutes regulation, urbanization, and rising C-section rates. • Low IMAM coverage (<25% in high-burden districts), reflecting weak active case finding and community engagement • Persistently high maternal anemia and limited impact of iron-folic acid supplementation on outcomes. • Only 43% of children (6–23 months) receive Minimum Acceptable Diet, indicating weak food system–nutrition linkage. ***Systems and Governance*** • Frequent stockouts of RUTF, MNP, and IFA; weak last-mile logistics and equipment gaps at otcs and itcs. • High HR turnover and limited supportive supervision affecting service quality. • Variable provincial capacity under federalization, leading to uneven implementation. • Heavy reliance on external funding; limited predictable domestic financing for nutrition. • Weak regulatory enforcement capacity (junk food marketing, salt quality monitoring, formula promotion).
Weaknesses	**Threats**
Policy and Financing Environment • Donor investment (to strengthen nutrition governance and systems. • Federal structure allows provincial innovation and context-specific nutrition programming. • Finalization of National School Health and Nutrition Strategy to expand adolescent nutrition platforms. • Increasing global emphasis on food systems transformation and climate-resilient nutrition. ***Socioeconomic and Environmental Context*** • Growing awareness of NCD prevention creates entry point for double-duty nutrition actions. • Rapid expansion of digital connectivity enabling behavior change communication and nutrition literacy campaigns. • Increasing local agriculture initiatives that can be aligned with dietary diversification.	***Policy and Financing Environment*** • Donor transition risk post-2026 if domestic financing is not institutionalized. • Political instability and election cycles disrupting continuity of multisectoral coordination. • Fragmentation of authority across federal tiers causing policy implementation delays. • Weak fiscal space amid competing national priorities (ncds, infrastructure, disaster response). ***Socioeconomic and Environmental Context*** • Triple burden of malnutrition: persistent stunting and anemia alongside rising overweight/obesity (~3% annual increase). • Aggressive marketing and rising consumption of ultra-processed foods; weak food labeling and advertising regulation. • Climate shocks (floods, landslides) worsening food insecurity and child wasting risk. • Deep-rooted socio-cultural norms (food taboos, early marriage, gendered food allocation) limiting maternal and adolescent nutrition gains.

6 Family Planning and Reproductive Health Program

Family Welfare Division

Family Planning and Reproductive Health Section

6.1 Family Planning and Reproductive Health

Family planning (FP) and reproductive health (RH) is a key component of Nepal's health programs which aims to improve the health and well-being of people and families by empowering them to make informed decisions regarding their reproductive health needs. In the early 1960s, Nepal implemented a comprehensive strategy for family planning (FP) and community health that paved the path for safer childbirth and safer motherhood. It has been enshrined as a fundamental right in the constitution of Nepal and included in the basic health service package under the Public Health Service Act 2075. In addition, the Safe Motherhood and Reproductive Health Act 2075, Safe Motherhood and Reproductive Health Regulation 2077, 16th National Plan (2081/82-2085/86) as well as Safe Motherhood and New-born Roadmap (2076-2087) emphasizes the availability and accessibility of right-based family planning services.

The strategic focus involves ensuring access and utilization of high-quality, client-centred family planning services, particularly targeting underserved populations and achieving SDG targets. Efforts are directed towards reducing contraceptive discontinuation, scaling up successful innovations, generating evidence, and linking family planning services with other reproductive health services. Family planning information and services are provided through government sectors, non-government organizations (NGOs), the private sectors, pharmacies and academic institutions through static clinics, social marketing, satellite clinics and mobile outreach clinics. Access to services in remote and underserved areas is facilitated through mobile outreach clinics, satellite clinics, and visiting providers. Even though the long acting reversible and permanent methods (LAPM) are provided mostly through scheduled outreach services, the focus is on strengthening regular provision of service from the health facility round the year.

Nepal FP 2030 Commitment

FP2020 was launched in 2012 following the London Summit on Family Planning, which brought together governments, donors, civil society, and private sector partners who pledged political and financial commitments to expand voluntary family planning access in the world's poorest countries. The Government of Nepal signed a commitment letter for FP2020 in March 2015 and further updated its commitment at the Family Planning Summit in London, UK on July 11, 2017. Building on the achievements and lessons of FP2020, FP2030 was officially launched in 2021 as its successor, extending the global commitment to 2030 with stronger emphasis on rights, equity, youth engagement, and country-led action. Nepal reaffirmed and strengthened its commitment under FP2030 by focusing on rights-based and client-centred approaches, expanding method choice, ensuring sustainable financing, improving data use for decision-making, strengthening supply chains, and prioritizing underserved groups to achieve universal access to family planning services by 2030.

Box 6.1 Objectives of FP Program

- Ensure universal and equitable access to voluntary, rights-based, and informed family planning counselling and services for all individuals and couples.
- Provide a full range of safe, effective, and acceptable modern contraceptive methods at all service delivery points, including rural and remote areas.
- Increase contraceptive use and reduce unmet need, unintended pregnancies, and contraceptive discontinuation.
- Give special focus to priority groups, including adolescents, youth, marginalized and underserved populations, postpartum and post-abortion women, partners of labour migrants, and sexual minorities.
- Reduce maternal, neonatal, and child illness and deaths by preventing unintended and high-risk pregnancies.
- Create an enabling environment that supports access to quality FP services for men and women, including adolescents.
- Increase demand for family planning services through effective behaviour change communication and community engagement.
- Ensure regular supply and quality of FP commodities in all health facilities, maintaining quality up to the last mile.

Commitments:

- Strengthen health governance for the family planning program in the federalized context.
- Improve equitable access to a range of contraceptives to meet the contraceptive need of individuals and couples.
- Ensure Sexual and Reproductive Health services are responsive to the need of adolescents and youth.
- Ensure round-the-year availability of family planning commodities in all service delivery points.
- Implement tailored demand generation and strategic behavioral change interventions.
- Ensure incremental budget allocation required for family planning towards access to universal health coverage.

Nepal developed its first ever costed implementation plan for family planning services on 2015-2021 which was the among guiding document. Based on the commitments on FP2030, the second costed implementation plan was developed for 2024-2030 which is in the process of endorsement. This document is believed to be the advocacy tool for resource generation for strengthening family planning services as well as guiding document for strengthening FP services at both national and subnational level.

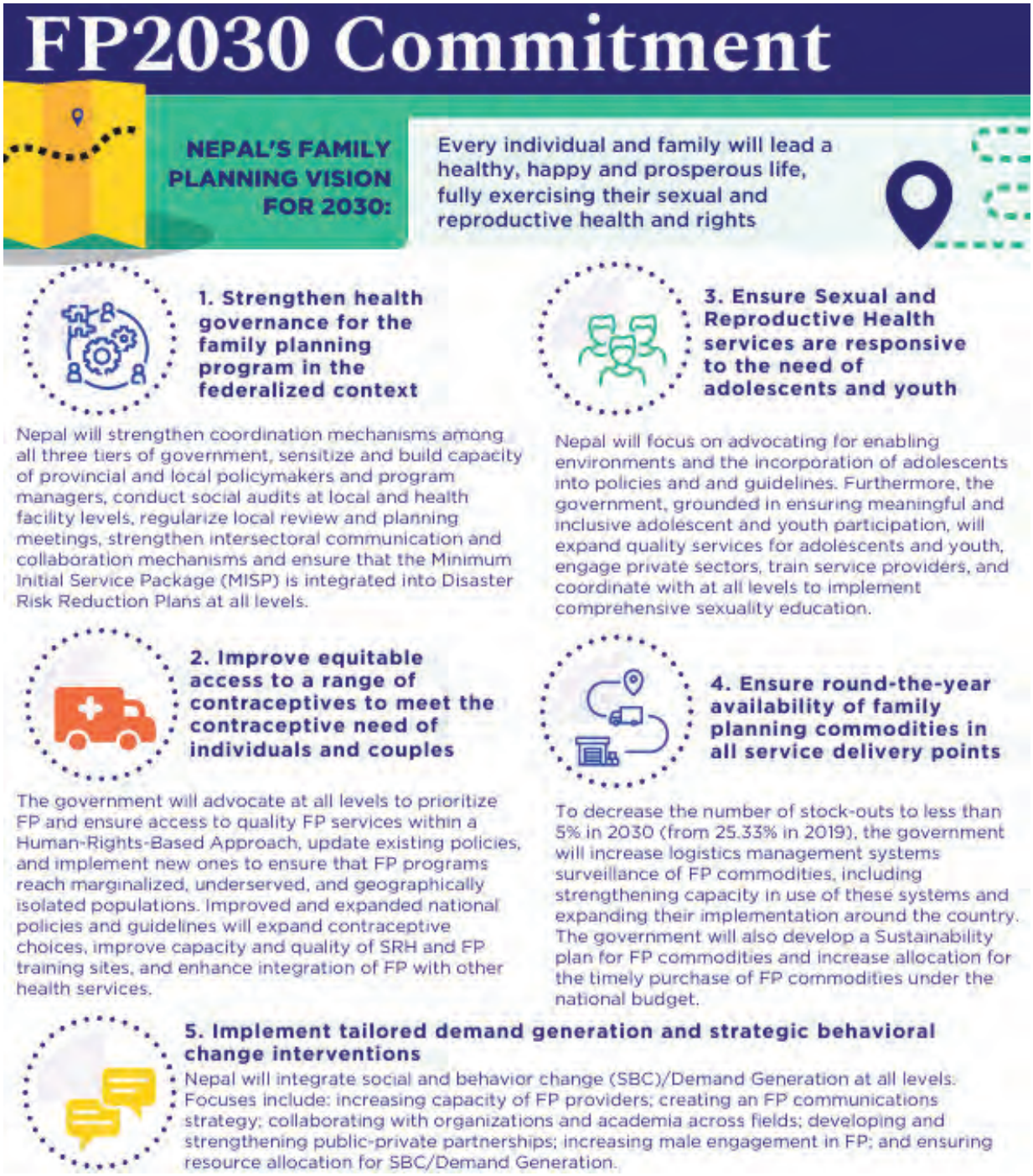


Table 6.1 SDG targets and indicators for Family Planning and Reproductive Health (FPRH) program

Target and Indicators	2078 (2022)	2082 (2025) Targets	2087 (SDG Targets-2030)
% women of reproductive age (aged 15-49 years) with FP need satisfied with modern methods	55%	76%	80%
Contraceptive prevalence rate[1] (mCPR)	43%	56%	60%
Unmet need[2] for Family Planning	21%	15.2%	10%
Total Fertility Rate[3] (TFR)	2.1	2.1	2.1
Adolescent (10-19 years) birth rate	71%	43%	30%

Source: NDHS 2022 (2078/79)

6.1.1 Major Activities in FY 2081/82

Service Delivery

- Provision of regular, quality FP counselling and services (Short-Acting Contraceptives – SARC and Long-Acting and Permanent Methods – LAPM) through static and outreach clinics.
- Expansion of contraceptive choices:
- DMPA-SC (Sayana Press) service initiated in 20 districts.
- 3-year Implant services available in 28 hospitals.
- Availability of Emergency Contraceptive Pills (ECP) through all public health facilities and Female Community Health Volunteers (FCHVs).
- Provision of comprehensive FP services including Postpartum FP (PPFP) and Post-Abortion FP (PAFP).
- Conducting satellite clinics targeting marginalized, underserved, and unreached populations.
- Free management of complications arising from FP services.
- Reimbursement up to NPR 25,000 for clients undergoing re-canalization procedures.

Health Workforce

- Blended Comprehensive Voluntary Surgical Contraception (CVSC) training:
- 23 Gynecologists and General Practitioners trained on Non-Scalpel Vasectomy (NSV) and Minilap.
- Orientation on Post-Pregnancy Family Planning for service providers working in ANC, Labour, PNC, OT, Birthing Units, MCH clinics, Pediatric Units, Immunization and Nutrition units.
- Training of gynecologists, nurses, and laboratory personnel on infertility management (Intra-Uterine Insemination – IUI).
- IUCD and Implant (LARC) training conducted through Provincial Health Training Centers.
- Piloting of onsite coaching and mentoring package in selected health facilities of Lalitpur district.
- Orientation on Disability-Friendly Sexual and Reproductive Health guidelines for provincial health authorities and health workers.

Leadership, Governance and Financing

- Public–Private Partnership (PPP) for FP services and strengthening Post-Pregnancy FP in designated hospitals and medical colleges.
- Finalization of guideline for onsite coaching and mentoring of FP services.
- Review and finalization of the Family Planning Costed Implementation Plan (CIP) by the National Planning Commission and Ministry of Finance.
- Regular reporting on progress of FP2030 commitments.

Logistics and Supply Management

- Forecasting and quantification of contraceptives.
- Procurement of pills, condoms, injectables, implants, and IUCDs.
- Supply chain management and distribution from Central Medical Store to Provincial Health Logistics Management Centers, District Health Offices, and local levels up to service delivery points.
- Prevention of stock-outs through regular supply monitoring and redistribution of commodities.
- Continued support of FP commodities by United Nations Population Fund (UNFPA) under the UNFPA Supplies Partnership Agreement.

Health Information Management System

- Integration of FP Data Pro module into the DHIS-2 platform and training of over 200 statistical officers and focal persons from five provinces (excluding Madhesh and Koshi) to strengthen data quality.
- Data verification in high-delivery-volume health facilities.
- Regular monitoring of FP and RH data for discrepancies and errors.
- Ensured regular reporting from NGO-run facilities such as FPAN and MSI clinics

[1] mCPR= the percent of women of reproductive age (15-49 years) using any modern method of contraception at a given point in time.

[2] Unmet need= women with unmet need are those who are fecund and sexually active but are not using any method of contraception, and report not wanting any more children or wanting to delay the next child

[3] TFR= The average number of children a hypothetical cohort of women would have at the end of their reproductive period if they were subject during their whole lives to the fertility rates of a given period and if they were not subject to mortality. It is expressed as children per woman

Current Users of family planning methods

The table shows that Female Sterilisation is most preferred method across FY 2079/80 to 2081/82, contributing around one-third of total users, while Implant is the leading reversible method at about 21%. All other methods show gradual decline across the three fiscal years except newly introduced method DMPA-SC (Sayana Press) and Emergency Contraceptive pills, which are on slowly increasing trend.

Table 6.2. Current users of family planning methods

Current user	FY 2079/80 %	FY 2080/81 %	FY 2081/82 %
Condom (CYP)	7	8.95	8.84
Depo	14	13.53	12.64
Pills	6	6.89	6.56
IUCD	5	5.59	4.60
Implant	20	21.52	21.36
Male Sterilization	11	9.98	9.96
Female Sterilization	37	33.54	34.10
DMPA-SC (Sayana Press)	0.9	0.9	1.63
ECP (CYP)	0.2	0.2	0.31

Source: HMIS/DoHS

Number of current users using permanent methods by province

In the FY 2081/82, nationwide a total of 1,106,162 current users were using permanent method among which 250,125 users were male and 856,037 users were female. In majority of the provinces except Bagmati and Karnali province, female sterilisation remains the most common choice among couples. Out of all permanent method users, 35.7% were from Madhesh province, 17.8% from Koshi, 15.4% from Bagmati, 13.2% from Lumbini, 7.5% from Gandaki, 6.9% from Sudurpaschim and 3.4% from Karnali province (figure 6.1).

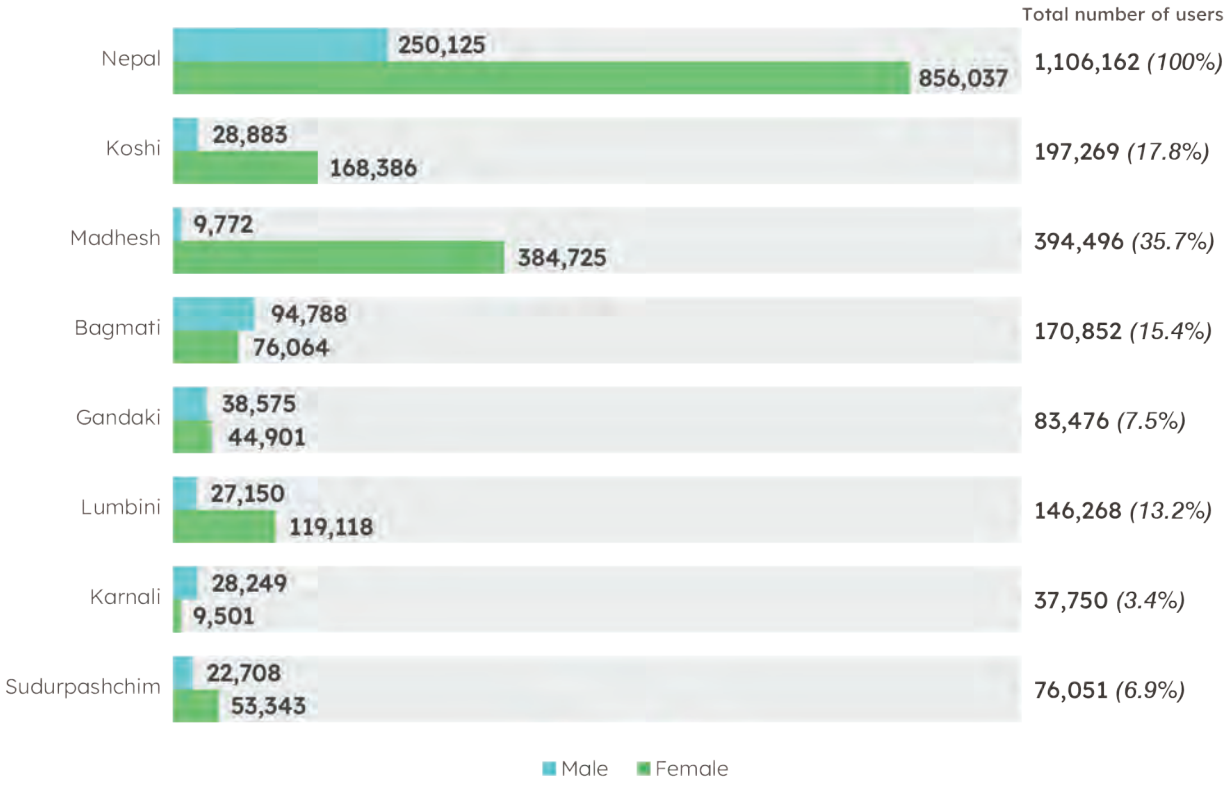


Figure 6.1 Number of current users using permanent methods

Method mix of modern contraceptive methods among the new acceptors

Among new acceptors of modern contraceptive methods in FY 2081/82 (total 611,480), Depo (DMPA-IM) is the most preferred method, accounting for 37.99% of users, followed by pills (26.72%) and implants (18.12%). Sayana Press contributes 8.67% of new users. Despite government efforts to promote more effective long-acting and permanent methods, uptake of permanent methods remains low, with female sterilization at 4.27% and male sterilization at only 0.5%, the least preferred method. Similarly, IUCD use remains low at 2.48%, despite being a non-hormonal method with minimal side effects. Overall, short-acting methods continue to dominate the method mix among new users.

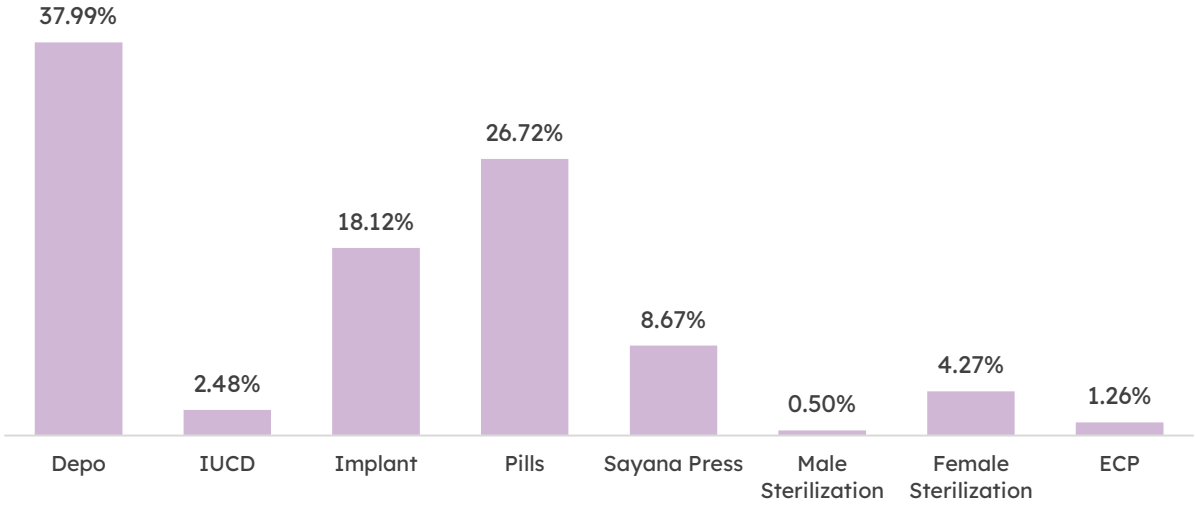


Figure 6.2 Modern methods - new acceptors method mix, FY 2081/82

Percentage of new acceptors of modern contraceptive among women of reproductive age (WRA)

Figure 6.3 shows that among women of reproductive age (WRA) in FY 2081/82, Depo has the highest proportion of new acceptors (2.72%), followed by pills (1.91%) and implants (1.30%). Uptake of IUCD (0.18%) and Sayana Press (0.62%) remains comparatively low. Permanent methods show limited acceptance, with female sterilization higher than male sterilization, while male sterilization (0.04%) is the least adopted method overall. This pattern indicates a continued preference for short-acting and female-controlled contraceptive methods.

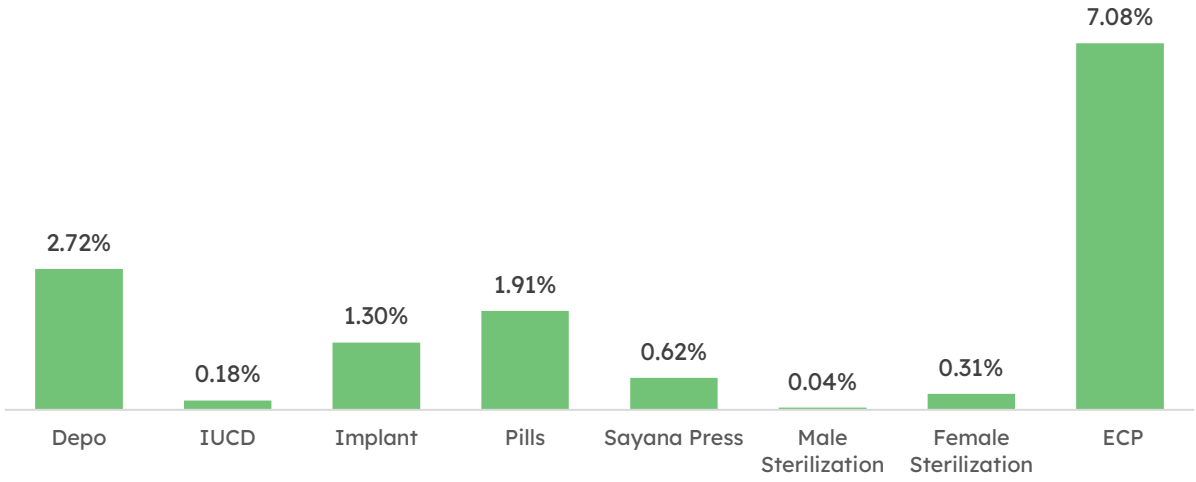
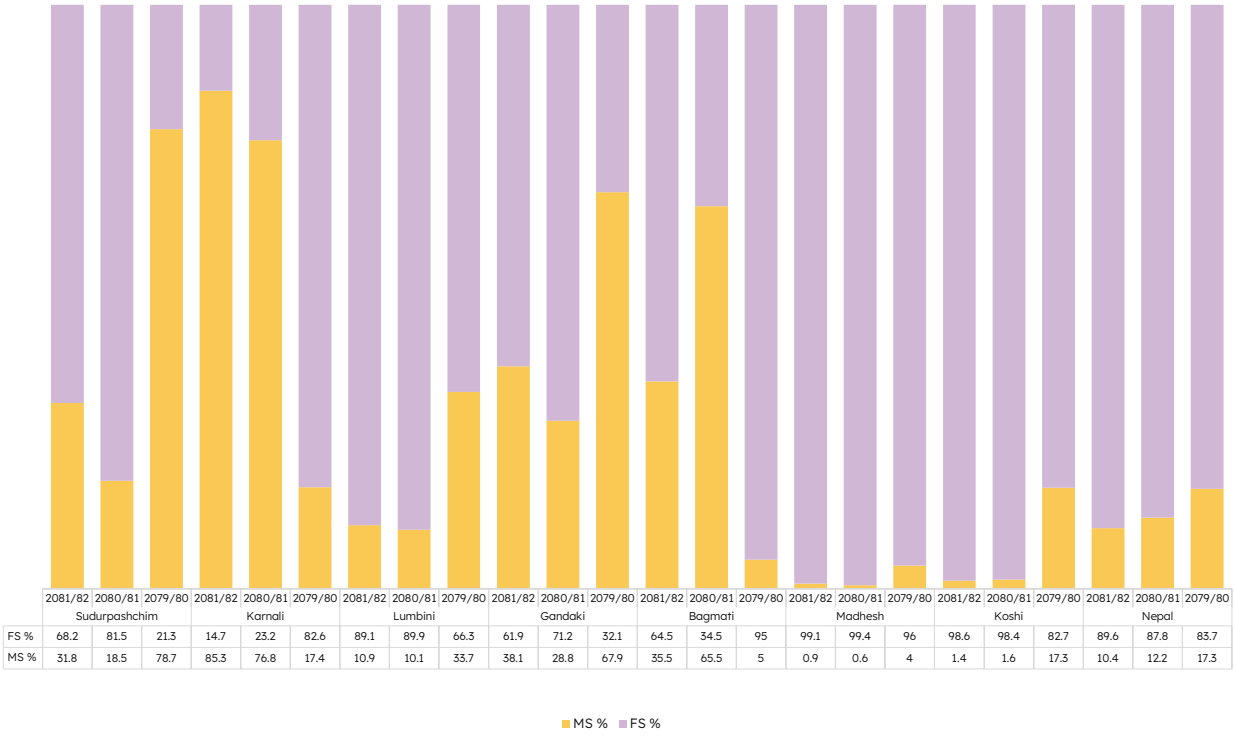


Figure 6.3 Percentage of new acceptor among the WRA, 2081/82

Proportion of new acceptors of permanent methods (Male and Female sterilisation methods)

Share of FS and MS among total sterilization new acceptors FY 2079/80 – 2081/82. In FY 2081/82, the percentage of female sterilization uptake increased to 89.6% from 87.8% in FY 2080/81. The highest percentage of female sterilization was 99.1% in Madesh province, while the highest percentage of male sterilization was 85.3 % in Karnali Province (figure 6.4).

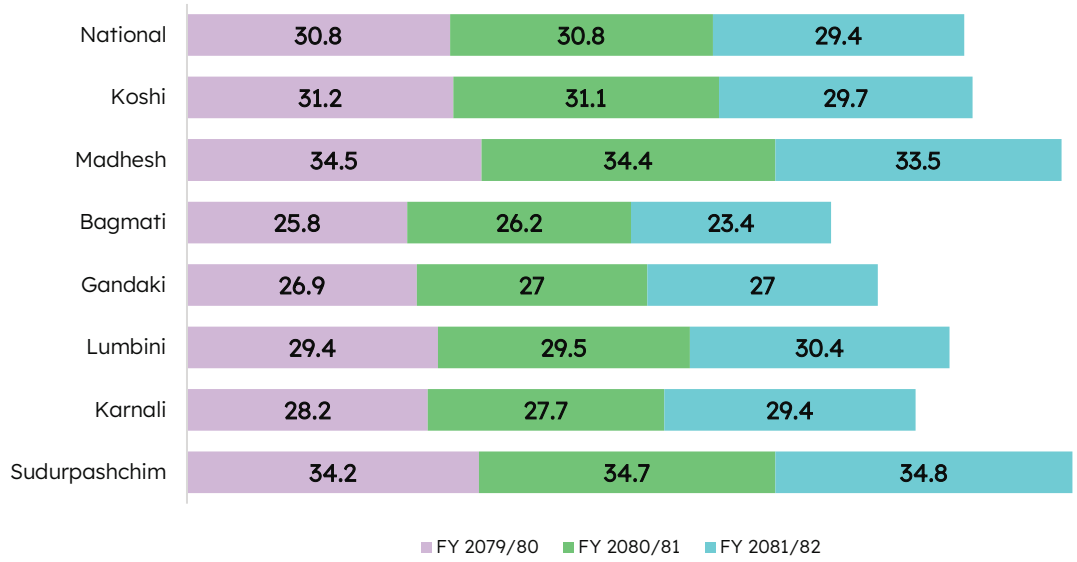


Source: HMIS/DoHS

Figure 6.4 Proportion of share of FS and MS among total sterilization new acceptors across provinces FY 2079/80- 2081/82

Modern Contraceptive Prevalence Rate (mCPR)

The Modern Contraceptive Prevalence Rate (mCPR) among women of reproductive age (WRA) remained largely stable across provinces during FY 2079/80 to 2081/82, though the national average shows a slight decline from 30.8% to 29.4%. Madhesh, Lumbini, and Sudurpashchim provinces consistently maintained mCPR above the current national average (29.4%), with Sudurpashchim recording the highest rate (34.8% in FY 2081/82). Lumbini and Karnali show slight improvements in the last fiscal year, while Koshi and Bagmati experienced significant decline. The denominator has been revised from MWRA to WRA, which may account for differences compared to previous reports. (Fig 6.5)

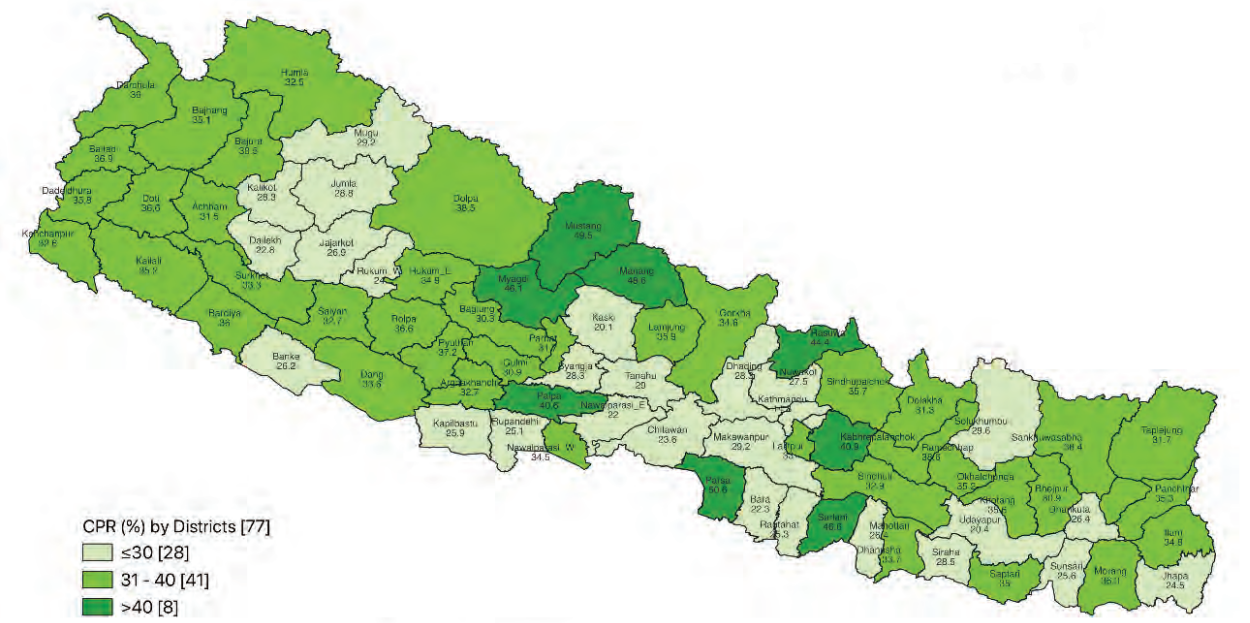


Source: HMIS/DoHS

[a]Denominator is changed from MWRA to WRA, therefore the values may differ in previous reports.

Figure 6.5 Trend of Modern Contraceptive Prevalence Rate (mCPR)

Of the 77 districts, a total of 27 districts had mCPR lower than the national average of 29.4%, while other districts had mCPR greater than the national average. In FY 2081/82, only one district i.e. Parsa recorded an mCPR greater than 50%, indicating comparatively high utilization of modern contraceptive methods. In contrast, the lowest mCPR was observed in Kathmandu District (14.8%), despite having a large number of health facilities providing family planning services. (figure 6.6).



Source: HMIS/DoHS

Figure 6.6 District wise mCPR status in FY 2080/81

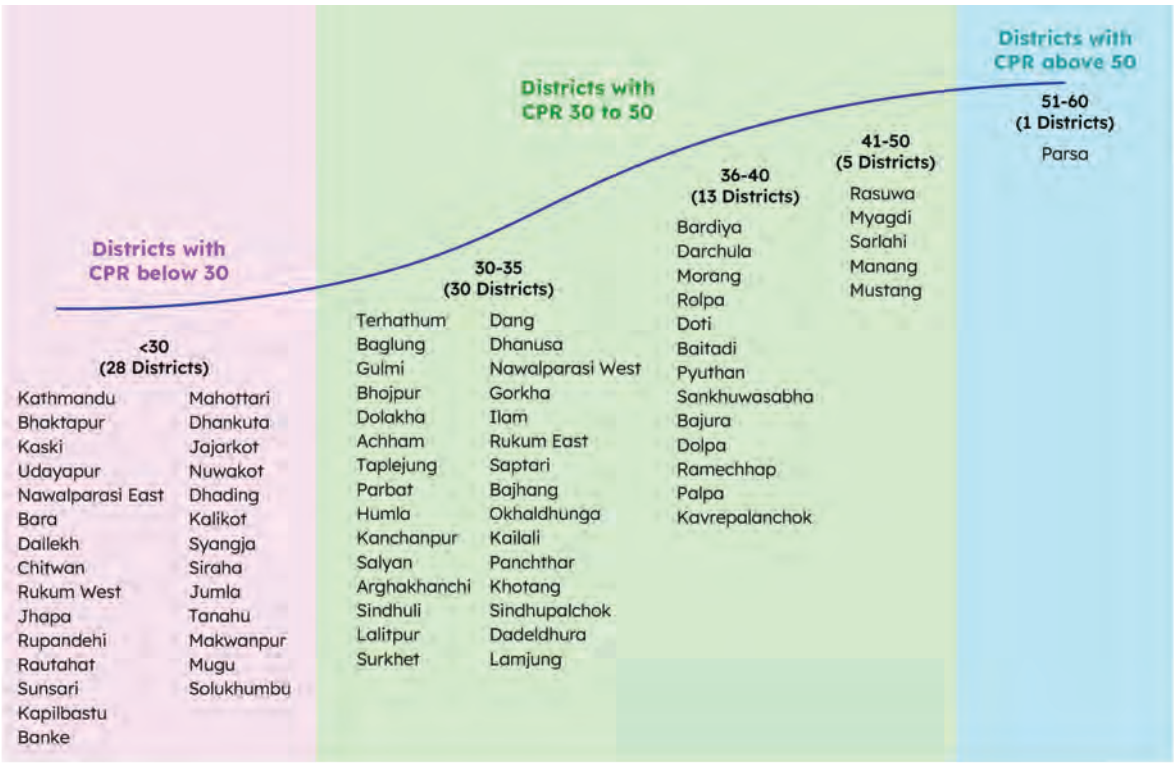


Figure 6.7 District wise mCPR status in FY 2081/82

Uptake of Post-Partum Family Planning (PPFP)

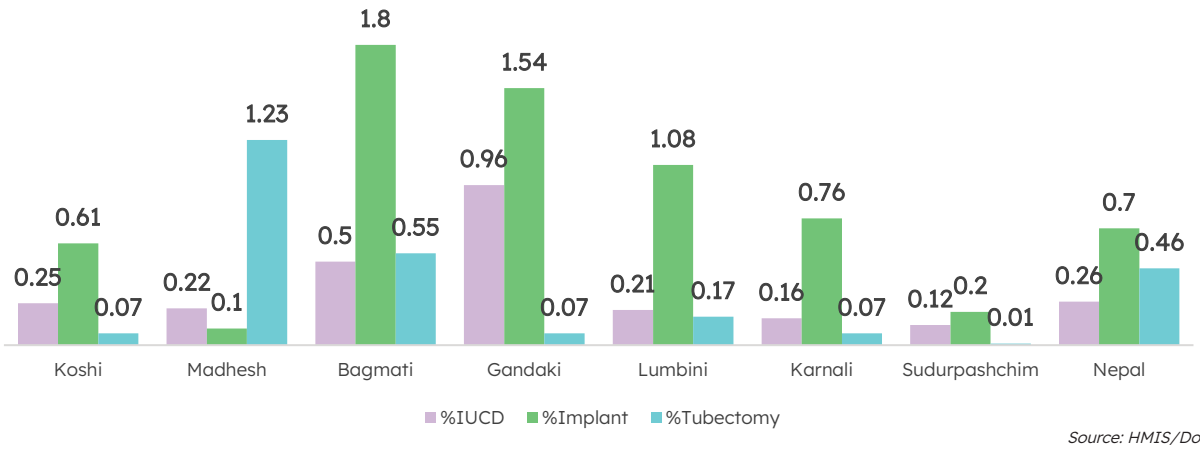
National proportion of postpartum uptake of family planning has increased over three years. The proportion of FP acceptors within 48 hours of delivery among institutional delivery increased from 1.63% in FY 2079/80 to 2.40% in FY 2081/82. Similarly, the proportion of PPFP acceptors within one years increased from 5.8% in FY 2079/80 to 10.9% in FY 2081/82. All the provinces have shown increase in trend in last 3 years, except in Sudurpaschim, the proportion within 48 hours decrease from 0.99% to 0.85%. The details of trend is given in Table 6.3.

Table 6.3 Trends in uptake of post-partum family planning by province

Provinces	% of FP Acceptors (Within 48 Hours of Delivery) among Institutional Delivery			% of Postpartum FP Acceptors (with in 48 hours and 48 hours to 1 yrs) among Total Delivery		
	2079/80	2080/81	2081/82	2079/80	2080/81	2081/82
Koshi	2.25	2.54	2.97	6.8	7.8	9.5
Madhesh	0.63	0.90	1.27	6.8	5.6	8.0
Bagmati	2.61	3.20	3.99	5.7	10.5	14.2
Gandaki	2.21	3.10	4.12	6.2	11.6	16.8
Lumbini	1.50	2.74	2.44	4.7	8.8	11.4
Karnali	0.95	1.08	1.25	5.1	8.7	10.2
Sudurpashchim	0.99	0.53	0.85	4.5	6.6	9.8
Nepal	**1.63**	**2.10**	**2.40**	**5.8**	**8.2**	**10.9**

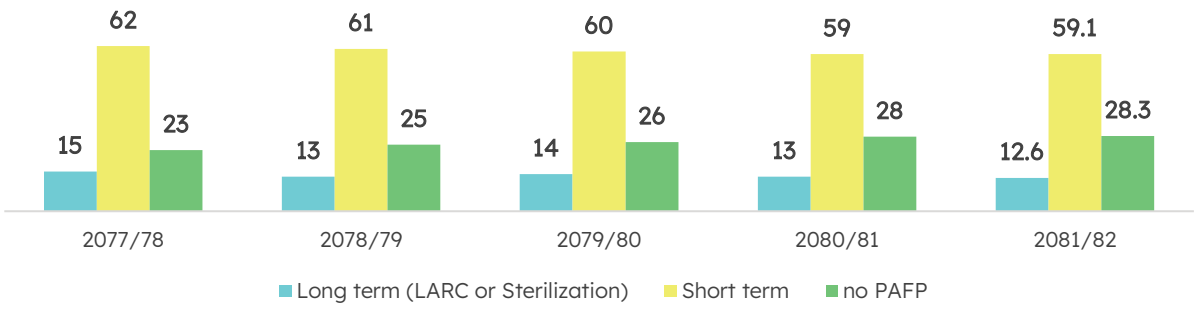
Trends in uptake of PPFPF disaggregated by:
- Within 48 hours: denominator: total institutional delivery
- Extended PPFP: denominator: total delivery

Postpartum uptake of Family Planning (PPFP) techniques as a percentage of all institutional deliveries in seven provinces during the fiscal year 2081/82 is highlighted in figure 6.8. Adoption rates nationwide were 0.46% for tubectomy, 0.70% for implants, and 0.26% for IUCD. Bagmati Province had the highest implant uptake at 1.80 %, Gandaki province had the highest rates for IUCD (0.96%), and Madhesh Province had the highest uptake for tubectomy (1.23 %). Sudurpashchim Province, on the other hand, had the lowest uptake of IUCD (0.12 %), and tubectomy (0.01%), and Madhesh province for implants at 0.10%.



Source: HMIS/DoHS

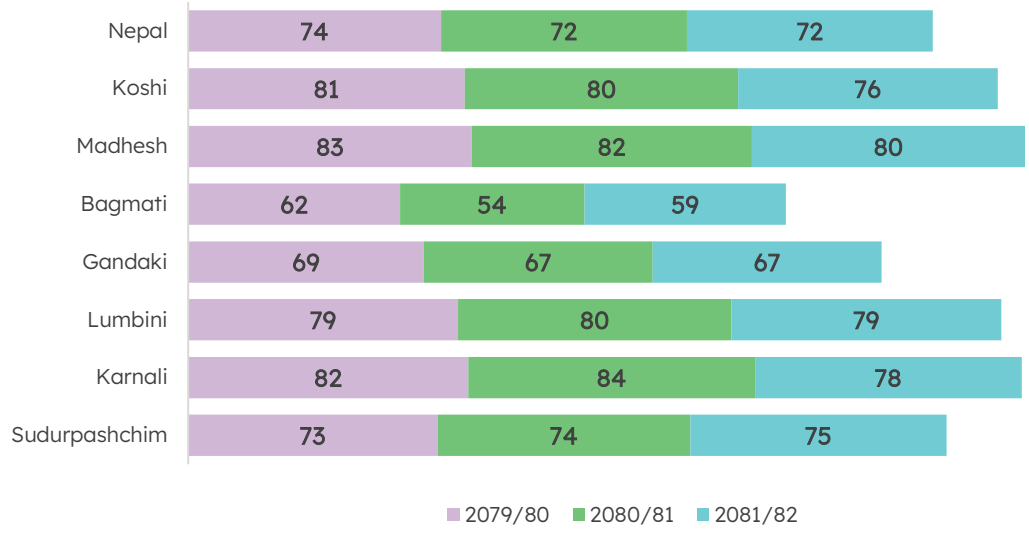
Figure 6.8 PPFP uptake as proportion of total institutional deliveries by province, FY 2081/82



Source: HMIS/DoHS

Figure 6.9 Proportion of post abortion FP uptake by method type FY 2077/78 to 2081/82

In the FY 2081/82 the uptake of PAFP has remained same from previous year at 72. Madhesh, Lumbini and Karnali Province experienced a steady decline reaching to 80, 79 and 78 respectively in FY 2081/82 in comparison to previous year. With PAFP uptake falling from 80 to 76 during the same time period, Koshi Province saw the biggest drop. On the other hand, the uptake at Sudurpashchim and Bagmati province had increased from 74 to 75, 54 to 59 respectively in FY 2081/82 from previous FY 2080/81 (Fig 6.10).



Source: HMIS/DoHS

Figure 6.10 Trend of post abortion FP uptake across provinces, FY 2079/80 to 2081/82

Box 6.2 SWOT Analysis of Family Planning Program

Strengths	Opportunities
• Strong government commitment. • Aligned with global commitments such as FP2030, ICPD+25, etc. • Nationwide network of public health facilities and Female Community Health Volunteers (FCHVs). • Provision of free family planning services from public health facilities. • Wide range of contraceptive choices for women and couples. • Integration of FP services into maternal and child health programs as well as safe abortion services. • Regular capacity building activities for health care providers.	• Unequal access in remote and hard-to-reach areas. • Varied mCPR across provinces and groups like Muslims, adolescents, postpartum women, LGBTIQ+, etc. • Dependence on external donors for commodities and technical support. • Limited male participation (very low uptake of Non-Scalpel Vasectomy). • Quality-of-care gaps, including provider bias and counseling limitations. • Occasional stock-outs.
Weaknesses	**Threats**
• Federal structure allows local governments to prioritize Family Planning based on local needs. • Expansion of postpartum and post-abortion family planning services. • Increasing use of digital health information systems for better tracking and forecasting. • Growing focus on adolescent sexual and reproductive health (ASRH) and other marginalized groups. • Engagement of private sector and social marketing organizations. • Community-based distribution and task shifting to expand access to LARCs.	• Declining prioritization of family planning services due to reduced Total Fertility Rate (TFR), leading to decreased political commitment, funding, and program focus. • Sociocultural barriers, myths, and misconceptions about contraceptive methods. • Gender inequality and limited decision-making power among women. • Migration (male out-migration affecting contraceptive dynamics). • Political instability and changing local priorities. • Donor funding uncertainty. • Public health emergencies (e.g., pandemics, disasters) disrupting service delivery.

6.2 Adolescent Sexual and Reproductive Health (ASRH)

Adolescents aged 10 to 19 constitute 24% (6.4 million) of the population in Nepal.

According to NDHS 2022, 13.1% of adolescent girls aged 15–19 have ever been pregnant, with 9.6% already mothers. Around 10 % of all maternal deaths were among adolescent The adolescent fertility rate (AFR) stands at 71 per 1,000 women, showing a decline from 88 in 2016. Despite the efforts made by government, only 14.2% of married adolescents use modern contraceptives, indicating gaps in access and utilization. Child marriage still remains a challenge, contributing to early pregnancies and limiting educational opportunities.

National Adolescent Sexual and Reproductive Health (ASRH) is one of the priority programs of Family Welfare Division (FWD). Nepal is one of the countries in South Asia to develop and endorse the first National Adolescent Health and Development (NAHD) Strategy in 2000. To address the needs of emerging issues of adolescents in the changing context, the NAHD strategy is revised in 2018 the main aim of revision of strategy was to address the problem face by the adolescent in Nepal mainly focusing on nutrition, mental health, menstrual health management, STI/HIV prevention, teen pregnancy, early marriage prevention, and substance use prevention. As per the latest Adolescent Friendly Health Facility Guideline 2079, all services provided by each health facility should be adolescent-friendly. Based on this guideline, and to strengthen policy guidance and governance, Adolescent Health Coordination Committees have been established at the local, provincial, and federal levels. These committees actively discuss and address adolescent health issues, ensuring community engagement and program relevance.

Progress has been made in scaling up services, with many health facilities now designated as AFS sites providing confidential, youth-friendly SRH care. School-based awareness programs, peer education, and community outreach have strengthened adolescent engagement and knowledge. Key challenges include low contraceptive uptake, social stigma, and cultural barriers that hinder service access, particularly for unmarried adolescents. Future priorities focus on expanding AFS coverage, integrating mental health and substance use prevention, and using evidence from NMCIS for program planning. These initiatives support SDG targets, including reducing the adolescent fertility rate to 30 per 1,000, and empowering Nepal's adolescents to make informed health decisions and contributing to the nation's development.

Box 6.3 National Adolescent Health and Development (NADH) Strategy, 2018

Vision: To enable all adolescents to be healthy, happy, competent and responsible.

Mission: Developing measures to ensure the health and holistic development of adolescents, encouraging strong collaboration among stakeholders, and making the most use of the tools that are already accessible.

Goal: To promote the sexual and reproductive health of adolescents.

General Objective: By the year 2025, all adolescents will have positive life styles to enable them to lead healthy and productive lives.

Strategic Principles and Direction

- Participation and leaderships of adolescent
- Equality and equity
- Right with responsibility
- Strategies partnerships
- Role of central, province, and local government

6.2.1 Major Activities Conducted in FY 2081/82

Expansion of adolescent friendly health facilities along with orientation of health care workers in both public and private health facilities.

- Orientation of Adolescent Friendly Heath Service Guideline was conducted at Federal Hospitals (Sukra Raj Tropical and Infectious Disease Hospital, Dadeldhura Hospital, Bharatpur Hospital, Karnali Academy of Health Sciences and Rapti Academy of Health Sciences) so as to strengthen them as referral sites.
- Certification of adolescent friendly health facilities at all levels (federal, provincial and local levels)
- Training of Trainers (ToT) for school nurses on Adolescent Sexual and Reproductive Health.

6.2.2 Key Indicators for Adolescent Services

Scale-up of Adolescent Friendly Service

The National Adolescent Friendly Health Services program has been scaled up to 2335 health facilities of all 77 districts. Highest number of certified sites were in Lumbini province (413 sites) and lowest in Karnali province (221 sites) (figure 6.11).



Source: HMIS/DoHS

Figure 6.11 Number of adolescents friendly sites certification till FY 2081/82

ASRH Service Utilization

Safe Abortion Services: Approximately one in ten safe abortion service users are adolescents, and this proportion has remained relatively consistent over the past three fiscal years. However, the absolute number of adolescents accessing safe abortion services declined in FY 2081/82 compared to FY 2080/81 at the national level. This decline was observed in all provinces except Karnali Province, which showed a continuous increase over the last two fiscal years. The proportion of adolescents among surgical abortion users has consistently been higher than among medical abortion users. However, both categories show a slight decline in FY 2081/82.

Table 6.4 Safe abortion services utilized by adolescents

Provinces	FY2079/80	FY2080/81	FY2081/82
Koshi	1,112	1,227	918
Madhesh	474	583	415
Bagmati	1,361	1,672	1,672
Gandaki	740	625	537
Lumbini	1,046	944	892
Karnali	333	494	521
Sudurpashchim	581	833	609
Nepal	**5,647**	**6,378**	**5,564**

Table 6.5 Types of abortion services used by adolescents- among total abortion service users

Fiscal Year	Medical	Surgical
FY2079/80	5.7	6.9
FY2080/81	5.8	7.4
FY2081/82	5.1	5.9

Safe Motherhood Services:

Percentage of Adolescents Completing Four ANC Visits as Per Protocol

Nationally, the percentage of adolescents completing four ANC visits declined from 8% to 7% and has remained stagnant in the last two fiscal years. Karnali Province consistently recorded the highest coverage (15%), while Bagmati Province showed a notable decline to 4% in FY2081/82. Madhesh Province demonstrated sustained improvement (8% to 9%), whereas Sudurpashchim Province remained persistently low at 5%. Overall, wide provincial disparities persist despite minimal national change.

Table 6.6 Percentage of adolescents completing four ANC Visits as per protocol

Provinces	FY2079/80	FY2080/81	FY2081/82
Koshi	8	7	7
Madhesh	8	9	9
Bagmati	7	6	4
Gandaki	10	11	10
Lumbini	6	5	5
Karnali	15	13	15
Sudurpashchim	5	5	5
Nepal	8	7	7

Percentage of Adolescents Completing Eight ANC Visits as Per Protocol

At the national level, the proportion of adolescents completing eight ANC visits increased gradually from 3% to 5% over the three fiscal years. Karnali Province recorded the most significant improvement, rising sharply from 2% to 10%, followed by notable progress in Madhesh Province (2% to 7%). In contrast, Bagmati Province showed fluctuating and comparatively low performance. Although improving, overall coverage remains low across the country.

Table 6.7 Percentage of adolescents completing eight ANC Visits as per protocol

Provinces	FY2079/80	FY2080/81	FY2081/82
Koshi	5	4	4
Madhesh	2	5	7
Bagmati	2	3	2
Gandaki	5	7	5
Lumbini	2	4	4
Karnali	2	8	10
Sudurpashchim	2	3	4
Nepal	**3**	**4**	**5**

Box 6.4 SWOT Analysis of Adolescent Health Program

Strengths	Opportunities
• Strong policy framework under the Ministry of Health and Population. • Expansion of Adolescent-Friendly Health Services (AFHS) in many public health facilities. • Integration of adolescent health into school health and nutrition programs. • Increasing collaboration with development partners (e.g., UNFPA, UNICEF). • Growing awareness of menstrual health and HPV vaccination initiatives. • Regular Capacity building activities by Provincial Health Training Centers in adolescent health and mental health counselling. • Digitization of IEC BCC materials • Expansion of "One School One Nurse and Health Promoting School" Program • Expansion of comprehensive sexuality education (CSE) in schools.	• Limited coverage and inconsistent quality of Adolescent-Friendly Health Services (AFHS). • Underutilization of services due to stigma and confidentiality concerns. • Inadequate focus on younger adolescents (10–14 years). • Weak coordination between health, education, and social sectors. • Limited mental health services tailored for adolescents. • Gaps in meaningful adolescent participation in planning and monitoring. • Data gaps and underreporting of sensitive issues (e.g., sexual behavior, GBV).
Weaknesses	**Threats**
• Federal governance structure enabling local-level prioritization of adolescent health. • Increasing digital engagement and social media platforms for awareness and education. • Integration of mental health, nutrition, and SRH services. • Strong global and regional momentum for adolescent health. • Potential to leverage youth networks and peer educators for outreach.	• Sociocultural norms restricting open discussion of sexual and reproductive health. • Early marriage and adolescent pregnancy in certain provinces. • Gender inequality and limited autonomy of adolescent girls. • Misinformation spread through social media.

6.3 Reproductive Health Morbidities

Reproductive Health Morbidity means any health condition adversely impacting the reproductive system as a result of reproduction, pregnancy, abortion, labor and sexual behaviour, and also refers to pelvic organ prolapse, obstetric fistula, infertility, cervical cancer, breast cancer as well as any other similar health conditions that affects the reproductive functioning3. Cervical cancer, breast cancer, obstetric fistula, pelvic organ prolapses, and infertility are among the prioritized RH morbidities7. These disorders are exacerbated by stigma, lack of understanding, and restricted access to healthcare. They frequently have major effects on the body, mind, and society. In order to improve health outcomes and lessen gender inequities, addressing these morbidities calls for comprehensive interventions such early diagnosis, treatment, improved access to services, and health education.

6.3.1 Major Activities Conducted in FY 2081/82

- Regular integrated reproductive health morbidity screening services are conducted through outreach camps at all local levels and health facilities with trained service providers.
- The HPV DNA screening program has been expanded to 47 local levels in 11 districts (Sunsari, Mahottari, Sarlahi, Rautahat, Lalitpur, Dolakha, Sindhupalchowk, Kaski, Palpa, Surkhet, and Kailali).
- HPV DNA screening tests are available at all seven provincial public health laboratories.
- Free pelvic organ prolapses surgeries, including rectocele, cystocele, vault prolapse, and pelvic floor repair, are provided through hospitals as well as outreach camps.
- Fistula surgeries are performed free of cost at Surkhet Provincial Hospital, Civil Hospital, and Kathmandu Model Hospital with support from agencies such as UNFPA, International Nepal Fellowship, and the Fistula Foundation.

Box 6.5 National Adolescent Health and Development (NADH) Strategy, 2018

Around 200-400 women in Nepal develop obstetric fistula annually, directly linked to a major cause of maternal mortality—obstructed labor. Early marriage and multiple births elevate the risk of pelvic organ prolapses. In Nepal, approximately 6.4% of women experience prolapse due to factors such as strenuous physical work during pregnancy. Infertility is affecting 13-15% of couples in Nepal. Infertility can impede individuals' and couples' rights to family planning.

- Fourteen health workers, including gynecologists, nurses, and laboratory personnel from six hospitals, were trained in infertility management (Intra-Uterine Insemination – IUI).
- Onsite coaching and mentoring were conducted at three hospitals providing Intra-Uterine Insemination services for infertility management.
- Mammography machines were distributed to B.P. Koirala Memorial Cancer Hospital, B.P. Koirala Institute of Health Sciences, Civil Service Hospital, Lumbini Provincial Hospital, and Narayani Hospital to support breast cancer screening and diagnosis.
- LEEP and colposcopy training were conducted for seven gynecologists from Surkhet Hospital, Bheri Hospital, Narayani Hospital, and Lumbini Provincial Hospital. Colposcopy machines and thermocoagulators were also provided to the respective hospitals to initiate regular services.
- Likewise, thermocoagulators were distributed to local levels with HPV DNA screening services, other local levels with trained health workers, all district-level hospitals, and all health offices.

6.3.2 Key Achievements in FY 2081/82

Cervical cancer screening program:

Cervical cancer screening in Nepal was initiated nationwide in 2010 A.D. using Visual Inspection with Acetic Acid (VIA) as the primary screening method. Recently, HPV DNA testing has been adopted as the recommended primary screening test, reflecting alignment with global evidence for more effective early detection. HPV DNA screening was piloted from FY 2079/80 in 13 local levels across five districts and has since been expanded to 47 local levels in eight districts across all provinces. All Provincial Public Health Laboratories now provide HPV DNA screening services. In addition, integrated reproductive health (RH) camps are organized at local levels, and hospitals also deliver cervical cancer screening services. Despite these efforts, overall screening coverage remains very low due to stigma, limited awareness, and persistent accessibility gaps, particularly in remote and underserved areas.

Table 6.8 Number of women aged 30 years and above screened for cervical cancer

Provinces	2079/80	2080/81	2081/82
Koshi	27927	35688	50835
Madhesh	15564	27067	21912
Bagmati	59091	95984	106769
Gandaki	26824	27960	27732
Lumbini	41425	36252	54585
Karnali	19583	16110	22365
Sudurpashchim	14918	20398	33878
Nepal	**205332**	**259459**	**318076**

Source: HMIS/DoHS

The data show a substantial increase in cervical cancer screening coverage in FY 2081/82, particularly for VIA screening, which rose sharply at the national level from 128,902 in 2080/81 to 190,136 in 2081/82. HPV DNA screening expanded significantly in 2080/81 and remained high in 2081/82, with Bagmati and Madhesh contributing large volumes. PAP smear and other screening methods also demonstrated a steady overall increase nationwide, indicating expansion and diversification of screening services across provinces.

Table 6.9 Trend of methods used for screening of cervical cancer among women of 30-49 years

Provinces	VIA			HPVDNA			PAP Smear & Other		
	2079/80	2080/81	2081/82	2079/80	2080/81	2081/82	2079/80	2080/81	2081/82
Koshi	20041	20249	31508	193	4612	1519	1502	3632	9038
Madhesh	9552	8940	17824	1155	11502	602	730	948	395
Bagmati	26248	33669	46907	4747	22796	21507	15922	19531	17946
Gandaki	18346	16242	16476	159	1250	1365	720	2826	2883
Lumbini	29494	22846	36940	319	2253	2280	3206	4900	5985
Karnali	15604	12464	16920	54	267	1262	570	351	677
Sudurpashchim	11725	14492	23561	150	2000	5099	82	224	736
Nepal	**131010**	**128902**	**190136**	**6777**	**44680**	**33634**	**22732**	**32412**	**37660**

Source: HMIS/DoHS

Positivity rate for Cervical cancer screening

The table shows that the positivity rate for cervical cancer screening remained largely stable across most provinces over the three fiscal years (FY 79/80 to FY 81/82). Madhesh and Karnali provinces recorded an increase in positivity rate in FY 81/82, while Sudurpaschim showed fluctuations during the period. The table shows the positivity rate including all three methods of cervical cancer screening (HPV DNA, VIA, PAP Smear). Overall, the national positivity rate slightly increased from 3.18% in FY 2079/80 to 3.58% in FY 2081/82.

Table 6.10 Trend of positivity rate for cervical cancer screening

Provinces	FY2079/80	FY2080/81	FY2081/82
Koshi	2.31	2.74	2.30
Madhesh	3.27	3.41	6.08
Bagmati	3.93	3.44	3.88
Gandaki	2.52	2.98	2.92
Lumbini	3.62	3.49	3.92
Karnali	3.25	2.89	4.96
Sudurpashchim	1.64	2.89	2.02
Nepal	**3.18**	**3.22**	**3.58**

Source: HMIS/DoHS

Proportion of Women managed with thermal ablation who tested positive

National coverage rose from 27% to 35% in FY2080/81 but declined to 17% in FY2081/82. Gandaki Province (68% to 12%) and Lumbini Province (45% to 19%) showed sharp declines, while Bagmati Province remained relatively stable (18% to 25%). The drop in the latest year suggests reduced screening and treatment coverage in most provinces.

Table 6.11 Provincial distribution of proportion of women managed with thermal ablation among who tested positive

Provinces	FY2079/80	FY2080/81	FY2081/82
Koshi	31	59	11
Madhesh	12	31	5
Bagmati	18	23	25
Gandaki	43	68	12
Lumbini	45	45	19
Karnali	2	19	7
Sudurpashchim	48	23	18
Nepal	**27**	**35**	**17**

Source: HMIS/DoHS

Breast Cancer Screening:

Breast cancer is the most prevalent cancer among women in Nepal, according to GLOBOCAN 2022. Screening is conducted through outreach camps at local levels using Clinical Breast Examination (CBE), and in hospitals using CBE and mammography where available. Community awareness on breast self-examination is promoted, with Female Community Health Volunteers supporting early detection efforts.

Number of women screened for breast cancer:

The number of women screened increased substantially nationwide, rising from 30,377 in 2079/80 to 87,386 in 81/82, showing a strong overall upward trend. Most provinces experienced significant growth, particularly Koshi, Karnali, and Sudurpashchim, while Bagmati peaked in 80/81 before slightly declining in 81/82. Overall, the data indicate expanding screening coverage across provinces over the three-year period.

Proportion of women suspected for lumps among those screened:

The table 6.13 shows province-wise counts for fiscal years 2079/80, 2080/81, and 2081/82. Madhesh Province records the highest values overall, though it declines from 4 to 2 over the period. Most provinces show a slight decrease or remain stable across the three years, with 2081/82 generally having lower values than previous years. Karnali Province has the lowest figures, starting at 0 and increasing slightly before remaining low.

Table 6.13 Provincial distribution of proportion of women suspected for lumps among screened for breast cancer over last three FYs

Provinces	FY2079/80	FY2080/81	FY2081/82
Koshi	3	3	2
Madhesh	4	2	2
Bagmati	2	2	1
Gandaki	2	2	1
Lumbini	1	1	1
Karnali	0	1	1
Sudurpashchim	2	1	1
Nepal	**2**	**2**	**1**

Source: HMIS/DoHS

Pelvic Organ Prolapse Prevention and management program

Nepal's Pelvic Organ Prolapse (POP) Management Program is guided by the national guideline introduced in 2065 BS and revised in 2068 BS. The program conducts local-level screening through outreach camps and provides free surgical services at static sites, often via surgical camps. Women also receive transportation support Rs. 1500 in mountain regions, Rs. 1000 in hilly regions, and Rs. 500 in Terai regions. Key challenges include social stigma and the shortage of trained health personnel and doctors to ensure year-round services.

Number of women screened for Pelvic Organ Prolapse:

The number of women screened for POP increased steadily at the national level from 83,056 in FY 79/80 to 153,398 in FY 81/82, showing substantial program expansion. Bagmati and Lumbini provinces recorded the largest increases over the three years, particularly in FY 81/82. Most provinces demonstrated an overall upward trend despite minor fluctuations in FY 80/81, indicating improved screening coverage nationwide.

Table 6.14 Province wise distribution of number of women screened for pelvic organ prolpase

Provinces	Screened for POP		
	FY2079/80	FY2080/81	FY2081/82
Koshi	12939	11928	19915
Madhesh	11736	12262	13459
Bagmati	14507	29569	43527
Gandaki	11280	9683	10850
Lumbini	15467	16654	30050
Karnali	10114	12078	20287
Sudurpashchim	7013	9688	15310
Nepal	**83056**	**101862**	**153398**

Source: HMIS/DoHS

Percentage of women identified with prolapse among those screened

The percentage of prolapse identified among screened women increased nationally from 16% in FY 79/80 to 20% in FY 80/81, before slightly declining to 18% in FY 81/82. Koshi, Karnali, and Sudurpaschim reported relatively higher detection rates across the years, while Bagmati consistently showed lower percentages compared to other provinces. Overall, the data indicate moderate fluctuation at the provincial level with a slight overall improvement compared to FY 79/80.

Table 6.15 Province wise distribution of percentage of prolapse identified among screened

Provinces	FY2079/80	FY2080/81	FY2081/82
Koshi	20	33	30
Madhesh	18	22	24
Bagmati	14	10	11
Gandaki	11	18	20
Lumbini	14	22	15
Karnali	19	25	21
Sudurpashchim	19	27	20
Nepal	**16**	**20**	**18**

Source: HMIS/DoHS

Percentage of women managed with ring pessary among those identified with Pelvic Organ Prolapse

The proportion of women receiving ring pessary application declined nationally from 80% in FY 79/80 to 53% in FY 81/82. Most provinces showed a decreasing trend over the three years, particularly Koshi, Bagmati, and Lumbini, while Gandaki maintained relatively higher and more stable coverage. Overall, the data indicate a gradual reduction in ring pessary use across provinces during the reporting period.

Table 6.16 Province wise distribution of percentage of women managed with ring pessary

Provinces	FY2079/80	FY2080/81	FY2081/82
Koshi	89	67	51
Madhesh	58	42	45
Bagmati	91	53	46
Gandaki	85	94	83
Lumbini	85	61	46
Karnali	66	51	50
Sudurpashchim	87	70	70
Nepal	**80**	**61**	**53**

Source: HMIS/DoHS

Percentage of women undergone surgery among those identified with Pelvic Organ Prolapse

The percentage of surgery performed for POP declined nationally from 11% in FY 79/80 to 4% in FY 81/82. Most provinces show a decreasing trend over the three years, with notable reductions in Koshi, Bagmati, Madhesh, and Sudurpaschim. Although a few provinces such as Gandaki and Lumbini show slight fluctuations, the overall pattern indicates a reduction in surgical management across the country.

Table 6.17 Province wise distribution of women undergone surgery among identified with pelvic organ prolapse

Provinces	FY2079/80	FY2080/81	FY2081/82
Koshi	16	7	4
Madhesh	8	6	2
Bagmati	17	11	4
Gandaki	4	2	4
Lumbini	8	10	6
Karnali	2	4	2
Sudurpashchim	18	4	7
Nepal	**11**	**7**	**4**

Source: HMIS/DoHS

Fistula Screening and management program

Fistula screening and management in Nepal is integrated into routine reproductive health (RH) services, where women are screened for fistula along with other RH morbidities. Diagnostic services are available at hospitals, and free fistula surgery is provided at limited centers such as BPKIHS, Paropakar Maternity and Women's Hospital, Civil Service Hospital, Surkhet Provincial Hospital, and Model Hospital. Key challenges include limited trained specialists and facilities, low awareness and stigma, and poor access for women in remote areas.

Number of women screened for fistula

The number of women screened for fistula in Nepal increased significantly over the three fiscal years, rising from 10,324 in 2079/80 to 39,978 in 2081/82—almost a fourfold increase. All provinces showed an upward trend, with the sharpest growth observed between 2080/81 and 2081/82. In 2081/82, Karnali Province recorded the highest number screened (9,281), while Madhesh Province had the lowest (1,144). Overall, the data indicates substantial expansion of screening coverage nationwide.

Table 6.18 Province wise distribution of number of women screened for fistula

Provinces	FY2079/80	FY2080/81	FY2081/82
Koshi	740	3321	6942
Madhesh	280	621	1144
Bagmati	2446	4892	6523
Gandaki	1012	1443	2252
Lumbini	2787	2288	7431
Karnali	2139	5542	9281
Sudurpashchim	920	2004	6405
Nepal	**10324**	**20111**	**39978**

Source: HMIS/DoHS

Number of women who had undergone surgery for fistula

Fistula surgeries in Nepal increased steadily over the three fiscal years, rising from 32 in 2079/80 to 152 in 2081/82. The majority of surgeries were performed in Karnali Province each year, although other provinces began reporting more cases in 2081/82. Koshi and Bagmati showed notable increases in the most recent year. Overall, the data indicates expanding access to fistula surgical services nationwide.

Table 6.19 Province wise distribution of number of women undergone surgery for fistula

Provinces	FY2079/80	FY2080/81	FY2081/82
Koshi	0	17	53
Madhesh	0	3	1
Bagmati	1	0	17
Gandaki	0	0	6
Lumbini	0	0	3
Karnali	31	57	71
Sudurpashchim	0	0	1
Nepal	**32**	**77**	**152**

Source: HMIS/DoHS

Box 6.6 SWOT Analysis of Adolescent Health Program

Strengths	Opportunities
• Government leadership through the Ministry of Health and Population with integration of RHM services into the national Safe Motherhood and Reproductive Health programs. • Provision of free services for major reproductive morbidities (e.g., uterine prolapse surgery, fistula repair) in public hospitals. • Outreach camps expanding access to screening and surgical services in remote areas. • Availability of cervical cancer screening (VIA and HPV DNA testing) in selected districts and provincial public health laboratories. • Partnerships with organizations such as United Nations Population Fund (UNFPA), International Nepal Fellowship, and Fistula Foundation to support service delivery and capacity building. • Training of gynecologists, nurses, and other health workers on infertility management and advanced procedures (LEEP, colposcopy, IUI).	• Limited specialized human resources (gynaecologists, anaesthesia, trained nurses) in remote provinces. • Inconsistent quality of care and limited follow-up mechanisms after surgery or treatment. • Weak referral systems between primary, secondary, and tertiary levels. • Inadequate routine data and surveillance on reproductive morbidities (e.g., infertility, chronic pelvic conditions). • Low awareness among women regarding available services. • Dependence on periodic outreach camps rather than continuous facility-based services in some areas.
Weaknesses	**Threats**
• Federal system enabling provinces and local governments to prioritize RHM services. • Expansion of HPV DNA screening and cervical cancer prevention programs. • Integration of RHM services with family planning, safe motherhood, and adolescent health services. • Use of digital health information systems for better tracking of cases and outcomes. • Increasing attention to non-communicable diseases (NCDs), including reproductive cancers. • Scope for public–private partnerships to expand diagnostic and surgical services.	• Sociocultural stigma around gynecological conditions (e.g., prolapse, infertility, fistula) leading to delayed care-seeking. • Financial sustainability concerns due to reliance on external donor support. • Political and budgetary constraints at provincial and local levels. • Geographic barriers and difficult terrain limiting equitable access. • Public health emergencies and natural disasters disrupting outreach and surgical camps. • Migration of skilled health workers affecting service continuity.

PHC/ORC.1 About the program

In Nepal, the Primary Health Care Outreach Clinic (PHC/ORC) program was established in 2051 (1994) as a community-based effort to improve underprivileged and isolated populations' access to basic healthcare services. Family planning, immunization, maternity and postnatal care, treatment of common illnesses, and health education are few examples of the preventive, promotional, and curative services offered by PHC/ORCs, which function as extensions of primary healthcare facilities and health posts. These clinics are held monthly at set places, times, and dates to ensure that their target populations can get services within half an hour walking distance.

The PHC/ORC program addresses the needs of underserved communities and promotes better health outcomes by bringing healthcare closer to communities by focusing on financial and geographic barriers. Health workers from nearby health facilities particularly Auxiliary Health Workers, Auxiliary Nurse Midwives and FCHVs get involved in providing the specified health services to the population within the catchment area. It's the role of local level to decide the number, location and dates of outreach clinics based on their needs. This initiative is a prime example of Nepal's dedication to delivering primary healthcare at the community level within the reach of people and promotes the equitable access to basic health care services.

Box PHC/ORC.1 Services of PHC/ORCs

Safe motherhood and new-born care:

- Antenatal, postnatal, and new-born care
- Iron supplement distribution
- Referral if danger signs identified.

Family planning:

- Education and counselling on family planning methods and emergency contraception
- Counselling and offer Short Acting Contraceptive services (Injectables (DMPA-IM and DMPA-SC), pills and condoms)
- Monitoring of continuous use ad tracing defaulters
- Counselling and referral for IUCDs, Implants and Voluntary Surgical Contaception services

Child health:

- Growth monitoring of under 2 years' children
- Treatment of pneumonia and diarrhoea.

Health education and counselling:

- Family planning
- Maternal and new-born care
- Child health
- STI, HIV/AIDS
- Adolescent sexual and reproductive health.

First aid:

- Minor treatment and referral of complicated cases.

PHC/ORC.2 Key Indicators for PHC/ ORC services

Conduction of PHC/ORC

The percentage of scheduled primary healthcare outreach clinics conducted in seven provinces for fiscal year 2081/82 is displayed in the figure, which indicates a significant increase in coverage over previous years. Nationwide 95.95% of scheduled clinics were carried out with an increase from 93.31 % in 2080/81. With 99.76%, Gandaki Province performed best, followed by Sudurpashchim (98.62%) and Lumbini (97.97%). Despite its improvement to 91.53%, Karnali Province still lags behind the national average, suggesting potential for improvement. (Table PHC/ORC.1)

Table PHC/ORC.1 Proportion of PHC/ORC sessions conducted out of planned in last three FYs 2079/80-2081/82

Provinces	FY 2079/80	FY 2080/81	FY 2081/82
Koshi	88.6	93.74	95.72
Madhesh	70.9	84.74	92.29
Bagmati	91.3	94.79	95.94
Gandaki	94.9	99.11	99.76
Lumbini	93.5	96.63	97.97
Karnali	81.4	89.16	91.53
Sudurpaschim	95.5	98.03	98.62
Nepal	**86.9**	**93.31**	**95.95**

Source: HMIS/DoHS

Service Users of PHC/ORC

Nationwide the number of service users at primary health care/outreach clinics (PHC/ORC) had increased from 2708051in FY 2080/81 to 2814281in FY 2081/82. Similar to previous FY with 6,03,783 people take Health Services from PHC/ORC in Madhesh Province which is the most among the provinces in FY 2081/82, followed by Lumbini with 5,78,427. Karnali and Sudurpaschim, on the other hand, had decreases; Karnali fell to 1,41,913people takes services while Sudurpashchim fell to 3,59,274 (Table PHC/ORC.2).

Table PHC/ORC.2 Service Users of PHC/ORC in last three FYs 2079/80-81/82

Provinces	FY 2079/80	FY 2080/81	FY 2081/82
Koshi	348,928	360,589	376,407
Madhesh	459,043	540,280	603,783
Bagmati	332,957	402,833	419,685
Gandaki	296,212	320,371	334,792
Lumbini	531,202	556,596	578,427
Karnali	152,036	148,488	141,913
Sudurpaschim	391,733	378,894	359,274
Nepal	**2,512,111**	**2,708,051**	**2,814,281**

Source: HMIS/DoHS

Services Utilization from PHC/ORCs

Although the overall number of service users attending PHC Outreach Clinics (ORCs) has increased in recent years, the utilisation of maternal health and family planning services has declined significantly compared to previous years. In contrast, the number of clients seeking general curative treatment has sharply increased, almost by 10%. Out of total depo dose distributed, 6.9% were distributed through PHC/ORCs. Similarly, out of total condom (pieces) and pills cycle distributed, 4.4% and 29.74%, respectively, were distributed through PHC/ORCs.

Table PHC/ORC.3 Number of services utilized during PHC/ORCs in last three FYs 2079/80-2081/82

ORC and Community Health Program	FY 2079/80	FY 2080/81	FY 2081/82	% of service from PHC/ORCs
General Treatment	1,089,604	1,327,910	1,463,577	NA
Antenatal Check-up	137,483	130,949	120,787	NA
Postnatal Check-up	26,851	28,917	27,263	NA
FP Method-Depo-Dose distribution	92,223	424,309	78,718	6.9
FP Method-Condom distributed (pieces)	424,309	92,223	424,309	4.4
FP Method-Pills-Cycle distribution	63,529	57,643	52,599	29.74

Source: HMIS/DoHS

Box PHC/ORC.2 SWOT Analysis of the PHC/ORCs

Strengths	Opportunities
• Priority one program of Government • Strategic locations targeting the marginalized communities and hard to reach communities • Ownership by local level • Involvement of FCHVs • Presence of Health facilities at ward level.	• Coordination and partnership between three tiers of government • Strengthening maternal, adolescent, and family planning services through targeted outreach. • Use of digital reporting systems (HMIS) for better tracking and planning. • Partnership with community groups and local NGOs for mobilization
Weaknesses	**Threats**
• Targeted PHC/ORCs sessions not scheduled up to mark • Inadequate supervision and monitoring • Limited human resources and irregular availability of trained staff. • Frequent stock-outs of medicines and family planning commodities. • Limited privacy and infrastructure for quality counselling (especially FP and maternal services).	• Not effective in urban settings • Communicable disease outbreak • Variation of service utilisation among remote and urban areas. • Declining utilisation of maternal and family planning services. • Increasing focus on curative services may dilute preventive objectives. • Migration and changing health-seeking behavior. • Budget constraints at local level affecting sustainability

7 Nursing and Social Security Services Program

NSSD	Nursing and Midwifery Capacity Development Program	School Health and Nursing Service Program Community Health Nursing Program	Female Community Health Volunteer Program	One Stop Crisis Management Center and Gender-based Violence Management Program	Geriatric Services Program	Bipanna Nagarik Aushadi Upachar Program

The Nursing and Social Security Division (NSSD) was established in 2075 B.S and is responsible for delivery of quality health services through capacity development of nurses and its profession including planning, coordination, supervision, monitoring, facilitation and research for various aspect of nursing and midwifery. It is also responsible for planning, implementation and evaluation of school health and community nursing services and geriatric and gender-based violence management programme along with listing and supervision of health facilities for treatment and management of selected diseases to impoverished Nepalese citizens. The division is also responsible to Formulate necessary policies and standards regarding the mobilization of Female Community Health Volunteers (FCHVs) and Social Health Security program. The social health security program is implemented following the various guidelines focusing to targeted people as mentioned in the guideline which is described below in detail. There are three sections in NSSD: 1. Nursing Capacity Development Section; 2. Geriatric and Gender-based Violence management Section; 2. Social Health Security Section.

7.1 Nursing Capacity Development Programs

Major roles and functions of Nursing Capacity Development Section is to co-ordinate, collaborate and facilitate the concerned agencies for the development and implementation of policy, strategy, standard, protocol and guideline to maintain quality in nursing and midwifery service. Coordinate and facilitate the concerned agencies for the development of law, standard, protocol and guideline to produce, deploy and mobilize qualified and competent human resources in nursing and midwifery profession and develop capacity of nurses working in field of alternative medicine by developing Standard of practice for quality in nursing service. Coordinate and collaborate to develop policy, regulation, and guideline regarding Specialization in nursing care.

This section assist and help the concerned agencies in developing national health related policies, strategies, standards, protocols and guidelines etc. Conduct research related activities to develop quality in nursing education and nursing services including specialized nursing educations and care services and coordinate and facilitate in the various study, research aimed for the enhancement of quality of community and midwifery educations and care services and for the development and promotion of new field /scope of nursing services like school health nurse and community nursing care services, public health nursing program also development and promotion of midwifery education and it's care services in developing nursing and midwifery human resource planning, capacity building, development and management.

7.1.1 Key Program conducted in FY 2081/82 by Nursing capacity development section are as follows.

7.1.1.1 Skill Exchange Program

A. Critical Care Nurses skill Exchange

Nurses in critical care settings require advanced knowledge, nursing proficiency, and leadership skills. Regular practice, hands-on training, and orientation enhance these abilities. Recognizing the importance, NSSD organized a skill exchange program among critical care nurses. The skill exchange program, based on NHTC's Critical Care Nurses training package, spanned 30 days with 8 participants, two from each selected hospital (Bir Hospital, and Koshi Hospital) and (Dhulikhel hospital and Bir Hospital). Participants, selected based on criteria of at least 6 months of critical care experience and a bachelor's degree in nursing, underwent a four-week rotation in the designated hospitals. Facilitators were critical care unit in-charges from the respective hospitals. During the four weeks, participants concentrated on developing and sharing skills and competencies outlined in two modules:

- Basic critical care and optional skills (as per hospital requirements)
- Advanced critical care and optional skills

B. Labour room and Midwifery led birthing unit skill exchange

A skills exchange program was conducted between midwife led birthing unit of Paropakar Maternity and Women's Hospital and maternity unit staff nurses of Narayani Hospital.

At present, Nepal has a limited number of trained midwives and skilled birth attendants. In this context, to enhance midwifery-related capacity within the limited resources of hospitals, a "Skill-exchange program for nursing staff providing midwifery services in birthing centers and maternity wards" aims to ensure that client

treatment in hospitals is sustainable, respectful, quality, effective, and transparent care.

Objectives:

- Midwives working in hospital-operated birthing centre and maternity wards share skills using a standard checklist.
- Provide quality maternity services based on evidence and within limited resources.
- Enhance the managerial capacity of nurses and midwives.

The skill exchange program groomed nurses and midwives from selected hospitals as leaders, imparting best practices and skills for implementation of quality care.

7.1.1.2 Midwifery Program

National Midwifery Roadmap 2025-2030

In this FY, Nursing and Social Security Division with support from UNFPA finalized the National Midwifery Roadmap 2025-2030. The development of the National Midwifery Roadmap positioned Nepal to be selected as one of the champion countries for the global midwifery acceleration plan. The roadmap was developed through consultative and inclusive process both at the national and sub-national level with the aim of identifying short term and long term priority actions with three strategic pillars: (1) strengthening competency-based midwifery education aligned with global and national standards, (2) ensuring systematic deployment and regulation of professional midwives across all levels of care, and (3) establishing strong monitoring and evaluation systems to track service quality, coverage, and impact.

The National Midwifery Roadmap provides a structured implementation plan aligned with the National Nursing and Midwifery Strategy, with clear activities and timelines across three outcome areas: midwifery education, deployment, and regulation. The roadmap is a critical tool for operationalizing national commitments, translating policy into action, and ensuring that midwifery services are institutionalized, scaled, and sustained nationwide.

7.1.1.3 Infection Prevention and Control (IPC) Program

Infection prevention and control practices constitute one of the cornerstones in healthcare service delivery that help ensure safety of patients and other members of the community. They are also one of the most important components of healthcare quality improvement initiatives. Poor execution of infection prevention and control practices not only lead to increased risk of healthcare associated infections to those seeking care in health care centers, but also can put entire populations at risk through outbreaks spilling out into the community at large. Gaps in infection prevention and control practices in health care centers are one of the major drivers of the global threat of antimicrobial resistance. There is increased awareness of the need to implement IPC programs with a comprehensive approach, involving various levels of health governance and healthcare facilities throughout the country, using a one-health approach. The WHO brought out a Global Strategy for Infection Prevention and Control and made a call to action to individual countries in 2023.

Infection prevention and control (IPC) is crucial to providing high-quality healthcare. National Infection Prevention and Control (IPC) guideline 2079 was endorsed. The major highlights of the guideline is the formation of national steering committee, technical working committee and also the hospital-based IPC committee. The national IPC guideline mandates bi-annual IPC assessments of health facilities using a standardized IPC assessment tool (annex 1) adapted from the WHOs Infection Prevention and Control Assessment Framework (IPCAF). The assessment tool consists of closed-ended questions with scored responses. IPC performance is evaluated across eight core components using a total of 81 indicator questions, each assigned a specific score. The eight core components that are assessed include: (i) IPC program; (ii) IPC guidelines; (iii) education and training in IPC; (iv) surveillance of health care–associated infections; (v) multimodal strategies; (vi) monitoring and audit of IPC practices with feedback; (vii) workload, staffing, and bed occupancy; and (viii) the built environment, materials, and equipment for IPC. Each component is scored on a scale of 0–100, with a maximum cumulative score of 800 across all eight components. IPC performance is classified based on total scores as follows: inadequate (0–200), basic (201–400), intermediate (401–600), and advanced (601–800).

Hospitals first conduct a self-assessment using the standardized IPC tool. This is followed by a joint external assessment conducted by a team comprising representatives from the division, IPC experts from other hospitals, and the IPC team from the concerned facility. In case of any discordance between scores from self-assessments and joint assessments, the scores obtained from the joint assessment is considered. Based on the assessment results, each health facility considers steps to strengthen IPC governance and practices within their institution.

The national IPC strategy is essential for addressing many challenges such as the high prevalence of HAIs, AMR, poor IPC practices, a lack of awareness and training, and so on in a complete and systematic manner. National antimicrobial treatment guidelines are in place, and there have been efforts in implementation of antimicrobial stewardship in a few hospitals. However, the implementation is poor. IPC helps to set a framework for coordinated action, lays the foundation for a safer, more resilient healthcare system that is better equipped to protect the health and well-being of all individuals. IPC manual was developed and implemented in the Federal Hospital Infection Prevention and Control (IPC) Strengthening and Follow-up Program was established in all health care facilities according to National Infection Prevention and Control (IPC) guideline 2079. National Infection Prevention and Control strategy is drafted and is in the process of approval.

Infectious diseases continue to be one of the most pressing public health challenges worldwide, posing significant threats to human health, economic

stability, and social well-being. The growing burden of healthcare-associated infections (HAIs) and antimicrobial resistance (AMR) has made disease control even more complex, particularly in developing countries like Nepal.

Healthcare-associated Infection Surveillance Standard Operative Procedure developed, finalized and one month baseline surveillance was done on five federal hospital Koshi Hospital, Pokhara Academy of Health Science, National Trauma Center, Bir Hospital and Paropakar Maternity and Women's Hospital.

Table 7.1 Baseline data of HAI Surveillance Report

Types of HAI	HAI Incidence density (per 1000 device days)				
	Hospital A	Hospital B	Hospital C	Hospital D	Hospital E
CLABSI	0	0	0	0	0
CAUTI	0.9		9.7	6.6	4.5
VAP	9.9	39.7	0	16.9	11.5
SSI	4.4%	0.7%	2.4%	0.8%	1.9%
Total HAI Incidence	**4.7 per 1000 patient days**	**4.5 per 1000 patient days**	**23.7 per 1000 patient days**	**3.26 per 1000 patient days**	**3.3 per 1000 patient days**

CAUTI: Catheter-related Urinary Tract Infection, CLABSI: Central Line Associated Blood Stream Infection, Vap: Ventilator Associated Pneumonia, SSI: Surgical Site Infection

Source: Hospital Reports

7.1.1.4 School Health and Nursing Service Program

With an emphasis on enhancing students' academic and health status, Nepal's "School Health and Nursing Service Program" seeks to include health services and interventions in schools at the federal, provincial, and local levels. Increasing health awareness, improving Adolescents Sexual Reproductive Health and, menstrual hygiene, encouraging health-seeking behaviours, lowering absenteeism, improving academic achievement, offering emergency medical assistance, and educating adolescents about empowering and reproductive health care are some of the program's goals. The genesis of the school nurse program can be traced to the strategic directives delineated in the National Health Policy of 2076, specifically under Strategy 6.5.2. This strategic initiative underscores the incremental extension of school health programs and health awareness campaigns to institutions of higher secondary education. The policy advocates for the deployment of at least one health personnel in each school, operating in conjunction with the educational sector under the purview of the Ministry of Education, Science, and Technology (MoEST). School Health and Nursing Service Guideline of 2076 is revised on 2081 the new guidelines address the two new concept 1. Health promoting school and its certification process and a 2. Health Ambassador. empowering student as a health leaders to support and implement the school health services program (Box 7.1) This guideline aims to the management of health and nursing services in schools can be achieved by promoting a healthy lifestyle, balanced and nutritious diet, environmental and personal hygiene, improving adolescent sexual and reproductive health, proper management of menstruation among adolescent girls, promotion of mental health, and referral systems during complex health problems and To promote the health of students, teachers, and other staff, and to create a health-promoting school with a health education-friendly environment aspires to institutionalize the pivotal role of school nurses, providing a comprehensive framework for establishing school health units at the institutional level. The school health unit is chaired by the school principal, with the appointed school nurse holding the position of member secretary of the unit. In 2076, the program was initiated as a pilot program and has been in operation. As of FY 2081/82, the program has been implemented in 1407 schools of which nearly 19% of schools were supported by NSSD, and the remaining were owned by the provinces and local levels. (table 7.2). Few of the private schools also have implemented this program.

Service delivery by school health nurse

- Providing promotive, preventive, curative and referral service
- Management and treatment of emergency in schools
- Act as a leadership in organizing school health program
- To create adolescent and child friendly school environment for effective learning
- Organizing awareness program for effective implementation of school health program
- Coordinating with parents to ensure health of the students
- To create healthy lifestyle and promote positive attitude among students
- Coordinate with local level
- Nutrition service support – BMI calculations, IFA distribution to adolescent, iron tablet, albendazole students, mid-day meal planning, ultra-processed food prevention, nutritional
- Psycho-social counselling -mental health such as suicide prevention, conversion disorder, stress anxiety, etc.
- Distribution sanitary pad

Box 7.1 Key objectives of School Health and Nursing service program

a. To promote sexual and reproductive health of adolescents and ensure proper menstrual health management.
b. To motivate children to adopt a healthy lifestyle from the school level.
c. To gradually certify all community and institutional schools as "Health Promoting Schools."
d. To ensure access to basic health and nutrition services at the school level.
e. To create a healthy, clean, and learning-friendly environment.
f. To provide behavior change–based health education.
g. To implement school-based health-related programs.
h. To promote the mental health of school-aged children.
i. To arrange health services, first aid, and emergency health services within school premises and address students' immediate health problems.
j. To develop an environment for timely identification and prevention of health problems and, when complications arise, to ensure timely referral to appropriate hospitals.
k. To help reduce student dropout rates and absenteeism caused by health problems.
l. To provide knowledge about reproductive health rights and services through reproductive health education.
m. To improve students' physical and mental health by organizing safe sports and physical activities for a healthy lifestyle.

Table 7.2 School nurses supported by NSSD and Provinces, FY 2081/82

School Nurses	Supported by NSSD (Number)	Support by respective Province (Number)	Total
Koshi	22	174	196
Madhesh	38	80	118
Bagmati	0	848	848
Gandaki	35	18	53
Lumbini	36	0	36
Karnali	98	0	98
Sudurpaschim	32	26	58
Nepal	**261**	**1146**	**1,407**

Sources: SHIS/NSSD

It is encouraging for the program that during this phase of implementation, different provinces have already made their provincial level guideline and owned this program.

Box 7.2 SWOT analysis of school nurse program

Strengths	Opportunities
• Effective program for health promotion at school level remarkably supported with menstrual health, hygiene of adolescent girls • Health promotion activities on nutrition, NCD prevention, mental health and BMI • Implementation of national program like Vitamin A, Deworming, IFA distribution, national immunization campaign and ASRH at school level • Regular assessment of nutritional status, mental health status, NCDs among students and teachers.	• Ownership of the program by provinces • Collaboration with MoEST • Absenteeism has been reduced among adolescent girl due to SHN program • Reduction of mental health issues and prevent suicide among students • Improvement in overall reproductive and sexual health of adolescents • Decrease the burden of NCD and mental health in the school as well as community
Weaknesses	**Threats**
• Inadequate regular supervision and monitoring of the program. • Sustainability of the program- both human resource and financial resources • Variation in guidelines among province and federal	• Lack of clarity for nurses on whether they are responsible to the Ministry of Education or the Ministry of Health and Population. • Lack of career growth opportunities for school health nurse

7.1.1.5 Community Health Nursing Program

Community Health Nursing Program is an essential part of Nepal's healthcare system, and aims to promote, prevent, and treat health issues in people, families, and communities. Following the "Samudayik Swasthya Karyakram Nirdeshika, 2078" (Community Health Program Guidelines, 2078), the program was started as a pilot in FY 2078/79 in two municipalities: Bhaktapur Municipality in Bagmati Province and Bardibas Municipality in Madhesh Province and extended to Chandragiri Municipality, Kathmandu and Waling Municipality, Syangja and in FY 2081/82, program was scaled-up in Itahari Sub-Metropolitan City in Koshi province.

The program is divided into two stages: the first is baseline data collection, in which CHNs document each person's sociodemographic and health-related data, creating a health profile of every individual; the second phase is centered on community-based and community-directed health treatments utilizing a life cycle approach. Particularly in underprivileged and rural areas, community health nurses (CHNs) are critical in providing vital health services and tackling public health issues at the grassroots level. In addition to preventing communicable diseases, NCDs and mental illness screening, counselling, referral and continuous follow-up, they are also responsible for promoting family planning, immunization, nutrition education, and maternal and child health care. In order to promote better habits and surroundings, CHNs also take part in health education, community engagement, and disease prevention initiatives.

CHNs continuously collect the health-related data of individuals and families using Community Health Toolkit (CHT) and are recorded and updated in the Community Health Information System (CHIS). Maintaining current health records for every member of a family and encouraging healthy lifestyles are its key goals in order to lessen the burden of both communicable and non-communicable diseases. In order to ensure equitable service delivery and close gaps in healthcare access, CHNs routinely recommend individuals of the community to medical facilities for essential treatments. Nepal's dedication to strengthening communities and improving health outcomes via an integrated and comprehensive strategy is reflected in this initiative.

Some of the roles and responsibilities of Community Health Officers (CHO) and Community Health Nurses (CHN) as per the "Samudayik Swasthya Karyakram Nirdeshika, 2078" include;

- Formation and leading community health team for effective implementation of Community Health Service program
- Regular monitoring of the program to identify challenges and coordinate with different stakeholders for resolving those problems
- Regular review of the program and communicating achievements and feedback to local level, coordination committee and other stakeholders to strengthen the program
- Capacity building of community health nurses working in ward level
- CHN to work as a bridge between community and health facility and provide quality health service
- Strengthening Maternal, Neonatal, Child, Adolescent, Sexual and Reproductive health activities

The distribution of Community Health Officers (CHOs) and Community Health Nurses (CHNs) among the four municipalities is shown in the table 7.3. CHNs are provided from the local level as well as federal level. A total of 68 CHNs had been serving in four municipalities (21 in Itahari, 17 in Bardibas, 15 in Chandragiri, and 15 in Waling). Of the total CHNs, there are four CHOs in all, one in each municipality.

Table 7.3 Total Number of CHN and CHOs, FY 2081/82

Municipalities (District)	Community Health Nurse	Community Health Officer	Total
Itahari (Sunsari)	20	1	21
Bardibas (Mahottari)	16	1	17
Chandragiri (Kathmandu)	14	1	15
Waling (Syangja)	14	1	15
Total	**64**	**4**	**68**

Source: CHIS/NSSD

CHN Key Service Delivery Indicators FY 2081/82

In FY 2081/82, the health profile of 73,396 households (680271 populations) was created by CHNs via household survey. Non-communicable disease survey (72,790 persons), mental health screening (38,296 persons) and hypertension screening (23,570 persons) were some of the major activities done by CHNs in FY 2081/82. Highest number of households and population reached by CHNs was in Chandragiri Municipality (117,357 populations in 28,908 households). The CHN program was implemented in Itahari Sub-metropolitan City from this fiscal year, so the household survey included only the collection of baseline family data. (table 7.4)

Annual Review of the community Health and Nursing Services Program one batch on NHTC including all local level health coordinator, CHO and CHN representative.

Table 7.4 Service provided by CHNs during home visit in FY 2081/82

SN	Indicators	Bardibas	Chandragiri	Waling	Itahari	Total Number
1	Total no of population reached	76,885	117,357	52,023	62,580	680,271
2	Total no. of household visited	15,848	28,908	12,312	16,329	73,397
3	Pregnancy registration	631	1,062	239	226	2,158
4	ANC home visit	2,375	3,182	584	160	6,301
5	PNC home visit by CHN	530	973	92	12	1,607
6	No. of suspected Hypertension cases screening and counselling	7,006	9,148	7,416	N/A	23,570
7	No. of Hypertension cases regular follow-up	580	883	944	N/A	2,407
8	No. of suspected Diabetes patient screening	5,812	8,109	1,313	N/A	15,234
9	No. of Diabetes cases regular follow-up	676	1,194	366	N/A	2,236
10	No. of women screened and counselling for Cervical cancer	1,649	5,352	2,948	N/A	9,949
11	No. of cases screening for Breast cancer	3,585	9,595	5,642	N/A	18,822
12	No. of Breast cancer cases followed-up	11	20	6	N/A	37
13	No. of Children screening for nutrition status and CBIMNCI	1,174	2,465	833	N/A	4,472
14	No. of Children follow up and refer for malnutrition	13	24	24	N/A	61
15	No. of person screening for Mental health status	8,253	19,714	10,329	N/A	38,296
16	No. of suspected cases of Mental health problem are counselled, referred and followed-up	86	146	75	N/A	307
17	MWRA survey conducted	1,035	1,929	296	12,597	15,857
18	Non-communicable disease survey	1,898	9,163	1,413	60,302	145,566

Source: CHIS/NSSD

Box 7.3 SWOT analysis of CHN program

Strengths	Opportunities
• Recruitment of human resource who are local with ample geographical and cultural proximity to population they serve • Digitalized system such as reminders, task generation for daily activities that leads to less chance of human error and create alertness • Accurate household data survey done by CHNs • Good coordination with local governments and community • CHNs are actively involved in Health promotion activities including NCD screening referral follow up and implementing national priority programs such as vaccinations, communicable diseases, mental health, maternal and neonatal health, geriatric health etc.	• Increasing interest of local levels to implement and uptake program on either cost-sharing model or full cost bearing model. • Involvement of partner organization for technical support. • Reduction of NCDs and mental health issues • Reduction of maternal and neonatal morbidity and mortality • Vital role in effectively addressing rising burden of NCDs and health problems in aging population
Weaknesses	**Threats**
• Budgetary constraint • High human resources turnover • geographical challenge	• Scale up largely depends upon local levels of interest in taking up program. • Sustainability issue in long term

7.1.2 Key activities of Nursing capacity development section in FY 2081/82

- Leadership development and management training for nursing staffs working in Ayruveda hospital and alternative medicine, teaching institutions, federal and province hospitals, and local levels was conducted in Kathmandu with coordination with NHTC. Two batch (48 No of participant) were trained. This package focuses on the leadership skill, communication and coordination skill and also the use of emotional intelligence.

- Capacity building on Research proposal development and report writing skill training was conducted in the field of research related activities for Nurses working in different federal and provincial hospitals. They were trained to providing evidence-based quality nursing services, some financial support was provided for selected some excellent report study
- Develop and revised forms and format used in hospital for recording and reporting.
- Onsite coaching and technical assistance were also provided to Certificate-Level Midwifery Education Institutions in Jiri and Rautahat for strengthening midwifery education.
- Infection prevention and control Assessment, follow-up and onsite coaching were conducted in federal-level hospitals using the standard checklist (annex 1) of the guideline. IPC Assessment is done in 9 Federal Hospitals and Follow up in 4 Federal Hospital. Gaps were identified and action plan were made accordingly for improving IPC practice in the hospital.
- Developed social-emotional learning ToT package for school health nurse.
- A total of 41 school nurses from five local levels in Koshi Province, Madhesh Province, and Gandaki Province have been trained in social-emotional learning to promote the mental health of students under the School Health and Nursing Program.
- Dissemination and sharing a study report of assessment of effectiveness of school health and nursing service program in Nepal
- Annual Review of the School Health and Nursing Services Program Completed in four Province, 2 batch
- A policy dialogue program on Health Promoting Schools has been successfully conducted with relevant stakeholders, including government and private schools.
- Advocacy on Implementing Comprehensive Sexuality Education, through the School Nursing Services Program and Strengthening of the Health promoting school was conducted on four province and 8 districts (Sarlahi, Rauthat,, Rupendehi, Arghakhanchi, Kapilbastu, Rolpa, Achham , Bajura) and in federal level Kathmandu including Bhaktapur and Lalitpur.

7.2 Female Community Health Volunteer (FCHV) Program

7.2.1 About the program

Female Community Health Volunteer (FCHV) program was established in 1988, and is a vital component of the nation's community-based healthcare system. The primary goal of the program was improving the quality and accessibility of primary healthcare services, especially for women and children. By 2050 B.S., the program had spread to all 77 districts after being introduced in 27 at first. It had changed from a ward-based strategy to a population-based model in 28 districts. The program's objectives are to empower women via education and skills, raise public health awareness, and involve local institutions in healthcare promotion in order to promote community health.

FCHVs are chosen by mothers' group and are essential in basic healthcare services, illness prevention, and health promotion. Initially, FCHVs used to receive 18 days (9 + 9 days) training, however, from FY 2077/78, the training has been revised to 10 days of basic training and 4 days of refresher training every four years. Following the training, to help them perform their duties, they are given essential resources such as medicine kit boxes, manuals, flipcharts, ward registers, Information Education and Communication (IEC) materials, FCHV bags, signboards and identity cards. In addition, they are provided with necessary supplies such as family planning commodities like pills and condoms, iron tables, vitamin A capsules and Oral Rehydration Solution (ORS) via health facilities.

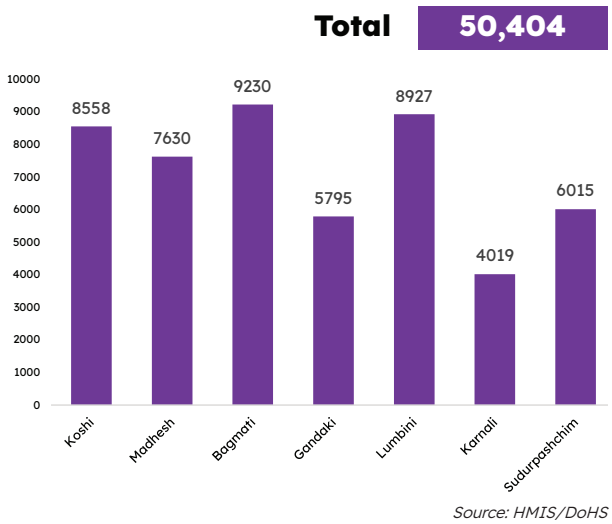
Important public health milestones, including lower rates of maternal and infant mortality and the advancement of Millennium Development Goals (MDGs) 4 and 5, have been made possible significantly due to FCHVs effort. Likewise, FCHVs who are acknowledged as important contributors to community health are anticipated to contribute significantly to the attainment of Sustainable Development Goals (SDGs) by 2030. The latest amendment of FCHV strategy 2076 such as change in FCHVs selection criteria and institutional arrangements highlights the government dedication to strengthening FCHV program.

There are currently about 50,404 FCHVs actively serving to health care in Nepal with highest number in Bagmati province (9,230 FCHVs) (figure 7.1). The crucial role FCHVs play in providing community healthcare is highlighted by these statistics, which show minor regional variations in number in different provinces.

Box 7.4 Objectives of the FCHV Programme

Objectives

- Mobilize a pool of motivated volunteers to connect health programmers with communities and to provide community-based health services,
- Activate women to tackle common health problems by imparting relevant knowledge and skills;
- Increase community participation in improving health,
- Develop FCHVs as health motivators and
- Increase the demand of health care services among community people.



Source: HMIS/DoHS

Figure 7.1 Number of FCHV in different provinces in FY 2081/82 (separate graph for total)

FCHV's contributions in heath service delivery

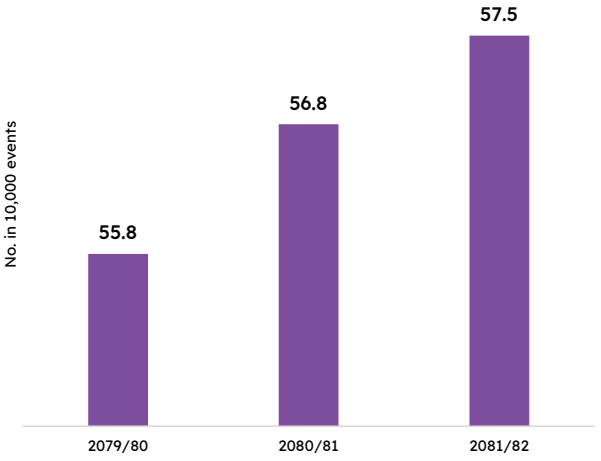
- Distribution of the FP commodities (refill regular pills, emergency contraception pills, and distribute condoms)
- Conduction of the mother's health group meetings, discuss on issues and provide health education
- FCHVs support mother's and new-born's care during home visit during postnatal period (in the first week of delivery) to provide care and health counselling to postpartum mothers on breast feeding, care of mother and new born as well as danger signs of mother and new born, and encourage them for postpartum visits to institutions as per the national protocol. They also provide support to postpartum mothers in initiating breast feeding within 1 hour of birth and immediately provide Vitamin A capsule as well.
- FCHVs also play a crucial role in reducing malnutrition among children and women of reproductive age groups.
- FCHVs assess the acute malnutrition status of the children under 5 years of age by measuring the Mid-Upper Arm Circumference (MUAC) of children and then refer for further management as per their severity.

Box 7.5 Facilities for FCHVs

- A total of NPR. 10,000/- is provided to each FCHV as dress allowance every year.
- A travel allowance of NPR. 12,000/- is provided to each FCHV as transportation cost every year
- Since 2071/72, the government has allocated budget of NPR 20,000/- to each FCHVs as an appreciation for their contribution during the farewell to FCHVs over 60 years of age as recommended by health mothers' groups.
- International World Volunteer Day (5th December) is celebrated as Female Community Health Volunteer day every year
- GoN bears the 50% of premium of health insurance for individual FCHVs and also, they are one of the target groups to receive service through Social Service Unit of Health Facilities.
- Local and province level provides top up above-mentioned budget heading

7.2.2 FCHVs' Key Service Delivery Indicators

There was progressively increase in number of mothers' health group meeting from FY 2080/81 (56.78 meetings per 10,000 events) to FY 2081/82 (57.45 meetings per 10,000 events) (Fig 7.2).



Source: HMIS/DoHS

Figure 7.2 Mother's health group meetings conducted by FCHVs in FY 2081/82

Over the course of three fiscal years, from 2079/80 to 2081/82, the distribution of commodities showed a downward tendency. Significant drops were observed in the distribution of condoms (63,62,700 pieces), iron tablets (2,37,400 tablets), and contraceptive pills (3,99,000) cycles) in FY 2081/82. (table 7.5)

Table 7.5 FP commodity, iron tablet distribution by FCHVs in FY 2079/80 – 2081/82 (In ten thousands)

Services	2079/80	2080/81	2081/82
Pills distribution (no. of cycles)	53.04	45.33	39.90
Condom distribution (pieces)	714.59	673.35	636.27
Iron tablet distribution	40	29.80	23.74

Source: HMIS/DoHS

There was continuation of home visits done by FCHVs focused on mothers who had delivered at home due to reasons of not being able to access the health facilities. Given their critical role in maternal and new-born care during home deliveries, FCHVs nationwide supported 21,773 skin-to-skin contact cases, 15,308 chlorhexidine applications, and 21,847 postnatal visits on the third day of birth. FCHVs provided highest no. of services in Madhesh province and least in Gandaki province during home deliveries and post-natal visits for home deliveries. (table 7.6)

Table 7.6 Support provided by FCHVs during home deliveries and postnatal visits for home-deliveries, FY 2081/82

Province	During Deliveries			Postnatal visits for home-deliveries		
	Initiating skin-to-skin contact after birth	Chlorhexidine applied on umbilicus	Ensured misoprostol tablets taken	≤24 hours of Birth	3rd day of Birth	7th day of Birth
Koshi	2,986	2,469	970	2,398	3,248	3,349
Madhesh	15,101	10,019	617	10,363	13,949	13,883
Bagmati	1,476	782	276	1,002	1,361	1,357
Gandaki	132	122	78	122	265	286
Lumbini	630	539	433	585	1,548	1,500
Karnali	1,108	1,052	572	850	1,087	1,014
Sudurpaschim	340	325	110	301	389	358
National	**21,773**	**15,308**	**3,056**	**15,621**	**21,847**	**21,747**

Source: HMIS/DoHS

Similarly, FCHVs helped in initiating breastfeeding within the first hour of delivery. In the fiscal year 2081/82, nationwide, FCHV encouraged 22,694 mothers for early initiation of breastfeeding (table 7.7).

Table 7.7 FCHVs' support in initiating breastfeeding within an hour of birth in FY 2081/82

Province	Breast Feeding <1 hour of Birth
Koshi	3,056
Madhesh	15,822
Bagmati	1,529
Gandaki	142
Lumbini	667
Karnali	1,094
Sudurpaschim	384
National	**22,964**

Source: HMIS/DoHS

7.2.3 Major Activities in FY 2081/82

Programmatic activities

- Provincial-level discussion and interaction program for the revision of National Fund operation guidelines for FCHVs and strengthening the Female Community Health Volunteer Program and the.
- Orientation and mobilization of FCHVs for national health programs was conducted
- FCHV review meeting was held at the province level and local level
- FCHV Day celebrated on 5th December by National, Provincial and every local levels
- Dress allowance, appreciation amount during farewell and travel allowance was distributed

Box 7.6 SWOT analysis of FCHV Program

Strengths	Opportunities
• FCHV program directly connects the community to the health system • Women empowerment • Regular and periodic trainings • Contribution in disease prevention and health promotion • Implementation and coverage of the national health program implemented in community.	• Creating social platforms for network of FCHVs and encouraging exchange of knowledge • Opportunities for women empowerment • Mobilization of FCHV in outbreak and disaster.
Weaknesses	**Threats**
• Lack of capacity of some FCHVs with technical education and knowledge • Recruitment process of FCHV for example, Senior FCHVs often appoint their own family members, such as daughters-in-law or daughters, as new FCHVs, leading to nepotism and favorism. • Inequitable distribution of FCHVs according to population in Federalization context • Less utilization of services provided by FCHVs in metropolitan and sub-metropolitan cities especially urban areas.	• FCHVs are reluctant to get retired and wish to continue their volunteer service with financial benefits. • Decreasing work performance of FCHV • Multiple projects/programs utilizing FCHVs as field workers can be exhaustive to them • Many FCHVs are illiterate and senior citizens that impacts monthly reporting • Some FCHVs hold dual roles, serving as both local leaders and FCHVs.

7.3 Social Service Unit (SSU) Program

7.3.1 About the Unit

The right to access free basic health services (BHS) and emergency services was reinstated in the Constitution of Nepal 2015, building on the Interim Constitution of 2063. The Social Service Unit (SSU), which began its operations in 2065 BS, was established with the primary objective of offering free or subsidized services to economically disadvantaged patients at referral hospitals. Over time, the program has expanded and is now operational in all provinces and districts.

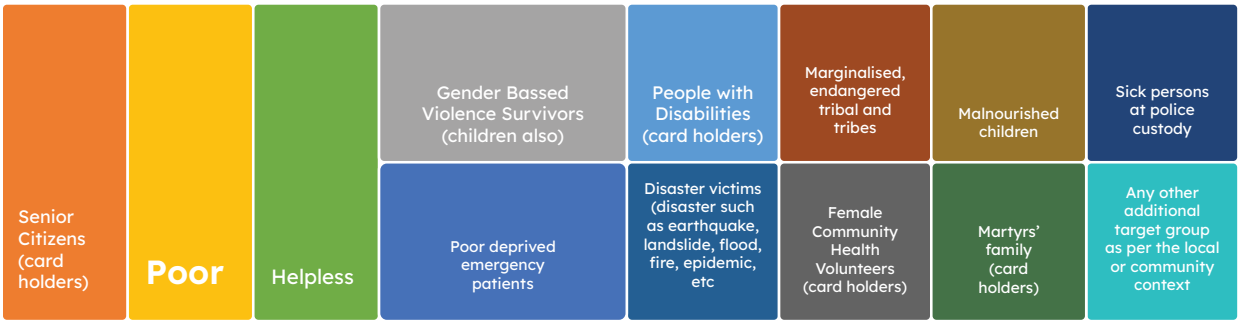


Figure 7.3 Target Population for SSU services

Source: SSU establishment and operation guideline, 2078 (Revised 2079)

Box 7.7 Key Guiding Document: SSU Establishment and Operation Guideline, 2078 (Revised 2079)

Objectives of Social service program

- Enhance equitable access to and utilization of health services for targeted patient groups
- Ensure the provision of free or partially subsided in regular or specialized health services to eligible patients
- Facilitate coordination of all social security programs, including health insurance, the deprived citizens' treatment fund, senior citizen (geriatric) health services, neonatal care, and free emergency services for vulnerable groups
- Create an enabling environment for the target group to access health services effectively and transparently

Institutional Mechanism

The Social Service Unit (SSU) operates under the leadership of a hospital director, chief, or medical superintendent, with the SSU unit being led by a chief, deputy chief, and facilitators. Target group patients are provided with free or partially free services at the hospital, based on an evaluation of their financial status, identification card, and other observations. For survivors of gender-based violence (GBV), hospitals are required to provide all available services free of charge. Furthermore, SSUs play a key role in coordinating and facilitating access to various social security programs/services, such as the deprived citizens' treatment fund, social health insurance, geriatric health care, neonatal care, specialized services, and emergency health services.

Milestones in the establishment of SSUs from piloting to scale up in all districts

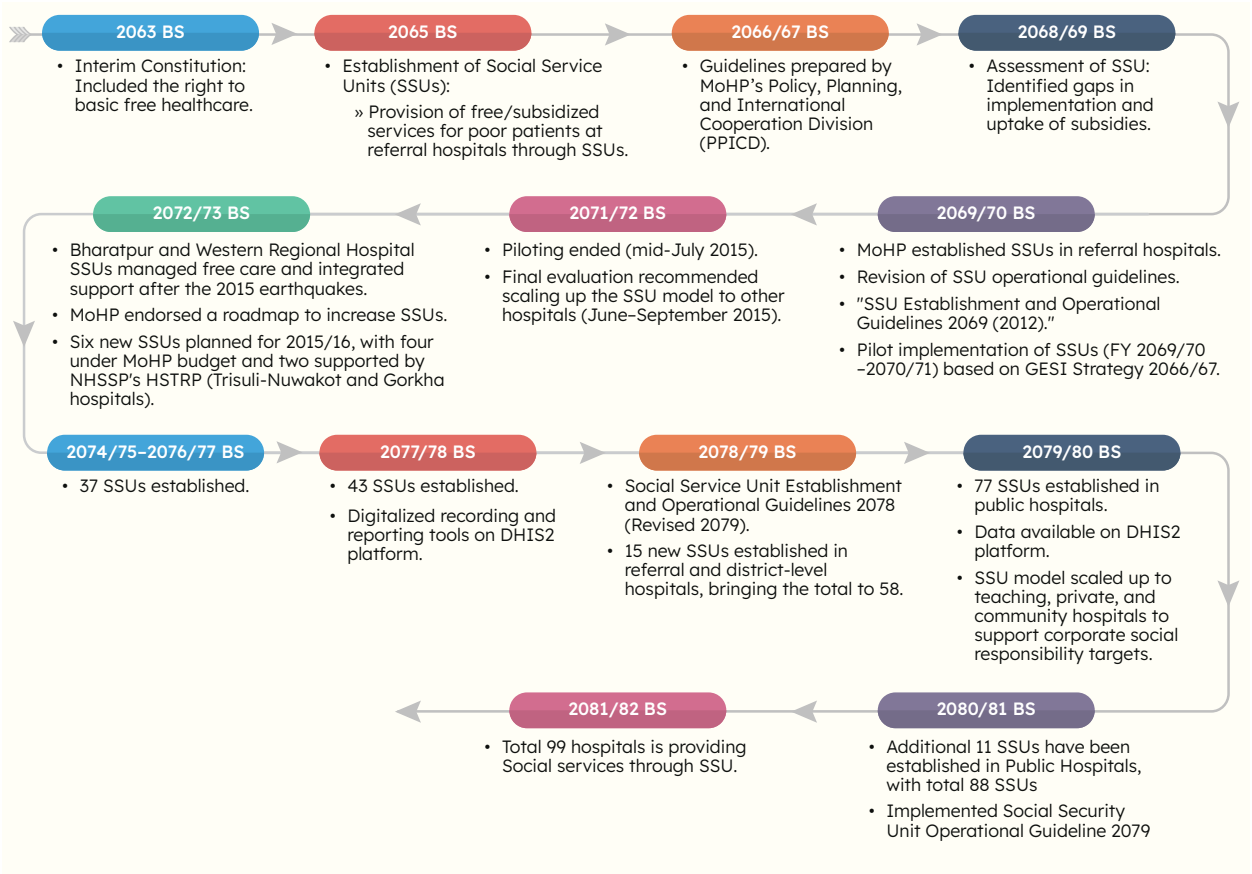


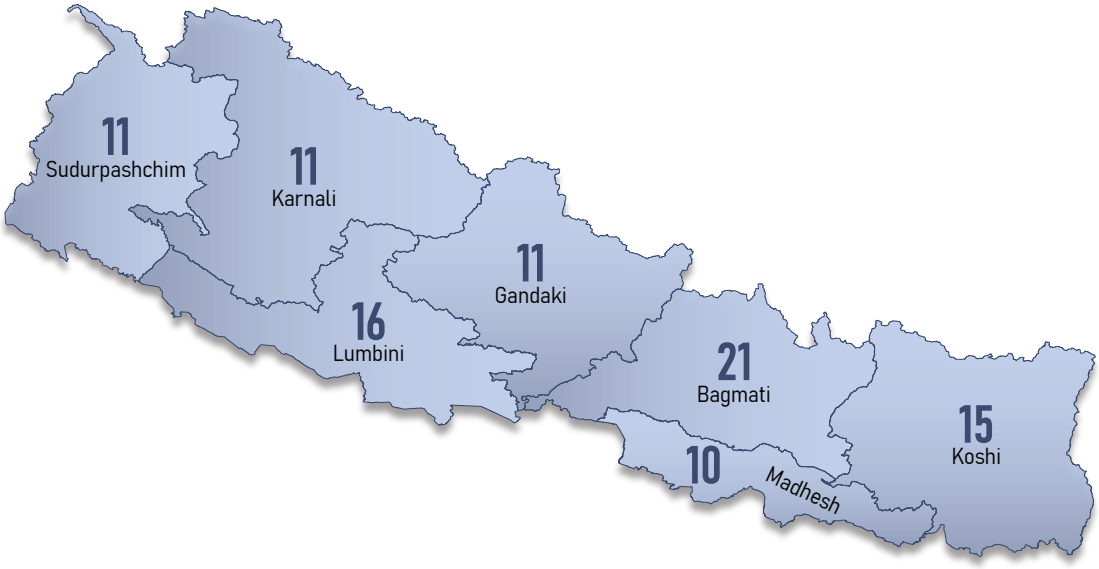
Figure 7.4 Milestones in the establishment of SSU from piloting to scale up in all district

7.3.1.1 Major Activities and Achievements in FY 2081/82

- 99 public hospitals are providing continue health services through SSUs focusing on targeted population. NSSD is facilitating to technical support for those Hospitals
- The guidelines for hospital reimbursement for medical treatment of Janayudha, Janaandolan, Madhesh Terai Andolan, conflict, and disaster victims has been approved
- Bir Hospital and the National Trauma Center have been reimbursed a total of NPR 593,815.46 for providing treatment to conflict and disaster victims

Social Service Unit Sites

As of FY 2081/82, a total of 95 Social Service Unit (SSU) sites are operating across Nepal to support patients in accessing healthcare services. Bagmati Province has the highest number of SSU sites (21), followed by Lumbini (16), Koshi (15), Gandaki (11), Karnali (11), Sudurpashchim (11), and Madhesh (10) (figure 7.5).



Source: CBS AND IMIS/HIB

Figure 7.6 Total SSU Sites (Province Wise)

Koshi (15)	Madhesh (10)	Bagmati (21)	Gandaki (11)	Lumbini (16)	Karnali (11)	Sudurpashchim (11)
BPKIHS, Sunsari	Janakpur Provincial Hospital, Dhanusha	PAHS, Lalitpur	Damauli Hospital, Tanahu	Rolpa Hospital, Rolpa	Dailekh Hospital, Dailekh	Baitadi Hospital, Baitadi
Koshi Hospital, Biratnagar, Morang	Narayani Hospital, Birgunj, Parsa	NAMS, Bir Hospital, Kathmandu	Pokhara Academy of Health Sciences, Kaski	Bheri Hospital, Banke	Provincial Hospital, Surkhet	Seti Hospital, Dhangadhi
Mechi Hospital, Bhadrapur, Jhapa	Gaur Hospital, Rautahat	Bharatpur Hospital, Chitwan	Dhaulagiri Hospital, Baglung	Lumbini Provincial Hospital, Rupandehi	Karnali Academy of Health Sciences, Jumla	Dadeldhura Hospital, Dadeldhura
Udayapur Hospital, Udayapur	Gajendra Narayan Singh Hospital, Saptari	Hetauda Hospital, Makwanpur	Gorkha Hospital, Gorkha	Rapti Academy of Health Sciences, Dang	Jajarkot Hospital, Jajarkot	Mahakali Hospital, Kanchanpur
Ilam Hospital, Ilam	Siraha Hospital, Siraha	Kirtipur Burn Center Hospital, Kathmandu	Myagdi Hospital, Myagdi	Prithvichandra Hospital, Nawalparasi	Humla Hospital, Humla	Darchula Hospital, Darchula
Sankhuwasabha Hospital, Sankhuwasabha	Kalaiya Hospital, Bara	National Trauma Center, Kathmandu	Syangjha Hospital,	Guleriya Hospital, Bardiya	Kalikot Hospital, Kalikot	Tikapur Hospital, Kailali
Inaruwa Hospital, Sunsari	Sarlahi Hospital, Sarlahi	STIDH, Kathmandu	Syangjha	Pyuthan Hospital, Pyuthan	Rukum Hospital, Rukum	Bajhang Hospital, Bajhang
Taplejung Hospital, Taplejung	Ram Uma Memorial Hospital, Siraha	Bhaktapur Hospital, Bhaktapur	Parbat Hospital, Parbat	Palpa Hospital, Palpa	Mehalkuna	Doti Hospital, Doti
Panchthar Hospital, Panchthar	Bardibas Hospital, Mahottari	Dhading Hospital, Dhading	Manang Hospital, Manang	Rapti Provincial Hospital, Dang	Hospital, Surkhet	Mangalsen
Dhankuta Hospital, Dhankuta	Mahottari Hospital, Mahottari	Trishuli Hospital, Nuwakot	Mustang Hospital, Mustang	Tamghas Hospital, Gulmi	Mugu Hospital, Mugu	Hospital, Achham
Bhojpur Hospital, Bhojpur		Rasuwa Hospital, Rasuwa	Lamjung Hospital, Lamjung	Rampur Hospital, Palpa	Dolpa Hospital, Dolpa	Bajura Hospital, Bajura
Rumjatar Hospital, Okhaldhunga		Dhulikhel Community Hospital, Kavre	Madhyabindu Hospital, Nawalparasi East	Kapilvastu Hospital, Kapilvastu	Salyan Hospital, Salyan	Geta Hospital
Faplu Hospital, Solukhumbu		Kanti Childrens' Hospital, Kathmandu		Rukum East Hospital, Rukum		
Tehrathum Hospital, Tehrathum		Paropakar Maternity and Women's Hospital, Kathmandu		Sandhikharka Hospital, Arghakhanchi		
Khotang Hospital, Khotang		Bakulahar Ratnanagar Hospital, Chitwan		Bhim Hospital, Rupandehi		
		Mental Hospital, Lalitpur		Bhaluwang Hospital, Dang		
		Sindhuli Hospital, Sindhuli				
		Chautara Hospital, Sindhupalchowk				
		Thokarpa Basic Hospital, Sindhupalchowk				
		Charikot Hospital, Dolakha				
		Ramechhap Hospital, Ramechhap				

Cases served through SSU

The number of cases served through SSU services has reduced from 78,504 in FY 2080/81 to 59,677 in FY 2081/82. The highest number of cases was served in Bagmati province (12,835 cases) and least in Gandaki province (4,619 cases). Compared to previous FY, all provinces have seen a significant decline in SSU-supported cases except Karnali province wherein the cases served were increased. (table 7.8).

Table 7.8 Total cases (new registered and follow-up) served through SSU services in FY 2081/82

Total Cases Served through SSU services	Nepal	Koshi	Madesh	Bagmati	Gandaki	Lumbini	Karnali	Sudurpaschim
FY 2079/80	**37,425**	7,791	3,509	4,894	2,537	6,296	2,634	9,764
FY 2080/81	**78,504**	11,098	9,692	18,313	7,847	8,991	4,978	17,585
FY 2081/82	**59,677**	10,220	8,124	12,835	4,619	5,624	5,824	12,431

Source: HMIS/DoHS

Box 7.8 SWOT analysis of SSU

Strengths	Opportunities
• SSU program is one of the priority programs under the "Leave no one behind strategy" • Institutional authorities have the capacity to recommend eligible populations in accordance with operational guidelines • Well-established network with SSUs at referral sites • Transparency in service delivery, with beneficiary names is published	• Identification of target populations and program estimates through coordination with relevant line ministries and divisions • SSUs can serve as a single-entry point for social health security and safety net programs in health
Weaknesses	**Threats**
• Complex documentation process for identifying the target population • Low awareness among the target population regarding the provisions of SSUs • Not enough budget as per demand of Service from SSU.	• Adverse selection in identifying beneficiaries • Frequent changes in hospital leadership. • Ultra poor population might be left behind due to lack of awareness of Social security scheme is targeted for them

7.3.2 One Stop Crisis Management Center (OCMC) and Gender-based Violence Management Program

7.3.2.1 About the program

Gender-Based Violence (GBV) is a significant human rights issue and public health concern which profoundly impacts the physical and mental health of the individual survivor and his/her children and imposes a social and economic burden to the society. It is inextricably linked to the gender norms and unequal power relations between genders in the society, predominantly affecting women and girls. Violence against Women and Girls (VAWG) is one of the manifestations of gender inequality. In Nepal, a considerable proportion of women and children still experience various types of gender-based violence (GBV), which causes serious bodily, sexual, and psychological trauma. Efforts to address and manage GBV holistically have been hampered by the absence of consistent and efficient approaches. The Ministry of Health has been appointed by the Government of Nepal as the principal authority to carry out Clause 3 of the National Action Plan 2010 against GBV in recognition of this difficulty. The Geriatric and GBV Management section of NSSD at DoHS is the focal point for formulating policies, strategies, guidelines and programs to health response to GBV. Hospital-Based One-Stop Crisis Management Centers (OCMC) providing comprehensive services with a secure and encouraging setting where survivors can get police services, psychosocial counselling, medical care, and legal support all in one location. By addressing the urgent need for a coordinated response to GBV, these facilities guarantee prompt and efficient assistance. OCMCs, which are found at hospitals in different districts, are crucial in lowering the obstacles survivors must overcome to obtain necessary services.



Figure 7.6 GBV Situation in Nepal, NDHS 2022

Significant progress has been achieved by the Government of Nepal (GoN) in amending laws and regulations to combat gender-based violence (GBV) in the nation. Women, children, men, and members of sexual and gender minority groups are among the survivors of violence served by these institutions. These facilities must provide GBV survivors with seven key services in accordance with OCMC Operational Guideline 2077, guaranteeing all-encompassing care and support including health services, psycho-social services, medico-legal services, safer homes initiatives, security, and rehabilitative services.

Box 7.9 Key Guiding documents for GBV programs

- National Population Policy, 2071
- Health sector Gender Equality and Social Inclusion (GESI) strategy, 2065/66 (2009)
- Operational Guideline of OCMC, 2077
- Clinical Protocol on GBV, 2077
- OCMC strengthening National action Plan 2082

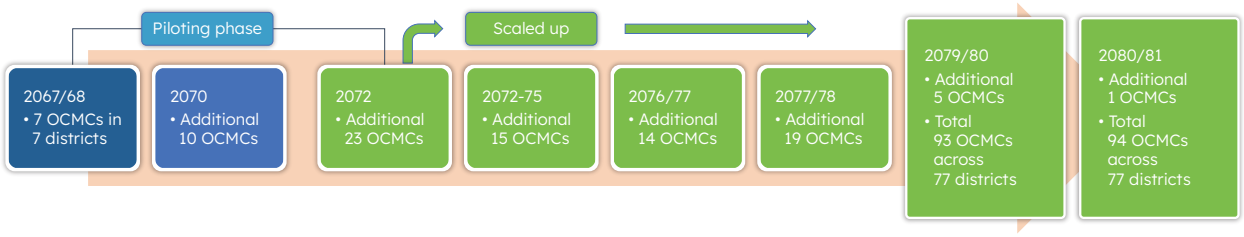
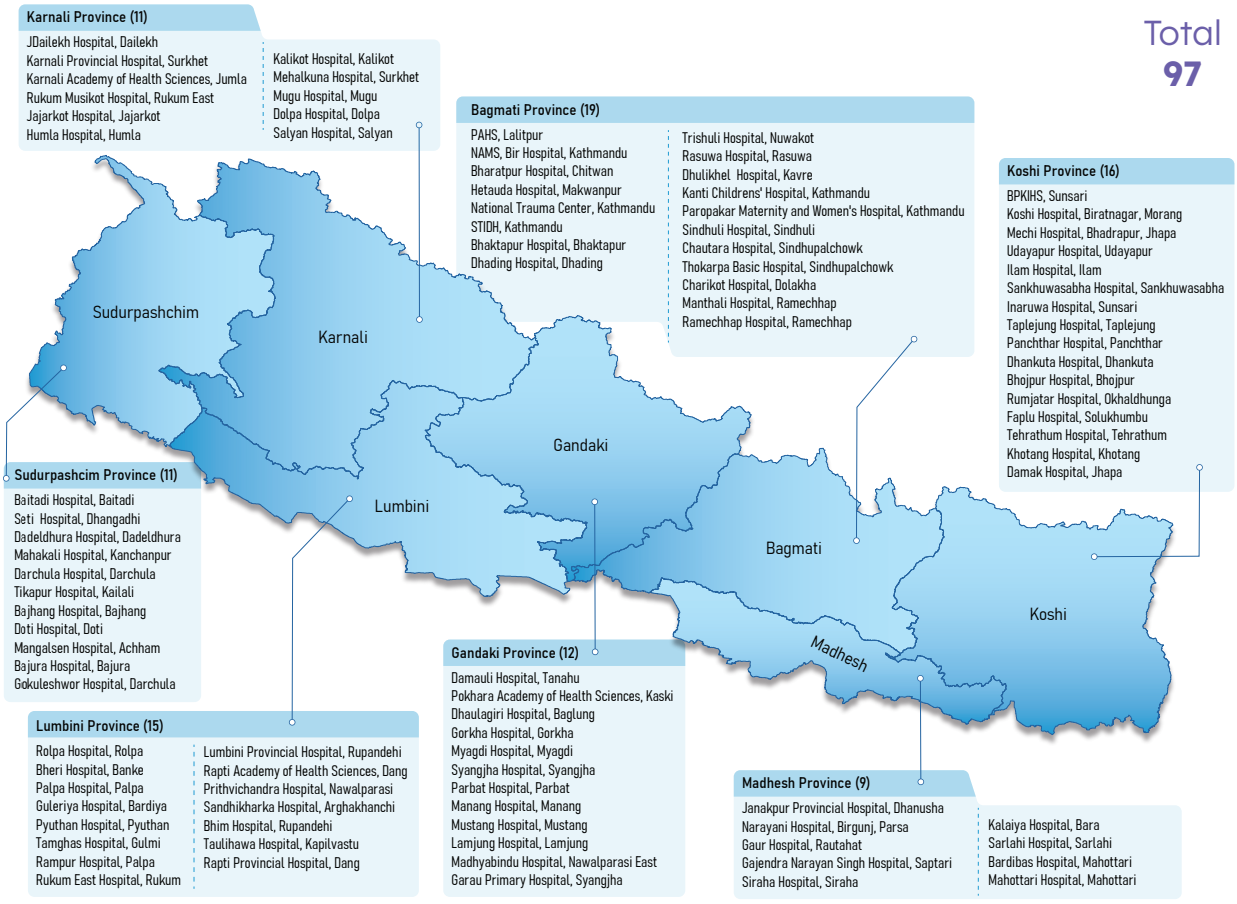


Figure 7.7 Important milestones in the establishment of OCMCs

7.3.2.2 Key Indicators of OCMC Services in FY 2081/82

OCMC Sites

As of FY 2081/82, a total of 93 OCMC sites are operating across Nepal to support violennce survivors in accessing healthcare services. Bagmati Province has the highest number of OCMC sites (19), and lowest in Madhesh province (9 sites) (figure 7.8).



Source: CBS AND IMIS/HIB

Figure 7.8 Total OCMC sites according to province

Number of cases served in FY 2081/82

At the national level OCMC, the number of reported perpetrators, number of new cases reported as well as follow-up cases showed an increasing trend in this FY compared to previous FY. The number of perpetrators reported was increased in Madhesh, Lumbini, Karnali and Sudurpashchim provinces. Likewise, there was a notable increase in new cases in Lumbini, Karnali, and Sudurpashchim provinces. All the provinces have seen the significant rise in follow-up cases (Table 7.9)

Table 7.9 Cases served from OCMCs in FY 2081/82

Province	Perpetrators reported (in number)		Follow-up cases (in number)		New cases (in number)	
	FY 2080/81	FY 2081/82	FY 2080/81	FY 2081/82	FY 2080/81	FY 2081/82
Nepal	**8,824**	**9,771**	**3,081**	**4,487**	**12,861**	**13,502**
Koshi	1,647	1,366	397	493	1,901	1,451
Madhesh	1,661	2,056	209	420	3,202	3,012
Bagmati	1,450	1,322	571	616	2,086	1,782
Gandaki	619	469	230	535	781	691
Lumbini	1,336	1,665	179	195	2,017	2,714
Karnali	568	961	797	1,199	1,006	1,552
Sudurpashchim	1,543	1,932	698	1,029	1,868	2,300

Source: HMIS/DoHS

Type of violence among new cases

The table 7.10 shows the percentage of different forms of violence among newly reported cases in Nepal and its provinces. Nationally, 27.33% of cases are emotional violence, with Bagmati having the lowest percentage (13.16%) and Madhesh having the highest (41.50%). The percentage of people nationwide who are denied resources, opportunities, or services is 15.14%; Madhesh has the greatest percentage (19.47%), while Lumbini has the lowest percentage (6.74%). The percentage of harmful traditional behaviours is 2.02% nationally, with Madhesh reporting the highest percentage at 3.95%. Nationally, violence against children or forced marriage is 6.38%, and most reported in Lumbini province (25.67%). With a countrywide prevalence of 27.11%, physical violence is the second most common form after emotional violence with Gandaki province having the highest rate at 35.16%. The sexual assault accounts for 9.38% nationally, and the highest percentage is seen in Bagmati province (19.84%). Similarly, nationally, rape cases constitute 15.14% of all instances; the highest percentage is reported in Koshi (24.72%).

Table 7.10 Type of violence among new registered cases of OCMC, FY 2081/82

Type of Violence among the total new registered cases	Koshi	Madhesh	Bagmati	Gandaki	Lumbini	Karnali	Sudurpaschim	Nepal
Emotional violence (%)	24.72	41.50	13.16	13.73	16.62	32.60	32.38	27.33
Rape (%)	24.72	6.52	24.32	29.02	12.35	16.54	13.34	15.14
Denial of resources/ opportunities/services (%)	9.16	19.47	9.42	7.45	6.74	11.96	16.65	12.64
Harmful traditional practices (%)	2.37	3.95	0.13	0.52	0.24	1.16	3.44	2.02
Child/forced marriage related violence (%)	0.59	0.33	2.34	1.31	25.67	0.89	2.52	6.38
Physical violence (%)	26.70	19.08	30.79	35.16	33.17	28.30	25.55	27.11
Sexual assault (%)	11.73	9.15	19.84	12.81	5.20	8.54	6.12	9.38

Source: HMIS/DoHS

Types of Services received from OCMC by new cases

OCMC has been providing various services to individuals who suffered from any type of violence. The distribution of One-Stop Crisis Management Center (OCMC) services by new cases across Nepal and its provinces during FY 2081/82 is shown in the table 7.11. With 11,993 cases served nationwide, psychosocial counselling was the most commonly offered service, with Madhesh province rendering highest number of services (2,890 cases). Across the country, physical examination was the second most services offered from OCMC (9,196 cases). Services like, emergency contraceptives services (553 cases), safe abortion services (444 cases), and STI treatment services (422 cases) were the least offered services from OCMC. Likewise, regional differences were recorded among the different services offered from OCMC.

Table 7.11 Services received from OCMC by new cases in FY 2081/82

Particulars	Nepal	Koshi	Madhesh	Bagmati	Gandaki	Lumbini	Karnali	Sudurpaschim
Psychosocial counselling	**11,993**	1,334	2,890	1,189	902	2,511	1,302	1,865
Physical Examination	**9,196**	1,049	820	1,340	683	2,749	724	1,831
Medico-legal service	**3,178**	421	536	557	303	593	329	439
Injury related services	**3,747**	299	657	516	290	1,140	283	562
HIV testing and counselling (HTC)	**3,841**	310	708	439	344	1,300	264	476
Pregnancy test	**2,578**	809	386	334	115	809	295	358
Treatment of mental illness	**1,883**	276	85	252	34	30	506	700
Emergency Contraceptives	**553**	109	72	80	51	105	59	77
STI Treatment	**422**	6	78	81	7	78	54	118
Safe Abortion Service	**444**	47	42	22	24	195	70	44

Source: HMIS/DoHS

Box 7.10 SWOT Analysis of OCMC and GBV Management Program

Strengths	Opportunities
• Legal framework and operational guidelines • Continuous capacity building activities • Integrated services at one location for survivors	• Establishment of good coordination mechanism among all stakeholders who have been involved the case management through OCMC • Integrated supervision and monitoring from other related sectors
Weaknesses	**Threats**
• Frequent transfers and low retention of trained staffs • Limited resources in government hospitals • Inadequate skilled HR • Limited awareness on gender-based violence management among community people. • Low interest on financial support to ocmc from provience and local level • Limited awareness of the availability of OCMC services in hospitals among local-level health workers and FCHVs. • Limited funding for safe homes and rehabilitation service for GBV survivors. • Inadequate readiness of centers per the OCMC establishment and operation guideline	• Perpetrators usually family members or intimate partner so repeated violence occuring • Lack of support faced in re-integrating the survivors back to the families/communities • Funding mechanism is dependent on federal government may affect operation of OCMC upto subnational level

7.3.3 Geriatric (Senior Citizens) Services

7.3.3.1 About the program

Nepal is undergoing a demographic shift, marked by an increase in life expectancy and a growing proportion of elderly individuals within the population. As per the 2078 (2021) census, the country is home to 2.97 million elderly people, representing 10.21% of the total population. Senior citizens are defined by the Senior Citizens Act, 2063 as individuals aged 60 years or older. This definition helps shape the scope and coverage of services aimed at elderly individuals. Health sector is providing at least 50% subsidized cost for allocated services as per the senior citizen act 2063

The Constitution ensures that senior citizens receive special protection and social security from the state. In alignment with this commitment, the National Health Policy 2076, the Fifteenth Plan (2075/76-2080/81), and the Gender Equality and Social Inclusion (GESI) strategy within the health sector emphasize the government's dedication to creating an equitable and inclusive health system. These policies aim to improve elderly citizens' access to quality healthcare services, tailored to their specific needs.

The geriatric health service strategy, 2078/79 – 2087/88 acknowledges that senior citizens are at a higher risk of chronic conditions and multi-morbidities, often accompanied by a decline in functional capacity. It emphasizes the need for health services to address these challenges by considering the specific limitations and requirements of the elderly. The strategy includes both population-based and service delivery approaches aimed at promoting healthy aging.

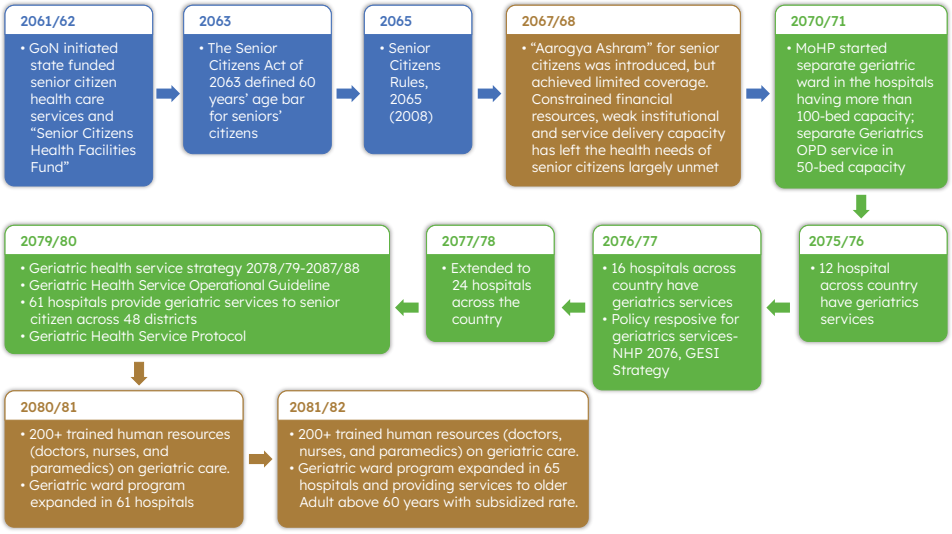


Figure 7.9 Milestone in the geriatric's health services in Nepal

Table 7.12 List of hospitals providing geriatric care across province

Koshi (11)	Madhesh (9)	Bagmati (12)	Gandaki (6)	Lumbini (12)	Karnali (6)	Sudurpashchim (9)
BPKIHS, Sunsari	Janakpur Provincial Hospital, Dhanusha	PAHS, Lalitpur	Damauli Hospital, Tanahu	Rolpa Hospital, Rolpa	Dailekh Hospital, Dailekh	Baitadi Hospital, Baitadi
Koshi Hospital, Biratnagar, Morang	Narayani Hospital, Birgunj, Parsa	NAMS, Bir Hospital, Kathmandu	Pokhara Academy of Health Sciences, Kaski	Bheri Hospital, Banke	Karnali Provincial Hospital, Surkhet	Seti Hospital, Dhangadhi
Mechi Hospital, Bhadrapur, Jhapa	Gaur Hospital, Rautahat	Bharatpur Hospital, Chitwan	Dhaulagiri Hospital, Baglung	Lumbini Provincial Hospital, Rupandehi	Karnali Academy of Health Sciences, Jumla	Dadeldhura Hospital, Dadeldhura
Udayapur Hospital, Udayapur	Gajendra Narayan Singh Hospital, Saptari	Hetauda Hospital, Makwanpur	Gorkha Hospital, Gorkha	Rapti Academy of Health Sciences, Dang	Jajarkot Hospital, Jajarkot	Mahakali Hospital, Kanchanpur
Ilam Hospital, Ilam	Siraha Hospital, Siraha	Kirtipur Burn Center Hospital, Kathmandu	Myagdi Hospital, Myagdi	Prithvichandra Hospital, Nawalparasi	Humla Hospital, Humla	Darchula Hospital, Darchula
Sankhuwasabha Hospital, Sankhuwasabha	Kalaiya Hospital, Bara	National Trauma Center, Kathmandu	Syangjha Hospital, Syangjha	Guleriya Hospital, Bardiya	Kalikot Hospital, Kalikot	Tikapur Hospital, Kailali
Inaruwa Hospital, Sunsari	Sarlahi Hospital, Sarlahi	STIDH, Kathmandu		Pyuthan Hospital, Pyuthan		Bajhang Hospital, Bajhang
Taplejung Hospital, Taplejung	Ram Uma Memorial Hospital, Siraha	Bhaktapur Hospital, Bhaktapur		Palpa Hospital, Palpa		Doti Hospital, Doti
Panchthar Hospital, Panchthar	Bardibas Hospital, Mahottari	Dhading Hospital, Dhading				
Dhankuta Hospital, Dhankuta		Trishuli Hospital, Nuwakot				
Bhojpur Hospital, Bhojpur		Rasuwa Hospital, Rasuwa				
		Dhulikhel Community Hospital, Kavre				
Total **60**						

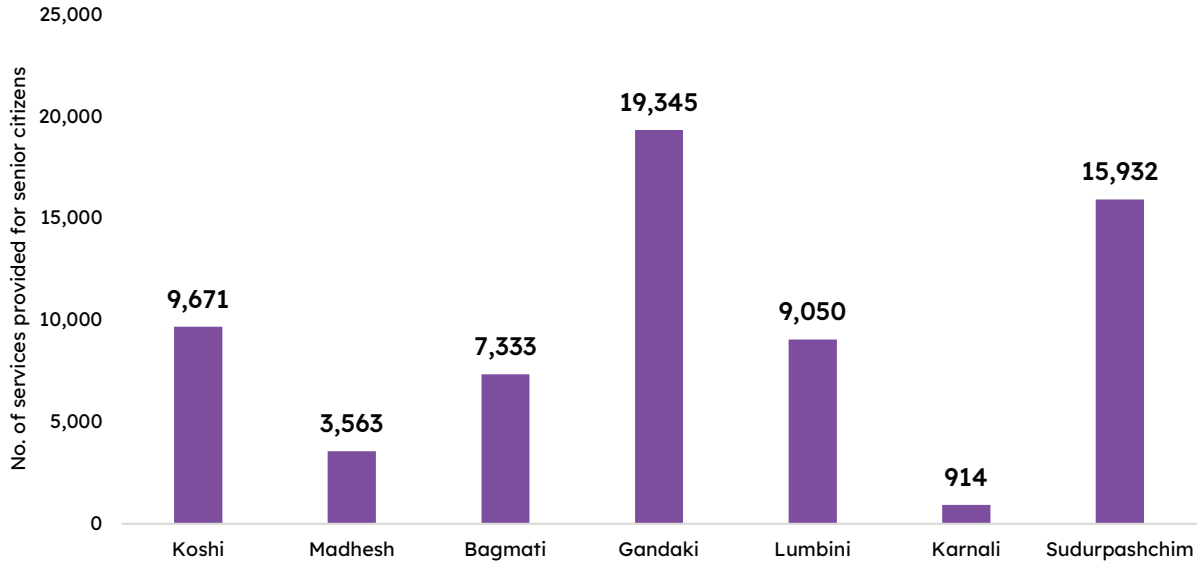
7.3.3.2 Major Activities and Achievements in FY 2081/82 under the Geriatric and Gender based violence management section under Nursing and Social Security Division

- Capacity building for Service provider providing service in the safe home
- Capacity building of health workers on child violence management
- Capacity building of health workers Psychosocial Counselling
- Capacity-building program for health managers on gender-based violence management."
- Capacity-building program for reproductive and mental health promotion targeted at violence survivors in safe homes."
- Orientation on elderly health care for staff working in geriatric care centers.
- Dementia national action plan drafted with provincial consultation.
- To promote healthy aging, develop an integrated program in collaboration with Ayurveda, Yoga, and Naturopathy along with health services."
- Preparation of an awareness package for partner organizations on violence management (gender, children, and senior citizens)"
- NSSD is providing technical services to the 65 Hospital for running of Geriatric services,99 hospital for SSU, 93 Hospital for OCMC services
- Advocacy program is done with Rotary and related stakeholder
- 200+ trained human resources related stakeholder for healthy Aging geriatric care.

7.3.3.3 Key Indicators of Geriatric Services in FY 2081/82

Coverage of the Senior Citizen (Geriatric) Services

In FY 2081/82, a total of 65,808 senior citizen utilized health services. Notably, the coverage of senior citizen health services varied across different provinces. Gandaki province has the highest coverage (19,345 users), while Karnali has the lowest coverage (914 users). figure 7.10)

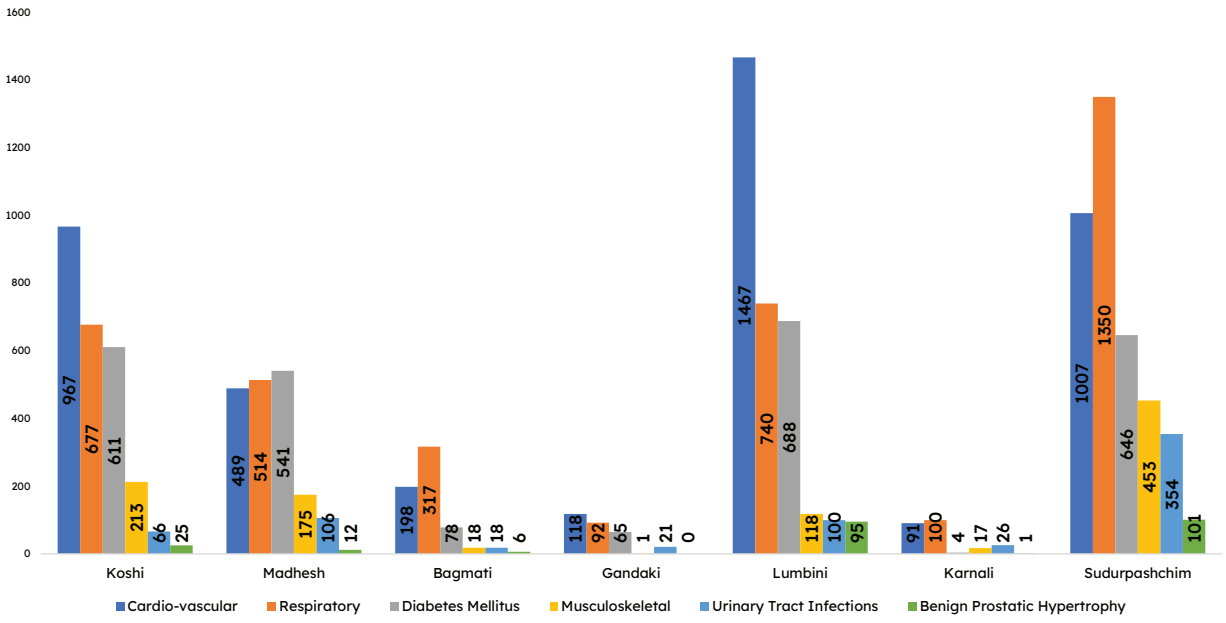


Source: HMIS/DoHS

Figure 7.10 Coverage of Senior Citizen Health Services in FY 2081/82, Total Users (60+) data to be verified

Common Morbidities of Senior Citizens receiving services

The bar graph (figure 7.11) illustrates common morbidities among senior citizens accessing services in Fiscal Year 2081/82 across different province. Each bar represents a province (Koshi, Madhesh, Bagmati, Gandaki, Lumbini, Karnali, and Sudurpashchim), and the colored segments within each bar show the number of senior citizens affected by Cardio-Vascular, Respiratory, Metabolic, Musculoskeletal, Urinary, and Prostate conditions among senior citizens. The graph allows for a visual comparison of the prevalence of each morbidity type across the regions. Sudurpaschim province has the highest number of senior citizens with commmn morbidties among all provinces, while cardio-vascular conditions was the most common morbidity among all other morbidities.



Source: HMIS/DOHS

Figure 7.11 Number of new cases registered for common morbidities among senior citizens in FY 2081/82

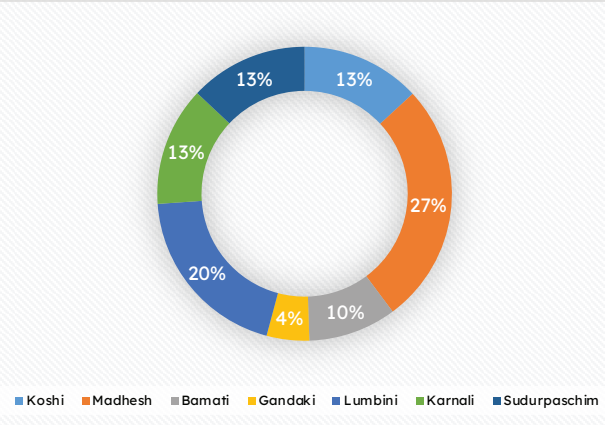
Box 7.11 SWOT Analysis of Geriatric Services

Strengths	Opportunities
• Strengthens continuum of care • Our policies have prioritized geriatric population for access of health care • Budget allocation for geriatric service to increase service access.	• Insufficient allocated budget as per demand of elderly population • Scarcity of skilled human resources trained in geriatric services • Geriatrics friendly health services have not been implemented up to community level
Weaknesses	**Threats**
• Fellowship programs can be initiated to produce geriatric specialized human resources • Integrated supervision and monitoring	• Frequent turnover of the trained staffs • Growing elderly population and increasing geriatric service demand • Lack of Longterm care provision from government site so that privatization is costly service to elderly people.

7.4 Bipanna Nagarik Aushadhi Upachar Program (Impoverished Citizen's Treatment Program)

7.4.1 About the program

The Bipanna Nagarik Aushadi Upachar Kosh (Impoverished Citizen's Treatment Fund) was launched in FY 2066/67 BS to enhance healthcare accessibility for marginalized populations. The program aims to support impoverished individuals undergoing treatment for selected chronic diseases. Its guidelines, formulated and implemented in 2067 BS under the title "Bipanna Nagarik Aushadhi Upachar Kosh Nirdeshika," have since undergone multiple revisions. Ministerial-level approval was granted in 2075 BS, with further updates in 2076 BS, 2077 BS and 2080 BS, and named as "Bipanna Nagarik Aushadhi Upachar Karyakram Sanchalan Nirdeshika, 2080".



Source: NMICS, 2019

Figure 7.12 Estimated proportion of poor people across the province

The guidelines enlist empanelled health facilities where eligible individuals can access treatment for conditions covered by the fund. The program primarily focuses on providing financial assistance for the treatment of eight critical diseases: kidney disease, heart disease, cancer, head injuries, spinal injuries, Parkinson's, Alzheimer's, and sickle cell anemia. By partnering with designated hospitals, the initiative seeks to ensure that impoverished Nepalese citizens receive essential medical care for these conditions.

Scheme of Bipanna Nagarik Aushadi Upachar Program

Table 7.13 Scheme of Bipanna Nagarik Aushadhi Upachar Kosh Nirdeshika, 2080

S.N.	Diseases	Details	Scheme Amount (Rs)
1	Kidney disease	Kidney transplant	Up to 4 lakhs
		Acute Glomerulonephritis, Nephrotic syndrome, Acute kidney injury	Up to 1 lakh
		Medicine after kidney transplant	Up to 1 lakh
		Human Leukocyte Antigen (HLA cross-match) of organ donor and recipient	50 thousand (maximum)
		Haemodialysis (up to 2 sessions in a week or as per the prescription of treating doctor if session is to be increased)	2500 (per session)
		Haemodialysis of seropositive patients	4000 (per session)
		Peritoneal dialysis (maximum 90 packets per patients, or maximum of 120 packets as per the prescription of treating doctor (regular update of prescription in 3 months, mandatory)	501 (per packet)

S.N.	Diseases	Details	Scheme Amount (Rs)
2	Heart diseases	a. Aortic surgery b. Placement of pacemaker and stent, ablation, complete damage of heart valve or treatment of heart failure	Up to 1 lakh
3	Cancer	Surgery of different types of cancer, chemotherapy, radiotherapy, medicine and medical products, bed and laboratory charges	Up to 1 lakh
4	Parkinson's	Medicine and medical products, bed and laboratory charges	Up to 1 lakh
5	Alzheimer's	Medicine and medical products, bed and laboratory charges	Up to 1 lakh
6	Spinal injury	Surgery, medicine and medical products, diagnostic services, bed charges including rehabilitative services	Up to 1 lakh
7	Head injury	Surgery, medicine and medical products, diagnostic services, bed charges including rehabilitative services	Up to 1 lakh
8	Sickle cell anaemia	Surgery, medicine and medical products, laboratory services and bed charges	Up to 1 lakh

7.4.2 Key Service Indicators

Number of Listed Hospitals

A total of 147 health facilities is enlisted to provide various medical services under Bipanna Nagarik Aushadhi Upachar Karyakram in FY 2081/82.

Number of listed hospitals by type of 8 disease

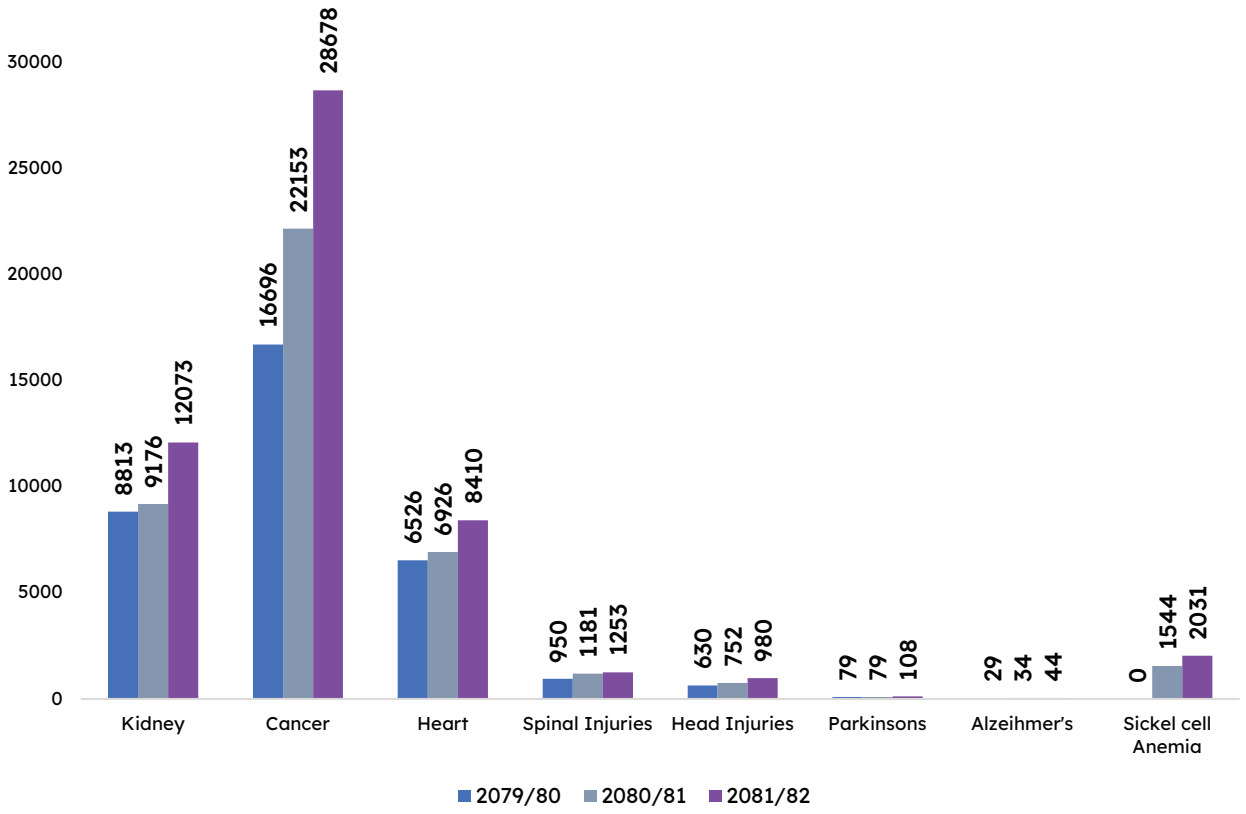
A total of 119 hospitals provide haemodialysis services, making it the most widely available specialized service. As of FY 2081/82, haemodialysis services are provided in 47 districts and will be gradually scaled up in remaining 30 districts. Continuous Ambulatory Peritoneal Dialysis (CAPD) services are accessible in 13 hospitals, and kidney transplants services are provided by 7 hospitals. Twenty-eight hospitals provide treatment for heart disease, and 34 hospitals are listed for cancer treatment. Additionally, 16 hospitals are listed for Sickle Cell Anomia services. Likewise, the hospitals enlisted according to province is shown in table 7.14. From the listed hospitals, patients can avail the schemes according to "Bipanna Nagarik Aushadhi Upachar Kosh Nirdeshika, 2080.

Table 7.14 Enlisted healthcare institutions by province

Provinces	Haemo dialysis	Perit oneal Dialysis	Sero positive dialysis	Kidney Trans plant	Acute Kidney Infections/ Medicines and Treatment	Can cer	Heart Dise ases	Head Injury	Spinal Injury	Alzhe imer's	Parkin son's	Sickle cell anaemia
Koshi	16	2	1	1	1	5	5	7	7	4	4	0
Madhesh	14	0	0	0	0	0	2	2	2	0	0	0
Bagmati	48	8	3	3	6	25	15	17	19	10	10	5
Gandaki	17	2	1	1	0	2	2	4	4	0	0	1
Lumbini	17	1	3	1	0	1	3	3	3	1	1	6
Karnali	2	0	0	1	0	1	1	2	2	1	1	1
Sudurpaschim	4	0	1	0	0	0	0	0	0	0	0	4
Total	**119**	**13**	**9**	**7**	**7**	**34**	**28**	**35**	**37**	**16**	**16**	**17**

Number of patients receiving free treatment

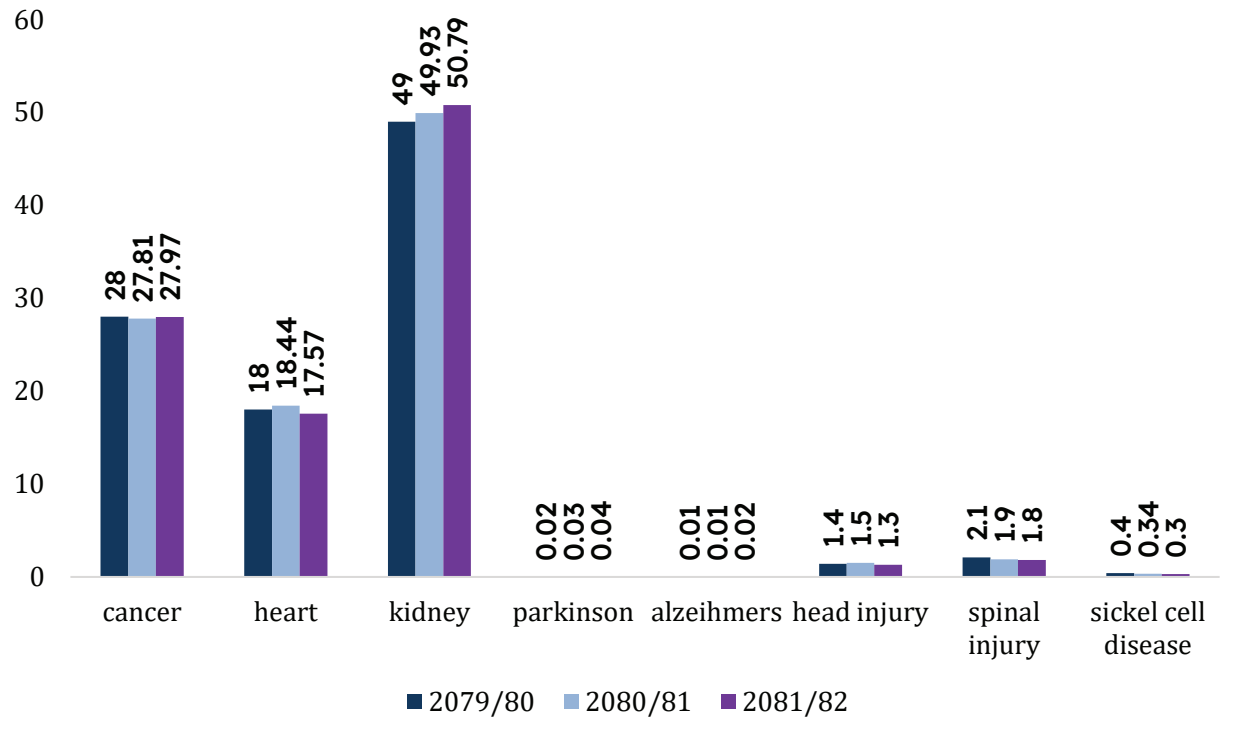
A total of 53,228 patients received free treatment under the Bipanna Nagarik Aushadhi Upachar Karyakram in FY 2080/81 of which Cancer patients were highest (28,678 patients) and lowest were Alzheimer's patients (44 patients). The number patients receiving free treatment showed an increasing trend from FY 2079/80 to FY 2081/82. (figure 7.13)



Source: NSSD

Figure 7.13 Number of patients receiving free treatment in FY 2079/80 to 2081/82

A total of Rs. 4,428,768,510 (NPR 4.42 billion) was spent to provide free treatment for the patients under the Bipanna Nagarik Aushadhi Upachar Karyakram in FY 2081/82. Majority of the funds were utilized by Kidney patients (50.79%) and lowest by Alzheimer's patients (0.02%). There were not much differences in the proportion of funds utilized by the patients in all three FYs from 2079/80 to 2081/82. (figure 7.14)



Source: NSSD

Figure 7.14 Fund Utilized by the people received treatment with targeted chronic diseases from FY 2079/80 to FY 2081/82

Box 7.12 SWOT Analysis of Bipanna Nagarik Aushadhi Upachar Program

Strengths	Opportunities
• Provide treatment for listed 8 chronic-. diseases to target population • Reduce financial burden to underprivileged citizen • Increase access to treatment facility as well as number of living years of patient with chronic kidney disease (CKD) and other diseases. • Improve quality of life under peritoneal dialysis patients • Participation of both public and private sectors in this program.	• Intergovernmental and inter-sectoral coordination • Advancement of treatment • Additional incentives being provided by some local and provincial governments to the target population • Strengthening of Continuous Ambulatory Peritoneal Dialysis service • Expansion of hospitals for renal transplant services in each province under bippana program
Weaknesses	**Threats**
• Insufficient fund / budget to treat listed disease among the targeted population. • Limited human resources for supervision of the program • Lack of awareness about the program to general people • Inadequate supervision and monitoring of the program • Delay in receiving reimbursement cost • Service provider hospitals are unevenly distributed across provinces, concentrated in Bagmati and scarce in madesh, Karnali and Sudurpashchim. • Insufficient awareness of peritoneal dialysis among the patients undergoing haemodialysis • Program is more focused on treatment rather than prevention. • Lack of per unit treatment cost of each diseases listed in bipanna program	• Quality assurance of service provided through listed hospitals • Sustainability in long term due to increase NCD • Treatment of kidney patients accounts for almost 50% of total budget expenditure. • Limited willingness of kidney patients to transition from haemodialysis to CAPD or transplantation • Government hospitals are not able to fulfil the standard as per the checklist to provide the listed services like cardiac and head and spine services in periphery leading to unavailability of the mentioned services to bippana Nagarik.

7.5 Other SSU Programs

7.5.1 Free Treatment for the Injured Person of Janayuddha, Jana-andolan, Terai/Madhesh Andolan, Earthquake, and Victims of Conflicts.

Exercising the authority granted by section 64 of the Public Health Service Act, 2075, GoN has developed the operating procedures for Reimbursing to Hospitals for providing services to Treatment of Victims of Janayuddha, Jana-andolan, Terai/Madhesh Movement, Earthquake and Victims of Conflicts. According to this operating procedure, the government annually allocate the budget for reimbursement to the hospitals for the medical treatment of those victims in Nursing and Social Security Division.

The procedures have following provisions regarding medical treatment:

- The injured person will have to get medical treatment at government/community hospitals within the country
- The Government of Nepal will reimburse the expenses incurred for medical treatment of the injured person on the basis of certified bills to the concerned hospital without any duplication.
- While requesting reimbursement for medical treatment provided to the injured person, the hospital shall submit a report in the format as per the operating procedure annex-1 to the Nursing and Social Security Division with following documents enclosed
    - o Application in the format as per operating procedure annex-2
    - o A letter of recommendation from the Ministry of Health and Population for medical treatment of the injured or an identity card revealing the identity of the injured or a letter of recommendation from the District Administration Office or the Ministry of Home Affairs
    - o A certified bill from the director of the hospital.
- The treatment expenses shall be reimbursed in such a manner that the service fee rate of the concerned hospital does not exceed the rate determined by the health insurance program
- NSSD analysed, and verified the report, then submit to the Payment Recommendation Committee for reimbursement based on the committee's decision, the division will reimburse the amount to the concerned hospital."

7.5.2 Treatment for Victims of Acid Attack

The MoHP has endorsed the procedure for treatment of Acid-Attack victims, 2078 which serves as a guidance to implement the provision of free treatment of acid-attack victims in Nepal. This procedure has enlisted four hospitals in the Kathmandu valley as dedicated hospitals for the treatment of acid-attack victims and they will provide treatment free of cost to the victims. However, the cosmetic-related treatment is not covered under this procedure. The four dedicated hospitals for treatment of acid-attack victims are:

- Tribhuvan University Teaching Hospital, Kathmandu
- Bir Hospital, Kathmandu
- Kirtipur Hospital, Kirtipur, Kathmandu, and
- Patan Hospital, Lalitpur

7.6 Major Accomplishments/ Highlights of Social Health Security in FY 2081/82

- The Bipanna Nagarik Aushadhi Upachar Program's software has been upgraded to improve functionality and efficiency.
- Capacity Building to nursing staff on haemodialysis service for 1 batch
- To expand Continuous Ambulatory Peritoneal Dialysis services and improve access for patients undergoing peritoneal dialysis, a training was provided with the National Health Training Center. (7-day training was conducted for 9 medical officers, and a 12-day training was conducted for nursing personnel.)
- FY 2081/82, DoHS has reimbursed to Bir Hospital and the National Trauma Center for medical treatment provided to the injured of the People's War, People's Movement, Madhesh/Terai Movement, conflict victims, and earthquake-injured individuals.

8 Non-Communicable Diseases and Mental Health Programs

EDCD | NCD and Mental Health Section

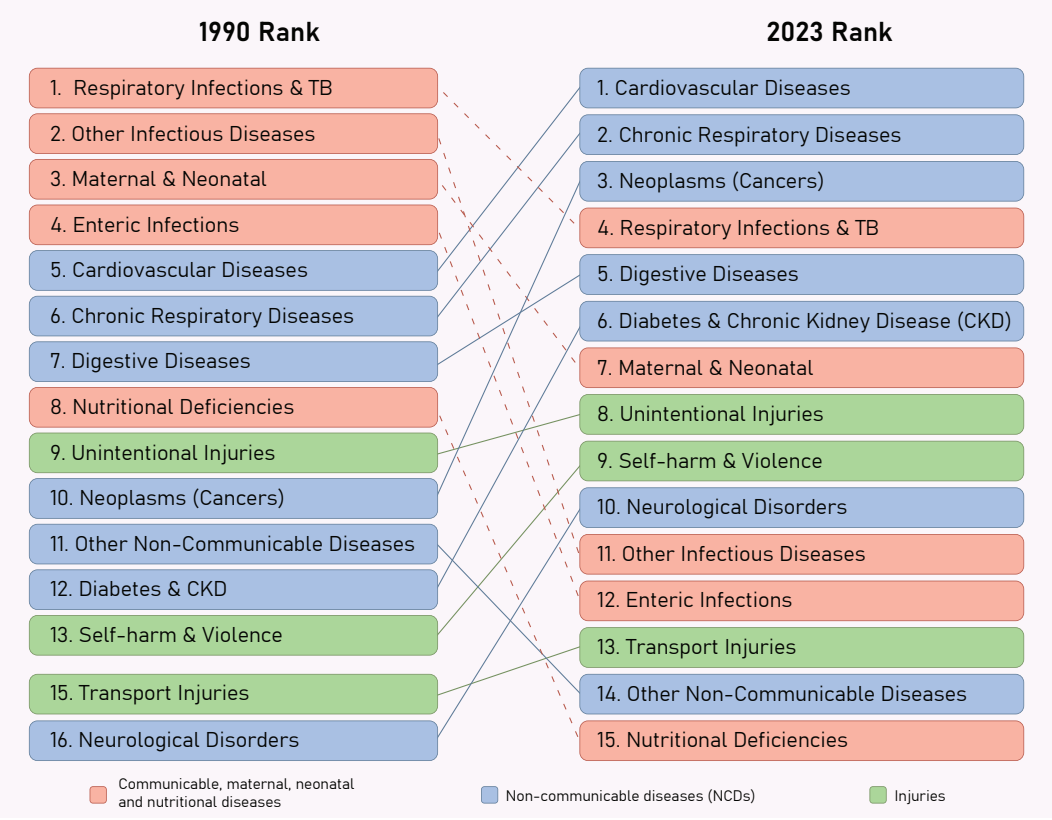
8.1 Non-Communicable Diseases Prevention and Treatment Programs

8.1.1 About the program

Trends of burden of diseases in Nepal

Non-communicable diseases (NCDs) have remained the leading cause of morbidity and mortality in Nepal for past decades. In 2023, NCDs accounted for 70.2% of total deaths, representing an increase from 66.87% in 2019. Among NCDs, cardiovascular diseases (CVDs) were the leading cause, contributing to 27.36% of total deaths, followed by chronic obstructive pulmonary disease (COPD) at 15.97%, and neoplasms at 9.47% in 2023. Similarly, NCDs were responsible for 62.05% of the total disability-adjusted life years (DALYs), indicating a substantial burden on population health. Of the total DALYs, cardiovascular diseases accounted for 14.11%, COPD for 7.37%, and cancers for 5.64%. These findings highlight the significant and growing impact of NCDs on mortality and overall disease burden in Nepal[1].

Figure 8.1 illustrates the epidemiological transition in Nepal between 1990 and 2023, showing a clear shift in the pattern of disease burden, with NCDs emerging as the leading causes of death. In 1990, infectious diseases, particularly respiratory infections and tuberculosis, were the predominant contributors to morbidity and mortality. However, by 2023, cardiovascular diseases, chronic respiratory diseases, and neoplasms had become the principal causes of both morbidity and mortality.



Source: IHME GBD data visualization

Figure 8.1 Percent of death 1990 to 2023

1 Institute for Health Metrics and Evaluation (IHME). 2023. Global Burden of Disease (GBD) Compare – Nepal.

Factors contributing to this rising burden include increasing life expectancy, demographic and epidemiological transitions, rapid urbanization, and lifestyle changes[2]. The growing disease burden has been linked to a decline in quality of life, an increase in Disability-Adjusted Life Years (DALYs), and catastrophic health expenditures. STEPS surveys (2008 vs. 2019) show a rise in insufficient physical activity (3.5% to 6.5%), high blood sugar (3.6% to 8.5%), and elevated BMI (17.1% to 24.3%) among adults. (fig. 8.2).

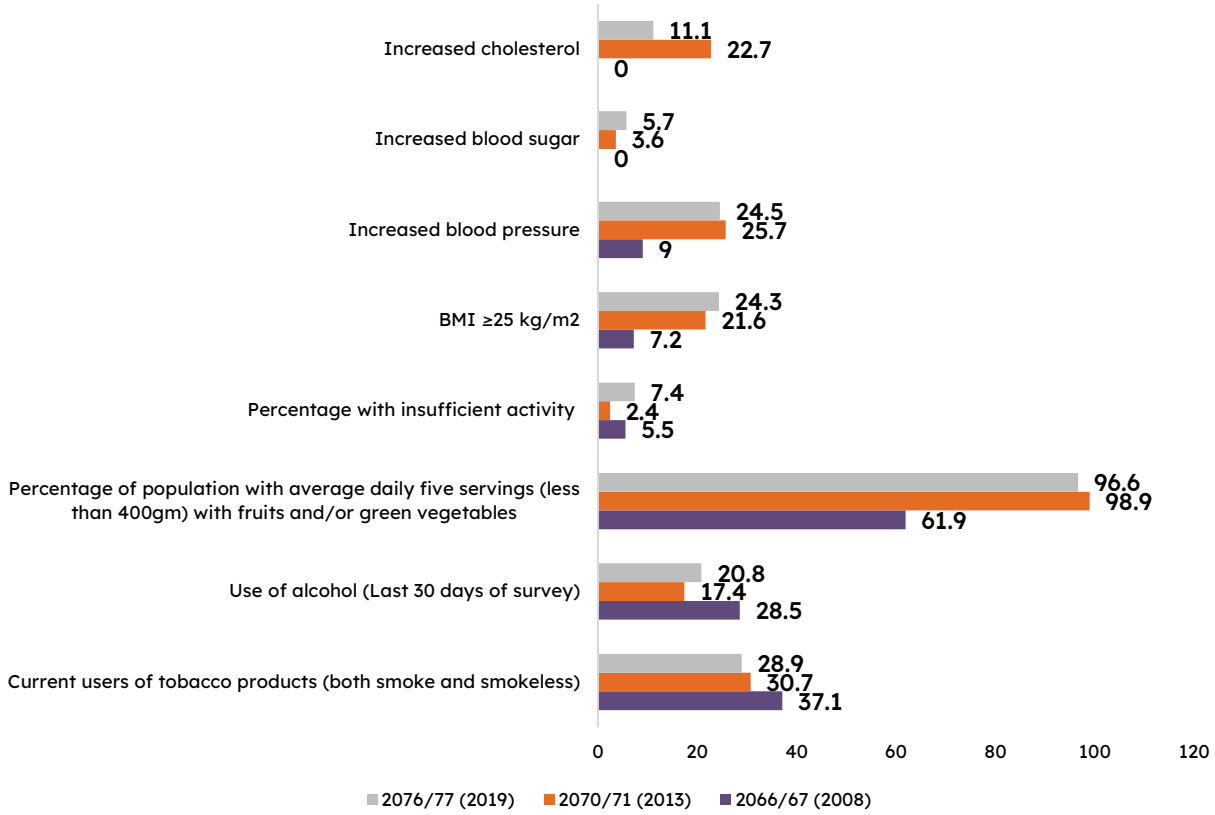


Figure 8.2 Risk factors of NCDs among the adult population in Nepal, STEPS Survey

Healthcare Expenditure on Non-Communicable Diseases (NCDs)

Non-communicable diseases (NCDs) accounted for the largest share of health expenditure in Nepal. In FY 2019/20, Nepal spent NPR 64,414.2 million on NCDs, representing 31.5% of total national health expenditure. The highest spending was on sense organ disorders (NPR 13,963.3 million; 6.9%) and digestive diseases (NPR 12,988.4 million; 6.4%), followed by cardiovascular diseases (NPR 7,113.4 million; 3.5%) and diabetes (NPR 827.8 million; 0.4%). Bagmati Province had the highest NCD expenditure (NPR 17,958.6 million; 33.5%), while Karnali Province had the lowest (NPR 4,774.5 million; 31.2%).

NCDs also constituted the largest share of household out-of-pocket (OOP) health expenditure, accounting for 40.3% in FY 2019/20, an increase from 38.8% (NPR 99.3 billion) in FY 2018/19 to 40.3% (NPR 199.7 billion) in FY 2019/20. In comparison, injury-related OOP expenditure accounted for 13.0% and 11.7% during the same period. This trend highlights the substantial and growing financial burden of NCDs on households and underscores the need for strengthened prevention and financial protection measures[3].

Multi-sectoral Action Plan for the Prevention and Control of Non-Communicable Diseases

The Non-Communicable Disease (NCD) and Mental Health Section was established within the Epidemiology and Disease Control Division (EDCD) to manage the escalating national burden of noncommunicable diseases, mental health conditions, and injuries. Formal institutionalization of this section was anchored by the Multisectoral Action Plan (2014–2020). Since then, the section has evolved to integrate mental health services with the prevention and control of major NCDs—including cardiovascular diseases, cancer, diabetes, and chronic respiratory diseases. The section provides comprehensive support to the Ministry of Health and Population (MoHP) in the formulation of national laws, policies, and evidence-based strategies for the management of non-communicable diseases (NCDs). A core mandate of the program involves the development of clinical standards, protocols, and guidelines to ensure the quality of services for cancer, diabetes, cardiovascular diseases (CVDs), and chronic respiratory diseases across all tiers of health institutions. Operationally, the section facilitates the preparation and implementation of federal-level annual work plans while providing critical coordination and technical support to provincial and local governments

2 Noncommunicable Disease Risk Factors: STEPS Survey Nepal 2019
3 Nepal National Health Accounts 2019/20, 2023. Ministry of Health and Population

for the decentralized management of NCDs and mental health conditions.

Beyond policy drafting, the section plays a pivotal role in strengthening the health system's supply chain and human resource capacity. This includes facilitating the procurement and logistics management of essential medicines and medical equipment, as well as coordinating specialized training and information management activities. Furthermore, the program is responsible for promoting healthy lifestyles through behavior change communication (BCC) and overseeing the social rehabilitation of individuals with mental health concerns. At the national level, the section ensures accountability and continuous improvement by conducting robust monitoring, evaluation, and multisectoral research, including surveillance and surveys, to track the evolving burden of NCDs in Nepal. The Multi-sectoral Action Plan (MSAP) for the Prevention and Control of Non-Communicable Diseases (2021–2025) (Box: 1) serves as a overall framework for its initiatives through a "whole of government" and "whole of society" approach. Its overarching target is to reduce premature death from major NCDs by 25% by 2025 and by one third by 2086/87 (2030).

Box 8.1 Key Components of Multi-sectoral Action Plan (MSAP) for the Prevention and Control of Non-Communicable Diseases (2021–2025)

Vision

A non-communicable disease–free, healthy, and productive population.

Mission

To reduce the suffering and premature mortality caused by non-communicable diseases through their prevention and control, thereby improving the quality of life of the Nepalese people.

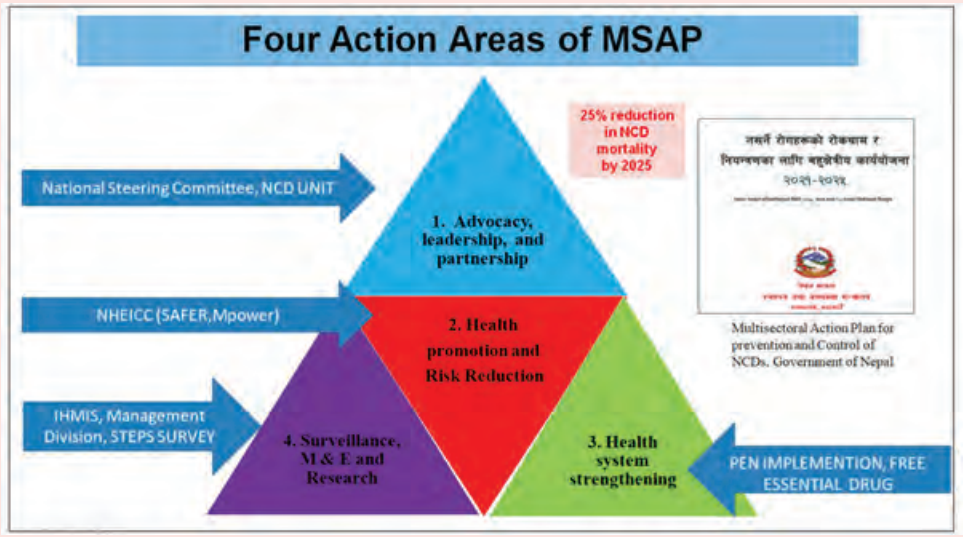
Goal

To reduce the burden of non-communicable diseases by adopting the policy of "Health in All Policies."

Objectives

- To reduce the risk factors of non-communicable diseases and address the underlying social determinants across various sectors.
- To strengthen a citizen-friendly health system for the effective prevention and control of non-communicable diseases.
- To establish a monitoring, evaluation, and surveillance system to support evidence-based policies and programs.
- To develop mechanisms for effective monitoring and collaborative supervision.

Action Areas



8.1.2 Key programs for management of NCDs and Major Activities for FY 2081/82

8.1.2.1 Nepal PEN program

The Package of Essential NCDs (PEN) and HEARTS* toolkit enhances fairness and effectiveness in primary healthcare for limited-resource settings, identifying essential technologies, medications, and risk prediction tools. It outlines protocols for implementing key interventions for NCDs and establishes a technical and operational framework for integrating these interventions into primary care, evaluating their impact. WHO PEN, a cost-effective package for low-resource settings, strengthens health systems by offering prioritized interventions, optimizing limited resources, and empowering primary care through user-friendly tools. The PEN program is currently running across all seven provinces and 77 districts of Nepal.

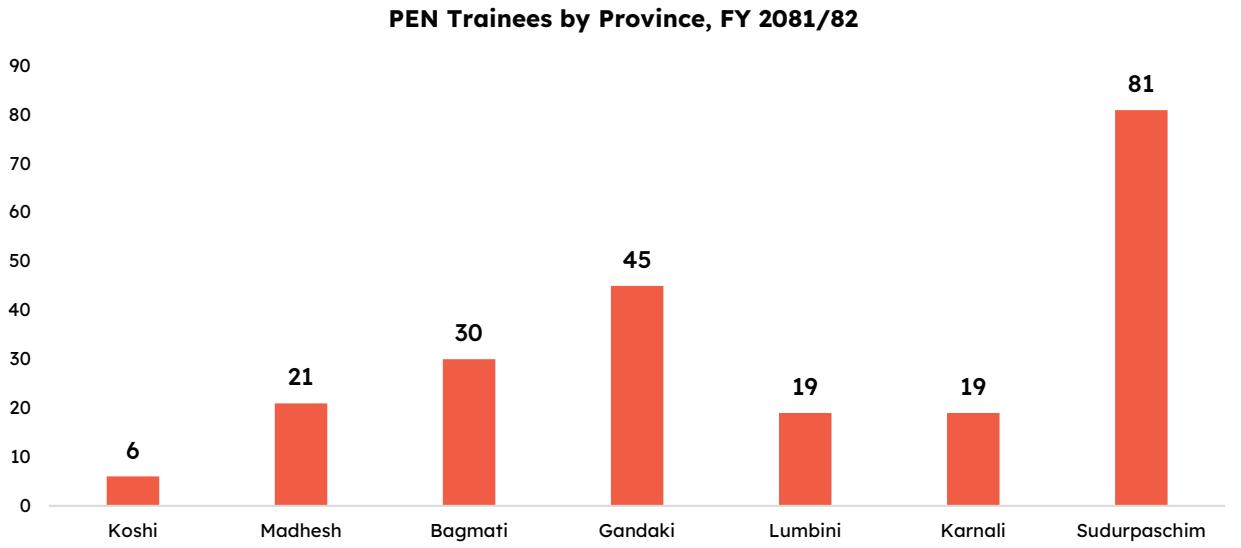
*H= Healthy-lifestyle counselling, E= Evidence based protocols, A= Access to essential medicines and technologies, R= Risk based CVD management, T= Team based care, S= Systems for monitoring.

Under the Nepal PEN program, capacity-building of primary health-care providers continued across provinces to support standardized NCD risk assessment and management at service delivery points. PEN trainings reached 777 providers in FY 2079/80, increased to 690 in FY 2080/81, and 221 in FY 2081/82, reflecting phased scale-up. (Table 8.1) In FY 2081/82, the distribution indicates continued nationwide implementation with higher training volume in Sudurpaschim and Gandaki provinces during the reporting year. (Figure 8.3)

Table 8.1 PEN Trainings by Fiscal Year

Fiscal Year	Number Trained
2079/80	777
2080/81	690
2081/82	221

Source: EDCD/DoHS



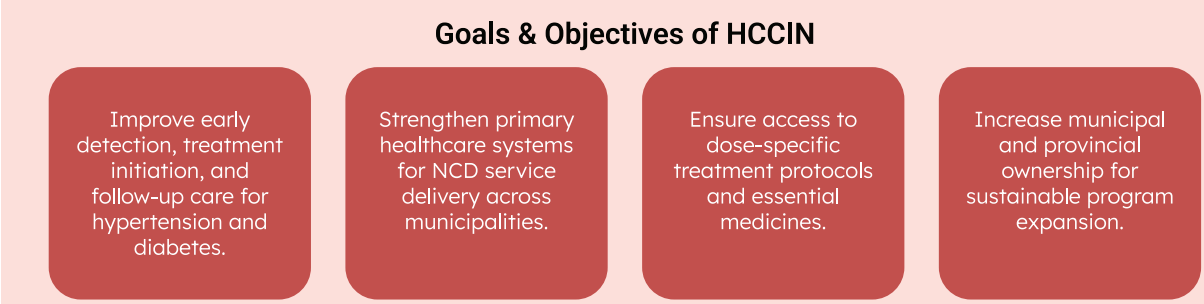
Source: EDCD/DoHS

Figure 8.3 PEN Trainees by Province, FY 2081/82

8.1.2.2 Hypertension Care Cascade Initiative Nepal (HCCIN)

Hypertension is a major public health concern in Nepal, affecting over 25% of the adult population. The Hypertension Care Cascade Initiative Nepal (HCCIN) was launched to improve the screening, treatment, and follow-up of hypertension and diabetes patients. The HCCIN is a multi-sectoral, data-driven initiative that aims to bridge the treatment gap and improve hypertension care at the grassroots level in Nepal. This initiative is designed to strengthen primary healthcare services by ensuring protocol-based treatment, workforce capacity-building, and sustainable local ownership. The MoHP launched the HCCIN in Jestha 2080 (May 2023), starting from Kavrepalanchok, with support from NORAD and WHO. This initiative enhances hypertension identification and management at the primary healthcare level and involves academia and health institutions. The Government of Nepal aims to provide hypertension and diabetes treatment to 1.5 million people by 2025. The program includes screening, diagnosis, treatment, and follow-up using evidence-based protocols, along with peer coaching, supportive supervision, clinical mentoring, and an e-health strategy to strengthen services.

Box 8.2 Goals and objectives of HCCIN



Box 8.3 Key Activities and Achievements of HCCIN (2081/82)

Coverage Expansion	• Implemented in 51 municipalities of 10 districts, and around 500 health facilities. • Over 40,000 patients enrolled in protocol-based hypertension management.
Health Worker Capacity-Building	• 1100 health workers trained on the standardized hypertension care protocols, the HCCIN program.
Local Ownership and Commitment	• Mayors in multiple districts signed commitment declarations to sustain the initiative through local resources.
Improved Patient Retention and Service Delivery	• Follow-up rates exceeded 60% in key districts. • Control rates exceeded 50% in key districts. • Enhanced medicine supply coordination with local and provincial governments.
Supervision, Monitoring, and Digital Innovation	• Regular supervision and monitoring visits conducted in Kavre, Ilam, and other districts. • Digital dashboard developed for real-time program tracking and data visualization.
Targets for the Coming Year	• Expand HCCIN coverage to additional districts and municipalities. • Strengthen digital data reporting and integrate it into the national health information system. • Achieve a 70% follow-up rate for enrolled patients • Achieve a 60% control rate for enrolled patients • Ensuring adequacy of drugs in the health facility for enrolled patient throughout the year. • Further enhance local government engagement for long-term sustainability.

8.1.2.3 PEN-Plus Program in Nepal

The Ministry of Health and Population, in collaboration with the Kathmandu Institute of Child Health (KIOCH), with technical and financial support from the NCDI Poverty Network and UNICEF Nepal, launched the PEN-Plus program in Jhapa, Bardiya, Dailekh, Bajhang, Gulmi, and Siraha districts. The program addresses the gap between chronic care services and the needs of underserved children and young adults. This integrated health service model bridges primary and tertiary care, improving access to quality capacity building through PEN-Plus training, 63 doctors trained across various sites. chronic care for severe NCDs at district hospitals. It focuses on conditions such as Type 1 Diabetes, Rheumatic Heart Disease, Congenital Heart Disease, Childhood Asthma, Hemoglobinopathies, Cancers, and Neurodevelopmental Disorders. The PEN-Plus initiative strengthens district hospitals by training healthcare providers, providing necessary equipment, and offering social support to patients. It aims to enhance treatment accessibility at the district level, reduce caseloads at tertiary hospitals, and contribute to Universal Health Coverage (UHC) and the Sustainable Development Goals (SDGs). In FY 2080/81, 63 doctors were trained across various sites. In FY 2081/82, 15 medical officers and 82 health care professionals were trained in various sites. (Table 8.2)

Table 8.2 PEN-Plus Sites with details of PEN-Plus training

Master Training of Trainers			
FY 2080/81	**Number of medical officers**	**FY 2081/82**	**Number of medical officers**
Gulmi District Hospital	13	Madhesh Institute of Health Sciences	5
Health Service Office, Dailekh	7	Provincial Hospital Surkhet, Karnali Province	5
Bajhang District Hospital	8	Lumbini Provincial Hospital, Lumbini	3
Damak Hospital	15	Dadeldhura Hospital, Dadeldhura	1
Bardiya Hospital, Gulariya	9	Seti Provincial Hospital	1
Province Hospital, Lahan	7	**Total**	**15**
Dolakha Hospital (Training site)	4	**Mid-Level Health Care Orientation**	**Number**
		Bajhang	39
		Gulmi	43

Source: EDCD/DoHS

Case findings and enrollment at PEN-Plus clinics:

Severe NCDs diagnosed and enrolled in clinics. The clinics began in Damak and Bardiya in February 2023, and expanded to four more sites in June 2024.

Table 8.3 Details of case findings and enrollment at PEN-Plus Clinics in 2081/82

Particulars		Bardiya	Damak	Bajhang	Gulmi	Lahan	Dailekh
Endocrinology	T1 DM	6	10	3	5	8	2
	T2 DM under insulin	102	290	13	46	23	10
Cardiology	HTN with end-organ damage	17	61	4	2	2	7
	RHD	13	39	14	12	4	12
	CHD	13	12	9	3	5	5
	IHD		64	2	5		18
	Cardiac Others	41	47	7			8
Hemoglobinopathies	Sickle cell disease	45	18				
	Thalassemia	5				15	
Respiratory	Childhood Asthma	41	44	7	2	23	2
	COPD (GOLD Group E)	26	48	104	72	53	51
Neurodevelopmental	Epilepsy			7	7	9	10
	Autism	18	2	1	1	3	2
	Other			8	7	22	1 (ID-18) Lahan
Oncology	Cancer		1				
Total Patients		**327**	**636**	**179**	**162**	**167**	**128**
New Cases diagnosed and enrolled at PEN-Plus Clinic 81/82							

Source: EDCD/DoHS

8.1.2.4 NCD Screening Month Campaign

During FY 2081/82, EDCD prioritized integrated prevention, early detection, and management of non-communicable diseases (NCDs) through nationwide screening and strengthened primary care services. A one-month community-based NCD screening campaign was implemented across all local levels during the month of Falgun, targeting adults aged 30 years and above for hypertension, diabetes, chronic kidney disease, and body mass index (BMI) assessment. Screening was conducted through health facilities and outreach services with referral linkages to higher-level centers for confirmation and treatment according to national protocols, including PEN and standard treatment guidelines. The program emphasized risk-factor reduction—tobacco and alcohol control, healthy diet, salt reduction, and physical activity—through community awareness and household engagement. Monitoring and reporting were carried out through local, provincial, and federal coordination mechanisms to assess coverage and outcomes and guide program improvement.

8.1.2.5 Implementation of National Cancer Control Strategy (2024-2030)

The National Cancer Control Strategy (NCCS) envisions progressively reducing the cancer burden and mortality in Nepal while improving the quality of life for cancer patients. For effective control of cancer, the preventive, promotive, and management aspects of cancer will be made accessible and affordable to the population through collaboration with various stakeholders and will be integrated into social, economic, and environmental ecosystems. The mission of NCCS is to strengthen cancer control by building adequate capacity in primary prevention, early detection, diagnosis, treatment, and palliative care for equitable cancer services, so that all people with cancer are cared for within a supportive and caring environment in a holistic approach, which is cost-effective and efficient. The strategy outlined in this NCCS 2024-2030 takes into account the existing cancer care scenario, which is lacking in almost all areas of care, and aims to fill in the gaps with early and long-term interventions as needed. The nine key strategies are outlined below. During FY 2081/82, provincial-level orientation on the strategy was conducted in selected provinces to support subnational implementation and capacity strengthening.

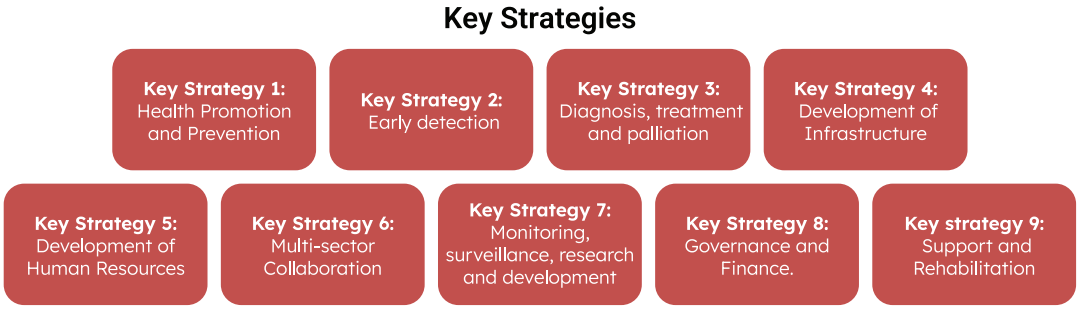


Figure 8.4 Key strategic action areas of the National Cancer Control Strategy

8.1.3 Key NCD prevention and treatment service indicators

Service utilization of NCDs

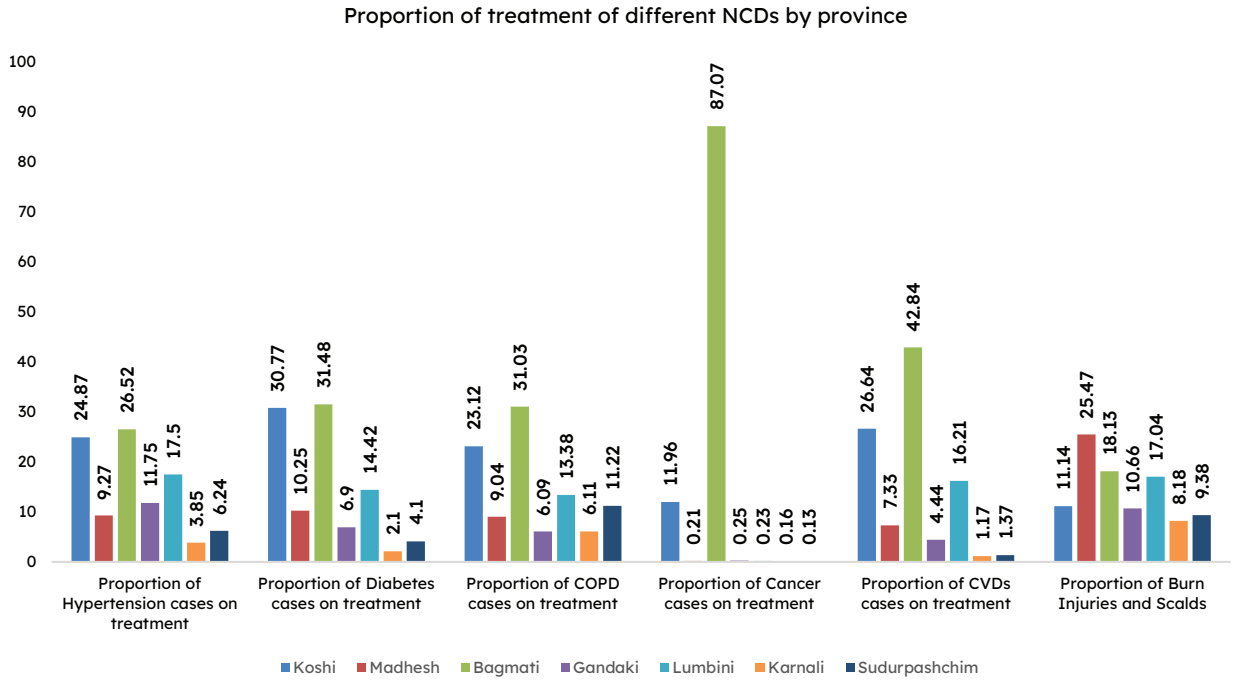
In FY 2081/82, a total of 16,81,953 patients of hypertension, 8,00,726 with diabetes, 3,25,135 with COPD, 98,080 with cancer, 42,825 with CVDs, and 79,630 cases of Burn Injury and Scalds were on treatment for NCDs. The comparative analysis of the three-year trend is described in the table 8.4.

Table 8.4 Number of NCD cases in last three fiscal years

NCD PROGRAM	2079/80 (2022/23)	2080/81 (2023/24)	2081/82 (2024/25)
Number of Hypertension cases on treatment	630,299	1,145,926	1,681,953
Cases of Diabetes Mellitus	312,370	584,352	800,726
Cases of COPD	185,857	259,110	325,135
Cases of Cancer	67,384	97,387	98,080
Cases of Cardiovascular Disease	19,270	30,330	42,825
Cases of Burn Injury and Scalds	79,567	80,698	79,630

Source: HMIS

The highest proportion of cases among the total reported cases was seen in Koshi and Bagmati province while Karnali province reported the lowest proportion of NCDs. The details of the proportion of treatment of different NCDs by province are given in Figure 8.5.



Source: HMIS/DoHS

Figure 8.5 Service utilization for common NCDs

Box 8.4 SWOT analysis of programs for management of NCDs

Strengths	Opportunities
• NCDs services accessible at grassroots level. • Prioritized capacity building activities, including the private sectors with a database for training. • Immediate planning to address issues of provincial and national review. • Effective communication and collaboration among supporting partners. • Increased participation of NGOs, INGOs working in NCD and Mental health in the national program. • Regular meetings of steering, coordination, and technical committees.	• Resource mobilization, partnerships, and collaboration with local government and new partners. • Increased collaboration and coordination among all three tiers of government. • Public-Private Partnership initiatives.
Weaknesses	**Threats**
• Inadequate institutional setup and human resources. • Poor retention of trained human resources. • Insufficient training for newly recruited health workers and lack of refresher trainings. • Inadequate and lack of timely supply of medicine, instrument and equipment.	• New NCDs are emerging, which are not incorporated at all tiers of government. • Rising and new risk factors of NCDs • ragmented priorities due to emerging and re-emerging diseases and epidemiological transition. • Climate change

8.2 Mental Health Programs

8.2.1 About the program

Trends and Burden of Disease in Nepal

Mental health conditions have become a significant and increasing contributor to the overall burden of disease in Nepal, with rising prevalence across population groups in recent years. Around 10% of the adult population experienced a mental disorder at some point in their lifetime, and 4.3% were living with a mental disorder at the time of the survey. Suicidality was found to be a significant concern, with 7.2% of individuals reporting suicidality, 6.5% experiencing current suicidality, 1.1% having attempted suicide in their lifetime, and 0.3% identified at risk for future attempts[4]. The proportion of DALYs attributable to mental disorders has increased significantly from 1990 to 2023 from 1.43% of total DALYs to 5.9% of total DALYs[5].

4 National Mental Health Survey, 2020. Institute for Health Metrics and Evaluation (IHME). 2023. Global Burden of Disease (GBD) Compare – Nepal.
5 Nepal Mental Health Survey, Nepal Health Research Council, 2020

Figure 8.1 illustrates that mental health–related burden increased in relative importance between 1990 and 2023. Self-harm and violence moved from 13th to 9th position among leading causes of death, placing a mental health–linked outcome within the top ten. Neurological disorders rose from 16th to 10th, reflecting population ageing, improved survival from other conditions, and greater recognition of neuropsychiatric morbidity. Concurrent declines in communicable and nutritional causes reduced competing mortality, making mental and neurological conditions more prominent in the overall burden profile. This shift indicates that mental health is an increasingly significant contributor to national disease burden and warrants strengthened prevention, early detection, and treatment within the NCD framework.

Healthcare Expenditure on Mental Health Disorders

In FY 2019/20, total expenditure on mental, behavioral, and neurological conditions in Nepal was 2,647.1 million, accounting for 22.7% of disease-related spending (1.3% of GDP). This included 496.2 million for mental (psychiatric) disorders, 457.6 million for behavioral disorders, 895.9 million for neurological conditions, and 797.5 million for unspecified conditions within this group.

National Mental Health Strategy and Action Plan

The history of mental health (MH) services in Nepal dates back to 2018 BS (1961 AD) when outpatient mental health services were introduced at Bir Hospital. Since then, the Government of Nepal has progressively strengthened its commitment to mental health. This includes establishing the NCDs and MH section and integrating mental health care as an essential service under the Public Health Services Act, 2075. Mental health services are now incorporated into the Basic Health Service (BHS) and Essential Health Service (EHS) Packages, as outlined in the Public Health Service Regulation. The National Health Policy of 2019, in section 6.17.5, sets forth a strategy to expand and integrate mental health services into the broader health system. National Mental Health Strategy and Action Plan (NMHSAP) 2077 (Box: 3) provides a comprehensive framework for planning and delivering mental health services.

DoHS has been implementing the WHO Special Initiative for Mental Health with a program to catalyze the implementation of the National MH Strategy and Action Plan. The initiative at the global level seeks to ensure universal health coverage involving access to quality and affordable care for mental health conditions. The initiative has targeted two strategic actions: advance policies, advocacy, and human rights; and scale-up quality interventions and services for people with mental health conditions. Nepal is one of seven countries implementing the WHO Special Initiative for Mental Health (SIMH). This has enabled a timely and long-term opportunity for Nepal's mental health system to go beyond small-scale project work and offers MoHP a chance to build significant reform.

Box 8.5 Key Components of National Mental Health Strategy and Action Plan (NMHSAP) 2077

Vision

To improve the mental health and psychosocial well-being of all Nepali people, enabling them to lead productive and quality lives..

Mission

To ensure the availability of quality mental health services through optimal use of available resources and continuous coordination and collaboration with relevant individuals, institutions, and agencies.

Goal

To ensure equitable, affordable, and easy access to mental health services for all as a fundamental right under the constitutionally guaranteed health services, by integrating mental health and psychosocial services into the primary health care system in an accountable and responsive manner and providing context-appropriate specialized mental health services.

Objectives

- To ensure free availability of basic mental health services through integration into primary health care.
- To make specialized mental health services easily accessible to all.
- To promote effective partnership, coordination, and collaboration among government, non-governmental, and private sectors.

Strategies

- Ensure equitable, affordable, and easy access to mental health services for all.
- Provide and manage the necessary resources, financing, human resources, and institutional mechanisms required for the delivery of mental health and psychosocial services.
- Promote mental health and increase public awareness to eliminate stigma, misconceptions, and myths related to mental illness.
- Protect the fundamental human rights of persons with mental health conditions and psychosocial disabilities.
- Integrate mental health–related information into the existing health information system and promote research and evidence generation.

8.2.2 Key programs for mental health and Major Activities for FY 2081/82

8.2.2.1 Suicide Registry Strengthening at Ilam Hospital and Expansion at Dhaulagiri Provincial Hospital, Baglung

Nepal faces a growing suicide crisis but lacks a reliable health-sector reporting system, relying mostly on police data. With WHO support, EDCD is piloting a DHIS2-based Suicide Registry to record cases at hospitals. It began in FY 2081–82 at Ilam and Mahakali hospitals, expanded in FY 2082–83 to Dhaulagiri Hospital (Baglung) in December 2025, showed good feasibility and staff acceptance, and included a refresher workshop at Ilam on 8 December 2025. This is the first step toward a national suicide information system to guide prevention efforts.

8.2.2.2 Namuna Palika implementation initiated in Ilam Municipality (Ilam)and Parshuram Municipality (Dadeldhura)

Nepal's MoHP developed the Community Mental Health Program Toolkit to help municipalities implement community-based mental health promotion and prevention, aligned with national strategies. After successful pilots in Bagchaur and Palungtar (FY 2081–82), EDCD and WHO expanded it to Ilam and Parshuram in FY 2082–83. Multi-stakeholder assessments and consultations (7–9 Dec 2025 in Ilam, 12–14 Dec in Parshuram) engaged 376 participants, identifying strengths (e.g., mhGAP-trained providers, growing awareness) and gaps (school programs, literacy, continuity, reporting). Priorities include strengthening primary care services, school mental health, suicide prevention (helpline 1166), community literacy, and collaboration with traditional healers. Both municipalities showed strong commitment to becoming model mental health areas, advancing inclusive, community-driven care.

8.2.2.3 Child and adolescent mental health (CAMH) services

Children and adolescents form 34% of Nepal's population, and early adversities like violence or poverty heavily impact their mental health. The 2020 National Mental Health Survey found 5.2% of adolescents have mental disorders, 3.9% have suicidal thoughts, and 0.7% have attempted suicide, with many conditions starting before age 14–18. MoHP, with UNICEF, is integrating child and adolescent mental health services into primary care and schools by training doctors, school nurses, and health workers, revising school curriculum to include mental health, delivering Socio-Emotional Learning to over 9,000 adolescents in Karnali under the HAT initiative, and establishing specialized facilities at Kanti Children's Hospital and Lagankhel with telemental health. Progress continues, but Nepal still needs a stronger tiered system, earlier identification, more targeted interventions, better service access, and additional specialist staff at provincial and local levels.

8.2.2.4 Psychotropic medications

Health facilities across Nepal provide various psychotropic medications free of costs including antipsychotics, anti-depressants, anxiolytics, mood stabilizers, and anti-epileptics. These medicines are Amitriptylline, Fluoxetine, Carbamazepine, Phenobarbitone, Sodium Valproate, Riseperidone, Diazepam, etc. However, due to frequent stock-outs and inconsistent supply, patients often incur out-of-pocket expenses. While registered medical doctors can prescribe these medications, health assistants in primary healthcare settings, after receiving appropriate training and following government protocols, are also authorized to prescribe them.

8.2.2.4 Integrating Mental Health into maternal health services

In Nepal, pregnant and postpartum women face high risks of anxiety, depression, and somatic issues, with suicide causing 6% of maternal deaths and remaining a leading cause among reproductive-age women. Poor maternal mental health harms mothers (increasing recurrence and mortality) and children (affecting physical, emotional, and neurological development). With WHO support, FWD and EDCD prioritize maternal mental health via the 2024 National Framework, integrating services into primary care and specialized hospital care. Paropakar Maternity and Women's Hospital has provided psychosocial counseling, trained 194+ staff since June 2024, appointed a psychiatrist in July 2024, and launched a dedicated outpatient unit in August 2024 serving over 200 women by December. Expansion to primary facilities in Dhading and Mahottari is planned. Challenges include stigma, misconceptions, and resource limits; next steps focus on awareness, service uptake, more specialists, and staff capacity building for sustainable care.

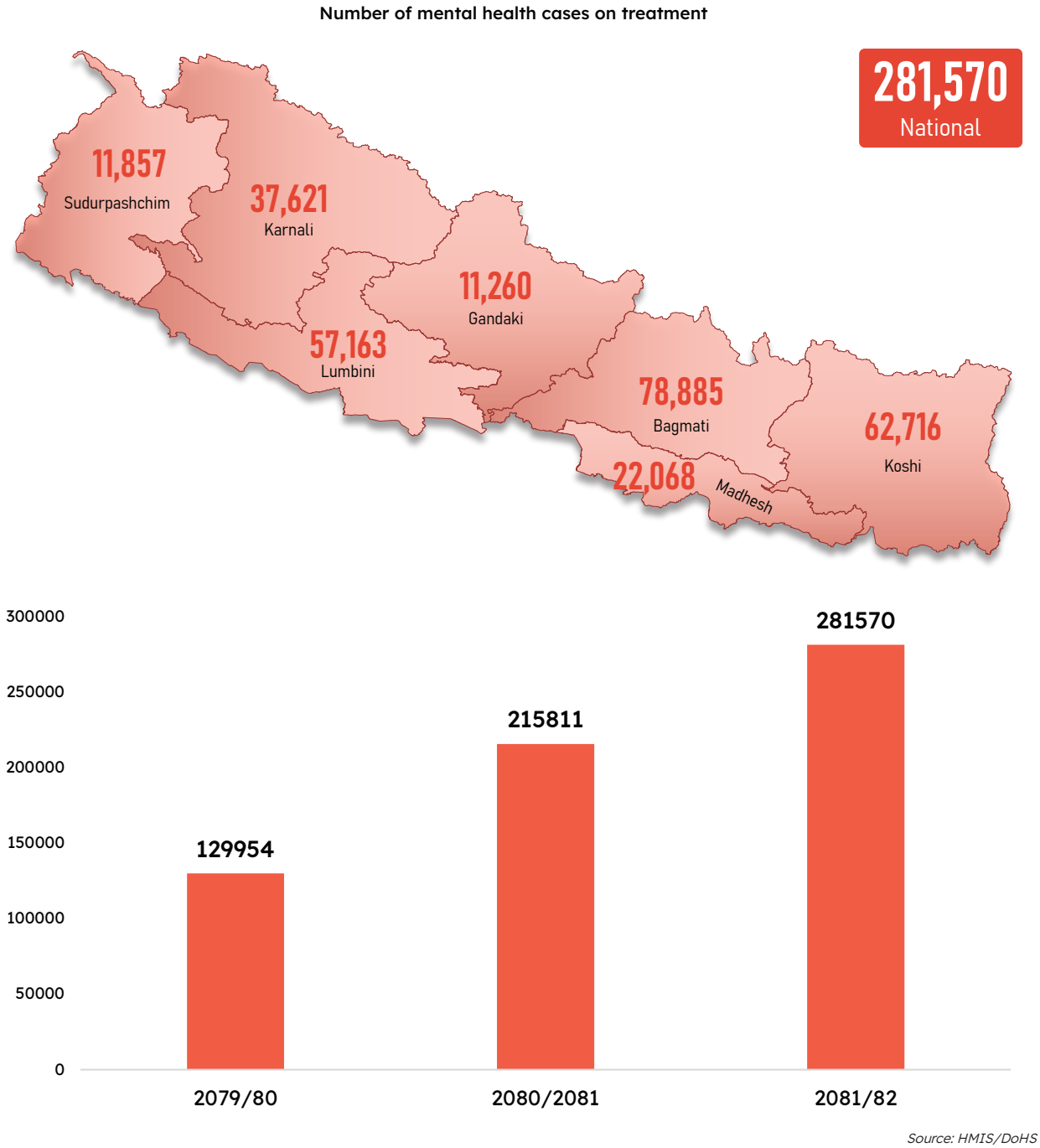
8.2.2.5 Capacity Building on Mental Health and Psychosocial Support

The Government of Nepal, with WHO support, has prioritized integrating mental health into primary health care by adopting the Mental Health Gap Action Program (mhGAP) and national community mental health care packages. mhGAP-based training has expanded to various health cadres, including nurses, Medical Officers/MDGPs, paramedics, child and adolescent mental health providers, psychosocial counsellors, and health managers. These efforts align with the National Mental Health Strategy and Action Plan 2077 and ongoing provincial initiatives to institutionalize mental health and psychosocial support in routine health services and emergency preparedness systems. The number of trained professionals under the mhGAP program was 916 for the FY 2081/82 which was decrease from previous two years (1,355 in FY 2080/81 and 799 in FY 2079/80).

8.2.3 Key mental health service indicators

Service utilization for mental health issues

In FY 2081/82 total of 2,81,570 individuals were on treatment for mental health issues. Most of the cases were from Bagmati province, while Gandaki province reported the cases. The details of the number of mental health cases on treatment are given in Figure 8.6.



Source: HMIS/DoHS

Figure 8.6 Service utilization for common mental health issues

Box 8.6 SWOT analysis of Mental Health Programs

Strengths	Opportunities
• Expansion of mental health programs at grass root level. • Prioritized capacity building activities, including the private sectors with a database for training. • Immediate planning to address issues of provincial and national review. • Effective communication and collaboration among supporting partners. • Increased participation of NGOs, INGOs working in Mental health in the national program. • Regular meetings of steering, coordination, and technical committees. • New policy guidance to galvanize resources from all levels on mental health.	• Evidence-based planning aligned with the National Mental Health Strategy and Action Plan 2020 (2077). • Resource mobilization, partnerships, and collaboration with local government and new partners. • Increased collaboration and coordination among all three tiers of government. • Public-Private Partnership initiatives. • Interest of Local levels and Provinces in Mental health.
Weaknesses	**Threats**
• Inadequate institutional setup and human resources. • Insufficient training for newly recruited health workers and a lack of refresher training. • Low technical capacity at the sub-national level on mental health program development and implementation. • Inadequate supply of medicine and equipment. • Access and quality of services in rural and underserved areas are not regulated.	• Poor motivation of health workers. Retaining trained human resources. • Stigma and discrimination related to mental health. • Fragmentation of health and social care support targeted at mental health. • Conflict-induced mental health disorders.

9 Epidemiological Surveillance, Research and Outbreak Management

EDCD	NTD and Vector Borne Disease Control Section	Zoonotic and Other Communicable Disease Control Section	Disease Surveillance and Research Section	Epidemiology and Outbreak Management Section	NCD and Mental Health Section	Leprosy Control and Disability Management Section

9.1 Epidemiological Surveillance and Research

9.1.1 About the Program

Disease Surveillance and Research Section at EDCD serves as a central agency for conducting surveillance and research activities within the DoHS. The current emphasis of the section is on conducting communicable disease surveillance to effectively manage early emergency outbreaks at the national level. Additionally, the section monitors routine surveillance of drinking water quality and has launched climate-sensitive disease surveillance and piloted event-based surveillance in Nepal.

Early Warning and Reporting System (EWARS)

Established in 1997, EWARS is a hospital-based sentinel surveillance system designed to promptly detect six priority diseases with outbreak potential: Acute Gastroenteritis (AGE), Cholera, Severe Acute Respiratory Illness (SARI), Dengue, Kala-azar, and Malaria. This indicator-based surveillance system operates through 134 strategically located hospitals nationwide, serving as sentinel sites that report cases immediately in the event of outbreaks or on a weekly basis. In addition to the primary six diseases, EWARS also includes reporting on other communicable diseases prone to outbreaks, such as Influenza-like Illness (ILI), Scrub Typhus, and Enteric fever. As of the fiscal year 2081/82, all designated sentinel hospitals actively contribute to EWARS reporting. This participation caters 94 government hospitals, 16 private hospitals, 14 medical colleges, 6 missionary hospitals, and 4 community hospitals. 12 government hospitals and 5 private hospitals were recognized in the year as new functional sentinel sites and the national surveillance coverage was increased to detect early, notify timely and respond promptly. This action has helped Ministry of Health and Population to achieve the Milestone determined by the Office of Prime Minister and Council of Ministers (OPMCM).

Recent status of the sentinel sites

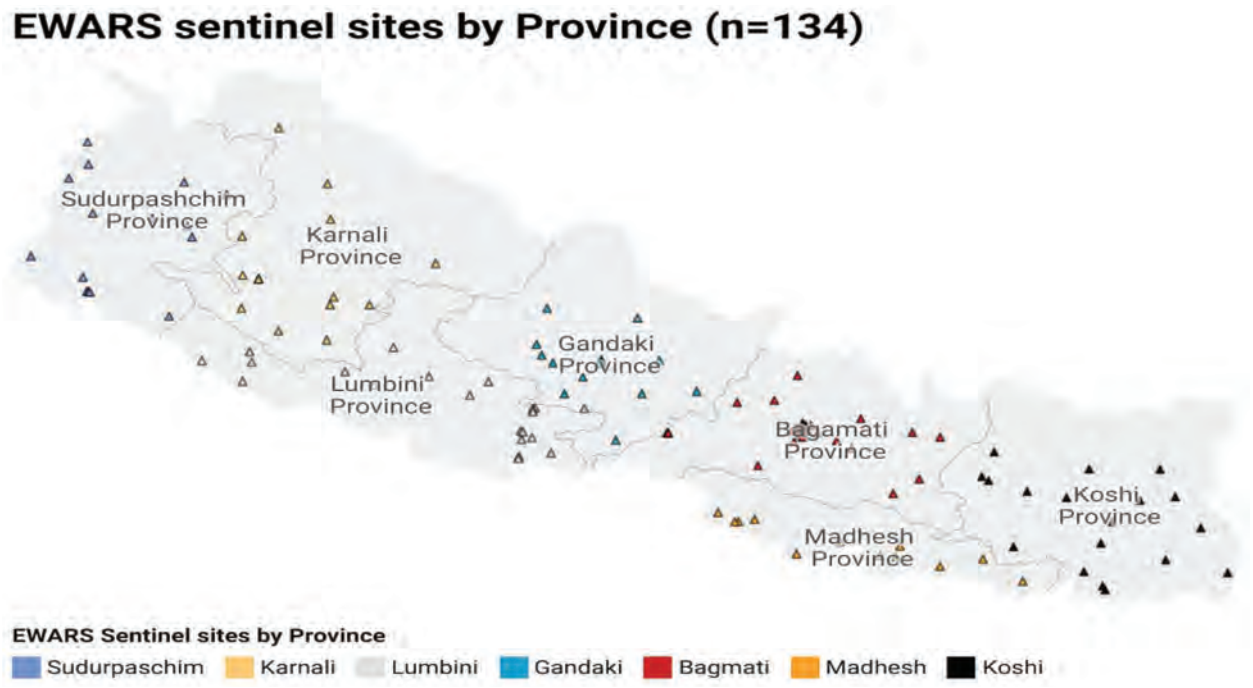


Figure 9.1 Province wise distribution of sentinel sites in Nepal

EWARS sentinel sites have increased from 118 (Functional sites 117) to 134 sites. A total of 17 hospitals were recognized as new sentinel sites and province-wise distribution of these new sentinel sites is given below:

Table 9.1 Province wise number of sentinel sites in Nepal

Province	Existing sites	Site expanded in FY 2081/82	Total sites
Koshi	18	0	18
Madesh	11	1	12
Bagmati	34	2	37
Gandaki	13	2	15
Lumbini	18	4	22
Karnali	11	2	13
Sudurpashchim	11	6	17
National	**117**	**17**	**134**

Remarks: Achieved Milestone for expansion of EWARS site of FY 2081/82 for OPMCM

Source: EDCD/DoHS

Hello Health 1115 Call Center for Disease Surveillance

The Hello Health 1115 Call Center was established on February 18, 2020, as a call center in response to the COVID-19 pandemic, initially focusing on COVID-19 risk communication and addressing public queries related to the spread of the virus, infection prevention, and vaccination information. Operating daily from 8 AM to 8 PM, the call center played a vital role in facilitating case investigations and contact tracing during the pandemic. Over time, the call center's purpose has evolved, and it has been repurposed to support routine public health surveillance. It now records and reports health and disease-related event data, verifies events, follows up on EWARS reporting, supports queries related to various health programs, and ensures timely information flow to relevant stakeholders. In addition to disease surveillance, the Hello Health 1115 Call Center addresses the queries and grievances related to health sector. The strengthening of the call center has also been recommended by the Joint External Evaluation (JEE) of IHR core capacities of Nepal conducted in 2022, to enhancing the country's overall surveillance system and continuing to be a critical component in the public health infrastructure.

Media Monitoring

Media monitoring includes daily monitoring of news media through Epidemic Intelligence from Open Sources (EIOS) and further scanning of open-source news media to identify potential outbreaks and sensitive health events. Each day, a comprehensive report is prepared, summarizing key findings, and highlighting events requiring further verification. This report is disseminated to concerned stakeholders, including municipal health authorities and response teams. This process supports event-based surveillance and timely response efforts.

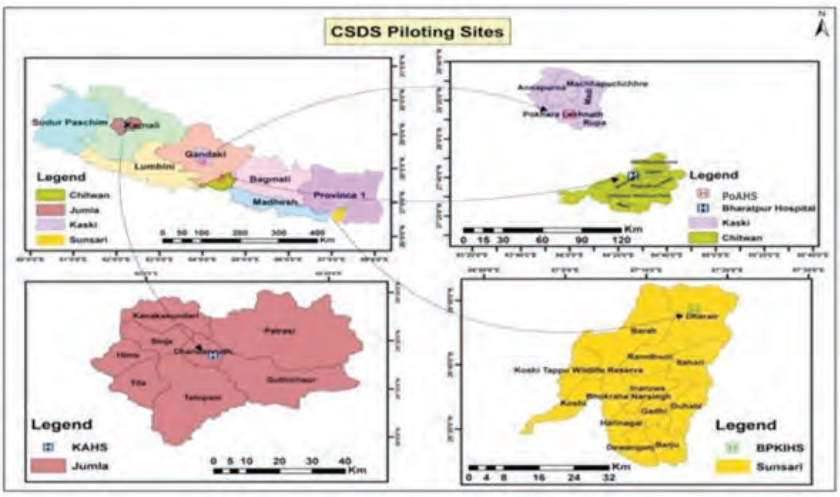
Drinking Water Quality Surveillance

The updated National Drinking Water Quality Surveillance (NDWQS) Guideline 2076 delineates the monitoring of drinking water quality at central, provincial, and local levels. MoHP, and institutions functioning under it, is committed to ensuring that water supplied by projects complies with the National Drinking Water Quality Standard, 2079. As outlined by Water Supply and Sanitation Regulation 2081, EDCD bears the exclusive responsibility for overseeing the surveillance of drinking water quality at diverse sources.

EDCD is determined to strengthen and ensure functionality of 77 drinking water surveillance sites at Health Offices in each district and expand drinking water quality surveillance to local level. National Public Health Laboratory at the central level and Provincial Public Health Laboratories are supporting in ensuring the quality of drinking water quality surveillance.

Climate Sensitive Disease Surveillance

Climate-sensitive Disease Surveillance (CSDS) program is a continuous initiative strategically crafted to augment the existing surveillance system with a focus on climate change impacts. By amalgamating meteorological data (currently encompassing temperature and precipitation) with information on three vector-borne and three outbreak-prone diseases identified by EWARS, the CSDS program endeavors to scrutinize and predict the potential expansion of diseases. Presently in its pilot phase, the program is actively underway in four sentinel sites Karnali Academy of Health Sciences (KAHS), Pokhara Academy of Health Sciences (PoAHS), Bharatpur Hospital and BP Koirala Institute of Health Sciences (BPKIHS); spread across three distinct eco-regions within Nepal. (Fig 9.2) Three Climate parameters viz Precipitation, Relative Humidity, Temperature are routinely connected to EWARS from Department of Hydrology and Meteorology (DHM) so that the association between climate parameters and certain infectious disease could be established. Data is being analyzed to develop a model to forecast the future trend of infectious diseases using climate parameters.



Source: EDCD/DoHS

Figure 9.2 Climate Sensitive Disease Surveillance Piloting Sites

Surveillance Outbreak Response Management and Analysis System (SORMAS)

SORMAS is an open-source digital tool that supports reporting of acute public health events, assessing its risk for outbreak, disease control and outbreak investigation and management procedures. It is a designated tool for Community Based Disease Surveillance in Nepal with features of both events based and indicator-based surveillance function applicable to both community level health facilities as well as all hospitals. It aims to ensure the availability of real-time surveillance data for priority diseases at all administrative levels. To address the existing gaps in the event-based surveillance system of the country, especially for early detection and response of outbreaks up to the community level through real-time digital surveillance, EDCD implemented SORMAS as a pilot program in FY 2079/80 in Gandaki and Sudurpaschim Provinces which has been expanded to Koshi, and Bagamati Provinces as a milestone program of MoHP in FY 2081/82.

9.1.2 Key Activities in FY 2081/82

Early Warning and Reporting System (EWARS)

- The RDT-based Cholera Surveillance Training Program was conducted across six provinces: Koshi, Madhesh, Gandaki, Lumbini, Karnali, and Sudurpaschim, covering all sentinel sites of these provinces. The training covered the proper use of RDT kits, timely sample transportation, and EWARS reporting procedures, including hands-on demonstrations. Medical Officers were also trained on the RDT-based Cholera Surveillance SOP and algorithm. With support from PPHL and Provincial Health Directorates, cholera RDT kits and Cary Blair media were distributed to all invited sentinel sites. Following the program, the immediate reporting rate for probable cholera cases improved, along with increased use of RDT kits for testing.
- An EWARS review workshop was conducted to assess nationwide activities, focusing on recording and reporting analysis, data audit, action plan development, improving real-time data consistency, and facilitating learning and experience sharing.
- Regular cross checking for the quality, accuracy, timeliness, and completeness of real-time data received from sentinel sites.
- Onsite coaching and orientation of the participants at the different sentinel hospitals and receiving their feedback on improving reporting system.
- Analyzing data captured from sentinel sites, monitoring disease trends, and promptly notifying relevant authorities in cases of suspected or predicted outbreaks.
- Publishing the electronic EWARS weekly bulletin and distributing it every Sunday to key personnel of MoHP, DoHS, provincial health authorities, all sentinel sites, and other pertinent stakeholders. Additionally, the bulletin is uploaded to the EDCD's website for wider accessibility.
- Regular identification of the outbreak signals through Event based surveillance reporting module and facilitating prompt outbreak responses.

Surveillance Outbreak Response Management and Analysis System (SORMAS)

- Conducted Advocacy and Inception meeting with provincial Ministry of Health, Health Directorates, Health Offices and one health stakeholders for SORMAS implementation in Bagmati and Koshi Province
- Conducted Training of trainers on SORMAS in Bagmati and Koshi Province
- Conducted Users training to Chief and a Member of Local level Rapid Response Team (RRT) of all local levels in Bagmati and Koshi Province
- Customization of SORMAS as per the feedback received from ToT and User Trainings in Bagmati and Koshi Province
- Development, testing and implementation of Call Centre (1115) Module in SORMAS
- Upgrading and Customization of EIOS (Media Scanning) module
- Testing and development of water quality surveillance module

- Regular verification of acute public health events and epidemic prone diseases reported in SORMAS and notification to concerned authorities for investigation and response
- Regular updating of variables in SORMAS.
- Development of initial module of Syndromic module in SORMAS as per the classified syndromes of nationally prioritized infectious diseases

Hello Health 1115 Call Center and Media Monitoring

- Responding to incoming calls from the public and stakeholders regarding health-related queries and concerns, while simultaneously documenting and communicating health events to relevant authorities for timely action.
- Assisting in monitoring and verifying data related to health events and disease outbreaks identified through media monitoring report and other sources.
- Conducting follow-up calls to verify data reported through health surveillance systems and ensuring accuracy.
- Providing accurate information and guidance on public health issues, including preventive measures and health campaigns.
- Contributing to risk communication through calls by providing accurate health risk information, addressing rumors, and managing health risks.
- Supporting emergency response efforts by relaying critical information and coordinating with response teams.
- Assisting health programs and stakeholders with information and queries related to public health initiatives.
- Tracking and analyzing call data, evaluating call center performance and implementing improvements to enhance service delivery and effectiveness.
- Preparing and distributing a detailed daily media monitoring report on outbreaks and sensitive health events to concerned authorities.
- Sharing outbreaks and significant health events identified through Epidemic Intelligence from Open -Source reports to the Hello Health call center (1115) for verification, enhancing event-based surveillance.

Climate Sensitive Disease Surveillance (CSDS)

- Developed a Climate Sensitive Disease Surveillance (CSDS) Application in EWARS platform- DHIS2 for visualizing and analyzing climate-sensitive diseases and meteorological data for timely forecasting climate informed decision-making and interventions.
- Established an Application Programming Interface (API) between EWARS and DHM to enable real-time data sharing. This integration facilitates seamless exchange of health and climate data, supporting comprehensive analysis and forecasting.
- Facilitated ongoing collaboration between the Department of Hydrology and Meteorology (DHM) and the DoHS to strengthen integrated climate informed disease surveillance. This included coordinating data-sharing mechanisms, aligning surveillance efforts, and fostering cross-sectoral engagement to enhance early warning systems for climate-sensitive diseases.

9.1.3 Key Program/Progress Status in FY 2081/82

Early Warning and Reporting System (EWARS)

EWARS receives disease and event reports from its 134 sentinel hospitals across the country on a regular basis, allowing near real-time monitoring of priority epidemic-prone diseases. A summary of cases reported through EWARS during 2023 to 2025.

Few top priority diseases reported in Early Warning and Reporting System (EWARS)

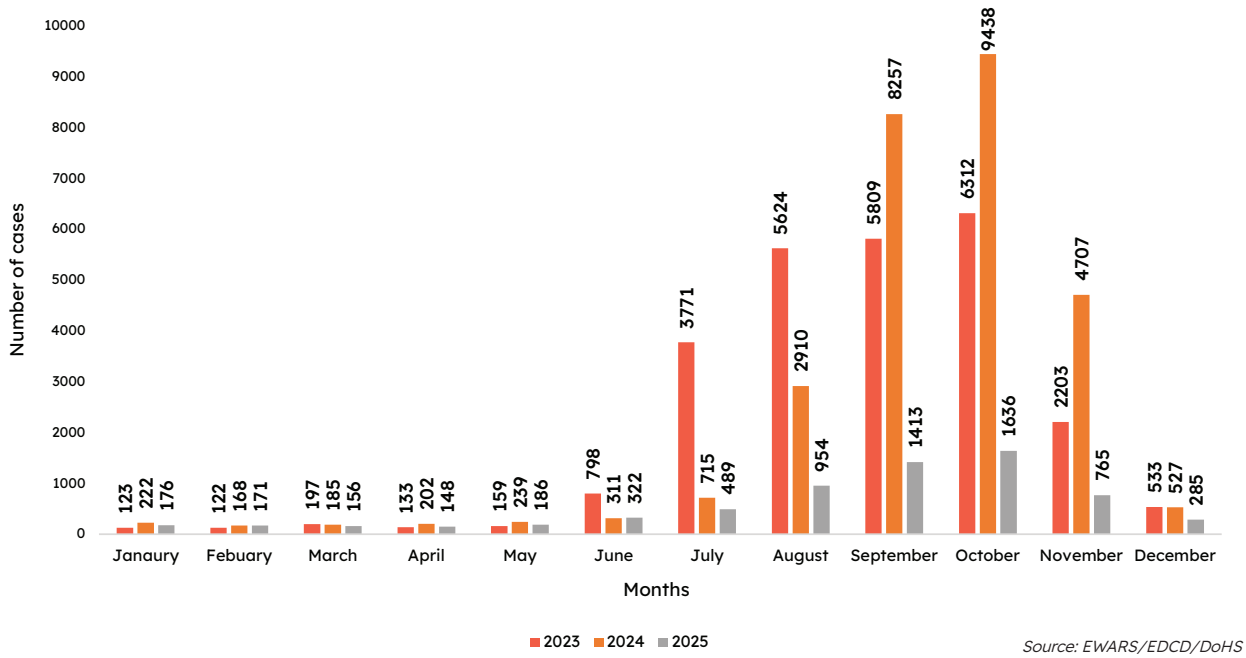
1. Confirmed Dengue Cases reported in EWARS

Table 9.2 shows that Bagamati reported the highest dengue cases, followed by Gandaki and Koshi, making them priority hotspots for targeted control and preparedness while Karnali reported the lowest number of cases. The geographic variation supports risk-based resource allocation and targeted response through EWARS. It ultimately supports Nepal's Dengue Control Program.

Table 9.2 Province wise distribution of Dengue cases in last 3 years

Province	2023	2024	2025
Koshi	8,860	1,966	938
Madesh	397	150	35
Bagmati	7,735	12,902	2,107
Gandaki	5,718	9,985	1,248
Lumbini	1,659	1,548	1,234
Karnali	234	254	464
Sudurpashchim	1,181	1,076	675
Total	**25,784**	**27,881**	**6,701**

Source: EWARS/DoHS



Source: EWARS/EDCD/DoHS

Figure 9.3 Month wise distribution of Dengue confirmed cases reported in EWARS from 2023 to 2025

2. Acute Gastro-Enteritis (AGE) reported in EWARS

Among other diseases monitored through EWARS, Acute Gastroenteritis (AGE) showed a steady rise, with 25,265 cases reported in 2025 compared to previous years. The figure below shows the clear and recurring seasonal pattern of Acute Gastroenteritis (AGE) cases in Nepal over three consecutive years. In each year, cases start to rise from March–April, reach a peak during May–July, and then gradually decline from August onwards, with the lowest burden observed in November–January.

The reason behind in rise in the number of AGE cases could be increase in reporting sites and reporting rate rather than actual increase in risk of AGE. However, further speculation and analysis of the scenario is necessary.

Table 9.3 Month-wise distribution of AGE

Month	2023	2024	2025
January	917	980	1,270
February	1,106	1,147	1,428
March	1,684	1,833	1,883
April	2,158	2,840	2,590
May	2,394	3,234	3,201
June	2,356	3,074	3,329
July	2,049	2,787	2,543
August	1,854	2,607	2,560
September	1,529	1,968	1,952
October	1,053	1,545	1,428
November	819	1,288	1,085
December	931	1,369	1,254

Source: EWARS/DoHS

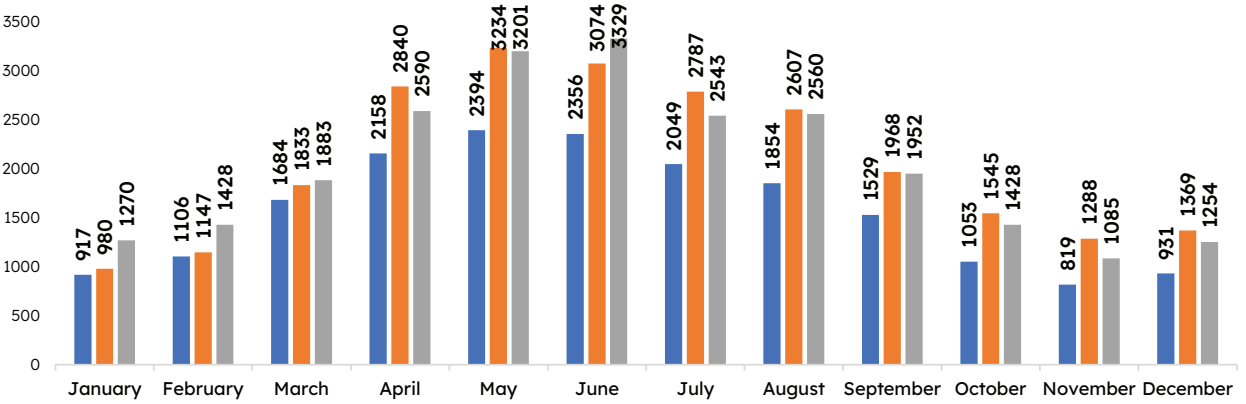


Figure 9.4 Seasonal pattern of AGE in Nepal (2023–2025)

3. Severe Acute Respiratory Infection (SARI) and Influenza Like Illness (ILI)

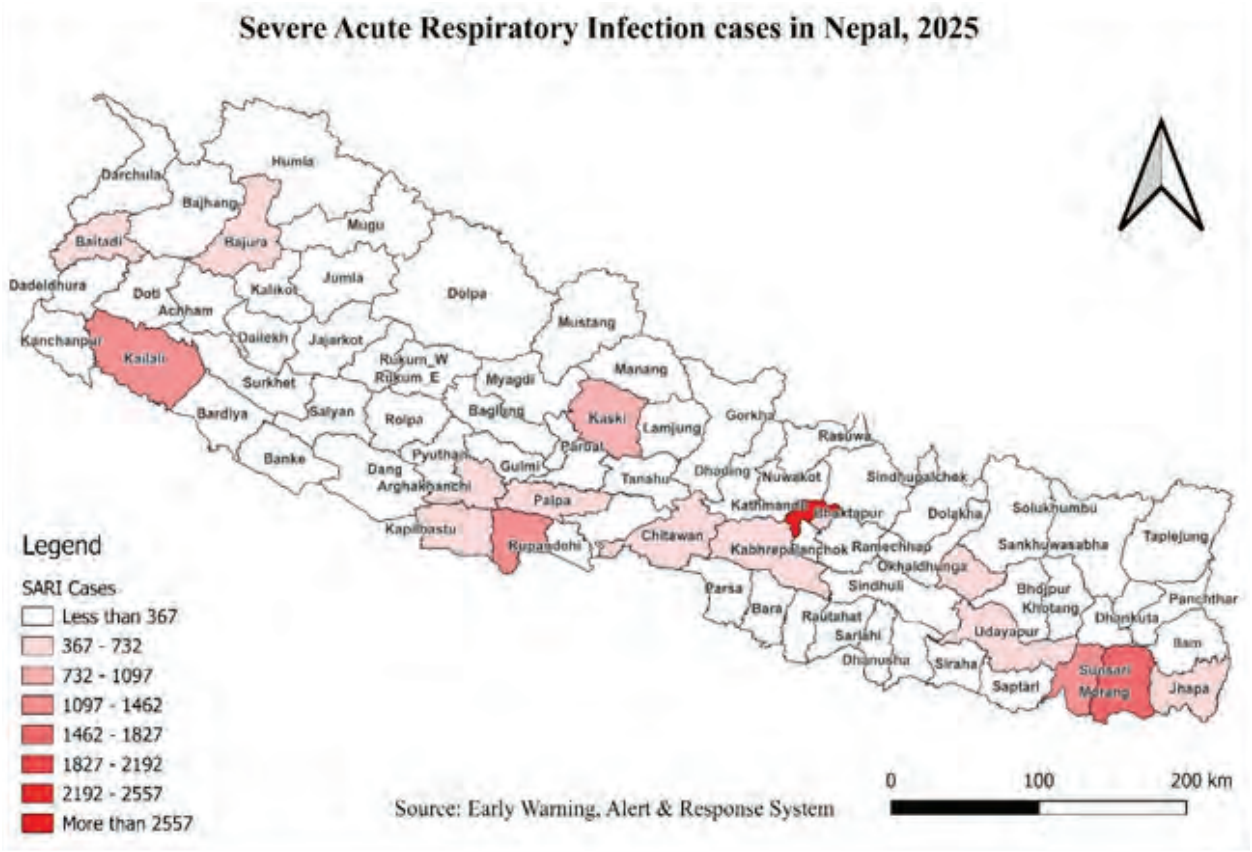


Figure 9.5 Distribution of SARI Cases in Nepal, 2025

This figure 9.5 illustrates the district-wise incidence of SARI in Nepal in 2025. Kathmandu district shows the highest SARI burden, while Morang, Kailali, and Rupandehi also report comparatively high prevalence that require close monitoring and targeted public health interventions.

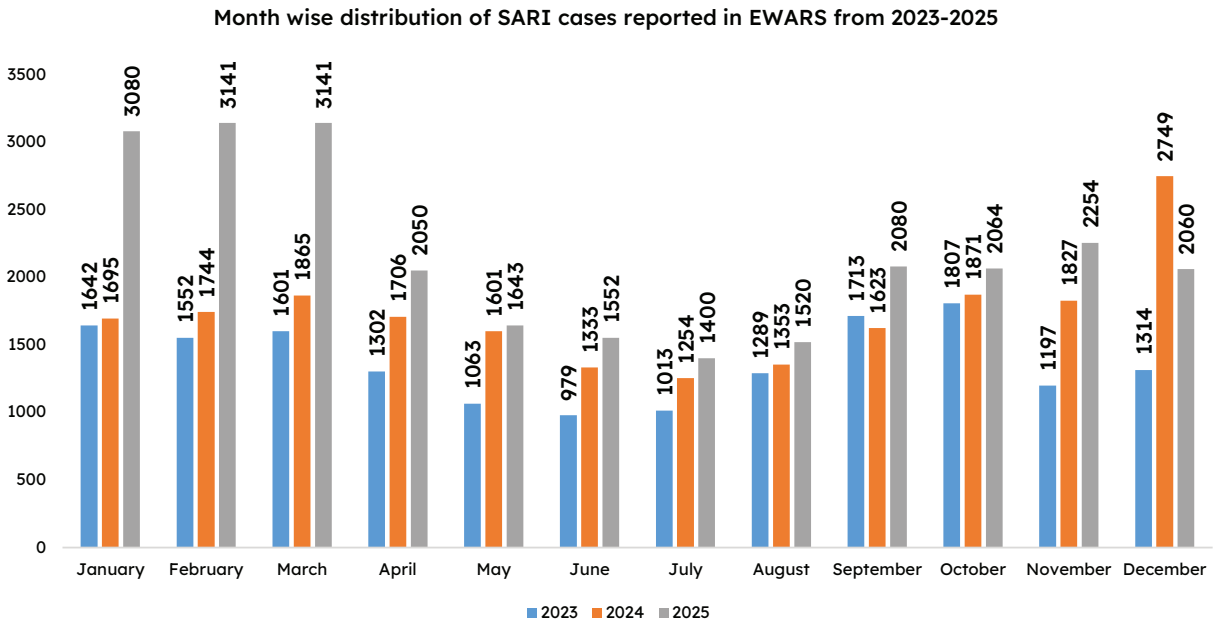


Figure 9.6a Trend analysis of SARI cases from 2023-2025

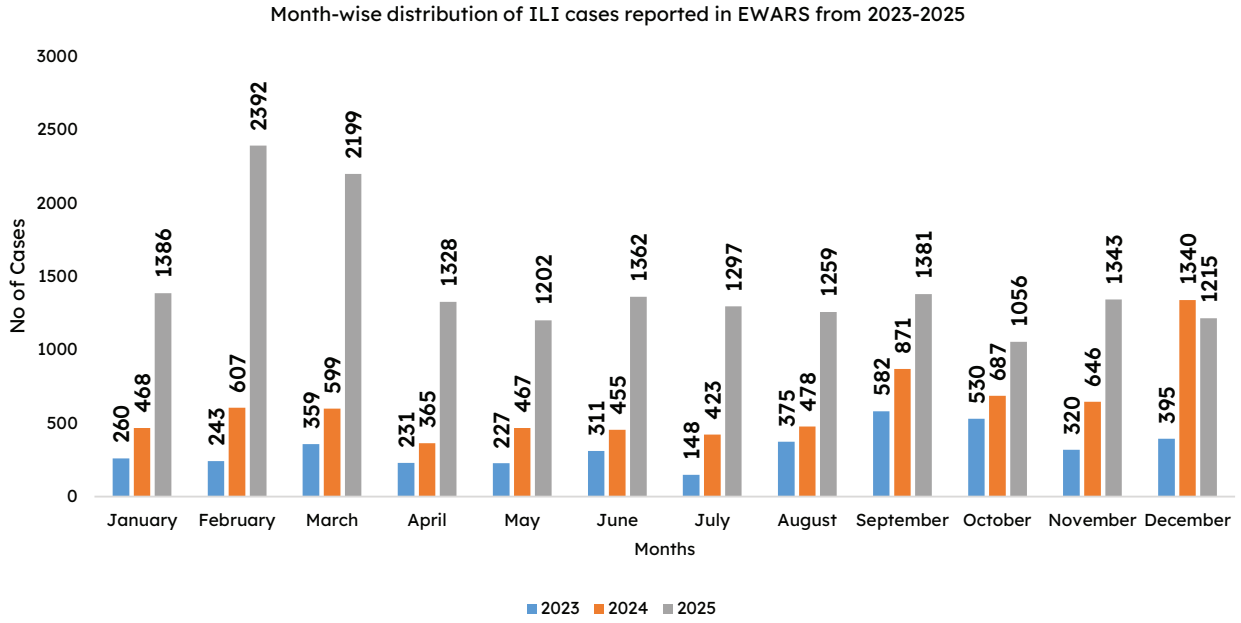


Figure 9.6b Trend analysis of ILI cases from 2023-2025

The trends show a gradual increase in both SARI and ILI cases over three years, indicating a concern in respiratory illness in Nepal. SARI cases remain consistently higher than ILI and show periodic surges, especially in late 2024 and early 2025. ILI also increases steadily with seasonal peaks, and rises in ILI are accompanied by increases in SARI.

As SARI cases were paradoxically higher than the ILI cases, the reason could be the under reporting of ILI cases as they were observed in OPD. The three-year rise in total no of cases of ILI and SARI together could be due to the increase in EWARS sites and improvement in reporting rate.

4. Lab Confirmed Kala-azar reported in EWARS

Table 9.4 Province wise trend analysis of Kala-azar

Provinces	2023	2024	2025
Koshi	22	21	19
Madhesh	6	6	4
Bagmati	36	58	65
Gandaki	4	2	2
Lumbini	44	39	56
Karnali	40	35	36
Sudurpaschim	41	22	14
Nepal	**193**	**183**	**196**

Source: EWARS/DoHS

The table 9.4 Shows that kala-azar remains a persistent public health threat in Nepal, with national cases staying close to 200 per year. The burden is unevenly distributed, with Bagamati, Lumbini, and Karnali Provinces consistently reporting the high numbers, while some provinces show low but ongoing transmission. The highest number of Kala-azar cases from Bagmati province does not necessarily indicate the highest burden as the province holds the highest no of EWARS site and people around the country can visit the tertiary level hospitals.

These findings highlight the need for targeted, province-specific interventions, strengthened surveillance, and better allocation of resources to support Nepal's kala-azar control and elimination plan.

5. Confirmed Malaria Cases reported in EWARS

Table 9.5 Province wise trend analysis of reported cases of Malaria

Provinces	2023	2024	2025
Koshi	2	6	9
Madhesh	5	12	26
Bagmati	11	42	53
Gandaki	11	16	6
Lumbini	21	30	47
Karnali	7	15	27
Sudurpaschim	43	101	83
Nepal	**100**	**222**	**251**

Source: EWARS/DoHS

Table shows the province-wise distribution malaria cases reported in EWARS in last 3 years. The three year trend shows the rise in number of malaria cases. Regarding province-wise distribution of Surdurpaschim was the province with highest no of reported cases.

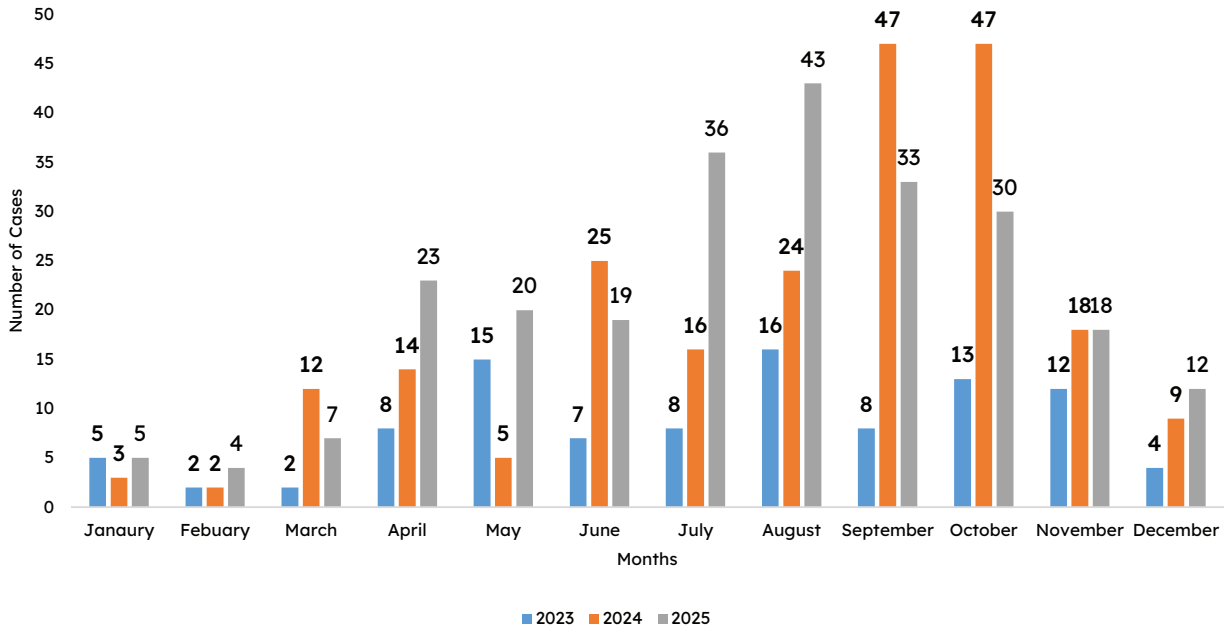


Figure 9.7 Month-wise distribution of Malaraia cases reported in EWARS 2023-2025

Fig 9.7 shows the seasonal trend of malaria cases reported. However, in 2025 highest number of cases were reported in July and August contrast to 2024 as the cases were higher in September and October.

6. Lab confirmed Scrub typhus cases in EWARS

Table 9.6 Province wise distribution of scrub typhus

Provinces	2023	2024	2025
Koshi	848	1,304	1,004
Madhesh	83	107	120
Bagmati	984	1,919	1,756
Gandaki	426	1,472	1,234
Lumbini	1,269	1,951	3,460
Karnali	129	366	582
Sudurpaschim	1,347	2,258	2,036
Nepal	**5,086**	**9,377**	**10,192**

Source: EWARS/DoHS

The table 9.6 shows the increasing trend of the scrub typhus reported in EWARS. The diseases has been gaining attention of the authorities in recent years. The highest number of cases were reported from Lumbini province and the Madhesh reported the lowest number of cases.

Event-based Surveillance through EWARS

Table 9.7 Details of events reported through surveillance

Events	Address	No. of events reported	No. of reported cases	No. of reported deaths
Influenza Like Illness	Khandachakra Municipality Kalikot	1	21	
Probable Cholera	Gaumul Rural Municipality, Bajura	1	1	
	Badimalika Municipality, Bajura	1	2	
Mushroom Poisoning	Pokhara Academy of Health Sciences Pokhara	1	2	1
	Seti Hospital, Kailali	1	2	
	Rukum Hospital, Rukum West	1	3	1

Events	Address	No. of events reported	No. of reported cases	No. of reported deaths
Influenza Like Illness	Khandachakra Municipality Kalikot	1	21	
Probable Cholera	Gaumul Rural Municipality, Bajura	1	1	
	Badimalika Municipality, Bajura	1	2	
Mushroom Poisoning	Pokhara Academy of Health Sciences Pokhara	1	2	1
	Seti Hospital, Kailali	1	2	
	Rukum Hospital, Rukum West	1	3	1
Acute Gastro Enteritis	Badimalika Municipality, Bajura	1	1	
	Narayan Municipality	2	17	
	Triveni Rural Municipality Rolpa	1	1	
	Chautara Sangachokgadhi, Sindhupalchowk	2	11	
Viral Hepatitis	Namobuddha Municipality, Kavre	3	23	
Food Poisoning	Rolpa	1	11	
Rubella	Chautara Sangachokgadhi, Sindhupalchowk	1	1	
	Total reported	**17**	**96**	

Source: EWARS/DoHS

Total 17 public health events were reported through EWARS in the FY. Suspected viral hepatitis signals from Methinkot Hospital Kavrepalanchok were escalated to outbreak, triggering a timely multi-sectoral response.

The outbreak was successfully contained through coordinated action by the sentinel hospital, Provincial and District RRTs, the Hello Health 1115 call center, and the federal surveillance unit—demonstrating the effectiveness of EWARS in early detection, verification, and rapid response to public health events.

Rapid Daignostic Test (RDT) Based Cholera Surveillance

In an effort to improve the cholera control in Nepal, EDCD in collaboration with GTFCC, GAVI, and John Hopkins University piloted RDT based cholera surveillance tor the early detection and response.

In 2022, 27 sites in Kathmandu valley were selected for the piloting of RDT based surveillance. After the feasibility study, Nepal applied for RDTs to GAVI for implementation of cholera surveillance from EWARS sites. Following the GTFCC recommendations, Nepal developed SOP on RDT based Cholera Surveillance.

Nepal received all together more than 43000 RDT kits as a grant from GAVI which were distributed primarily to EWARS sites. As the enthusiastic response and demand from sentinel sites, Nepal applied for 50000 RDT kits and received in April 2025 which were distributed to EWARS sites and other hospitals where required through provincial health logistic centers and health offices.

RDT has played a critical role in early detection of probable cholera followed by confirmation through stool culture. In 2025, more than 1500 RDT uses was reported in EWARS which could be more if all the RDT negatives were reported, however a significant no; 198 were found positive for either O1 or 0139 or both.

Table 9.8 Cholera RDT use (reported in EWARS) and positive test results

Hospital Name	Total no of Tests	Total Positives
Amda Hospital Butwal	9	0
Armed Forced Hospital	1	1
Bayalpata Hospital	1	0
Bhaktapur Hospital	442	0
Bharatpur Hospital	1	0
Bheri Hospital	19	3
Chitwal Medical College	3	3
Civil Service Hospital	1	1
Crimson Hospital	34	0
Damauli Hospital	10	0

Hospital Name	Total no of Tests	Total Positives
Devdaha Medical College	3	3
Dhaulagiri Hospital	21	1
Dhulikhel Hospital	1	1
Rasuwa Hospital	1	1
Achham Hospital	18	2
Bajhang Hospital	2	2
Bajura Hospital	7	7
Bhojpur Hospital	67	0
Dhading Hospital	2	0
Doti Hospital	8	1
Gorkha Hospital	9	2
Ilam Hospital	10	0
Jajarkot Hospital	1	1
Mahottari Hospital	4	2
Khotang Hospital	34	4
Panchthar Hospital	1	2
Parbat Hospital	22	6
Pyuthan Hospital	11	1
Rukum Hospital	2	1
Sakhuwasabha Hospital	1	0
Sindhupalchowk Hospital	8	8
Solukhumbu Hospital	2	1
Taplejung Hospital	8	5
Udayapur Hospital	2	2
Mustang Hospital	14	3
Myagdi Hospital	40	7
Gajendra Narayan Singh Hospital	3	2
Rautahat Hospial	5	5
Gulmi Hospital	27	0
Hetauda Hospital	3	3
Mahakali Hospital	1	1
Manipal Medical Hospital	1	0
CIWEC Hospital Pvt Ltd	2	1
Methinikot Hospital	1	1
Narayani Hospital	520	28
National Medical College	36	34
Nawa Jiwan Hospital	1	1
Nisarga Hospital	1	1
Nobel Medical College	2	0
Okhaldhunga Community Hospital	2	0
Pashupati Chaulagain Smriti Hospital	39	11
Pokhara Academy of Health Sciences	3	2
Pokhariya Hospital	16	16
Kalaiya Hospital	11	11
Rolpa Hospital	1	0
Seti Provincial Hospital	4	4
Sukraraj Tropical and Infectious Disease Hospital	4	4

Hospital Name	Total no of Tests	Total Positives
Tikapur Hospital	1	1
United Mission Hospital	1	1
Total	**1505**	**198**

Source: EWARS/DoHS

Although the reported RDT use from EWARS site seem lower, the detection of cases reported across every corner of the country. Many other health facilities are also using RDTs for the detection of cholera

RDT has been remained instrumental in early detection of Cholera Outbreak. Cholera was first detected by use of RDT in a private hospital in Birgunj Parsa in August where around 2000 people affected. Early detection triggered the early response thus preventing mortality of cholera cases in Parsa Cholera Outbreak.

Additionally, another cholera outbreak hit the rural area of Saptari district; Chinnamasta in September. RDT was used for the detection of cholera cases in the hospital as well as community level.

Surveillance Outbreak Response Management and Analysis System (SORMAS)

During the three years period from FY 2079/80 to 2081/82, more than 40 infectious diseases and several acute events of public health significance were reported in the SORMAS.

In FY 2081/82, Dengue was the most reported cases (n= 41493) with increasing number of cases than previous years. Similarly, Typhoid fever (n=9795), Scrub Typhus (n=13345), Malaria (n=1373) also increased as compared to previous years. Overall, most of the diseases reported in SORMAS are on increasing trend as compared to previous years with some exceptions in case of Influenza (other) (n=561) and conjunctivitis (3193).

In addition, Snakebite (n= 1891) and ARI (n=27343) were the most reported acute events of public health significance with increasing trend compared to previous years. Details of cases reported in SORMAS are as follows (see Table 9.9)

Table 9.9 Prioritized infectious diseases and other acute public health events reported in SORMAS, FY 2079/80 -2081/82

Disease	2079/80	2080/81	2081/82
Dengue	3043	30188	41493
ARI	214	6001	27343
Scrub Typhus	764	7706	13345
Typhoid Fever	1633	5110	9795
Conjunctivitis	136	11987	3193
Snakebite	250	874	1891
Malaria	594	1097	1373
Cholera	63	61	1187
COVID	2753	648	1013
Influenza-A	19	498	660
Other Influenza like illness	1577	1038	561
Chickenpox	35	193	479
Kala azar	157	239	306
Mumps	23	153	210
Influenza-B	27	181	171
Measles	100	47	70
Respiratory Syncital Virus(RSV)		14	62
SHAPHU	1	178	6

Source: SORMAS/DoHS

EWARS receives disease reports from 134 designated sentinel hospitals, whereas SORMAS collects case-based reports from community-based HCFs; together, the two systems complement each other in terms of reporting channels.

Hello Health 1115 Call Center for Disease Surveillance and Media Monitoring

During FY 2081/82, the call center received over 27,225 calls, of which 24,431 were answered.

These data were compiled and published in weekly reports. During FY 2081/82, over 1,496 news related to potential outbreaks and sensitive health events were reported through media monitoring report.

Climate Sensitive Disease Surveillance

Regular reporting of disease data from sentinel sites and meteorological data from the DHM is a key component of the CSDS tool. To enhance data recording and reporting, digital connectivity has been established between relevant departments within each sentinel site, ensuring seamless communication and data entry. With the recent development of a dedicated server, a robust database system has been implemented to automate data integration. This system now directly fetches data from the EWARS and DHM's server, significantly reducing the need for manual data entry and sharing. This advancement not only minimizes errors and inconsistencies but also ensures real-time availability of disease and meteorological data, improving the overall efficiency and accuracy of climate-informed disease surveillance.

Box 9.1 SWOT Analysis of Epidemiological Surveillance and Research

Strengths	Opportunities
• Functional EWARS system with the active Sentinel Sites. • EWARS developed as integrated surveillance system: indicator-based and event-based surveillance system to detect early, notify timely and response promptly. • Swift reception of signals/alerts from both sentinel sites and call centers. • Implementation pilots of the CSDS and SORMAS	• List of fifty-two prioritized diseases fulfilled the legal basis for executing regular disease surveillance and response management. • Integration with other national health information system • Learning from international best practices • Use of data for evidence-based decision making
Weaknesses	**Threats**
• Limited coverage of sentinel sites. • EWARS sites majorly reported the data of Inpatient & Emergency department only • Inadequate monitoring, analysis and immediate feedback by different level • No any digital platform for Drinking Water Quality Surveillance and Food Quality Surveillance • Vertical surveillance without integration is in operation. • Inadequate number of staff at Surveillance and Research Section • Lack of proper means for verification and validation mechanisms poses challenges in ensuring data accuracy and reliability • Increasing workload and multiple responsibilities of the reporting staf	• Emergence of new and re-emerging infectious diseases • Natural disasters and climate change impacts • Dependence on external funding and technical support • Weak infrastructure in remote and hard to reach areas • Data security and system reliability risks

9.2 Epidemiology and Outbreak Management Program

9.2.1 About the Program

Epidemiology and Outbreak Management Section (EOMS) within EDCD is responsible for developing and implementing strategies and interventions for preparedness and response, aimed at minimizing the health impact of communicable disease outbreaks and various health emergencies across the nation. These efforts align with the broader objective of enhancing health security by strengthening current health system and providing technical support to subnational level health systems. EDCD serves as the Focal point responsible for implementing the International Health Regulations (IHR), 2005. The EOMS section plays one of the key roles in strengthening the IHR core capacities and in reporting on progress.



Figure 9.8 Major areas of functions/responsibilities of EOMS, EDCD

9.2.2 Major Activities in FY 2081/82

- Vaccination of Hajj pilgrims as per the requirement of Ministry of health, Saudi Arabia
- Prioritization of provincial health hazards using STAR (Strategic Toolkit for Assessing Risk)
- Endorsement of national guideline for sample collection and transportation during acute public health events, followed by capacity building/ orientation to health/laboratories/RRT personnels regarding it.
- Conducted two batches of Training of Trainers for Rapid Response Teams (RRT)
- Assurance and facilitation for Rapid response team formation at all local levels.
- Verification, investigation and response of reported alerts and outbreaks
  - Cholera outbreak, Kathmandu
  - Post-flood syndromic surveillance and response
  - Hepatitis A outbreak, Kavrepalanchowk
- Organized 1st National Conference on Field Epidemiology with sharing of more than 70 scientific papers related to outbreak, AMR, surveillance, epidemiology with nearly 400+ participants from government organizations, academia and concerned stakeholders.
- Facilitation for preparation and endorsement of Provincial Health Emergency Preparedness and Response Plan of Koshi and Gandaki province.
- Finalization of multiple guidelines and framework, and their orientation in all seven provinces
  - Alert and response framework
  - Initial Rapid Risk Assessment guideline
  - Monitoring and Evaluation of outbreak response framework
  - Learning Resource Package for members of Local level RRT
- Publication of trimester bulletin regarding outbreak and its response.
- Orientation of provincial, district and local level RRT members of Sudurpaschim province about cholera and other water borne disease outbreak and response.
- Engaged stakeholders for revision of National Pandemic Preparedness and Response Plan.
- Preparation of draft for revision of infectious disease act 2020.



Source:EDCD/DoHS

Figure 9.9 Health desks functional at ground crossing in FY 2081/82

Health desks

There are 17 Health Desks at 17 Ground Crossing Points (GCP) of Nepal, of which 15 are at Nepal-India GCP and 2 in Nepal – China GCP (Figure 9.9). There are 2 functional Health Desk at air crossing; Tribhuwan International Airport and Pokhara International Airport. These health desk at point of entries are governed by the federal government through IHR focal point; EDCD. Health desk at point of entries (POE) were expanded during the Covid 19 pandemic to screen individuals based on symptoms followed by rapid testing, minimizing the risk of importation of COVID cases. Currently, it serves the same purpose of syndromic screening of various communicable diseases and referral to treatment sites nearby.

Table 9.10 Functional health desk at ground crossing points

Province	Health Desk
Koshi	Pashupatinagar Health Desk, Ilam
	Kakadbhitta Health Desk, Jhapa
	Rani Health Desk, Biratnagar
Madhesh	Madar Health Desk, Sirha
	Bhittamode Health Desk, Mahottari
	Gaur Health Desk, Rauthahat
	Inarwa Health Desk, Birgunj, Parsa
Bagmati	Rasuwagadi Health Desk, Rasuwa
	Tatopani Health Desk, Sindhupalchowk
Gandaki	Tribeni Health Desk
Lumbini	Belahiya Health Desk, Sunauli
	Krishnanagar Health Desk, Krishnanagar
	Jamunaha Health Desk, Nepalgunj
Sudurpaschim	Trinagar Health Desk, Dhangadi
	Gaddachauki Health Desk, Mahendranagar
	Jhulaghat Health Desk
	Pulaghat Health Desk

Table 9.11 Functional health desk at air crossing points

Province	Health Desk
Bagmati	Tribhuwan International Airport, Kathmandu *
Gandaki	Pokhara International Airport, Pokhara

* IHR designated Point of Entry (PoE)

Box 9.2 SWOT Analysis of Epidemiology and Outbreak Management Programme

Strengths	Opportunities
• Endorsed guiding documents: New RRT and EMT guideline with provision of district and local level RRT. • Trained human resources RRT, RCCE, Sample Transportation and FETP • Functional health desk at 17 ground crossings points and 2 air crossing points. • Functional National IHR Focal Point with Term of Reference • Functional PHEOC at all 7 provinces with formation of Hub and satellite network of hospitals. • Formation of Hospital command centre and Hospital Disaster Preparedness & Response Plan (HDPRP) at major Government Hospitals.	• Devolved governance systems (three tier of governments) • Identified areas of improvement through Joint External Evaluations (JEE) of IHR • National and International Commitment for health emergency risk management • Lessons Learned from COVID-19 Pandemic • Commitment for Organisation and • Management (ONM) Survey • Positive attitude of concerned stakeholders for preparedness, prevention and response of an outbreak.
Weaknesses	**Threats**

• Outdated and old laws, plans and strategies:
  ▪ Infectious Disease Act, 2020
  ▪ National Cholera Control Plan
  ▪ National Action Plan for Health Security
  ▪ National Multi-Hazard Health Emergency Preparedness and Response Plan
• Lack of implementation of Public Health Service Act, provisions related to health emergencies.
• No permanent structure of organisation and operational guideline for health desks at point of entries.
	• Difficulty in information sharing among three tiers of governments and other sectors
	• Non-supportive legal provisions for contingency funds utilization during outbreaks
	• Mis and Dis-information circulation during outbreak

EDCD

- NTDs and VBDs Control Section
- Zoonotic and Other Communicable Disease Control Section
- Leprosy Control and Disability Management Section

10.1 Neglected Tropical Diseases (NTDs) and Vector Borne Diseases (VBDs) Control Programmes

10.1.1 Malaria

Malaria control in Nepal formally began in 1958 with the establishment of the National Malaria Eradication Programme, which has since evolved into the National Malaria Elimination Programme (NMEP) under the Epidemiology and Disease Control Division (EDCD). Over the decades, Nepal has reduced malaria from a widespread epidemic in the Terai to a low-transmission public health concern, with indigenous transmission now limited and mortality remaining minimal. Malaria remains seasonal, with peaks typically occurring before and after the monsoon. In line with regional and global commitments, Nepal has set a national target to eliminate malaria by 2030.

A major strategic milestone in Nepal's elimination pathway was the adoption of a micro-stratification approach in FY 2066/67 (2010). Initially implemented at the district level and later refined to the ward level within Local Level Governments (LLGs), this evidence-based strategy enables precise identification of populations at risk and targeted delivery of interventions at the community level. The stratification process incorporates analysis of recent malaria trends, climate patterns, ecological characteristics, key vector species, and human movement vulnerabilities. Guided by recommendations from EDCD and the Malaria Technical Working Group (TWG), the framework has been reviewed and updated in FY 2068/69 (2012), 2072/73 (2016), and 2074/75 (2018) to ensure responsiveness to evolving transmission dynamics.

Through strengthened surveillance systems, expanded diagnostic services, systematic case investigation and classification, and sustained vector control measures such as Indoor Residual Spraying (IRS) and Long-Lasting Insecticidal Nets (LLINs), Nepal has achieved substantial reductions in local transmission. The predominance of imported cases in recent years reflects progress toward interruption of indigenous transmission while underscoring the importance of cross-border collaboration and sustained vigilance.

The National Malaria Elimination Programme contributes directly to Sustainable Development Goal (SDG) 3, particularly Target 3.3 to end the epidemic of malaria by 2030 and Indicator 3.3.3 on reducing malaria incidence per 1,000 population. Continued strategic targeting, evidence-based planning, and multi-sectoral coordination position Nepal on a progressive pathway toward achieving its malaria elimination goal and strengthening long-term public health resilience.

Table 10.1 Micro stratification for Malaria risk

Province	High Risk ward	Moderate Risk Ward	Low Risk Ward
Koshi	0	0	226
Madhesh	1	0	335
Bagmati	1	0	375
Gandaki	0	0	261
Lumbini	14	1	303
Karnali	5	5	408
Sudurpaschim	4	11	608
National	**25**	**17**	**2,516**

Source: EDCD/DoHS (Malaria Micro-stratification 2025)

In 2081/82, the updated micro-stratification categorized wards into high, moderate, low and no risk. Lumbini province consists of 14 high-risk wards out of a total of 25 high-risk wards and Karnali has 5 wards categorized as high risk, while most of the moderate risk wards fall in Sudurpashchim province (11 out of 17).

Box 10.1 National Malaria Strategic Plan, 2025-2030

The government of Nepal has developed a National Malaria Strategic Plan (NMSP) with an ambitious vision of malaria-free Nepal. The vision, mission, goals, and objectives of the NMSP are as follows:

Vision

Malaria-free Nepal

Mission

Universal access to early detection, prompt treatment, and response for malaria elimination

Goal

- To achieve zero indigenous malaria cases in 2026 and sustain thereafter.
- To strengthen the system for the prevention of re-establishment.

Objectives

- To ensure quality diagnosis, treatment, and preventive measures for malaria at all levels of the health system.
- To strengthen the surveillance system for evidence-based decision making and prevention of re-establishment of Malaria.

Strategies

- Strategy 1: Strengthening the malaria surveillance system for evidence-based decision making, case response, and prevention of re-establishment.
- Strategy 2: Ensuring disease prevention through effective vector surveillance and control interventions.
- Strategy 3: Ensuring universal & prompt access to quality-assured diagnosis and treatment of malaria cases.
- Strategy 4: Ensuring political commitment, ownership, and enabling environment at all three levels of governance for malaria elimination.
- Strategy 5: Harnessing innovation and expanding operational research in the malaria program.

10.1.1.1 Major activities conducted in FY 2081/82:

- **Long-lasting insecticidal nets (LLINs) distribution:** 12,876 LLINs were distributed through continuous distribution to people living in active foci, malaria risk groups and pregnant women at their first ANC visits.
- **Malaria micro-stratification up to the ward level:** Malaria micro-stratification was done in 77 districts at the central and provincial level, considering the risk cluster up to the ward level.
- **Malaria Disease Surveillance:** Malaria Disease Information System (MDIS) is fully operational. Continuation of the 1-3-7 model malaria case-based surveillance as a key intervention, including a web-based recording and reporting system for districts. Continued program orientation and technical guidance to district and peripheral-level health workers to strengthen implementation and surveillance.
- **Private sector engagement in malaria elimination:** Malaria Continuous Medical Education (CME), orientation and reorientation activities among private sector stakeholders were the continuation activities focusing on malaria diagnosis and treatment, recording and reporting to DHIS-2 on correctly and timely manner.
- **Vector Control Intervention:** Indoor Residual Spray (IRS) was carried out in high and moderate-risk wards of the 25 districts biannually around the positive index case. In the meantime, an assessment of the quality of IRS was done to identify the proper vector control.
- **Malaria commodities supply chain management:** Regular supply of malaria diagnosis m-RDT and antimalarial drugs to Service Delivery Points (SDPs) has been assured throughout the year.

10.1.1.2 Status of Malaria Program

Table 10.2 Malaria epidemiological information FY 2079/80-2081/82

Items/indicators	2079/80	2080/81	2081/82	Data Source
Total population	10,299,169	1,07,73,494	11,267,526	Malaria Micro stratification
Total sample examined (Slide and RDT)	468,330	495768	449324	HMIS
Annual blood examination rate (ABER)	4.55	4.6	4.22#	HMIS
Annual parasite incidence (per 1000)	0.05	0.07	0.104#	HMIS and MDIS (Calculated)
Annual *Pf* incidence (per 1000)*	0.015	0.016	0.025	MDIS (Calculated)
Slide positivity rate	0.11	0.16	0.27	HMIS
Slide *Pf* positivity rate *	0.03	0.03	0.063	MDIS and HMIS (Calculated)
Death from Malaria	0	2	2	HMIS
Probable/clinically suspected malaria cases	290	400	381	HMIS

*Includes Pf and P. mix (23 P. mix cases in FY 2081/82)

#Values may vary from Nepal Health Factsheet 2025 due to update in risk population following micro-stratification

Source: EDCD&HMIS/DoHS

From FY 2078/79 to 2081/82, malaria surveillance indicators reflect sustained diagnostic coverage alongside increasing transmission intensity. The total population reached 11,267,526 in 2081/82, with 449,324 samples examined, maintaining a high Annual Blood Examination Rate (ABER) of 4.22%, significantly higher than 2078/79 (2.89%). Despite strong testing coverage, epidemiological indicators show a rising trend: the Annual Parasite Incidence (API) increased from 0.05 to 0.104 per 1,000 population, while Annual Pf incidence more than doubled to 0.025 per 1,000. The Slide Positivity Rate (SPR) climbed to 0.27%, the highest in the four years, and the Slide Pf positivity rate increased notably to 0.063, indicating a growing proportion of falciparum infections (including 23 P. mix cases in 2081/82). Malaria mortality remained low but recorded 2 deaths in 2081/82, and clinically suspected cases stood at 381. Overall, while diagnostic efforts remain strong, the upward shift in incidence and positivity rates signals increasing transmission pressure and highlights the need for intensified surveillance and response.

Table 10.3 Malaria Foci Status in Nepal

Items/indicators	2079/80	2080/81	2081/82
Active Foci	16	23	27
Residual Non-Active Foci	44	28	39
Cleared Foci	23	33	18

Source: MDIS/EDCD

The four-year trend in malaria reflects increasing pressure on elimination gains. After declining to 16 in 2079/80, Active Foci rose steadily to 27 in 2081/82, the highest in the reporting period, indicating expansion or reactivation of transmission areas. Although Residual Non-Active (RNA) Foci had reduced significantly by 2080/81, their increase to 39 in 2081/82 suggests that previously controlled areas remain vulnerable to resurgence. Most striking is the sharp decline in Cleared Foci, which dropped from 87 in 2078/79 to just 18 in 2081/82, signaling a slowdown in achieving and sustaining foci clearance. Collectively, these trends point to growing challenges in consolidating elimination progress and underscore the need for intensified surveillance and response in affected areas.

Table 10.4 Foci status as of Fiscal Year 2081/82 by Province

Province	Active	RNA	Cleared
Sudurpaschim	8	16	9
Karnali	3	8	6
Lumbini	14	13	3
Gandaki	0	0	0
Bagmati	1	0	0
Madhesh	1	1	0
Koshi	0	1	0
Total	**27**	**39**	**18**

Source: EDCD/DoHS

The provincial distribution of malaria foci highlights a clear geographic concentration of transmission risk. Of the 27 Active Foci, the majority are clustered in Lumbini (14) and Sudurpaschim (8), together accounting for most active transmission areas, while Karnali reports 3 and Bagmati and Madhesh report 1 each; Gandaki and Koshi report none. A similar pattern is observed in Residual Non-Active (RNA) Foci (39), which are predominantly located in Sudurpaschim (16), Lumbini (13), and Karnali (8), indicating continued vulnerability in western provinces. In contrast, Cleared Foci (18) are mainly concentrated in Sudurpaschim (9) and Karnali (6), with limited clearance in Lumbini (3) and none in several other provinces. Overall, the burden remains heavily concentrated in western Nepal—particularly Lumbini and Sudurpaschim—underscoring these provinces as priority areas for intensified surveillance, targeted interventions, and sustained elimination efforts.

Table 10.5 Malaria case distribution by species

Items/Indicators	2079/80	2080/81	2081/82
Total positive cases	533	791	1164#
Total indigenous cases	24	24	39
Total imported cases*	509	767	1125
Total P. falciparum (PF) cases **	151	173	282
% of PF of total cases**	28.33	21.87	24.2
Total indigenous PF cases **	4	3	6
% indigenous PF cases **	2.64	1.73	2.12
Total imported PF cases **	147	170	276
% imported PF cases**	97.36	98.27	97.88
Total P. vivax (Pv) cases + Ovale***	382	618	882
Total indigenous Pv cases + Ovale***	20	21	33
% indigenous Pv cases + Ovale***	5.24	3.4	3.7
Total imported PV Cases + Ovale***	362	597	849
% imported Pv cases + Ovale***	94.97	96.6	96.3

*Include one blood transfusion transmitted malaria in 2081/82.
**PF + P.mix (23 P. mix cases in FY 2081/82.
***P. ovale (10 in FY 2081/82).

#Values may vary from Nepal Health Factsheet 2025 due to update in risk population following micro-stratification

Source: MDIS/EDCD/DoHS

The four-year trend shows a substantial escalation in malaria burden, with total positive cases increasing from 491 in 2078/79 to 1,164 in 2081/82, more than doubling during the period. This rise is overwhelmingly driven by imported cases, which reached 1,125 in 2081/82, while indigenous cases remained comparatively low at 39, indicating limited but persistent local transmission. P. falciparum (Pf) cases increased markedly to 282 in 2081/82, accounting for 24.2% of total cases, with the vast majority (97.88%) classified as imported; indigenous Pf cases remained minimal (6 cases). Similarly, P. vivax + Ovale cases rose sharply to 882 in 2081/82, again predominantly imported (96.3%), while indigenous Pv/Ovale cases were limited (33 cases). Overall, the data clearly indicate that imported infections primarily drive the sharp increase in malaria cases, while indigenous transmission remains at a relatively low level but requires continued surveillance to prevent local spread.

Table 10.6: Provincial malaria epidemiological trend 2079/80-2081/82

Province	Annual Blood Examination Rate (ABER) of Malaria at Risk Population			Malaria Annual Parasite Incidence Per 1,000 Population			% of PF Cases Among the Total Malaria Cases			% of Imported Cases Among Positive Cases of Malaria			Slide Positivity Rate of Malaria		
	2079/80	2080/81	2081/82	2079/80	2080/81	2081/82	2079/80	2080/81	2081/82	2079/80	2080/81	2081/82	2079/80	2080/81	2081/82
Koshi	4.52	0.71	3.26	0.01	0.00	0.01	50	50	40	100	92	90	0.03	0.04	0.04
Madhesh	2.99	0.67	3.79	0.06	0.02	0.18	29.69	19.18	14.4	100	100	98.3	0.21	0.28	0.48
Bagmati	8.1	2.02	3.53	0.04	0.01	0.03	40.63	27.47	55	96.88	99	96	0.05	0.07	0.08
Gandaki	2.64	1.64	3.66	0.02	0.01	0.03	26.92	43.75	42	100	94	92.3	0.09	0.04	0.07
Lumbini	5.77	2.27	7.31	0.11	0.06	0.26	37.57	21.68	30.8	99.45	96	96.8	0.2	0.26	0.35
Karnali	2.95	3.02	3.42	0.02	0.02	0.04	12.9	16.2	13.5	70.97	97	96.2	0.08	0.07	0.13
Sudurpaschim	3.84	3.19	3.81	0.06	0.09	0.17	13.33	14.47	13	92.67	96	96.5	0.16	0.29	0.43

Source: EDCD and HMIS/DoHS

Provincial analysis for FY 2081/82 shows marked variation in surveillance coverage and transmission intensity. Lumbini stands out with the highest ABER (7.31%), the highest API (0.26 per 1,000), and a high SPR (0.35), indicating both strong testing coverage and elevated transmission. Madhesh recorded a sharp rise in API to 0.18 and the highest SPR (0.48), suggesting increased positivity despite moderate testing levels. Sudurpaschim also showed increased transmission indicators, with API rising to 0.17 and SPR to 0.43.

In contrast, Koshi and Gandaki maintained very low API levels (0.01-0.03), reflecting minimal transmission, although sustained surveillance remains essential. Bagmati reported moderate API (0.03) but the highest proportion of Pf cases (55%), indicating a greater share of falciparum infections among its total cases. Across all provinces, the proportion of imported cases remained consistently high (around 90-100%), reaffirming that imported malaria continues to drive the national burden. Overall, western and southern provinces-particularly Lumbini, Sudurpaschim, and Madhesh-demonstrate comparatively higher transmission intensity in 2081/82, while imported cases dominate across the country.

Box 10.2 SWOT analysis of Malaria Program

Strengths	Opportunities
• Strengthened case confirmation and laboratory-based diagnosis. • Expanded designated microscopy network and peripheral diagnostic capacity. • Continued IRS and LLIN distribution implementation in all high and moderate-risk areas. • Structured capacity-building, including private sector engagement. • Functional surveillance aligned with the elimination framework (case investigation and classification).	• Sustained Global Fund financial and technical support. • Strengthened cross-border coordination and information sharing. • Collaboration with national and international technical partners. • Integration of malaria services within broader vector-borne disease programmes. • Alignment with the national health sector strategy and elimination targets.
Weaknesses	**Threats**
• Operational challenges in 1-3-7 surveillance implementation, especially due to epidemiological shifting of diseases to higher altitudes. • Reduced clinical prioritization in low-transmission settings. • Over-reliance on RDTs compared to microscopy. • Data quality and case-classification challenges. • Delays in timely case notification and reporting.	• Continued importation is linked to cross-border mobility. • Limited structured reporting on peacekeeping returnees from endemic regions. • Risk of transmission of drug-resistant malaria strains by active military personnel traveling back home from African regions. • Climate variability affects transmission patterns. • Competing public health emergencies diverting programme focus. • Risk of localized transmission from isolated indigenous cases.

10.1.2 Scrub Typhus

Scrub typhus, caused by *Orientia tsutsugamushi*, is transmitted to humans through the bites of infected larval mites, known as chiggers' mites. These mites, measuring 0.15–0.3 mm, leave a distinctive black eschar at the bite site, which aids in clinical diagnosis. The disease is not transmitted directly from person to person. Scrub typhus exhibits a seasonal pattern, with peak transmission occurring before and after the rainy season in Southeast Asia, although in tropical regions, transmission may occur year-round. Areas with dense scrub vegetation are particularly conducive to the presence of infected chiggers.[1]

Effective management of scrub typhus requires a robust reference laboratory equipped with Immunofluorescence Assay (IFA) and molecular diagnostic capacity to enable accurate diagnosis, genetic characterization of circulating strains, and evolutionary analysis. In addition, a comprehensive surveillance system, early outbreak detection and prompt response, including treatment and preventive measures are essential for effective control.[2]

In Nepal, several studies have documented the presence of scrub typhus. A serological analysis of blood samples from fever patients at Patan Hospital in Kathmandu Valley during 2060/61 BS (2004 AD) reported a 3.2% positivity rate. Additionally, cases of morbidity and mortality associated with scrub typhus were reported following the 2072 BS (2015 AD) earthquake. Although the systematic surveillance remains limited, scrub typhus has been recorded through the Early Warning and Reporting System (EWARS) since 2072/73 BS (2016 AD) with sporadic

[1] Epidemiology, clinical characteristics, diagnosis, and outcomes of scrub typhus infection in Nepal: a systematic review. Pratik Lamichhane, Kailash M. Pokhrel, Baraa Alghalyini, Abdul Rehman Zia Ziadi, Maied Z. Alshehery, Kapil Khanal, Madhur Bhattarai, Alisha Yadav. Annals of Medicine & Surgery. Volume 85. Year 2023

[2] Dhimal, M., Dumre, S.P., Sharma, G.N. et al. An outbreak investigation of scrub typhus in Nepal: confirmation of local transmission. BMC Infect Dis 21, 193 (2021).

outbreaks in different parts of the country, including those influenced by factors such as population displacement following the Jajarkot earthquake in 2081 BS (2024 AD. A recent conducted in 2023 AD reported seroprevalence of 19.31% (ranging from 5 to 40%) among acute undifferentiated febrile illness, indicating a substantial burden of scrub typhus in Nepal.

10.1.2.1 Major activities conducted in FY 2081/82

Capacity strengthening

Three batches of three-day Training of Trainers (ToT) on national protocols for the diagnosis, treatment, and management of NTDs and VBDs, including scrub typhus, were conducted (two in Gandaki Province and one in Koshi Province), targeting 90 doctors from major hospitals in these provinces.

Rapid Diagnostic Test Kits Supply

The test of scrub typhus is being provided free of cost in the government hospitals and EDCD supplies the test kits on a need basis. In the fiscal year 2081/82, more than 35000 scrub typhus RDT kits were supplied to ensure availability of the test kits in the high burden areas.

Outbreak Response

In response to the sudden increase in scrub typhus cases reporting in Darma Rural Municipality, Salyan District, Karnali Province in Kartik 2081 BS, the EDCD in coordination with Provincial Health Service Directorate, Salyan Health Service Office, mobilized rapid response teams and facilitated supply of RDT kits. In addition, awareness activities and local health camps were coordinated through local government and health service office and treatment services were provided through Salyan Hospital and other health facilities.

IEC/BCC Activities

EDCD has developed and disseminated numerous Information, Education, and Communication (IEC) materials to prevent and control scrub typhus. With support from National Health Education, Information, and Communication Centre (NHEICC), IEC brochures were distributed to raise awareness.

10.1.2.2 Status of Scrub Typhus

Nationally, the total reported scrub typhus cases increased substantially from 9,243 (FY 2079/80) to 16,597 (FY 2080/81) and further to 25,494 (FY 2081/82), representing a nearly threefold rise over the three-year period. All provinces recorded a consistent upward trend, with Lumbini reporting the highest figures across all three fiscal years and the largest absolute increase, whereas Karnali and Madhesh exhibited the most pronounced proportional growth.

Table 10.7 Distribution of Scrub Typhus cases (OPD)

Provinces	2079/80	2080/81	2081/82
Koshi	773	2,119	2,235
Madhesh	94	308	903
Bagmati	1,290	1,838	3,063
Gandaki	1,565	1,725	2,419
Lumbini	2,843	4,322	7,862
Karnali	403	2,539	4,056
Sudurpashchim	2,275	3,746	4,956
National	**9,243**	**16,597**	**25,494**

Source: HMIS/DoHS

Box 10.3 SWOT analysis for Scrub Typhus

Strengths

- National guidelines on diagnosis, management, and prevention of Scrub typhus in Nepal is available
- Rapid diagnostic test kits and effective antibiotics (e.g., Doxycycline, Azithromycin) are part of essential health supplies in many facilities, facilitating early diagnosis treatment
- Capacity building for health workers in diagnosis and management of Scrub Typhus has been integrated with other NTD/VBD activities.
- Scrub Typhus surveillance systems are in place: EWARS functions at 134 sites, and SORMAS has been introduced in five provinces, with expansion to other provinces.
- Rapid response committees and teams are established at federal, provincial, district, and local levels, ensuring readiness for timely outbreak response.

Opportunities

- Scrub Typhus is officially recognized as one of 52 infectious diseases under the Public Health Service Act, 2018, as listed in the Nepal Gazette, ensuring a legal mandate for action.
- Nepal's federal structure ensures government presence down to the ward level, offering opportunities to engage communities in scrub typhus prevention efforts.
- "Hello Health" (1115) can be leveraged to increase community awareness and early reporting.

Weaknesses

- Community awareness of scrub typhus remains low, contributing to delayed diagnosis and inadequate prevention efforts Current surveillance (e.g., EWARS sentinel sites) covers limited areas, leaving many cases undocumented and undermining response planning.
- Limited budget allocation for scrub typhus prevention and control.
- A consistent rise in reported scrub typhus cases across provinces suggests existing control measures are insufficient.

Threats

- Global funding cuts, declining official development assistance, coupled with reductions in national health budget for NTD/VBD programs may limit program capacity.
- Scrub typhus is spreading to urban populations, increasing the number of people at risk beyond traditional rural high-exposure groups.

10.1.3 Dengue

Dengue, a mosquito-borne illness transmitted by Aedes aegypti and Aedes albopictus, is endemic across all provinces in Nepal. First identified in 2060/61 BS (2004 AD), dengue cases have steadily increased, particularly in tropical lowland areas and subtropical hilly regions, including Kathmandu. Several outbreaks have occurred between 2062/63 BS (2006 AD) and 2078/79 BS (2022 AD), highlighting the disease's persistence and spread across various districts.

Entomological surveillance by the EDCD from 2062/63 to 2066/67 BS (2006–2010 AD) detected A. *aegypti* in five peri-urban areas of the Terai (Kailali, Dang, Chitwan, Parsa, and Jhapa), confirming local transmission. Between 2068/69 and 2071/72 BS (2012–2015 AD), cases were reported intermittently, followed by annual outbreaks in different districts. A major outbreak occurred in 2075/76 BS (2019 AD), affecting 68 out of 77 districts, with 17,992 cases reported. During the COVID-19 pandemic (2076/77–2077/78 BS or 2020–2021 AD), the number of dengue cases declined, but the 2079 BS (2022 AD) outbreak was the largest recorded in Nepal, with 54,784 cases and 88 deaths. Dengue has now become a significant public health concern, with cases reported year-round in all 77 districts. Current programs aim to reduce dengue related mortality through targeted. A recent study by the Vector Borne Disease Research and Training Center (VBDRTC) has confirmed that both *Aedes aegypti* and *Aedes albopictus* mosquitoes are responsible for transmitting dengue in Nepal. Entomological surveillance conducted in three cities- Kathmandu, Lalitpur, and Ghorahi- in 2079 BS (2022 AD) found the presence of both mosquito species in Lalitpur and Ghorahi.

In 2062/63 BS (2006 AD), a collaborative study by the EDCD and NPHL identified all four dengue virus subtypes (DEN-1, DEN-2, DEN-3, and DEN-4) circulating in Nepal. However, in the 2079 BS (2022 AD) serotyping study conducted by EDCD and NPHL, the predominant virus was DENV1, followed by DENV3 and DENV2, with no positive samples for DENV4. However, in 2080 BS (2023 AD) and 2081 BS (2024 AD), DENV-2 emerged as the predominant serotype.

Box 10.4 Nepal's Dengue Control Program

Goal

To reduce the morbidity and mortality due to dengue fever, dengue hemorrhagic fever (DHF) and dengue shock syndrome (DSS).

Objectives

- To develop an integrated vector management (IVM) approach for prevention and control.
- To develop capacity on diagnosis and case management of dengue fever, DHF and DSS.
- To intensify health education and IEC activities.
- To strengthen the surveillance system for prediction, early detection, preparedness and early response to dengue outbreaks.

Strategies

- Early case detection, diagnosis, management and reporting of dengue fever
- Regular monitoring of dengue fever surveillance through the EWARS
- Mosquito vector surveillance in municipalities
- The integrated vector control approach where a combination of several approaches are directed towards containment and source reduction

10.1.3.1 Major activities in FY 2081/82

Advocacy and Multisectoral Coordination

- In Shrawan 2081 BS, the MoHP organized a high-level meeting on dengue prevention and control with chiefs of local governments from Kathmandu, Bhaktapur and Lalitpur districts, along with other key stakeholders.
- Interactive coordination events were conducted with elected representatives, health professionals at local levels, and other stakeholders in districts identified as having high potential for dengue burden, including Kavrepalanchowk, Gorkha, Lamjung, Mahottari and Parsa. These activities complemented coordination efforts with local levels conducted by EDCD in several high burden districts in FY 2079/80 and FY 2080/81. The events fostered discussions on short- and long-term action needs for local governments, resource mobilization, and evidence-based planning for dengue preparedness and response, thereby creating a more enabling environment for effective dengue control at the local level.
- In Mangsir 2081 BS, EDCD organized a virtual meeting with the top ten high case-reporting districts to review the dengue situation and solicit inputs for planning for the upcoming fiscal year.
- In Asar 2082 BS, a coordination and sensitization session was conducted involving a wide range of stakeholders, including academia, professional associations, international clubs, media, consumer rights groups, aimed at strengthening multi-stakeholder engagement in dengue prevention.

Disease Surveillance, Monitoring and Evaluation (M&E)

- The dengue situation was regularly monitored using data reported through the EWARS and SORMAS. Prompt notifications highlighting unusual increases in dengue cases were sent to local levels, through official letters from EDCD, prompting timely vector control measures and enhancing preparedness for case management.
- Dengue surveillance data were analyzed on a regular basis and compiled into comprehensive Dengue Situation Report (SITREPs) for dissemination to relevant stakeholders and the media. In FY 2081/82, 82 Dengue SITREPs were produced and shared.
- In FY 2081/82, EDCD organized a two-day orientation for doctors, medical recorders and lab professionals from EWARS sentinel and reporting sites across six provinces (Koshi, Madhesh, Gandaki, Lumbini, Karnali and Sudur Pashchim Provinces). The orientation included updates on dengue case definitions and reporting procedures.
- In Chaitra 2081 BS, review of national dengue control program was held with provincial health authorities and national stakeholders, as part of the Joint Annual Review and Planning Meeting for NTD/VBD Programs.

Vector Surveillance and Vector Control

- In fiscal year 2080/81, *Aedes* surveillance as a part of Integrated Vector Surveillance was conducted through the Provincial Health Directorates and health offices across various districts in all seven provinces.
- A comprehensive 'search and destroy' campaign was conducted at district and local levels, utilizing funds allocated in the Annual Work Plan and Budget (AWPB).
- One batch of Entomology Refresher Training was conducted by VBDRTC, to update health workers on key entomological competencies, including vector surveillance, species identification, vector incrimination and insecticide susceptibility testing.
- EDCD also conducted an orientation and demonstration on vector surveillance and control to officials for officials of Tribhuwan International Airport (TIA), enable airport authorities to strengthen vector control measures within airport premises.

Capacity Strengthening on Clinical Management of Dengue

- EDCD conducted two batches of virtual orientations for healthcare providers focused on national guidelines for the prevention, control and case management of dengue. One session was jointly organized in coordination with the Ministry of Health and Social Development, Gandaki Province. In total, over 720 healthcare providers were oriented.
- District-level orientations on the clinical case management of Dengue were conducted in Jhapa, Morang, Mahottari, Parsa, Kathmandu, Kavrepalanchowk, Lamjung, and Gorkha, districts. These activities complemented similar efforts in other high- burden districts in FY 2080/81. Over 210 doctors and healthcare providers from both public and private health facilities were trained.
- Short, user-friendly dengue guidelines, including flow charts, were distributed to major government and private hospitals nationwide, particularly those reporting hight dengue caseloads. These tools outlined case classification, clinical management procedures, and guidance on fluid administration and were displayed in emergency and in-patient wardsto support clinical decision-making.

Risk Communication and Community Engagement

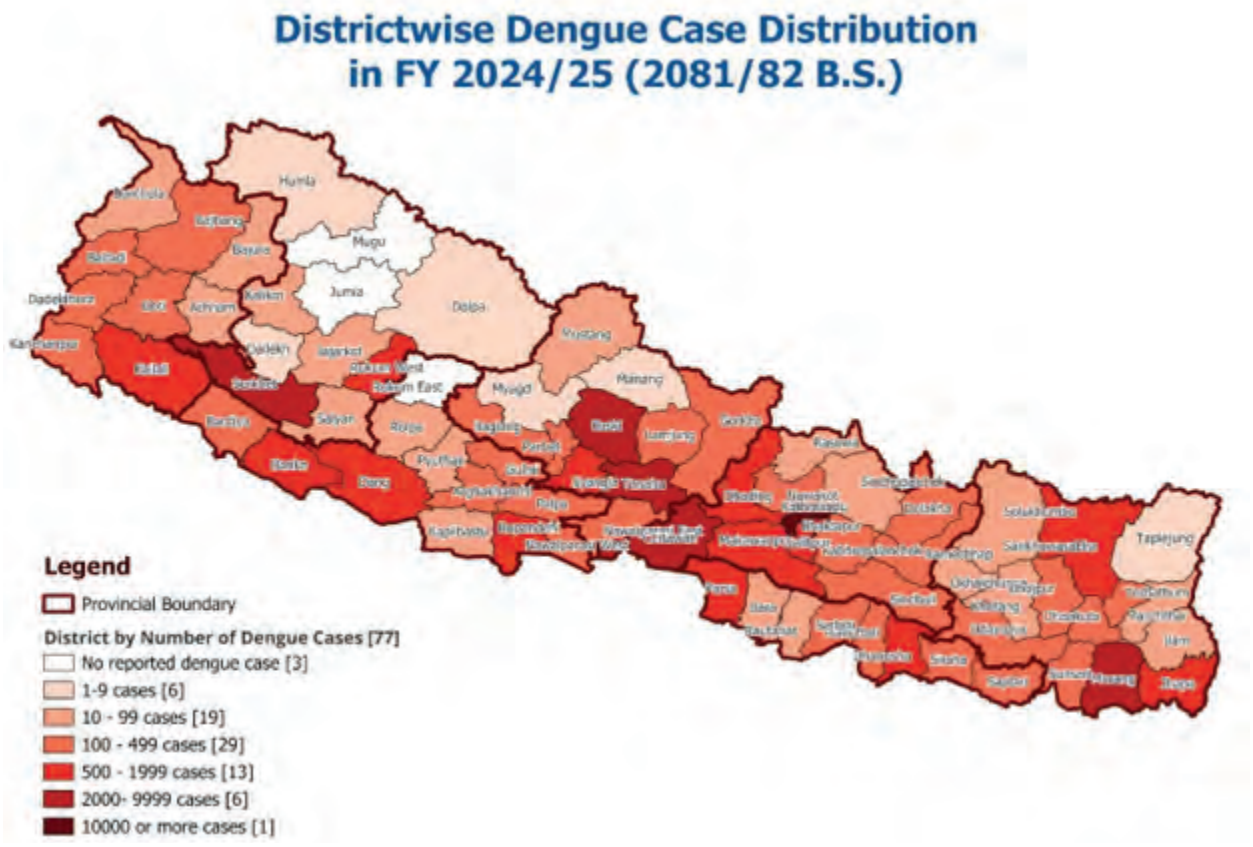
- To enhance risk communication, IEC materials were produced and distributed to provincial and local levels through multiple channels. These included an awareness video on dengue, a dengue booklet tailored to diverse target audiences, and a leaflet on the "search and destroy" approach.
- In addition, previously developed IEC materials were also reprinted and redistributed. These materials aimed to educate the public on dengue fever, its symptoms, effective measures to prevent Aedes mosquito bites, and strategies for vector control.
- Dengue-related Public Service Announcements (PSAs), developed by NHEICC in Nepali and 12 other local and national languages, were broadcast across various FM and radio channels.
- On 32 Asar 2082 BS, MoHP officially launched Shrawan Month as Nepal's first-ever Nationwide Dengue Awareness Month, with the aim of engaging the whole of society and all three tiers of government. This initiative generated a strong political commitment and national ownership for the intensification of risk communication and community engagement activities nationwide.
- EDCD, in collaboration with WHO and youth organizations, initiated a nationwide youth campaign on dengue "search and destroy," planned for fiscal year 2082/83. Over 120 youths across the country were oriented to identify Aedes breeding sites, raise awareness, and engage their communities for dengue prevention.

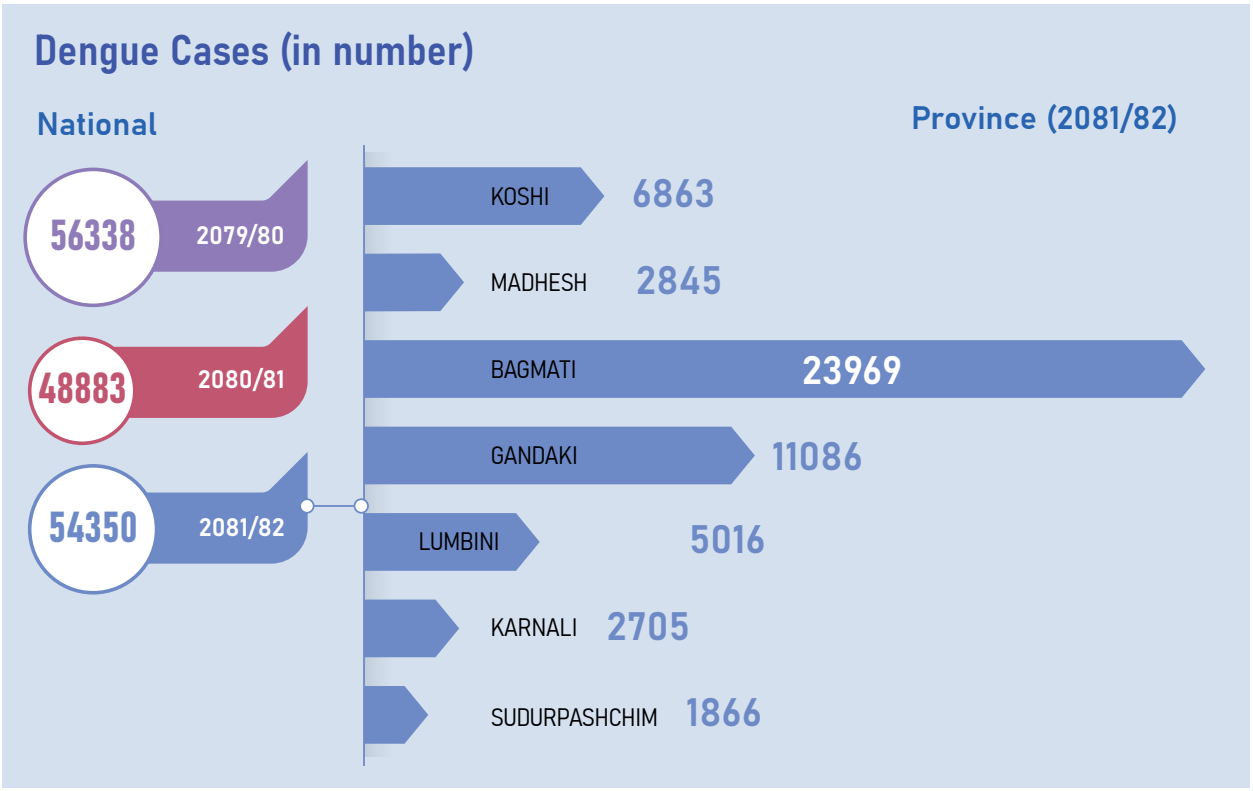
Other Activities

- In Magh 2081, EDCD in collaboration with WHO initiated the drafting of Multisectoral Plan on Dengue Prevention and Control 2082-87. Initial discussions were held during the Technical Working Group Meeting in Chaitra 2081 BS. The plan is being finalized with inputs from multiple stakeholders and is expected to be completed by the end of 2082 BS.
- Rapid diagnostic test kits were procured and distributed to provincial and local governments based on assessed needs and demands.

10.1.3.2 Status of Dengue Program

The number of dengue cases increased in 2081/82 compared to previous year. The highest number of cases were reported from Bagmati province (23,969) followed by Gandaki province (11,086). The details of dengue cases are given in figure 10.1.





Source: HMIS/DoHS

Figure 10.1 Dengue cases (OPD Morbidity) across provinces in FY 2081/82

Box 10.5 SWOT Analysis of Dengue Control Program

Strengths	Opportunities
• National guidelines are available for dengue prevention, control, and case management; and Rapid Response Team (RRT) mobilization and standard operating procedures (SOPs) for vector control and surveillance. • The NTD Steering Committee at the MoHP and a Dengue Task Force at EDCD provide national-level coordination. • Rapid response committees and teams are established at federal, provincial, district, and local levels, ensuring readiness for timely outbreak response. • Annual budgets are allocated to provinces and local governments for dengue prevention, control, and outbreak response. • Dengue surveillance systems are in place: the Early Warning and Reporting System (EWARS) functions at 134 sites, and the SORMAS has been introduced in four provinces, with plans for expansion. • All seven provinces have entomological laboratories with trained personnel and essential supplies for entomological (Aedes) surveillance	• Strong political commitment and increasing awareness among lawmakers and high-level officials provide momentum for expanding dengue prevention and control. • International funding for pandemic preparedness presents a strategic opportunity to strengthen dengue-related systems and infrastructure. • Dengue is officially recognized as one of 52 infectious diseases under the Public Health Service Act, 2018, as listed in the Nepal Gazette, ensuring a legal mandate for action. • Nepal's federal structure ensures government presence down to the ward level, offering opportunities to engage community-based groups such as tole lane organizations, consumer committees, and women's groups in local dengue prevention efforts.
Weaknesses	**Threats**
• Low priority for the dengue control program at subnational level. • Multi-sectoral collaboration beyond the health sector remains weak, limiting broader engagement and coordinated action. • Limited entomological capacity and vector surveillance due to the unavailability of resources (trained human resources and budget) • Surveillance systems like EWARS and SORMAS have limited coverage, and reporting is often delayed and incomplete, affecting early detection and timely response. • Underreporting, overreporting, and inconsistent, incomplete, and untimely reporting of dengue cases. • Most dengue prevention and control measures are triggered by outbreaks rather than focused on continuous prevention. • There is high demand for rapid diagnostic test (RDT) kits, leading to frequent shortages in public health facilities and high testing costs in the private sector during peak seasons • Dengue virus serotyping is infrequent and often delayed, reducing its usefulness for clinical and public health decision-making.	• Rising temperatures, heavier rainfall, and increased humidity due to climate change are expanding the habitat of Aedes mosquitoes, making all 77 districts vulnerable to dengue transmission. • Rapid urbanization, unplanned construction, and high population mobility are contributing to the spread of dengue into new areas. • Global funding cuts, declining official development assistance (ODA), and reductions in the national health budget pose serious risks to sustained financing for dengue prevention and control efforts.

10.1.4 Kala-azar

Kala-azar, also known as Visceral Leishmaniasis (VL), is the most severe form of leishmaniasis, caused by the Leishmania parasites transmitted through the bites of infected female sandflies, specifically Phlebotomus argentipes. Without timely treatment, more than 95% of VL cases are fatal, with symptoms including prolonged fever, significant weight loss, and enlargement of the spleen and liver. The disease predominantly impacts the most impoverished populations and is closely associated with malnutrition, poor housing conditions, weakened immune systems and environmental changes. Post-Kala-azar Dermal Leishmaniasis (PKDL) can develop following VL treatment or, in some cases, even without prior VL infection. PKDL manifests as skin lesions and may contribute to further disease transmission.

The National Kala-azar Elimination Program has set a target to eliminate Kala-azar as a public health problem by 2026. Nepal has achieved the targets of elimination as a public health problem since the last two years and all districts is below the elimination threshold of annual incidence of less than 1 case of Kala-azar per 10,000 population at the district level and less than 1% case fatality rate due to primary Kala-azar.

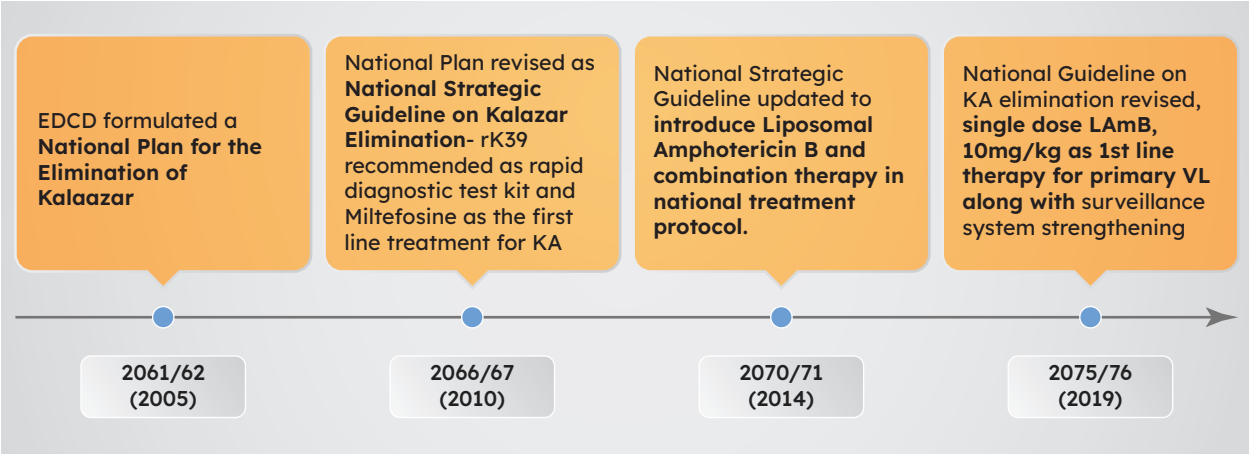


Figure 10.2 Milestones of National Kala-azar elimination program in Nepal

Box 10.6 Kala-azar elimination program

Goal

- Achieve elimination of kala-azar as a public health problem by 2026.
- Sustain elimination thereafter and prevent resurgence.

Target

- Maintain the annual incidence of kala-azar at less than 1 case per 10,000 population at the district level.
- Maintain the case fatality rate for primary kala-azar at less than 1 percent.

Objectives

- Reduce the incidence of kala-azar infection.
- Reduce mortality due to kala-azar.
- Diagnose and treat PKDL cases to reduce the human reservoir of parasites.
- Manage VL–HIV co-infections effectively.
- Strengthen vector control through integrated vector management approaches.
- Ensure community engagement through awareness-raising activities at all levels.

Strategies

- Strengthening disease surveillance and post-validation surveillance
- Early diagnosis and quality treatment
- Integrated vector surveillance and effective management
- Leadership, governance, and cross-country collaboration
- Advocacy, social mobilization, community engagement, and partnerships

Over the past decade, the incidence of Kala-azar cases has seen a significant decline. However, the geographical spread of the disease and the emergence of sporadic cases without clear epidemiological links have posed challenges to achieving the elimination targets. In these years there have been notable advancements in the diagnosis and treatment of Kala-azar. The national program has ensured the availability of the rK39 dipstick test kit- a rapid and easily administered serological test- up to the PHCC level in highly affected districts. Additionally, essential drugs for Kala-azar treatment, including liposomal amphotericin B, miltefosine and paromomycin have been made accessible at all designated treatment centers.

The Epidemiology and Disease Control Division (EDCD) provides Kala-azar diagnostics and medications free of charge to patients. To further support the elimination efforts, treatment centers are reimbursed NPR 5,000 for each treated case, and patients receive incentive of NPR 2,000 to cover transportation costs.

10.1.4.1 Major activities in 2081/82

Update of National Strategic Plan and Roadmap (2082 to 2087)

The National Kala-azar Elimination Program is updating the National Strategic Plan and Roadmap for Kala-azar Elimination (2082 to 2087) to sustain the achievement of elimination targets, plan for post validation surveillance and shift the focus towards elimination of transmission by 2030 and is in the finalization process.

Update of National Treatment Protocol for Leishmaniasis

EDCD supported the revision of Nepal's National Leishmaniasis Treatment Protocol to align it with updated WHO recommendations and recent national and international clinical evidence. As the existing protocol lacked guidance on key areas such as VL-HIV co-infection, pediatric VL, cutaneous and mucocutaneous leishmaniasis, and diagnostic clarity, EDCD, with WHO support, convened a two-day consultative meeting on 16–17 December 2024 in Kathmandu. The meeting brought together national clinical experts to review inputs from an earlier clinical workshop and to develop an updated draft guideline. The revised protocol reflects current best practices, incorporates a clearer and more user-friendly format, and is undergoing review from the expert.

Establishment of Centre of Excellence

As the national program is moving towards elimination of Kala-azar as a public health problem, the need for specialized treatment centers (Centre of Excellence for Kala-azar) was realized. Currently two hospitals- Madesh Institute of Health Sciences provincial hospital, Janakapur and Surkhet provincial hospital in Karnali Province- have been designated as Centre of Excellence and is equipped with trained human resources, advanced diagnostics and treatment facilities. EDCD has already provided training of trainers and further training programs to clinicians, paramedics and nursing staff for quality and early diagnosis, treatment and case management of Kala-azar cases.

Indoor Residual Spraying (IRS) Guidelines Endorsement and Dissemination

The Epidemiology and Disease Control Division led the drafting and development of the National IRS Guidelines for the control of kala-azar and malaria vectors in Nepal. Prior to this, no specific IRS guidelines existed for kala-azar and implementation was often inconsistent with limited quality assurance mechanisms. To address this gap, a series of expert consultations were convened to develop standardized and practical guidelines aligned with global recommendations and national field realities. The guidelines were finalized, formally endorsed and disseminated nationwide to ensure uniform reference and application at all levels. Printed copies were produced and distributed to facilitate wider access and consistent use.

Development of Standard Operating Procedure (SOP) for Mass Screening

The National Kala-azar Elimination Programme developed a SOP for "Active Case Detection of Kala-azar through mass screening in camp settings in highly endemic areas, integrated with a skin NTD approach." This initiative supports Nepal's intensified efforts to eliminate kala-azar as a public health problem by 2026. As the elimination target approaches, undetected cases in highly endemic clusters, including Post Kala-azar Dermal Leishmaniasis (PKDL), continue to pose a risk for ongoing transmission due to delayed identification and treatment. Camp settings will also enable an integrated skin NTD approach, allowing simultaneous screening for kala-azar, PKDL, cutaneous leishmaniasis (CL), mucocutaneous leishmaniasis (MCL), and leprosy. This integrated model improves efficiency, optimizes resources and reduces missed cases. The SOP has been formally adopted by the national programme and mass screening camps will be organized in high-burden clusters to operationalize this approach and accelerate progress towards elimination.

NTDs Steering Committee Meeting

The NTDs Steering Committee Meeting was held in Pokhara, Gandaki Province, on 20 June and was chaired by the Health Secretary. EDCD presented Nepal's progress towards visceral leishmaniasis (VL) elimination. Key discussions included expediting endorsement of the VL National Strategic Plan (NSP) following the extension of the elimination roadmap timeline from 2025 to 2030, preparation of the national dossier for VL elimination validation and ensuring sustained government financing for key medicines such as Miltefosine and Paromomycin.

Annual NTDs/VBDs Review and Planning Meeting

EDCD organized the annual review and planning meeting for Neglected Tropical Diseases (NTDs) and Vector-Borne Diseases (VBDs) programmes from 19–21 March, with participation from federal and provincial stakeholders. The meeting covered kala-azar, malaria, lymphatic filariasis, leprosy, dengue, rabies, and snakebite envenoming. The forum reviewed progress towards disease control and elimination targets, discussed operational challenges, and identified priorities for the Annual Work Plan and Budget (AWPB) for the upcoming fiscal year. The meeting strengthened coordination across levels and aligned programme activities with national priorities.

Integrated Vector Surveillance (IVS)

The National Kala-azar Elimination Programme has been strengthening IVS as a core component of the Integrated Vector Management strategy. In FY 2081/82, IVS was implemented in all seven provinces. Multidisciplinary field missions of 8–10 days were conducted led by provincial health directorate, entomologists and laboratory personnel to monitor vector species, density, breeding patterns, and infection risks for kala-azar and other vector-borne diseases, including malaria, dengue, and lymphatic filariasis. Site selection and prioritization were guided by epidemiological trends and programmatic needs. Field-based surveillance activities documented diverse mosquito and sandfly species confirming the presence of multiple disease vectors and risk of disease transmission. The findings informed targeted vector control measures and emphasized the importance of regular, systematic IVS to guide evidence-based public health interventions.

Field Entomology Training

The program strengthened national and sub-national capacity in field entomology to support surveillance and control of vectors of public health importance. From 4 to 10 September 2025, a seven-day Field Entomology Training was conducted in coordination with Vector Borne Disease Research and Training Center in Hetauda, benefiting 18 health workers from local, district, provincial, and federal levels. In addition, EDCD

provided technical support during a 14-day integrated field entomology training conducted in Sudurpashchim Province reaching 13 vector-borne disease focal persons from high-risk areas. Earlier, from 21 to 30 April 2025, an entomology refresher training was organized for seven health and laboratory personnel. These coordinated efforts strengthened entomological capacity across levels, ensuring that vector surveillance findings are effectively translated into evidence-based vector control interventions nationwide.

Combined Active Case Detection (ACD) and IRS in high-burden areas

The National Kala-azar Elimination Programme, with support from WHO, implemented integrated ACD and IRS from April to June 2025 in 10 high-burden districts where there was budget gap. The intervention followed an index case–based approach and targeted communities of 40 identified kala-azar index cases. A total of 1,311 individuals were screened, of whom 887 suspected cases were tested using rK39 rapid diagnostic tests. In addition, 2,017 community members were reached through awareness and sensitization activities. IRS was carried out in 703 households and 639 additional structures, directly protecting 3,318 people. The intervention also strengthened local capacity through advocacy meetings, onsite coaching, and orientations, reaching 295 stakeholders. This included 81 health workers trained on ACD procedures and 72 spray team members trained on quality IRS implementation.

Participation in National Programme Managers and RTAG Meeting on Kala-azar and Malaria Elimination

Officials from the EDCD and the Vector Borne Disease Research and Training Center (VBDRTC), along with national technical experts on kala-azar and malaria, participated in the National Programme Managers Meeting and the Regional Technical Advisory Group (RTAG) Meeting on Kala-azar and Malaria Elimination in the South-East Asia Region, held in Sri Lanka from 25–27 February 2025. Nepal delivered a country presentation outlining the current status and progress towards kala-azar and malaria elimination, highlighting achievements, key operational challenges, and existing gaps. The RTAG provided recommendations to Member States, including Nepal, to further strengthen elimination strategies and sustain progress.

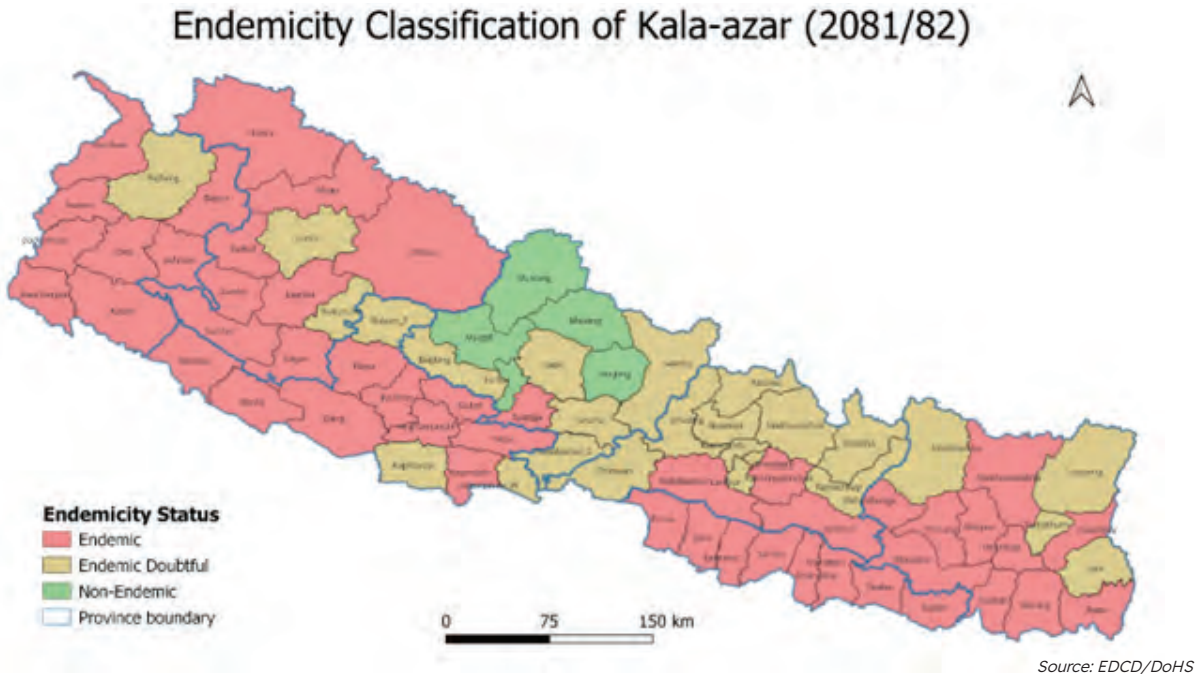
Joint Field Missions to Lumbini and Bagmati Provinces

From 16–18 February, EDCD, in coordination with provincial health authorities and WHO, conducted a joint field mission to Banke and Bardiya districts of Lumbini Province to review implementation of priority communicable disease programmes, including kala-azar. The mission engaged district health officials, visited health facilities, monitored district stores, and interacted with affected individuals in high-risk communities. Operational challenges and good practices were documented to inform programme improvements and follow-up actions at national level. Similarly, from 21–24 April, integrated onsite coaching, advocacy and active case detection activities were conducted in selected municipalities of Kavrepalanchowk district in Bagmati Province. The mission identified programme gaps and enabled immediate corrective actions to strengthen and sustain kala-azar elimination efforts.

10.1.4.2 Status of Kala-azar Elimination Program

Kala-azar Endemicity Status

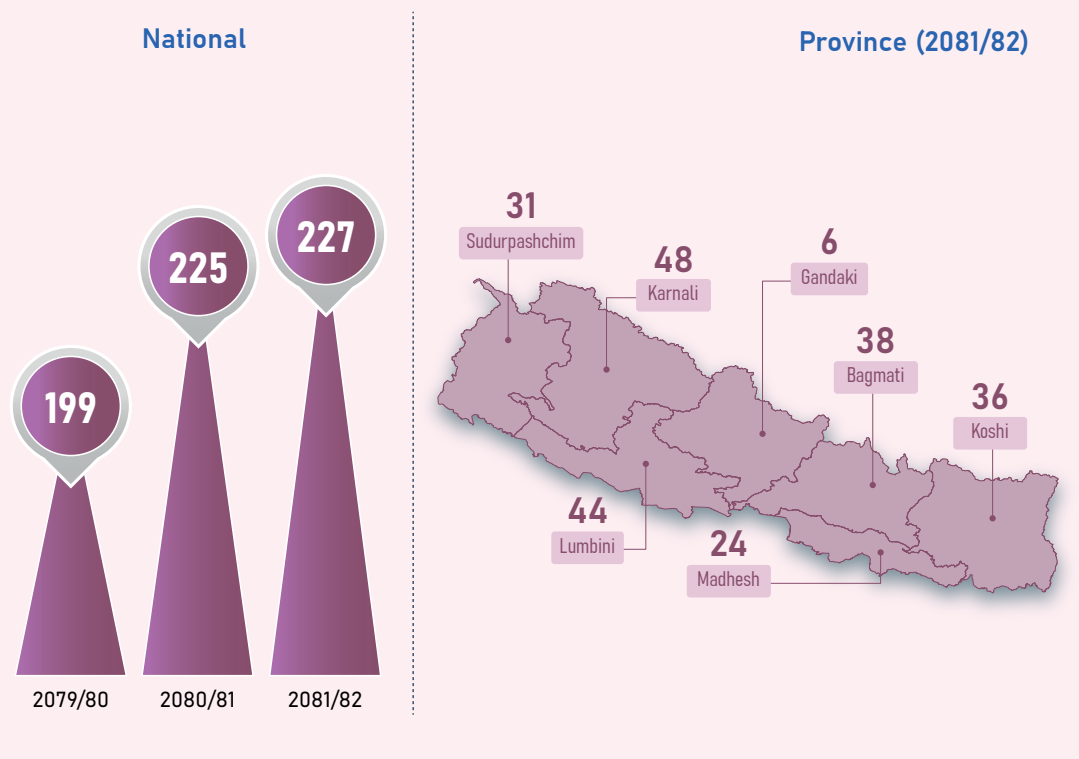
Forty-seven districts were classified as endemic districts and 25 as endemic doubtful, only 5 districts of Gandaki Province were classified as non-endemic. The details of district classification of endemicity are given in figure 10.3.



Source: EDCD/DoHS

Figure 10.3 District-wise Kala-azar Endemicity Classification

The highest number of Kala azar cases were reported in FY 2078/79, this year the cases slightly increased to 227 from previous year. Karnali province reported the most (48) cases followed by Lumbini province (44) cases. The details of the Kala-azar cases is given in figure 10.4.



Source: HMIS/DoHS

Figure 10.4 Cases of Kala-azar detected in three FYs and distribution across province in FY 2081/82

Box 10.7 SWOT Analysis of National Kala-azar Elimination Program

Strengths	Opportunities
• Free diagnostics and treatment • Case-based surveillance and digital tracking- GPS mapping, case verification and validation of each reported cases. • Updated policies and technical standards- Revised national guidelines, SOPs for Active Case Detection (ACD), Indoor Residual Spraying (IRS), and Integrated Vector Surveillance (IVS) promote uniformity and quality assurance. • Integrated and multidisciplinary approach- Collaboration across epidemiology, entomology, laboratory services and clinical care. • Robust surveillance systems- Use of HMIS and EWARS supports routine reporting and early detection of outbreaks or unusual trends. • Index case–based ACD strategy. • Strong partnerships and collaboration: Engagement with WHO, academic institutions, researchers and stakeholders facilitates operational research and knowledge exchange. • Implementation of vector surveillance at sentinel sites.	• Academia support in clinical and implementation research informing evidence-based strategies. • Strengthened national and international collaboration with WHO's technical support for elimination. • Continued advocacy, orientation and training programs. • Increased investment from all level of government for kala-azar elimination efforts. • Strengthened capacity in entomology and vector control • Use of geospatial analysis for targeted intervention
Weaknesses	**Threats**
• Seasonal insecticide spraying coverage remains suboptimal in some high-risk areas, limiting impact on vector density. • Community awareness still lacking in some high endemic areas • Inconsistent quality of diagnostic kits and no WHO pre-qualified lists available for rK39 test kits • Limited integration with private clinicians	• Emergence of other forms of leishmaniasis- Rising cases of cutaneous leishmaniasis (CL), mucocutaneous leishmaniasis (MCL), and Post Kala-azar Dermal Leishmaniasis (PKDL) may complicate elimination efforts and require additional resources. • Expansion of disease to new foci. • High-cost of medicines with limited market availability pose a threat to sustained supply

10.1.5 Lymphatic Filariasis (LF)

Lymphatic filariasis (LF), or elephantiasis, is a mosquito borne parasitic disease-causing disfigurement and disability. LF is acquired during childhood through mosquito bites, with visible and more severe symptoms typically emerging in adulthood, although they can also manifest in children. It is transmitted by various species f mosquito and is caused by filarial worms, primarily Wuchereria bancrofti globally. In Nepal, Culex quinquefasciatus is the known vector for LF infection. Adult worms disrupt lymphatic vessels, producing microfilariae circulating in the blood. Mosquitoes become infected by biting infected individuals, continuing the transmission cycle. LF transmission is determined by factors such as infected individual numbers, microfilaria density, vector mosquito density, vector characteristics, and human vector contact frequency. Clinical outcomes include limb lymphoedema, genital diseases like hydrocele and chylocele, and recurrent acute attacks with pain and fever. Subclinical lymphatic damage affects nearly all infected individuals, with chronic conditions leading to long-term mental, social, and financial consequences, exacerbating social stigma and poverty. The activities of the program are guided by elimination program targets and strategies. (Box 10.8, figure 10.6)

Box 10.8 National Lymphatic Filariasis Elimination Program

Goal

Elimination of Lymphatic Filariasis from Nepal by the year 2030 as a public health problem by reducing the level of the disease in population to a point where transmission no longer occurs.

Objectives

- To interrupt the transmission of Lymphatic Filariasis
- To reduce and prevent morbidity.
- To provide de-worming benefit using Albendazole to endemic communities
- To reduce mosquito vectors through application of suitable and available vector control measures (Integrated Vector Management)

Targets

- Complete MDA in all LF endemic districts by 2082/83 (2025),
- Complete post MDA surveillance to validate LF elimination by 2087/88 (2030),
- Achieve elimination of LF as a public health problem defined as <1% microfilaremia and <2% antigenemia by 2025 and sustain thereafter,
- Complete the morbidity mapping in all districts by 2083/84 (2026),
- Ensure continued essential package of care for all identified morbid cases by 2084/85 (2027),
- Validate LF elimination by 2030 and sustain thereafter.

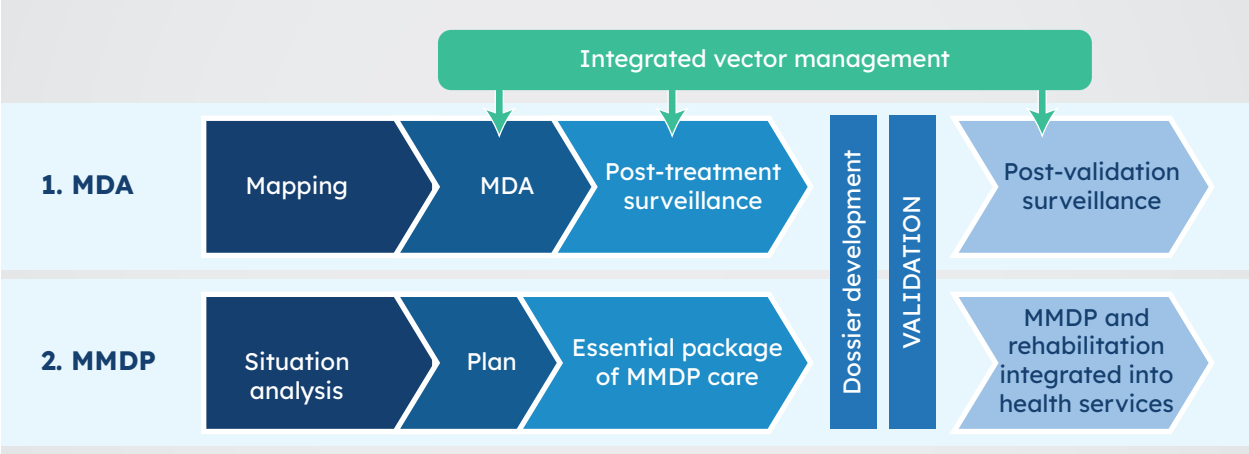


Figure 10.5 Strategies for LF Elimination

The LF elimination strategy starts with a baseline survey, followed by Mass Drug Administration (MDA) for six rounds (DA MDA) or two rounds (IDA MDA). Post-treatment surveillance (Pre-TAS/EMS and TAS/IIS) assesses MDA impact, with additional rounds if needed. Successful MDA completion and comprehensive MMDP interventions lead to validation of LF elimination. A dossier is submitted to the WHO, and after validation, Post-Validation Surveillance ensures sustained absence of LF transmission. MMDP interventions continue, seamlessly integrated with primary healthcare services.

LF Endemicity in Nepal

Nepal was identified as one of the 72 countries endemic for LF by WHO. Initially, the LF vector was believed to be present between altitudes of 300 to 5,800 feet. However, a 2070/71 (2014) study expanded this range, revealing vector presence up to 6,890 feet in Nepal. A series of LF mapping initiatives conducted from 2057/58-2068/69 (2001 to 2012), utilizing Immunochromatography Test cards (ICT), unveiled an average baseline prevalence of 13%, with variations from less than 1% to as high as 39.8% across districts. Combining ICT survey data with morbidity reporting, vector density, sanitation status, and geo-ecological considerations, 64 out of 77 districts were identified as endemic, encompassing an initial at-risk population of 25 million.

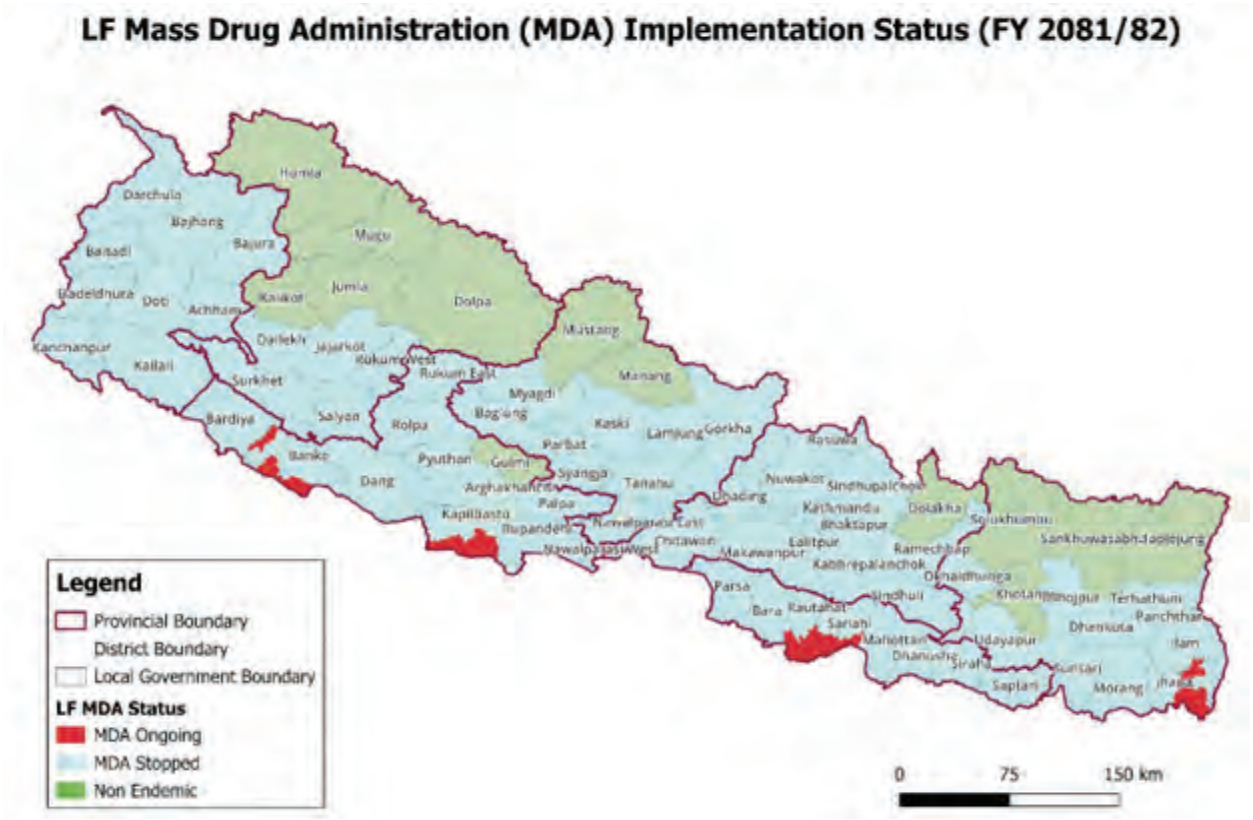
10.1.5.1 Major activities in FY 2081/82

Implementation of Mass Drug Administration MDA Campaign

In Fiscal Year 2081/82, the Mass Drug Administration (MDA) campaign was conducted in four municipalities of Banke District following the failure of one Evaluation Unit to achieve the WHO-recommended microfilaria (Mf) threshold of <1% during the IDA Impact Survey.

The triple-drug therapy (IDA) regimen, comprising ivermectin, diethylcarbamazine (DEC), and albendazole, was implemented in four municipalities of Banke District—Nepalgunj Sub-Metropolitan City, Duduwa Rural Municipality, Narainapur Rural Municipality, and Ward No. 04 of Baijanath Rural Municipality.

Of the four municipalities, three successfully achieved the WHO-recommended epidemiological coverage of more than 65% during the campaign. (figure 10.6)



Source: EDCD/DoHS

Figure 10.6 Status of Mass Drug Administration in Nepal in 2081/82

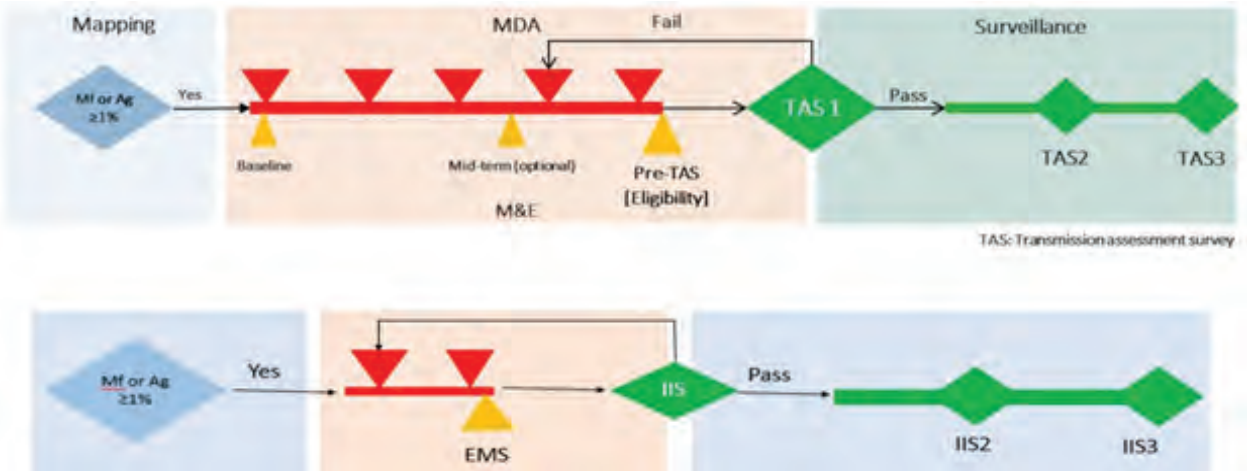
Monitoring and Evaluation of MDA program

The Epidemiology and Disease Control Division (EDCD) has conducted Post-MDA Coverage Surveys, Pre-Transmission Assessment Surveys (Pre-TAS), and Transmission Assessment Surveys (TAS I, II, and III) to systematically monitor and evaluate Lymphatic Filariasis (LF) elimination activities in accordance with WHO guidelines.

Transmission Assessment Surveys (TAS) are undertaken in districts implementing the two-drug regimen (DA) MDA. In districts implementing the triple-drug regimen (IDA), Epidemiological Monitoring Surveys (EMS) and IDA Impact Surveys (IIS) have been conducted in line with WHO provisional guidelines.

In Fiscal Year 2081/82, TAS-2 surveys were conducted in Bardiya and Dhankuta districts, and both districts successfully passed the surveys. Additionally, the first round of the IDA Impact Survey (IIS-1) was implemented in four districts—Morang, Dang, Banke, and Kailali. In Banke district, three municipalities (Nepalgunj Sub-Metropolitan City, Duduwa Rural Municipality, and Narainapur Rural Municipality) did not meet the WHO-recommended criteria to stop Mass Drug Administration, thereby necessitating additional rounds of MDA in these municipalities as per WHO guidelines.

Similarly, Ward No. 04 of Baijanath Rural Municipality in Banke district exceeded the WHO-recommended microfilaria (Mf) threshold of <1%, indicating the need for continued intervention.



IIS: IDA Impact Survey

EMS: Epidemiological Monitoring Survey

Figure 10.7 Monitoring and Evaluation of MDA program

Morbidity Mapping and Disability Prevention

The MMDP program is further strengthened by rolling out training to health workers in all districts in phases for continuous mapping, management, and referral of LF morbid cases. To date, 49 MMDP centers in 48 districts have been functionalized. In this FY, 20 additional MMDP Care and Support centers were established in 20 districts (Panchthar, Ilam, Dhankuta, Okhaldhunga, Bara, Sarlahi, Saptari, Parsa, Bhaktapu, Makawanpur, Chitwan, Tanahun, Kaski, Palpa, Rolpa, Rukum East, Surkhet, Baitadi, Bajhang and Dadeldhura). LF cases receive additional rehabilitative and social support from self-help groups where they practice self-care and engage in livelihood activities. The morbidity data collected from mapping (SMS and paper-based approach) of 57 districts showed that 47,866 cases of LF have been identified so far, among which majority (32,659 cases) were hydrocele, 14,776 lymphoedema (Male-5,586 and Female-9190) and 431 cases were having both Hydrocele and Lymphoedema. In this FY 2081/082, data collection of Morbidity estimation in12 districts (Solukhumbu, Ilam, Sindhuli, Rautahat, Dolpa, Jumla, Humla, Mugu, Kalikot, Jajarkot, Dailekh, and Surkhet) was completed and the findings will be incorporated in next Fiscal year reporting.

Capacity Building in MMDP Care and Support Centers

Comprehensive training in line with WHO morbidity management and disability prevention guideline and standard operating procedure (SOP) was provided to medical Doctor, Nursing staff and paramedics of 20 hospitals in 20 districts(Panchthar, Ilam, Dhankuta, Okhaldhunga, Bara, Sarlahi, Saptari, Parsa, Bhaktapur, Makawanpur, Chitwan,Tanahun, Kaski, Palpa, Rolpa, Rukum East, Surkhet, Baitadi, Bajhang and Dadeldhura), to improve the accessibility and utilization of essential package of care. A total of 233 health workers were trained on case management and self-care practices. The training aimed to equip healthcare professionals with the necessary skills and knowledge to improve specifically prevention and treatment of acute attack, lymphedema management strategies and practice of self-care.

Assessment of impact of MDA through Molecular Xenomonitoring (MX) in Kailali and Banke

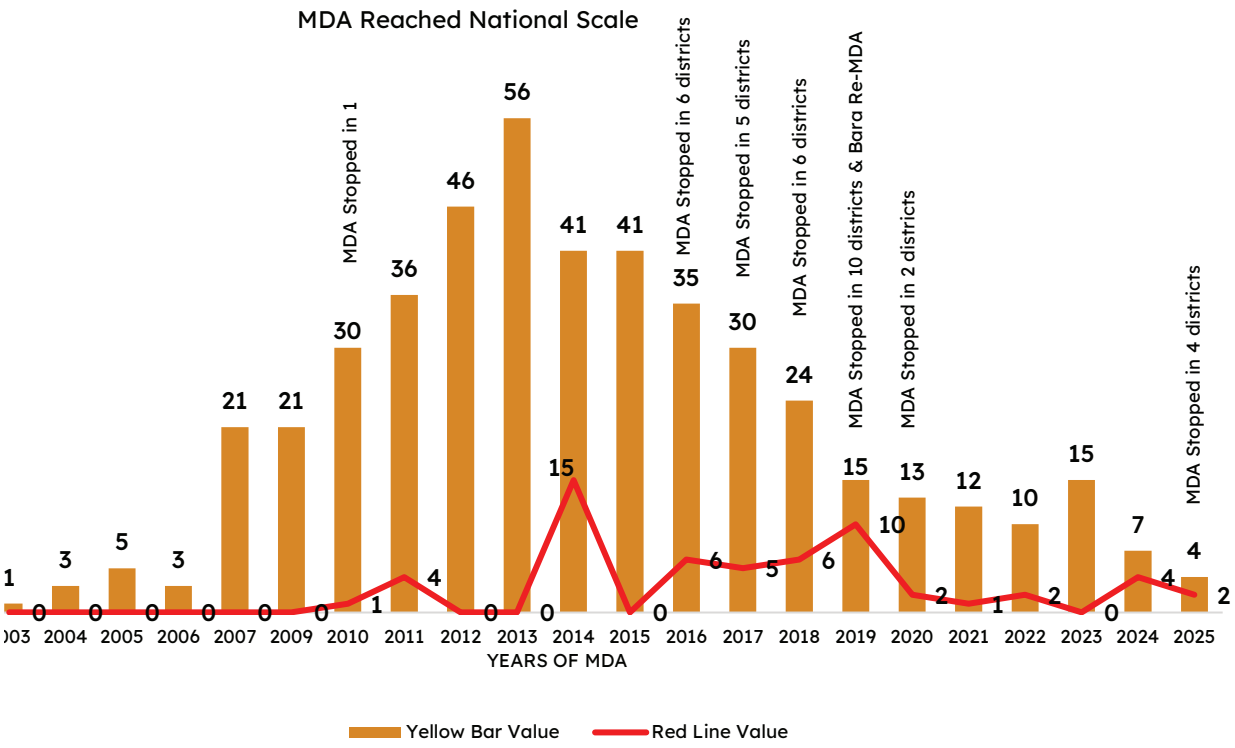
Molecular xeno-monitoring (MX), a highly sensitive methods for detecting the filarial DNA presence in the LF vectors, introduced to complement the existing assessment surveys for LF parasite detection and residual transmission in the community. In this FY, MX was conducted in two districts, Banke and Kailali, where IDA surveys had previously been performed. Both districts tested positives for filarial DNA in female Cx. quinquefasciastus higher than the recommended cut-off values for infection prevalence.

District	Total Female Cx. Quinquefasciatus	Total Pools	Screened Number of positive pools (%)	Filarial infection prevalence in mosquito % (95% CI)
Kailali	7014	290	83 (28.6)	1.38 (1.11-1.70)
Banke	7895	326	37 (11.3)	0.50 (0.35-0.67)
Total	**14,864**	**616**	**120 (19.5)**	

10.1.5.2 Status of Lymphatic Filariasis Program

Table 10.8 Status of Implementation of Lymphatic Filariasis Program in 2081/82

Number of endemic districts	MDA not started/ not at scale	MDA at scale	IDA 3rd round	IDA 4th round	EMS Passed/ IIS Planned	IIS-I Passed	TAS 1 passed	TAS 2 passed	TAS 3 passed
64 districts	0	64 districts	1 district- Banke (Four municipalities)	1 district (Kapilvastu 6 municipalities)	N/A	(Morang, Dang, Kailali, 5 municipalities of Banke)	53 districts	47 districts	28 districts



Source: EDCD/DoHS

Figure 10.8 Year-wise Scaling up of MDA campaign

The Mass Drug Administration (MDA) programme was initiated in 2003 from one district of Nepal and was subsequently expanded to achieve nationwide coverage by 2013. In 2025, MDA was stopped in four districts—Morang, Dang, Kailali, and Banke (one Evaluation Unit). In the same year, MDA was implemented in one Evaluation Unit each of Banke and Kapilvastu districts.

Specifically, the campaign was conducted in three municipalities of Banke and six municipalities of Kapilvastu. The detailed report of the Kapilvastu MDA will be presented in the next fiscal year (FY 2082/083).

Table 10.9 MMDP Implementation Status

Mapping completed	MMDP core and support cenres	Self help group formation	Cumulative number of hydroceles operated
69	49	7 districts (Jhapa, Morang, Sunsari, Kapilvastu, Rupandehi, Nawalparasi West and Baglung)- 75 self-help groups)	16,149

Source: EDCD/DoHS

Box 10.9 SWOT Analysis of LF Elimination Program

Strengths	Opportunities
• Strong Government ownership through Ministry of Health and Population and Epidemiology and Disease Control Division with clear elimination roadmap. • Two decades of nationwide MDA implementation with established microplanning and health workers and FCHVs-led community delivery system. • Sustained technical guidance and drug donation support from World Health Organization and global partners. • Post MDA surveillance system institutionalized for evidence-driven stop-MDA decisions. • Mosquito Xeno monitoring in respect to LF has been initiated. • Operational MMDP Care and Support Centers in 48 districts for improving the quality of Life of LF patients. • Hot spot identification and focal MDA has initiated districts • Confirmatory survey has completed in all high mountainous and Himalia districts. • IDA implementation plan is started in all endemic units	• Integration of LF services within federalized health system and Primary Health Care system. • Digitalization (GIS mapping, e-reporting) to improve micro-targeting • Cross-border collaboration with India to reduce importation risk. • Leveraging LF platform to strengthen broader NTD and One Health initiatives. • MMDP Care and Support Centers to deliver the Essential Package of Care. • Self-Help groups and integration with leprosy program to scale up self-care.
Weaknesses	**Threats**
• Persistent low-coverage pockets (Terai districts, high-mobility and cross border areas) delaying transmission interruption. • Inadequate scale of Morbidity Management and Disability Prevention (MMDP) services • Community fatigue after repeated MDA rounds in remaining endemic districts. • Fatigueless of health workers and FCHVs to implement the MDA campaign in certain districts • Systematic incompliance of MDA preventive chemotherapy especially in urban areas and particular community.	• Urban population has significantly lower epidemiological MDA coverage than Rural populations • Fatigueless of health workers and FCHVs to implement the MDA campaign in certain district

10.1.6 National Leprosy Elimination Program

The establishment of the Khokana Leprosarium in the nineteenth century was the beginning of organized leprosy preventive services in Nepal. In 1960, the then His Majesty's Government (HMG) of Nepal, in collaboration with the World Health Organization (WHO), conducted a leprosy survey with an estimated number of 100,000 leprosy cases. Later, Dapsone monotherapy was started as a pilot project in 1966. This project gradually expanded as a vertical program and remained so till 1987 when it was integrated into general health services. Multi drug therapy (MDT) was introduced for the first time in Nepal in the year 1982 in selected few areas and hospitals. By that time the number of registered cases had come down to 31,537 (PR of 21 per 10,000). The number of districts then with a prevalence rate (PR) of over 5 was 62 and in only three districts the PR was less than 1 per 10,000 population. There was a gradual and steady expansion of MDT services and by 1996 MDT coverage was extended to all districts of the country. Being a member country, Nepal is committed to the elimination of leprosy in line with the global leprosy program and is an active member of the global alliance for elimination of leprosy as a public health problem. In 1995, an estimation of leprosy prevalence was done, and all basic health staff (BHS) were provided training in Leprosy. Health education was intensified to improve community awareness and to facilitate case detection. The first independent evaluation of the National Leprosy Control Program was undertaken during January (7th to 26th) 1996, by a group of experts representing the then HMG, WHO, and Non-governmental Organizations (NGOs). Two rounds of Leprosy Elimination Campaigns were organized in the years 1999 and 2000. Following the continuous efforts from the Government of Nepal, Ministry of Health & Population, Leprosy Control Programme, WHO-Nepal, district health/public health office and concerned agencies, leprosy was declared eliminated as a public health problem at the national level in 2009 and declared in January 19, 2010 (2066 Magh 5) with a national registered prevalence rate of 0.77 cases per 10,000 population, which was below the cut-off point of below 1 per 10,000 population definition set by World Health Organization.

Box 10.10 Milestones of National Leprosy Elimination Program of Nepal

Year BS (AD)	Milestones
1913/14 (1857)	Establishment of Khokana Leprosarium
2016/17 (1960)	Leprosy survey by Government of Nepal in collaboration with WHO
2022/23 (1966)	Pilot project to control leprosy launched with Dapsone monotherapy
2038/39 (1982)	Introduction of multi-drug therapy (MDT) in leprosy control programme
2043/44 (1987)	Integration of vertical leprosy control programme into general basic health services
2047/48 (1991)	National leprosy elimination goal set
2051/53 (1995)	Focal persons (TB and leprosy assistants [TLAs]) appointed for districts and regions
2052/53 (1996)	All 75 districts were brought into MDT programme
2055 - 2057 (1999/2000–2001/02)	Two rounds of National Leprosy Elimination Campaign (NLEC) implemented
2064/65 (2008)	Intensive efforts made for achieving elimination at the national level
2065/66 (2009 and 2010)	Leprosy elimination achieved and declared at the national level
2067/68 (2011)	Developed and endorsed National Leprosy Strategy (2011–2015)
2068/69 (2012-2013)	Elimination sustained at national level and national guidelines, 2013 (2070) revised
2069/70 (2013-2014)	Mid-term evaluation of implementation of National Leprosy Strategy (2011-2015)
2070/71 (2014-2015)	Ministry of Health designated Leprosy Control Division as the Disability Focal Unit
2070/71 - 2074/75 (2015-2018)	Piloting of Leprosy Post Exposure Prophylaxis in Jhapa, Morang and Parsa
2073/74 (2017)	Policy, Strategy and 10 Years Action Plan on Disability Management (Prevention, Treatment and Rehabilitation) 2073-2082 developed and disseminated
2074 (2018)	National Leprosy Strategy 2073-2077 (2016-2020) developed and endorsed. Revised leprosy guideline in line with national leprosy strategy and global leprosy strategy.
2075/76 (2019)	In-depth Review of National Leprosy Programme and Envisioning Roadmap to Zero Leprosy
2076/77 (2020)	Development of Leprosy Post Exposure Prophylaxis Guideline
2077/78 (2021)	Endorsement National Roadmap for Zero Leprosy-Nepal 2077/78-2087/88 (2021-2030) Endorsement of National Leprosy Strategy 2077/78 – 2081/82 (2021-2025)
2081/82 (2025)	Organized 1st National Leprosy Conference

The National Leprosy Elimination Program of Nepal is guided by National Roadmap for Zero Leprosy (2021-30 AD) and National Leprosy Strategy (2021-25 AD).

Box 10.11 National Leprosy Strategy of Nepal

Vision

Leprosy free Nepal

Goal

Elimination of leprosy (interruption of transmission of leprosy) at the subnational level (municipality) (interruption of transmission is defined as zero new autochthonous child leprosy cases for consecutive five years at the municipality level)

Objectives

- To eliminate leprosy transmission at the subnational level (province, district, local level)
- To strengthen clinical case management at district and municipal levels and improve referral system
- To enhance capacity building through training of health staff particularly at the peripheral health facilities.
- To enhance prevention of leprosy.
- Reduction of stigma and discrimination.
- To strengthen leprosy surveillance system and regular monitoring, supervision, and periodic evaluation at all levels.
- To strengthen partnerships among different stakeholders.
- To strengthen management of leprosy complications like reactions and disability prevention and rehabilitation.
- To coordinate with neighboring states of India in management, reporting and referral of cases from border areas.
- To promote research and innovations.

Strategic Pillars

- Implement the national leprosy roadmap for zero leprosy across all level-national, provincial, and local.
- Scale up leprosy prevention alongside integrated active case detection.
- Manage leprosy and its complications and prevent new disability.
- Combat stigma and ensure human rights are respected.

10.1.6.1 Major activities in FY 2081/82

Active Case Detection and Leprosy Post-Exposure Prophylaxis (LPEP)

Active Case Detection and Leprosy Post-Exposure Prophylaxis (LPEP) program was conducted in 9 municipalities of Saptari district 2-6 Mangsir 2082 (17-21 November 2024) with support from WHO, Health office-Saptari and Provincial Health Directorate-Madhesh Province. The activity consisted of an Orientation Programme for health workers, field activity focused on contract tracing and provision of single dose rifampicin to eligible contacts of leprosy index cases. A total of 117 leprosy index cases were contacted in the field, including 9 cases with Grade II disability.

Out of 3,191 identified contacts (792 family members and 2,399 neighbors), 2,149 were screened, while 702 were absent. Among those screened, 385 were under two years of age and 54 had previously taken rifampicin. Single dose rifampicin (SDR) was administered to 2,618 eligible contacts.

During house-to-house visits, 40 suspected cases were identified by health workers and FCHVs, out of which 5 were confirmed as new cases of leprosy. Among the confirmed cases, 3 were female, 1 had Grade II disability, and 1 was a child. Additionally, 2 previously lost-to-follow-up cases were reintegrated into regular MDT.

Leprosy data verification and monitoring visit

The leprosy data verification and monitoring programme was conducted in Baglung (11 Falgun 2081/ Feb 23, 2025) and Lamjung (8 Falgun 2081/Feb 20, 2025) districts of Gandaki Province, where orientation on leprosy data recording and reporting was provided, and in Ramechhap (10 Chaitra 2081/March 23, 2025) and Kavre (11 Chaitra 2081/March 24, 2025) districts of Bagmati Province through monitoring visits. The activity was carried out in coordination with the Provincial Health Directorate and the Leprosy Programme to implement data verification and mapping. Discussions covered the objectives and importance of verification, the national leprosy situation, case trends, reporting discrepancies, and recording/reporting issues. The team reviewed programme records including the Leprosy Treatment Register (HMIS 5.5), Patient Charting Card (HMIS 5.4), and Monthly Reporting Form (HMIS 9.3), and cross-verified new, relapse, and retreatment cases. Based on verified records, the annual leprosy reporting form for FY 2080/81 (up to Chaitra 2080) was

completed, necessary corrections were updated in the DHIS-2 system on site, and leprosy patient charting cards (HMIS 5.4) were distributed to municipal health sections.

Commemoration of 72nd World Leprosy Day-2025

On Magh 13, 2081 (January 26, 2025), 72nd World Leprosy Day was observed under the themes "Unite, Act, and Eliminate" through an interaction program with Stakeholders, people affected by leprsoy and Media persons in Kathmandu to raise awareness for the reduction stigma/ discrimination, sharing of current leprosy situation, promote early detection, and advocate for the rights of those affected by leprosy and NTDs through multi-sectoral collaboration. An awareness rally was also organized in Maharajgunj area to mark the day along with the students, organizations of people affected by leprosy and partners working in leprosy elimination program.

Co-ordination meeting with leprosy stakeholders:

A two-day coordination meeting with leprosy stakeholders was held on 1–2 Poush 2081 (16–17 December 2024) at the LCDMS meeting hall. Representatives from partner organizations, including The Leprosy Mission Nepal, NLR-Nepal, Nepal Leprosy Trust, FAIRMED Foundation, INF-Nepal, Sewa Kendra, READ Nepal, LAWA, and NELRA, shared updates on their ongoing support to the Leprosy Elimination Programme, followed by discussions and feedback. The meeting also reviewed the implementation and evaluation process of the National Leprosy Strategy (2021–2025).

The discussions focused on planning for World Leprosy Day 2025, preparation for the National Leprosy Conference (April 2025) with support from the Sasakawa Health Foundation, and formation of organizing committees with defined roles and responsibilities. Key technical issues were also addressed, including data accuracy and validation of case reporting in DHIS-2 and MDT supply management, confirmation and reporting of relapse cases, sharing of information from the Annual Programme Review Meeting (EDCD), and partner support for staffing at LCDMS, along with other relevant programme matters.

Leprosy surveillance through case validation, data verification and onsite coaching to health workers on recording and reporting of Nepal

Leprosy case validation and data verification program was carried out in Kapilvastu (Lumbini Province) and Morang and Sunsari (Koshi Province) on 4-9 Baisakh, 11 and 13 Baisakh (17-22 April 2025, 24 April and 26 April 2025) respectively. Field visits were carried out in 25 health facilities across 9 municipalities, where reported cases in the last 3 months were clinically validated using WHO diagnostic criteria with support by consultant dermatologist. Reported cases were cross-checked with treatment registers and follow-up records by officials from EDCD, Provincial Health Directorate, WHO, and partners; health workers were oriented on proper recording/reporting, MDT stock availability was verified and Female Community Health Volunteers assisted in mobilizing patients for validation.

Additionally, a comprehensive orientation on leprosy data management was organized for health workers and municipal health section chiefs from Morang and Sunsari, with participation of the Director General of DoHS, EDCD officials, LCDMS, provincial representatives, and programme focal persons. The programme included sessions on leprosy epidemiology and elimination strategies, practical training on recording and reporting tools, review and reconciliation of HMIS data, identification of reporting errors, and discussions to address challenges and improve data quality and reporting consistency.

Basic leprosy training (BLT) for Health Professionals of various leprosy endemic districts:

A three-day basic leprosy training for health professionals from endemic districts was conducted on 28–30 August 2024 (12-14 Bhadra 2081) in Anandaban Training Center. The training covered the epidemiology, transmission, and national programme status of leprosy, including its social impact, clinical diagnosis, classification, and treatment. Participants received sessions on nerve involvement, disability prevention, reactions in leprosy, and integrated skin NTD concepts, along with demonstrations and case discussions.

The programme also included practical components such as physical examination and case demonstrations, active case finding methods, surveillance, recording and reporting procedures, referral criteria, and assessment of nerve damage using VMT/ST. Overall, the training aimed to strengthen participants' clinical skills, early detection capacity, and proper reporting and management of leprosy cases.

Nepal Leprosy Conference 2025

The Ministry of Health and Population, with support from the Sasakawa Health Foundation, WHO, Nepal Law Society and organizations of persons affected by leprosy, organized the first Nepal Leprosy Conference on 25-26 Baisakh 2082 (8–9 May 2025). The conference brought together over 200 participants, including policymakers, legal experts, health professionals and community representatives. The conference opened with renewed political will, as Prime Minister K.P. Sharma Oli pledged to repeal discriminatory laws and promote public awareness, and Health Minister Pradip Paudel called for action-oriented strategies. The event emphasized renewed political commitment, with national leaders calling for repeal of discriminatory laws, strengthened public awareness, improved early detection, inclusive care and stronger program review.

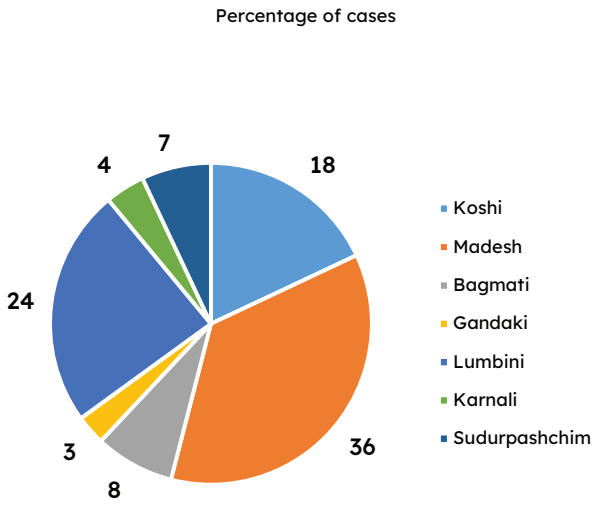
Six technical sessions examined ongoing transmission, delayed diagnosis, especially among children, stigma and discrimination, service gaps, and surveillance weaknesses, with particular attention to high-burden provinces such as Madhesh and Lumbini and under-resourced Karnali. Key recommendations included expanding school- and community-based active case detection, strengthening contact tracing and post-exposure prophylaxis (LPEP), improving disability

management, reforming discriminatory laws, engaging media, empowering self-help groups, decentralizing services, training frontline health workers, and enhancing digital surveillance systems such as DHIS2.

The conference concluded with a strong collective commitment from government, parliamentarians and development partners to interrupt transmission and move toward zero leprosy by 2030. Achieving this goal will require sustained political will, integrated and decentralized services, legal and social reforms, and meaningful community engagement.

10.1.6.2 Status of National Leprosy Program

In FY 2081/82, a total of 2,409 new leprosy cases and 2608 leprosy cases under treatment on Multidrug Therapy (MDT) were reported. There is a decline in national NCDR compared to last fiscal year reporting. National NCDR was 8.2 per 100,000 population, and the prevalence rate (PR) was 0.88 per 10,000 population. Madhesh province and Lumbini province exhibited the highest NCDR and PR. Among new leprosy cases, 3.78% were children and 6.39% presented with Grade 2 Disability (G2D). Females constituted 42% of new cases. In FY 2081/82, 16 districts in Nepal reported a leprosy prevalence rate exceeding 1 per 10,000 population, indicating continued endemicity. Nawalparasi-West recorded the highest prevalence at 2.2per 10,000, followed by Bara (2.04 per 10,000) and Banke (1.94 per 10,000). A year-on-year comparison between FY 2080/81 and FY 2081/82 shows that 13 districts consistently had a prevalence rate ≥1 per 10,000, while three additional districts: Bardiya, Jajarkot, and Sunsari crossed this threshold in FY 2081/82. At the provincial level, Madhesh Province (1.28 per 10,000) and Lumbini Province (1.23 per 10,000) exhibited the highest leprosy prevalence rates, highlighting priority areas for intensified surveillance and intervention. The details of leprosy cases are given in figure 10.9 and table 10.8.



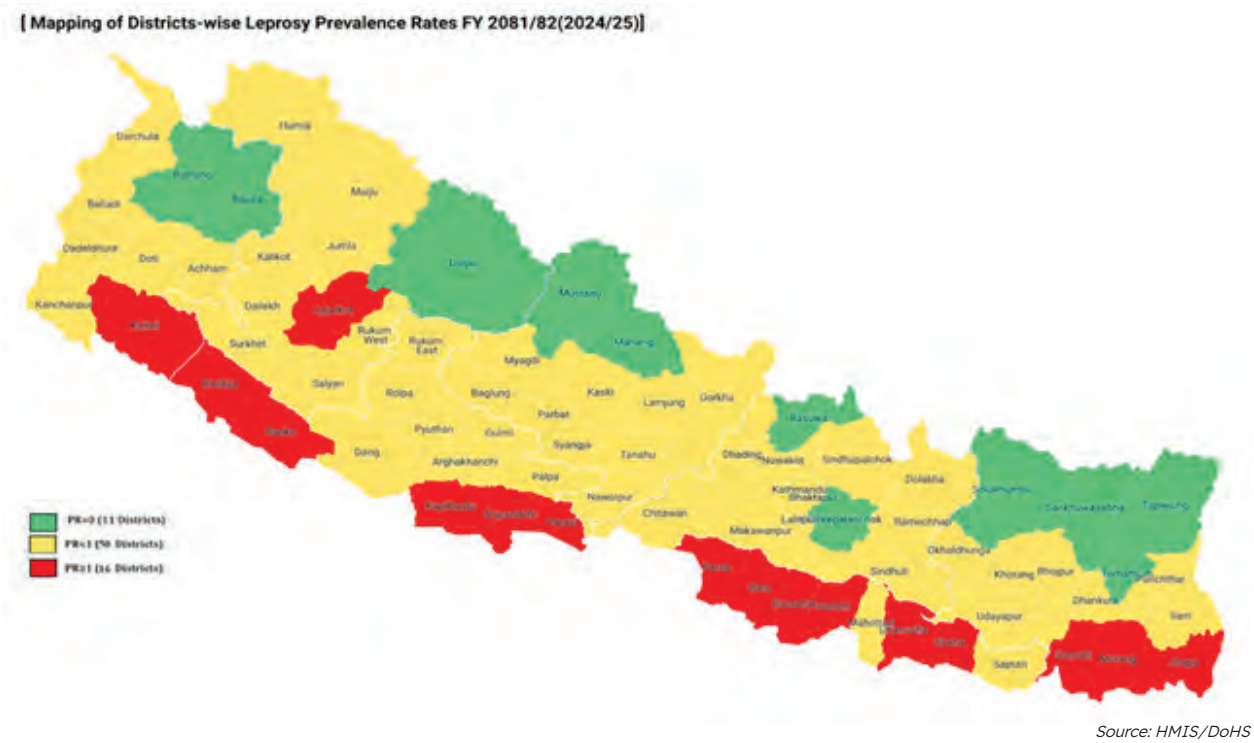
Source: HMIS/DoHS

Figure 10.9 Distribution of the new cases of the Leprosy in FY 2081/82 across provinces

Table 10.10 Status of Leprosy program monitoring indicators by province in FY 2081/82

Province	Population	New Case Detection Rate/100,000 population	Prevalence Rate/ 10,000 population	Percentage of MB among new	Percentage of Child among new	Percentage of G2D among new	Percentage of G2D Child among new	Percentage of female among new
Koshi	49,98,321	8.8	0.87	83.26	4.52	10.63	0	45.7
Madhesh	62,67,141	13.7	1.28	69.66	4.67	6.77	0	44.1
Bagmati	62,56,218	3.1	0.43	95.88	1.55	2.58	0	34.53
Gandaki	24,15,275	3.4	0.55	95.06	1.23	3.7	0	43.2
Lumbini	52,03,132	11.1	1.23	84.63	3.45	4.15	0.17	40.93
Karnali	17,04,067	4.9	0.65	95.18	1.2	4.82	0	27.71
Sudurpaschim	26,82,172	6.4	0.8	91.33	3.47	7.51	0	40.46
National	**2,95,26,326**	**8.2**	**0.88**	**81.15**	**3.78**	**6.39**	**0.04**	**42.01**

Source: HMIS/DoHS



Source: HMIS/DoHS

Figure 10.10 District based Leprosy prevalence rate in FY 2081/82

The highest prevalence rate of leprosy was seen in Nawalparasi West district while the highest number of under treatment cases was reported in Rupandehi district (155). The details of leprosy cases with 16 highest rate are given in figure 10.11.

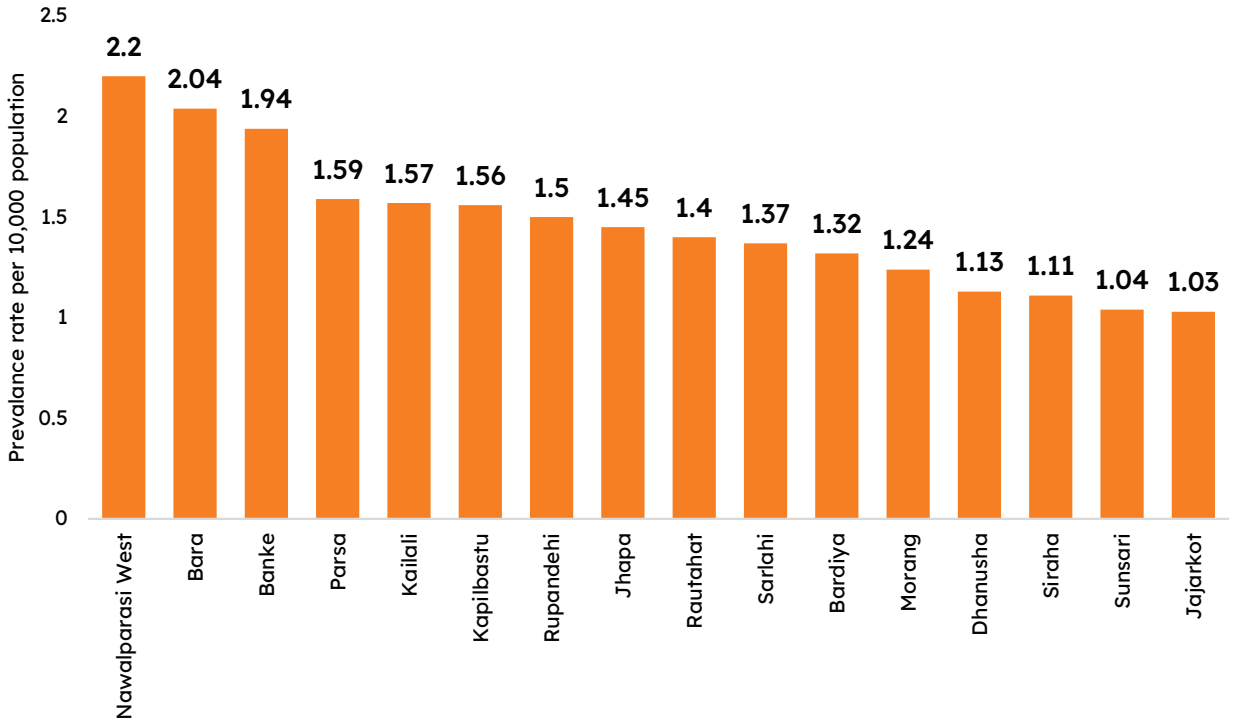
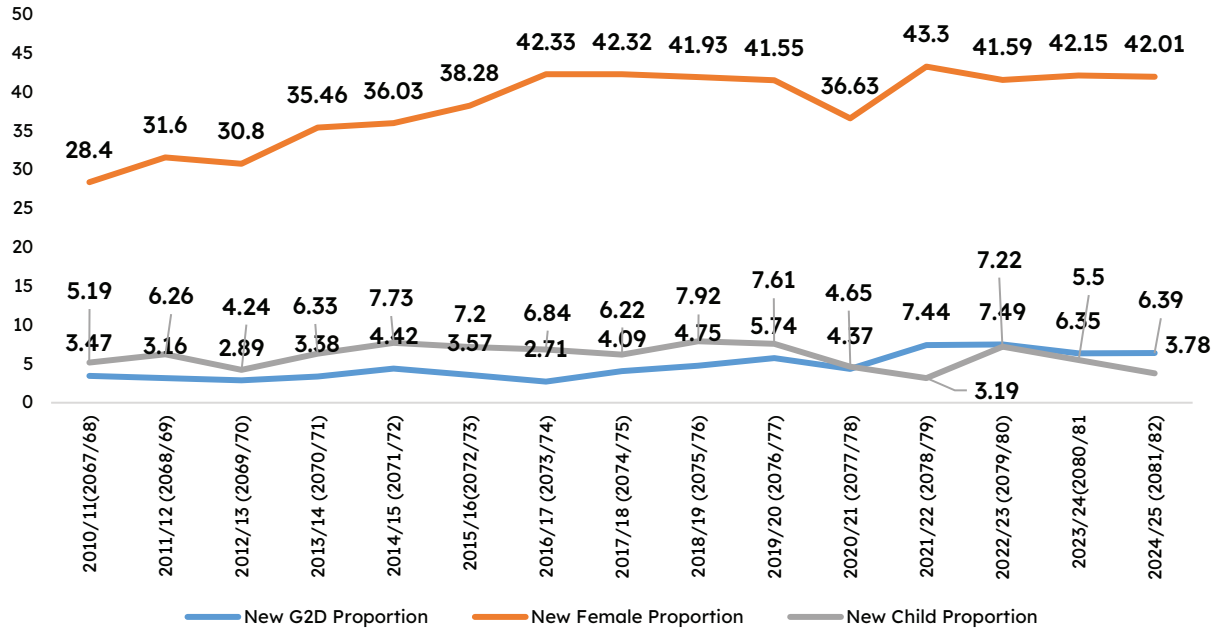


Figure 10.11 District with high prevalence rate of Leprosy in FY 2080/81

Source: HMIS/DoHS

The new grade 2 disability and new female proportion remained stagnant at around 6% and 42% respectively compared to the previous year. There has been a decline in the proportion of new child cases, decreasing from 5.5% in the previous year to 3.78% in the current fiscal year.



Source: HMIS/DoHS

Figure 10.12 Proportion of New Grade 2 Disability, Child and Female cases from 2067/68 to 2081/82

Box 10.12 SWOT Analysis of NLEP

Strengths	Opportunities
• Free MDT, transportation cost for released cases, and additional services for treating complications • Leprosy services accessible at grassroot levels • Continuous supply of MDT • Increased participation of leprosy-affected individuals in the national program • Regular meetings of steering, technical and coordination committees • Active case detection, contact examination, and surveillance of patients, family and neighbors • Expansion and continuation of Leprosy Post-Exposure Prophylaxis in case reporting districts. • Evidence-based planning aligned with the National Leprosy Strategy 2021–2025. • Operational research in high-endemic districts improving service quality. • Initiatives for vocational education and income generation for people affected by leprosy.	• Expansion and continuation of Leprosy Post-Exposure Prophylaxis (LPEP) in high-risk districts. • Partner support for resource mobilization and collaboration with local governments and new partners. • Piloting and scaling up of case-based reporting systems for better data management. • Strengthening preventive chemoprophylaxis initiatives in high-endemic districts. • Community awareness campaigns to increase early case detection and reduce stigma. • Potential for integrating leprosy services with other primary health care and NTD programs. • Advocacy for increased funding and technical support from national and international partners.
Weaknesses	**Threats**
• Inadequate institutional setup and limited human resources at the periphery. • Low priority and awareness of leprosy programs among some peripheral health authorities. • Limited rehabilitation and post-treatment support services. • Insufficient training for newly recruited health workers and lack of refresher training. • Challenges in managing reactions and complications at peripheral centers. • Limited technical monitoring, supervision, and quality assurance in leprosy recording, reporting, and surveillance. • Resource constraints affecting expansion of contact examination and LPEP coverage.	• Increasing number of new leprosy cases, including cases in children, indicating ongoing community transmission. • High proportion of Grade 2 Disability (G2D) due to late case detection. • Retention challenges of trained human resources in remote or low-endemic districts. • Stigma, discrimination, and social barriers affecting case detection and treatment adherence. • Maintaining access and quality of services in remote mountain and hill districts. • Significant number of foreign case reports affecting program planning. • Potential program deprioritization or reduction of funding if leprosy is considered “low prevalence” in some regions.

10.2 Zoonotic Diseases and Other Communicable Disease Control

10.2.1 Zoonotic disease control

Each year, globally, five new human diseases emerge, three of which are of animal origin.[3] At least 75% of emerging infectious diseases originate from animals.[4] The Zoonotic and other Communicable Disease Control Section based on the "One Health" principle focuses on implementing public health programs to address zoonotic diseases.

The Government of Nepal has published a list of 52 infectious diseases in the Gazette. The list of infectious diseases includes rabies, tuberculosis, Covid-19, measles, dengue, Japanese encephalitis, cholera, smallpox, HIV, elephantiasis, scrub typhus, kala-azar, rubella, among others. Out of these 52 infectious diseases, following 10 have been identified as prioritized zoonotic diseases.

1. Influenza (Avian and Seasonal)
2. Rabies
3. Coronavirus (SARS-CoV, MERS-CoV, SARS-CoV2)
4. Leptospirosis
5. Brucellosis
6. Salmonellosis
7. Leishmaniasis
8. Zoonotic Tuberculosis
9. Toxoplasmosis
10. Cystode (Cysticercosis/Hydatidosis)

Addressing these prioritized zoonotic diseases requires sustained collaboration across human, animal, and environmental health sectors, operationalizing the "One Health" approach beyond coordination into routine practice, supported by adequate and dedicated financial resources to ensure effective implementation.

10.2.1.1 Rabies control programme

Rabies is a zoonotic viral disease that causes acute and severe encephalitis in humans and other mammals. It is almost invariably fatal once clinical symptoms appear. However, it is entirely preventable through timely vaccination, effective animal bite management, and improved awareness of safe human–animal interactions. In Nepal, dogs account for over 96% of reported animal bite incidents, and approximately 99% of human rabies cases are attributed to dog-mediated transmission.[5] .Vaccinating 70% of dogs is crucial to break the rabies transmission cycle, making it a priority for one-health actors.[6]

10.2.1.1.1 Major activities in FY 2081/82

- Capacity building of health workers on case management of dog and other animal bite.
- Rabies outbreak investigation and Risk Communication and Community Engagement
- National Rabies Elimination Strategy and Work plan, 2025- 2030 on endorsement process

10.2.1.2.2 Status of Rabies Control Program

Number of cases of dog bites decreased by 0.3% in current fiscal year, similarly other animal bites increased by 20%. Total twelve deaths were reported due to animal bites. The details of bites are given in Table 10.11.

Table 10.11 Animal bites and consumption of the ARV vials in FY 2079/80–2081/82

Fiscal year	Number of cases of dog bites	Number of cases of other animal bites	No. of cases of animal bites (dog+ Other animal)	Number of ARV vials issued	Reported Deaths
2079/80	1,08,555	10,837	1,19,392	4,56,978	10
2080/81	1,92,402	17,899	2,10,301	3,00,000	14
2081/82	1,91,804	21562	213366	2,11,947	12

Source: HMIS/Logistic Management Section

10.2.1.2 Snake bites control program

In Nepal, 89 snake species have been documented. Of this diverse assemblage, 17 species are confirmed to possess front-fanged venom delivery systems and are therefore classified as highly venomous and of significant medical importance.[5]

Currently, 103 treatment centers across the country provide snakebite management services. Many of these centers are operated in collaboration with the Nepal Army, Nepal Red Cross Society, and local communities. Since 2056 BS (1999/2000 AD), the Government of Nepal has been distributing anti-snake venom serum (ASVS) free of cost at these centers.

[1] Weiss RA, Sankaran N. Emergence of epidemic diseases: zoonoses and other origins. Fac Rev. 2022 Jan 18;11:2. doi: 10.12703/r/11-2. PMID: 35156099; PMCID: PMC8808746.
[2] Ellwanger JH, Chies JAB. Zoonotic spillover: Understanding basic aspects for better prevention. Genet Mol Biol. 2021 Jun 4;44(1 Suppl 1):e20200355. doi: 10.1590/1678-4685-GMB-2020-0355. PMID: 34096963; PMCID: PMC8182890.
[3] Thakur, S., Joshi, N. P., Chand, B., & Neupane, L. (2024). Unprecedented rabies outbreak in Nepal's Far Western Region: A call for urgent action. IJID One Health, 4, 100027. https://doi.org/10.1016/j.ijidoh.2024.100027
[4] https://www.fao.org/newsroom/detail/FAO-OIE-and-WHO-unite-for-World-Rabies-Day-to-call-for-elimination-of-disease/en#:~:text=Vaccinating%20at%20least%2070%25%20of,assurance%20of%20absence%20of%20disease.
[5] National Guidelines for Snakebite Management in Nepal, 2019, EDCD, DoHS, Nepal.

Table 10.12 Snake bite cases, Nepal FY 2081/82

Fiscal year	Total cases	Non-poisonous	Poisonous
2079/80	9,120	7,897	1,223
2080/81	8181	6693	1488
2081/82	10144	8398	1746

Source: HMIS /DoHS

10.2.1.2.1 Major activities in FY 2081/82

- GIS based snakebite portal development process initiated
- Accreditation of new treatment centers across the country
- Snakebite case management training to health workforce
- Onsite coaching in selected treatment centers
- Social media campaign, BCC activities and IEC material development.

Box 10.13 SWOT analysis of Zoonotic disease programs

Strengths	Opportunities
• Nationwide free provision of Anti-Rabies Vaccine (ARV) and Anti-Snake Venom Serum (ASVS). • Updated national guidelines for rabies post-exposure prophylaxis and snakebite case management. • Expanded network of snakebite treatment centers and ARV administration sites. • Regular capacity building of health workers on rabies and snakebite management.	• Utilization of international and regional platforms for technical cooperation and cross-border preparedness. • Mobilization of domestic and external funding for priority zoonotic disease interventions. • Institutionalization of the One Health approach through coordinated multisectoral action
Weaknesses	**Threats**
• Absence of patient-level HMIS tracking for ARV, eRIG, and ASVS consumption. • Lack of standardized snakebite treatment center establishment guidelines for primary and secondary-level facilities. • Unavailability of standardized management guidelines for all 52 infectious diseases.	• Rising risk of zoonotic diseases due to ecological change and population mobility. • Increasing human–animal conflict, elevating exposure to zoonotic pathogens. • Governance gaps and weak multisectoral ownership limiting effective One Health implementation

10.3 International Health Regulations (IHR)

The *International Health Regulations (2005) (IHR)* are an instrument of international law that is legally-binding on 196 State Parties, including all the 194 WHO Member States. This revised IHR, or IHR (2005), entered into force on 15 June 2007 after being adopted at the 58th World Health Assembly.

The purpose of the IHR (2005) is to prevent, prepare for, protect against, control and provide a public health response to the international spread of disease in ways that are commensurate with and restricted to public health risk and which avoid unnecessary interference with international traffic and trade.

In 2024, WHO Member States adopted amendments by consensus at the Seventy-seventh World Health Assembly in Geneva. One of the changes is the introduction of a new level of global alert a "pandemic emergency" to trigger stronger international collaboration when a health risk escalates beyond a public health emergency of international concern (PHEIC) and poses the risk of becoming, or has already become a pandemic, with widespread impact on the health system and disruption to societies. The amendments also introduce the establishment of National IHR Authorities by governments to coordinate IHR implementation, and include provisions to strengthen access to medical products and financing based on equity and solidarity. These changes were driven by lessons learned during the COVID-19 pandemic.

To ensure effective implementation of the Regulations, State Parties are required to develop, strengthen and maintain the capacity to detect, assess, notify and report events in accordance with IHR. They must also develop and strengthen the capacity to respond promptly and effectively to public health risks and public health emergencies of international concern (PHEIC).

The Epidemiology and Disease Control Division (EDCD) is designated as the National IHR Focal Point (NFP). The NFP is responsible for timely notification of public health events that may constitute a Public Health Emergency of International Concern (PHEIC), as well as for inter-sectoral coordination at the national level.

IHR Monitoring and Evaluation Framework (IHR-MEF)

The IHR Monitoring and Evaluation Framework (IHR-MEF) consists of four components to monitor compliance with the obligations related to the establishment of the IHR core capacities. (Figure 10.13)

	IHR MONITORING AND EVALUATION FRAMEWORK			
	States Parties self-assessment annual reporting (SPAR)	After action reviews (AAR)	Simulation exercices (SimEx)	Voluntary External Evaluations
Purpose	Monitor progress towards implementation of IHR core capacities	Assess the functionality of capacities during real events	Assess the potential functionality of capacities for non-real events	Evaluates objectively IHR contribute to health security
Mandate	Mandatory	Voluntary	Voluntary	Voluntary
Focus	Existence of capacities	Functionality of capacities	Functionality of capacities	Existence of capacities
Periodicity	Annually	Within 3 months of specific real events	Regularly when required as part of the exercise programme	Every 4-5 years
Type	Quantitative	Qualitative	Qualitative	Quantitative

Source: https://www.who.int/publications/i/item/international-health-regulations-(-2005)-ihr-monitoring-and-evaluation-framework

Figure 10.13 Four components of IHR monitoring and evaluation framework

State Party Annual Report (SPAR)

Under Article 54 of the IHR, all States Parties must report annually to the World Health Assembly on the status of implementation of their core capacities using the State Party Self-Assessment Annual Reporting (SPAR) tool. The second edition of SPAR tool, as updated in 2021 requires State Parties to assess and report annually on 15 IHR capacities, as outlined below. (Box 10.14)

Box 10.14 The 15 IHR Capacities under IHR SPAR second edition

- C1. Policy, Legal and Normative Instruments
- C2. IHR Coordination and National Focal Point Functions
- C3. Financing
- C4. Laboratory
- C5. Surveillance
- C6. Human Resources
- C7. Health Emergency Management
- C8. Health Services Provision
- C9. Infection Prevention and Control (IPC)
- C10. Risk Communication and Community Engagement (RCCE)
- C11. Points of Entry (PoE) and Border Health
- C12. Zoonotic Diseases
- C13. Food Safety
- C14. Chemical Events
- C15. Radiation Emergencies

SPAR Score Trend in Nepal (2021–2025)

A national consultative workshop involving relevant sectors and technical partners is conducted to review, validate, and finalize the SPAR scores prior to submission. The overall average SPAR scores from 2021 to 2025 using the SPAR tool second edition demonstrate gradual improvement in national public health capacities. (Figure 10.14)

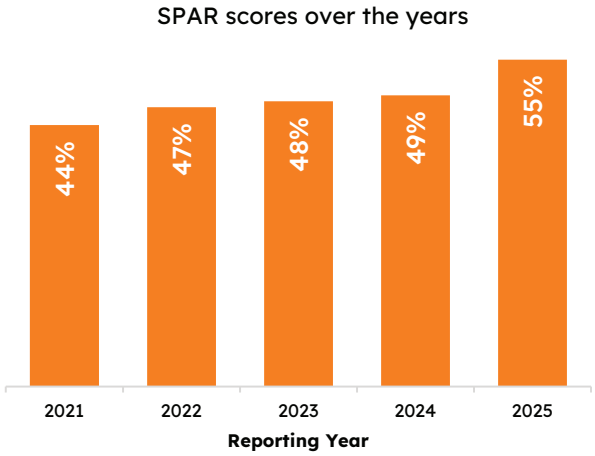


Figure 10.14 Overall average SPAR scores from 2021 to 2025

10.4 One Health

The One Health approach recognizes the intrinsic interconnectedness of human, animal, and environmental health and promotes coordinated, cross-sectoral action to comprehensively address health risks and strengthen preparedness for public health emergencies of national and international concern. In accordance with the National One Health Strategy (2076), the Zoonotic and Other Communicable Disease Control Section of the Epidemiology and Disease Control Division (EDCD) serves as the focal point within the Ministry of Health and Population for operationalizing the One Health agenda. The section emphasizes understanding the interfaces between humans, domestic and wild animals, food systems, water, and the environment to mitigate emerging and re-emerging health risks. This approach facilitates enhanced multisectoral collaboration, systematic data sharing, integrated disease surveillance, and coordinated outbreak investigation.

Under the One Health framework, key interventions include bite case management, Mpox, Seasonal Hyperacute Panuveitis (SHAPU), and Nipah virus infection prevention, diagnosis, treatment, and control activities. Antimicrobial resistance (AMR), increasingly recognized as a global "silent pandemic," remains a critical One Health priority due to its complex, cross-sectoral determinants requiring coordinated action across human health, animal health, agriculture, and environmental sectors.

Box 10.15 SWOT analysis of One Health Approach

Strengths	Opportunities
• Promotes a holistic approach to addressing complex health issues. • Enables early detection and timely response to emerging and re-emerging diseases.	• Strengthens integrated surveillance, collaborative research, and international cooperation. • Provides a platform for multisectoral advocacy and coordinated response to public health events.
Weaknesses	**Threats**
• Inadequate allocation of resources and limited availability of trained human resources. • Competing priorities leading to insufficient and fragmented funding.	• Resistance to adopting integrated, multisectoral approaches. • Limited mechanisms for routine data and information sharing across sectors.

11 National Tuberculosis Control Program



11.1 Overview

Tuberculosis (TB) is a significant public health issue in Nepal and is one of the leading causes of death worldwide. It is caused by Mycobacterium tuberculosis and primarily affects the lungs, although it can involve in other organs. Nearly one quarter of the world's population is infected with TB bacteria. The disease is closely associated with poverty, social vulnerability, disproportionately affecting adults, particularly men. Despite being preventable and curable, access to diagnosis and care falls short of standards set under UHC, affecting a substantial portion of the population in Nepal. Annually, the national program assesses the TB epidemic status and monitor progress in response efforts. Data are systematically compiled and analyzed from multiple sources, including the National Tuberculosis Control Center (NTCC), the Health Management Information System (HMIS), the National Tuberculosis Program Management Information System (NTPMIS), and WHO country profiles. These data inform evidence-based planning, policy formulation and programmatic decision making to strengthen TB control efforts nationwide.

11.1.1 TB burden estimates

Globally, an estimated 10.7 million people fell ill with TB in 2024.The disease caused approximately 1.23 million deaths, while 390,000 people developed multi-drug resistant/ rifampicin-resistant (MDR/RR) TB. In the same year, in South-East Asia Region (SEAR), 3.7 million people were diagnosed with TB, 4,33,000 deaths occurred, and 1,50,000 people with MDR/RR-TB were estimated.[1]

According to the National TB Prevalence Survey Report (2076/2020), Nepal's annual TB prevalence is estimated at 1,17,000 cases with an incidence of 69,000 and 17,000 TB-related deaths. These figures are 1.8 times, 1.6 times and 3.1 times higher than the previous estimates, respectively. (Table 11.1). According to Global TB report 2025, Nepal faced a TB burden of an estimated 67,000 cases, with an incidence rate of 227 per 100,000 population. HIV-related TB cases totaled 420, with an incidence rate of 1.4 per 100,000 population, while 2400 individuals were affected by Multi-Drug-Resistant/Rifampicin-Resistant (MDR/RR) TB, at a rate of 8.1 per 100,000 population. The mortality burden was significant, with 16,000 HIV-negative TB deaths (mortality rate: 53 per 100,000) and 160 HIV positive TB deaths (mortality rate: 0.53 per 100,000). (Table 11.2)

Table 11.1 Comparison Between the Pre-and Post-Survey TB burden in Nepal 2075 (2018)

Year	Incidence (all forms)	Prevalence (all forms)	Mortality (HIV Neg. & Pos.)
2075 (2018) New estimates	69,000 (245 per 100k)	1,17,000 (416 per 100k)	17,003 (9,000-26,000)
2075 (2018) Prior estimates	42,000 (151 per 100k)	60,000 (215 per 100k)	5,500 (3,900 - 7,400)
Revised burden, higher by:	1.6	1.8	3.1

Table 11.2 TB Burden Estimates in Nepal 2025

Indicators	Number	(Rate per 100,000 population)
Total TB incidence	67,000 (38,000-104,000)	227 (129-350)
HIV-positive TB incidence	420 (230-680)	1.4 (0.8-2.3)
MDR/RR-TB incidence	2,400 (830-4,000)	8.1 (2.8-13)
HIV-negative TB mortality	16,000 (8,300-26,000)	53 (28-87)
HIV-positive TB mortality	160 (87-240)	0.53 (0.3-0.8)
Estimated proportion of TB cases with MDR/RR-TB, 2025		
New cases	3.5% (2.4-5.1)	
Previously treated cases	4% (3.3-4.8)	
UHC and Social Protection		
People with TB and their households facing catastrophic total costs	51.1% (45.6-56.5)	
DR-TB households	75.6% (68.0-81.8)	
DR-TB households	50.5% (45.0-56.1)	

Source: Global TB Report 2025 and National Tuberculosis Patient Cost Survey in Nepal, 2024.

[1] Global TB Report, 2025

[2] Nepal Tuberculosis Control Center. 2020. National Tuberculosis Prevalence Survey Report 2076 (2020). Department of Health Services, Ministry of Health and Population, Government of Nepal

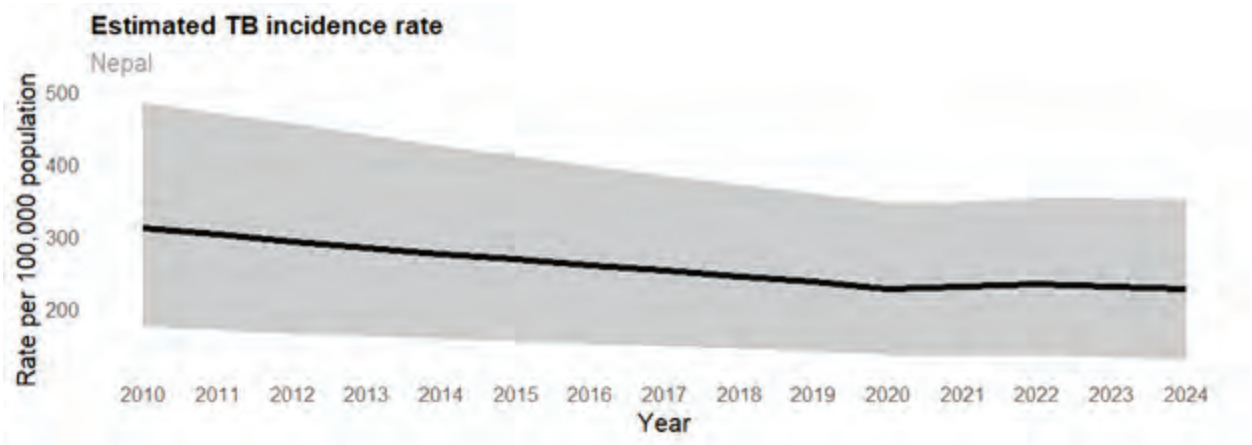


Figure 11.1 Estimated TB Incidence Rate in Nepal (2024)

Source: Global TB Report 2025, WHO

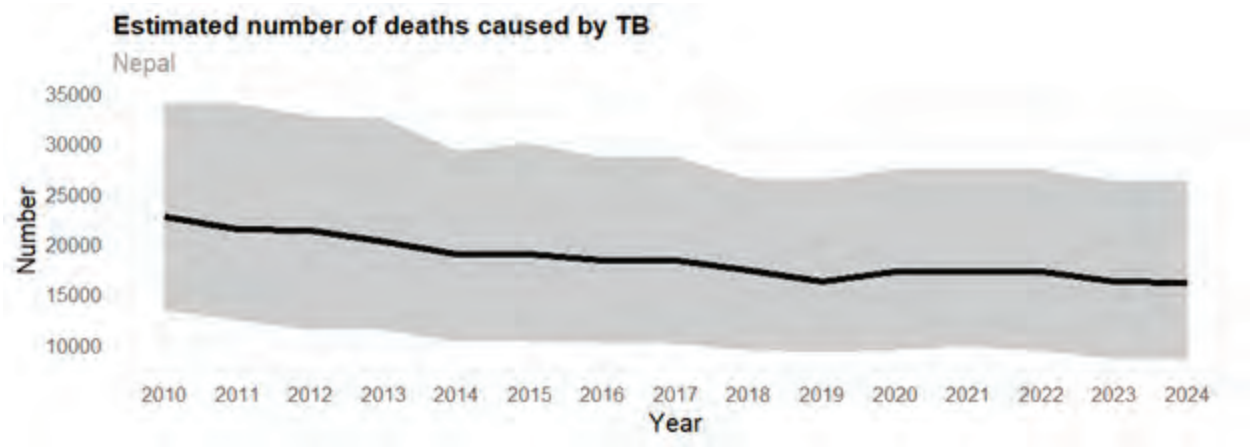


Figure 11.2 Estimated Amount of TB Deaths in Nepal (2024)

Source: Global TB Report 2025

Proportion of MDR/RR-TB cases are 3.5% among new TB cases and 4% among previously treated cases. These figures underscore the ongoing challenges in controlling drug-resistant TB and the need for intensified targeted efforts to effectively address TB burden in Nepal. (Figure 11.1 and 11.2).

Global and country commitments to End TB

In 2070/71-2071/72 (2014-2015), WHO and the UN Member States pledged to end the TB epidemic by adopting the End TB Strategy and the UN SDGs. These frameworks set targets to reduce TB incidence, mortality, and financial burdens faced by patients. Subsequent declarations, including the Moscow Declaration (2017) and the UN General Assembly High-Level Meetings on TB (2018, 2023), reaffirmed commitments to the SDGs and the End TB Strategy, while introducing additional measures such as the Multi-Sectoral Accountability Framework and strengthened community engagement. Nepal aligned its national strategies with these global commitments. The commitment to end TB in Nepal was endorsed by Nepalese parliamentarians in December 2018, followed by the Prime-minister in March 2021. In October 2021, Nepal, together with India and Indonesia co-hosted a high-level ministerial meeting to renew TB response in the context of COVID 19. In 2023, Nepal further strengthened its commitment through the Gandhinagar Declaration in India and the 2nd UN High Level Meeting on TB in New York, United States.

Table 11.3 Global and country commitments to end TB

Vision	A world free of Tuberculosis by 2050 Zero deaths, disease and suffering due to tuberculosis			
Goal	End the global tuberculosis epidemic by 2035			
Indicators	**Milestone**		**Target**	
	2020	**2025**	**SDG 2030**	**END TB 2035**
Reduction in number of TB deaths compared with 2015 (%)	35	75	90	95
Reduction in TB incidence rate compared with 2015 (%)	20 (<85/1,00,000)	50 (<55/1,00,000)	80 (<20/1,00,000)	90 (<10/1,00,000)
TB-affected families facing catastrophic costs due to TB (%)	Zero	Zero	Zero	Zero

Box 11.1 Key Guiding Document - National Strategic Plan 2078/79-2082/83 (2021/22-2025/26)

Goal

Nepal aims to reduce TB incidence rate from 238 per 100,000 population in 2078/79 (2020/21) to 181 per 100,000 population by 2083/84 (2025/26); reduce the mortality rate from 58 per 100,000) to 23 per 100,000 during the same period; end TB epidemic by 2091/92 (2035); eliminate TB by 2107 (2050); and reduce the catastrophic costs faced by TB-affected households to zero.

Objectives

- To build and strengthen political commitment, sustainability, and a patient-friendly health system to end TB
- To ensure the identification of TB, diagnosis, quality treatment and prevention

Strategies

- Improve the quality of TB services and strengthen the health system for universal access to TB care. Enhance TB services and support by increasing the community engagement in TB management, and strengthen the digitalized case-based surveillance system in health care
- Strengthen laboratory services to further improve the management of TB diagnosis and treatment
- Quality Improvement of the services for TB prevention, identification and treatment

National Response to TB Control and Management

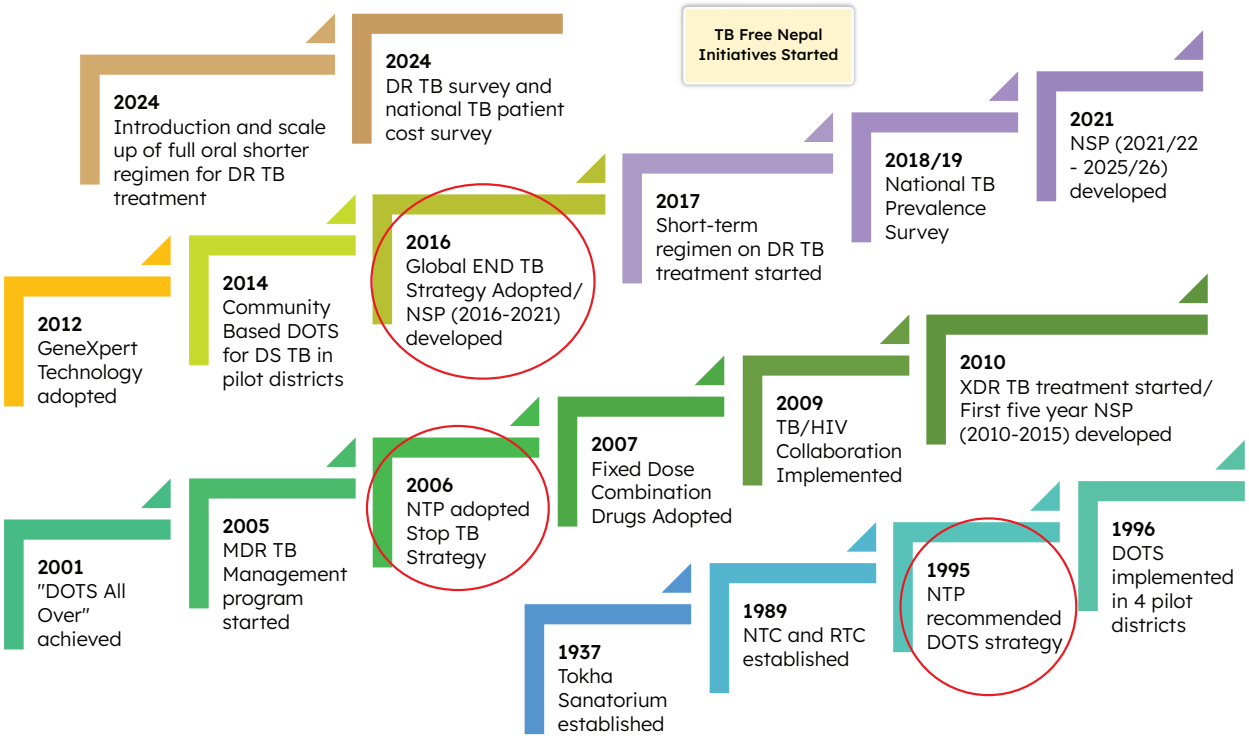


Figure 11.3 Major Milestones in GoN efforts for TB Control and Management

Within the organizational structure of the Ministry of Health and Population, NTCC serve as the leading entity for National TB Control Program (NTP). It is responsible for policy formulation, strategic planning, monitoring, and quality assurance of the program. Efforts to control TB disease in Nepal began in 1937 with establishment of a sanatorium at Tokha to care for TB patients. In 1951, a chest clinic was established in Kathmandu, marking the beginning of the formal TB treatment in Nepal. Likewise, in 1965, GoN established the National TB program. Later, in 1989, the clinic and the program were merged and NTCC was established as the apex body to manage TB control activities in the country. Nepal initiated a TB control program by adopting the DOTS TB strategy in 1996 and has since been recognized globally as a successful model for effective TB control. In 2016, the program adopted global END TB strategy aiming to end TB epidemic by 2035 and envisioning a TB Free Nepal by 2050. The current National TB Strategic Plan NSP (2021/22 to 2025/26) is based on the burden estimates from the TB prevalence survey report 2076 (2020). The TB Free Initiative was started at the local level in late 2021 as a major policy action of NSP (2021/22-2025/26). Since 2024, Nepal has transitioned to all-oral,

[3] https://www.who.int/news-room/events/un-general-assembly-high-level-meeting-on-ending-tb

[4] https://documents-dds-ny.un.org/doc/UNDOC/GEN/N23/306/91/PDF/N2330691.pdf?OpenElement

shorter six-month BPaLM and BPaL regimens for the treatment of DR-TB.

Country Progress towards the End TB Strategy and SDGs

As per the Global TB Report 2025, Nepal achieved a 15.0% reduction in the TB incidence rate and a 15% decline in TB-related deaths between 2071/72 (2015) and 2080/81 (2024). However, Nepal is still far behind in tracking progress towards END TB targets (50% reduction of TB incidence and 75% reduction of TB deaths in 2025 compared to 2015). According to TB Patient Cost Survey 2024 indicate that 51.1% of the households with TB patients face catastrophic costs due to TB.

11.2 Key Performance Indicators for Tuberculosis control program:

Expanded access to Diagnostic services

- Expanded mWRD (GeneXpert) servicesto two additional sites at Chautara hospital, Sindhupalchowk and Rapti provincial hospital, Tulsipur
- Upgraded fifteen TB designated microscopy centers with fluorescence microscopy technology to enhance diagnostic accuracy and early detection.

Provided quality treatment services

- Continued TB treatment services through 6,241 DOTS centers and 31 DR-TB treatment centers, including the expansion of additional DR- TB treatment center in FY 2081/82).
- Initiated the shorter tuberculosis preventive treatment (TPT) regimen (3HP) for children under five years of age and people living with HIV (PLHIV).

Innovative approaches to End TB

- Continued and strengthened the TB-free initiatives in an additional 50 local level governments (LLGs), expanding coverage to 149 LLGs.
- Implemented active case finding among high-risk and vulnerable population using AI based portable chest X-ray technology.

Strengthening monitoring and surveillance

- Achieved 100% implementation of e-case-based reporting, with 98% of TB data integrated into the national reporting system.
- Continued onsite coaching and mentoring at TB service delivery sites to improve service quality and reporting accuracy.
- Handed over of seven AI based X-ray to all seven provinces to strengthen diagnostic capacity and active case detection.

Study/research

- Conducted an operational study on adverse drug reactions among DR TB patients enrolled in the BPaLM/BPaL regimen.
- Carried out an assessment of TB free initiative implemented in selected Palikas across Nepal

Capacity Enhancement

- Conducted clinical management training for 51 medical doctors
- Orientation on DR TB Treatment and Management to the health workers of newly expanded DR TB Treatment Centers instead of expansion
- Provided orientation on the TB-free Initiative program to newly expanded local levels across all provinces.
- Delivered eTB training in Koshi and Lumbini Provinces with 22 and 25 participants respectively.
- Organized eight TB-CME sessions on DS - TB and DR - TB management at different levels in major hospitals.
- Conducted Basic TB modular training to healthcare workers

11.3 Key Program Indicators

Institutional coverage of TB services

Nepal adopted the Directly Observed Treatment Short-Course (DOTS) strategy in 1996, achieving nationwide coverage by 2001. At present, DOTS centers are integrated into public health services or operated through NTP partner organizations in both public and private sectors. In FY 2081/82, DR-TB treatment centers were added to increase coverage. (Table 11.4, 11.5). Additionally, partnerships with private nursing homes, polyclinics, I/NGO health clinics, prisons, refugee camps, police hospitals, medical colleges, and municipalities have significantly contributed to improving access to TB services.

Table 11.4 Expansion of Service Sites in last five consecutive Fiscal Years (2076/77 to 2081/82)

Number of Service Sites	Fiscal Year				
	2077/78	2078/79	2079/80	2080/81	2081/82
DOTS Center	5,503	5,971	6,209	6,241	6,241
MDR Treatment Centers	22	22	24	29	31
MDR Treatment Sb-Centers	81	81	98	98	98
DR Hostel	6	6	6	6	7
DRTB Referral Centers	3	3	3	3	3
Microscopy Centers	896	896	786	785	785

Number of Service Sites	Fiscal Year				
	2077/78	2078/79	2079/80	2080/81	2081/82
mWRD Center (GeneXpert and Truenat)	84	98	113	117	141
Xpert XDR Facilities	-	-	19	21	21
Culture Labs and DST	2	2	2	2	2
Line Probe Assay (LPA)	2	2	2	2	2
Solid Culture	-	2	2	2	2
Solid Culture	-	2	2	2	2

Source: NTP service data

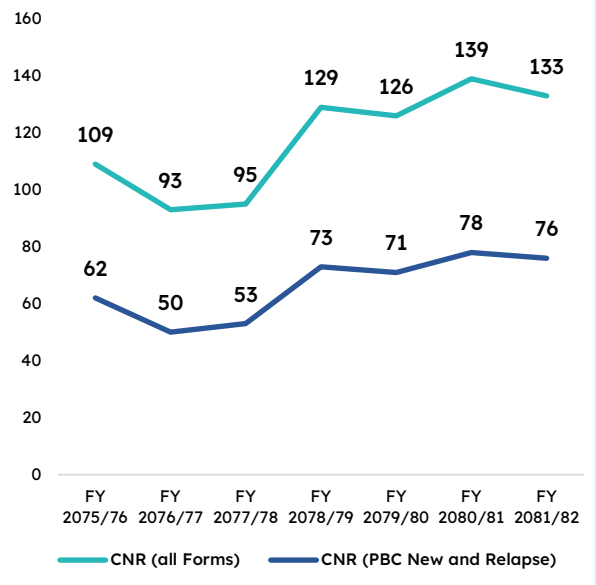
Table 11.5 Service sites across provinces in FY 2081/82

Number of Service Sites	FY 2081/82 by Province						
	Koshi	Madhesh	Bagmati	Gandaki	Lumbini	Karnali	Sudurpaschim
DOTS Center	1,117	1,006	1,227	831	922	425	713
MDR Treatment Centers	4	5	4	3	4	2	7
MDR Treatment Sub-Centers	17	17	23	9	14	16	2
DR Hostel	-	-	-	1	-	-	-
DRTB Referral Centers	1	1	1	-	1	-	2
Microscopy Centers	-	-		1	1	-	1
GeneXpert Facility	131	74	154	101	145	57	123
mWRD Center (GeneXpert and Truenat)	19	21	25	10	21	9	12
Xpert XDR Facilities	3	2	5	3	4	1	3
Culture Labs and DST	0	0	2	0	0	0	0
Line Probe Assay LPA)	0	0	2	0	0	0	0
Solid Culture	1	0	0	1	0	0	0

Source: NTP service data

Case notification rates

In FY 2081/82, the case notification rate (CNR) of all forms of TB is 133 per 100,000 population (n=39,151), and that notification of TB cases (PBC new and relapse) is 76 per 100,000 population. Total 98.6% incident TB cases registered (New and Relapse) among all TB cases. Additionally,72.4 % of all TB cases were pulmonary cases, and 58.3% were bacteriologically confirmed pulmonary TB cases. A total of 24475 cases were confirmed using Xpert MTB/RIF testing (table 11.6) (See figures 11.4-11.6 for disaggregation for CNR based on province, age group and sex). Among the 30 districts with high TB case notifications, 18 are in the Terai region, and the remaining 12 are in the Hilly region. (figure 11.7)



Source: NTCC/DoHS

Figure 11.4 TB case notification rate (2075/76–2081/82)

Table 11.6 TB case notification FY 2081/82

TB Case Notifications (New and Relapse), 2081/82	
Total New and Relapse	38,606
% pulmonary	72.40%
% pulmonary bacteriologically confirmed	58.30%
% children aged 0-14 years	5.60%
% women	38.90%
% men	61.10%
Total TB cases notified	**39,151**

Source: NTCC/DoHS

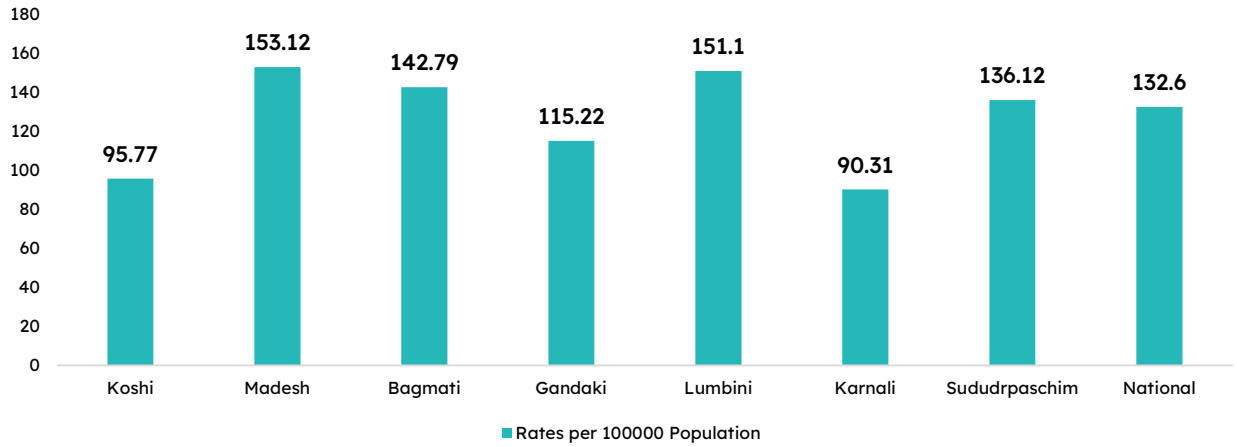


Figure 11.5 Notified TB cases (All forms) in rates by provinces for FY 2081/82

Source: NTCC/DoHS

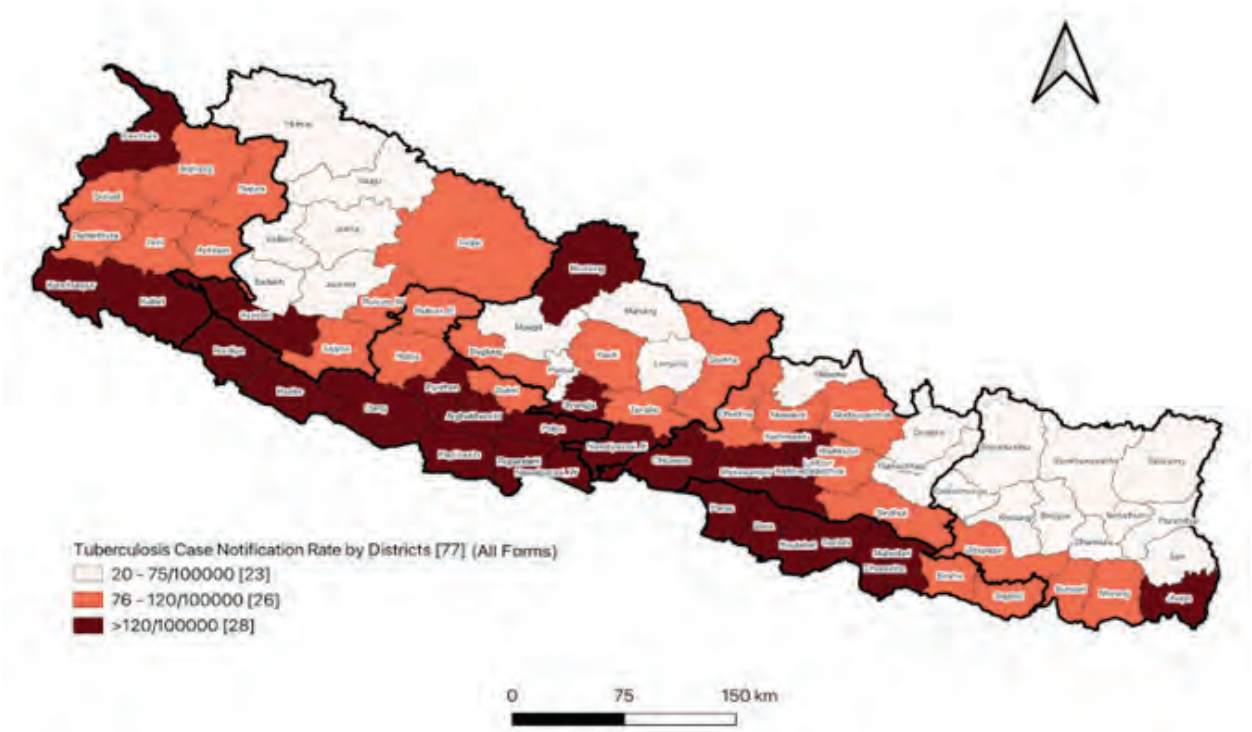


Figure 11.6 District wise tuberculosis case notification rate, 2081/82

Source: HMIS/DoHS

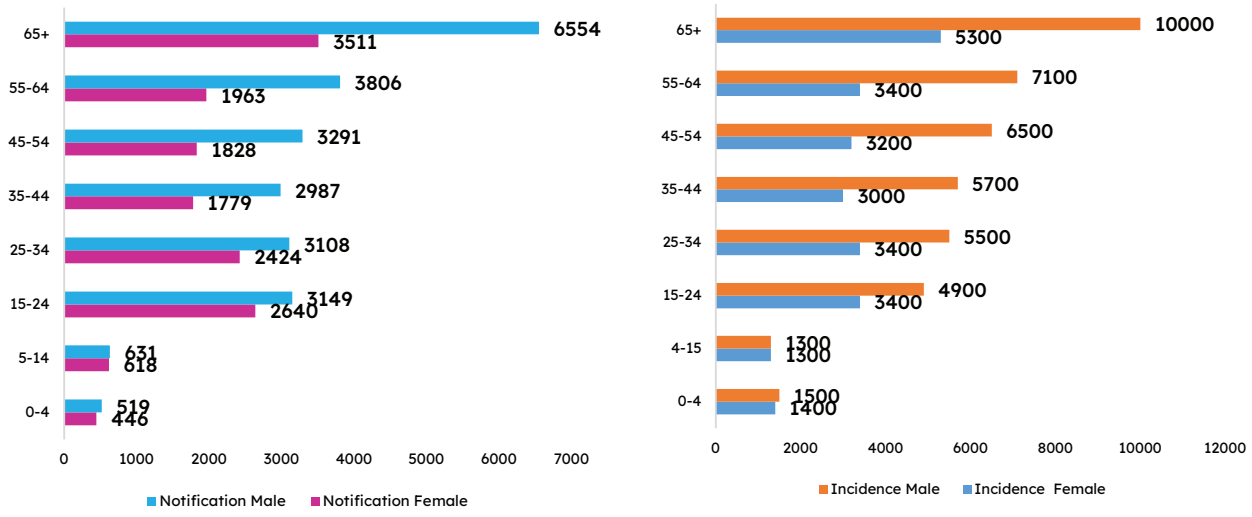
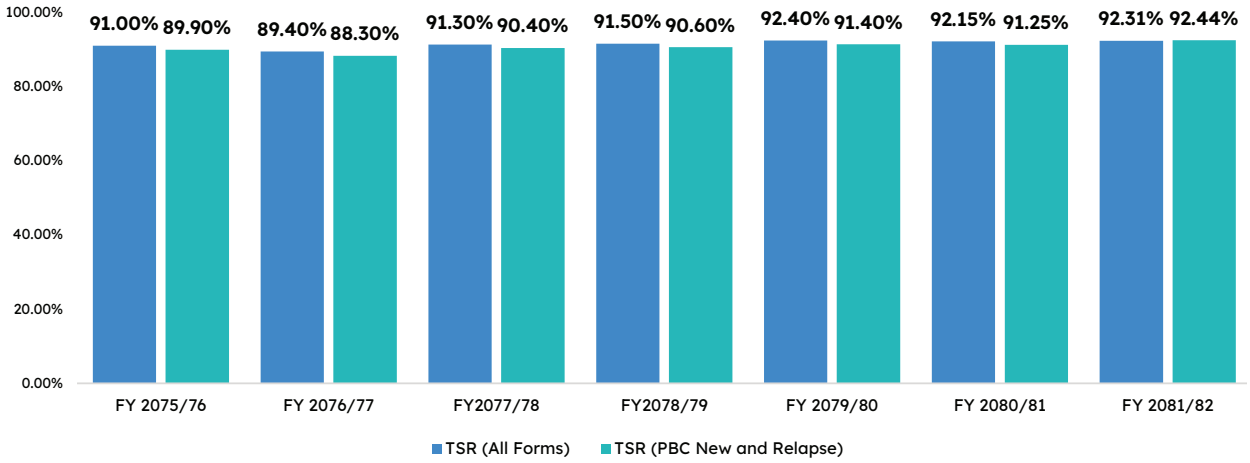


Figure 11.7 Notified TB cases by age-group compared to the estimated incidence.

Source: HMIS/DoHS

Treatment outcome

TB treatment success rates in Nepal have consistently exceeded 90.0%, except in FY 2076/77, impacted by the COVID-19 pandemic. In FY 2081/82, the overall treatment success rate (TSR) is 92.31% for all forms of TB. However, the success rates for retreatment cases (Relapse, Treatment After Failure, Treatment After Loss to Follow-up, and other previously treated) have consistently been lower than the success rates for new cases (figure 11.8). Only Gandaki province had an average treatment failure rate exceeding 1% this year, while 3.2% of TB patients died during treatment. Additionally, Koshi province reported a higher loss to follow-up (above 3%) compared to other provinces. (table 11.7)



Source: HMIS/DoHS

Figure 11.8 TB Treatment Success Rate (TSR) trend (in percentage) (FY 2075/76 – FY 2081/82)

Table 11.7 Province wise TB treatment outcomes (2081/82)

Province	Treatment Success Rate (%)	Treatment Failure Rate (%)	Mortality Rate (%)	Rate of Loss to Follow Up (%)	% Not Evaluated
Koshi	90.1%	0.9%	3.7%	3.0%	1.0%
Madhesh	92.4%	0.4%	2.7%	1.6%	0.4%
Bagmati	92.8%	0.9%	2.7%	1.4%	1.3%
Gandaki	91.2%	1.4%	4.5%	2.3%	0.4%
Lumbini	94.1%	0.6%	3.5%	1.5%	0.3%
Karnali	93.2%	0.5%	3.3%	1.9%	1.1%
Sudurpaschim	89.9%	0.8%	3.9%	2.6%	0.5%
National	**92.3%**	**0.7%**	**3.2%**	**1.8%**	**0.7%**

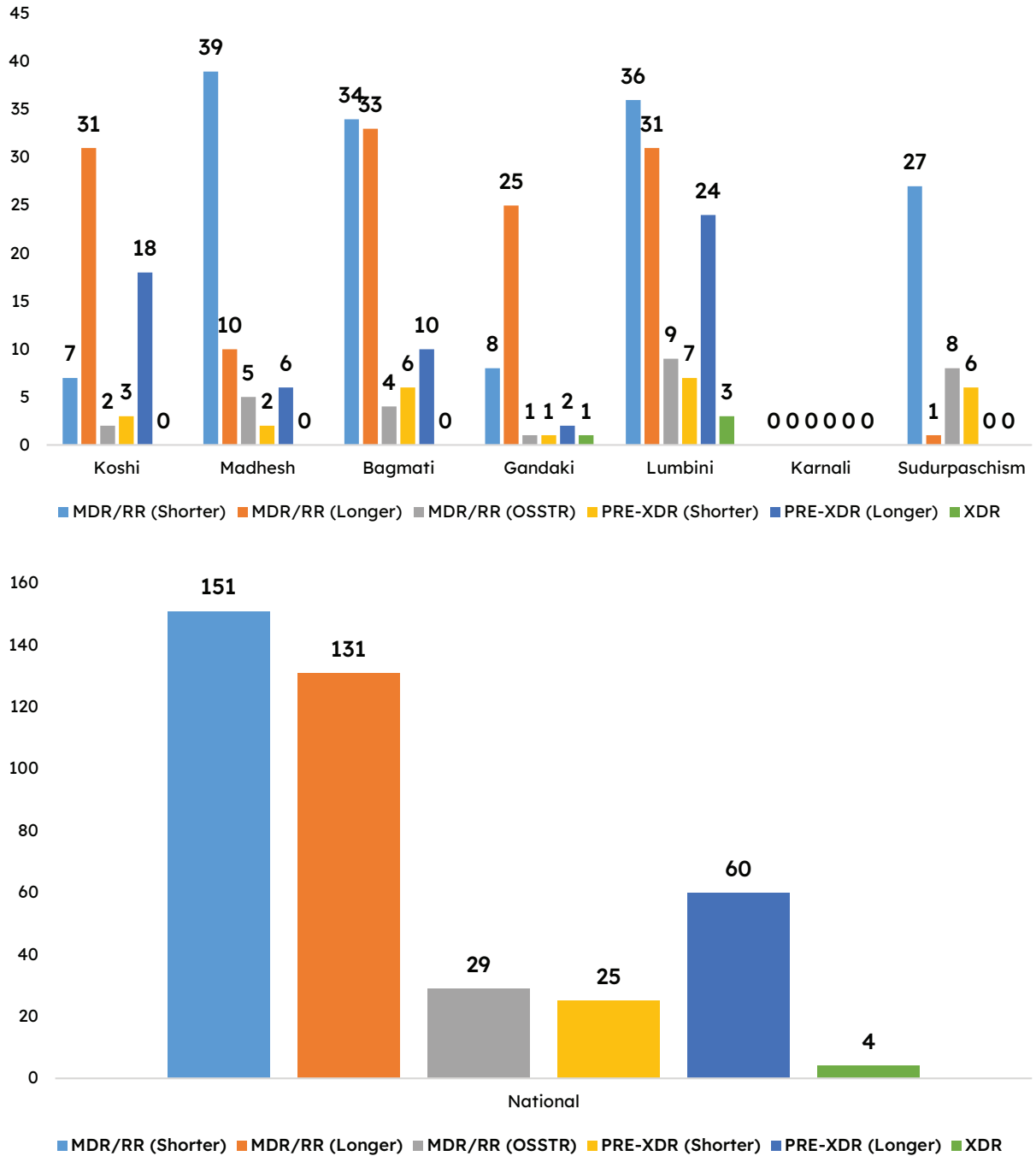
Source: HMIS/DoHS

Drug resistant tuberculosis

DR-TB is a public health challenge in Nepal, necessitating innovative approaches and increased funding for national programmatic management. The focus is on detecting and enrolling more patients in MDR-TB treatment to enhance outcomes.

DR-TB enrolled in treatment

In FY 2081/82, a total of 400 MDR/RR-TB cases were registered for treatment in Nepal. Detection methods for drug-resistant TB include Gene Xpert, Culture/DST, and LPA. Out of the 400 MDR TB cases reported, 151 were MDR shorter, 131 were MDR (LTR), 29 MDR/RR (OSSTR), 25 were Pre-XDR (shorter), 60 Pre-XDR (longer) and 4 were XDR. (figure 11.9)

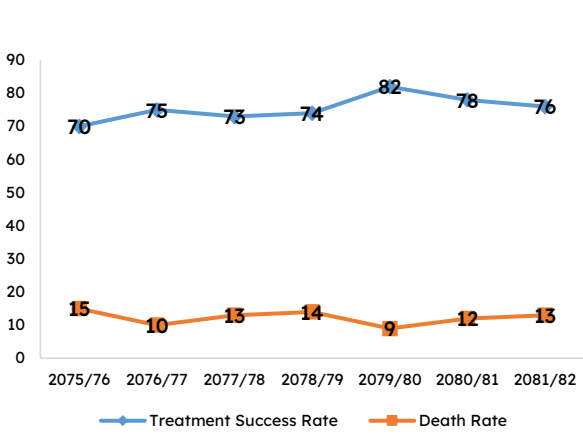


Source: NTPMIS/DoHS

Figure 11.9 DR-TB cases enrolled in treatment by provinces in FY 2080/81

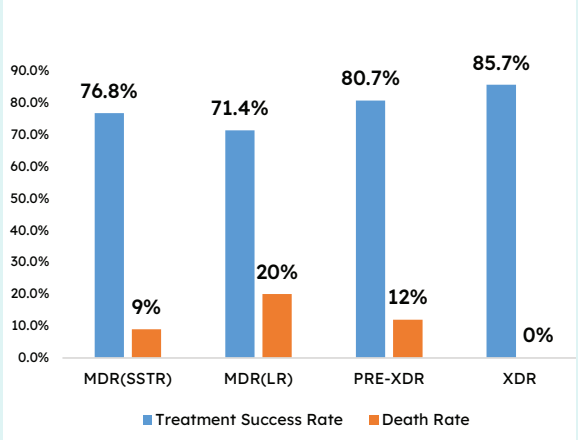
Treatment outcome of DR TB

The treatment success rate for DR-TB in this reporting period was 76%. In recent years, the treatment success rate of DR TB was consistently greater than 70%, suggesting the effectiveness of treatment regimens, quality of drugs, adherence and patient care services for managing DR-TB in Nepal. (figure 11.10).



Source: NTPMIS/NTCC

Figure 11.10 Treatment success rates (%) in FY 2075/76 - 2081/82

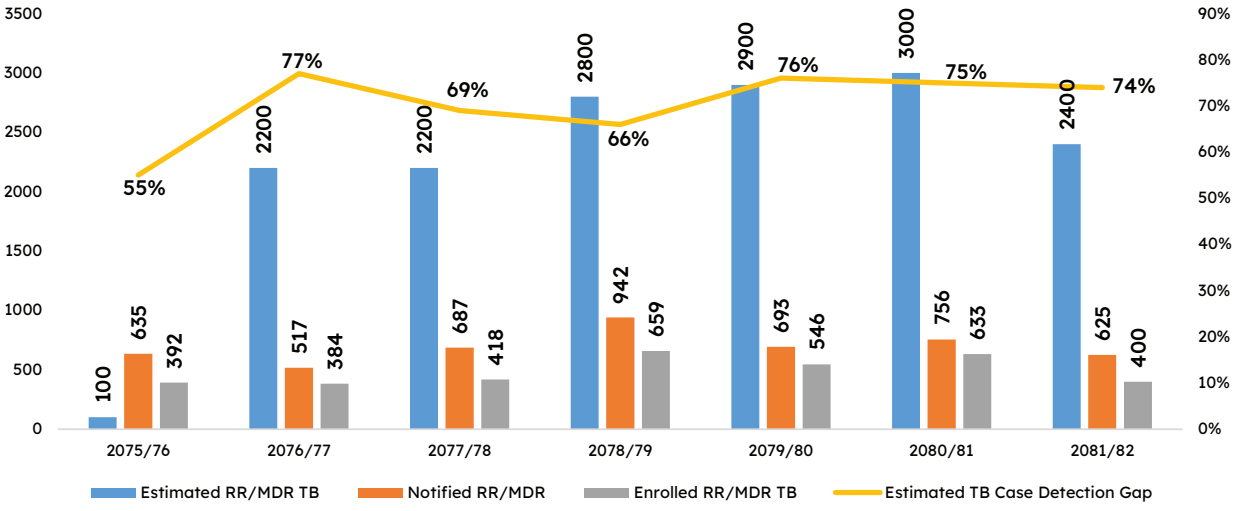


Source: NTPMIS

Figure 11.11 Treatment success rates (%) in types of DR-TB FY 2081/82

DR TB annual case finding and gap from estimates

The estimated proportion of TB cases with multidrug-resistant or rifampicin-resistant TB (MDR/RR-TB) was 3.5% among new cases and 4% among those previously treated (Global TB report 2025). In Nepal, around 2,400 people were estimated to have MDR/RR-TB in FY 2081/82, but only 625 were detected, resulting in a 74% detection gap. (figure 11.12) Among those diagnosed, 400 received DR-TB treatment.



Source: NTPMIS

Figure 11.12 MDR TB annual case finding and gap in fiscal year 2081/82

NTP's laboratory network

A strong TB laboratory network is essential to ensure timely and universal access to quality-assured diagnostics. Trained human resources, adequate infrastructure, equipment, a quality assurance system, a sample transportation network, a supply of commodities, and a monitoring system are key components of such a laboratory network. The National Tuberculosis Reference Laboratory (NTRL) is an apex laboratory in TB laboratory network which works along with the PPHL and Provincial TB Laboratory present in each province to provide quality assured TB laboratory diagnostic services to the patients. There are Molecular WHO-recommend rapid diagnostic (mWRD) centers that provide diagnostic as well as universal DST services, and designated TB microscopy centers (DMCs) providing diagnostic services across the country. Sample collection centers, established under DMCs or mWRD centers, are supported by a robust sample transportation system, which is planned to enhance accessibility to TB laboratory services. External Quality Assessment (EQA) for sputum microscopy is conducted at seven Provincial bodies (PPHL or TTC) and NTRL, NTCC Bhaktapur. The Lot Quality Assurance System (LQAS) is used for EQA of sputum microscopy.

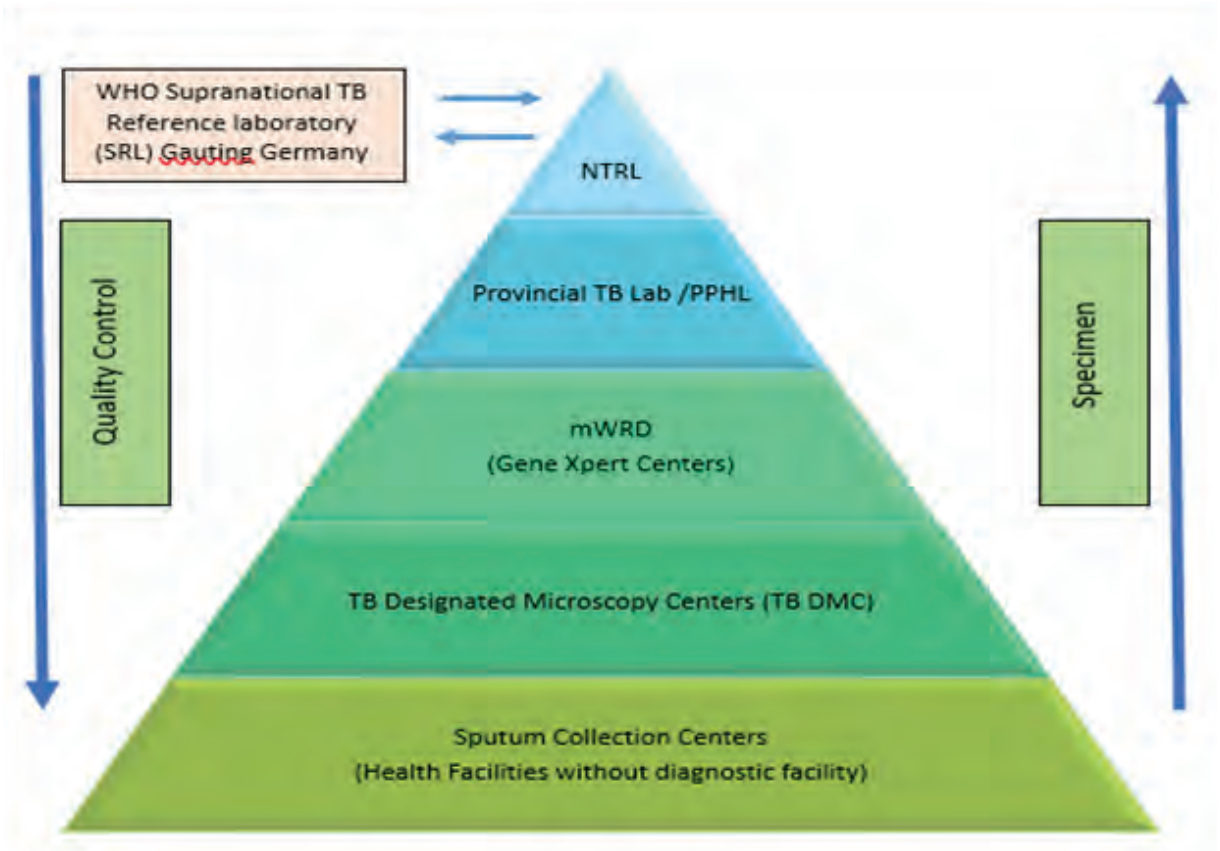
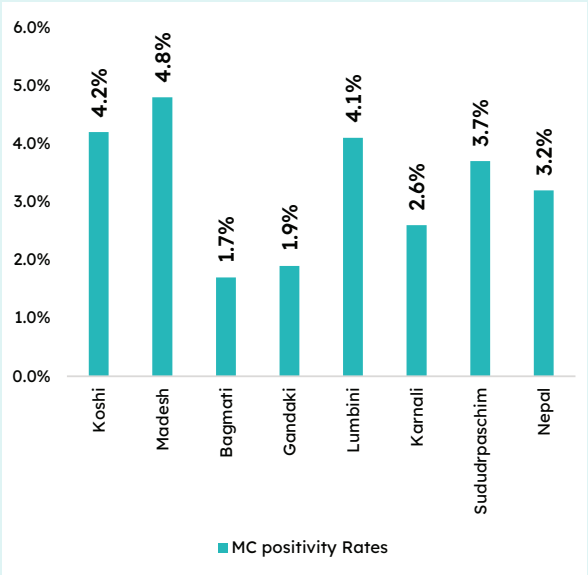


Figure 11.13 National TB Laboratory Network

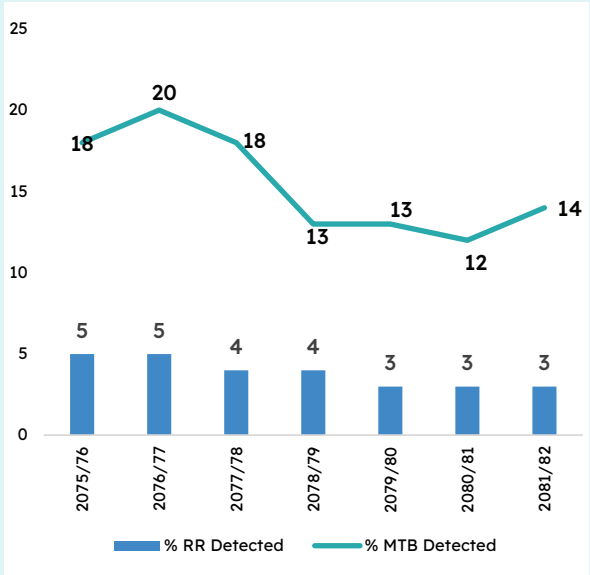
Laboratory tests for TB diagnosis

In FY 2081/82, among 3,22,155 presumptive TB cases tested, a 3.18% positivity of sputum microscopy test rate led to the diagnosis of 10,253 Pulmonary Bacteriologically Confirmed (PBC) TB cases. (figure 11.14) Additionally, in FY 2081/82, the proportion of MTB among total GeneXpert tests was 13.7%, and the proportion of RR MTB among total MTB cases was 2.5%. (figure 11.15).



Source: HMIS, NTPMIS

Figure 11.14 Sputum Microscopy Positivity Rate performed in FY 2081/82

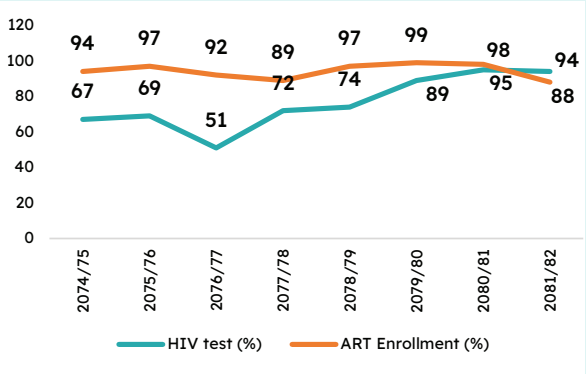


Source: HMIS, NTPMIS

Figure 11.15 TB diagnosis performed using GeneXpert test

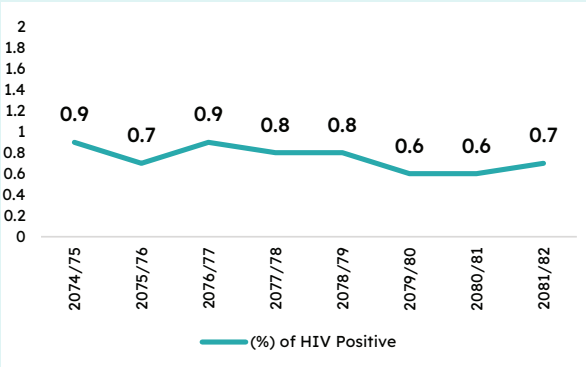
TB/HIV co-morbidity

The testing proportion for HIV among TB patients was 94% in FY 2081/82. Moreover, in FY 2081/82, Antiretroviral therapy (ART) enrollment was 88.5%. (figure 11.16) TB-HIV comorbidity rate was 0.6 for FY 2080/81 among tested (figure 11.17) While there is rise in the proportion of Testing of HIV among TB, the resulting lesser co-morbidity from nearly 1 % in 2074/75 to almost 0.7% HIV among TB in 2081/82 significantly highlights the improved TB and HIV program and burden management.



Source: HMIS, NTPMIS

Figure 11.16 Trend of HIV testing and ART enrollment proportion among tested positive



Source: HMIS, NTPMIS

Figure 11.17 HIV TB Comorbidity

TB preventive treatment (TPT)

The TB Preventive Treatment (TPT) is provided to the eligible children under 5 years old who are the contacts of bacteriologically confirmed pulmonary TB cases and PLHIV in Nepal. Presently, TPT services have been successfully implemented in 42 high-burden districts across the country. In the fiscal year 2081/82, a total of 2516 children under the age of 5 were reported to have initiated preventive treatment, marking a significant progress toward the program's objectives. The ongoing efforts underscore the commitment to scaling up TB preventive measures and expanding coverage among vulnerable populations, including PLHIV. Program has envisioned for scale up of activity to all the 77 districts including adult population from the next Fiscal year.

TB Free Nepal Initiative

In the fiscal year 2081/82, the TB-Free Nepal Initiative was implemented in 149 out of 753 local levels supported by an additional federal grant of NPR 26,00,13,000. Additionally, approximately few local level also allocate budget ceiling for the initiative. The initiative, which initially covered 25 local levels in FY 2078/79, was expanded to 149 local levels in FY 2081/82. In FY 2081/82, a total of 10,773 TB patients were notified in these local levels.

Planning, monitoring and evaluation

Data source for TB program management and review

The primary data source for NTP is the Health Management Information System (HMIS). In adherence to the NSP's directive to develop an electronic-case based data system, the NTP has invested in the development of the National Tuberculosis Program Management Information System (NTPMIS) database. This platform records individual case-based data for each patient and is accessible at https://ntpmis.gov.np/ (figure 11.8) The NTPMIS system operates as an online platform, compatible with DHIS2 platform.

NTP consistently monitors case notification, smear conversion, treatment outcomes and program management reports, conducting supervision visits across all program levels through Periodic (monthly, half-yearly, yearly) planning, monitoring, and evaluation (PME) workshops, visits and analyzing key monitoring data, involving local, provincial, and national levels.

Research and Survey

In 2024 an operational study to assess the adverse drug reactions in DR TB patients enrolled in BpaLM and BpaL regimen was conducted. The two national survey Drug resistance survey and patient cost survey findings were disseminated.

Logistics supply management

NTP's logistics system provides anti-TB drugs and commodities every four months to designated service delivery sites, based on the number of new cases and ongoing treatments. Forecasting and quantification precede drug procurement, following PPMO rules for GoN Budget and PPM for GDF imports. All drugs are stored at NTCC Store and supplied to District Medical Stores via PHLMC every four months. Furthermore, the drugs from district medical stores, is sent to local levels every four months.

Financial progress status

In FY 2081/82, the total budget allocated for NTP was NPR 1,067,425,000, comprising the budgeted figure from GoN , Global Fund and WHO. (table 11.8)

Table 11.8 Financial Performance of NTP in FY 2081/82

Source	Budget in NPR Budget	Expenses	Financial Progress
GoN (NTCC)	687,925,000	596,969,524	86.77%
Global Fund (Redbook)	375,500,000	226,075,395	60.20%
WHO (Redbook)	4,000,000	0	0%
Total NPR	**1,067,425,000**	**823,044,919**	**77%**

Source: NTCC/GoN Redbook

The allocation made by GoN represents the budgeted figure of federal government. The major areas of investment and expenditures were on the procurement of drugs, laboratory consumables & equipment, GeneXpert cartridges, capacity enhancement, supervision & monitoring, supply chain management and Tb Free initiatives. Besides this financial support from Global fund is invested in procurement of Cartridges, laboratory consumables and equipment, drugs, Implementation of Case findings interventions, support to DR centers. NTP has had collaborations and support from various organizations. WHO has been a key technical partner to NTP and UNDP as a principal recipient of Global Fund Grant has served as key financial partner.

Key partners in NTP

The National Tuberculosis Program (NTP) collaborates with various organizations, enhancing its capacity and impact. WHO serves as a key technical partner, contributing expertise to NTP's operations and guiding NTP for best practices. UNDP, serving as the principal recipient of the Global Fund Grant, serves as both a key financial as well and a technical partner to NTP and implementation of activities at community level through the sub-recipient partners especially in active case finding, private sector and community engagements, contact tracing, preventive, and childhood TB management. (table 11.9) These partnerships contribute to the multifaceted success of NTP, encompassing technical expertise, financial backing, and on-the-ground program implementation. The collaborative network ensures a holistic and effective approach to tackling tuberculosis within the national framework.

Table 11.9 NTP partners

Partners	Key Support Area
WHO	Main Technical Partner of NTP
UNDP	Principal Recipient of Global Fund Grant and key Technical Partner
Global Fund	Major Donor and Implementation partner of NTP
BNMT, Bagmati sewa samaj, JANTRA, MPDS, NATA Nepal, TB Nepal	Sub-recipient partners of Global Fund Grant
NYMAT Nepal	Supports TB- related advocacy programs
Trisuli Plus	Supports community engagement and TB related advocacy programs

Box 11.2 SWOT Analysis of NTP

Strengths	Opportunities
• Dedicated and well-qualified team at NTCC • Standard protocol for TB treatment and management • Wider reach of treatment service facilities (>6200) and diagnostic services • Engagement of partners in national TB program • Initiation/Implementation of Shorter Treatment Regimen (BPaLM/BPaL Regimen) in DR TB Services.	• Continued technical support from WHO, UNDP and the Global Fund • Priority one public health program; high political commitment, TB Free Initiative expanded to 149 local levels), Global Fund/SR interventions in 42 districts • Participation of PPHL in the EQA for laboratory diagnosis of TB • Implementation and scale up of newer technologies in TB screening such as Computer Added Detection AI X-ray • Opportunities to strengthen private sector and community engagement in TB diagnosis and management
Weaknesses	**Threats**
• Limited qualified human resources forTB program management at province and local levels • Significant gap in TB reatment coverage (case notification vs. estimated incidence). • Limited engagement of the private sectors and community stakeholders in TB services • Inadequate EQA system for mWRD • Challenges in ensuring uninterrupted logistics supply and management • Inadequate onsite coaching, mentoring and supportive supervision • Funding gaps for TB medicine, catridges and lab consumables	• High stigma, discrimination and catastrophic costs • Challenges in extending warranties and maintaing mWRD and CAD X-ray equipment • Frequent transfer of dedicated staffs at all levels • Open borders with high internal and external migration increasing TB transmission risk • Rising TB co-morbidity rates with other infectious diseases • Reluctance to provide DR TB services from the health institutions and hospitals which makes it difficult in expansion of DR TB Treatment Centers.

12 HIV and STIs Control and Management Program



12.1 Background

The first documented case of HIV in Nepal was reported in 2044/45 BS (1988 AD). In 2050 BS, the National Centre for AIDS and STD Control (NCASC) was set up, signaling the start of a structured national effort to combat HIV/AIDS and sexually transmitted diseases (STDs). Nepal introduced its inaugural policy on AIDS and STDs in 2052 BS (1995 AD), marking the country's initial formal framework for addressing these challenges. The first National HIV/AIDS Strategy rolled out in 2058/59 BS (2002 AD), prioritizing prevention, treatment, care, and support for those impacted. In 2060 BS (2003 AD), antiretroviral therapy (ART) became available in Nepal, offering free treatment to individuals living with HIV. The National Policy on HIV and Sexually Transmitted Infections (STIs) underwent revision and updating in 2067/68 BS (2011 AD) to better respond to the changing dynamics of the epidemic. In 2072 BS (2016 AD), Nepal embraced the Fast-Track Targets with the goal of ending AIDS as a public health concern by 2030, in line with the global Sustainable Development Goals (SDGs).

Nepal's HIV epidemic has shifted from a low-prevalence phase to a concentrated one. While HIV rates remain relatively low in the broader population, they are significantly elevated among certain high-risk groups. The epidemic is primarily concentrated in key populations, such as people who inject drugs (PWID), sex workers and their clients, men who have sex with men (MSM), transgender (TG) individuals, male labor migrants (MLM) and their partners, and prison inmates.

The National HIV Strategic Plan (NHSP) 2021–2026 builds on the successes of earlier plans and aligns with international commitments, including the SDGs and UNAIDS strategies. It adopts a people-centered framework rooted in human rights and health equity, with the aim of sharply reducing new HIV infections and AIDS-related deaths, while enhancing the overall well-being and quality of life for people living with HIV (PLHIV).

Box 12.1 National HIV Strategic Plan (NHSP) 2021–2026

Vision:

Ending the AIDS epidemic in Nepal by 2030

Mission:

To provide an inclusive, equitable, and accessible continuum of HIV care services

Goal:

- To prevent new HIV infections
- To improve HIV related health outcomes of PLHIV
- To reduce HIV related inequalities among PLHIV and KPs

Key Targets by 2026:

- 95-95-95 Goals: Achieve that 95% of people living with HIV know their status, 95% of those diagnosed receive sustained ART, and 95% of those on treatment achieve viral suppression
- Reduction in New Infections: Significantly decrease the annual number of new HIV infections (reduce by 90%, baseline as of 2010)
- Elimination of Mother-to-Child Transmission: Achieve virtual elimination of HIV transmission from mother to child
- Achieve case rate of congenital syphilis of ≤ 50 per 1,00,000 live births

Priorities:

- Accelerating HIV prevention services among key populations
- Expanding innovative and effective testing approaches with universal access to comprehensive treatment, care, support, VL testing and suppression services
- Elimination of vertical transmission of syphilis
- Scaling up HIV-sensitive social protection services to key and vulnerable populations
- Addressing human rights and gender in HIV response
- Strengthening effective, inclusive and accountable HIV governance
- Elimination of Mother-to-Child Transmission: Achieve virtual elimination of HIV transmission from mother to child
- Achieve case rate of congenital syphilis of ≤ 50 per 1,00,000 live births

Source: National HIV Factsheet 2024, National Centre for AIDS and STDs Control

12.2 Key activities in FY 2081/82

12.2.1 HIV Testing and Counselling Services

HIV testing and counselling services (HTS) have been a central focus of Nepal's HIV response, serving as the entry point to comprehensive HIV care. These services, which began in 1995, were initially referred to as Voluntary HIV Counselling and Testing (VCT) or HIV Testing and Counselling (HTC). The first-ever HTS program used the Client-Initiated Testing and Counselling (CITC) approach. Over the years, Nepal has expanded its efforts to encourage HIV testing, particularly among key populations at higher risk, by providing services free of charge and aligning them with the 2022 National HIV Testing and Treatment Guidelines. To further increase testing uptake, Nepal introduced a community-based testing approach for key populations, following the 2017 National Guidelines on Community-Led HIV Testing. Community-led testing connects outreach programs to testing services and is implemented by both government and non-governmental organizations. Additionally, Provider Initiated Testing and Counselling (PITC) has been integrated into various health services, such as STI clinics, antenatal and childbirth centers, malnutrition clinics, postpartum care, family planning centers, and TB services to address TB/HIV co-infection. HIV testing and counselling services are available across all 77 districts of Nepal, ensuring nationwide access for both key populations and the general public. Antiretroviral therapy (ART) services began in February 2004 at Sukraraj Tropical and Infectious Disease Hospital in Kathmandu, Nepal. ART is provided free of charge to all PLHIV. As of FY 2081/82, there are 100 operational ART sites and 20 ART Dispensing centers across 77 districts in Nepal.

12.2.2 Sexually Transmitted Infections (STIs) Management

Nepal's key strategies for managing sexually transmitted infections (STIs) include targeted behavior change communication (BCC), condom promotion and distribution, STI diagnosis and treatment (using both syndromic and etiological approaches), and referral services. These services are accessible through government health facilities and non-governmental organizations (NGOs) for both key populations and the general public. Nepal follows the World Health Organization's (WHO) recommended approach to managing STIs in patients presenting with identifiable signs and symptoms. The first National STI Case Management Guideline was introduced in 1995 and has since been updated in 2014 and 2022 to incorporate the latest global and local evidence. The updated 2022 guidelines were developed by the NCASC. To monitor STI prevalence and trends among key and general populations, Nepal relies on data from Integrated Biological and Behavioral Surveillance (IBBS) surveys and the Health Management Information System (HMIS/DHIS2). As part of the national HIV response, the ongoing strategy has standardized the quality of STI diagnosis and treatment, extending these services to the health post level within primary healthcare. Addressing Nepal's concentrated HIV epidemic also involves strengthening the connections between BCC programs and HTC, as well as enhancing linkages between HTC and STI services. For key populations, STI management services are integrated into antiretroviral therapy (ART) centers to provide comprehensive care.

12.2.3 Prevention of Mother to Child Transmission of HIV for Elimination of Vertical Transmission (eVT)

Nepal launched the Prevention of Mother-to-Child Transmission (PMTCT) program, also known as eVT, in February 2005. In 2009, a Community-Based PMTCT (CB-PMTCT) program was introduced, and it now operates across all 77 districts. These programs provide HIV screening and counselling to women during antenatal care (ANC) visits at health facilities. The National Guidelines on PMTCT have been integrated into the National HIV Testing and Treatment Guidelines 2022, ensuring that maternal and child healthcare incorporates HIV testing. Counselling and infant feeding information have been tailored to address the needs of HIV-infected and HIV-exposed infants. Alongside the CB-PMTCT program, Nepal is scaling up PMTCT services to align with ART, HTC, and STI services, ensuring a continuum of care for pregnant women living with HIV. Linkages have been established between PMTCT services and interventions for key populations, family planning, sexual and reproductive health, and counselling services. In line with its goal to eliminate vertical transmission of HIV by 2026, Nepal adheres to a "test and treat" strategy. This approach includes rapid initiation of ART for all pregnant and breastfeeding women with HIV, regardless of CD4 count, and prophylactic treatment for their infants. In recent years, Nepal has expanded PMTCT services, resulting in increased HIV testing and detection among pregnant women and improved access to comprehensive care.

12.2.4 HIV Treatment Services

Since 2004, the government has been providing free Antiretroviral drugs (ARV) through ART centers to improve the survival and well-being of people living with HIV (PLHIV). In 2017, the NCASC adopted the WHO's "Treat All" policy after updating the national HIV testing and treatment guidelines. To support diagnosis and treatment, infrastructure such as CD4 and viral load testing machines has been established across the country, and healthcare personnel have been trained to deliver treatment, care, and support services effectively. Since February 2017, Nepal has adopted the Test and Treat approach, guided by the National HIV Testing and Treatment Guidelines of 2022. CD4 count services are available at seven sites across seven districts and viral load testing sites has been expanded to nine sites. Multi-month dispensing (MMD) of ARV drugs have been practiced for clinically well (stable on ART) clients with intention to mitigate the direct and indirect cost associated with both clients and service providers to improve care and retention in treatment. NCASC has systematically monitored and analyzed the status of MMD among PLHIV using data recorded in HIV care and ART Tracking (DHIS2 Tracker, mHealth and Biometric) system.

12.2.5 Oral Substitution Therapy Services

Harm Reduction includes strategies, programs, and practices aimed at supporting individuals who continue to use injectable drugs, either before they are ready to seek treatment or during periods of relapse. It is a goal-oriented approach focused on minimizing the health risks and harm associated with injectable substance use. One key harm reduction initiative is oral substitution with Opioid Therapy (OST) for injectable substances. OST is an effective treatment that also plays a vital role in preventing HIV and Hepatitis C. Currently, 12 OST sites operate across 10 districts in Nepal, including eight government-managed and four NGO-managed sites. However, there are no OST services available in Karnali and Sudurpashchim provinces.

12.2.6 Strengthening Strategic Information of National HIV Program

To overcome the challenges associated with aggregated data reporting, NCASC developed and implemented the HIV Care and ART Tracking (DHIS2 Tracker, mHealth and Biometric) System, also known as the DHIS2 Tracker. This system provides real-time data to support informed HIV response in Nepal. Previously, the recording and reporting (R&R) system relied solely on paper-based methods, which lacked individual-level data at the national level. The HIV Care and ART Tracking System consists of three integrated components: a) DHIS2 Tracker, b) mHealth, and c) Biometrics. Currently, the DHIS2 Tracker is being used at all HIV service delivery points nationwide to record and manage information related to HIV prevention, testing, treatment, care, and support for clients. NCASC has prepared integrated monitoring checklist with key performance indicators focusing HIV testing and counselling, laboratory, PMTCT, ART, Logistic management, HIV care and tracking system, OST, availability and use of recording and reporting tools at district authorities and local level for FY 2080/81. Based on this monitoring checklist, regular monitoring is being carried out as per need. Every year NCASC has been preparing HIV AIDS factsheet based on analyzed data.

12.2.7 Early Infant Diagnosis (EID) and Viral Load Testing Sites

Early Infant Diagnosis (EID) service is available for babies born to HIV-positive mothers to detect HIV status among exposed babies at the earliest. DNA PCR test is done for EID and conducted among children below 18 months. EID through DNA PCR technology is available at National Public Health Laboratory (NPHL), Teku since September 2014. The EID testing is scaled to all 7 Provincial Public Health Laboratory (PPHL) and two remote ART centers. Dried blood spot (DBS) samples for EID are collected from all ART sites and sent for EID testing.

There are two dedicated sites for viral load testing: NPHL, Teku, and Seti Provincial Hospital, Dhangadhi.

12.2.8 DHIS2 Tracker

The DHIS2 Tracker records all client-related information for HIV prevention, testing, treatment, care, and support services, including PMTCT, EID, and follow-up discontinuation, across all service delivery points. Once a client is registered, their details are entered into the system and can be accessed at any time. Its primary goal is to ensure real-time data recording, supporting effective treatment and program implementation. The system also facilitates the transfer and referral of client information between sites. Integrated with a Biometric System for fingerprint scanning, the DHIS2 Tracker streamlines processes such as duplication checks and client transfers. However, some sites face internet speed challenges, which affect the system's full functionality. The DHIS2 Tracker, a priority for NCASC and the Integrated Health Information Management Section (IHIMS), enables sites to generate monthly reports that can be uploaded directly to the aggregated DHIS2 system of the national Health Management Information System (HMIS). Since both systems operate on the same platform, individual client data can be formatted into national reporting templates for seamless integration into HMIS. This reduces data entry errors and enhances timely reporting from ART sites. Operational across all HIV program sites in Nepal, the HIV Care and ART Tracking System consists of three interconnected components: DHIS2 Tracker, mHealth, and Biometrics. Built on the DHIS2 platform, which is also used by IHIMS under the Management Division of the Department of Health Services, the system centralizes client information, prevents duplication, and supports efficient client management.

12.2.9 mHealth (Mobile Health)

mHealth is designed to support HIV treatment and improve client retention in care. The system uses both automated and manual SMS methods to send appointment reminders and general awareness messages to clients. These targeted messages, including those directed at mothers and their babies, have significantly improved adherence to services and retention in HIV care and treatment. The DHIS2 Tracker integrates with mHealth to deliver appointment reminders and HIV-related awareness messages to clients enrolled in the service. Structured messages are sent to the client's registered mobile number at the time of enrollment. However, health workers must regularly update the mobile numbers of PLHIV in the system, as some clients frequently change their contact numbers. However, health workers must frequently update the mobile numbers of PLHIV in the system, as some groups frequently change their numbers.

12.2.10 Biometrics

The biometric system is utilized for clients confirmed as HIV-positive or enrolled in HIV care. It assigns each new client a unique alphanumeric identification code during registration in the HIV Care and ART Tracking System. This code helps identify whether a client is already registered at another ART center in Nepal, addressing duplication issues. It also facilitates retrieving and reviewing client's past records, supports treatment planning, and simplifies tracking clients who transfer between sites and districts. The system, integrated with the DHIS2 Tracker, uses fingerprint scans to determine if a client is new or already in the system. This allows for instant retrieval and updating information, prevents double counting, and links medical records to the client's biometric data. Lessons from the biometric system are being applied by various

partners to enhance individual-level data recording and reporting for HIV prevention, care, and support components in the national HIV program. On June 9, 2022, NCASC, with support from AHF Nepal, FHI 360/ Epic Nepal, and Save The Children International (global Fund), integrated HIV prevention, care, and support data managed by implementing agencies (INGOs, NGOs) into the HIV Care and ART Tracking System. Recording registers and monthly reporting forms for HIV-related services were developed in FY 2079/80 and are incorporated into the national HMIS/ DHIS2 system from FY 2080/081. This integration ensures real-time data generation across the entire HIV Cascade, enabling comprehensive monitoring and monthly reporting to the national HMIS/DHIS2, thus establishing a unified national HIV information system.

12.2.11 Integrated Biological and Behavioral Surveillance (IBBS) Survey

Nepal has been conducting HIV and STI surveillance particularly among key populations, namely: people who inject drugs, FSW and their clients, MSM and TG, and Male Labor Migrants for more than a decade mainly to track changes in HIV and STI prevalence along with behavioral components such as condom use etc. Hepatitis-B and C screening among PWID has been started in the IBBS surveys since 2015. From 2020, national level surveillance survey was conducted among people who inject drugs and in 2024 National level IBBS for male labor migrants was done.

12.2.12 HIV Surveillance

NCASC is taking the lead in HIV surveillance activities in Nepal, in technical collaboration with WHO, UNAIDS, Global Fund Program, USAID, FHI360 Nepal and AHF Nepal including the engagement of communities and people living with HIV. NCASC has developed National Consolidated Guidelines on Strategic Information of HIV Response in Nepal 2022-2026. The national consolidated SI guidelines aim to design an appropriate framework for measuring progress of National HIV Strategic Plan (2021-2026) targets and indicators at different level, i.e., impact, outcome and output level, including definitions of core indicators and specifications for data collection and provide a road map for data sources, data collection, analysis and its use for improvement of program implementation.

12.2.13 HIV Infection Estimations and Projections

Nepal updates HIV infection estimates annually using available biological and behavioral data, routine program data, key population size estimates and other relevant key information from different studies using AIDS Epidemic Modelling (AEM) and Spectrum.

12.2.14 Size Estimation of Key Populations

National size estimation of key populations (FSW, PWID and MSM and transgender people) was started in 2010. In 2005, 2007 and 2009, national level size estimates were derived by updating the 2003 estimate based on population growth. In 2010 for the first time, a national level mapping exercise which used a combination of direct and extrapolated district level estimates was conducted in Nepal.

12.2.15 Data Quality Assessment of ART sites in Nepal

In 2025, NCASC with support from AHF Nepal conducted a Data Quality Assessment (DQA) across 70 ART sites representing 97% of PLHIV on treatment to improve the accuracy and reliability of HIV treatment data essential for achieving national fast-track 95-95-95 targets. The assessment reviewed key data systems and tools (HMIS 7.4, 7.5, 9.3/9.4/9.5, and the DHIS2-based HIV Care and ART Tracking System) using contextualized validation and facility assessment tools. Indicators/variables examined included data related to age, gender, risk group, treatment status, PMTCT, EID, and viral load. Data were collected through record reviews, triangulation, and interviews with ART site staff, supported by trained enumerators and standardized digital tools.

12.2.16 World AIDS Day Celebration

NCASC every year celebrates World Aids Day on 1st December. In year 2081 BS, NCASC celebrated 37th World Aids Day with the slogan "TAKE THE RIGHTS PATH" (एड्स अन्त्यका लागि सबैको अधिकार सुनिश्चित गरौं)

12.3 Key Service Status 2081/82

12.3.1 Positivity Rate Among Tested Through HTS

In FY 2081/82, total 428,640 individuals were tested for HIV, out of which 2,272 tested positive for HIV infection. The positivity rate slightly increased to 0.53% compared to last fiscal year. (Table 12.1)

Highest number of cases were reported from Bagmati province (733) while Karnali province only reported 39 cases of HIV infection. The highest positivity yield of 1.4% was reported from Bagmati province. (Table 12.2)

Table 12.1 HIV testing and counseling services for the period of FY 2075/76 to 2081/82

Indicators	Fiscal Years						
	2075/76	2076/77	2077/78	2078/79	2079/80	2080/81	2081/82
Total tested for HIV	237,496	147,968	176,895	376,191	558,219	524,090	428,640
Total HIV positive reported	2,298	2,416	2,944	3,270	3,046	2,475	2,272
HIV positivity rate (%)	0.97	1.63	1.66	0.86	0.55	0.47	0.53

*Source: HMIS/DoHS. *Out of total 376191 HIV tests reported in IHMIS only 174251 number of tests reported by HTC list of IHIMS which was approved by NCASC in close coordination with IHIMS and provincial authorities. HIV testing and positive numbers were also reported by non-HTC sites (Private hospitals, Health Posts, UHCs, BHSCs, NGOs etc.). Similarly, some of the NGO sites were not integrated within national IHMIS during FY 2078/079*

Table 12.2 HIV testing and counseling services at provinces in FY 2081/82

Provinces	Tested for HIV	Positive reported	% of Positivity Yield
Koshi	72,472	269	0.4%
Madhesh	76,116	481	0.6%
Bagmati	54,169	733	1.4%
Gandaki	26,769	156	0.6%
Lumbini	117,877	413	0.4%
Karnali	8,117	39	0.5%
Sudurpaschim	73,120	181	0.2%
Total	428,640	2,272	0.5%

Source: HMIS/DoHS

12.3.2 Cases Tested for STIs

Total of 40,666 individuals were tested for STIs in FY 2081/82. Highest number of tests were done in Lumbini province followed by Bagmati and Koshi province. Only 653 individuals were tested for STIs in Karnali province in FY 2081/82. (Figure 12.1)

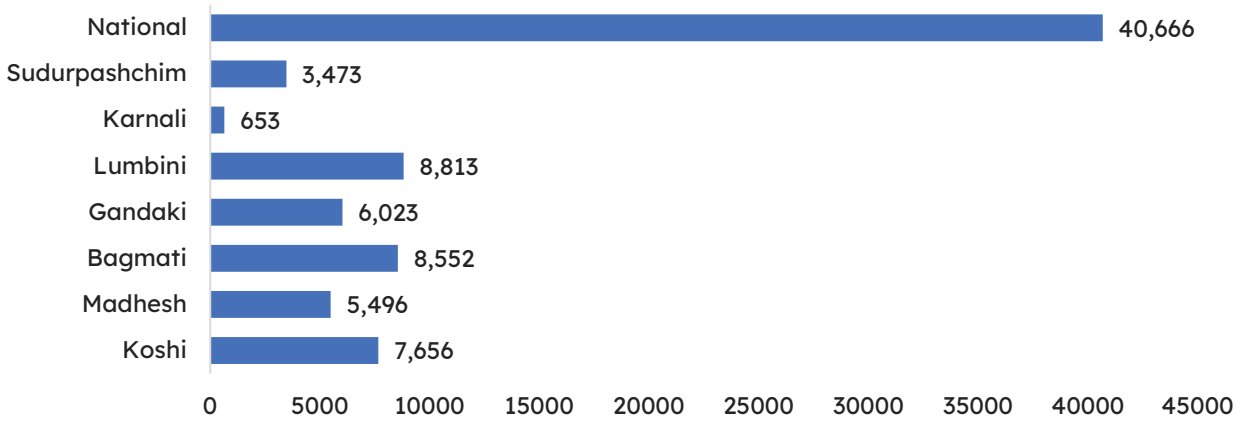


Figure 12.1 Number of cases assessed for STIs through ART sites in FY 2081/82 (separate chart for national)

12.3.3 eVT Service Uptake

Total 602,175 women were tested during ANC, labor or PNC, out of which 62 positive cases were identified. Most number of cases i.e. 16 were identified from Madhesh province where highest number of women's i.e. 145,600 were also tested. Fifteen cases were identified from Lumbini province while 13 cases were identified from Bagmati province. Karnali province reported zero number of positive women. In line with this, 132 mothers received ART (included both already on ART became pregnant and newly diagnosed HIV positive who were enrolled in ART treatment), where highest number was reported by Lumbini province (40) followed by Madhesh province (33). (table 12.3)

Table 12.3 Service statistics on eVT at provinces in FY 2081/82

Province/Women in her ANC, labor or PNC	Women tested	Positive women identified	Mothers received ART
Koshi	91,672	10	18
Madhesh	145,600	16	33
Bagmati	93,176	13	19
Gandaki	44,992	5	9
Lumbini	130,730	15	40
Karnali	42,245	0	2
Sudurpashchim	53,760	3	11
National	**602,175**	**62**	**132**

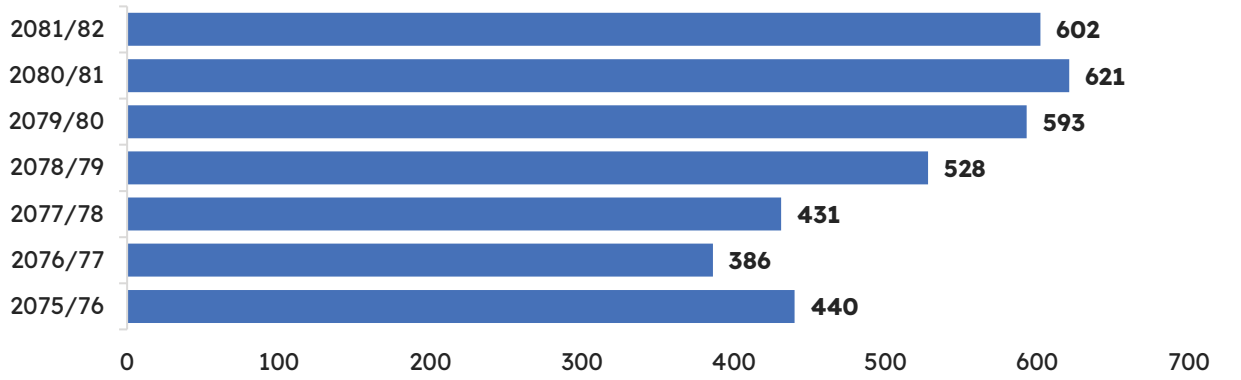
Source: NCASC

Total 125 children up to 18 months were tested for EID, out of which 96 were tested within 2 months of birth. Among total children tested for EID, three were diagnosed with HIV positive. (table 12.4)

Table 12.4 Service statistics on Early Infant Diagnosis (EID) in FY 2081/82

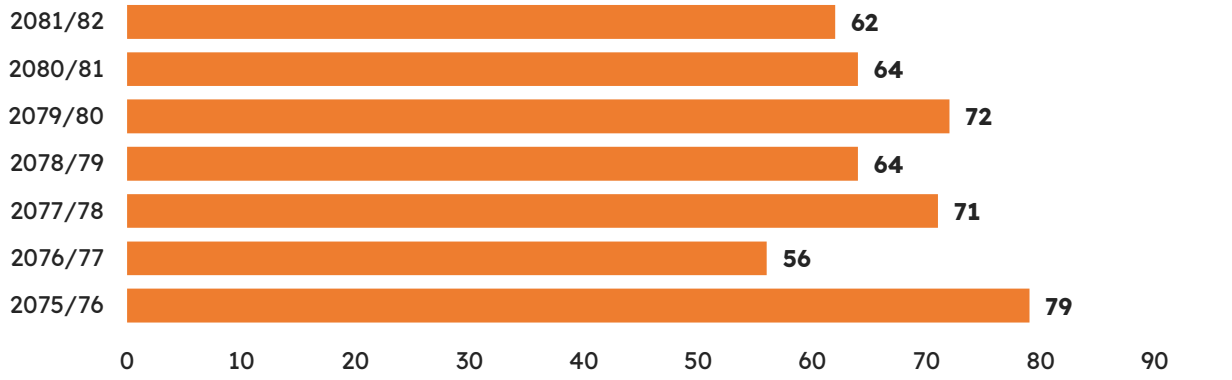
Total number of children up to 18 months tested (PCR)	Total number of children up to 2 months tested (PCR)	Total number of children up to 18 months diagnosed HIV positive through PCR test
125	96	3

Source: HIV Care and ART Tracking System, FY 2081/82



Source: HMIS/DoHS

Figure 12.2 Mothers- ANC, Labor and PNC women tested for HIV per 1,000in FY 2075/76 to 2081/82



Source: HMIS/DoHS

Figure 12.3 Number of new HIV cases among ANC, Labor and PNC women tested for HIV

12.3.4 HIV Treatment Services

Total number of PLHIV on ART were 27,054 in FY 2081/82 among which 26% were from Bagmati province while only 3% were from Karnali province.

Table 12.5 Number and proportion of PLHIV on ART

Province/ Women in her ANC, labor or PNC	Total number of PLHIV on ART	Percentage of PLHIV on ART
Koshi	2623	10
Madhesh	4687	17
Bagmati	7104	26
Gandaki	3066	11
Lumbini	5113	19
Karnali	731	3
Sudurpashchim	3730	14
National	**27054**	**100**

Source: NCASC

12.3.5 Oral Substitution Therapy (OST) Services

The number of cases currently on Buprenorphine decreased from 287 to 245 in FY 2081/82 while cases currently on Methadone increased from 1104 to 1280 in FY 2081/82. (Table 12.6 and Table 12.7)

Table 12.6 Number of PLHIV enrolled in OST in FY 2075/76 to 2081/82

OST Service Status	Fiscal Year						
	2075/76	2076/77	2077/78	2078/79	2079/80	2080/81	2081/82
Total clients on Buprenorphine	165	134	139	318	270	287	245
Total clients on Methadone	451	468	466	750	970	1104	1280

Source: HMIS/DoHS

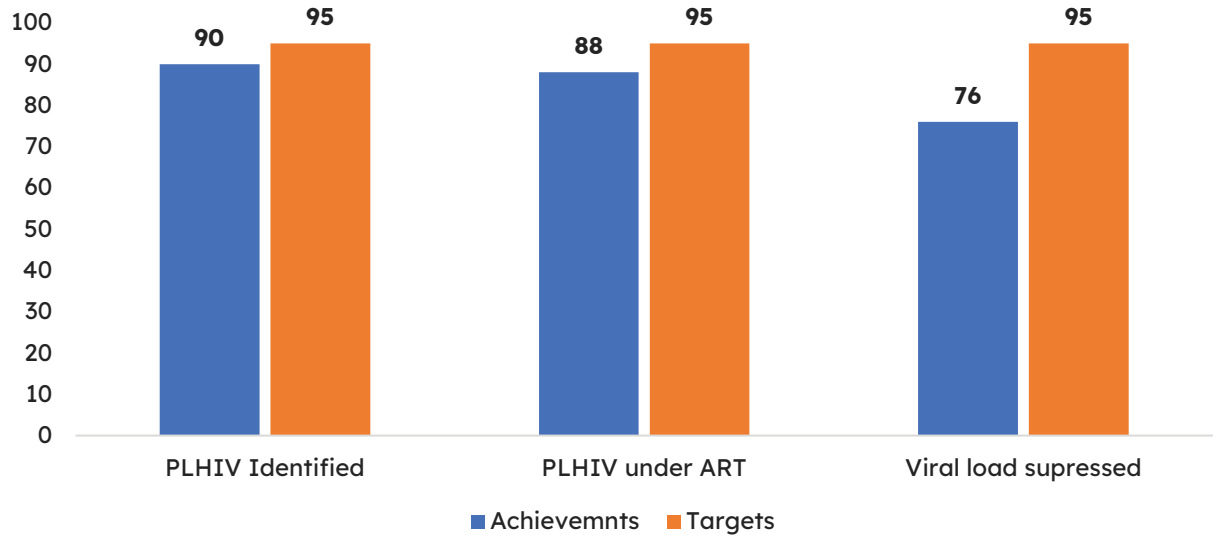
Table 12.7 Number of total clients on OST by province in FY 2081/82

Province	Total clients on Buprenorphine	Percentage Distribution	Total clients on Methadone	Percentage Distribution
Koshi	6	2	285	22
Madhesh	22	9	24	2
Bagmati	161	66	842	66
Gandaki	52	21	58	5
Lumbini	4	2	71	6
Karnali*	-	-	-	-
Sudurpashchim*	-	-	-	-
Nepal	**245**	**100**	**1280**	**100**

Note: *No OST program sites in Karnali and Sudurpashchim Province

Source: HMIS/DoHS

12.3.6 Progress Against 95-95-95 Targets



Source: HMIS/DoHS

Figure 12.4 Progress against 95-95-95 targets

Box 12.2 SWOT Analysis of HIV and STI Programs

Strengths	Opportunities
• High level of political leadership and commitment, Government's enhanced leadership for increased resource mobilization for sustained HIV response. • National HIV and STI Policy, National HIV Strategic Plan (2021-2026), updated Technical Guidelines and Protocols, surveillance in place. • Enhanced institutional capacity of NCASC in planning, implementation, monitoring and evaluation of HIV programs • Significant progress: 94%, 87% and 74% against 95-95-95 targets higher than Asia-pacific and world • Increased coverage of data (Government and Nongovernment) up to health facility and community level using tracker system for individual data and interoperable with HMIS for aggregate data. • Incorporation of recording and reporting with additional HMIS number for HIV prevention, care and support. • Innovative measures to improve HIV response– community-led monitoring, self-testing, PrEP, addressing HIV/TB, and other co-morbidities • Strengthened health systems and community systems for local response – prevention, testing, treatment, care and support • Number of new ART sites established for increased ART site coverage and efficient ART service delivery	• Federal context of health governance, Increasing collaboration and engagement of relevant stakeholders for resource mobilization • Integration of HIV services in health system with other services • Promotion of eHealth information system • Combination prevention with innovative approaches and evidence-based decision-making practices • Continued coordination, engagement and collaboration among multiple stakeholders including Civil Society Organizations • Scaling up community led response, prevention, testing, treatment, care and monitoring • Participation of local governments, civil society, private sector and key populations to scale-up of HIV programs at each level • Strong civil society presence, community engagement and support from partners • Auto-synchronization of national HIV program monthly reports from HIV Care and ART Tracking System to HMIS/DHIS2.
Weaknesses	**Threats**
• Despite significant improvement on fast-track target, more effort is required to achieve third 95 target • Limited human resources for HIV response in GON settings • Inadequate VL testing services. • Inadequate engagement of Public Private Partnership • Heavy reliance on donors (EDPs) with limited government budget • Limited programs related to STIs in the national program • Limited integrated supervision approach	• Pandemics and disasters • Political instability and frequent leadership change • Implementation challenges in Federal health systems (new structures) • Persistent inequalities, stigma and discrimination • Burden of coinfections and other comorbidities • Stagnant domestic Investment for sustainability (covering the financial costs of services).

13 Curative Services and Medio-legal Services

Curative Service Division | Hospital Services Monitoring and Strengthening Section | Basic and Emergency Health Management Section | Eye, ENT and Oral Health Section | Health Facilities providing curative services | Medico-legal Services

13.1 Curative Services

13.1.1 About the Management of Curative Services

13.1.1.1 Hospital Services Monitoring and Strengthening

Hospital Services Monitoring and Strengthening Section of Curative Service Division (CSD), DoHS, is responsible for overall hospital service monitoring and strengthening for the provision of continuous optimum quality services. This section also facilitates and oversees the registration, renewal, and upgrading processes for hospitals within its jurisdiction. It also assists formulating policies, and standards for hospital strengthening, hospital regulation, collaboration between private and public health institutions to ensure effective healthcare services.

Public Health Service Regulation,2077categorizes hospitals based on bed capacity and the services they offer. Under this framework, both public and private hospitals, particularly those with more than 200 beds, specialized and super-specialized hospitals, undergo regular monitoring and inspections. The consistent monitoring and supervision of hospitals are crucial for ensuring that all patients receive access to high-quality health services. Additionally, it guarantees the allocation of a free 10% of beds to economically disadvantaged citizens. The section also contributes in development of the protocols and monitoring the rational use of the drugs and creating awareness regardinganti-microbial resistance (AMR). Beyond these responsibilities, the section has a broader mandate that includes institutionalizing new and emerging health trends like telemedicine, Electronic Health Record (EHR) / Electronic Medical Record (EMR) systems, travel clinics, health tourism, and conducting studies on antimicrobial resistance, development of the national-level study centres.

13.1.1.2 Basic and Emergency Health Management

Basic and Emergency Health Management Section is dedicated to safeguarding the constitutionally protected right to health for all citizens. Article 35 of the Constitution of Nepal, 2072 explicitly declares, “Every citizen shall have the right to free basic health services from the State, and no one shall be deprived of emergency health services.”

Access to basic health services(BHS) is ensured in Nepal by the extensive network of Basic Hospitals, health posts, primary healthcare Centres (PHCCs), Basic Health Service Centre, Urban Health Centres and community units. These services concentrate on nutrition, family planning, immunization, maternity and child health, and the prevention and management of common illnesses. All Nepali citizens are guaranteed free basic health services and local level governments (LLGs) are solely responsible for providing these services. Legal frameworks, such as the Public Health Service Act 2075 and its implementing regulations, which define BHS as inclusive and comprehensive and cover important public health activities across the continuum of care, strongly support this commitment.

The BHS package is further explained in Public Health Service Regulation 2077, which lists the service elements and health facility specifications. Public Health Regulation specifies nine essential elements for BHS. These consist of vaccination services, Integrated Management of Newborn and Childhood Illnesses (IMNCI), nutrition services, maternal, newborn, and child health (MNCH) services like family planning, abortion, and reproductive health care, infectious disease services, mental health services, geriatric health services, general emergency services, promotional health services, and Ayurveda and other traditional medical practices. These elements are further separated into 42 subcategories in to guarantee all-encompassing strategy for meeting the various health requirements of the people.

All three tiers of governments function in co-ordination and unison to oversee financial transfers, logistics, and service provision and with necessary coalition with non-government entities. The federal government provides oversight on technical, policy level and operational support, while provincial and local governments are more responsible to deliver and ensure availability of BHS in their particular jurisdictions.

To implement BHS effectively, the Ministry of Health and Population (MoHP) developed operational guidelines in 2079, covering important factors like infrastructure, service quality, waste management, etc. and highlighting on the rights of service users as well. Key institutions such as the Basic and Emergency Health Service Management Section within the Curative Service Division at the federal level, provincial health entities, and local health offices play integral roles in providing technical assistance, monitoring, logistics management, and ensuring uninterrupted delivery of essential medical supplies, vaccines, and family planning commodities. Together, these mechanisms aim to achieve universal health coverage, leaving no one behind.Additionally, the section plays a key role in

initiating policies, rules, criteria, protocols, and guidance for emergency health services, as well as contributed to the development of national policies related to referral systems. It also assists MoHP in implementing and regulating emergency service flow and referral services.

Table 13.1 Basic health service delivery units at three spheres of government

Local level	Provincial level	Federal level
Basic hospital (5, 10, 15 beds)	General Hospital (25-200 beds)	General Hospital (200 plus beds)
Basic Health Service Centres (BHSCs) Primary Health Care Centres (PHCC) Health Posts (HP) Community Heath Unit (CHU) Urban Health Center (UHC)		Specialized and Super Specialized Hospitals Teaching Hospital (Academy and others)
Ayurveda Dispensaries (Aushadhalaya)	Provincial Ayurveda Hospital Provincial Ayurveda Chikitsalaya/ Ayurveda Health Centre	Central Ayurveda Hospital

Source: Public Health Service Regulation, 2020

Additionally, through RRI approach MoHP developed BHS Monitoring Framework (Aadharbhut Swasthya Sewa Anugaman Digdarshan) in 2080. The framework has envisioned the establishment and operationalization of an integrated Basic Health Service Monitoring System (BHSMS) that monitors availability, accessibility, utilization, and quality of BHS, utilizing data from various sources.

13.1.1.3 Eye, ENT and Oral Health

Eye, ear, nose, and throat (ENT), and oral health often take a backseat in discussions about the broader healthcare system and services. However, these aspects are equally vital in ensuring the overall quality of health services. Recognizing the importance of advocating for these often overlooked elements, CSD has established its own section dedicated to managing and institutionalizing the delivery of eye, ENT, and oral health services. This section plays a crucial role in formulating national policies, rules, standards, protocols, and guidelines related to eye, ENT, and oral health. Its efforts extend to enhancing the effectiveness of these services and integrating them into the National Health Service system, along with conducting relevant research studies to further contribute to the advance healthcare practices.

13.1.2 Major Activities and Achievements in FY 2081/82

13.1.2.1 Assessment of Minimum Service Standards (MSS) of Hospitals and Health Facilities

MSS stands out as a highly successful tool for evaluating the service readiness and service availability of health institutions. Using a standardized set of assessment standards, MSS gives a percentage score that indicates the status of institutions' readiness and service availability. Initially launched in 2072 as the Hospital Management Strengthening Program, MSS initially focused on assessing the then district- level hospitals. With continuous consultation with the subject experts in different forums, over time, the tool evolved, and currently, there are distinct MSS tools tailored for Health Posts, Primary, Secondary A, Secondary B, Tertiary hospitals, and specialized hospitals (Children Hospital, Infectious and Tropical Disease Hospital, Mental Hospital, Maternity and Gynaecological Disorders Hospital, Trauma Hospitals and Cardiac Hospitals). This adaptability ensures a more precise assessment of diverse healthcare facilities. MSS has identified three core areas for assessment- governance and management, clinical service management and hospital support service management. The assessment identifying the gaps and backed up by the action plans for resource management to fulfil these gaps ensures MSS assessment to be a continuous effort towards preparing foundation for quality service provision (Fig 13.1).

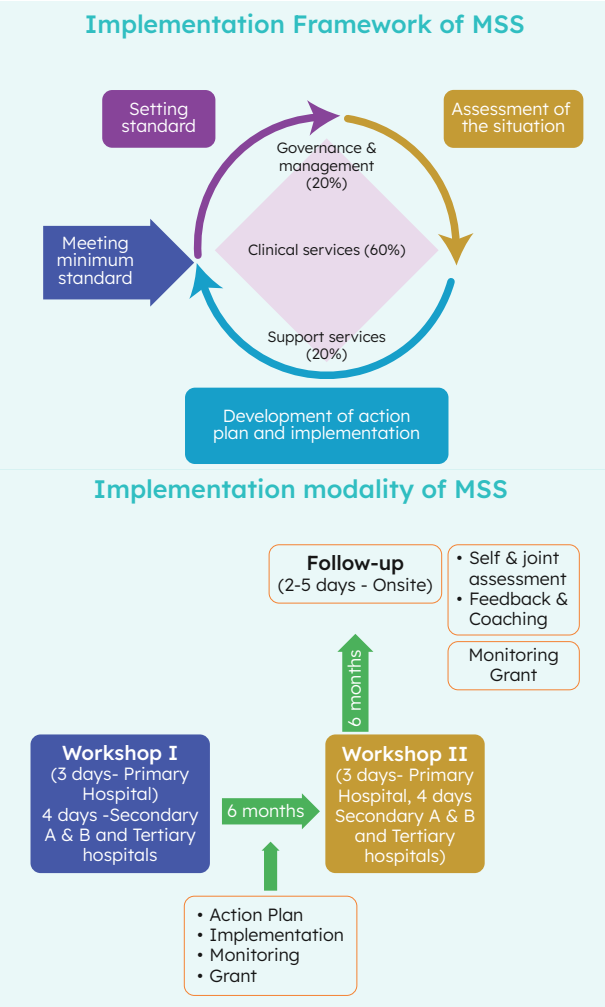
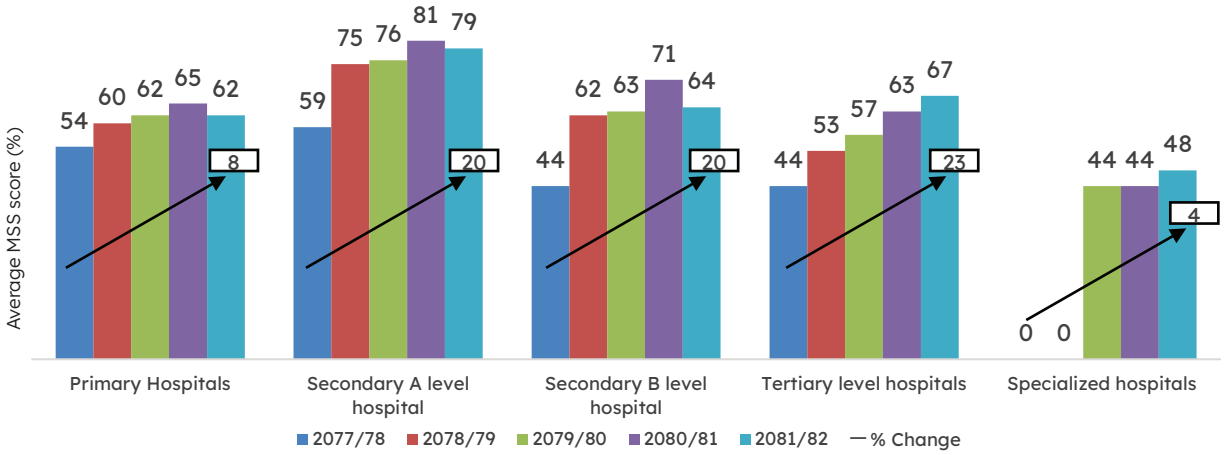


Figure 13.1 Key concept, implementation framework and implementation modality of MSS

In the fiscal year 2081/82, the MSS was evaluated across 133 hospitals. The national average scores were as follows: 62% for primary hospitals, 79% for secondary A level hospital, 64% for secondary B level hospitals, 67% for tertiary level hospitals, and 48% for specialized hospitals. The national average scores demonstrate an upward trend for tertiary level and specialized level hospitals whereas, downward trend for primary, secondary A and B level hospitals.The highest percentage of national MSS score change was achieved by tertiary level hospitals (23% increased) between FY 2077/78 - 81/82.(figure13.2.). Likewise, MSS score for primary hospitals (78%) and secondary A hospitals (84%) was highest in Koshi province, secondar B hospitals in Lumbini province (88%), tertiary hospitals (78%) and specialized hospitals (50%) in Bagmati province.(Table 13.2)



Source: CSD/DoHS

Figure 13.2 National Average MSS Score Trend as per level in FY 2076/77 – 2080/81

Table 13.2 Average MSS scores of different levels of hospital assessed in FY2081/82

Provinces	MSS implemented hospitals (number)	Average MSS score (%)
Koshi	21 (Primary-11, Secondary A-7, Secondary B-1, Teritary-2)	Primary-78%, Sec.A-84%, Sec.B-65%, Tertiary-77%
Madhesh	14 (Primary-5,Secondary A-6,Secondary B-1,Teritary-2)	Primary-50%, Sec.A-73%, Sec.B-50%, Tertiary-46%
Bagmati	26(Primary-14,Secondary A-5,Secondary B-0,Teritary-3,specialized-4)	Primary-52%, Sec.A-80%, Sec.B-76%, Tertiary-78%, Specialized-50%
Gandaki	26(Primary-18,Secondary A-6,Secondary B-0,Teritary-1,Specialized-1)	Primary-52%, Sec.A-83%, Sec.B-0, Tertiary-69%, Specialized-42%
Lumbini	20(Primary-4,Secondary A-13,Secondary B-1,Teritary-2)	Primary-61%, Sec.A-79%, Sec.B-88%, Tertiary-77%
Karnali	12(Primary-8,Secondary A-2,Secondary B-1,Teritary-1)	Primary-72%, Sec.A-65%, Sec.B-85%, Tertiary-49%
Sudurpaschim	14(Primary-10,Secondary A-2,Secondary B-1,Teritary-1)	Primary-74%, Sec.A-83%, Sec.B-71%, Tertiary-73%
National	**TOTAL MSS - 133**	

Among the tertiary hospitals assessed in FY 2081/82, the highest score was attained by Bharatpur Hospital (88%) followed by Bheri Hospital (83%). (figure 13.3)

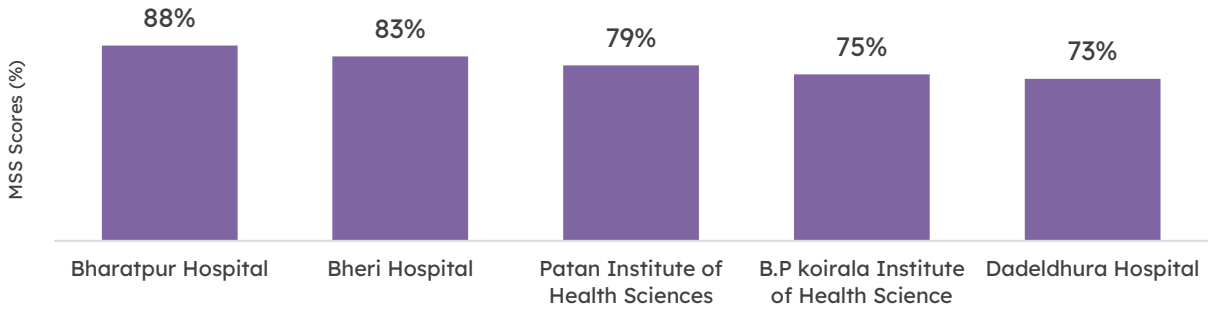


Figure 13.3 Top five tertiary level hospitals based on MSS scores in FY 2081/82

In FY 2081/82, the top five MSS scorers among hospitals within the respective provinces in shown in table 13.3. Udaypur hospital in Koshi province, Gaur hospital in Madhesh, Chautara hospital in Bagmati, Parbat hospital in Gandaki, Bardiya hospital in Lumbini, District hospital, Kalikot in Karnali province, and District hospital, Bajhang in Sudurpashchim province achieved the highest MSS scores among respective provinces.

Notably, among the top-performing hospitals, 41 % achieved a score within the 85-100% range, earning the green color code on the MSS score scale. Additionally, 27 hospitals scored within the 70-85% range, corresponding to the blue color code. Moreover, 44 hospital fell within the 50-70% range, indicating the yellow color code on the MSS Score category. The remaining hospitals received less than 50 % of MSS score (table 13.3).

Table 13.3 Top five MSS scores among hospitals within respective provinces

Province	Top five MSS scorers among hospitals within respective provinces				
Koshi	Udayapur Hospital	District Hospital Terhathum	Katari Hospital	District Hospital Bhojpur	District Hospital Sankhuwasabha
	94%	90%	88%	87%	87%
Madhesh	Gaur Provincial Hospital	Bardibas Hospital	Jaleshwor Provincial Hospital	Ram Kumari Sarada Uma Prasad Murarakha Hospital	Siraha Provincial Hospital
	91%	85%	79%	77%	77%
Bagmati	Chautara Hospital	Bhaktapur Hospital	Ramechhap Hospital	Bharatpur Hospital	Dhading Hospital
	93%	90%	89%	88%	82%
Gandaki	Parbat Hospital	Gorkha District Hospital	Dhaulagiri Hospital	Lamjung District hospital	Damauli Hospital
	91%	90%	89%	88%	80%
Lumbini	Bardiya Hospital	Arghakhachi Hospital	Bhim Hospital, Bhairahawa	Gulmi Hospital	Kapilvastu Hospital
	97%	94%	94%	91%	90%
Karnali	Kalikot District Hospital	Karnali Provincial Hospital	Salyan District Hospital	Rukum West District Hospital	Mugu District Hospital
	85%	85%	85%	82%	76%
Sudurpaschim	District Hospital, Bajhang	District Hospital Acham	District Hospital Baitadi	Mahakali Hospital	District Hospital Doti
	94%	89%	89%	88%	88%

13.1.2.2 Other Completed Activities in FY 2081/82

- Endorsement and Orientation on National Referral Guideline 2081
- Endorsement and Orientation of National Patient safety Action Plan
- Endorsement and Orientation on National Oral Health Strategy
- -Endorsement and Orientation on National Palliative Care Strategy
- Policy dialogue on BHS with local level representatives
- Orientation and implementation of clinical audit related program
- Continuation of MSS Program in all level Health Institutions
- Monitoring of Private and Government Hospitals, Basic Health Service Centers and Local level.
- BHS STP TOT Orientation in Koshi Province
- School Nurse Orientation Program on Eye, ENT and Oral Health

13.1.3 Status of the common curative services

13.1.3.1 Outpatient Department (OPD) service utilization in FY 2080/81

In the fiscal year 2081/82, there were a total of 65510817 clients visiting as reported in the HMIS. The total number of clients served has gradually increased over the course of last three fiscal years. This translates to an average of 1.6 outpatient visits per person per year, which is same as the 1.6 visits per person in previous fiscal year. The province wise data depicted in table 13.4 and 13.5. The highest numbers of clients were reported by bagmati province while the lowest number of clients visited health facilities in Karnali province. The highest average number of visits per person rate was seen in Bagmati province (2.0) followed by Gandaki (1.8), while the lowest average visit rate was seen in Sudurpaschim province (1.3).

Total 34,479,027 new OPD morbidity cases were reported in health facilities all over Nepal. The highest share of these new cases was seen in Bagmati province (24.69%), followed by Koshi (19.38) province. The least proportion were from Karnali province (6.09%). The details of new OPD morbidity cases over last three fiscal years in shown in Table 13.6.

Table 13.4 Total clients served at National and Provincial Level

Provinces	2079/80	2080/81	2081/82
Koshi	9172541	10587454	11180646
Madhesh	6483142	7284643	7366524
Bagmati	16878372	21756105	22979040
Gandaki	4902802	5599930	5861274
Lumbini	8971407	9940769	10210445
Karnali	3001816	3206981	3227977
Sudurpashchim	4470151	4679322	4684910
Nepal	**53880231**	**63055204**	**65510817**

Table 13.5 Average number of visit per person at different provinces

Provinces	2079/80	2080/81	2081/82
Koshi	1.4	1.5	1.6
Madhesh	1.2	1.2	1.2
Bagmati	1.8	2.0	2.0
Gandaki	1.5	1.6	1.8
Lumbini	1.3	1.4	1.5
Karnali	1.3	1.4	1.5
Sudurpashchim	1.2	1.3	1.3
Nepal	**1.5**	**1.6**	**1.6**

Source: HMIS/DoHS

Table 13.6 Total new OPD morbidity cases in Health Facilities in previous three Fiscal years

Provinces	2079/80	2080/81	2081/82	% in FY 2081/82
Koshi	5269448	6282926	6680761	19.38
Madhesh	4720838	6055329	5487852	15.92
Bagmati	6484434	7515876	8511743	24.69
Gandaki	3102156	3236314	3206304	9.30
Lumbini	5208707	5659470	5464058	15.85
Karnali	2039565	2288900	2098825	6.09
Sudurpashchim	2782025	3064523	3029484	8.79
Nepal	**29607173**	**34103339**	**34479027**	**100**

Source: HMIS/DoHS

13.1.3.2 Reasons for visiting OPD in FY 2081/82

The most common reasons for OPD visits in FY 2081/82 includegastritis (APD), fever, upper respiratory tract infections (URTI), headache, hypertension, cough, general examination, musculoskeletal pain, lower respiratory tract infection (LRTI), and skin diseases respectively. (figure 13.4)

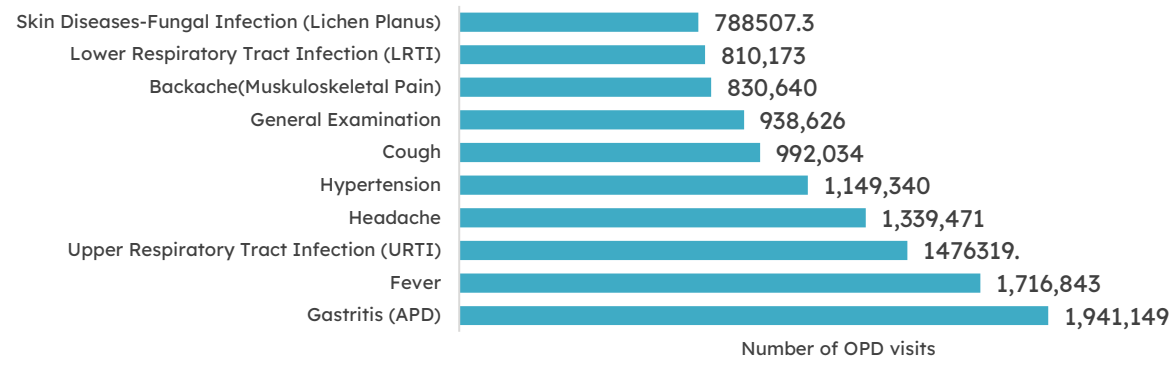


Figure 13.4 Most common reasons for visiting OPD in FY 2081/82

13.1.3.3 Utilization of Emergency and Inpatient Services

In FY 2081/82, 12.06% and 6.57% of the population utilized the hospital emergency and in patient services respectively which was slightly higher than the rate of utilization as that of previous FYs. Provincial differences were observed in the hospital service utilization rates with highest emergency service utilization rate in Bagmati province (22.25%) followed by Gandaki province (14.55%). The inpatient utilization rate surpassed the national average in Koshi province (10.44%), and Bagmati province (9.77%). There were least referred cases in Madhesh province for both services.

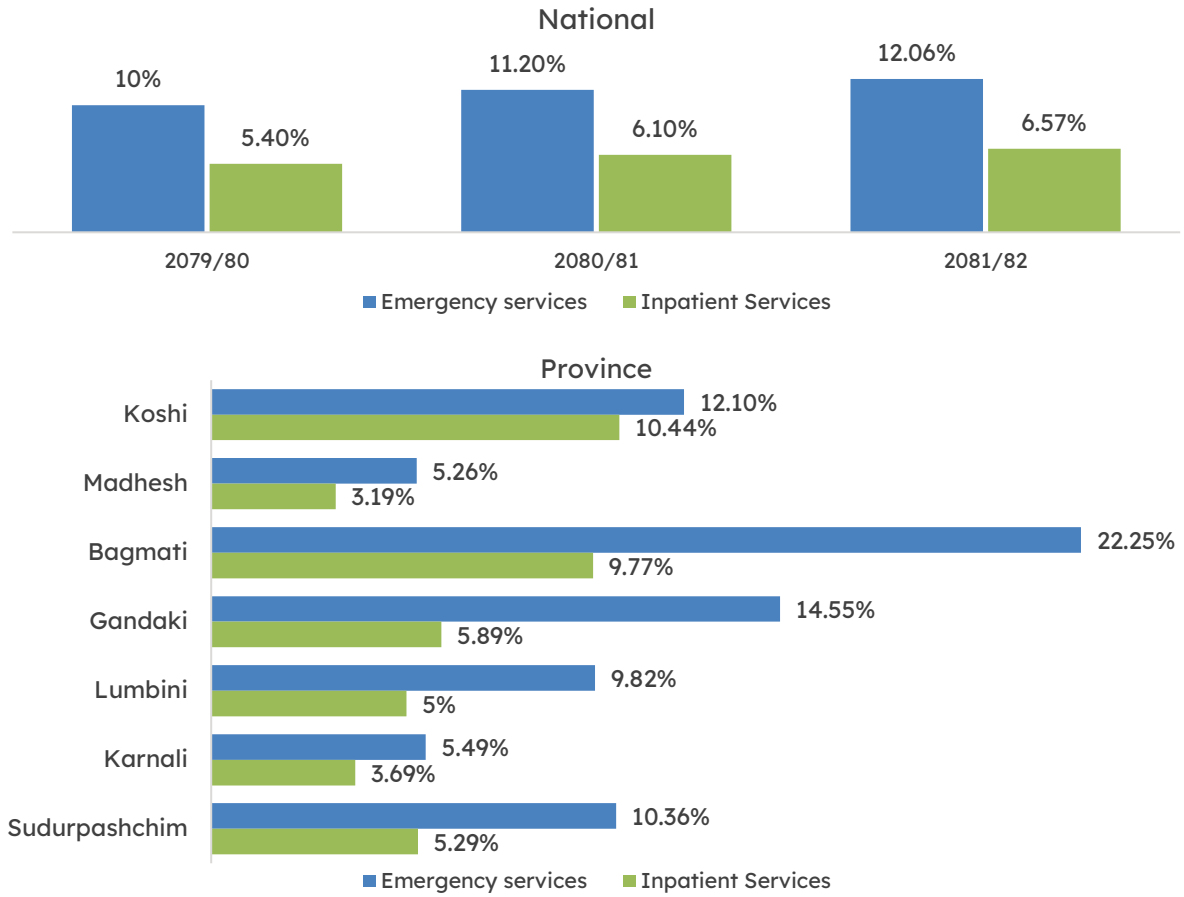


Figure 13.5 Percentage of population utilizing hospital emergency and inpatient services

13.1.3.4 Most Common Morbidities Presented at IPD

Among various cases reported through HMIS in FY 2081/82, the most common cause of inpatient admissions was related to cataract (n=37,603) (Table 13.7). Out of total discharge, 7,72,757(40%) were reported with ICD code (table 13.8). Therefore, it necessitates the need to capture more with ICD code. The total discharges of 19,39,575 cases were reported in the FY 2081/82. Majority of the discharged cases were recovered/cured (16,82,042) (table 13.9).

Table 13.7 Top Ten Inpatients Morbidities in FY 2081/82

S.N.	Inpatient Morbidity	Number of cases
1.	9B10 Cataract	37,603
2.	JB20 Single spontaneous delivery	29,216
3.	JB20.Z Single spontaneous delivery, unspecified	23,898
4.	JB22.1 Delivery by emergency caesarean section	16,710
5.	MG26 Fever of other or unknown origin	14,384
6.	CA40 Pneumonia	13,846
7.	CA22 Chronic obstructive pulmonary disease	11,750
8.	JB22 Single delivery by caesarean section	11,727
9.	BA00.Z Essential hypertension, unspecified	10,643
10.	CA22.0 Chronic obstructive pulmonary disease with acute exacerbation, unspecified	10,370
Note:	Cataract (Reporting from eye hospital)	

Table 13.8 Chapter wise Inpatient Morbidities based on ICD 11 in FY 2081/82

ICD 11 Chapters name	Number
Certain Infectious or Parasitic Disease [1A00- 1HOZ]	52774
Neoplasms [2A00- 2F9Z]	34819
Diseases of the blood or blood-forming organs [3A00-3C0Z]	11778
Diseases of the Immune System [4A00-4B4Z]	1916
Endocrine, nutritional or metabolic disease [5A00- 5D46]	27867
Mental, behavioural or neurodevelopmental disorders [6A00-6E8Z]	10971
Sleep-wake disorders [7A00-7B2Z]	492
Diseases of the nervous system [8A00-8E7Y]	17491
Disease of the visual system [9A00- 9E1Z]	46102
Disease of the ear or mastoid process [AA00- AC0Z]	4037
Disease of the circulatory system [BA00- BE2Z]	33437
Disease of the respiratory system [CA00 –CB7Z]	88568
Disease of the Digestive system [DA00-DE2Z]	68575
Disease of the skin [EA00-EM0Z]	3420
Disease of the musculoskeletal system or connective tissue [FA00- FC0Z]	7770
Disease of the genitourinary system [GA00- GC8Z]	70634
Condition related to sexual health [HA00-HA6O]	11
Pregnancy childbirth or the puerperium [JA00-JB6Z]	133561
Certain conditions originating in the perinatal period [KA00- KD5Z]	22419
Developmental anomalies [LA00- LD9Z]	6200
Symptoms signs or clinical findings, not elsewhere classified [MA00- MH16]	43414
injury poisoning or certain other consequences of external causes [NA00-NF2Z]	51443
External causes of morbidity or mortality [PA00 –PL2Y]	8805
Factors influencing health status or contact with health services [QA00-QF4Z]	27205
Codes for special purposes [RA00- RA03]	48
Total	**773757**

Table 13.9 Inpatient Outcome

Inpatient Outcome	Female	Male	Percentage
Recovered/Cured	980270	701772	86.72
Stable	59384	57152	6.01
Referred Out	17266	16200	1.73
DOPR/LAMA/DAMA	43874	43857	4.52
Absconded	834	517	0.07
Death < 48 Hours	3328	4414	0.40
Death ≥ 48 Hours	4738	5969	0.55
Total discharge (1,939,575)			**100**

Source: HMIS/DoHS

13.1.4 Status of Hospital Key Performance Indicators

Annual surgical procedure

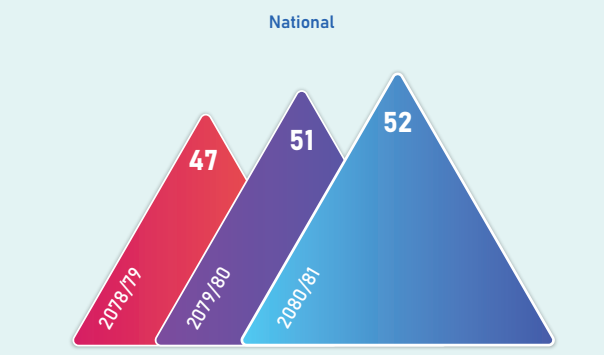
Number of surgicalprocedures is in upward trend, increasing from 686,555 in FY2079/80, followed by 852,748 in FY 2080/81, to 9,82,428 in FY 2081/82, indicating greater utilization.Major surgeries consistently represent the largest proportion of these services.Minor surgeries are available at ER, IPD and OPD setting. The proportion of caesarean section delivers is on the rise each year, resulting a higher proportion of female surgical procedures compared to male. In FY 2081/82, the reporting of ER Major, ER Intermediate, and Inpatient Intermediate surgeries represents improved data capture providing more granular data for analysis. The substantial volume of outpatient minor surgeries highlights the system's capacity for non-admittance procedures (table 13.10).

Table 13.10 Surgical services received at hospitals in FY 2079/80-81/82

Surgical services	FY 2079/80		FY 2080/81		FY 2081/82	
	Female	Male	Female	Male	Female	Male
Major Surgeries	2,00,314	1,56,108	2,18,408	1,71,174	2,79,214	2,01,648
ER major surgery	49,244	20,738	44,762	19,867	42,588	16,235
ER Minor Surgeries	26,246	33,170	28,441	37,697	28,816	42,570
Inpatients Minor Surgeries	35,175	35,873	40,154	42,220	42,794	45,647
Inpatients intermediate Surgery	23,812	25,924	31,048	34,259	37,203	37,334
ER intermediate Surgery	6,274	6,123	6,648	6,740	8,712	8,543
Outpatients Minor Surgeries	65,602	64,086	85,664	85,666	93,514	97,610
Total	3,76,581	3,09,975	4,55,125	3,97,623	5,32,841	4,49,587
Grand Total	**6,86,556**		**8,52,748**		**9,82,428**	

Bed Occupancy Rate

In FY 2081/82, the bed occupancy rate was 52.55%, a slight increase (0.5%) from FY 2080/81. The highest bed occupancy rate was reported from Koshi province (62.55%), followed by 58% in Lumbini province. The lowest bed occupancy rate was reported from Karnali province (42.5%). (Fig 13.6)



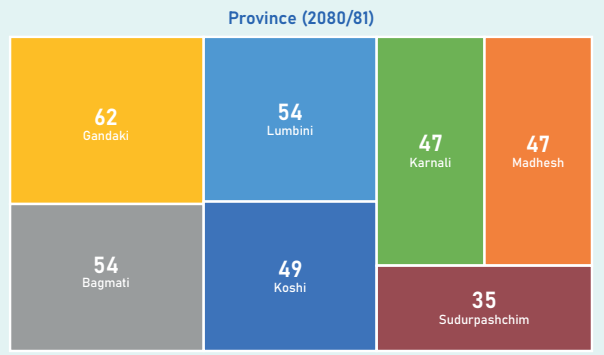
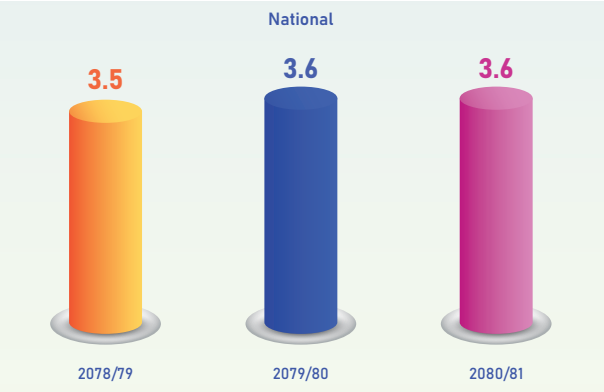


Figure 13.6. Bed occupancy rate in FYs 2079/80-2081/82

Average Length of Stay in Hospital (in days)

In FY 2081/82, the national average length of hospital stay (ALOS) was 3.35 days, showing a slight change compared to previous fiscal years. (Fig 13.7).Notably, ALOS varied across provinces, with three provinces (Bagmati, Gandaki, and Lumbini) surpassing the national average. ALOS serves as a proxy indicator of efficiency, influenced by factors such as the type of treatment (medical, surgical, major, minor), patient characteristics, and treatment protocols. The overarching goal is to minimize unnecessary hospital stays, ensuring that patients receive optimal and tailored care based on their specific needs.



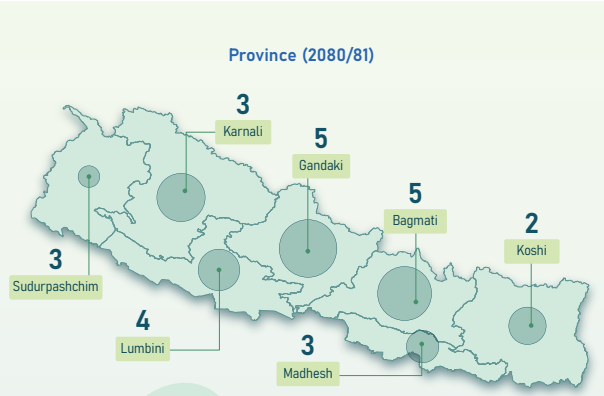


Figure 13.7 Average length of hospital stays (in days) in FYs 2079/80-2081/82 and provincial average in FY 2081/82

Brought dead to health facility

In fiscal year 2081/82, a total of 7,979 cases were brought dead to health facility. Males constitute of larger proportion of these cases. itals. In last fiscal year 2080/81 brought death were 8006 and in 2079/80 brought death were 6586. However the data doesnot specify the cause of these deaths.

Post-mortem services

Post-mortem services are available at selected hospitals. In the fiscal year 2081/82 a total of 13,820 post-mortem case were recorded. In 2080/81 post-mortem cases were 13,899 and In 2079/80 post-mortem cases 11,893 were recorded.

Box 13.1 SWOT Analysis of Curative Services

Strengths	Opportunities
• Formulation, endorsement and implementation of laws, policies, and frameworks for better alignment of private health institutions with national programs • Development of standard treatment protocols for uniform and quality healthcare services • Regular monitoring and inspection of Government and private hospitals to ensure the delivery of quality health services. • Monitoring of Basic and Emergency Health services along with availability and utilization of services and Basic Medicines. • Budgetary distribution to PLGs and LLGs to facilitate procurement of BHS drugs and consumables • Related section overseeing the management of eye, ENT, and oral health care services • Formulation of guidelines and documents to standardize eye, ENT, and oral health care services	• Formulate guidelines for standardizing smaller healthcare institutions (clinics, polyclinics, nursing homes) • Conduct studies on the current status of AMR and facilitate awareness programs • Conduct research on BHS for evidence-based modification of protocols and standards • Define, ensure, and update emergency health services across various levels of health institutions • Conduct a baseline survey of eye, ENT, and oral health care services for improvement and integration with the central healthcare system
Weaknesses	**Threats**
• Inadequate human resources for effective inspection, monitoring, and program implementation • Absence of a formal and legal framework for reporting the expenditure of the budget from PLGs and LLGs • Lack of coordination with PLG and LLG for uniformity in monitoring and inspecting healthcare facilities • Insufficient orientation and sensitization of guidelines and protocols to healthcare workers and the public • Inadequate monitoring and evaluation of policy implementation at the ground level • Absence of guidelines for dental hospitals and clinics	• Lack of interdivisional and inter-program level coordination causing delays in regulation and protocol implementation • Need for inter-ministry coordination for infrastructure development in digital health expansion • Lack of sensitization and uniform understanding of government guidelines among private health institutions • Sense of unaccountability in the private sector toward the government due to a lack of regulatory steps and framework • Budgetary restrictions hindering effective program implementation and monitoring

13.2 Medico-legal services

13.2.1 Background

Medico-legal services are intricately linked with the country's justice system. These services encompass the examination and reporting on patients involved in various scenarios such as assault, road traffic and industrial accidents, suicide, homicide, sexual assault, sexual offence, elderly, spousal, and child abuse, neglect and starvation, torture, self-infliction, criminal abortion, criminal poisoning, and intoxication by alcohol or other means. Certain areas within this domain demand highly specialized skills for accurate examination and expert opinions.Medical expertise plays a pivotal role in death investigation in addition to defining age.

In Nepal, the practice of autopsy for medico-legal purposes became usual only after 2016/17 (1960). At that time doctors working in the prisons, also called police surgeons, were appointed amongst the government medical officers who would perform autopsies at Bir Hospital, Kathmandu. Similarly, medico-legal work including autopsy was done by government medical officers in other parts with the help of trained assistant for dissection.

Constitution of Nepal has envisaged the concept of justice, including compensation, within medico-legal services for victims and affected individuals. While the constitution provides a strong foundation for obtaining justice, individuals committing crimes, meaning the perpetrators, are not brought within the legal purview until the victims, who may not feel the sense of justice, seek legal recourse through clinical medico-legal services. The ease with which victims can bring the perpetrators into the legal domain is facilitated by the research of experts, the condition of the victim, and the evidence obtained through clinical medico-legal services. This is why clinical medico-legal services are considered crucial for providing a strong foundation for social justice, including social security. It serves as a powerful mechanism to promote logical equality and social inclusion through healthcare services.

When medico-legal examination and investigations are required, a report prepared on the basis of such examination is submitted. The report, supported by the

Box 13.2 Policy framework and institutional basis for medico-legal services

Key guiding document for policy framework:

- Muluki Ain (National Code of Criminal Offenses), 2074
- MulukiFauzdariKaryavidhi (Criminal Procedure Code) and DeviyaniKaryavidhi (Evidence Act) of 2074
- GESI Strategy of the Health services, 2075
- Medical Legal Services Operation Directive of 2075
- Establishment and Operation Directive of Gender-Based Violence Management Center in Hospitals, 2077
- Clinical Protocol on Gender-Based Violence, 2077

medico-legal examination, is presented in court by a doctor as an expert witness. The medical opinion, along with the forensic report and the testimonies of medical professionals, is also considered by the court. Recently, the government has prioritized the establishment and organization of medico-legal services, focusing on policy, legal, institutional, financial, and programmatic aspects, as well as simplification.

13.2.2 Major activities in FY 2081/82

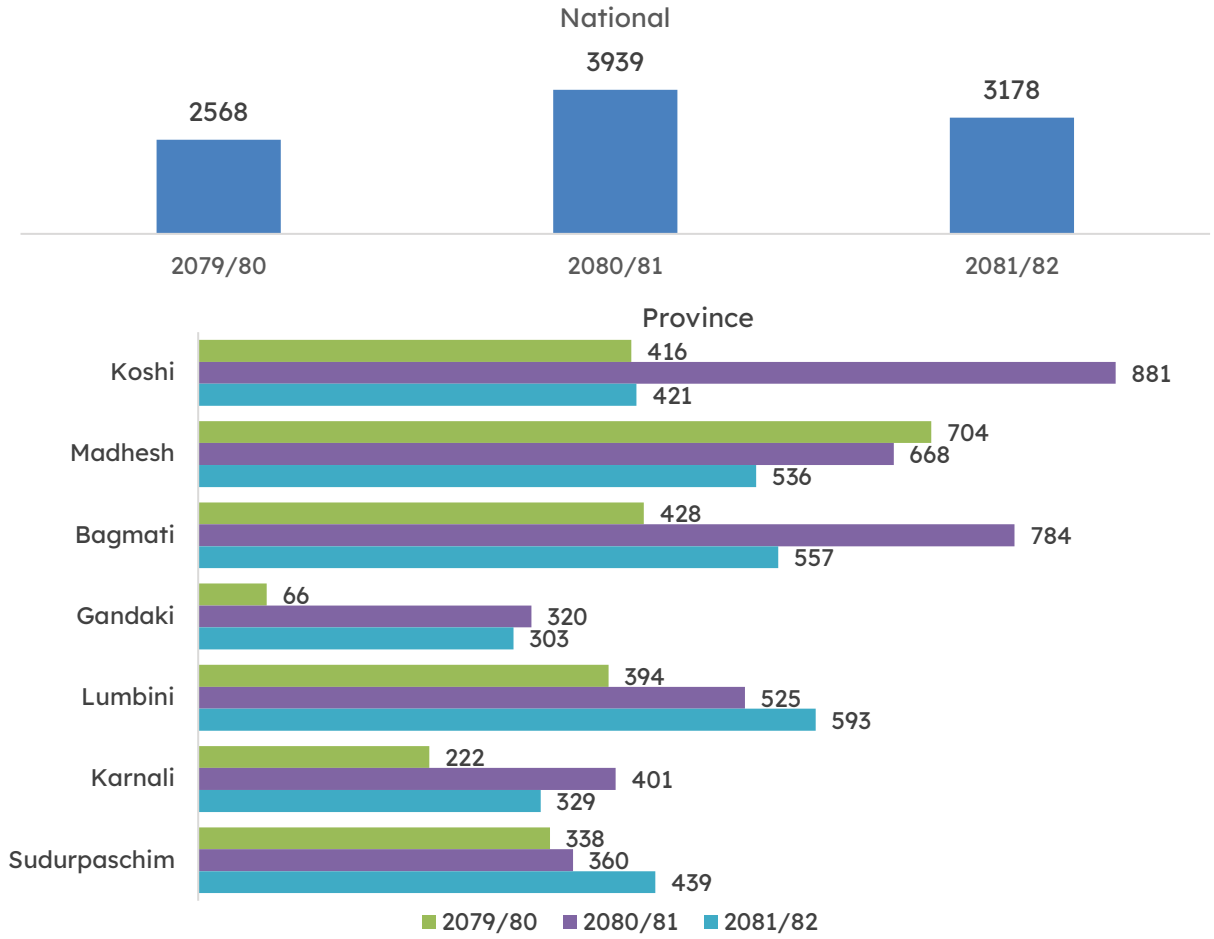


Figure 13.8: Number of medico legal services received in last three FYs (Province wise)

Box 13.3 SWOT Analysis of Medico-legal services

Strengths	Opportunities
• Collaborating and coordinating in the integrated operation of services for victims and affected individuals in cases related to gender-based violence. • Holds a crucial responsibility for establishing social justice and social security • Facilitates easy identification of crimes and victims. • Simplified the collection of strong evidence, including compensation, for legal proceedings • Serves as a fundamental basis for promoting GESI through healthcare services. • National level medico-legal service committee, which is chaired by Chief, QSRD, MoHP	• Development of the expertise and enrolment of more doctors in forensic medicine subject • Collaboration with the Medico-legal Society of Nepal (MeLeSon) • Reporting integrated with Nepal police, MoHA
Weaknesses	**Threats**
• Limited institutional development due to temporary and contractual agreements with medical officers hinders the overall progress of medico-legal services. • Lack of collaboration, coordination, and support among all authorities and related agencies. • The absence of forensic labs and legal science testing centres in all provinces and local levels, as well as at the central level, poses a risk of losing crucial evidence and necessary materials without proper management.	• Denial and resistance to such crucial responsibilities after only a 7-day training may increase challenges. • Physicians may feel a sense of violation while acting as witnesses, during the investigative process, and in the form of court and police visits. • The risk of becoming vulnerable to injustice and security threats if evidence, reports, and research affairs are not handled promptly by the concerned parties

14 Federal Level Health Academia and Hospitals

14.1 Federal Level Health Academia and Their Services

14.1.1 Overview of health academia

Ministry of Health and Population (MoHP) and its affiliated entities have undergone significant transformation and restructuring as a part of country's federalization process. A key milestone in this journey was report of the high-level committee on health profession education policy. By now, government medical college/academy are established in six provinces.

Currently, there are seven s federal level medical academia, and one additional academia (Ramraja Prasad Singh Institute of Health Sciences) is being proposed as shown in Figure 14.1. These institutions are autonomous in terms of administration and finances and are not-for-profit. All of them all are under the authority of the federal MoHP, except for Nepalese Army Institute of Health Sciences (NAIHS), which is run by Welfare Fund of the Nepali Army under the Ministry of Defence. There are two provincial level academia one each in Madhesh Province and Bagmati Province.

This section of the chapter provides an overview of the federal level academia, only those under the authority of MoHP, listing the medical education program they offer to produce health workforce in the country. It also covers major government programs and highlighting their main challenges. In addition to the academia, universities also play a role in health professional education and contribute to the production of HRH in the country.

National Academy of Health Sciences (NAMS)

Began in 2014 (1957) as Civil Medical School

Established as NAMS in 2060 (2002)

B.P. Koirala Institute of Health Sciences (BPKIHS)

Established in 2049 (1993), and as an autonomous health sciences academia in 2055 (1998)

Nepal-India cooperation, founded under an agreement signed on Falgun 26, 2050 (March 10, 1994).

Patan Academy of Health Sciences (PAHS)

Located in Patan, it started with a School of Medicine in 2066 (2010)

Expanded in 2072 (2016) to include nursing programs and 2073 (2017) started Master's Program in Public Health

Karnali Academy of Health Sciences (KAHS)

Established in 2068 (2011)

It emerged from the Karnali Zonal Hospital in Jumla, and is dedicated to fulfill healthcare needs Karnali Province

Nepalese Army Institute of Health Sciences (NAIHS)

Established in 2069 (2012), is not-for-profit medical education endeavor of the Welfare Fund of the Nepalese Army

It is managed by the Directorate General of Directorate of Welfare Planning of Nepalese Army

Pokhara Academy of Health Sciences (PoAHS)

Established in 2072 (2015)

Established by upgrading the Western Regional Hospital, PoAHS serves as a center of hope for medical education in Nepal.

Rapti Academy of Health Sciences (RAHS)

Established in 2074 (2017)

Potential referral hospital for popualtion in Lumbini and Karnali Provinces

Ramraja Prasad Singh Institue of Health Sciences

Proposed

Provincial Level Academia

Madan Bhandari Academy of Health Sciences (MBAHS)

Established by the Provincial Act of 2018

Madhesh Swasthya Bigyan Pratisthan

Established in 2077 (2020)

Figure 14.1 Health academia as of FY 2081/82

Each of the academia have their own teaching hospitals with at least one tertiary level hospital for major clinical attachments, as guided by the criteria of the medical education policy. NAMS at present has three federal level hospitals for major clinical attachments- Bir Hospital, Kanti Children Hospital and Paropakar Maternity and Women's Hospital. In addition, for need based clinical posting, there are Mental Hospital, Shahid Gangalal National Heart Center, B.P Koirala Memorial Cancer Hospital, NPHL and others. The hospitals affiliated with these academies are government-owned federal hospitals, except for the Patan Academy of Health Sciences (PAHS) and B.P. Koirala Institute of Health Sciences (BPKIHS), which have hospitals owned by the academy itself.

There are different health professional education programs courses run by the health academia (Table 14.1). These health professional courses are annually accredited by MEC and number of seats for the courses are decided in each academic year.

Table 14.1 Different course run by federal level health academia as of FY 2081/82

Academies	Academic Programs	Total Students (studying)
NAMS	DM/MCH, MD/MS/MDS, Nursing, Allied Sciences, Anesthesia Assistant	1,450
PoAHS	Post Graduate: Obs/Gynae, Medicine, Surgery Graduate: MBBS, BSc Nursing, BN	141
KAHS	Post Graduate: MD, MS, MPH, Mpharm Graduate: MBBS, BN, BPH, B.Pharm, BSc Nursing	917
BPKIHS	DM/MCH, MD/MS/MDS, Nursing, Allied Sciences, Anesthesia Assistant	1,811
RAHS	Post Graduate: Medicine, Surgery, MPH, MN Graduate: MBBS, B. Midwifery, BN, BMLT Fellowship: Geriatric-1 and Oculoplastic Surgery-1	NA
PAHS	Post Graduate: OBGYN, Medicine, Surgery, Ortho, MPH, MN Graduate: MBBS, BNS, Midwifery, Bsc Nursing	261

Source: NJAR 2082

14.1.2 Major activities in FY 2081/82

Hospital Service Utilization

Table 14.2 Innovations in health academia in FY 2081/82

Academies	Innovations
NAMS	• Burn services restarted; Pain Clinic, PCC Dept., Cancer screening; Drug Info and Pharmacovigilance centers, VEEG, DBS, POEM, expanded cochlear implants; ICU enhancement.
PoAHS	• Super-specialty services (cardio, gastro, nephro, neuro, uro). • Independent kidney transplant; cathlab; ERCP/angiography. • PICU/NICU expansion; LIS, QR payment, Gen-Z and high-altitude clinics.
KAHS	• Training hub (SBA, PTC, OCMC, Research); WHO skill lab; EMR. • New academic programs: MD Surgery, MPH, M Pharma. • Dialysis services; strong municipal partnerships.
BPKIHS	• New pharmacy; Burns & Oncology wards; 90% MCH completion; Milk Bank. • 3D Gait Lab; major equipment upgrades: ECMO, 3D mammography, C-arm, AI-enabled USG, automated
RAHS	• Journal launched; MBBS, MD/MS, MN, BN started. • Neurosurgery, Urology, advanced Ophthalmology; Cathlab in progress.
PAHS	• Community- and competency-based education innovations. • Oxford research, maternal care app; moving toward paperless hospital.

Source: NJAR 2082

Revenue Generation vs Expenditure

Table 14.3 Revenue generation and expenditure by health academia in FY 2081/82

Academies	Revenue Generated (NPR)	Expenditure (NPR)	Balance (NPR)
NAMS	84,37,81,660.53	84,26,37,464.80	11,44,195.73
PoAHS	95,13,56,001	94,14,83,000.4	19,42,24,617.9
KAHS	82,78,82,985	87,86,10,908	5,07,27,923
BPKIHS	3,06,76,15,877	2,94,37,87,514	12,38,28,362
RAHS	1,98,27,60,009	1,94,59,03,965	6,68,56,044
PAHS	NA	NA	NA

Source: NJAR 2082

Key Indicators of Health Academia (Private and Public) in Nepal

Table 14.4 Key indicators of health academia in Nepal

SN	Health Academia in Nepal	Total Client Served	Average Length of Stay (days)	Bed Occupancy Rate (%)	Average Number of Client Served (per day)
1	Birat Medical College Teaching Hospital, Morang	403,826	5.53	121.93	1,106
2	BPKIHS, Sunsari	670,116	6.06	50.28	1,836
3	Chitwan Medical College, Chitwan	332,202	7.55	51.61	910
4	College Of Medical Science, Chitwan	269,074	45.43	65.68	737
5	Devdaha Medical College and Research Institute, Rupendehi	95,225	NA	110.43	261
6	Dhulikhel Hospital (Kathmandu University Teachig Hosital), Kavre	537,539	5.62	49.12	1,473
7	Gandaki Medical College, Kaski	186420	6.34	65.98	511
8	Janaki Academic Hospital Pvt.Ltd, Mahottari	5007	NA	NA	14
9	Janaki Medical College, Dhanusa	49142	0.03	0.03	135
10	Kantipur Dental College Teaching Hospital And Research Center, Kathmandu	4963	NA	NA	14
11	Karnali Academy Of Health Science, Jumla	88286	7.1	32.8	242
12	Kathmandu Medical College, Kathmandu	297436	5.64	77.62	815
13	KIST Medical College, Lalitpur	276120	3.51	NA	756
14	Lumbini Medical College, Palpa	181676	NA	45.08	498
15	Manipal Teaching Hospital, Kaski	271899	8.82	65.1	745
16	Manmohan Memorial Medical College & Teaching Hospital Pvt Ltd, Kathmandu	202418	8.42	46.57	555
17	NAMS (Bir Hospital), Kathmandu	603686	10.68	71.38	1654
18	National Medical College Hospital, Parsa	447022	13.54	117.12	1225
19	Nepal Medical College, Kathmandu	167354	5.24	22.95	459
20	Nepalgunj Medical College Teaching Hospital, Kohalpur, Banke	203105	6.24	73.3	556
21	Nepalgunj Medical College Teaching Hospital, Nepalgunj, Banke	131833	4.85	60.91	361
22	Nobel Medical College, Morang	524588	4.61	68.86	1437
23	PAHS (Patan Hospital), Lalitpur	728144	7.75	68.29	1995

SN	Health Academia in Nepal	Total Client Served	Average Length of Stay (days)	Bed Occupancy Rate (%)	Average Number of Client Served (per day)
24	Peoples Dental College And General Hospital Pvt Ltd, Kathmandu	47,668	6.24	57.25	131
25	Pokhara Academy of Health Science, Kaski	490,092	4.76	68.91	1,343
26	Rapti Academy Of Health Science, Dang	204,607	4.55	64.19	561
27	Tribhuvan UniversityTeaching Hospital, Kathmandu	687,694	10.07	62.69	1,884
28	Universal College of Medical Science, Rupandehi	236,404	6.28	54	648

Source: NJAR 2082

The table 14.4 shows the key indicators of health academia (private and public) in Nepal in FY 2081/82. The highest number of clients was served by Patan Academy of Health Sciences (PAHS), Lalitpur (728,144 clients) followed by Tribhuvan University Teaching Hospital, Kathmandu (687,694 clients), whereas, lowest number of clients were served by Janaki Academic Hospital Pvt. Ltd, Mahottari (5,007 clients), and Kantipur Dental College Teaching Hospital and Research Center, Kathmandu (4,963 clients).

The average length of stay (ALOS) serves as a proxy indicator of efficiency, influenced by the factors such as type of treatment (medical, surgical: major or minor), patients characteristics and treatment protocols. Among the health academia, the ALOS was enormously higher in College of Medical Sciences, Chitwan (45.83 days), while majority of the hospitals had ALOS between 5 to 10 days.

Likewise, the bed occupancy rate was more than 100% in three health academia (Birat Medical College Teaching Hospital, Morang: 121.93%; National Medical College, Parsa: 117.12%; and Devdaha Medical College and Research Institute, Rupandehi: 110.43%), while other health academia had bed occupancy rate below 80%.

14.1.3 Key Issues and Challenges

a. Systemic and Governance

- Low budget for free basic services, SSU, Aama, geriatric and underprivileged care.
- Fragmented policies: unclear EHS directives, free-service and referral guidelines.
- Frequent HI rule changes, unstable HIB system, delayed/undervalued claims.
- MEC issues: seat allocation, discontinuation of FDP, delayed autonomy decisions.
- Insufficient funds for infrastructure, maintenance, digital systems.

b. Infrastructure, Logisticsand Digital Health

- Inadequate ward/OT/NICU/MICU/diagnostics; limited expansion space.
- Weak waste management (no dedicated budget, poor ventilation, no cytotoxic disposal).
- Irregular supply of drugs/consumables.
- Fragmented EMR, no unique ID; poor system integration; slow internet; weak IT staffing

c. HR and Service Delivery

- Shortage of nurses, paramedics, specialists, telemedicine and OCMC HR.
- High turnover, poor motivation; difficulty deploying specialists to satellites.
- Inequitable HR distribution; difficulty managing destitute/mentally ill patients.

d. Program-Specific Challenges

- OCMC/GBV: HR gaps, LTFU, no rehab options, multiple reporting lines, legal interference.
- SSU: Delayed reimbursement, insufficient funds, poor beneficiary identification.
- Telemedicine: HR hesitation, digital illiteracy, poor connectivity, limited equipment.
- Death Audit: No guidelines, trained staff or standard formats; weak forensic capacity.
- Health Insurance: HI card misuse, HIB downtime, erratic lab rates, unjust claim rejections

Way Forward

a. Policy and Governance

- Standardize EHS directives, free-service guidelines, referral and OCMC protocols.
- Strengthen coordination among MoHP–MEC–HIB–Local Governments.
- Move toward a unified national social protection framework (Aama, SSU, Geriatric, HI)

b. Financing

- Increase budget for free services, SSU, OCMC, waste mgmt., maintenance and digital health.
- Ensure timely budget release; revise reimbursement to reflect actual costs; introduce co-payment where feasible

c. Human Resources

- Recruit specialists, nursing, paramedic, telemedicine and OCMC HR.
- Implement retention incentives for remote/satellite sites.
- Promote training, faculty exchange, fellowships, and HOPE training

d. Service Delivery and Digital Health

- Strengthen hub–satellite coordination; digitize inventory and automate claims.
- Implement integrated EMR/HMIS with unique patient ID; stabilize HIB systems.
- Expand digital literacy and telemedicine readiness

e. OCMC/SSU/Waste

- Strengthen psychosocial and medico-legal support; rehab partnerships; better coordination with municipalities.
- Waste-handling safety: hazard allowance, vaccination, PEP availability, facility upgrades.

14.2 Federal Level Hospitals

14.2.1 Overview of Federal Level Hospital

With federalization, there have been changes in the mandate of the ministries across different tiers of Government. MoHP is now mandated to take overall responsibility of functioning of tertiary and above hospitals. As of FY 2081/82, there are federal level hospitals with following categories;

- six tertiary hospitals owned by the government,
- three government hospitals under ministry of home affairs and ministry of Defence are dedicated for respective service holders,
- twelve government hospitals that are organ specific/disease specific/age group specific hospitals,
- one semi-government teaching hospital of university
- five hospitals of academia under government ownership (including Bir hospital),
- two hospitals of academia under ownership of academy and supported by government
- one hospital for prisoners and
- two hospitals for Ayurveda and alternative medicines.

These federal level hospitals cater country wide referral cases. Additionally, almost all of them function as the clinical training sites for different capacity building activities including short term trainings and long-term trainings like fellowship programs.



Figure 14.2 List of the federal level hospitals as of FY 2081/82

14.2.2 Key Issues and Challenges in Federal Hospitals

Table 14.5 Key issues and challenges in federal hospitals, FY 2081/82

Key Areas	Issues and Challenges
Human resources	• Shortage of staffs, workload challenges • Shortage of trained human resource on digital technology
Free health delivery service	• Fragmentation of social security benefits
Financial constraints	• Lack of resources to procure essential supplies • Delay in insurance reimbursement
Information and communication technology	• Lack of infrastructure and trained staff for digitalization
Human insurance	• Slow servers • Challenges in reimbursement process
Waste management and infection control	• Lack of infrastructure for waste management • No system for liquid waste management
Policy and governance	• Poor interdepartmental communication and monitoring • Lack of dissemination of audit and review findings (death audits)
Service delivery and clinical care	• Overcrowding of patients
Technology adoption and innovation	• Low usage of digital technology • Lack of trained manpower to use technology
Access and Equity	• Reach of tertiary care • Limited specialized services in provinces

Way forward

- Full EMR/HIMS implementation and IT strengthening
- Recruiting, training and deploying adequate HR
- Infrastructure expansion, equipment upgrades
- Improving health insurance and SSU systems
- Strengthening waste management (liquid, radiological, pharma)
- Operationalizing telemedicine and expanding outreach
- Improving maternal and neonatal care (Aama)
- Strengthening OCMC, GBV, and psychiatric services
- Establishing functional death audit systems
- Better governance, coordination and financial sustainability

15 Disability Inclusive Health, Rehabilitation Services and Road Safety

EDCD

Leprosy and Disability Management Section

15.1 Disability inclusive health services and Rehabilitation services

15.1.1 Background

An estimated 1.3 billion people, approximately 16% of the global population, experience significant disability. This number is rising due to factors such as population aging and the increasing prevalence of non-communicable diseases. According to the NDHS 2022, 71% of the de facto household population aged 5 and older report no difficulty in any functional domain. Among this population, 23% experience some difficulty in at least one functional domain, 5% have significant difficulty, and 1% are unable to perform at least one functional task. Overall, 6% of the de facto household members aged 5 and older either experience severe difficulty or are unable to function in at least one domain. The most reported disability among individuals aged 5 and older is difficulty seeing (15%), followed by difficulty walking or climbing steps (12%).

Rehabilitation services are a fundamental part of health services and integral to the realization of universal health coverage. Rehabilitation addresses the impact of a health condition on a person's everyday life by optimizing their functioning and reducing their experience of disability. Globally, an estimated 2.4 billion people are currently living with a health condition that may benefit from rehabilitation.

The Rehabilitation 2030 initiative was launched in February 2017 and introduced a "call for action," rallying stakeholders towards concerted and coordinated global actions to scale up rehabilitation. To achieve this, 10 priority areas for action were identified:



Figure 15.1. Ten Priority areas for Action of the Rehabilitation 2030 Initiatives

MOHP/DOHS/EDCD is committed to improving disability-inclusive health and rehabilitation services for all the population in need.

15.1.2 Major activities in FY 2081/82

15.1.2.1 Training for Assistive Product (TAP)

The "Training on Assistive Products (TAP)" was conducted from 10–14 Poush 2081 (25th–29th December 2024) at Dhanushadham, Madhesh Province for health workers. The training aimed to strengthen assistive product service delivery at the primary health care level. Activities included theoretical sessions and practical exercises on mobility, self-care and vision assistive products, online Gate-TAP registration and learning, pre- and post-tests, group work, case presentations, and skill demonstrations such as the use of crutches, walkers, shower/toilet chairs and basic vision assessment. Participants also had a clinical exposure visit to Prerana Physical Rehabilitation Center where they observed rehabilitation services, assistive device provision processes and real client case discussions. Representatives from Provincial Health Directorate, EDCD, WHO Nepal and other stakeholders participated, and discussions were held on coordination, integration of disability management and rehabilitation (DMR) services, advocacy and planning for strengthening assistive product services within the health system.

The "Training on Assistive Products (TAP)" was conducted from 1–7 Ashwin 2081 (17–23 September 2024) in Dhangadhi and Mahendranagar, Sudurpaschim Province, with the main training sessions held at Robust Hotel for health workers. The training focused on strengthening assistive product services at the primary health care level. Activities included theoretical and practical sessions on mobility, self-care and vision assistive products, GATE-TAP online registration and learning, pre- and post-tests, group discussions, case presentations and skill demonstrations such as foot screening, use of walking aids, crutches, toilet/shower chairs and basic vision screening. Participants also conducted a field visit to NNSWA, Mahendranagar, where they observed rehabilitation services, prosthesis provision for amputation clients and interacted with real service users through case assessment and prescription planning. Representatives from Provincial Health Directorate, EDCD, WHO Nepal and other stakeholders participated, and discussions were held on coordination, advocacy, HMIS integration and strengthening disability management and rehabilitation (DMR) services within the health system.

15.1.2.2 Workshop for drafting of basic rehabilitation package for healthcare workers.

The workshop on drafting the Basic Rehabilitation Package (BRP) was conducted from 26–28 Mangsir 2081 (11–13 December 2024) in Kathmandu for health professionals and stakeholders. The program focused on developing a training package to strengthen rehabilitation services at the primary health care level. Activities included presentations, technical discussions and group work on rehabilitation domains such as motor function and mobility, cardiorespiratory care, pain management, cognition, vision, hearing and assistive devices, along with identification of assessment methods, red flags, referral pathways and counselling approaches. Participants also discussed training methodology, curriculum structure, evaluation methods, and required logistics, with demonstrations, case discussions and skill-based learning approaches proposed for future training. Representatives from EDCD, NHTC, WHO Nepal and other stakeholders participated and jointly worked on coordination, policy alignment, and integration of rehabilitation services into the national health system to support UHC and strengthen disability management and rehabilitation services.

15.1.2.3 International Day of Persons with Disabilities Celebration

The International Day of Persons with Disabilities was celebrated on 18 Mangsir 2081 (3rd December 2024) with the participation of approximately 250 attendees, including persons with disabilities and their key stakeholders. The event aimed to promote inclusion, raise awareness on disability rights, and strengthen coordination among concerned agencies. The program included an opening session with remarks from government representatives and stakeholders, experience-sharing from persons with disabilities, and interactive discussions on disability inclusion, accessibility and rehabilitation services. The celebration served as a platform to advocate for inclusive policies, enhance collaboration among organizations working in disability management and rehabilitation, and reaffirm commitment toward achieving equal participation and opportunities for persons with disabilities within the community and the health system.

15.1.2.4 Health Equity for Persons with Disabilities – Situation Assessment

The Health Equity for Persons with Disabilities situation assessment was conducted from 4–13 Kartik 2081 (20–29 October 2024) in Kathmandu, Lalitpur and Dhulikhel with the objective of assessing the existing situation and developing an action plan to promote equitable health services for persons with disabilities. The activities included high-level briefing and consultations with the Ministry of Health and Population, Department of Health Services, EDCD and other divisions, key informant interviews with technical sections, and activation meetings of the disability technical committee. Focus group discussions were held with persons with disabilities and organizations of persons with disabilities to explore their experiences, barriers and service gaps. Field visits were conducted to Dhulikhel Hospital, primary health care facilities, municipality offices and service centres to observe accessibility, rehabilitation, insurance and community-level services, and meetings were organized with UN agencies, development partners and stakeholders working in disability. A two-day workshop further analysed findings and identified strategic entry points for improving health equity, resulting in documentation of existing inequities, identification of system-level gaps, and development of a comprehensive action framework to strengthen disability-inclusive health services within the national health system.

15.1.2.5 Revision of Standard Assistive Technology (AT) Product List

The government initiated the revision of the Priority Assistive Product List (PAPL) in 2080 (2024) with technical support from an AT expert consultant and a

multi-sectoral Technical Working Group (TWG). Using the Delphi method, three rounds of nationwide online surveys were conducted among rehabilitation and AT stakeholders across six functional domains between 2081 Shrawan to Ashwin (August and September 2024). The process initially prioritized 40 assistive products, and following a consensus meeting on 25 October 2024, additional items were included, resulting in a finalized list of 54 assistive products. EDCD/LCDMS planned a final TWG meeting for endorsement and publication of the updated national AT product list.

15.1.2.6 Disability Management and Rehabilitation Training

A Disability Management and Rehabilitation (DMR) training program was conducted across all seven provinces of Nepal to strengthen the capacity of health services in providing disability-inclusive care. The training targeted medical officers working at different levels of health facilities and focused on early identification of disability, basic rehabilitation interventions, referral pathways, assistive product provision, counselling, and recording/reporting mechanisms. In total, 120 medical officers were trained through interactive sessions, practical demonstrations and case-based discussions, enhancing their skills to manage disability conditions and improve access to rehabilitation services at the primary health care level and within the broader health system.

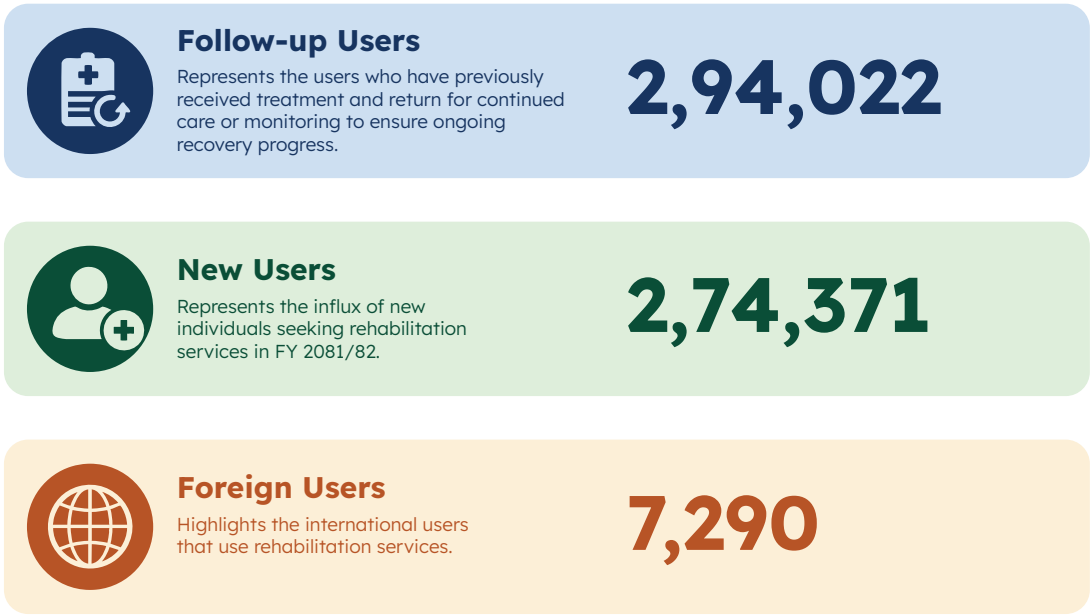
15.1.2.7 Disability Management and Rehabilitation – Master Trainers (ToT)

A Training of Trainers (ToT) on Disability Management and Rehabilitation was conducted at Autism Care Nepal Society on 17 – 22 Chaitra 2081 (30th March – 4th April 2025) to strengthen provincial capacity for disability-inclusive health services. The training aimed to develop master trainers who could further support implementation of rehabilitation services at provincial and local levels. A total of 21 master trainers, representing all seven provinces, were developed through the program.

The training included classroom sessions, demonstrations, live practice with children and caregivers, goal-setting exercises, and group discussions. Participants learned about early identification of developmental and disability conditions, communication and behaviour management strategies, caregiver coaching, counselling approaches, and referral mechanisms. Practical sessions and home-visit simulations enhanced participants' facilitation and mentoring skills. The program strengthened the capacity of provincial trainers to support health workers and expand disability management and rehabilitation services within the health system.

15.1.3 Key program/service indicators status in FY 2081/82

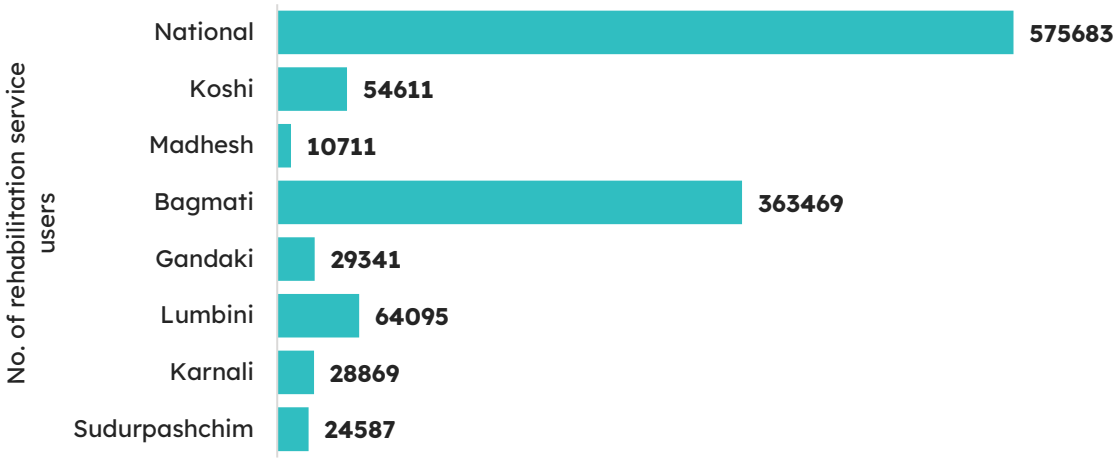
A total of 294,022 follow-up users, 274,371 new users, and 7,290 foreign users of rehabilitation services has been reported in FY 2081/82. (figure 15.2)



Source: HMIS/DoHS

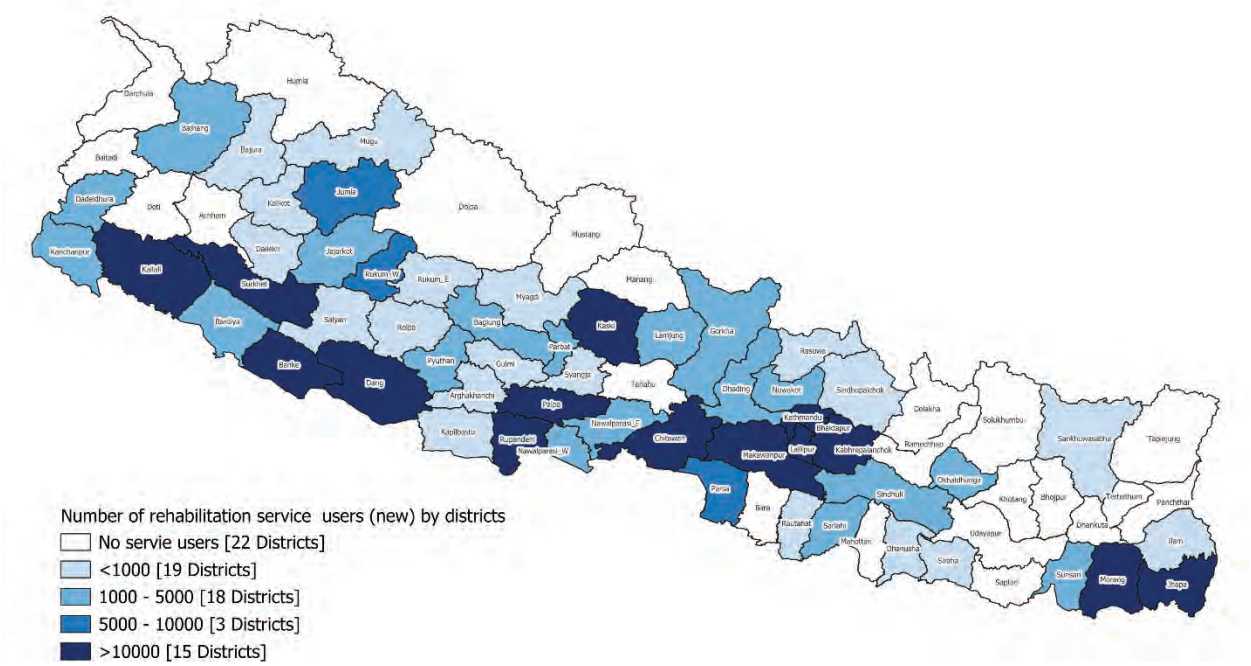
Figure 15.2 Rehabilitation services users in FY 2081/82

In FY 2081/82, a total of 5,75,683 users were provided with rehabilitation services, an increasing trend compared to previus FY. Rehabilitation service is present across all seven provinces. Bagmati province (3,63,469 users) has comparatively higher service delivery due to a concentration of rehabilitation providers; followed by Lumbini (64,095 users) and Koshi (54,611 users) provinces with established physiotherapy units in district hospitals (figure 15.3).



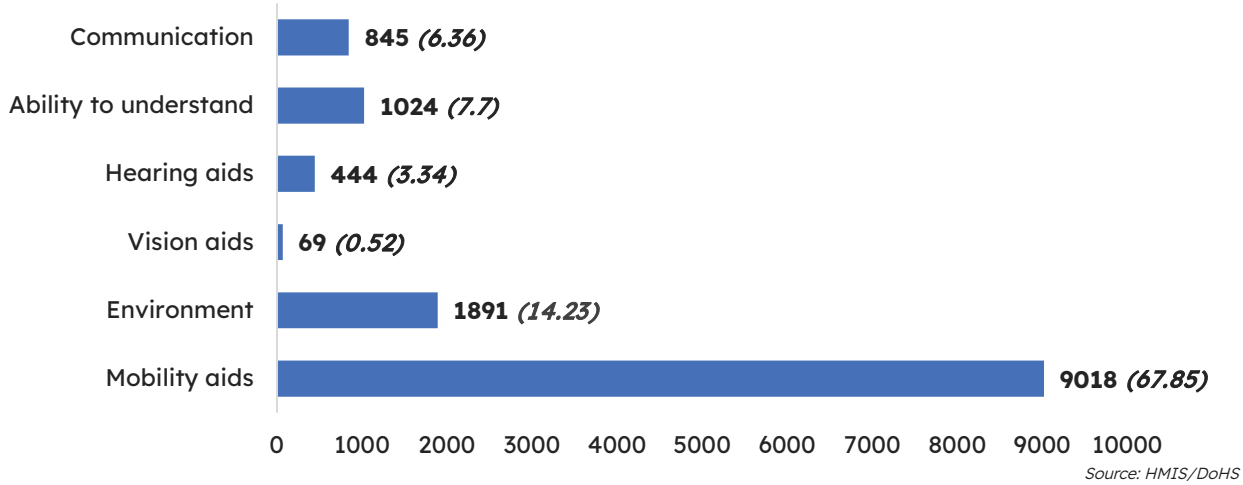
Source: HMIS/DoHS

Figure 15.3 Total number of province-wise users of rehabilitation service in FY 2081/82



Source: HMIS/DoHS

Figure 15.4 Rehabilitation services (new) mapping based on reporting in HMIS/DHIS 2 in FY 2081/82

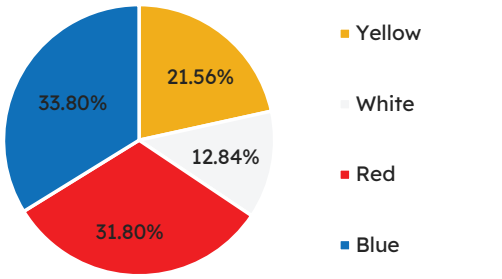


Source: HMIS/DoHS

Figure 15.5 Number of assistive devices provided in FY 2081/82

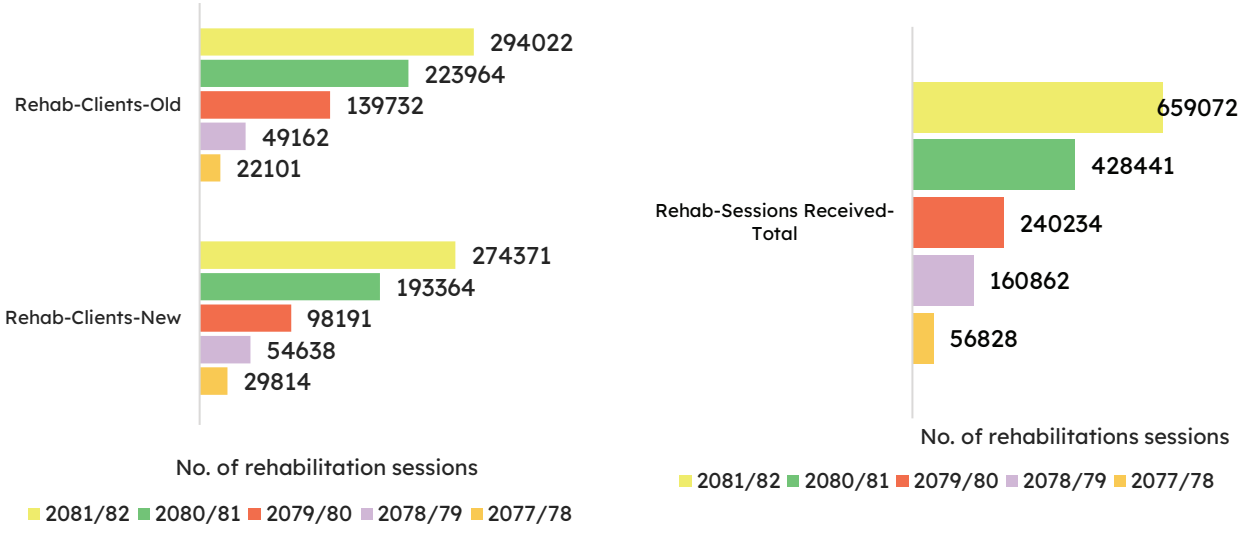
Assistive products (AP) are vital external devices for enhancing the optimal functioning. As a key element of rehabilitation, AP service involves assessment, prescription, product preparation, user training, and follow-up by qualified professionals. In FY 2081/82, a total of 13,291 assistive devices were delivered, with 9,018 (67.85%) being mobility aids like crutches, canes, and walkers (figure 15.5).

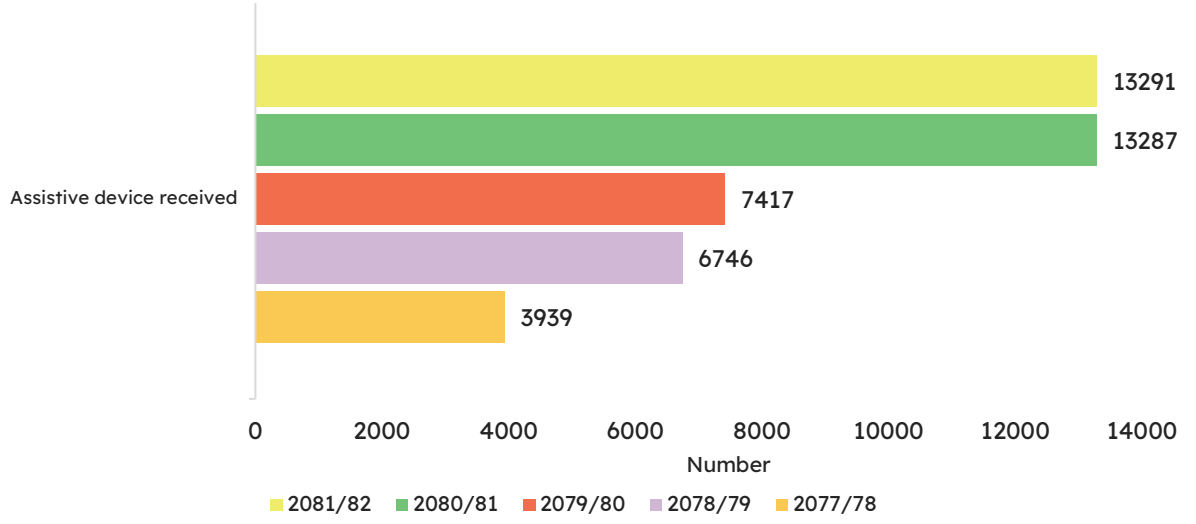
A total of 3,233 people with disabilities received rehabilitation services, and most of them receiving those services had severe or moderate disabilities (red and blue). (Figure 15.6)



Source: HMIS/DoHS

Figure 15.6 Beneficiaries getting rehabilitation services based on disability cards in FY 2081/82





Source: HMIS/DoHS

Figure 15.7 Rehabilitation services utilization in past five FYs (2077/78 – 2081/82)

Rehabilitation services utilization showed a sharp increasing trend between 2077/78 to 2081/82. A total of 659,072 rehabilitations sessions were conducted in FY 2081/82 (figure 15.7).

Box 15.1 SWOT Analysis of Disability Management, Rehabilitation and Assistive Technology

Strengths	Opportunities
• Strong commitment from the Ministry of Health and Population (MoHP) toward integration of rehabilitation services within the health system, with disability-inclusive health and rehabilitation provisions reflected in national policy documents. • Increasing focus on rehabilitation support in sub-national and local government planning processes. • Training programs available for rehabilitation professionals across different levels of health facilities. • Inclusion of rehabilitation service indicators in the national HMIS/DHIS-2 reporting system. • Established multi-sectoral coordination mechanisms for rehabilitation at federal, provincial, and local levels. • Ongoing development of standards and guidelines for establishment, operation, and upgrading of rehabilitation facilities. • Situational analysis conducted and strategies being developed to promote health equity for persons with disabilities.	• Integration of rehabilitation services into national health and development plans. • Emphasis on disability-inclusive health across all levels of health services. • Expansion of Public-Private Partnership (PPP) initiatives, including integrated recording and reporting of rehabilitation services. • Use of technology, such as tele-rehabilitation, to increase access to services, especially in remote areas. • Active stakeholder and community engagement to raise awareness, foster ownership, and improve program outcomes. • Growing aging population and increasing numbers of persons with disabilities, creating demand for adapted and expanded rehabilitation services.
Weaknesses	**Threats**
• Uneven distribution of the rehabilitation workforce, with the majority concentrated in the private sector and heavily centralized in Bagmati Province. • Insufficient number of rehabilitation beds, centers, and functional service units across the country. • Limited integration of rehabilitation services at the primary health care level. • Limited availability and integration of assistive products and assistive technology within government health services.	• Limited government funding and investment for rehabilitation services. • Absence of government-owned or publicly managed rehabilitation centres in many regions. • Inconsistent service delivery standards, potentially leading to variable quality of care. • Lack of standardized clinical practice guidelines and insufficient professional development opportunities for rehabilitation staff. • Health emergencies or crises may divert resources and attention away from rehabilitation services. • High dependence on external development partners for rehabilitation service provision, raising concerns about long-term sustainability.

15.2 Road Safety

15.2.1 About the program

Globally, road crashes kill an estimated 1.19 million people and cause countless serious injuries and disabilities each year. Road crashes are the leading cause of death for children and young adults aged 5–29, and rank as the 12th leading cause of death for people of all ages, surpassing HIV/AIDS, tuberculosis, and malaria. Road traffic fatalities and injuries impose high costs on society, especially on the poor and the working-age population. In addition to the loss of life and toll on human health, they result in lost productivity, property damage, legal and judicial costs, out-of-pocket expenses, and public healthcare expenditures. Road crashes cost low and middle-income economies the equivalent of 2-6 percent of their GDP each year. Without urgent action, road traffic crashes will keep rising as the demand for mobility in low and middle-income countries grows.1 (1-Annual Report 2024, Global Road Safety Facility, World Bank)

In 2077 (September 2020), the UN General Assembly adopted resolution A/RES/74/299, marking the Second Decade of Action for Road Safety (2077/78–2087/88 or 2021–2030). This resolution aims to reduce road traffic deaths and injuries by at least 50% by 2030 (refer to fig 15.8 for the five pillars of the action plan).

In Kartik 2078 (October 2021), the WHO, in collaboration with UN regional commissions and partners in the UN Road Safety Collaboration, launched the Global Plan for the Decade of Action. This plan aligns with the Stockholm Declaration, advocating a comprehensive approach to road safety. Key elements include improvements in road and vehicle design, stricter law enforcement, and enhanced emergency response services. Additionally, the plan promotes walking, cycling, and public transportation for their associated health and environmental benefits.



Figure 15.8 Five Pillars of road safety action plan Figure as previous AHR

Road travel remains the primary means of transporting goods and people in Nepal. Population growth, urbanization, the rapid increase in vehicles, and expanding road networks have significantly influenced transportation and mobility. However, these developments bring challenges to road safety, including the rising number of vehicles and road networks, limited public awareness, frequent crashes, and inadequate enforcement of road safety measures.

According to the Global Burden of Disease (BoD) estimates, road traffic injuries accounted for 4.11% of all deaths in Nepal, representing 26.99% of injury-related mortality in 1990, which increased to 40.02% in 2017. A decade-long analysis of road traffic crashes in Nepal revealed a consistent rise in incidents, with higher casualty rates recorded between 12 noon and 6 pm.

In this context, the Ministry of Health and Population (MoHP) actively engages and contributes to various stakeholder activities on road safety, spearheaded by the Nepal Road Safety Council, Ministry of Physical Infrastructure and Transport (MoPIT), and Nepal Police. Among the multi-sectoral strategies outlined in the Nepal Road Safety Action Plan 2077/78-2087/88 (2021-2030), the primary health sector-related strategy focuses on providing timely emergency care for road crash victims. This includes establishing a comprehensive trauma care system at federal, provincial, and local government levels to ensure a prompt response to crashes, encompassing pre-hospital, hospital, and post-hospital care, along with necessary formalities.

The MoHP's efforts, aligned with the five pillars of road safety action, are systematically institutionalized across various centers and divisions to enhance road safety outcomes (figure 15.9).

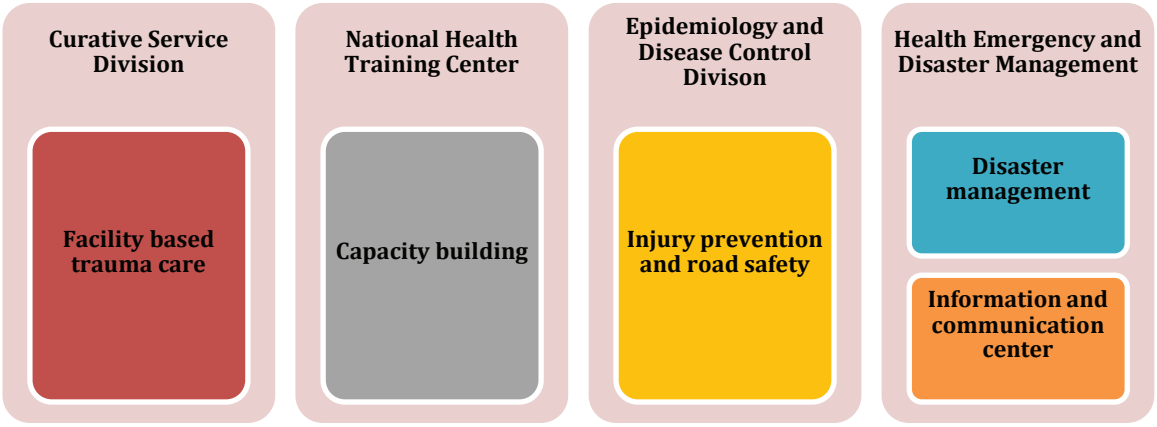


Figure 15.9 Institutional arrangements for implementation of road safety strategy for health sector

15.2.2 Key service indicator status in FY 2081/82

15.2.2.1 Road Traffic Injuries

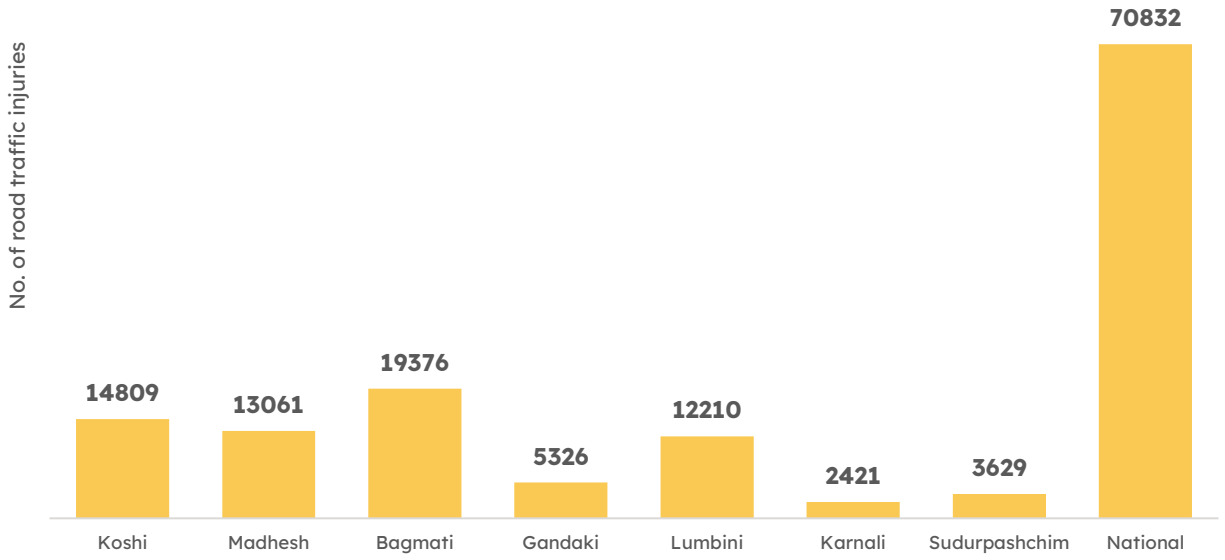


Figure 15.10 Province wise distribution of road traffic injuries in FY 2081/82

Source: HMIS/DoHS

A total of 70,832 road traffic injuries were reported in Nepal in FY 2081/82. Highest number of cases was reported from Bagmati province (19,376 cases), and least from Karnali province (2,421 cases). The detail of the number of RTI cases according to the provinces wise is give in figure 15.10.

16 Public Health Laboratory Services



16.1 About National Public Health Laboratory (NPHL)

The National Public Health Laboratory (NPHL) was initially established in 1968 AD as The Central Laboratory and redesignated as NPHL in 1991 AD. It serves as Nepal's national reference laboratory providing diagnostic services, identifying and confirming emerging and remerging diseases, and laboratory surveillance of diseases of public health concerns. It also serves as a quality assurance authority, overseeing the registration and licensing of private laboratories and blood centers, the focal institution for blood safety. During outbreaks, NPHL plays a crucial role in providing laboratory confirmation of diseases having public health threats, including those that could escalate to Public Health Emergencies of International Concern (PHEIC).

Moreover, NPHL has established molecular diagnostic facilities, including early HIV diagnosis for infants and genotyping of pathogens, with a BSL-3 lab designed for handling high-risk biological agents and is only the government laboratory accredited under ISO 15189:2012 since 2020 for clinical chemistry, immunology, serology, hematology, and molecular testing.

The vision of NPHL is to develop itself as a center of excellence in diagnostics, with an aim to provide high-quality laboratory services at all levels of Nepal's healthcare system, from central to district and primary health care (PHC) centers. The objectives of NPHL are to focus on meeting diagnostic demands related to emerging and reemerging diseases by upgrading facilities and introducing advanced technologies for specialized test, strengthen national laboratory capacity through NEQAS, supervision, and monitoring, procurement of quality equipment and reagents and promote Good Laboratory Practice (GLP) across laboratories nationwide.

NPHL operates according to Nepal's Health Sector Strategy Implementation Plan (NHSS-IP). It has five main sections: Non-Communicable Disease Laboratory, Infectious Disease Laboratory, Quality Control and Training, Laboratory & Blood Transfusion Services Regulation section, Administration & Supply Management section. These sections are further divided into different units according to their nature of work.

Table 16.1 Trend of total test counts and total patient served in three FYs (2079/80 – 2081/82)

Fiscal Year	Total Test Count	Total Patients Served
2079/80	600,099	133,322
2080/81	795,293	165,999
2081/82	832,491	172,782

16.1.1 Non-Communicable Disease Laboratory:

The Non-Communicable Disease (NCD) Department is organized into five major units: Hematology, Biochemistry, Endocrinology, Histocytopathology, and Molecular & Immunopathology Laboratory which provide comprehensive routine diagnostics along with a wide range of specialized tests, supporting accurate diagnosis and effective management of noncommunicable diseases through high-quality laboratory services.

This NCD Department offers advanced diagnostic techniques such as Immunofluorescence Assay for autoimmune diseases, leukemia panel testing using flow cytometry, hemoglobin electrophoresis for detecting hemoglobinopathies, coagulation factor assays along with inhibitor analysis and immunohistochemistry for diagnosis of various solid cancers. PCR based molecular diagnostic tests like EGFR, BCR-ABL, HPV DNA testing for high-risk Human papilloma Virus, HLA-B27 for autoimmune diseases and HLA typing for Renal transplant are also performed, enabling precise screening and diagnosis of various autoimmune diseases and malignancies.

In addition to diagnostic services, the department conducts surveillance of hemoglobinopathies through sentinel sites located in Nepalgunj, Bharatpur, Dhangadhi, and Butwal to facilitate early detection and

effective management of hemoglobinopathies along with active hrHPV DNA testing as a part of national hrHPV DNA screening program for cervical cancer prevention, thereby contributing significantly to overall health outcomes across Nepal.

Table 16.2 Samples tested in NPHL NCD Section in FY 2081/82

Tests performed		Samples
Biochemistry Tests		4,62,642
Haematology Tests	Routine Haematology Tests Haemoglobinopathy Tests	1,00,886
Histocytopathology Tests		2,555
Immunology/Endocrinology Tests		1,36,823
Molecular & Immunopathology Tests	HPV DNA PCR HLA Typing ANA/IFA	4,454

Source: NPHL/DoHS

Table 16.3 Number of HPV DNA tests performed and their subtypes in FY 2081/82

HPV Types	Test Count
HPV 16	36
HPV 18	23
HPV other type	203
Negative	3,064
HPV Mix Genotypes	203
Total	**3,529**

Source: NPHL/DoHS

Table 16.4 HLA typing for renal transplant recipients and donors in FY 2081/82

HLA Panel	Test Count
CDC	09
DSA	10
PRA	09
HLA SSO Typing	19

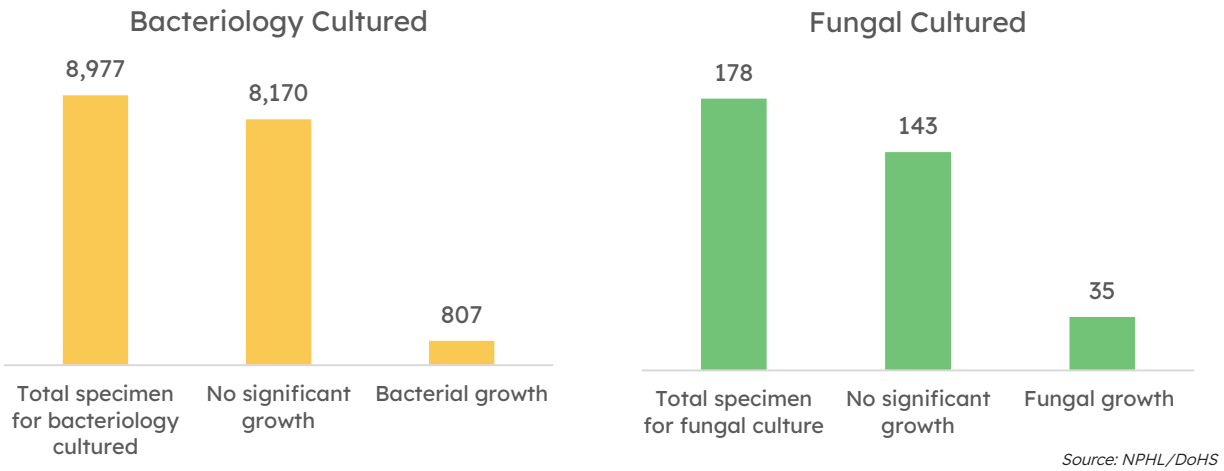
Source: NPHL/DoHS

16.1.2 Infectious Disease Laboratory

In addition to conducting routine and specialized testing, this department plays an active role in various surveillance programs. The Infectious Disease Laboratory is divided into several key subunits, including the Microbiology Unit, Vaccine-Preventable Disease Surveillance Unit, National Influenza Center (NIC) & Respiratory Disease Unit, and HIV Reference Unit. These units work in collaboration to support national efforts in identification, confirmation, monitoring and surveillance of infectious diseases of public health concern.

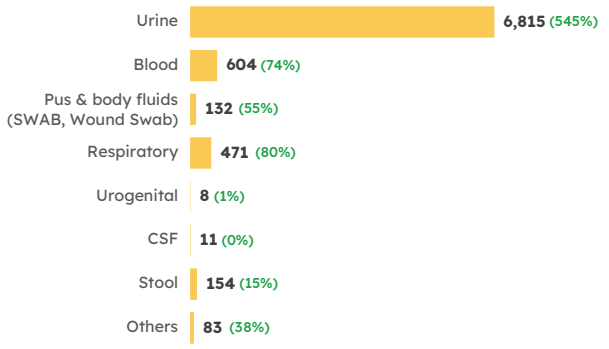
16.1.2.1 Microbiology Unit

The Microbiology unit includes Routine Bacteriology, Mycology, Parasitology and Serology subunits, integrating Anti-Microbial Resistance (AMR) surveillance with routine microbiology activities.



Source: NPHL/DoHS

Figure 16.1 Specimens cultured and bacterial growth positivity in FY 2081/82



Source: NPHL/DoHS

Figure 16.2 Specimen wise distribution of culture tests performed in FY 2081/82

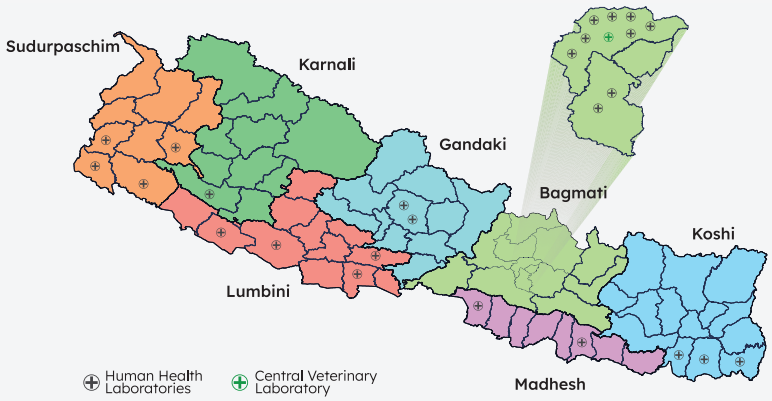
Antimicrobial Resistance (AMR) Surveillance Program

Antimicrobial Resistance (AMR) Surveillance in Nepal funded by WHO is a multisectoral initiative coordinated by the NPHL under the Ministry of Health & Population (MoHP) since its initiation in 1999, currently monitoring 12 organisms and 26 surveillance sites. Four multi sectoral committees support AMR activities:

- AMR Multisectoral Steering Committee (AMRMSC) chaired by the Secretary, MoHP, for policy discussions.
- One Health National Technical Working Committee (NTWC) for overseeing implementation and making technical recommendations.
- Two Technical Working Groups (TWG-HH for human health and TWG-AH for animal health) for providing technical and operational inputs, including developing guidelines, protocols, and SOPs.

The Director of NPHL serves as the chairperson, and the Microbiology Head acts as the Member Secretary of the Human Health Technical Working Group (HHTWG) for AMR surveillance. To combat the accelerating threat of AMR, Nepal recently endorsed the National Action Plan on AMR (NAP-AMR) 2024-2028, which adopts a "One Health" approach integrating human, animal, and environmental sectors. Its main objective is to establish an efficient and effective AMR surveillance system for containing AMR.

NPHL organizes capacity-building training for site personnel on bacterial identification, antibiotic susceptibility testing, biosafety, biosecurity, and quality assurance in bacteriology. The sites receive regular monitoring, onsite orientation, and technical support, including logistics. AMR data are annually submitted to the international GLASS platform. In addition, NPHL actively participates in external quality control (EQAS) programs, and National External Quality assessment (NEQAS) of sites are conducted quarterly.



Bagmati Province (10)

- NPHL, Kathmandu (National Reference Laboratory for AMR)
- Bir Hospital, Kathmandu
- Patan Academy of Health Sciences (PAHS), Lalitpur
- Tribhuvan University Teaching Hospital (TUTH), Kathmandu
- Kathmandu Model Hospital (KMH), Kathmandu
- KIST Medical College and Teaching Hospital (KISTMCTH), Lalitpur
- Sukraraj Tropical and Infectious Disease Hospital (STH), Kathmandu
- Maternity Hospital, Kathmandu
- Kanti Children's Hospital (KCH), Kathmandu
- Central Veterinary Laboratory, Kathmandu

Koshi Province (3)

- Province Hospital (PHB), Bhadrapur, Jhapa
- Koshi Hospital (KH), Biratnagar
- BP Koirala Institute of Health Sciences (BPKIHS), Dharan

Madhesh Province (2)

- Janakpur Hospital (JPH), Janakpur
- Narayani Hospital (NH), Birgunj

Gandaki Province (2)

- Western Regional Hospital, Pokhara
- Manipal Teaching Hospital (MTH), Pokhara

Lumbini Province (4)

- Rapti Academy of Health Sciences (RAHS), Dang
- Lumbini Provincial Hospital (LPH), Butwal
- United Mission Hospital (UMH), Palpa
- Bheri Hospital (BH), Banke

Karnali Province (1)

- Surkhet Provincial Hospital, Surkhet (PHS)

Sudurpaschim Province (4)

- Bayalpata Hospital (BYH), Achham
- Dadeldhura Hospital (DDL), Dadeldhura
- Mahakali Provincial Hospital (MkPH), Kanchanpur
- Seti Provincial Hospital (SPH), Dhangadhi

Figure 16.3 AMR surveillance sites in Nepal as of FY 2081/82

Source: NPHL/DoHS

Table 16.5 Distribution of AMR Priority Pathogens among culture positive specimen in 2024/25 (bacteria only from 26 sites)

Site and Specimen wise Culture Positivity Rate (bacterial only from 26 Sites)																			
Site	Province	Blood		Respiratory		Urine		Exudates		Stool		Uro-genital		CSF		Other		Grand Total	
		N	Positivity (%)	N	Positivity (%)	N	Positivity (%)	N	Positivity (%)	N	Positivity (%)	N	Positivity (%)	N	Positivity (%)	N	Positivity (%)	N	Positivity (%)
BPKIHS	Koshi	8,273	590 (7.1)	2,316	423 (18.3)	19,235	2,766 (14.4)	2,608	979 (37.5)	1,136	13 (1.1)	469	82 (17.5)	1,887	80 (4.2)	0	0	35,924	4,933 (13.7)
Koshi Hospital	Koshi	378	74 (19.6)	1,625	299 (18.4)	5,519	944 (17.1)	932	350 (37.6)	52	3 (5.8)	1,035	175 (16.9)	9	1 (11.1)	66	36 (54.5)	9,616	1,882 (19.6)
Mechi Hospital	Koshi	291	3 (1)	236	42 (17.8)	2,802	330 (11.8)	37	11 (29.7)	49	0 (0)	1	0 (0)	4	0 (0)	34	9 (26.5)	3,454	395 (11.4)
JPH	Madhesh	550	101 (18.4)	10	3 (30)	1,067	116 (10.9)	199	107 (53.8)	37	10 (27)	0	0	2	0 (0)	2	2 (100)	1,867	339 (18.2)
Narayani Hospital	Madhesh	970	212 (21.9)	206	91 (44.2)	1,585	234 (14.8)	72	41 (56.9)	32	1 (3.1)	223	72 (32.3)	10	2 (20)	2	1 (50)	3,100	654 (21.1)
Bir Hospital	Bagmati	4,205	256 (6.1)	4,074	1,325 (32.5)	12,671	2,097 (16.5)	3,972	1,612 (40.6)	135	0 (0)	26	6 (23.1)	317	38 (12)	230	150 (65.2)	25,630	5,484 (21.4)
Dhulikhel Hospital	Bagmati	4,197	111 (2.6)	5,821	1,575 (27.1)	14,632	2,332 (15.9)	2,898	1,516 (52.3)	518	12 (2.3)	1,903	250 (13.1)	179	6 (3.4)	41	17 (41.5)	30,189	5,820 (19.3)
Kanti Hospital	Bagmati	23,614	338 (1.4)	900	25 (2.8)	6,430	284 (4.4)	576	300 (52.1)	202	5 (2.5)	0	0	2	0 (0)	3	2 (66.7)	31,727	954 (3)
Kathmandu Model Hospital	Bagmati	2,043	27 (1.3)	788	89 (11.3)	5,481	1,078 (19.7)	386	245 (63.5)	76	2 (2.6)	24	7 (29.2)	9	2 (22.2)	23	16 (69.6)	8,830	1,466 (16.6)
KIST Hospital	Bagmati	2,868	149 (5.2)	1,797	298 (16.6)	6,311	763 (12.1)	605	250 (41.3)	106	0 (0)	84	12 (14.3)	9	0 (0)	181	33 (18.2)	11,961	1,505 (12.6)
NPHL	Bagmati	610	14 (2.3)	368	62 (16.8)	6,775	550 (8.1)	99	64 (64.6)	137	11 (8)	8	0 (0)	15	0 (0)	1	0 (0)	8,013	701 (8.7)
Patan Hospital	Bagmati	13,631	815 (6)	5,296	629 (11.9)	28,654	2,619 (9.1)	4,703	2;080 (44.2)	1,392	67 (4.8)	3,330	171 (5.1)	905	6 (0.7)	467	111 (23.8)	58,378	6,498 (11.1)
PMWH	Bagmati	4,192	450 (10.7)	65	0 (0)	27,920	761 (2.7)	363	37 (10.2)	0	0	1,284	284 (22.1)	350	0 (0)	6	2 (33.3)	34,180	1,534 (4.5)
STIDH	Bagmati	2,230	87 (3.9)	1,395	273 (19.6)	3,050	435 (14.3)	14	5 (35.7)	506	34 (6.7)	0	0	0	0	0	0	7,195	834 (11.6)
TUTH	Bagmati	8,201	783 (9.5)	6,832	1,589 (23.3)	24,534	3,808 (15.5)	8,274	2,913 (35.2)	537	0 (0)	0	0	793	38 (4.8)	0	0	49,171	9,131 (18.6)
Manipal Hospital Pokhara	Gandaki	1,210	141 (11.7)	1,949	406 (20.8)	9,835	1,441 (14.7)	697	234 (33.6)	121	0 (0)	176	40 (22.7)	136	5 (3.7)	212	102 (48.1)	14,336	2,370 (16.5)
PAHS	Gandaki	3,525	411 (11.7)	962	173 (18)	5,822	695 (11.9)	1,098	376 (34.2)	147	2 (1.4)	266	20 (7.5)	163	5 (3.1)	89	33 (37.1)	12,072	1,715 (14.2)
Bheri Hospital	Lumbini	294	72 (24.5)	179	75 (41.9)	588	137 (23.3)	262	148 (56.5)	32	1 (3.1)	353	124 (35.1)	0	0	0	0	1,708	558 (32.7)
Lumbini Provincial Hospital	Lumbini	1,482	78 (5.3)	1,349	409 (30.3)	6,714	1,115 (16.6)	475	172 (36.2)	66	0 (0)	2	1 (50)	3	0 (0)	1	0 (0)	10,092	1,775 (17.6)
Rapti Academy of Health Sciences	Lumbini	2,300	229 (10)	804	255 (31.7)	6,472	1,159 (17.9)	653	247 (37.8)	158	0 (0)	31	10 (32.3)	0	0	0	0	10,418	1,906 (18.3)
United Mission Hospital	Lumbini	181	54 (29.8)	118	92 (78)	1871	521 (27.8)	712	499 (70.1)	20	5 (25)	80	37 (46.3)	8	1 (12.5)	71	44 (62)	3,061	1263 (41.3)
Province Surkhet Hospital	Karnali	1084	27 (2.5)	211	48 (22.7)	3115	520 (16.7)	303	117 (38.6)	0	0	3	0 (0)	1	0 (0)	49	16 (32.7)	4,766	728 (15.3)
Seti Provincil Hospital	Sudupaschim	536	25 (4.7)	94	16 (17)	1943	263 (13.5)	504	297 (58.9)	137	4 (2.9)	3	0 (0)	17	1 (5.9)	1	0 (0)	3,235	606 (18.7)
Bayalpata Hospital	Sudupaschim	17	0 (0)	18	1 (5.6)	211	51 (24.2)	98	39 (39.8)	0	0	0	0	0	0	0	0	344	91 (26.5)
Dadeldhura Hospital	Sudupaschim	476	46 (9.7)	149	21 (14.1)	489	24 (4.9)	64	29 (45.3)	3	0 (0)	0	0	4	0 (0)	1	0 (0)	1,186	120 (10.1)
Mahakali Provincial Hospital	Sudupaschim	165	19 (11.5)	21	3 (14.3)	1726	381 (22.1)	123	89 (72.4)	12	1 (8.3)	3	2 (66.7)	0	0	4	2 (50)	2,054	497 (24.2)
Grand Total		**87,523**	**5,112 (5.8)**	**37,583**	**8,222 (21.9)**	**205,452**	**25,424 (12.4)**	**30,727**	**12,757 (41.5)**	**5,611**	**171 (3)**	**9,304**	**1,293 (13.9)**	**4,823**	**185 (3.8)**	**1,484**	**576 (38.8)**	**382,507**	**53,740 (14)**

Source: NPHL/DoHS

Table 16.6 ESBL Producing E. coli in human Surveillance in FY 2080/81

	Total E. Coli	Presumptive ESBL producing E. Coli
Human Surveillance	19634	9439 (48.7 %)

Note: Presumptive ESBL E. Coli is defined as E. coli resistant to 3rd generation cephalosporins. (Not confirmed)

Source: NPHL/DoHS

Molecular Surveillance Lab

In Nepal, there is a National AMR surveillance system that reports AMR data generated through 26 tertiary care hospitals to GLASS. Currently, those reports are based on phenotypic detection only. With an aim to enhance and further investigate the genes conferring to AMR, Nepal has planned to start molecular surveillance of selected pathogens through PCR such as genes encoding for Extended spectrum beta lactamases (ESBLs), Carbapenem (CPM) resistant pathogens and Methicillin resistant Staphylococcus aureus (MRSA). Currently, pilot study is being carried out in 5 AMR sites.

New Tests Added in FY 2081/82: In FY 2081/82 Molecular Surveillance Lab has introduced several tests like Stool antigen tests for H. pylori, Antifungal susceptibility test for Candida species, Gene Xpert Ultra and Cryptococcal antigen.

New Activities: Tests such as Toxin detection for Clostridium difficle, Identification and Antifungal susceptibility tests and serological tests for fungal detections are under test plan. A pilot study is being carried out in 5 AMR sites for molecular surveillance to detect genes of MDR pathogens. After the successful completion of this pilot, the plan is to start regular surveillance.

16.1.2.2 Vaccine Preventable Disease (VPD) Unit

The Government of Nepal is working in collaboration with the World Health Organization (WHO) to reduce the mortality and morbidity associated with vaccine-preventable diseases such as Japanese Encephalitis, Measles, and Rubella, where NPHL plays a central role in laboratory-based surveillance providing confirmatory lab diagnosis for suspected cases and supporting the rapid detection of outbreaks. The laboratory surveillance data generated by NPHL are crucial for identifying trends of causative pathogens, detect new or re-emerging pathogens and provide laboratory evidence on status of disease elimination and eradication in Nepal.

Table 16.7 Test frequency of VPD in FY 2081/82

S. No	Tests	Total	Positive	Negative
1	Measles IgM (ELISA)	2128	72	2056
2	Rubella IgM (ELISA)	2128	88	2040
3	JE IgM (ELISA)	930	80	850
4	Rota Ag (ELISA)	1110	123	987
5	Polio Surveillance Samples	197	1	196

Source: NPHL/DoHS

Measles/Rubella surveillance

NPHL started Measles/Rubella diagnosis from 2003 and later in 2005 started laboratory diagnosis of Japanese Encephalitis as a National Reference Laboratory. BP Koirala Institute of Health Sciences (BPKIHS), Dharan established as a subnational VPD laboratory started testing of Measles Rubella and Japanese encephalitis from 2014. Province Public Health Laboratory (PPHL), in Sudurpaschim Province, Dhangadhi has been added as the next subnational VPD laboratory in 2024.

NPHL joined the Global Measles/Rubella Laboratory Network (GMRLN) for molecular genotype testing. WHO-SEARO provided virtual training in 2021, and after achieving scores above 95% in practice and EQAS panels, NPHL performed parallel testing with Regional Reference Laboratory (RRL) Bangkok. With a molecular test concordance of over 97%, NPHL gained approval for independent testing. In 2014, NPHL was also accredited by the World Health Organization (WHO) as a proficient measles/rubella laboratory. In 2023, an onsite review was conducted by experts from WHO and the U.S. Centers for Disease Control and Prevention (CDC), and the laboratory's proficient status was successfully continued.

Environmental Surveillance for Poliovirus in Nepal

Environmental surveillance is an effective and sensitive approach for detecting the Polio virus (PV) in environmental samples, widely adopted globally. It is especially valuable in densely populated urban areas where Acute Flaccid Paralysis (AFP) surveillance may be limited, as well as in regions with suspected persistent virus circulation or frequent re-introduction. Nepal has not reported any Wild Polio Virus (WPV) cases since 2010.

Environmental surveillance for poliovirus began in November 2017 from five sites in Kathmandu Valley. In December 2022, the program was expanded to the provincial level, with sewage sample collection initiated in Biratnagar (Koshi Province) and Janakpur (Madhesh

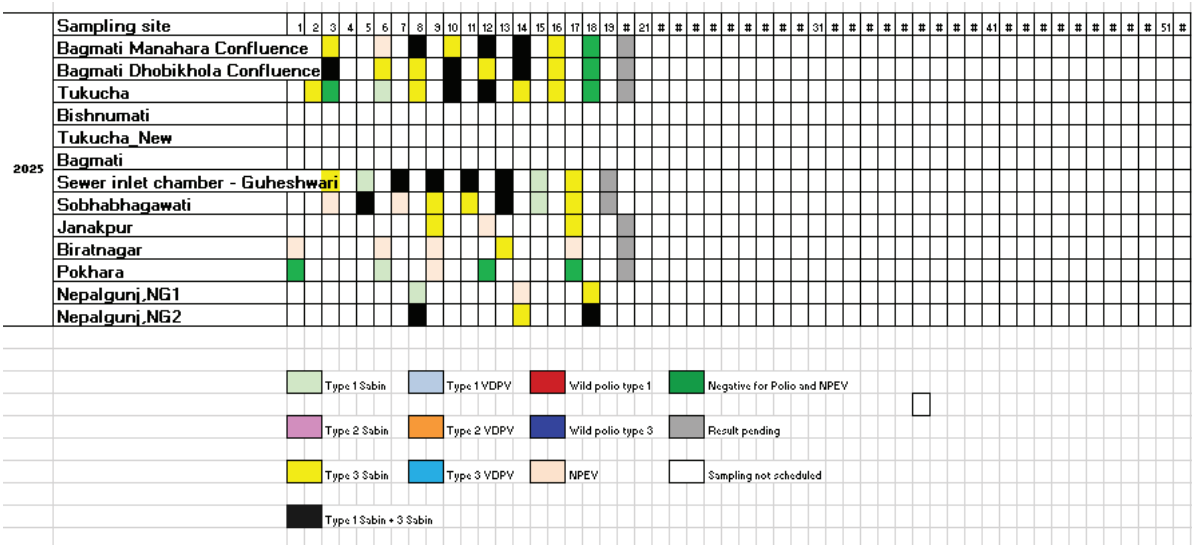
Province). In 2024, the surveillance network further expanded to Gandaki Province, and most recently, to Nepalgunj in Lumbini Province on February 17, 2025. Laboratory staffs in these provinces have received training on proper sample collection and processing procedures.

Table 16.8 Polio Environmental Surveillance Program

Name of sites	Number of samples	Frequency
B1- Sewer Inlet Chamber Chabahil, Guheswori, Mitrapark, Gokarna, Uttardhoka. (Estimated Population – 150,000)	2 samples per month	1st sample in the first week and 2nd in the third week
B2 – Bagmati Manahara Confluence Bhaktapur, Madhyapur, Sankhu, Pepsikola, Kodku (Estimated Population – 300,000)	2 samples per month	1st sample in the first week and 2nd in the third week
B3 – Bagmati / DhobiKhola Confluence Kathmandu Urban, Kapan,Chandol, Baneshwor, Bijulibazar (Estimated Population -300,000)	2 samples per month	1st sample in the first week and 2nd in the third week
B4- Tukucha Kathmandu Urban (Estimated Population – 150,000)	2 samples per month	1st sample in the second week and 2nd in the fourth week
B5 – Shovabagwati (Bishnumati) Kathmandu Urban (Indrachowk, Ason, Kilagol, Chhetrapati) (Estimated Population – 200,000)	2 samples per month	1st sample in the second week and 2nd in the fourth week

Source: NPHL/DoHS

From the province, one sample per month is being collected and transported to NPHL for further processing. Concentration of the sewage is performed at NPHL and the concentrate is shipped to Regional Polio Reference Lab, in Bangkok for further testing.

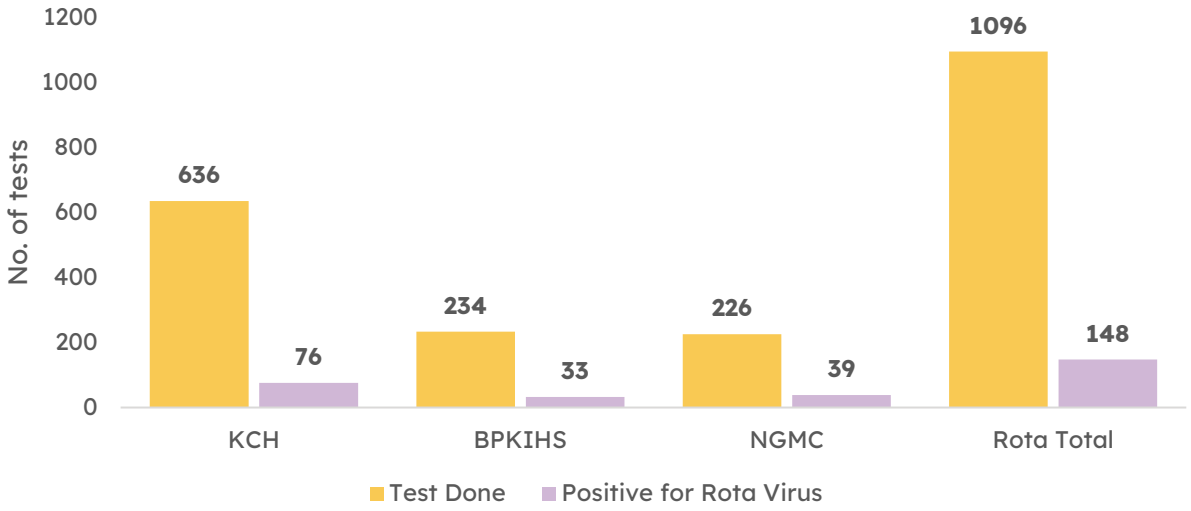


Source: NPHL/DoHS

Figure 16.4 Environmental polio surveillance for different strains of polio from different sites in FY 2081/82

Rotavirus Surveillance

Rotavirus sentinel surveillance was initiated at the National Public Health Laboratory (NPHL) in 2021, in collaboration with three sentinel sites; B.P. Koirala Institute of Health Sciences (BPKIHS), Kanti Children's Hospital (KCH) and Nepalgunj Medical College (NGMC). Stool samples collected at these sites are transported to NPHL, where enzyme-linked immunosorbent assay (ELISA) is performed to detect rotavirus antigen in the specimens.



Source: NPHL/DoHS

Figure 16.5 Tests done for Rota surveillance in Jan 2025 to Dec 2025

National Malaria Reference Laboratory

To achieve the national goal of malaria elimination by 2025, and malaria-free status by 2026, national steering committee for malaria has been formed. NPHL works in close coordination with EDCD and has successfully conducted malaria QA/QC workshop in all the 7 provinces. NPHL has passed the external quality assessment of 1st lot of malaria PCR.

Activities of National Malaria Reference Laboratory in FY 2081/82

- Quality Assurance and Control:
- Advance Molecular Surveillance
- Capacity Building
- Case-Based Surveillance Support
- Laboratory Network Integration

16.1.2.3 National Influenza Centre (NIC)

NIC in Nepal was established on 19th April 2010. It has been recognized as 132nd Influenza Centre (IC) at global level and 9th IC in the WHO south East Asia region by WHO since 2010 AD. Since its establishment, it has been performing molecular diagnostic assay and surveillance for Influenza A and B. Nepal started monitoring influenza activity in 2010 AD by Collecting and analyzing ILI epidemiologic data from Patan Hospital and collected specimens from ILI patients at Patan Academy of Health Sciences (PAHS) and 10 other peripheral sentinel sites since January 2011.

The restructuring and integration of Influenza and SARS CoV-2 sentinel surveillance was started in October 2021 with the inception meeting of National Influenza Surveillance Network and completed after a consultative meeting. The approval of "Integrated Influenza & SARS CoV-2 Sentinel Surveillance in Nepal" proposal was approved by MoHP on 25th Feb 2022. This restructuring of the sentinel surveillance has covered wide geographical coverage of Nepal including all 7 provinces and fifteen Tertiary care hospitals in Nepal. There are now 8 testing sites for multiplex RT-PCR in National Integrated Surveillance Network (NISN) including 7 PPHLs and NIC at NPHL. NIC has been regularly performing RT PCR test for influenza A, B and SARS-CoV-2 and sharing data to WHO global Influenza Surveillance and Response System (GISRS) through FluNet and FluID platforms in RespiMart. Similarly, NIC has been sharing representative samples or virus isolates with the WHO collaborating Center for further genomic characterization and the genomic data.

Also, NIC has been performing outbreak investigations of emerging and re-emerging respiratory viruses in the country. NIC has developed capacity for whole genome sequencing of SARS CoV-2 and Influenza A and routinely performs genomic surveillance in the country.

Innovative approaches:

As part of its pandemic preparedness efforts, the National Public Health Laboratory (NPHL) initiated plans to establish Avian Influenza surveillance in the human population. A multisectoral consultative workshop on Avian Influenza surveillance in humans was held on 30 March 2025, with participation from EDCD, CVL, and DLS.

Following the workshop's recommendations, NPHL reviewed data on areas with frequent Avian Influenza outbreaks, nearby health facilities, and local municipalities. To move this forward:

- On 9th July 2025, NPHL convened a preparatory meeting with EDCD, CVL, and DLS to discuss the feasibility study plan for surveillance.
- On 11th July 2025, NPHL held a preparatory and advocacy meeting with selected municipalities and hospitals to ensure local engagement and support.

Major Activities:

1. To improve and maintain the country's capacity to conduct routine influenza surveillance and detect and respond to avian/ pandemic influenza and RSV Surveillance in children below <2 years of age.
2. To develop the country's capacity to respond to detect and investigate emerging and re-emerging Respiratory viruses.
3. To strengthen National Influenza Centers (NIC), to fully participate in the WHO Global Influenza

Surveillance and Response System (GISRS), and maintain capacity to share specimens, clinical and epidemiologic data related to influenza circulation.

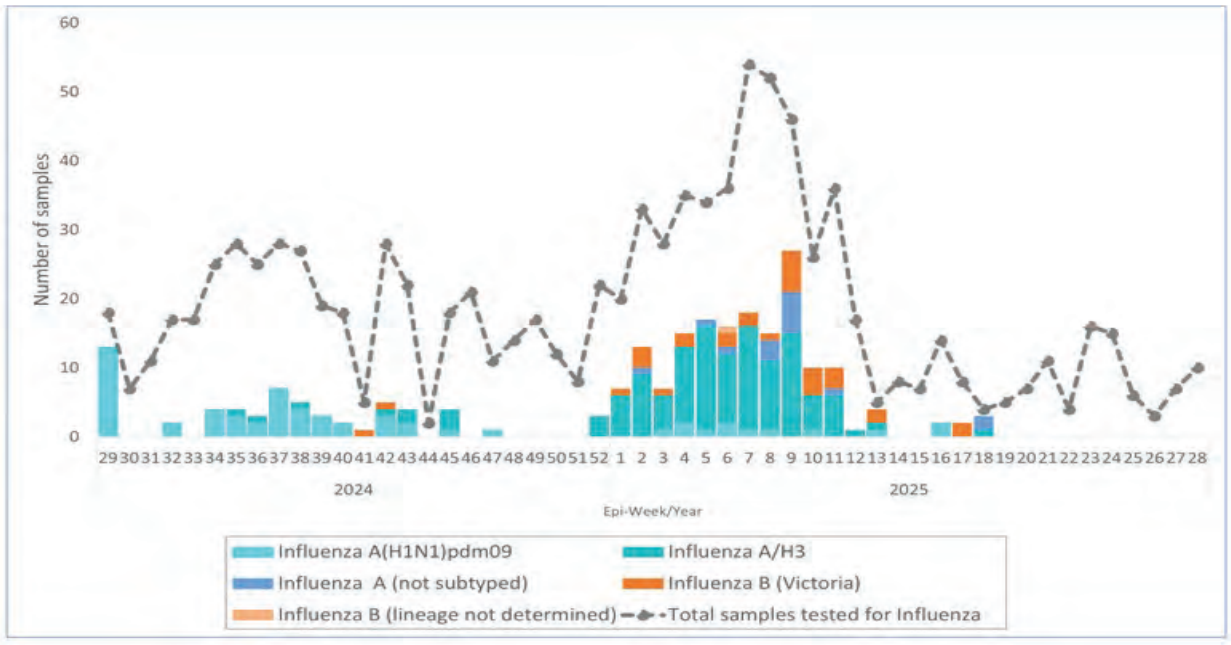
4. To develop capacity for genomic characterization of outbreak prone respiratory viruses and their routine genomic surveillance.

Table 16.9 Tests performed at NIC in FY 2081/82

S. No	Tests	Frequency
1	Influenza Test (Uniplex) *	611
2	Respiratory Syncytial Virus	478
3	Trioplex Test	1
4	Adeno Virus Test	2
5	Chikungunya Virus RT-PCR	2
6	Influenza-SARS-CoV-2 Multiplex RT-PCR	3,653
7	Monkey Pox RT-PCR	4
8	Rabies Virus (RT-PCR)	5
9	Herpes simplex Virus (HSV1 and HSV2)	3
10	Respiratory Microbial Panel II RT-PCR	10
11	Legionella pneumophila (Surveillance)	1
12	Streptococcus Pneumoniae (Surveillance)	2
13	Brucella	1
14	Gastro Panel I	1
15	Gastro Panel II	1
16	PCR for Bacillus diphtheriae	1
17	SARS-CoV-2 PCR (GeneXpert)*	2
18	SARS-CoV-2 PCR *	366
	Total	**5,144**

Source: NPHL/DoHS

A total of 5,144 samples were tested under the National Influenza Surveillance Network during the fiscal year 2081/82 (from July 15, 2024, to July 20, 2025). These samples included SARI (Severe Acute Respiratory Infection) and ILI (Influenza-Like Illness) cases collected from sentinel hospitals participating in the surveillance network.



Source: NPHL/DoHS

Figure 16.6 Status of diagnostic sample testing of Influenza A and Influenza B in FY 2081/82

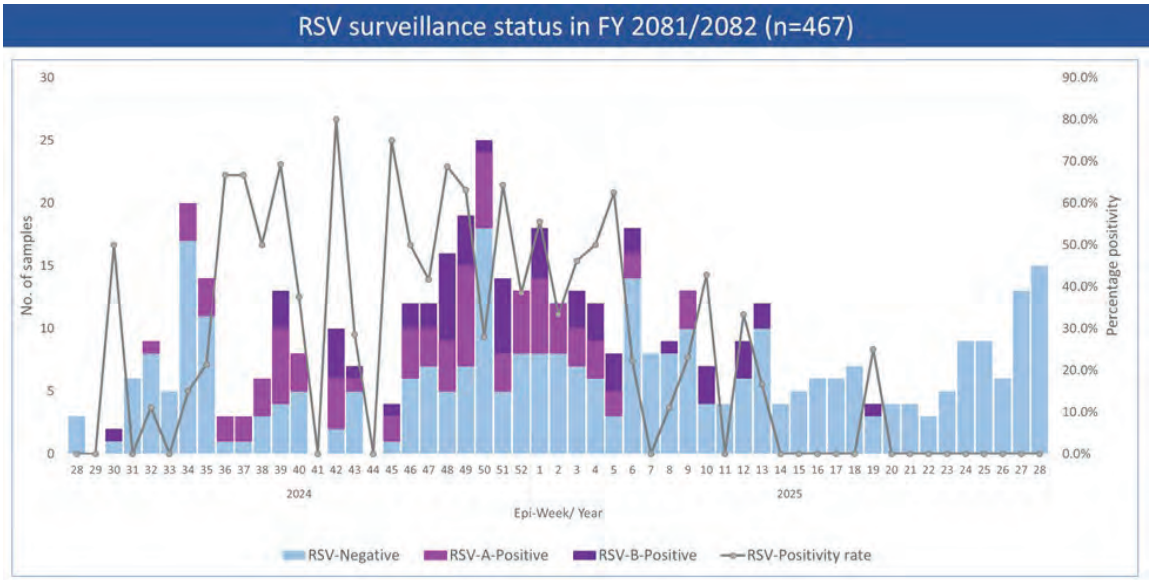
Table 16.10 Diagnostic Sample testing for influenza in FY 2081/82

Total Samples Tested	967
Influenza A (H1N1) (pdm09) positive	59
Influenza A/H3 positive	122
Influenza A (not subtyped)	15
Influenza B (Victoria) Positive	31
Influenza B (lineage not determined)	1

A total of 967 diagnostic samples were tested for influenza during the fiscal year 2081/2082 (from July 15, 2024, to July 20, 2025). In addition, the National Public Health Laboratory (NPHL) conducts influenza testing on clinical samples received from various hospitals as part of routine diagnostic services.

Respiratory Syncytial Virus (RSV) Surveillance 2081/82

NIC implemented Respiratory syncytial virus (RSV) surveillance from November 2024 at 4 sentinel sites (Kanti Children's Hospital, Koshi Hospital, Narayani Hospital and Province Hospital Surkhet). In fiscal year 2081/82, NIC performed 476 RSV RT PCR tests (Extended SARI) from samples of children aged below 2 years received from sentinel hospitals have been tested for Respiratory Syncytial Virus (RSV) from Epi Week 1-52 (December 30, 2024-Dec, 28, 2025).



Source: NPHL/DoHS

Figure 16.7: Number of tests done for RSV in FY 2081/82

16.1.2.4 HIV Reference Laboratory Unit

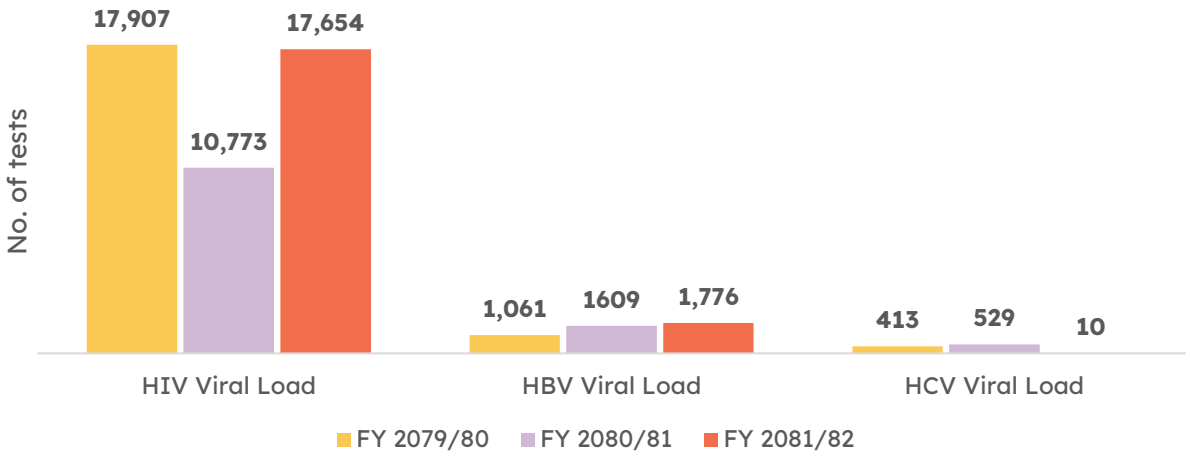
The laboratory primarily concentrates on testing and monitoring activities and programs related to HIV and Hepatitis. It is divided into two main units: the Molecular Unit and the Immuno-Serology Unit. This unit is involved in supporting the preparation of policy documents regarding HIV programs in close coordination with National Centre for AIDS and STD Control (NCASC). Specifically, HIV reference laboratory at NPHL has supported scaling up HIV testing initiatives, such as the test and treat policy, community-based testing (CBTs) performed by lay providers, and the introduction of HIV self-testing (HIVST). Furthermore, NPHL plays a crucial role to strengthen HIV viral load testing services to monitor disease and improve the quality and coverage of HIV care. The tests performed for the diagnosis of HIV infection are Rapid test and Enzyme Immunoassay (EIA) for the detection of antibodies, Electro Chemiluminescence immunoassay (ECLIA) for detection of antigen/antibody. In addition, for monitoring purposes PCR (quantitative test: for the detection of Viral load (VL)) and CD4 test are performed.

Early infant diagnosis (EID) of HIV for the mother-to-child transmission in cases below 18 years of age and confirmation of HIV inconclusive cases is also done by qualitative PCR for HIV-1. For the diagnosis of hepatitis B and C, Rapid test, EIA and ECLIA for the detection of antigen/antibody are done. PCR tests for the detection of viral load for hepatitis B and C are also performed in the laboratory.

In FY 2080/81, as a part of expansion of HIV viral load testing services, PPHL Koshi, PPHL Lumbini, PPHL Karnali, PPHL Sudurpashchim and Bheri Hospital Passed the HIV viral load validation and are ready to perform the test using a manual platform.

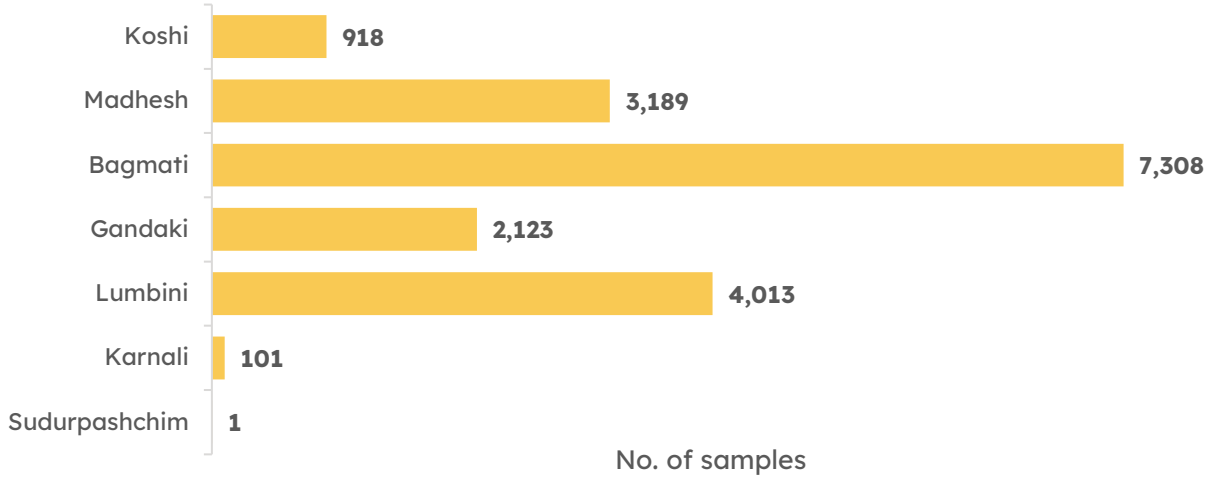
In addition to the testing for HIV, Rapid testing, EIA and ECLIA for Hepatitis B and C, for antigen/antibody detection along with PCR tests for Hepatitis B and C viral load are also performed in the laboratory.

To maintain its commitment to quality, NPHL actively participates in several international External Quality Assurance (EQA) programs. These include HIV Viral Load and Early Infant Diagnosis (EID) testing with the Centers for Global Health CDC in the USA, HBV and HCV viral load assessments with the National Reference Laboratory (NRL) in Australia, CD4 testing through Siriraj Hospital in Bangkok, and Serology and Molecular EQAS with both CMC Vellore and NRL, Australia.



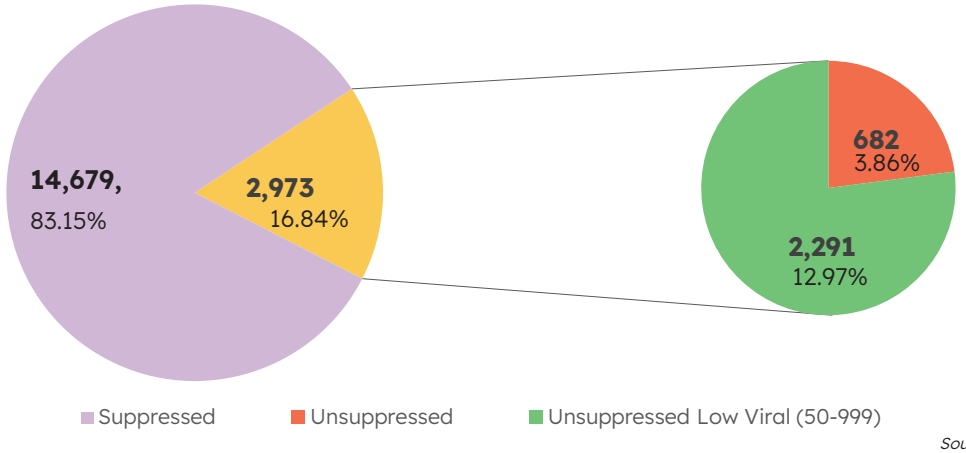
Source: NPHL/DoHS

Figure 16.8 HIV, HBV, HCV Viral Load Tests done in FY 2079/80-2081/82



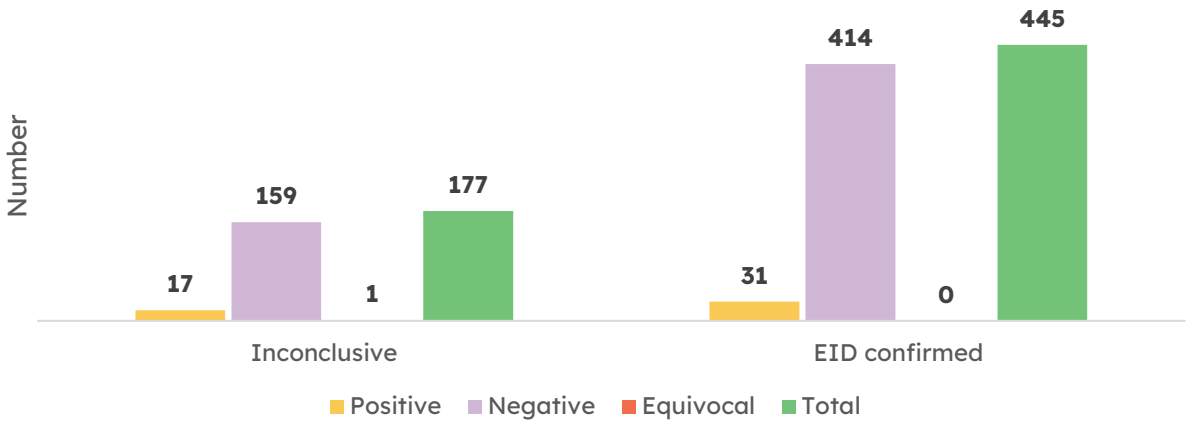
Source: NPHL/DoHS

Figure 16.9 HIV Viral Load Sample from Provinces in FY 2081/82



Source: NPHL/DoHS

Figure 16.10 Total HIV Viral Load Tests Done and Viral Load Suppression Rate FY 2081/82



Source: NPHL/DoHS

Figure 16.11 Early Infant Diagnosis (EID) diagnosis in FY 2081/82

16.1.3 Laboratory Regulation and Blood Transfusion Service Regulation Department

National Public Health Laboratory is a focal point for blood safety, where the National Bureau for Blood Transfusion Service (NBBTS) section within this unit works on all the National Blood Transfusion policy related activities. The unit also carries out Licensing and Monitoring of Laboratory and Blood Bank as per the "Health Institute Establishment Standard 2077".

Table 16.11 Total number of A and B category lab in FY 2081/82

Lab Category	Total
Registered 'A' category Labs in the Country	18
Registered 'B' category Labs in the Country	96
Branches of A and B category Labs in the country	15

Source: NPHL/DoHS

Table 16.12 Details of Laboratory inspection in FY 2081/82

	Activity	Type of Health Institute	Outcome
Laboratory Inspection (45)	Onsite inspection of Laboratory	• A grade: 1 (New) • B grade: 14 (New: 9; Renewal: 5) • Branches B-Grade: 4 (New) • Collection unit: 10 (New)	Licensing, Renewal
	Onsite inspection of Laboratory	• A-Grade Laboratory: 4 • B-Grade Laboratory: 12	Follow-up visit

Source: NPHL/DoHS

National Bureau for Blood Transfusion Services (NBBTS)

The National Bureau for Blood Transfusion Services (NBBTS), located at the National Public Health Laboratory (NPHL), oversees the National Blood Programme (NBP). It ensures a safe and sufficient blood supply, develops policies and standards for blood transfusion services, and acts as the national reference laboratory for transfusion-transmissible infections (TTIs), handling confirmatory testing of inconclusive results. NBBTS also manages the National Hemovigilance Program, provides training for BTSC staff, supervises and licenses BTSCs, conducts motivational programs, and supplies equipment to enhance their services.

Table 16.13 Details of Blood Bank inspection in FY 2081/82

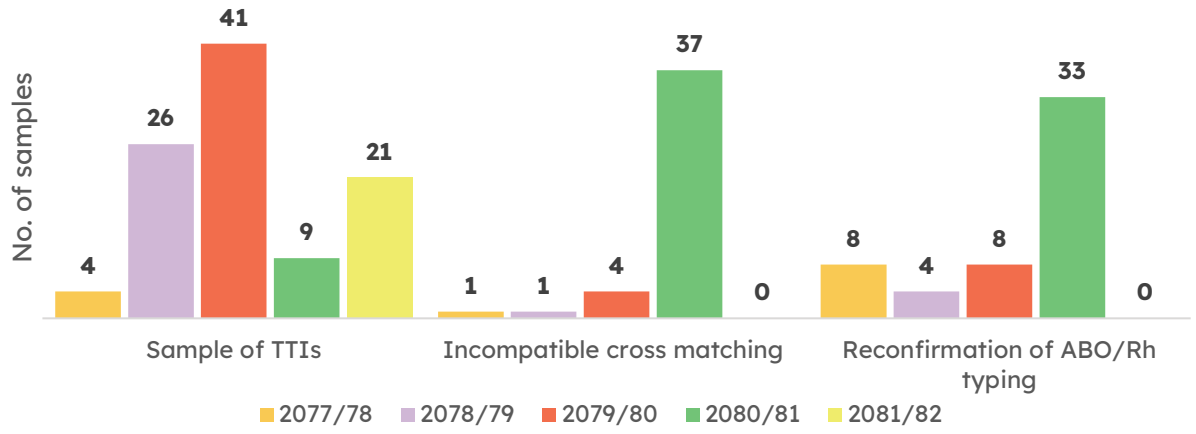
	Activity	Type of Health Institute	Outcome
Blood Bank Inspection (16)	Onsite inspection of Blood Bank	• C grade Blood Bank: 5 • D Grade Blood Bank:2	Licensing, Renewal
	Onsite inspection of Laboratory	• A Grade Blood Bank: 1 • C Grade Blood Bank: 2 • D Grade Blood Bank: 4 • E Grade Blood Bank: 2	Follow-up visit

Source: NPHL/DoHS

Table 16.14 Hemo-vigilance site reports in FY 2078/79-2081/82

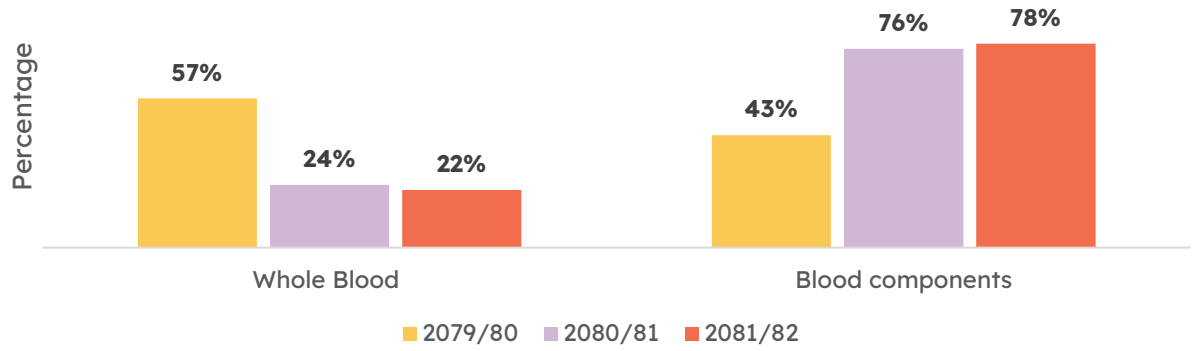
Hemo-vigilance sites report	2079/80	2080/81	2081/82
Blood Transfused Recorded Data	28,080	59601	114961
Minor Transfusion Reactions	177	1345	201
Major Transfusion Reactions	1	0	0

Source: NPHL/DoHS



Source: NPHL/DoHS

Figure 16.12 Number of samples received for reconfirmation in FY 2077/78 - 2081/82



Source: NPHL/DoHS

Figure 16.13 Proportion of blood and blood component used in FY 2079/80 to 2081/82

16.1.4 Quality Control (QC) and Training Department

16.1.4.1 Quality control unit

NPHL is an ISO 15189 accredited laboratory. Many qualities related activities and training are conducted under this section. Various National External Quality Assurance programs (NEQAS) are being operated throughout the country through this department.

Table 16.15 NEQAS Program in NPHL

NEQAS from NPHL	Targeted lab	Frequency of cycle	Started
General/Basic NEQAS program • Basic clinical Biochemistry • Basic Hematology • Gram's stain ' • Peripheral blood smear (PBS morphology)	All lab /hospital/ clinic/ polyclinic/of government, semi-government & private sectors	3 times of years (Bhadra/Ashoj, Poush/Magh, and Baisakh/Jestha)	2053/54 (1997)
Dried tube specimen (DTS) EQA program • HIV 1 and 2 rapid test and ELISA	HIV testing sites only	Twice a year	2077/78 (2021)

NEQAS from NPHL	Targeted lab	Frequency of cycle	Started
EQA program for bacteriology • Bacteria Identification • Antimicrobial Susceptibility Testing (AST)	AMR SITES	Three times a year	2061/62 (2005)
TTIs serology for blood transfusion service centre (NEQAS –TTIs) • HIV 1 and 2 • Hepatitis B Virus Surface Antigen (HBsAg) • Anti HCV antibody • Syphilis Antibody	For all Blood Transfusion service centre of Nepal.	2 times of Year	2068/69 (2012)
COVID-19 PCR EQAS proficiency test	For all COVID-19 PCR Sites	4 times of year	2076/77 (2020)
COVID-19 PCR EQAS Retesting	For all COVID-19 PCR Sites	Monthly	2076/77 (2020)

Source: NPHL/DoHS

Table 16.16 General/Basic NEQAS program in FY 2081/82

Lot Number	Fiscal year	Number of labs enrolled (samples dispatched)	Results obtained from (Number/%)	Number of labs with Score based on SDI range (%)			
				+/- 0-1	+/-1-2	+/-2-3	+/->3
56	2081/2082 BS	685	58				
57	2081/2082 BS	841	42	50	31	17.5	1.5
58	2081/2082 BS	879	46				

Source: NPHL/DoHS

Result Interpretation is based on as follows:

SDI Range	Interpretation
Within -1.0 to +1.0	Excellent
Between ± 1.0 to ± 2.0	Good
Between ± 2.0 to ± 3.0	Accept with caution. Warning signal
beyond ± 3	Unacceptable performance, action signal

Scoring 100% in NEQAS: Excellent. Score between 90-100%: Need to improve performance (Action required to troubleshoot the underlying problem). Score below 90%: Unacceptable performance (Urgent action needed to review the technical competency of the BTSC and upgrade the quality of performance).

Table 16.17 NEQAS-HIV Program (HIV DTS PT-06) in FY 2081/2082

Site	Batch	Performance				
		Excellent (100%)	Need to Improve (90-100%)	Unacceptable (<90%)	Total Participants	Total sample sent sites
Koshi	2024-PT 06	4	1	5	10	10
Madhesh	2024-PT 06	7	0	15	12	12
Bagmati	2024-PT 06	14	0	1	15	16
Gandaki	2024-PT 06	9	0	0	9	10
Lumbini	2024-PT 06	12	0	2	14	15
Karnali	2024-PT 06	5	0	1	6	6
Sudurpaschim	2024-PT 06	12	0	5	17	17

Source: NPHL/DoHS

Table 16.18 NEQAS-HIV Program (HIV1 VL PT) in FY 2081/82

Total Sites	No of sample sent	Responded	% of Report responded	Excellent Performance	% of Excellent	Need to improve performance	% of need to improve	Unacceptable performance	% of unacceptable
4	4	3	75	3	100	0	0	0	0

Source: NPHL/DoHS

Table 16.19 AMR-NEQAS Program in FY 2081/82

Batch	Total sample sent	Total Participant	Excellent >80%	Satisfactory 60-79%	Unsatisfactory <60%
2024-2nd AMR NEQAS	25	23	74%	22%	4%
2024-2nd AMR NEQAS	26	26	85%	15%	0
2025-1st AMR NEQAS	26	26	62%	23%	15%

Source: NPHL/DoHS

16.1.4.2 Training unit

The training unit facilitates the laboratory staff to acquire and update laboratory knowledge and skills for the smooth functioning of clinical laboratory. Many in house and inter laboratory trainings are conducted in NPHL.

Table 16.20 Training and Orientation Program in FY 2081/82

LQMS Training for Lab Personnel	RSV Sentinel Site Visit
AMR Revised SOP Training	Lab Placement training for Microbiology
Hands on Training on PCR	Annual VPD review meeting
SORMAS and Data Management	LCI-AMR at Lumbini and Pokhara
Annual Influenza Review Meeting	LCI-AMR at Paropakar Maternity & Women's Hospital
Polio Sentinel Site visit	LCI-AMR at Sukraraj Tropical & Infectious Disease Hospital
RSV Sentinel Site Visit	Orientation training for Focal persons for RSV surveillance
RSV Sentinel Site Visit	ISO Sensitization workshop for Cat. A and B lab
RSV Sentinel Site Visit	Provincial NAP Workshop for Polio Surveillance
LCI-AMR at Nepalgunj	Strengthening Program on QC for Local and Provincial Level
LCI-AMR at RAHS	Internal auditor and lead assessor training as per ISO 15189:2022 to seven PPHL and federal hospitals

16.1.5 Biorepository Unit

The National Public Health Laboratory (NPHL) established a Biorepository unit in 2023, marking a significant step forward in healthcare and research. This unit is designed to securely and efficiently store biological samples and organisms for long-term use, primarily to support future research and studies. The types of samples stored include clinical specimens, microorganisms, and other relevant biological materials.

The Biorepository unit at NPHL plays a crucial role in preserving these valuable biological materials for future scientific studies, medical research, and public health investigations. It is responsible for collecting, cataloguing, and storing a wide range of samples from various departments within the organization.

This storage system enables researchers, scientists, and healthcare professionals to access a diverse collection of biological samples for in-depth studies, epidemiological research, diagnostics, and the development of new medical treatments. By preserving these samples, NPHL is contributing to efforts to address emerging health challenges, improve disease detection and treatment, and enhance the overall well-being of the community it serves.

Major Activities

Currently, samples from the Infectious Unit are being transferred to the biorepository for storage. These include samples related to COVID-19, RSV, Influenza, Japanese encephalitis, measles, rubella, rotavirus, polio, and more. Each sample is assigned a unique code and is systematically stored using specialized software, which helps track the sample's location within the storage system, including the specific freezer, compartment, rack, tray, and box position.

16.2 Highlights of FY 2081/82

1. New Tests Added
   - Immunofluorescence Assay for Anti-Nuclear Antibody (ANA)
   - Allergy Panel
   - Next Generation Sequencing for Breast Cancer
   - PCR for HLA B27
   - BCR-ABL Quantitative and Qualitative
2. Memorandum Of Understanding (MOU) Signed for test that are not available at the Institution
   - BP Koirala Memorial Cancer Hospital
   - Sukraraj Tropical and Infectious Disease Hospital
   - Paropakar Maternity and Women's Hospital
   - Bharatpur Cancer Hospital
   - Provincial Public health Laboratory, Koshi Biratnagar
3. NPHL successfully transitioned from ISO 15189:2012 to ISO 15189:2022.

4. Initial gap analysis in accordance with ISO 15189 was conducted in 7 Provincial Public Health Laboratories (PPHLs) and 3 federal hospitals.

5. Internal auditor and lead assessor training as per ISO 15189:2022 was provided to 54 participants from laboratories across Nepal.

6. Calibration of biosafety cabinets was carried out by NSF-certified biomedical engineers.

7. Installation of new equipment
   - BSL Containment Unit
   - Digital PCR
   - HPLC
   - Vending Machine
   - Abbott Alinity
   - Hybridization
   - -20 degree freezer
   - 2-8 degree freezer
   - Distilled Water Plant

Box 16.1 SWOT analysis of NPHL

Strength	Opportunity
• Internationally accredited • Runs routine and specialized laboratory tests alongside other responsibilities • Strengthening laboratories with proper and needful HR comparable to international standards. • Capacity building for proper biosafety and biosecurity which is essential in all laboratories • Proper waste management of hazardous/ infectious material • Increased penetration with PPHL	• Strengthen NPHL as referral center with prevention of out sourcing clinical sample outside country • Strengthen diagnostic as well as research activities in government based federal, provincial and district level hospitals. • Register all government hospitals-laboratory in NPHL • Strengthen country capacity in diagnostic services to combat epidemics and pandemics. • Development of referral mechanism between public and private laboratories within the country
Weakness	**Threat**
• Inadequate laboratory mapping • Poor implementation of NEQAS • Lack of scholarships for higher education and advance level trainings for laboratory personnel	• Lack of country's law and bylaws most needed for laboratory standardization and accreditation • Insufficient budget allocation for quality assurance activities of medical laboratories

17 Human Resource Capacity Building

NHTC			BMET Unit	
	Training material development section	Skill Development Section		Vector Borne Disease Research and Training Center
	Training Accreditation and Regulation Section	Administration Section		

17.1 National Health Training Center

17.1.1 Overview of NHTC

Competent and motivated workforce forms the core of a high quality, effective and efficient health system. In line with the national policies, plans and programs of the Ministry of Health and population (MOHP), National Health Training Centre (NHTC), established in 2050 BS. It is responsible for organizing and managing training for different cadres of health service provider. It is primarily responsible for policy formulation, planning/ budgeting, need assessment, curriculum design, implementation, monitoring and evaluation (M&E), follow up and overall quality assurance related to the training system. It is also responsible for accrediting clinical training sites and clinical and public health related training courses to maintain the standard of health training so as to strengthen the capacity of health service providers across the country. The training network includes six provincial health training centers, one human resource development centre at karnali province and 66 clinical training sites.

17.1.2 Strategies of NHTC for Capacity Building of HR

- Assessing, standardizing and accrediting training sites
- Development, standardization, and revision of training
- Institutional capacity development of all levels of training sites
- Conduction preservice, in service, short-term and long-term training as per national requirements
- Integration and institutionalization of training activities
- Developing links with professional career development
- Strengthening TIMS and developing the trainer's roster at all levels

17.1.3 Major activities/achievements in FY 2081/82

Training Material Development

- NHTC developed new training materials covering: General Training Skills –GTS, Cold chain equipment repair and maintenance, Health care waste management operation and maintenance of Autoclave/microwave, Infection prevention and Control - Advanced, Blended Method, Supplementary course for psychosocial counseling, Continuous ambulatory Peritoneal dialysis, Health Management Modular training for Local level, SBA SHP Modular Training Module 1 to 5, Pen Plus training for doctors, Basic Burn Care (BBC), Basic Emergency Care (BEC) , advanced Cardiac Life Support, Community first Health responder(Developing), Brief Tobacco Intervention(Developing), Water quality surveillance(Developing).
- Revised 7 existing training materials: Adolescent Sexual and Reproductive Health Training, Reproductive Health Morbidity Screening Training, Occupational Health and Safety, X-ray users' maintenance, Lab users' maintenance, Biomedical Refresher training, Health Response to GBV.

Box 17. 1 Vision, Goal and Objectives of NHTC

Vision:

Effective health training system for the development of skilled and accountable health workforce to provide quality health services.

Goal:

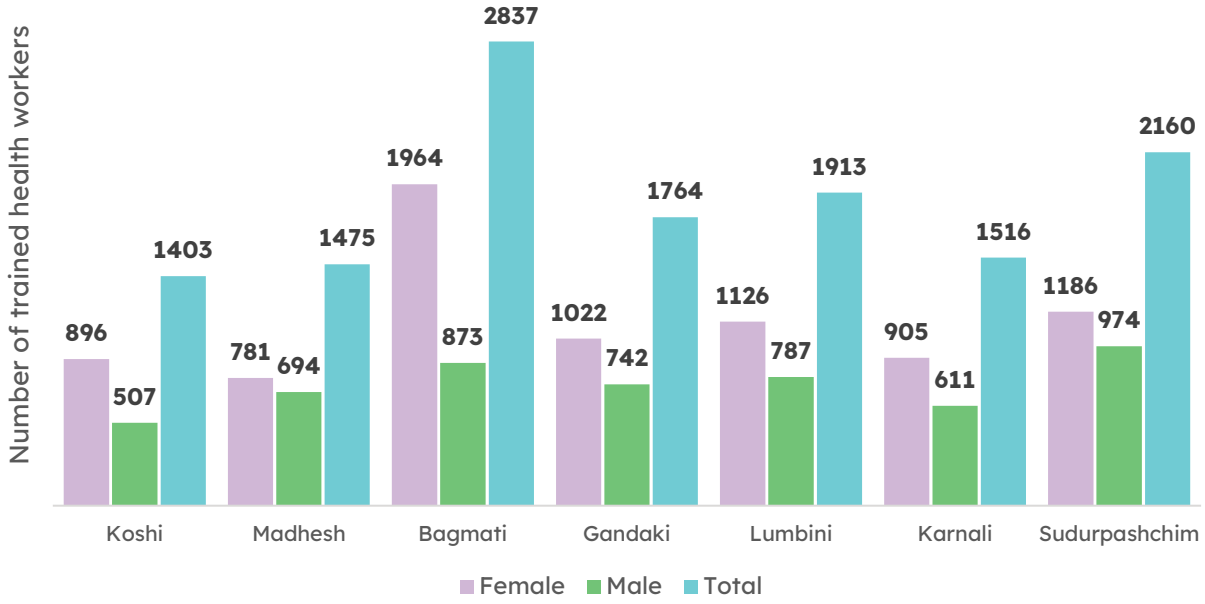
To enhance the technical and managerial capacity of health care service providers at all levels to deliver quality health care services towards attainment of the optimum level of health status of Nepali citizens

Objectives:

- To standardize the training Learning Resource Packages (LRP) of different trainings
- To organize and conduct service trainings to address the need of the country and to support the quality of care by enhancing the service provider's competency
- To ensure the quality of training activities by different mechanisms in adherence to national standards and to enhance the capacity of different training sites
- To adopt and promote innovative training approaches
- To strengthen mechanism and capacity for post training follow up, enhancement and support

Skill Development

- In FY 2081/82, 188 trainings were held and 13,068 participants were trained in different training programs. The major cadre groups trained were nursing (5868), HA and AHW (3790), Medical Officer (1896) and Public Health officer and administrator (251).
- Field Epidemiology Training Program-Frontline's-89 field epidemiologist developed.

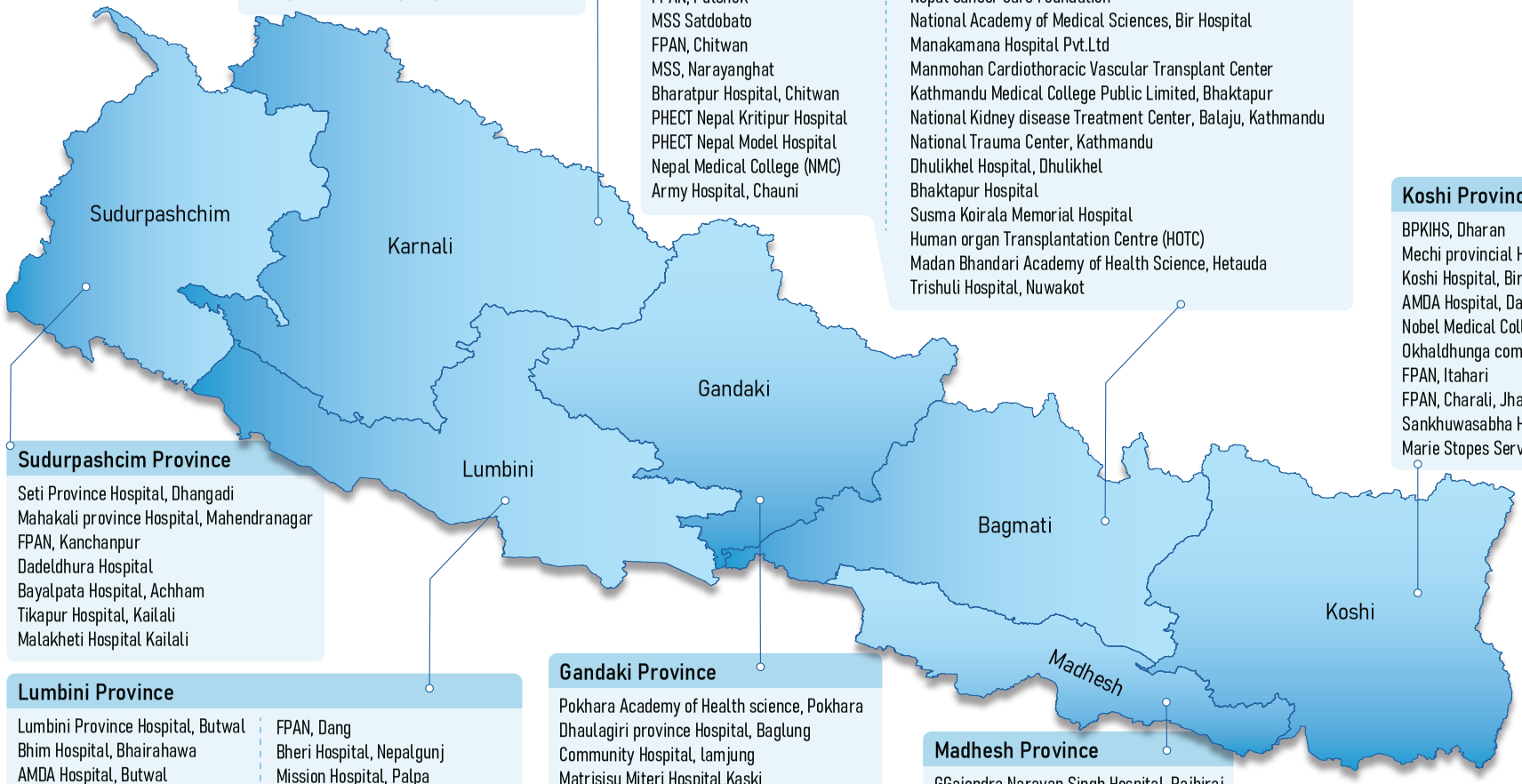


Source: NHTC/DoHS

Figure 17.1 Number of trained health workers in FY 2081/82 according to province

Training Accreditation and Regulation

1. Total 67 clinical training sites accredited till FY 2081/82 (in FY 2081/82, one new i.e. Trishuli Hospital, Nuwakot has been added).
2. Additional accreditation granted to existing clinical sites:
   - ROUSG training at Dhaulagiri Provincial Hospital, Baglung
   - Medicolegal training at Seti Provincial Hospital, Dhangadhi
   - ECCT training at Nepalgunj Medical College
   - SNCU training at Pokhara Academy of Health Sciences
3. For internship and related academic activities, students from various universities, academies, and colleges at undergraduate and postgraduate levels in medicine, nursing, public health, and related fields were provided orientation and instruction on the overall health system and training activities.
4. The e-copy of the National Health Training Center's annual report for FY 2080/81 has been published and uploaded to the website.
5. Continuous activities were carried out for quality observation and feedback of ongoing training programs.
6. Updating and expanding the Training Information Management System (TIMS)
7. Preparation of the Follow-up Enhancement Program (FEP) guideline draft.
8. Review and follow-up of FETP training
   - Since the initiation of program in 2022, the National Health Training Center has produced approximately 185 FETP Frontline graduates, 1 Advanced FETP graduate, and 81 mentors. A two-day review program targeting about 55 trained personnel and mentors was conducted to document post-training outbreak investigation involvement and ensure effective mobilization. The review generated concrete strategic and operational recommendations across five thematic areas.
9. Coordination, review, and planning workshops with clinical training sites
   - To strengthen coordination and collaboration among the National Health Training Center, health training centers, and training sites for quality training delivery, seven provinces conducted 2-day review and planning workshops.



Karnali Province

Karnali province Hospital, Surkhet
Karnali Academy of Health Sciences, Jumla
Chaurjahari community hospital Western Rukum

Bagmati Province

PMWH, Kathmandu
CFWC, Chhetrapati, Kathmandu
FPAN, Pulchok
MSS Satdobato
FPAN, Chitwan
MSS, Narayanghat
Bharatpur Hospital, Chitwan
PHECT Nepal Kritipur Hospital
PHECT Nepal Model Hospital
Nepal Medical College (NMC)
Army Hospital, Chauni
TUTH, Maharajgunj
Kanti Children's Hospital
Nepal cancer care Foundation
National Academy of Medical Sciences, Bir Hospital
Manakamana Hospital Pvt.Ltd
Manmohan Cardiothoracic Vascular Transplant Center
Kathmandu Medical College Public Limited, Bhaktapur
National Kidney disease Treatment Center, Balaju, Kathmandu
National Trauma Center, Kathmandu
Dhulikhel Hospital, Dhulikhel
Bhaktapur Hospital
Susma Koirala Memorial Hospital
Human organ Transplantation Centre (HOTC)
Madan Bhandari Academy of Health Science, Hetauda
Trishuli Hospital, Nuwakot

Koshi Province

BPKIHS, Dharan
Mechi provincial Hospital,Jhapa
Koshi Hospital, Biratnagar
AMDA Hospital, Damak, Jhapa
Nobel Medical College, Biratnagar
Okhaldhunga community Hospital
FPAN, Itahari
FPAN, Charali, Jhapa
Sankhuwasabha Hospital
Marie Stopes Service Pvt Ltd, Biratnagar

Sudurpashcim Province

Seti Province Hospital, Dhangadi
Mahakali province Hospital, Mahendranagar
FPAN, Kanchanpur
Dadeldhura Hospital
Bayalpata Hospital, Achham
Tikapur Hospital, Kailali
Malakheti Hospital Kailali

Lumbini Province

Lumbini Province Hospital, Butwal
Bhim Hospital, Bhairahawa
AMDA Hospital, Butwal
FPAN Butwal
MSS, Chandrauta, kapilvastu
Lumbini Medical College, Palpa
FPAN, Dang
Bheri Hospital, Nepalgunj
Mission Hospital, Palpa
Nepalgunj Medical College, Banke
Rapti Provincial Hospital, Dang

Gandaki Province

Pokhara Academy of Health science, Pokhara
Dhaulagiri province Hospital, Baglung
Community Hospital, lamjung
Matrisisu Miteri Hospital,Kaski
Sisuwa Hospital, Kaski

Madhesh Province

GGajendra Narayan Singh Hospital, Rajbiraj,
FPAN, Janakpurdham, Dhanusha
Province Hospital, Janakpur
Narayani Hospital, Birgunj
Siraha Povince Hospital

Figure 17.2 List of clinical training sites accredited in Nepal

Source: NHTC/DoHS

BMET unit

- CTEVT-accredited 18-month Diploma in Biomedical Engineering (DBEE) program previously enrolled 24 students. From this year onward, no of students increased by 6, with total 30 students.

Biomedical Central Workshop

1. Training (2081/82)

- Training on Maintenance of Hemodialysis equipment for Engineers and Technicians (15 days) –12 participants
- User maintenance of Lab Equipment Training (17 days) -11 participants
- User maintenance of X-Ray Equipment Training (10 days) -10 participants (2 batch Completed)
- General Training Skills (5 days)- 16 participants

2. Biomedical Central workshop (2081/82)

- Equipment received :91
- Equipment repaired :91

Strategic Document Drafting

- The National Health Training Strategy 2081–2087 is being finalized after consultations with provinces and stakeholders to update the 2004 strategy in line with the federal context.
- The FETP Strategic Roadmap Nepal 2025–2030 has been drafted through technical working groups and federal/provincial consultations and is moving toward approval by the FETP Steering Committee.

Additional Activities

- An online electronic library has been launched on the NHTC website for federal and provincial training centers.
- A virtual learning platform is under development, beginning with the Health Response to GBV training.

17.1.4. Planned Activities for FY 2082/83

Training Material Development Section

- Integrate medico-legal training on Postmortem Examination and Clinical Forensic Medicine into pre-service education
- Virtual training management and virtual update programs for trainers of newly developed and revised training packages
- Intermediate FETP (Field Epidemiology Training Program) course
- Finalization of the LRP for water quality surveillance and conducting related training
- Workshop and interaction program with MEC to integrate existing training materials into the academic curricula of medical colleges, academies, and universities
- Development and piloting of training materials on poisoning management
- Trainers' Orientation (ToT) on Rapid Response Team

Training Accreditation and Regulation Section

- Monitoring training sites to provide Training implementation approval, renewal, and regulation of health-related training centers
- Training Follow-up Enhancement Program (FEP)
- Measure quality, provide feedback, and regulate ongoing training activities
- Coordination review and planning workshop with clinical training sites
- Preparation of the Training Management Guideline 2082
- Preparation of a simulation lab accreditation guideline
- Updating and printing of training quality tools
- SHP/SBA modular training site preparedness, assessment, and accreditation

Skill Development Section

- CTS training
- Induction training for health officers appointed through the Public Service Commission process
- Medico-legal training on postmortem examination and clinical forensic medicine for doctors
- First Trimester Abortion Care standardization training for doctors (OB-GYN/MDGP)
- Palliative care training
- Training of Trainers (ToT) on burn care and management for doctors/health workers/nursing staff
- SHP/SBA trainers preparation/update
- GTS training for trainers of various programs
- Geriatric care training for medical officers
- ToT on Health Care Waste Management
- Disability management and rehabilitation training for medical officers
- Community First Health Responder (CFHR) training
- Mental health training – Module 2B
- AMR (Antimicrobial Resistance) training for healthcare workers
- Advanced IPC (Infection Prevention and Control) training
- Basic Emergency Medical Technician (BEMT) training
- Basic Emergency Care (BEC) training
- Hospital Preparedness for Emergencies (HOPE) training
- NSV/MINILAP comprehensive blended training
- Burn care and management training for doctors/ health workers/nursing staff
- Basic Life Support (BLS) training for long- and medium-distance drivers and traffic police
- Field Epidemiology Training Program (FETP) – Frontliners
- Ambulance driver training

Biomedical Equipment Training unit

- Diploma in Biomedical training for 24 participants, and continuation of FY 2079/80.

Box 17.2 SWOT Analysis of NHTC

Strengths	Opportunities
• Development of more competency (Skill) based training packages and learning resource packages (LRP's) using blended approach • Revision and update of the existing training packages • Standard operating procedures (SOPs) and guidelines for training packages and training sites • Operation of TIMS at all provincial health training centers • Profile of trainers and trainees are maintained in each province • Coordination, collaboration and partnership with province health training centers, External Development Partners, Bilateral and Multilateral Agencies for quality health training management and conduction • Expansion and prior arrangements of training sites and training materials	• Annual increment in the number of trained health workforce • Competent and skilled health workforce • Incentives and accommodation facilities to trainers as well as training participants • Support from government as well as various External Development partners
Weaknesses	**Threats**
• Shifting into one door trainings however, multi-door trainings persist • Lagging to shift into technology-based education such as self-paced learning, online learning platform as well as web-based learning • Inadequate training follows up mechanism • Inadequate skilled technical human resources to operate TIMS at all levels • Improper recording and inadequate reporting mechanism between province and federal health training center • Lack of systematic coordination mechanism with province governments and local level for training management and quality control. • Gaps in accreditation, renewal and accountability of training sites • Challenging to manage a separate pool of trainers from various disciplines • Lack of need-based selection of participants • Lack of training needs assessment for institutionalizing need-based training. • Many health professionals lack access to continuing education opportunities, which can hinder their ability to stay up to date with the latest developments in their field. • Health training often focuses on theory rather than practical skills. • Lack of training on prevention and promotion. Majority of training courses provided are focused on curative service.	• Delayed revision of the training related policies, strategies and guidelines • Inclusion of participants from remote and backward districts • Inadequate accommodation facilities for training participants • Limited sites for special training • Inadequate training materials • Inadequate budget allocation for training monitoring and quality assurance • Inadequate incentives for trainers and participants who travel from distant districts • High demand of training and limited resources • Lack of adequate regulatory frameworks to ensure that health training programs meet minimum standards of quality

17.2 Vector Borne Disease Research and Training Center

17.2.1 About the program

Vector Borne Disease Research and Training Center (VBDRTC) was established in 2035 (1979) as Malaria Research and Training Center under the Nepal Malaria Eradication Organization. On 30th Jestha 2053 (12th June 1996), the center was named as VBDRTC. The key objective of VBDRTC is to build capacity and conduct research for better understanding of VBDs' etiology, transmission intensity, and interventions program implemented for VBDs by Government including, Malaria, Kala-azar, Dengue, Chikungunya, Lymphatic filariasis, Scrub typhus and Japanese encephalitis.

17.2.2 Major activities in FY 2081/82

- Early Warning and Reporting System (EWARS) on site coaching in hospital basis
- Basic and Refresher Malaria Microscopic Training
- Entomology Refresher Training
- 3 days VBDs training to health workers
- Insectarium Management

17.2.3 Key Achievements in FY 2081/82

Physical and Financial Achievement of Program Activities

In FY 2081/82, financial achievement was 63.16 % and physical achievement was 92%. The total budget absorption rate was 63.10% in FY 2081/82 (Table 17.1)

17.2.4 Challenges of VBDRTC

- Dissolution of VBDRTC development committee
- Inadequate human resources
- Financial limitations and funding gaps in research and training programs
- Duplication of activities with EDCD

Table 17.1 Budget absorption rate of VBDRTC in FY 2081/82

Items	Budget (Nrs in millions)	Expenses (Nrs in millions)	Budget absorption rate %
Administrative cost	13.66	11.24	82.28
Programmatic cost	9.95	4.57	45.92
Total	23.61	14.9	63.10

Source: VBDRTC

18 Health Education, Information and Communication

NHEICC	Health Education and Material Development Section	Health Communication Coordination Section	Health Promotion and Tobacco Regulation Section	Administrative Section

18.1 About the NHEICC

National Health Education Information and Communication Center (NHEICC), established in 2050 (1993), is the federal government entity responsible for health promotion activities. It plans, executes, monitors, and evaluates a variety of health promotion programs, such as advocacy, health education, communication, community engagement, and research. Guided by the National Health Communication Policy 2069 (2012), National Health Policy 2076 (2019) and other relevant policies, NHEICC promotes national health programs to address the health policies and to achieve Sustainable Development Goals (SDGs). It employs key approaches such as advocacy, social mobilization, and SBCC (Social and Behavior Change Communication). NHEICC has four sections viz. a) Health Promotion, Non-communicable Disease and Tobacco Regulation Section, b) Health Education and Material Development Section, c) Health Communication Coordination Section, and d) Administrative Section. NHEICC is also the focal point of MoHP for tobacco and alcohol control and regulation along with Risk Communication and Community Engagement (RCCE).

Box 18.1 Vision, goal and objectives of NHEICC

Vision

Healthy, conscious and responsive citizens concerned with happy life

Goal

To promote health, prevent and control diseases, and maximize the utilization of health care services.

General objective

The general objective of the NHEICC is to promote the health of the people by raising awareness and preventing diseases through the active participation of the citizens themselves and the full utilization of available health services.

Specific objectives of NHEICC

- To assist the MOHP to formulate national acts, policies, strategies and guidelines related to health promotion and health communication
- To regulate the marketing of alcohol and tobacco products as well as harmful health products in coordination with the relevant agencies
- To strengthen, expand and implement health promotion programmes and RCCE at all levels
- To facilitate related stakeholders to make healthy settings like “healthy palika”, health promoting schools, health promoting workplaces, health promoting hospitals etc. with support and coordination of relevant stakeholders
- To generate, collect and mobilize resources to implement health promotion and communication programmes
- To develop and update SBC materials in coordination with relevant stakeholders
- To provide technical support for health promotion, education and material development at all levels
- To mobilize and use modern and traditional health education methods and media to increase health literacy and promote healthy behaviour among the general public
- To prevent the inappropriate and unauthorized dissemination and duplication of messages or information and IEC materials on different health related issues
- To enhance capacity on health communication to develop, produce and disseminate quality messages and information

NHEICC focuses on these strategic areas:

Policy and Strategy: Assisting the MoHP to formulate national acts, policies, and guidelines related to health promotion.

Implementation: Strengthening and implementing health promotion programs and RCCE (Risk Communication and Community Engagement) at all levels.

Material Development: Developing and updating SBC (Social Behaviour Change) materials in coordination with stakeholders.

Literacy and Behavior: Mobilizing modern and traditional methods to increase health literacy and promote healthy behaviors among the general public.

Quality Control: Preventing the unauthorized dissemination of health messages and enhancing capacity for quality information production.

18.2 Major Focal Programme of NHEICC

Tobacco Control and Regulation programme

Nepal demonstrated its commitment to tobacco control by becoming a Party to the WHO Framework Convention on Tobacco Control(FCTC) and enacting the Tobacco Product (Control and Regulatory) Act in 2011. This legislation provides a comprehensive framework for regulating tobacco use, including smoke-free public places, bans on tobacco advertising, promotion and sponsorship, and pictorial health warnings on tobacco packaging. Tobacco control is also a key strategic priority under Nepal's Multisectoral Action Plan for the Prevention and Control of Non communicable Diseases 2021–2025, which calls for strengthening tobacco control policy implementation, expanding cessation support, and enhancing enforcement mechanisms.

Nepal has made important progress in advancing MPOWER measures, including the recent endorsement of 100% pictorial health warnings on tobacco packaging and the launch of the national tobacco Quit Line (1132) in 2025.

Roadmap to Tobacco Control & Regulation related Legislations

- Tobacco Products (Control and Regulation) Act, 2068 (2011) is the principal legislation overseeing tobacco control in Nepal. It covers various aspects, including smoking regulations in public areas, workplaces, and public transport, as well as tobacco advertising, promotion, sponsorship, packaging, and labelling.
- Tobacco Products (Control and Regulation) Rule, 2068;
- Tobacco Product Control and Regulatory Directive, 2071; and
- Directive on Printing Warning Messages and Pictures on Tobacco Product Boxes, Packets, Cartons, Parcels and Packaging Materials, 2081.

Alcohol control and regulation programme

The Government of Nepal has prioritized strengthening alcohol control as part of its commitment to reducing noncommunicable diseases and alcohol-related harm. NHEICC, under MoHP, has implemented key priority activities focusing on policy advocacy, institutional capacity building, and the development of a Brief Alcohol Intervention (BAI) package. These efforts are aimed at strengthening both preventive and treatment-oriented responses within the health system.

A 24-month SAFER (package of cost-effective interventions to reduce alcohol harm) Roadmap for Nepal, endorsed by the National SAFER Advisory Committee in February 2023, provides a structured framework for implementing priority actions aligned with the five SAFER pillars. NHEICC, has prepared a draft concept note for the development of a new alcohol control and regulation bill for submission to the Cabinet, seeking approval to initiate the legislative drafting process. NHEICC organized Interactive Orientation Workshops on the SAFER Initiative to reduce alcohol use for stakeholders including mayors, deputy mayors, public health officers, health facility in-charges, medical officers, nurses, and representatives from relevant local institutions. NHEICC has advanced the development of the Brief Alcohol Intervention Package in collaboration with NHTC.

Risk Communication and Community Engagement (RCCE)

The Risk Communication and Community Engagement (RCCE) Guideline, 2078 (2021), serves as the definitive strategic framework for managing public health emergencies and outbreaks. It mandates a shift from top-down messaging to a participatory, two-way communication model that prioritizes community feedback and the mitigation of misinformation (Infodemic Management). As the national focal point, NHEICC utilizes this guideline to coordinate federal, provincial, and local efforts, ensuring that health interventions such as those for Dengue, Cholera, or natural and human made disasters are evidence-based, culturally sensitive, and inclusive of marginalized populations.

Health Education and Material Development

Support the production and distribution of print and digital health awareness materials—such as posters, pamphlets, infographics, and booklets—on priority topics including family planning, maternal and child health, noncommunicable diseases (NCDs), tobacco control, and climate-related health risks; collaborate with MoHP divisions, programs, and stakeholders to review, tailor, and update need-based educational resources for federal, provincial, and local levels; contribute to broader health promotion initiatives, including support for reviewing the school health curriculum and textbooks of Grades 1 to 12 to assess adequacy and quality in health content , to find gaps and areas needing improvement while updating the curricula to include age-appropriate, relevant, and evidence-based health education content aligned with current health challenges and global standards and handover to the Curriculum Development Centre; and provide technical assistance for material innovation, quality assurance, appropriate dissemination, and prevention of unauthorized duplication." Multi-language and disability friendly health messages were developed and broadcasted.

18.2.1 Major Activities in FY 2081/82

Health Education and Communication	Advocacy/Orientation	Other Program
Broadcasting of health-related messages and information through National Televisions	Advocacy and communication on antimicrobial resistance	Media monitoring
Airing of health messages and public health radio programme through Radio Nepal	Interaction Program to Journalist about the different health issues	Capacity building program on Social Behaviour Change Communication (SBC) for health
Publication of health messages, information and press release in national newspapers	Advocacy and Communication Program on Safe Abortion	Quit Tobacco Cessation Program – Quitline Centre Establishment
Production and Broadcasting of health messages, and public health dialogue (Janaswasthya Bahas) through Nepal television	Advocacy and Communication Program on BMS (Breast Milk Substitute) Act and Nutrition	Health Promotion School Program
Communication Program through on online media	Advocacy and Communication program on Adolescent Health and Reproductive sickness	Risk Communication and Community Engagement (RCCE) Program
Development of Disabled Friendly Health Education and communication materials	Advocacy and Communication program on Child Health and Regular Immunization	Coordination Program to social media and Telecommunications
Health education and Communication programme on SMART couple promotion and reproductive health	Advocacy and Communication Program on Non- Communicable Disease Control and Mental Health	Health promotion programme for marginalized and deprived community or group
Health awareness and communication program on Organ transplant	Advocacy and Awareness Program for the Prevention of Adolescent health on Risk Factors eg. Alcohol, Smoking and Tobacco	Monitoring, prevention and control program for Smoking and Tobacco
Communication program on Acid Attack, Burn, accident and injuries	Provincial advocacy Workshop on Tobacco Control	Monitoring and Facilitation of Health Promotion and education program
Awareness and Communication program on Senior Citizens, Eye and Oral Health	Health Promotion and Communication Program for the Prevention and Control of Hereditary Blood Disorders and Autoimmune Diseases, Including Systemic Lupus Erythematosus.	SAFER Initiatives Program
Health Communication program on Tuberculosis, neglected tropical, zoonotic and vector borne diseases		Healthy local level related program
Awareness Program on Prevention and Control of Non-communicable Diseases, Trans-fat and Sweeten Beverages		Alcohol Control program
Awareness Program on Basic Health and Social Security		Coordination with education stakeholders for curriculum updates

18.2.2 Key Achievements FY 2081/82

1. Pictorial Health Warning Directive 2082 approved and endorsed by the MoHP

NHEICC played a leading technical and coordination role in finalizing the Graphical Health Warning Directive 2082, ensuring alignment with national tobacco control laws and international commitments. The endorsement of adoption of 100% pictorial health warnings on tobacco packaging by the Ministry of Health and Population (MoHP) marks a significant step toward strengthening tobacco product packaging regulations and increasing public awareness about the harms of tobacco use.

2. Provincial advocacy workshop on SAFER Initiatives to reduce alcohol consumption and drafting of Brief Alcohol Intervention Package for Health service providers

NHEICC organized and facilitated provincial-level advocacy workshops under the SAFER initiative in Dharan and Pokhara to promote evidence-based alcohol control strategies. A preliminary draft of the Brief Alcohol Intervention (BAI) package was developed.

3. Quit Line 1132 to help quit smoking/ tobacco product use was started

NHEICC launched the national Quit Line 1132 on 19 Jestha 2082 as a dedicated cessation support service, providing counseling and guidance to individuals seeking to quit tobacco use. This initiative expanded access to cessation services and reinforced the government's commitment to supporting behavior change. Total of 50 tobacco users were counselled through the quit line in 2 months after the launch of the quit line.

4. World No Tobacco Day celebrated and video competition on tobacco control carried out

On the occasion of World No Tobacco Day, NHEICC coordinated nationwide awareness activities, including a video competition to engage youth and the public in tobacco control advocacy.

5. Concept note for comprehensive bill on Alcohol Control and Regulation prepared

Discussions among stakeholders on the concept note outlining key provisions for a comprehensive Alcohol Control and Regulation Bill was conducted.

6. NCD Screening Month awareness campaign conducted in collaboration with EDCD

In collaboration with the Epidemiology and Disease Control Division (EDCD), NHEICC implemented a nationwide awareness campaign during NCD Screening Month. The campaign focused on promoting early detection and prevention of non-communicable diseases through mass communication and community engagement. NHEICC developed the social media assets and campaign materials for nationwide dissemination.

7. Dengue prevention and control awareness campaign conducted in collaboration with EDCD

NHEICC supported EDCD in disseminating timely information and risk communication messages for dengue prevention and control. The campaign enhanced public awareness on vector control measures and community-level preventive actions.

8. BTI training workshop

Brief Tobacco Intervention (BTI) workshop was conducted in Nepalgunj to strengthen the capacity of healthcare providers in delivering evidence-based cessation counseling. The training improved frontline service delivery and reinforced tobacco cessation integration into routine health services.

9. NRT distribution in Bir Hospital

NHEICC facilitated the distribution of Nicotine Replacement Therapy (NRT) at Bir Hospital to support tobacco users in quitting. This initiative complemented counseling services and strengthened access to comprehensive cessation support within tertiary healthcare settings.

10. National Health Promotion Strategy Draft

NHEICC led the development of Nepal's Health Promotion Strategy to cover the SDG period. The draft is under final discussion and is expected to be endorsed in fiscal year 2082/83.

11. Multi-language health education materials

Japanese Encephalitis audio message developed on Bhojpuri, Awadi, Maithali, Tharu and Nepali language. HPV vaccine and Breast cancer audio message was developed on 22 different languages such as Bhojpuri, Awadi, Maithali, Doteli, Rai, Tamang, Rai Bantawa, Nepal bhasa, Rana Tharu, Paschim Tharu, Purbeli Tharu, Nepali, Bajika, Limbu, Gurung, Baitadi, Magahi, Rajbansi, Urdu, Sherpa, Magar and Magar Kham.

Extreme heat audio message (Lu) was developed on five different languages such as Awadi, Bhojpuri, Bajika, Magahi and Maithali.

Immunization (missed dose) was developed on 15 languages such as Bhojpuri, Awadi, Maithali, Doteli, Tamang, Rai Bantawa, Nepal Bhasa, Rana Tharu, Paschim Tharu, Purbeli Tharu, Bajika, Limbu, Gurung, Baitadi and Magar.

All the messages were broadcasted through provincial network of Radio Nepal.

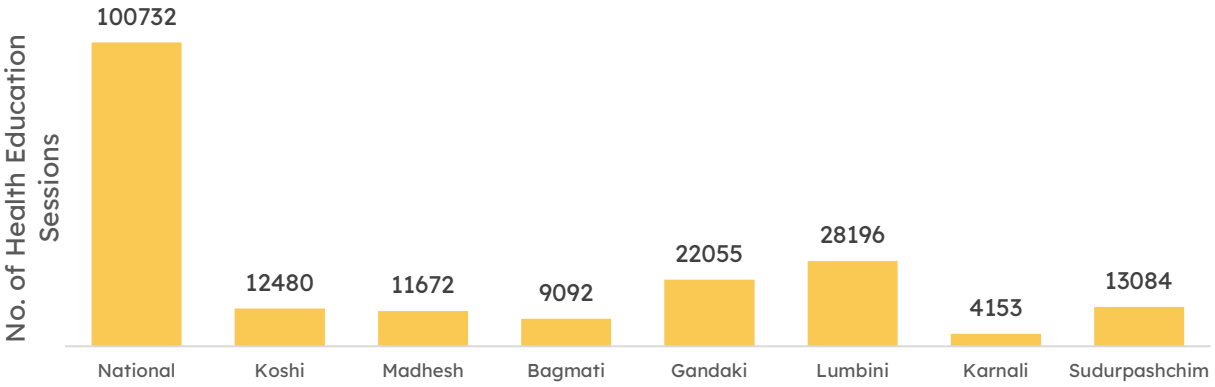
18.3 Key program indicators and achievements FY 2081/82

18.3.1 Number of health education sessions conducted

In FY 2081/82, a total of 1,00,732 health education sessions were conducted, out of which maximum was conducted in Lumbini and minimum in Karnali province. (Fig 18.1)

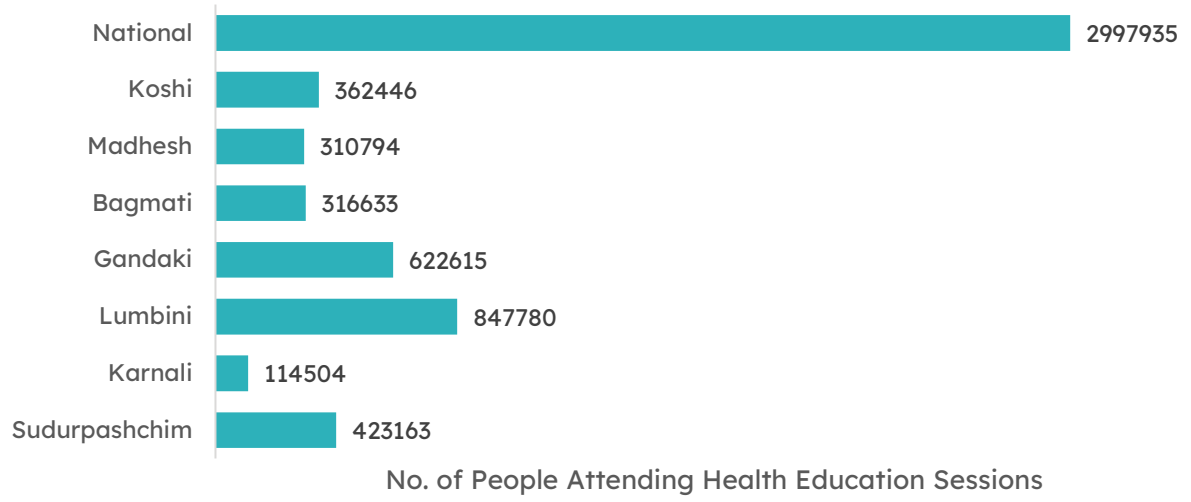
18.3.2 Number of people attending health education sessions

In FY 2081/82, a total of 29,97,935 people had attended health education sessions conducted throughout Nepal. Similar to number of sessions conducted, attendees were highest in Lumbini and least in Karnali province. (Fig 18.2)



Source: NHEICC

Figure 18.1 Coverage of Health Education Sessions Conducted in FY 2081/82 (separate for Nepal)



Source: NHEICC

Figure 18.2 Reach of Health Education Sessions Conducted in FY 2081/82 (separate for Nepal)

18.3.3 Federal level physical and financial achievement of program activities

In FY 2081/82, financial achievement was 83 % and physical achievement was 83 % of NHEICC at federal level. (Table 18.1)

Table 18.1 Physical and financial achievement of NHEICC at federal level in 2079/80 to 2081/82

Programme	FY 2079/80		FY 2080/81		FY 2081/82	
	Physical	Financial	Physical	Financial	Physical	Financial
Federal Level	82	79	78.05	71.16	83	83

Source: NHEICC

Box 18.2 SWOT Analysis of NHEICC Program

Strengths	Opportunities
• National Health Communication policy in place. • RCCE guidelines in place. • SAFER Initiative roadmap under implementation. • Utilization of multimedia for communication	• Interest of different stakeholders in HEICC activities • Initiation of digital technology in health • New initiations such as anti-alcohol control advocacy programme, Health Promoting school programmes • Coverage of mobile phone and internet services in communities
Weaknesses	**Threats**
• Limited human resources for health promotion at federal, province and local level • No organizational structure including human resources for health promotion at all province and local levels. • Preparedness mechanism during emergencies is needed to be stronger and strengthen. • Inadequate allocation of budget for communication programme as per health policies, strategies and directives. • Insufficient control mechanism for mis-advertisement of unhealthy products.	• Multi-door health communication activities • Mis-advertisement of unhealthy products • Continuous change of behaviour pattern/continuous change of lifestyle of people • Low health literacy • Resistance to change • Interference by companies who produce unhealthy commodities • Less emphasis on health promotion activities as per the international declaration and changing patterns of diseases and health case scopes. • Misinformation about health campaigns in social media. • Persistent Socio-Cultural Barriers & Deep-Seated Myths

19 Logistics and Health Information Management Program

MD	Integrated Health Information Management Section (IHIMS)	Environmental Health and Health Related Waste Management Section	Health Infrastructure Development Section (HIDS)	Logistic Management Section (LMS)

Management Division (MD) administers comprehensive management functions within Department of Health Services (DoHS) and functions as secretariat to Director General (DG), DoHS. It synchronously aids as the vital nexus for health-related information management. Health Management Information System (HMIS), Logistics Management Information System (LMIS), and Health Infrastructure Information System (HIIS) are the three vital systems being smoothly implemented. The MD is tasked with a wide range of responsibilities, including planning, coordination, supervision, forecasting, quantification, procurement, and distribution of health commodities to healthcare facilities, infrastructure development, equipment, instrument, support in the waste management and water sanitation and hygiene (WASH) aspects of the health facilities. Additionally, MD ensures the functionality of all the information systems for ensuring timely availability of routine data including ensuring their quality. Furthermore, MD supports MoHP in monitoring and evaluation of health programs and formulating policies, guidelines, directions, and standards. The division plays a pivotal role in overseeing the construction and maintenance of public health institution structures, providing support for the maintenance of medical equipment, and meticulously managing the inventory of biomedical equipment, instruments, and transportation vehicles.

19.1 Health Management Information System

19.1.1 About the program

Integrated Health Information Management Section (IHIMS) plays a crucial role in managing health related routine service data and information from FCHVs to federal level. It serves as a foundation for monitoring, evaluation, and planning across all three tiers of government: federal, provincial and local. IHIMS coordinates among all three tiers of government, ensuring integrated platform available for collecting, collating, analyzing, visualization, dissemination and storage of health information derived by the national health system. (Figure 19.1 IHIMS information flow)

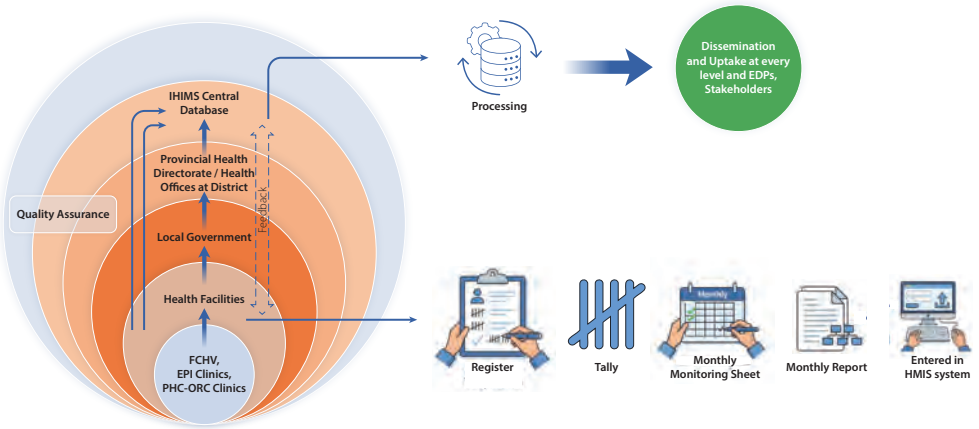


Figure 19.1 HMIS Information flow

A primary mandate entrusted to IHIMS is to lead and coordinate the systematic generation of periodic and annual health reports, with subsequent dissemination of findings to the stakeholders. These reports hold paramount significance in the ongoing monitoring and evaluation processes within the health sector including health sector progress, contributing to evidence based AWPB.

The HMIS operating on an open-source District Health Information System 2 (DHIS2), an ICT friendly platform with highly scalable features, manages health sector information in an integrated and comprehensive manner through one door system. To reach its current state, HMIS has come through several significant milestones (figure 19.2). Revision of the HMIS tool in FY 2078/79 was the effort in history of tool revision by IHIMS. The tool revision was based on covering the additional health related issues such as mental health, health education information etc. There are now 68 HMIS recording tools and 5 reporting tools. The recording tools are completely paper based whereas, reporting is directly done through online HMIS built in DHIS2 platform which is maintained in paper-based reporting forms (tools) in HFs and entered online. (figure 19.3)

Milestone on HMIS tool development

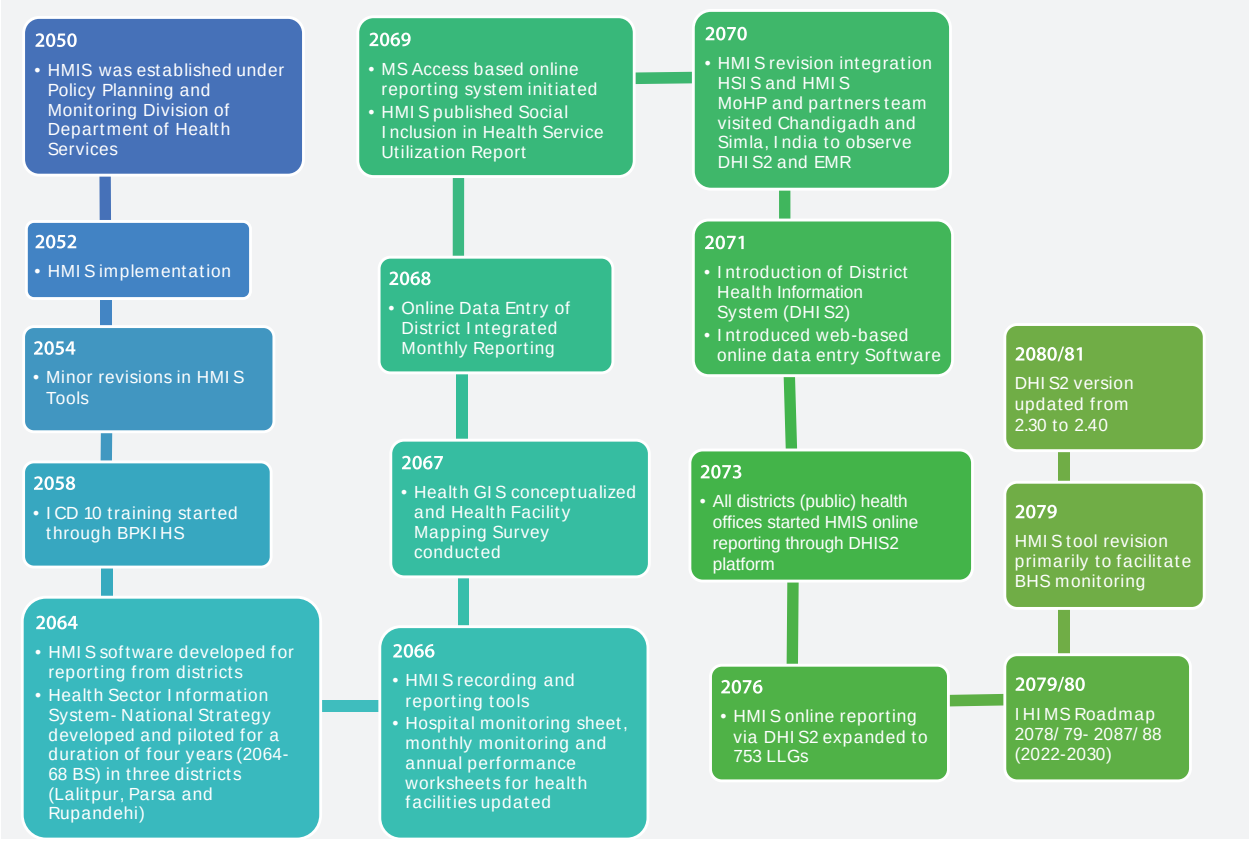


Figure 19.2 Milestone on Development of HMIS Tools

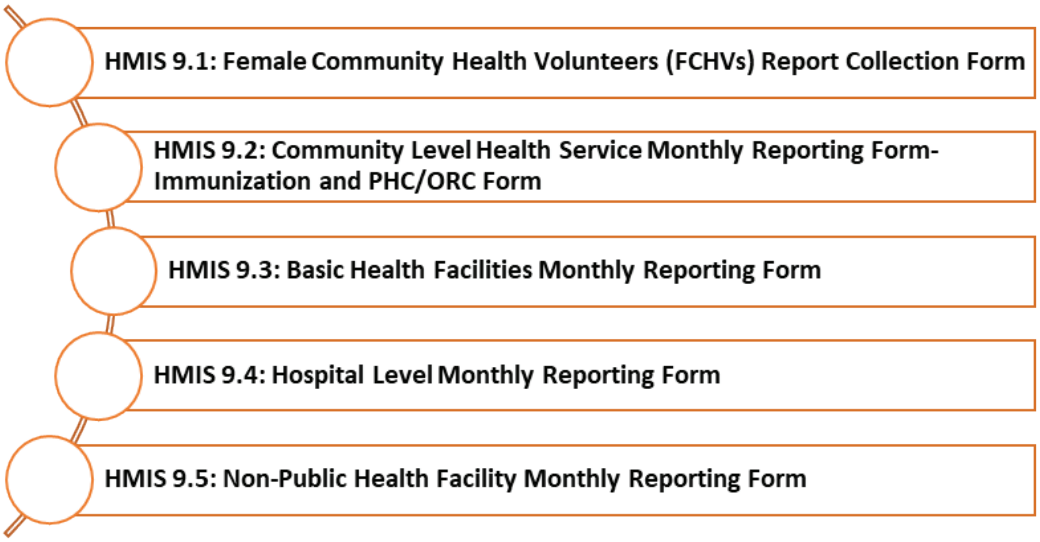


Figure 19.3 Current reporting tools being used in HMIS

IHIMS Roadmap 2078/79- 2087/88 (2022-2030) has been crucial to drive key improvements in health data management. In FY 2080/81, efforts focused on strengthening HMIS by enhancing infrastructure, software, and processes. Training programs aimed to improve user proficiency and ensure meticulous data handling. Ongoing monitoring facilitated prompt issue resolution, contributing to sustained system improvement. These initiatives sought to establish a reliable HMIS foundation, enhancing data quality for informed healthcare decision-making.

Logistic management information system

To streamline logistics management, LMIS unit was established within the Logistic Management Division (LMD) in fiscal year 2050/51 (1994), now under MD. The LMIS unit introduced a web-based LMIS in fiscal year 2065/66 and later implemented an online Inventory Management System (IMS) in fiscal year 2073/74 for store management. Management Division transitioned to an electronic Logistic Management System (eLMIS) from Baishakh 2075 to strengthen supply chain management processes and enhance LMIS data entry and visualization, aiding informed decision-making. The eLMIS now covers all local Level stores with plans for extensions to all service delivery points (SDPs) based on operational requirements. As of Ashad 2082 there are a total of 6,809 live sites, comprising 5,857 SDPs, 772 local level stores, 149 at District Health Offices, and 15 provincial and 8 federal stores. In cases where SDPs await eLMIS implementation, LMIS forms are submitted to LLGs for data entry. Since fiscal year 2079/80, the reporting cycle for LMIS has shifted from a quarterly basis to a more granular monthly reporting system. eLMIS provides a dashboard that visualizes the stock status, consumption of health commodities and reporting status. The digitalization of inventory management activities such as handover takeover form (Hastantaran Faram), entries in Health Facilities' Supply Registration Book (Dakhila Register), and stock books through eLMIS has significantly reduced the paper-based workload for providers and staffs. Additionally, eLMIS ensures the safety of data, providing a secure platform for managing inventory information. Information flow of the logistic management information system is depicted in figure 19.4.

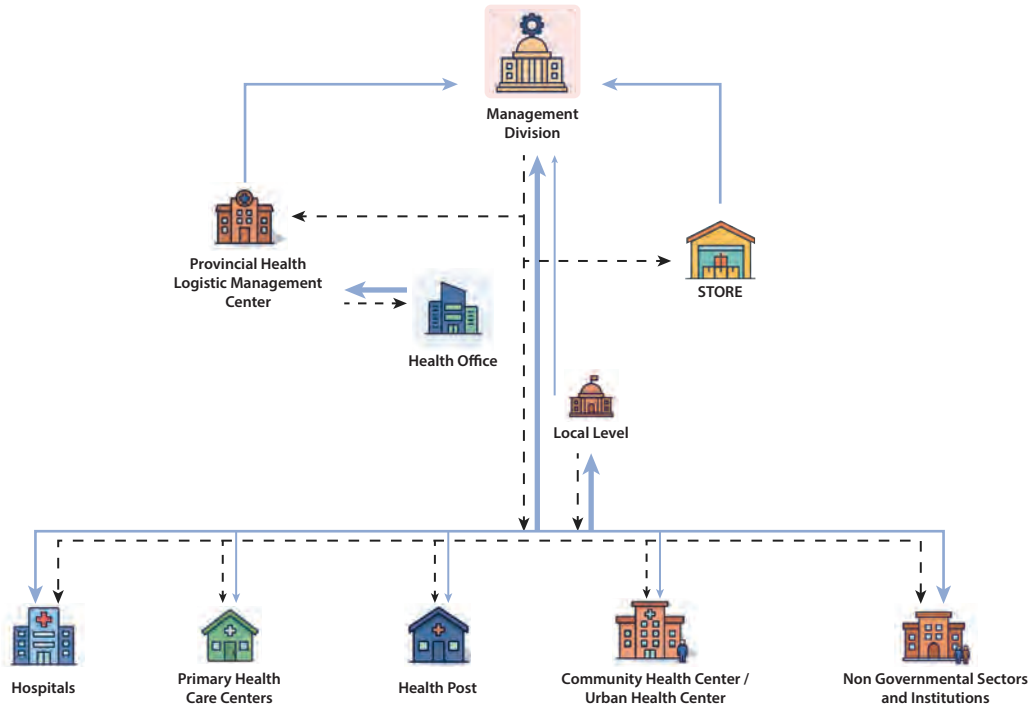


Figure 19.4 Logistic Management Information Flow

Digital Health Landscape

Distance, geography, cost and time are one of major factors that limit the service access and utilization in Nepal. The recent survey in FY 2079/80, NDHS 2022, showed that a large majority of women travel to the nearest health facility by walking (83%). There are still 9% of the survey population who reported that the nearest health facility is at more than an hour distance and 23% reported that it takes more than 30 minutes to reach the nearest facility. Penetration of the Information Communication Technology (ICT) in health has been seen as one of the alternatives to increase access and reduce travel time and contribute substantially to UHC. eHealth was conceptualized and agreed by world health leaders to consider drawing up a long-term strategic plan for developing and implementing eHealth services to develop the infrastructure for ICT for health to promote equitable, affordable and universal access to their benefits. Recently, the term digital health was introduced as, a broad umbrella term encompassing eHealth as well as emerging areas, such as the use of advanced computing sciences in 'big data', genomics and artificial intelligence. In Nepal, Information Technology (IT) penetration was observed in health around 2054 (1997) when HMIS was in the process of development.

Current availability of communication equipment in the health facilities for health service purpose is 26%, and 55% of health facilities have computers with internet facilities. Similarly, at the population level 15.4% households have computer and 51% households have internet access at home. It is evident that the use and expansion of ICT is rapidly growing and in year 2078/79, internet penetration has reached to 38% in the public in Nepal. The focus of digital health is on strengthening health systems and public health programs, increasing equity in access to health services, strengthening health information systems and increasing the efficiency of health care delivery.

Digital health in Nepal is guided by laws, regulations, Digital Nepal Framework and health sector strategies and policy. MoHP has been implementing the eHealth Strategy 2017 and eHealth Roadmap 2019. Several efforts are under way to develop digital health platforms that expand the reach of health services and support self-care. Digital health interventions are expanding in the public and private health sectors further boosted by the COVID-19 situation in the country.

Global reference documents are available to set strategies, strengthen digital governance and support the interventions. In addition, there are national acts, regulations, frameworks, guidelines and policies in place in the health and ICT sector to govern digital health. Some national documents guiding the digital landscape are:

- Electronic transaction act 2063 (2008) and rules 2064 (2009)
- Information Communication Technology Policy 2072 (2015)
- Public Health Service Act 2075 (2018) and Regulation 2077 (2020)
- eHealth Strategy 2073/74 (2017) and Roadmap (FY 2076/77-2080/81) (2019-2024)
- The Privacy Act, 2075 (2018)
- Statistical Act, 2079
- Digital Nepal Framework 2076 (2019)
- AI Policy, 2082
- National Health Policy 2076 (2019)
- The Fifteenth Plan (FY 2076/77-2080/81 (2019/20 – 2023/24))
- Electronic Governance Commission (Formation and Operation) Act 2079 (2022)
- Nepal Health Sector Strategic Plan (NHS SP) 2079/80-2087/88 (2023-2030)
- Integrated Health Information Management System Roadmap (2078/79-2087/88) (2022-2030)
- Nepal Health Facility Registry Procedure 2081
- Procedure for Nepal Health Workforce Management Information System 2024
- Integrated Electronic Medical Records (EMR) Operation and Management Directives, 2081

The IT infrastructure is expanded to all the local levels and health facilities with varied strength of network and hardware resources. In the IT human resource, there are four positions in the federal MoHP, three in DoHS, one in DDA, one in NPHL, one in NHEICC, and none in DoAA. However, the availability of ICT related permanent staffs in federal level is very low than required to keep pace with advancement of technology and cope with it. There is high and growing demand of such cadres from the agencies at all levels.

Health, ICT and market sectors are collaborating formally and informally to advance the digital health interventions in Nepal. Digital solutions are produced by MoHP and market-based innovators. Collection of digital health interventions for inventory development exercise in 2081/82 (2025) has explored the existence of following digital solutions prevailing in Nepal, though the inventory is based on limited reporting. (Table 19.1)

Table 19.1 Major digital health related domain of services and their platforms as of FY 2081/82

Domain of services	Major platforms/ Solutions
Health Management Information System	DHIS2
Maternal and New Born Health Services	MPDSR, ODK Collect, RMNCAH
Hospital based Death Registration Management System	DRMS, MCCoD
Facility based Birth Registration Management System	BRMS
Health promotion	Hamro Swasthya
Community based maternal and child care	Community Health Toolkit, Ama ko Maya
Telemedicine services	Danfe care, Ncell, Mero Doctor
Logistic Management	eLMIS, PAMS, mSupply
Health service management in the facilities	Nepal EHR, Okhati, Dolphine, MIDAS, Dcode, Bahmni EMR, Mero Upachar OpenMRS, MediPro, Cogent, eHMIS etc.
Public health surveillance	SORMAS
Early warning and reporting for notifiable diseases	EWARS/DHIS2, Malaria Disease Information System, Kalazar Tracker
Health Facility Registry	NHFR
Digital Health Inventory Management	Digital Health Atlas

Domain of services	Major platforms/ Solutions
Immunization services	Routine Immunization Portal, eIRS
TB case management	eTB Register, DRTB/DHIS2, GxAlert
HIV case tracker	DHIS Tracker, OnHealth/DHIS2
Management of Human Resources for Health	NHW-MIS
Planning and Management of Assets in Health Services	PLAHMAS
Social Health Insurance Management	OpenIMIS
Drug Administration Management	DAMS

The list (table 19.1) is not exhaustive and there is a need to prepare inventory of all digital solutions and ensure the compliance to the standards. In this backdrop, MoHP is continuously putting its efforts to improve the uptake of digital solutions and obtain real-time health service uptake and related health status indicators and strengthen reliability of routine reporting.

Box 19.1 SWOT analysis of digital health

Strength	Opportunity
• Existence of plan and policies for foundation of digital health • Penetration of digital devices in the market • Increasing global and regional support environment • Availability of global resources • Dedicated IT team in the MoHP • MoHP initiation to establish the Standard and Interoperability Lab (SIL) • Readiness of HF Registry, ICD11 and Geo-codes for interoperability	• Reducing cost of technology • Increasing awareness and demand of digital health • Increasing engagement of academic institutions • Private sector development and competitive market • Demand for higher efficiency in health • Emerging solutions for financial transactions • Availability of global public goods
Weakness	**Threat**
• Poor governance mechanism to support adoption, authentication, validation and use of digital health tools and technologies. • Variation in the capacity at different levels and rural and urban settings • Uncertain investment in the ICT infrastructure • Absence of proper institutional mechanism at all levels of health including HR provisions • Lack of organized support system • Lack of standards, systematic and enterprise architecture for digital health	• Growing silos, sporadic and sub-standard products in the market • Lack of ICT friendly health facility building architecture • Poor inter-sectoral coordination mechanism • Skill mixed and IT friendly cadres are not sufficiently provisioned in the organogram at all levels • Unregulated digital health products

19.1.2 Major Activities of HMIS

- Conducted Provincial-level Training of Trainers (ToT) on the upgraded DHIS2 system.
- Organized and conducted comprehensive capacity-building programs regarding the Revised HMIS Tools for data focal persons.
- Facilitated specialized orientation sessions on DHIS2 for clinical and administrative staff within both Government and Private Hospitals.
- Implemented Department of Health Services (DoHS) website as per Department of Information Technology (DoIT) template.
- Collected the Health Facility Geo-Locations into the DHIS2 platform (6008 Health Facilities).
- Monitored and provided on-site technical assistance for the Integrated Health Dashboard Program across selected municipalities.
- Published the Annual Health Report 2080/81 and the Nepal Health Factsheet 2024.
- Target Population was projected upto the Local Level (ward wise) for F/Y 2081/82.

19.1.3 Status of Key Reporting Indicators

Status of HMIS reporting

Reporting from grassroots levels (FCHVs) have decreased to 98% in F/Y 2081/82 however reporting from public hospitals increased to 97% compared to last FY. (figure 19.5). Non public hospitals have national reporting proportion of 67% with cent percent reporting from Lumbini and Karnali province with lowest reporting of 57% from Bagmati province. BHSCs from all province have cent percentage reporting, as well as in national level. The national level reporting percentage of PHC-ORC is 95% with Lumbini province achieving cent percentage reporting and Bagmati province having lowest reporting rate of 85%. (Figure 19.6)

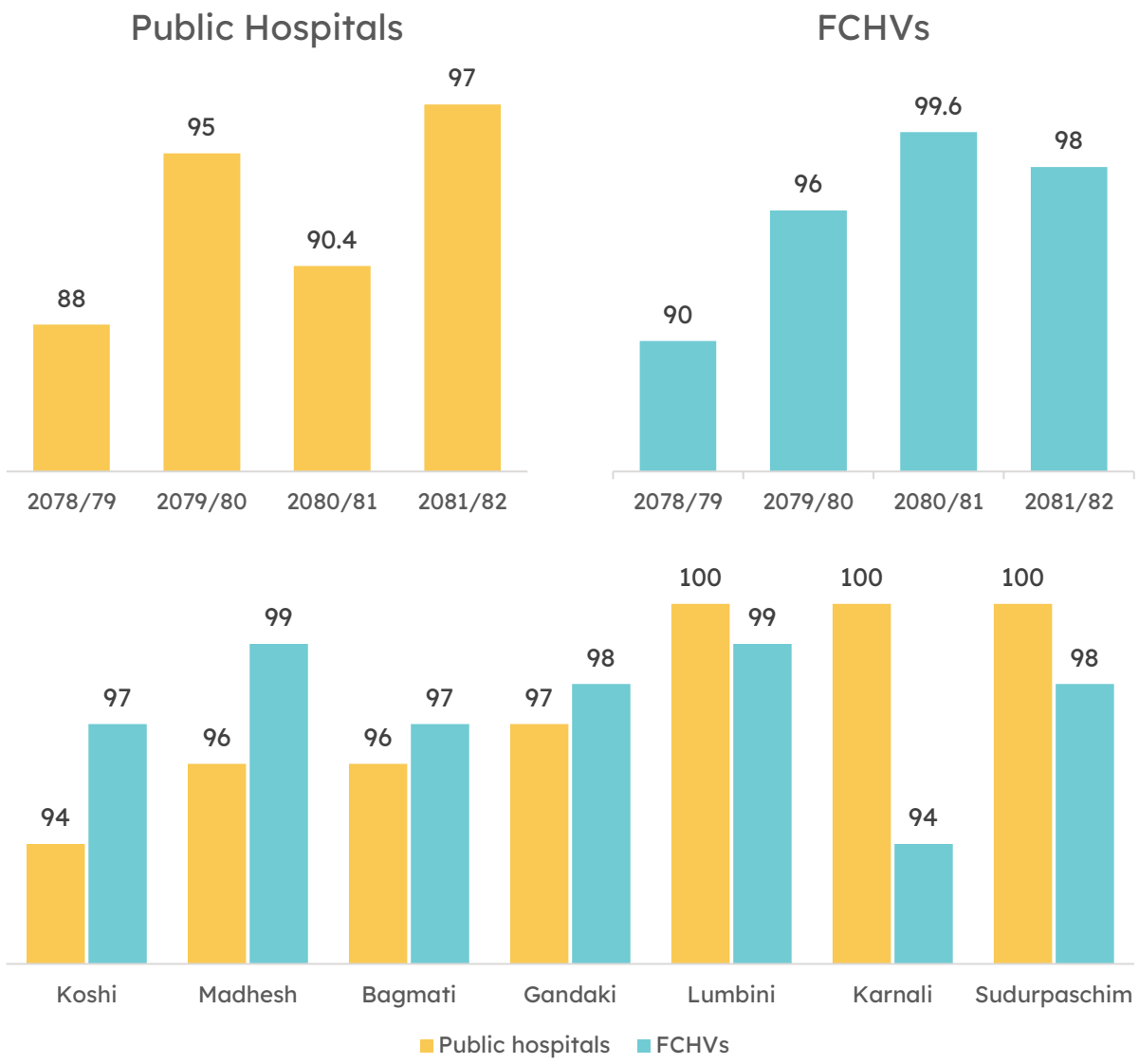
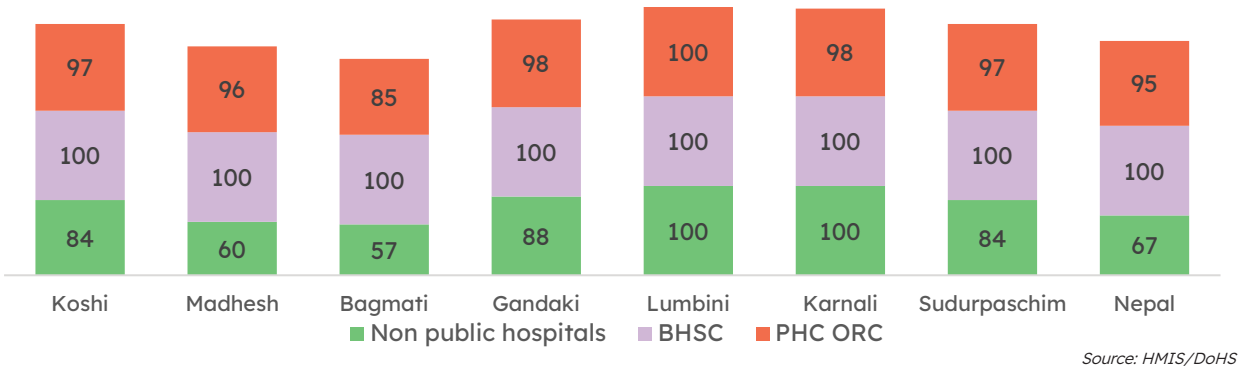


Figure 19.5 Reporting status from FCHVs and public health facilities in FY 2081/82

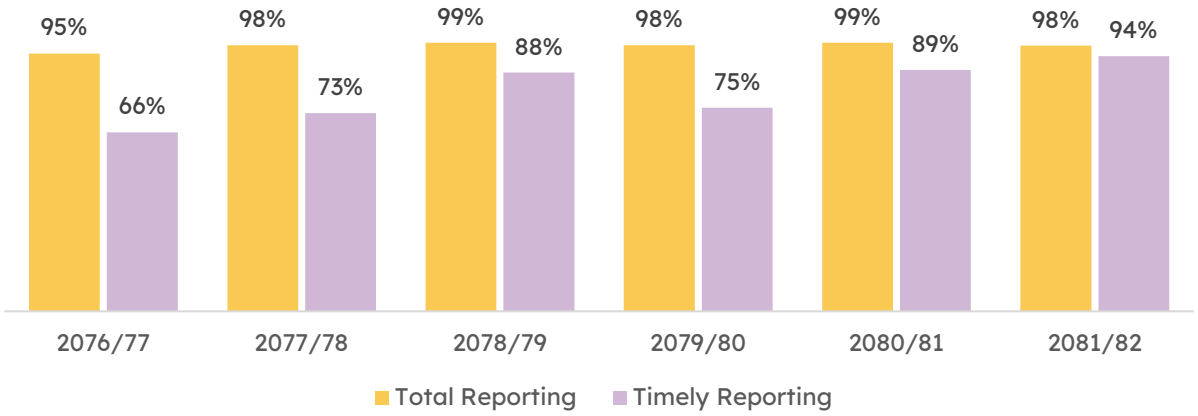


Source: HMIS/DoHS

Figure 19.6 Reporting status from non public hospitals, BHSC and PHC ORC FY 2081/82

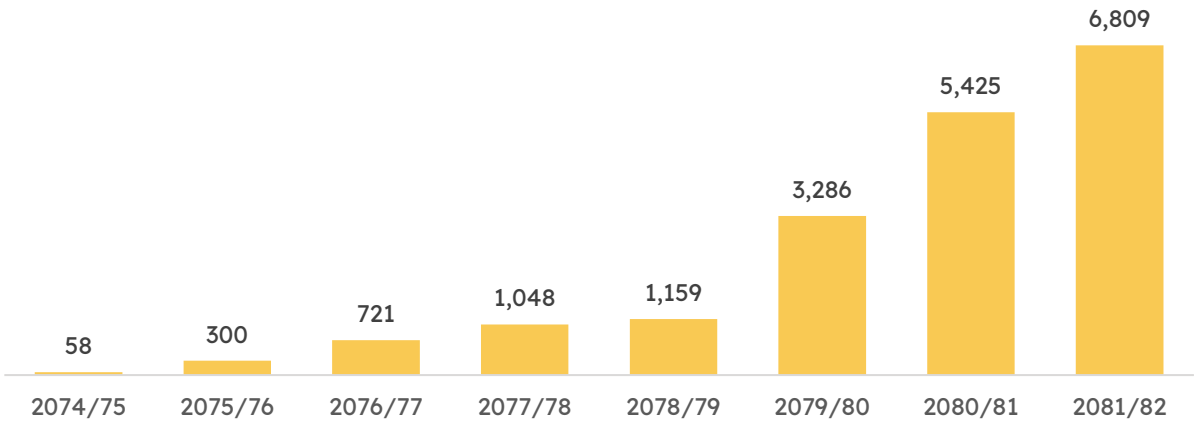
Status of eLMIS reporting

There were a total 6,809 health facilities reporting through e/LMIS. The total reporting percentage decreased (97.89%) compared to last year while timely reporting percentage increased from the previous year in FY 2081/82. A increase has been reported in timely reporting, from 89% last year to 94% the current year (figure 19.7).



Source: eLMIS/DoHS

Figure 19.7 National LMIS and Timely reporting trend from FY 2076/77 – 2081/82



Source: eLMIS/DoHS

Figure 19.8 eLMIS Rollout and Expansion Status

Health Facility wise eLMIS sites

Health Facility Type	Count
Central Stores	8
PHLMC Stores	15
National and Provincial Public Health Laboratories	8
District Health Offices	149
LLG Stores	772
Hospitals	263
Health Post/Primary Health Care/Basic Health Unit/ Community Health Unit/ others/Ayurvedic Health Center	5,594
Total	**6,809**

Province wise eLMIS Live sites

Province Name	Count
Koshi	1,017
Madhesh	902
Bagmati	1,463
Gandaki	982
Lumbini	1,173
Karnali	646
Sudurpashchim	626
Total	**6,809**

- LMIS reports from all SDPs on monthly basis are entered from Local Level Government.
- eLMIS is the only source of LMIS data for all tiers of Supply Chain in Nepal

Source: eLMIS/DoHS

Figure 19.9 eLMIS and LMIS Data entry sites by Provinces, 2081/82

Operational Status

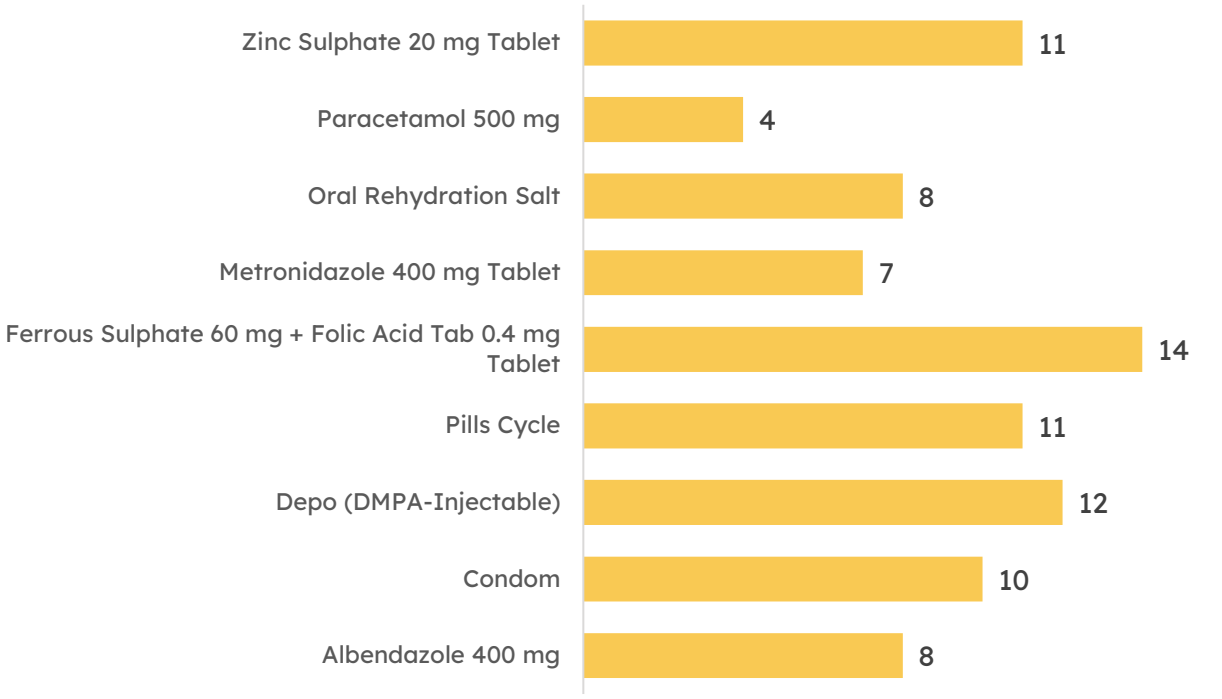
eLMIS is implemented at all federal, provincial, health offices, and local level stores. LLGs have realized the importance of supply chain processes and the necessity of real time information for the SDPs within their catchment areas. As a result, they have initiated gradual expansion of eLMIS sites at their SDPs, with 89% of SDPs operational on the system. (table 19.2)

Table 19.2 Operational Status of eLMIS by health facilities in FY 2081/82

Health Facility Type	Total number of eLMIS Sites	Operational	Non-Operational	eLMIS Utilization
Federal (Central) Store	8	8	0	100%
PHLMC (Provincial) Store	7	7	0	100%
PHLMC Cold Chain	8	8	0	100%
Health Office	77	77	0	100%
Health Office Cold Chain	72	67	5	93%
Local Level Government	753	727	26	97%
Local Level Government Cold Chain	19	18	1	95%
Laboratory	8	7	1	88%
Hospital	263	231	32	88%
Health Post/Primary Health Care/Basic Health Center/Urban Health Center/ Community Health Unit/ART Sites	5594	4897	697	88%
National Utilization	**6809**	**6047**	**762**	**89%**

Source: eLMIS/DoHS

The eLMIS and LMIS reports provides data visibility regarding stock status of key health commodities at the health facility level and essential medicines for basic health services on a quarterly basis. Among common essential commodities, FP commodities, Depo (DMPA injectable) and Pills have displayed the average stock out rate of 12% and 11% in the FY 2081/82. Among MNCH and essential commodities, paracetamol has the lowest stock out rate at 4%, whereas Zinc Sulphate shows a stock out of 11%. (figure 19.10).



Source: eLMIS system

Figure 19.10 Average Stock-Out Percentage of some essential medicines (FY 2081/82)

Box 19.2 SWOT Analysis of Health Information Management Program

Strengths	Opportunities
• Provision of public health act and regulations for recording and reporting. • Health policy with statement on information system modernization. • Long experience and expanded network up to the community level. • HMIS roadmap in place. • Revised HMIS tools implemented nationwide. • Provincial, health office level and LLGs staffs oriented/ trained on revised HMIS tools. • Major program indicators can be calculated through the platform • Data management in DHIS2 platform. • PHA guidelines and tools for data use. • Adaptation of ICD11. • Online reporting • Dashboard • Strengthened inter-agency coordination	• Representation of Secretary of Health in National Statistical Council. • Increased digital literacy. • Increased demand for data. • Existence of data management committees. • Federal and provincial M & E mechanism. • EHR and EMR in expansion • Partnership for data at global, regional and country level. • Maintaining regular updating of DHIS2
Weaknesses	**Threats**
• Lack of technical support team for DHIS and server management. • Late dissemination of target population. • Low use of GIS/data visualization. • Inadequate data quality assurance mechanism. Inadequate guidelines for data management and sharing. • Inadequate skilled staff at federal level. • Lack of IT and Medical Recorder personnel at federal and provincial levels • Problem in defining catchment area and target population for the health facilities	• Incomplete recording and reporting in the Hospitals, especially OPD. • Multiple software without standardization and interoperability. • Inaccurate target population in some places at local levels. • Chain of command and communication is not maintained • Lack of policy framework for managing data in EHR (confidentiality, security, storage). • Inadequate posts of medical recorders in the hospitals • Sustaining the System and Server Management • Lack of Statistical Literacy in the public. • Less resourceful in the Statistical & Technical Infrastructure and Capacity Building.

19.2 Logistic Management Program

19.2.1 About the program

Procurement of commodities within the nation is regulated by the Public Procurement Act (2063) and Regulation (2064). Following the devolution in the fiscal year 2075/76 (2018/19), the oversight of federal-level procurement has been entrusted to the Logistics Management Section (LMS), with a predominant focus on acquiring and disseminating vital pharmaceuticals and equipment.

The Consolidation of Annual Procurement Plan (CAPP) has been a standard practice at the Department of Health Services (DoHS) since the year 2071/72 (2014/15). CAPP Monitoring Committee (CAPP-MC), chaired by the DG, DoHS, is a team-oriented approach to monitor the execution of CAPP. In operation since 2017, the committee monitors the progress of procurement, addresses issues, and tackles challenges related to procurement execution. The CAPP-MC meetings, held on various dates, contribute to expediting the procurement processes of DoHS.

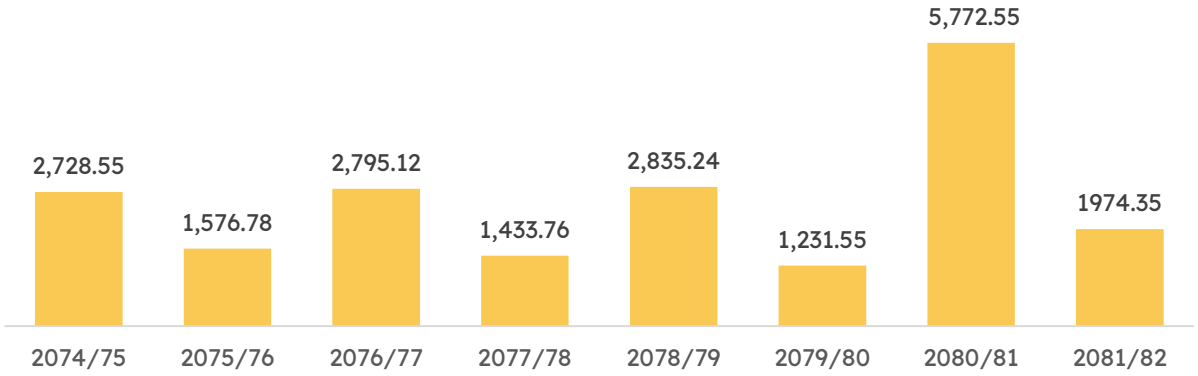
Adoption of the Standard Bidding Document (SBD) and Electronic Government Procurement (e-GP) has significantly improved efficiency, transparency, fairness, and competition. The initiation of the Single Stage Two Envelope (1S2E) bidding method in the procurement of goods, following the 12th amendment of the Procurement Procedures Regulation (PPR) in 2078/79 (2022), marks a notable development. The use of SOPs, established in previous years, plays a crucial role in facilitating the procurement process. The integration of e-GP and quality assurance measures for procuring medicinal goods contributes to the overall quality of the procurement output. Additionally, the use of standard technical specifications from the Technical Specifications Bank (TSB) is pivotal in ensuring the

quality assurance of medical goods. Directives for the disposal of expired medicines and medical waste guide procuring entities and stores in maintaining quality in logistics management.

Furthermore, the implementation of the new e-GP Operation Guideline in 2079/80 (2023) aligns with the directives of the Public Procurement Monitoring Office (PPMO). Nevertheless, there is an ongoing effort to develop and endorse a separate SBD for the health sector and a framework agreement under the guidance of PPMO.

SSimilarly, at the federal level, the Supply Chain Management Working Committee (SCM-WG) within the MD convenes periodic meetings to address specific supply chain performance issues, such as storage, reporting, and stock levels. These sessions involve discussions on key performance metrics, leading to the determination of remedial actions for improving SCM. The committee engages in evidence-based conversations covering policy, SOPs, strategies for enhancing supply chain performance, and capacity development of health workers, resulting in plans for remedial actions.

Simultaneously, the implementation of the Procurement Improvement Plan (PIP) 2074/75- 2078/79 (2017-2022) has played a crucial role in strengthening the MoHP's procurement framework, focusing on critical aspects of the procurement process. This initiative evolves into the comprehensive Public Procurement Strategic Framework for the Management of Medicines and Medical Goods (2079/80-2082/83), aiming to establish a coherent structural framework across health institutions. Additionally, in 2079 second edition of the handbook for medicinal goods procurement and supply was publicly available for synchrony.



Source: CAPP Execution Data, DoHS

Figure 19.11 Procurement Budget of DoHS in FY 2074/75 to FY 2081/82

Department of Health Services (DoHS) procurement budget from FY 2074/75 to FY 2081/82 reveals a pattern of significant fiscal variability over the eight-year period. According to the CAPP Execution Data, the budget reached a peak in FY 2080/81, totaling NPR 5,772.55 million, which represents a substantial increase compared to previous years. For the fiscal year (2081/82), the budget allocation for procurement was NPR 1,974.35 million.

Table 19.3 Program Division wise procurement budget

Program Division	Procurement Budget in Million NPR	Percentage	Major Procurement
DOHS	12.52	0.63%	Security Services, Stationaries and Office Supplies, and Drinking Water
Family Welfare Division (FWD)	607.25	30.76%	Vaccines, FP and nutrition commodities, Kits and Printing forms, format
Epidemiology and Disease Control Division (EDCD)	229.95	11.65%	Vaccines, serums, Test Kits and reagents, insecticides. medicines for disease control and emergency
Nursing and Social Security Division	38.5	1.95%	Consulting Services
Management Division	1086.13	55.01%	Major Equipment for hospitals, cold chain equipment, printing, transport services repair and maintenance work
Total	**1974.35**	**100%**	

Source: CAPP Execution Data, DoHS

The DoHS procurement budget for FY 2081/82 totals NPR 1,974.35 million, with the majority allocated to the Management Division (55.01%) for hospital equipment and the Family Welfare Division (30.76%) for vaccines, nutrition and family planning commodities. 11.65% was allocated to EDCD for disease control, vaccines, diagnostics and medicines, while the remaining funds support consulting and administrative services. This distribution is prioritized towards strengthening healthcare infrastructure and ensuring the supply of essential medical commodities.

19.2.2 Major Activities/Progress in FY 2081/82

In FY 2081/82, several key procurement and supply chain management activities were successfully implemented, including the quarterly SCMWG meetings, preparation of consolidated annual procurement plan, forecasting and quantification, procurement and distribution of hospital equipment, health commodities and essential medicines and supplies for emergencies, revision of guidelines and training materials, interaction and orientation for cargo handlers, and capacity-building on Effective Vaccine Management (EVM). However, a number of planned activities could not be completed. The management and disposal of expired medicines and obsolete items was delayed due to legal barriers and procedural complexity. Training on public procurement management and orientation on basic supply chain management, breakdown maintenance of cold chain equipment, pre-ship inspection of medicines and essential commodities were not conducted primarily due to limited time and a hold on USAID funding. Similarly, the finalization and dissemination of the Supply Chain Strategy 2024-2034 could not be achieved as the strategy remained unendorsed. Overall, while core operational activities were largely completed, some strategic and capacity-building interventions faced delays due to administrative and funding constraints.

Significant progress was made in the procurement of essential health commodities, equipment, and services across multiple program areas. A majority of procurement activities particularly for family planning commodities (e.g., condoms, implants, DMPA, IUCD), vaccines, emergency response supplies, and disease control items were successfully completed, demonstrating strong implementation performance. High-value procurements such as MR vaccines (multi-year contract), ongoing multi-year contract of TD, BCG, BoPV, JE vaccines, and advanced medical and diagnostic equipment were also effectively executed, although a few components within large equipment packages experienced partial cancellations. While most contracts under emergency health response and hospital equipment were completed, several key procurements including LLINs, microscopes for malaria programs, and the printing of HMIS and annual health reports could not be initiated due to inadequate budgetary resources and significant funding cuts from USAID. These challenges were further compounded by insufficient time for procurement execution as the fiscal year approached its end, which prevented the timely initiation of procurement of these items. Additionally, a small number of contracts were cancelled or remain incomplete, particularly in infrastructure, equipment, and consulting services mostly due to inadequate time to its execution. Moreover, several procurement processes had to be re-bid due to the bid-price exceeding the cost estimate. Overall, the procurement portfolio reflects robust progress with minor delays and cancellations, indicating generally effective procurement management with scope for improvement in planning and timely initiation of selected activities.

Table 19.4 Procurement method and procurement progress

Procurement Method	Total Number of Procurement Package	Number of Process Initiated	Not Initiated	Completed among process initiated	Cancelled among process initiated
International Competitive Bidding (ICB) Goods	8	8	0	8	0
National Competitive Bidding (NCB) Goods	30	28	2	25	3
Direct Procurement (DP) Goods	5	5	0	5	0
Direct Contract (DC) Goods and Services	4	2	2	2	0
National Competitive Bidding (NCB) Works	1	1	0	0	1
Sealed Quotation (SQ) Works	2	2	0	2	0
National Competitive Bidding (NCB) Non Consulting Service	3	3	0	3	0
(QCBS) Consulting Service	1	1	0	0	1
Total	**54**	**50**	**4**	**45**	**5**
		92.59%	**7.41%**	**90%**	**10%**

Source: CAPP Execution Data, DoHS

In FY 2081/82, overall progress of procurement activities was good, with 50 out of 54 procurement packages (92.59%) initiated and only 4 packages (7.41%) uninitiated. Among the initiated processes, 45 packages (90%) were successfully completed, while 5 (10%) were cancelled. All packages under International Competitive Bidding (ICB) and Direct Procurement (DP) for goods were fully initiated and completed without any cancellations, indicating efficient performance in these categories. There was a

substantial progress in executing National Competitive Bidding (NCB) for goods, however, a small number of processes were either not initiated or cancelled. In contrast, procurement under NCB works and QCBS consulting services was cancelled, highlighting areas for improvement. Except for the direct purchase activities, all the procurements were conducted using eGP. Overall, the procurement performance reflects a high level of implementation efficiency, with minor gaps in initiation and completion.

Table 19.5 List of equipment procured by DoHS in FY 2081/82

SN	Item	Qty
1	Fully Automated Biochemistry Analyzer and Immunoassay Analyzer with Integrated System	2
2	Fully Automated Blood Culture System with Antibiotic Neutralization and TB Culture	2
3	Fully Automated Microbes Identification, Antibiotic and Anti-Fungal Drug Sensitivity System	2
4	Automated Maldi-TOF MS System	1
5	Fully Automated Culture Media Preparatory System	1
6	Endo-Urolory Visualization System and Thulium Fiber Laser System	2
7	Thulium Fiber Laser	2
8	3D Printer	2
9	Dental X-Ray Set (RVG Dental X-Ray Unit)	10
10	High End Wireless 3D Intraoral Scanner	2
11	Cone Beam Computerized Tomography (CBCT)	2
12	Dental Compressor	60
13	Dental Chair	60
14	Dental Instrument Set	100
15	HD Video Endoscopy with Gastroscope	4
16	Haemodialysis Machine	50
17	Reverse Osmosis Unit for Haemodialysis	7
18	Anesthesia Workstation with 7 Parameter Patient Monitor	25
19	Molecular (WHO-Recommended) Rapid Diagnostic (mWRD) Device for Tuberculosis screening and diagnosis	8
20	Consumables	5,000
21	Intra-Aortic Balloon Pump (IABP) System	2
22	Intravascular Lithotripsy (IVL)	2
23	Intra Vascular Ultrasound (IVUS) System	2
24	Endoscopic USG	1
25	Cardiac Output Monitor (Haemodyanamic Monitor)-Non Invasive	5
26	Automated Extraction Kit for HPV DNA Screening for the machine Llferiver @ 8X3600	91,000
27	RT-PCR Kits for HPV DNA Tes	91,000
28	VTM	91,000

Major Issues and challenges

The procurement process faced several key issues and challenges during the reporting period. Inadequate budgeting for essential programmatic items and gaps in aligning budget planning with actual equipment needs affected the rational of procurement. Delays were further compounded by late submission of procurement requests and complex decision-making processes. Ensuring value-based procurement remained challenging, particularly in balancing competition, quality, and cost. The procurement of proprietary items with single suppliers, such as specialized reagents and implants, also limited competitive options. Additionally, unnecessary media rumors negatively influenced procurement decisions and staff morale. Repeated delays and re-bidding occurred due to cost estimates being approved at unrealistically low prices, affecting the procurement of critical supplies such as RUTF, F-75, F-100, Vitamin A, implants, and MNP. Furthermore, the absence of multi-year contracting provisions for key and regular health commodities necessitated annual procurement cycles, leading to delays and disruptions in the timely availability of essential supplies.

Similarly, Supply chain management also faced persistent structural and operational challenges. There is an inadequate number of skilled human resources to effectively manage supply chain functions at different levels. Many processes remain manual, with limited automation and digital systems, leading to inefficiencies. Inadequate storage infrastructure, including limited warehouse space and suboptimal storage conditions, further constrains efficient inventory management. Additionally, systemic issues commonly observed in Nepal such as weak coordination among stakeholders, logistical constraints in remote areas, and limited use of data continue to affect the overall performance and responsiveness of the supply chain system.

Conclusion

The performance of the Logistic Management Section during FY 2081/82 demonstrates substantial contributions to strengthening healthcare service delivery across Nepal. Through prioritized and strategic procurement of essential medicines, vaccines, and hospital equipment, the division has supported improved service readiness and alignment with national health priorities. Despite notable progress in procurement efficiency and supply chain operations, challenges related to budgeting, procedural delays, and system limitations persist. Addressing these gaps particularly in planning, adoption of multi-year contracting, strengthening human resources, and enhancing automation will be critical to ensuring timely procurement and a more resilient and responsive supply chain system. Overall, the efforts made during the fiscal year provide a strong foundation for further improvements in logistics management and sustainable healthcare delivery.

Box 19.3 SWOT Analysis of Logistics Management Program

Strengths	Opportunities
• Use of Standard Bidding Documents prepared by Public Procurement Monitoring Office (PPMO) ensuring compliance and uniformity • Availability of guidelines for inventory management, transportation, forecasting, and quantification • Increasing use of e-Government Procurement (eGP) system for transparent procurement processes • Growing experience in emergency procurement during crises (e.g., pandemics, disasters)	• Need and scope for interoperability between systems (AWPB, CAPP, TSB, LMIS/PAMS) to reduce duplication and improve efficiency • Use of Framework Agreement for procurement of essential medicines and commodities for basic and emergency health services • Use of Multi-Year Contract for procurement of regular and essential program commodities • Adoption of international best practices in procurement and supply chain management • Digital transformation (automation, real-time dashboards, data analytics for forecasting) • Capacity-building support from regulatory and development partners
Weaknesses	**Threats**
• LMIS/PAMS not comprehensive enough for full quantification, forecasting, and real-time stock tracking • Weak data quality and limited use of data for decision-making • Inadequate skilled human resources in procurement and supply chain management • Insufficient staffing in warehouses and store management • High turnover of trained personnel affecting continuity • Procedural complexity and lengthy approval processes delaying procurement • Weak coordination between planning and procurement units and the three tiers of government • Limited storage infrastructure and suboptimal warehouse conditions • Inefficient last-mile distribution, especially in remote areas • Limited capacity building opportunities in procurement and poor monitoring and supervision mechanisms	• Price volatility and supply chain disruptions (global or regional crises) • Market dependency on limited suppliers and import-based procurement • War, Conflict, Natural disasters disrupting supply chains and logistics systems • Insufficient capacity of bidders and suppliers at sub-national level • Rumors and Media Pressure • Political interference, undue influence, and governance challenges in procurement • Fragmentation of procurement across tiers leads to inefficiencies

19.3 Health Infrastructure Development Program

19.3.1 About the Program

Infrastructure Development Section (IDS) oversees the enhancement of health infrastructure by developing guiding documents and maintaining updated records of biomedical equipment and health infrastructure of health institutions.

The Nepal Public Health Service Act 075 Section 7 has mentioned the need to provide quality health services by establishing health facilities as per standards and management of human resources, technologies and equipment. The MoHP, Nepal Health Sector Strategy vision that "All Nepali citizens have productive and quality lives with highest level of physical, mental, social and emotional health" and the mission "Ensure citizens fundamental rights to stay healthy by utilizing available resource optimally and through strategic cooperation between service providers, service users and other stakeholders" is an important guiding principle for the physical asset management (PAM) Strategy.

Availability and utilization of the entire physical asset including all the medical equipments and its management round the year is major element to ensure quality health service to the people. One of the major problems in promoting and availing quality health services at all levels include physical infrastructure and asset management in the health sector.

Since 2015 the global health agenda has been focused on achieving the Sustainable Development Goals (SDGs) with well defined target and detailed indicators. The work of achieving equitable access to, and optimal use of, medical devices is a critical component towards achieving the SDGs.

Key functions of IDS include supporting national policy development, managing health infrastructure information through HIIS, aiding health facilities in creating infrastructure plans, coordinating with authorities for basic infrastructure management, overseeing hospital code of conduct, supervising health infrastructure, managing medical equipment data, and collaborating with stakeholders for maintenance and mobilization of human resources including biomedical engineer.

19.3.2 Major Activities in FY 2081/82

Total of 12,500 inventory stickers are distributed to Federal and Provincial hospitals for labeling on Biomedical Equipments.

Box 19.4 SWOT Analysis of Health Infrastructure Development Program

Strengths	Opportunities
• Coordination between the three tiers of governments • Real time information about the ongoing activities is obtained • Inventory management reduces risk of loss of medical equipment • Availability of records of biomedical equipment (electronic) and health infrastructure supports evidence-based planning of procurement of medical equipment and health infrastructure	• All three tiers of governments and development partners are supporting to develop guidelines, standards, biomedical workshop and other infrastructures • A sticker with barcode can be used in near future • Development of specification of biomedical equipment is priority program.
Weaknesses	**Threats**
• Lack of Government owned information management system to collect real time data of biomedical equipments. • Lack of technical (Biomedical and Civil/Architect technicians/Engineers) human resources in most of the health facilities. • Lack of training on inventory management to Biomedical and Civil/Architect technicians/Engineers.	• Multiple information management system of inventory • Fast growing technologies on biomedical equipment and infrastructure is being difficult to cope with limited human resources on IDS • The current specification of stickers is outdated due to technological advancement • Low priority on technological development of biomedical equipment and infrastructure

19.4 Environmental Health and Healthcare Waste Management Program

19.4.1 About the Program

Environmental Health and Healthcare Waste Management Section serves as a focal point for development of quality standards for WASH in healthcare facilities and healthcare waste management. It also facilitates building climate resilient health facilities and prepare plans of action to reduce greenhouse gas emission from health facilities. Similarly, this section is also responsible to facilitate carrying out regular surveillance and studies related to impact and drinking water, air and overall environmental on health status and support for environmental pollution control.

It is unlikely to attain SDGs 3 and 6 without proper WASH facilities as well as effective healthcare waste management in healthcare facilities. Joint Monitoring Programme (JMP) report estimates essential WASH services in healthcare, including water, sanitation, hygiene, waste management, and environmental cleaning, aligning with the targets set by SDG 6.1, 6.2, and 3.8. The JMP 2019 report indicates inadequate WASH services in Nepalese healthcare facilities with nearly 2 million individuals using health facilities without access to water and sanitation. Merely 389,000 people have access to healthcare facilities with basic waste management. While water sources and functional toilets have improved in most facilities, universal access to hygiene amenities is lacking. Additionally, Nepal generates 0.99 to 1.73 kg of healthcare waste per bed daily, with 0.33 to 0.59 kg being hazardous. COVID-19 hub hospitals produce an average of 1.1 kg waste per active bed.

MoHP aims to improve healthcare waste management through revised National HCWM Standards and Operating Procedures (2020). Nepal has also approved National Standard on WASH in healthcare facilities as an effort to improve WASH services aligning with the Public Health Service Act 2075 (2018). The NHS-SP also highlights the importance of HCWM and WASH while providing quality health services. National Health Care Waste Management Standards and Operating Procedure 2020 is the guiding document for the safe management of health care waste in health facilities which also includes proper way of collection, transportation and the disposal of waste in health facilities. (Box 19.5) National Standard on Water, Sanitation and Hygiene for Health Service providers2078 sets out the standards for WASH services for different level of health facilities. (table 19.6)

Box 19.5 Key areas of National HCWM Standards and Operating Procedure, 2020

- Definition, sources and categorization of Health care waste
- Environmental and public health impacts of health care waste
- Health care waste management planning and role of different level of Governments
- Legal framework, commitments and principles
- Different steps of health care waste management system including waste minimization, treatment and management of hazardous health care waste
- Health and safety practices, training and raising awareness

Table 19.6 Standard of WASH in Healthcare Facilities

Area	Required standard	Types of Health Facilities				
		Category-1	Category-2	Category-3	Expanded service	Mobile camps
Basic	Basic			√	√	
	Adv. Level 1			√		
	Adv. Level 2	√	√			
Basic	Basic		√	√	√	
	Adv. Level 1		√			
	Adv. Level 2	√				
Basic	Basic			√	√	
	Adv. Level 1			√		
	Adv. Level 2	√	√			

Note: The classification of health facilities is provided in Schedule 3

This table categorizes health facilities based on **the National Standards on Water, Sanitation, and Hygiene for Healthcare Facilities 2021.** The table classifies facilities into five types:

1. Category-1 Health Facilities
2. Category-2 Health Facilities
3. Category-3 Health Facilities
4. Expanded Service Facilities
5. Mobile Camps

Each type of facility is assessed against three key WASH components (Drinking Water, Sanitation, and Hygiene) at different levels of service: Basic, Advanced Level 1, and Advanced Level 2.

1. Drinking Water Standards in Health Facilities

- Basic Level: Required in expanded service facilities and mobile camps, ensuring that water is available from an improved source on the premises.
- Advanced Level 1: Applied in Category-3 facilities, ensuring water distribution for drinking, handwashing, and medical purposes. All standards mentioned in the National Drinking Water Quality Standards must be met.
- Advanced Level 2: Required in Category-1 and Category-2 health facilities, ensuring water distribution for special situations (e.g., hemodialysis, intensive care unit, newborn intensive care unit, neurology-related, heart-related procedures, operations, and plastic surgery). Drinking Water Quality Guidelines must align with World Health Organization (WHO) standards and the specific needs of each medical device.

2. Sanitation Standards in Health Facilities

- Basic Level: Applied in Category-3 health facilities, expanded service facilities, and mobile camps, ensuring that improved sanitation facilities are usable, with dedicated staff toilets, sex-separated toilets with menstrual hygiene facilities, and accessible toilets for people with limited mobility.
- Advanced Level 1: Implemented in Category-2 facilities, ensuring sanitation facilities are designed according to different locations/settings for all people as specified in Schedule 11.
- Advanced Level 2: Required in Category-1 facilities, ensuring sanitation facilities meet location-based and service-user requirements as specified in Schedule 11.

3. Hygiene Standards in Health Facilities

- Basic Level: Required in expanded service facilities and mobile camps, ensuring that a handwashing basin with soap and water or alcohol-based hand sanitizer is available at service points and in toilets.
- Advanced Level 1: Applied in Category-3 facilities, with hygiene standards specified based on different dimensions and sub-dimensions in Schedule 12.
- Advanced Level 2: Required in Category-1 and Category-2 facilities, ensuring compliance with the standards specified in Schedule 12.

This table serves as a guideline for ensuring that different types of health facilities meet appropriate WASH standards to promote safe and effective healthcare services.

19.4.2 Major Activities in FY 2081/82

- Conducted orientation and on-site coaching programs for the expansion of climate-resilient and environmentally sustainable healthcare facilities in three districts (Jumla, Baglung, and Rautahat).
- Conducted an advocacy and on-site coaching program on climate-resilient health facilities and the reduction of GHG emissions from the health sector, along with a workshop on the integration of health into NDC 3.0 in two districts (Doti and Kathmandu).
- Activities conducted with support from UNICEF Nepal included:
    - Conducted a workshop on the WASH FIT orientation package with stakeholders.
    - Finalized standard drawings and guidance notes for WASH in healthcare facilities (HCFs).
    - Conducted a workshop on the implementation guidelines of the existing national WASH FIT tool.
    - Conducted a workshop to finalize the WASH in HCF roadmap.
    - Conducted a workshop for the preparation of liquid healthcare waste management (HCWM) guidelines.
- Finalized and endorsed the WASH FIT tool for basic healthcare facilities.
- Expanded the WASH FIT program to 36 district hospitals.
- Conducted a WASH FIT capacity development program for healthcare workers from different districts.
- Initiation of preparation of guidelines for Liquid healthcare waste management.
- Preparation and publication of Healthcare Waste Management (HCWM) and WASH-related IEC and learning materials.

Progress of WASH in Healthcare Facilities According to the 2024 JMP Report.

In 2024 (FY 2080/81), the Joint Monitoring Programme (JMP) of WHO and UNICEF published global report on Water and Sanitation Status of Nepal. The report published data on water, sanitation, hand hygiene, healthcare waste management and environmental cleaning sector in line with sustainable development goal indicators. The full report is available at Water, sanitation, hygiene, environmental cleaning and waste management in health care facilities: 2023 data update and special focus on primary health care | JMP and data for regions and country can be found in the link Downloads index | JMP.

In comparison to the previous years' report, Nepal's progress in 2024 is good where there are less data gaps in all service levels. Nepal is amongst the 29 countries in the world who have estimates for all five basic WASH indicators. Nepal is the country where hand hygiene facilities at point of entry and waste segregation is highest (99%). To be specific, Nepal is one of the 73 countries with basic water supply (water available from improved source eg tubewell, pipe and protected well/spring in premise) coverage of 83%, 52 countries with basic sanitation (improved toilet that is usable, dedicated to staff, male/female and person with disability) coverage of 21%, 48 countries with basic hand hygiene (water and soap or alcohol based hand rub available) available service of 70%, 67 countries with basic healthcare waste management (safely segregated into bins, sharp and infectious waste treated and disposed safely) service of 13% and 40 countries with environmental cleaning (cleaning protocol available and all staff with cleaning responsibility trained) service of 4%. The access to environmental cleaning is least (84%) where persons responsible for cleaning have not received training and lacks cleaning protocol followed by 12% in healthcare waste management, 7% in hand hygiene and 5% in sanitation.

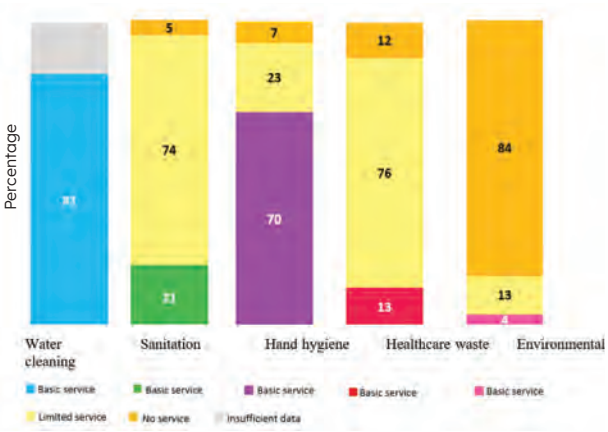


Figure 19.12 WASH Facilities in HF

Access to basic water supply is relatively better in urban (84%) than rural (82%), better in hospital and non-government (98%) than non-hospital (78%). Access to basic sanitation is better in urban (20%) than rural (13%), much better in hospital (45%) than non-hospital (13%). The situation of basic hand hygiene is relatively better off in Nepal- highest in non-government setting (88%) and lowest (64%) in non-hospital setting. The situation of basic waste management service is poor in general- higher in urban (16%) than rural (4%), and highest in non-govt (58%) and lowest in non-govt (8%). The situation of environmental cleaning is poorest in Nepal in general with higher coverage in urban (5%) than rural (2%) setting, and better off in non-government (11%) than hospital/non-hospital (2%). Almost three quarter of healthcare facilities have limited sanitation (absence of disability friendly toilet) and healthcare waste management services (lack of waste treatment and disposal) which is the challenge to meet the sustainable development goal (SDG) target of 2030.

Nepal's effort to improve WASH service in healthcare facilities are highly encouraged by global team. Nepal delegates have participated in many international forum and shared our experiences which have been highly appraised. Nepal's case study has also been published in global report 2024 showing commitment of HCF staff improving WASH services. The details can be accessible at https://www.washinhcf.org/wp-content/uploads/2024/12/Global-status-of-WASH-FIT-2024_final-web.pdf.

Box 19.6 Key Findings of GHG Emission Study 2079/80

This study estimates Nepal's health sector GHG emissions at 0.002% of global GHG emissions (1,164,719 tCO2e), constituting 4.1% of Nepal's GHG emissions and 0.05% of global health sector emissions. (Table 19.7 and 19.8)

Table 19.7 Type of Emissions covered in GHG emission study 2079/80 (2023)

Scope 1
Stationary/mobile combustion, fugitive emissions (cooling/fire suppression, medicinal/anesthetic gases), and waste (solid waste disposal, composting, incineration of non-hazardous/general healthcare waste, clinical mix, hazardous waste).
Scope 2
Purchased electricity and steam/heat/cooling.
Scope 3
Indirect emissions involve business trips, employee computing, patient commuting, inhalers (MDI, DPI), extra supply chain, electricity transmission/distribution losses, and waste (solid waste disposal, composting, incineration, mirroring direct emissions).

Table 19.8 Key Findings from baseline assessment of GHG emission of Nepal's health sector operations 2079/80 (2023)

Scope 1 Direct Emissions	**474,846.91**	**40.77%**
1.1 Stationary Combustion	104,151.89	8.94%
1.2 Mobile combustion	39,788.49	3.42%
1.3 Fugitive Emissions and Cooling and fire suppression	326,048.02	27.99%
1.4 Medicinal/Anesthetic gases	4,858.51	0.42%
Scope 2 (Emissions from purchased electricity)	**11,555.40**	**0.99%**
2.1 Purchased electricity	11,555.40	0.99%
Scope 3 (Indirect emissions)	678,316.57	58.24%
3.1 Extra Supply Chain	587,102.03	50.41%

Additionally, analysis of Nepal health facility survey 2021 was carried out to monitor the progress toward SDG 2030 with technical collaboration of UNICEF. (See Key Findings in Box 19.7)

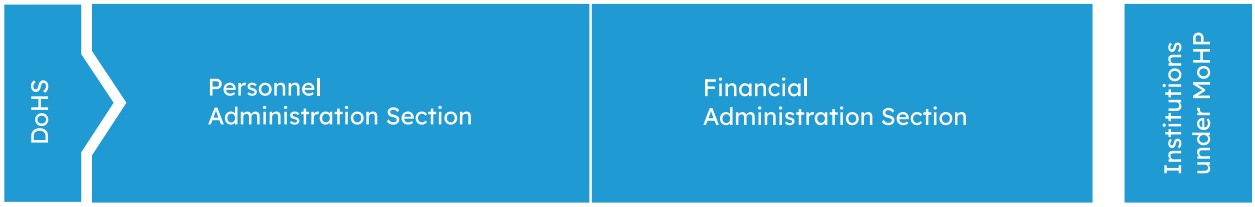
Box 19.7 Key Findings of NFHS 2012 Further Analysis

Over 80% of healthcare facilities in Nepal have access to basic improved water supply (Fig 19.13) with highest percentage in Gandaki province and the lowest in Madhesh province. Similarly, more than 60% of Health Facilities offer basic hygiene facilities, with Bagmati and Gandaki provinces having the highest percentages and Madhesh province the lowest. However, basic hygiene, Healthcare Waste Management, and environmental cleaning facilities are grossly inadequately both at national and at sub-national levels emphasizing the urgent need for improvement.

Box 19.8 SWOT Analysis of Environmental Health and Waste Management Program

Strengths	Opportunities
• Dedicated Environmental Health and Healthcare Waste Management Section serving as a national focal point. • On-site coaching and orientation programs for waste treatment technologies. • Advocacy and integration of health into NDC 3.0. • Promotion of climate-resilient health facilities. • Multi-level government engagement in HCWM planning and implementation.	• Scaling up WASH FIT to 36 hospitals. • Development of national framework and guidelines for liquid healthcare waste. • NDC 3.0 integration provides opportunity for climate financing. • Adoption of non-burn (autoclave and microwave) treatment technologies for HCWM.
Weaknesses	**Threats**
• Lack of trained cleaning staff and absence of cleaning protocols in many facilities • High proportion of facilities lack proper hazardous waste treatment systems. • Insufficient WASH infrastructure in healthcare facilities. • Weak coordination, particularly between municipalities and healthcare facilities, regarding the final disposal of healthcare waste. • Absence of a national system for systematic collection and reporting of WASH service data in healthcare facilities.	• Limited financial and technical resources for scaling advanced WASH services. • Growing healthcare services increase hazardous waste volume. • Inadequate infrastructure may lead to unsafe disposal. • Variability in adherence to national standards across provinces and facility types.

20 Human Resource in Health and Health Finance Management



20.1 Human Resource in Health (HRH) Administration and Management

20.1.1 Overview of HRH administration and management

Human resource in health (HRH) is an essential component of health system building block. WHO defines HRH as all people engaged in actions whose primary intent is to enhance health. The umbrella of HRH includes both technical and non-technical human resources required for operation from grassroots to policy making. Indeed, Health service providers constitute about two thirds of the HRH and remaining third is composed of health management and support workers.[1] WHO 2006 report acknowledged the need of accelerating the progress and sustain achievements in health sector and called for a launch of Global Health Workforce Alliance. Furthermore, HRH agenda in health system need to be at the center of political and policy agenda for country to address the HRH crisis.[2] HRH administration and management involves the spectrum of planning, deployment, capacity building and continuous professional development, promotion, transfer and training of employees. The proper placement and use of human resources is crucial for effective quality health care delivery. As per the health service providers registered in the respective health professional councils in Nepal, there are 9.04 doctors, 21.08 nurse, 20.67 AHWs, 11.81 ANMs, 10.27 laboratory personnel and 5.97 Health Assistants per 10,000 populations.[3] However, these are only registered numbers and do not capture the picture on availability and enrollment in the health system of Nepal- private/ public.

Key guiding documents

In Nepal, one of the important milestone for management of HRH is promulgation of Nepal Health Service Act 2053 (1997), which included provision, among many of its provision, of need of remote area for at least two years for promotion and that such health workers are prioritized in nomination for scholarship and training opportunities. And to ensure the remoteness be well defined, the act in its schedule enlisted the then districts in five categories. Additionally remote allowances were introduced as financial incentives for health workers in remote posting.[4] This started the government initiatives dedicated to redistribution of the HRH in the remote areas which was further strengthened at the level of implementation with the Health Service Rules 2055 (1999).[5] The act and rules through its series of amendments remain functional till date to manage HRH in health system. In all major policy, strategy and guiding documents, HRH has been pronounced as an important component and the realization of needful retention of the young medical education graduates in the country led the decision of GoN to instill a two-years bond service program to the medical education students from reservation quotas/scholarship for undergraduate studies in 2060/61 (2004). The bond was further expanded to all level of courses taken in the medical education and is guided by Medical Education Policy 2080 (2023)[6], this is further attached with the provision of the certificate from Nepal Medical Council (NMC).

In due course of time, MoHP has been putting its efforts to address the HRH planning, projection and management through its broader sector strategic plans as well as strategies dedicated for HRH- Nepal Strategic Plan for Human Resources for Health 2059/60-2073/74 (2003–2017), Human Resources for Health Strategic Plan 2067/68- 2071/72 (2011–2015) and Nepal Strategic Plan for Human Resources for Health 2077/78-2086/87 (2021–2030). In addition to these strategies, MoHP has put on its efforts to need of dedicated HRH for functionality of the health facilities also through MSS tools elaborating on the functional organogram based on services envisioned to be provided through the respective health facilities.

1 World Health Organization. The World Health Report 2006. Working together for health. Geneva: World Health Organization; 2006.

2 Fronteira, I., Buchan, J., Poz, M.R.D. et al. 2022. Leadership in HRH: remembering the future? Human Resource Health 20, 38 (2022). https://doi.org/10.1186/s12960-022-00738-9

3 Ministry of Health and Population. 2021. Nepal Strategic Plan for Human Resources for Health 2077/78- 2086/87 (2021–2030). Government of Nepal.

4 Nepal Law Commission. 1997. Nepal Health Service Act, 2053 (1997) and its amendments. Government of Nepal.

5 Nepal Law Commission. 1997. Nepal Health Service Rules, 2055 (1999) and its amendments. Government of Nepal. 6 Medical Education Commission. 2023. Medical Education Policy 2080 (2023). Government of Nepal.

6 Medical Education Commission. 2023. Medical Education Policy 2080 (2023). Government of Nepal.

20.1.2 Major Activities in FY 2081/82 in DoHS network

HRH administration and management is an important function carried out by DoHS Personnel Administration Section (PAS). The major responsibilities and objective of the PAS involve, but not limited to:

- Provide routine and programmatic administrative functions of handling day-to-day administrative requirements of the offices and programs including management and updating of personnel information of all levels and institutions under DoHS
- Support and conduct organization and management (O&M) survey focused to review existing structure against the scope of work and propose an organizational structure that best fits for the attainment that scope of work/objectives of the organization
- Manage the posting and transfer of medical officers and other health workers who completed their studies under scholarships through Medical Education Commission (MEC).
- Deployment, transfers, promotions, recommendations and retention of the HRH within jurisdiction of DoHS
  - DoHS can deploy, level upgrade and transfer up to 7th level of HRH under MoHP
  - DoHS can recommend to MoHP for approval of special leave and education leave requested by health workers under its jurisdiction
- Support in legal affairs to DoHS
  - Provide legal opinion and advice on the questions of legal dilemma.
  - Prepare reply to defence on the cases filed against the DoHS
  - Provide assistance and opinion on legal documents as well as on the procedure and guidelines to be prepared.

Routine activities

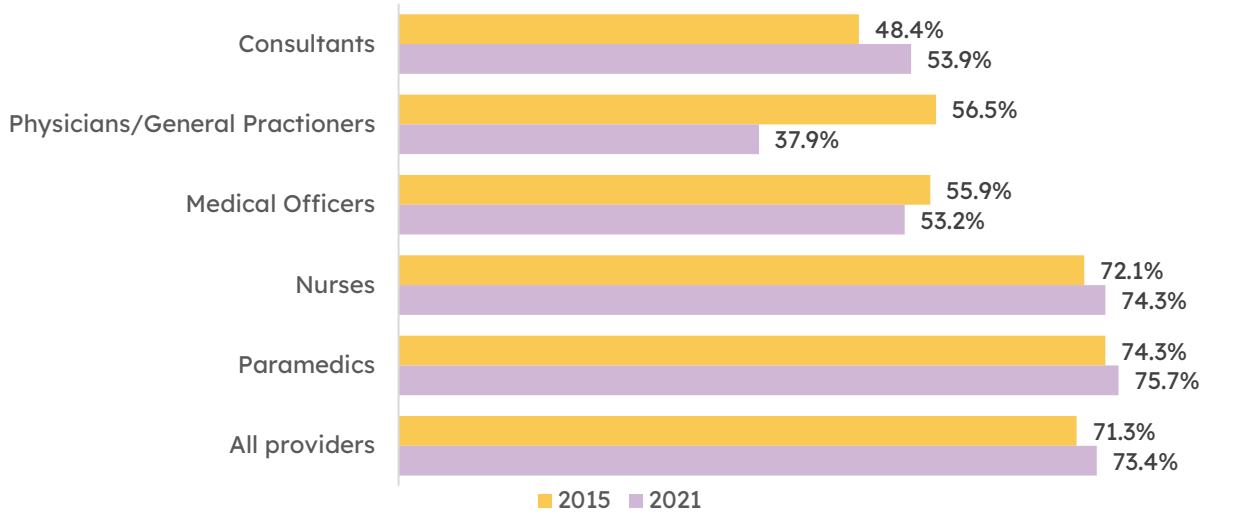
- Maintain the professional discipline of its employees
- Approval of leaves including issuing letter of recommendations to MoHP for the approval of special and education requested by employees up to the 7th level
- Manage internal promotion up to 7th level. This is done twice annually based on batches of entry and fulfilment of the criteria for internal promotion including the review of the performance of the employee (Karya Sampadan Mulyankan (Ka. Sa.Mu.))
- Manage transfers of the health workforce under jurisdiction of DoHS
- Manage the retirement of staff including the mandatory retirement based on age limit as per government guideline
- Approval of resignations of staffs under the jurisdiction of DoHS
  - Below 7th level,
  - 7th and above is done through MoHP.

Furthermore, each entity under MoHP/DoHS are liable for the capacity building, regular supervision and monitoring, mentoring and coaching of HRH under their jurisdiction to ensure quality of care the point of service delivery.

20.1.3 Status of HRH Administration and Management

Status of fulfillment of sanction post

There were 73.4% fulfilled posts against the sanctioned posts within the MoHP. There were consistent gaps in the fulfilment across all cadres with marked decline in the fulfilment in the positions of the physicians/ general practitioners (figure 20.1) (See Annex table 20.1 for the status of fulfilment of sanction post in DoHS network). It is worrisome that there are no consultants or physicians and no general practitioners in Karnali Province (table 20.1).



Source: NHFS 2015 and NHFS 2021

Figure 20.1 MoHP sanctioned posts filled with cadre of HRH

Table 20.1 Sanctioned posts filled across provinces and heath facility type

Background characteristics	Consultants	Physicians/general practitioners	Medical officers	Nurses	Paramedics *	All providers**
Facility type						
Federal/provincial-level hospitals	53.9	42.3	58.5	78.2	73.4	68.8
Local-level hospitals	-	22.7	30.7	59.8	81.8	69.7
PHCCs	-	-	44.4	52.6	81.9	74.7
BHS centres	-	-	0	0	75.2	75.1
HPs	-	-	0	0	76.8	76.7
Urban Health Centres	-	-	-	-	18.7	18.7
CHUs	-	-	-	-	7.8	7.8
Province						
Koshi	23.4	50	33.3	73.3	67.5	65.2
Madhesh	34	44.4	65.9	62.3	85.2	82.7
Bagmati	77.2	50	71.8	88.6	83.5	82.6
Gandaki	52.1	37.5	36.6	57	59.2	57.2
Lumbini	48.8	33.3	32.4	53.2	73.6	68.8
Karnali	0	0	23.8	58.6	71.8	69.7
Sudurpaschim	16.7	12.5	32.8	69.9	68.8	65.5
Total	53.9	37.9	53.2	74.3	75.7	73.4

Source: NHFS 2021

*Includes health assistant, auxiliary health worker, senior auxiliary health worker, public health inspector, public health officer, auxiliary nurse midwife, laboratory technologist, laboratory officer, laboratory technician, laboratory assistant, radiographer, and dark room assistant

** Includes consultants, physicians/general practitioners, medical officers, nurses, and paramedics

These gaps in the fulfilment are majorly due to lack of timely call for vacancies from the public service commission (PSC) to fulfill the vacant positions, relying on the contract based staffs, decreased retention of the HRH and increasing emigration of the HRH to global spheres. MoHP/DoHS is serious to address this issue and is putting its continuous efforts to ensure timely call for vacancies and regular O & M based upgrading of the organizational structure and its approval.

Box 20.1 SWOT Analysis of HRH administration and management

Strengths	Opportunities
• Human resource placement in rural and remote facilities guided by legal framework • Placement of scholarship doctors and other health workers in remote	• Electronic personnel database for real time status of the HRH gaps
Weaknesses	**Threats**
• Weak coordination between MoHP, department and districts for personnel management • Weak management of staff on long leave • Lack of functional database of DoHS personnel • Remedial for vacant positon through temporary/ contract staffs	• Insufficient information for strategic placement and transfers, evident to be more political • Delayed approvals even for the evidence-based positions under MoHP by Ministry of Finance (MoF) • Very low basic scale of payment of the health service providers

20.2 Health Finance Management

20.2.1 Overview of health finance management

Heath financing is an important building block and an essential strategic component to ensure UHC and achievement of SDGs. Evidence suggests that countries should strive to spend 5% of their gross domestic product (GDP) and low and middle income countries to spend USD 86 per capita to promote access to primary care services.[7] Despite the fact that the return of investment in health comes back in many folds as that of the investment, political willingness and commitment have been observed to be crucial in terms of the allocation of the sufficient funds for health financing. Sources of health financing at federal level include domestic revenues, internal borrowing and foreign aid. Health development partners support directly through earmarked funding or indirectly through non-government organizations. The details on the support of the major health development partners is elaborated in Chapter 25 of this report. At present, Nepal has adopted a mixed health care financing system with free BHS, health insurance, targeted social health protection programs and out of-pocket expenditure for services not covered through the safety nets in both public and private spheres. A total of 54.2% of the health spending is reported to be from out-of-pocket expenditure.[8]

Key guiding documents

In addition to the regular finance management documents and guidelines, GoN has approved a dedicated strategy for health financing - NHFS 2080-2090 (2023/24-2033/34) guiding the health sector investments in two major areas ensuring equitable access to quality health services and reducing financial hardship of the population and managing financial resources for health and their effective financial management. The five major strategies adopted are:

- Expansion of fiscal space for health
- Strengthening health financing governance
- Ensure social health protection by risk pooling and procurement of the services through health insurance for quality service delivery
- Manage resources for each unit of basic health services based on population, geography and burden of disease
- Manage financial resources for strengthening emergency health service system.

20.2.2 Major activities in FY 2081/82 in DoHS

In DoHS, the financial administration section and its division work in coordination to fulfil the aspects of health financing. An effective financial support system is imperative for efficient health service management. the preparation of annual budgets, the timely disbursement of funds, accounting, reporting, and auditing are the main financial management functions needed to support the implementation of health programs. Financial Administration Section (FAS) is the focal point for financial management for all DoHS programs. The major responsibilities and objective of the FAS involve, but not limited to:

- Support all programs, divisions and centers for preparing annual budgets
- Obtain and disburse programme budgets
- Keep books of accounts and collect financial reports from all related health institutions
- Prepare and submit financial reports
- Facilitate internal and external auditing
- Provide financial consultations
- Clear and response the audit findings

Target - To achieve 100 percent expenditure of all budgets in accordance with programme works plans within a specified time as per financial rules and regulations of the government and to maintain the recording, accounting and reporting system accurately and on time.

Furthermore, in between different tiers of the government, there is flow of funds from federal to provincial level to LLGs in health in forms of revenue sharing, internal resources, internal borrowing and conditional grants.

20.2.3 Achievements in the fiscal year 2081/82

Absorption of budget in DoHS Network

In FY 2081/82, out of total national budget, NRS. 12,713,138 was allocated for the execution of programs under the DoHS Network. The total absorption rate was 80.18 %. The share of the budget in DoHS network was highest for the Nursing and Social Security Division (36.83%) with 98.66 % absorption rate and 80% physical progress. Remarkably, the absorption rate for Nursing and Social Security Division was 98.66 % with 100% physical progress (table 20.2)

7 NHRC. 2022. Towards Universal Health Coverage: Addressing Financial Hardship and Improving Access to Healthcare in Nepal (Policy brief). Kathmandu. Nepal Health Research Council.

8 MoHP (2023). Nepal National Health Accounts 2018/19 – 2019/20, Ministry of Health and Population, Government of Nepal, Kathmandu, Nepal

Table 20.2 Health Budget in DoHS Network in FY 2080/81

Code	Institution	Budget allocated (NPR In'000)	Proportion of allocated budget	Expenses (NPR In'000)	Absorption Rate (%)	Physical Progress (%)
37001011	Department of Health Services	225,347	1.77	191,001	84.76	-
37001103	Family Welfare Division	3,839,102	30.19	2,595,549	67.61	-
37001105	Epidemiology and Disease Control Division	493,125	3.87	279,281	56.63	-
37001115	Nursing and Social Security Division	4,682,638	36.83	4,619,686	98.66	-
37001107	Management Division	1,230,382	9.67	755,879	61.43	-
37001112	Curative Service Division	27,850	0.21	8,766	31.47	-
37001101	National TB Control Center	1,067,425	8.39	824,467	77.24	-
37001109	National Health Education and Information and COmmunication Center	133,999	1.05	66,232	49.43	-
37001102	National AIDS and STDs Center	510,397	4.01	468,520	91.8	-
37001110	National Health Training Center	99,701	0.78	58,304	58.48	-
37001111	National Public Health Laboratory	403,172	3.17	326,414	80.96	-
37001118	COVID 19 Prevention and Control					-
Total		12,713,138	100	10,194,099	80.18	

Source: Finance Administration Section, DoHS

Status of clearance of irregularity in DoHS network

Out of 4.8 million irregularity amount, 16% was cleared till FY 2079/80. While till FY 2080/81, the irregularity amount was 4,977,980.

Table 20.3 Irregularity clearance status of last three years FY 2078/79-2081/82 (NPR In'000)

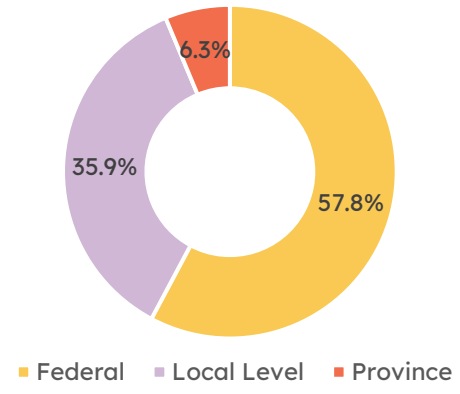
Fiscal year	Total Irregularity amount	Irregularity clearance	learance %
Till 2079/80	4,857,184	92,8390	16%
Till 2080/81	4,977,980	NA	NA

Source: Finance Administration Section, DoHS

*submitted to Office of the Auditor General to clear the irregularity

Status of inter-governmental fiscal transfer

In total health sector, 57.8% percentage of total budget was from federal level, while 6.3% from provincial level and 35.9% from local level. Conditional grant amount provided by MoHP to provinces decreased by 5.09% in current fiscal year compared to last FY. The amount of conditional grant, however, increased by 1.86% for local level. The highest increase in conditional grant was for rural municipality (3.11%). The details of conditional grant transfer is given in Table 20.4.



Source: Finance Administration Section, DoHS

Figure 20.2 Composition of Budget Distribution in Health Sector

Table 20.4 Summary of the conditional grant transfer from Federal MoHP to Provinces and Local Level (in million NPR)

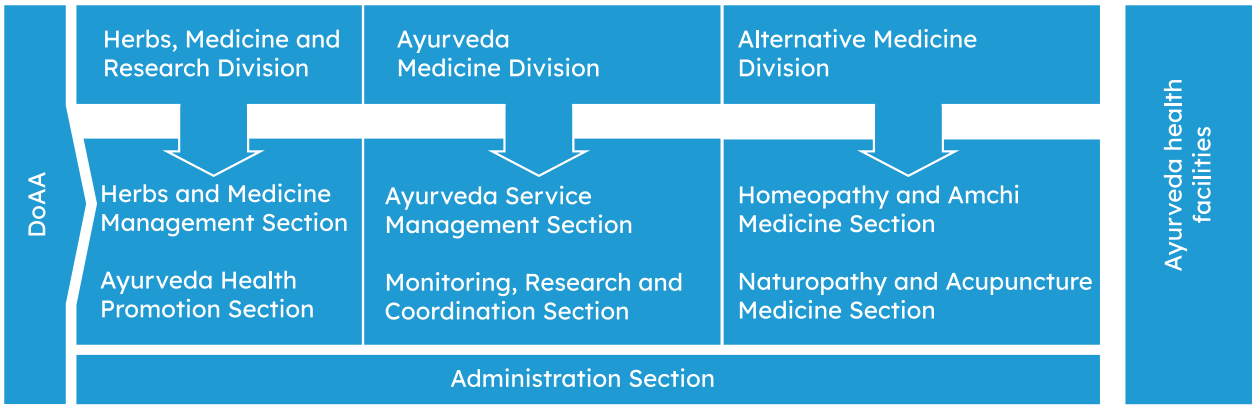
Unit	FY 2022–23		FY 2023–24		FY 2024–25		FY 2025–26		% Change
	Total Grant	Avg/unit	Total Grant	Avg/unit	Total Grant	Avg/unit	Total Grant	Avg/unit	
Province (a)	**6267**	**895.3**	**6127**	**875.3**	**6379**	**911.2**	**6053.7**	**911.2**	**-5.09**
Local (b)	**27444**	**36.4**	**30177**	**40.1**	**33718**	**44.8**	**34361.8**	**44.8**	**1.86**
Metropolitan	608	101.3	664	110.6	728	121.3	747.4	121.3	2.69
Sub-metropolitan	636	57.8	664	60.4	821	74.6	832.8	74.6	1.49
Municipality	11897	43.1	12912	46.8	14599	52.9	14948.2	52.9	2.38
Rural Municipality	14304	31.1	15936	34.6	17289	37.6	17833.4	37.6	3.11
Total (a+b)	**33711**		**36304**		**40097**		**74777.3**		

Source: Finance Administration Section, DoHS

Box 20.2 SWOT Analysis of Financial Management

Strengths	Opportunities
• Legal, operational guidelines and robust government software TSA, CGAS, EGP etc for health financing and its management	• Restructuring organizational structure as per demand, demographic and epidemiological transitions • Mobilizing earmarked taxes to increase fiscal space for health • SDG priorities, governments commitments • Robust system and competent human resources
Weaknesses	**Threats**
• Mismatch in the allocation of health budget to the LGs in the certain levels • No legally tangible interlinkage between federal, provincial and local levels in human resources and fiscal data • Follow ups needed to get data related to development partner funded programs • Not able to track out duplicate program done by different levels	• Non-release of committed HDPs budgets in time. • To retain trained human resources • Global politics may affect health financing

21 Ayurveda and Alternative Medicine (DoAA)



21.1 Department of Ayurveda and Alternative Medicine (DoAA)

Ayurveda, an ancient medical system indigenous to Nepal, is deeply ingrained in the country's customs and culture. A significant portion of the population relies on traditional practices for primary healthcare due to factors such as accessibility, affordability, and cultural alignment. With over 400,000 traditional medicinal practitioners practicing various modalities, including ritualistic and spiritual practices, diet, and self-healing, including medicinal herbs, minerals, and animal products. Ayurveda plays a pivotal role in the healthcare system with its interventions ranging from promotive, preventive, curative and rehabilitative services.

DoAA is the apex body of Ayurveda and Alternative Medicine under MoHP and is responsible for planning, programming, coordination, supervision, monitoring, and evaluation of Ayurveda and Alternative Medicine service programs. DoAA is predominantly liable for providing Ayurveda and alternative medicine amenities to the population. It is working to make available in an effective manner the quality Ayurveda health services, ensuring easy access within the reach of all citizens of basic health services at free of cost. It plans to produce, acquire, develop, and utilize necessary human resources to make Ayurveda and Alternative Medicine services affordable and effective. Its major task is to develop the Ayurveda and medicine system through the systematic management and utilization of available herbs in the country as well as safeguarding and systematic development of other existing Alternative/complementary/Traditional medicine systems. It plans to promote public health by giving high priority to life style modification to reduce communicable and non-communicable diseases through Yoga, Meditation, Ayurveda, usage of quality herbs and other alternative medical practice. It conducts awareness on public health related Ayurveda practices.

The value of Ayurvedic services in basic healthcare and NCD prevention is acknowledged by both national and international policies. The Constitution of Nepal specifically calls for the protection and promotion of traditional Ayurveda medicines, along with naturopathy and homeopathy. It plans to increase the investment in the Ayurveda and Alternative medicine sector by state to ensure quality and accessible health services. DoAA has developed Ayurveda Health Management Information System (AHMIS).

In line with the federal structure, there is a need to restructure the Ayurveda system, as outlined in the National Health Policy 2076 (2019)1 and its strategy 6.7.1. The sixteenth plan (2081/82 – 2085/86), transformative strategy no. 5 aims to develop quality, reliable and integrated health system. Particularly, it envisions to develop and expand modern, Ayurvedic, natural and other traditional health service system and deliver them through an integrated health system.

Key areas of focus on planned development and expansion of Ayurveda, Naturopathy, Homeopathy, and other alternative medicines include:

- **Structural development:** This involves creating a framework suitable for the identification, collection, preservation and sustainable uses of locally available medicinal herbs, minerals, and animal-origin medicines.
- **Management and regulation:** The plan emphasizes the need for managing and regulating Ayurveda and other alternative medicines based on standards and norms.
- **Establishment of centers:** This includes the establishment of Ayurveda, Yoga, and Naturopathy Centers, with a particular emphasis on utilizing Ayurveda, Yoga and Naturopathy systems of medicine for the promotion of health tourism.

The outlined strategies reflect a comprehensive approach to integrate traditional medical practices into the broader healthcare system, addressing both the healthcare needs of the population and the preservation of traditional knowledge and practices.

Box 21.1 Objectives and strategy of DoAA

Objectives of DoAA

- To expand and develop functional and physical infrastructure of Ayurveda and Alternative health institutions.
- To prepare and implement plan and policies related to Ayurveda and alternative medicine.
- To conduct and coordinate the necessary programs to achieve the goal of a healthy Nepal.
- To conduct and coordinate the citizen wellbeing campaigns.
- To research Ayurveda, Herbal and mineral of medicinal value.
- To prepare a policy and operational plan for achieving the national goal of development and expansion of Ayurveda and alternative medicine.
- To improve the quality of Ayurveda and Alternative medicine services delivered through all institutions of all levels and to ensure easy access of these services.
- To develop and manage the required human resources;
- To promote community participation in the management of the health facility and utilization of local herbs;
- To promote a healthy lifestyle through Ayurveda and Yoga.
- To promote health status and sustainable development of Ayurveda and Alternative System using locally available medicinal plants;
- To promote positive attitudes towards health care and awareness of health issues;

Strategies

- Provide preventive, promotive and curative health services in the rural areas;
- Establishment and development of Ayurveda and Alternative institutions;
- Strengthen and expand the Ayurveda and Alternative health services;
- Develop skilled manpower required for various health facilities;
- Strengthening of monitoring and supervision activities;
- Development of information, education and communication center in the Department;
- Develop inter sectoral coordination with Education Ministry, Forestry, Local Development Sector and other NGOs and INGOs;
- Establishment of federal and provincial Ayurveda and Alternative Hospitals and Ayurveda Dispensaries;
- Strengthening and expansion of research & training center of international level;
- National and International level training for the capacity enhancement of its human resources

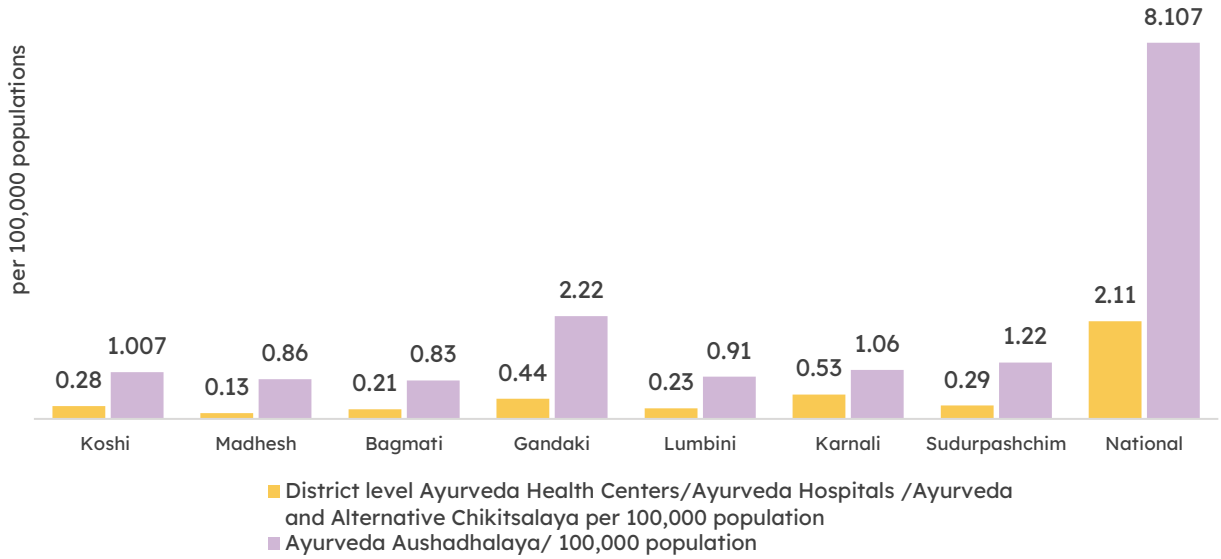
Furthermore, the BHS package includes *poorva pancha-karma (Abhyanga, Swedana), yoga and satawari powder distribution* for breast feeding mothers from Ayurveda services and treatment of wart, allergy, tonsillitis, gastritis, vitiligo and arthritis from Homeopathy services which further strengthens GoN's commitment towards encouraging utilization of the Ayurveda and Alternative Medicine services.

Box 21.2 Organization of Ayurveda and Alternative Medicine Services

Federal Level	• Department of Ayurveda and Alternative Medicine • Ayurveda Hospital, Naradevi • National Ayurveda Research & Training Center (NARTC) • Singhadurbar Vaidhyakhana Vikas Samitee • Nepal Ayurveda Medical Council (NAMC) • Pashupati Homeopathy Hospital
Provincial Level	• Provincial Ayurveda Hospital- (Koshi- Jhapa, Lumbini – Dang, , Karnali – Surkhet, Sudurpaschim –Kailali) • Provincial Ayurveda and Alternative Chikitsalaya/ District Ayurveda Health Centers/Hospitals /Ayurveda and Alternative chikitsalaya
Local Level	• Ayurveda Dispensaries (Aushadhalaya) • Nagarik Arogya Sewa Kendra

21.1.1 Institutional coverage of Ayurveda and Alternative Medicine Services

There are Ayurveda health facilities from local to federal level across the nation. There are six Ayurveda health facilities at federal level and four provincial Ayurveda hospitals. There are no provincial level Ayurveda hospitals in Madhesh, Bagamati and Gandaki provinces. There are 75 district level Ayurveda Health Centers/Ayurveda Hospitals /Ayurveda and Alternative Chikitsalaya and 305 Ayurveda Aushadhalaya, one local level Ayurveda hospital (Rampur Ayurveda hospital, Rampur Municipality, Palpa) across the country.



Source: AHMIS/DoAA

Figure 21.1 Institutional coverage of district level Ayurveda Health facilities (Ayurveda Health Centers/Ayurveda Hospitals/ Ayurveda and Alternative Chikitsalaya) and Ayurveda Aushadhalaya per 100,000 population.

21.1.2 Major Activities in FY 2081/82

Federal level

- Guidelines developed for Swarnabindu Prashana for children aged 1 to 5 years.
- Upgradation of Ayurveda Health Management Information System (AHMIS) and integration of ICD-11 TM2 code and WM code for morbidity
- Strengthening of National Ayurveda, Panchakarma and Yoga Center in Budhanilkantha. (Under Construction)
- Strengthening of Provincial Ayurveda Hospital at Kailali, Surkhet, Jhapa, Dang and Ayurveda Hospital Butwal, Gandaki Ayurveda Hospital, Provincial Ayurveda and Alternative Chikitsalaya Parsa, Sarlahi, District Ayurveda Health Center, Morang etc.
- Strengthening program of Naturopathy, Yoga, Homeopathy, Unani, Aamchi (Sowa Rigpa)
- Monitoring of services provided by Community and private Ayurveda & Alternative Medicine institutions.
- Annual review meetings.
- Evaluation, monitoring and co-ordination with province and local level
- National/International Yoga Day; International Meditation Day; National Naturopathy Day; National Arogya Diwas & Dhanwantari Jayanti, World Acupuncture day celebrations.
- Establishment of open Gym in different places of all seven Provinces.
- Implementation of MSS for Central, Provincial and local level Ayurveda health institutions.
- Orientation of MSS for Ayurveda Aushadhalaya in Bagmati Province
- Development of Nepal Ayurveda Bhaishalya Samhita (Nepal Ayurveda Formulary) Avaleha Khanda and Taila Khanda
- Drafting of National List of Essential Ayurveda Medicines (NLEAM) and updated the list of free distribution list of Ayurveda medicines from different level Ayurveda health facilities.
- Drafting of Yoga protocol for citizen well been program.
- Establishment of 300 Nagarik Arogya Kendra (Citizen Wellbeing Centers) across the country.
- Continuation of School Ayurveda and Yoga education Program.

Province and Local Level
• Yoga and Lifestyle Management Training Program • Workshop and Discussion with Local Traditional Healers • Preparation of IEC Materials on Ayurveda • School Ayurveda Health Program • Promotive Health Program for Senior Citizens • Awareness Program on Medicinal Plants • Program for Lactating Mothers, distribution of Satawari (Galactogogue Medicine) • Ayurveda Health Promotion and Public Awareness Program through NagarikArogya Program • Skill Development/Empowerment Program • Prevention, Reduction, and Management of NCD • Ayurveda Health Management Information System (AHMIS) Training Program • Citizen Wellbeing (Nagarik Arogya) Program • Yoga/Skill Development Training for Ayurveda Personnel • Training on “Operation & Management of Ayurveda Programs” for Ayurveda Personnel • Free Health Camps • Citizen Health Campaigns and Community Health Education Programs through Citizen Wellbeing Group • Information Communication-Materials Development and Broadcasting • Swastha Jivan Shaili Karyakram (Healthy Lifestyle Program) • Vidhyalaya Ayurveda tatha Yoga Shiksha Karyakram (School Ayurveda and Yoga education Program) • Nagarik Arogya Clinic for NCDs • Healthy Life style (Swastha Jeevan) Program • Establishment of Citizen Wellbeing (Nagarik Arogya) Centers at the Local Level • National/International Yoga Day; international Meditation Day; National Arogya Diwas and Dhanwantari Jayanti celebrations • Purva Panchkarma Sewa (Purva Panchkarma Service) • Bhansa Sudhar Karyakram • Gaughar Clinic • Laboratory services • Therapeutic Yoga services • Promotive Yoga services and Yoga campaign

21.1.3 Key Service Indicators

Users of BHS Ayurveda services in FY 2081/82

In FY 2081/82, the users of Purba-pancha karma were about 2,288 per 10,000 population, yoga service were about 837 per 10,000 population and Satawari (Galactogogue medicines) distribution was about 203 postnatal women per 10,000 population. There was provincial variation in the number of the users of BHS ayurveda services. (figure 21.2) This utilization of Ayurveda services across the provinces demonstrates that there is attraction towards therapeutic Ayurveda practices and Yoga services. Understanding the preferences in healthcare and tailoring strategies to ensure equitable access and promotion of province specific relevant traditional and alternative medicine systems will be crucial.

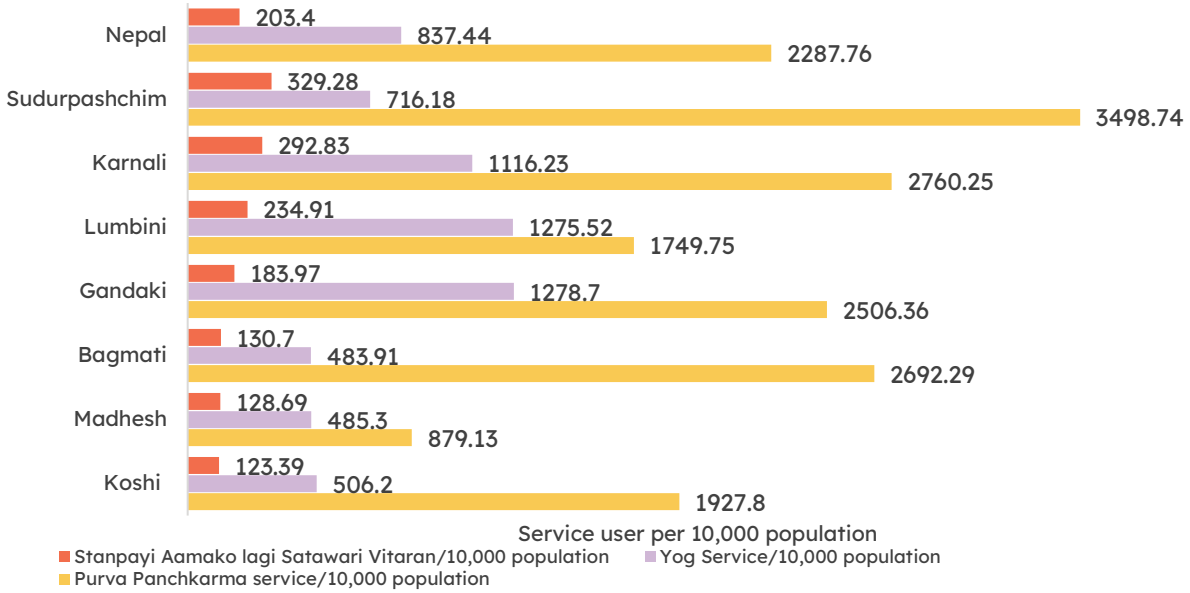
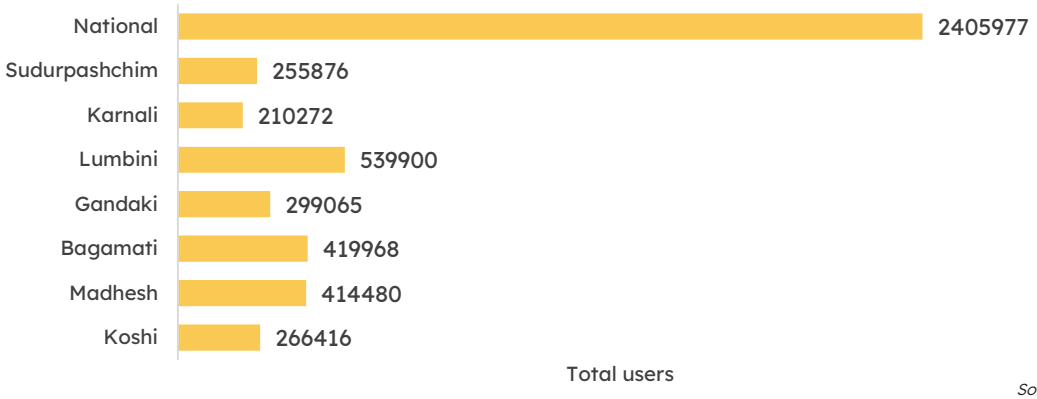


Figure 21.2 Users of BHS Ayurveda services per 10,000 populations in FY 2081/82

In addition to basic health service utilization there are a range of the Ayurveda services available, in FY 2081/82, an impressive total of 24,05,977 individuals availed themselves of Ayurveda services, highest being availed in Lumbini province (5,39,900 users). Overall, the number of patients served was higher than previous year, indicating a remarkable level of user engagement. (Figure 21.3).



Source: AHMIS/DoAA

Figure 21.3 Total Users of Ayurveda Services in FY 2081/82

Morbidity among users of Ayurveda services

In FY 2081/82, the most frequently reported morbidities included abdominal disorder, followed by osteoarthritis, cough, etc. (table 21.1)

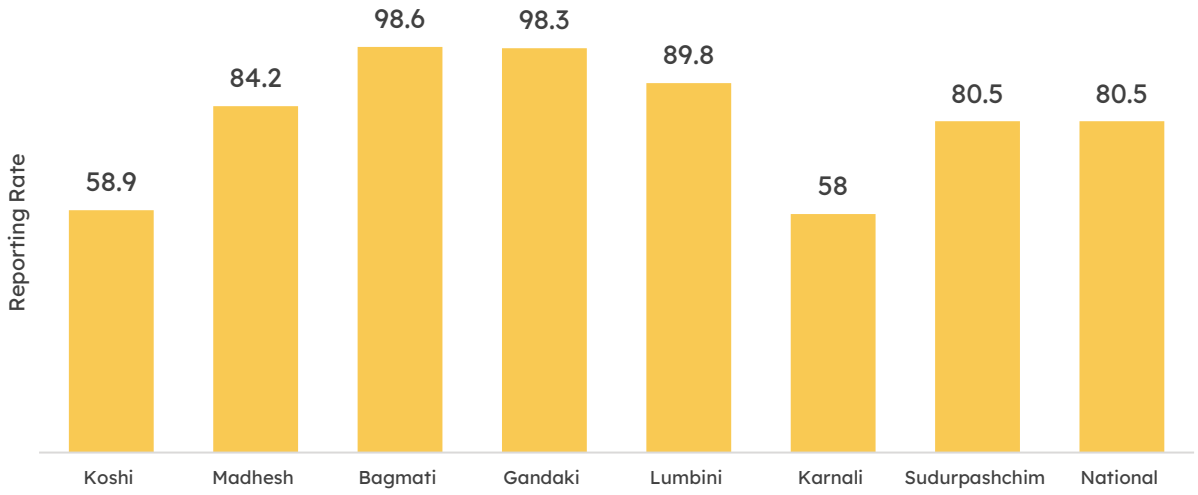
Notably, there is a noticeable trend wherein users with non-communicable and chronic conditions demonstrate an increasing preference for Ayurveda services. This shift in preference underscores the growing recognition and acceptance of Ayurveda as a viable and effective healthcare option for addressing enduring health challenges especially those related to NCDs control and management. The data suggests a significant role for Ayurveda in catering to the healthcare needs of individuals with persistent health issues, highlighting its relevance and effectiveness in managing a diverse range of morbidities. District-wise Model School for "School Ayurveda and Yoga Program" has been selected to conduct "My health, My responsibility" campaign to prevent non-communicable diseases (including mental disorders).

Table 21.1 Common morbidities reported among Ayurveda service users

Top 10 Morbidities among Ayurveda Service Users in FY 2081/82	
Morbidities	**Service Users**
Abdominal disorder	143522
Musculo-skeletal and Nervous Disorder – Osteoarthritis	140899
Respiratory Disorder – Cough	107201
Gudavikar-Hemorrhoids	92403
Rheumatoid Arthritis	90293
Blood Pressure Disorder – Hypertension	75326
Musculo-skeletal and Nervous Disorder – Lumbago	63595
Gout	61112
Respiratory Disorder – Asthma and COPD	60972
Madhumeha	56979

Source: AHMIS/DoAA

In FY 2081/82, overall, 80.5% have reported their data to DoAA, indicating reduction of about ten-percentage points compared to previous FY. Ats per the provinces, the reporting rate from Ayurveda Health Facilities is highest in Bagmati province (98.3%). Koshi and Karnali provinces had reporting rate lower than the national average. (figure 21.4).



Source: AHMIS/DoAA

Figure 21.4 Reporting rate of Ayurveda Health Facilities in FY 2081/82

Minimum service standards of Ayurveda Health Facilities

Leveraging insights gained from the implementation of the MSS for health facilities under DoHS, DoAA developed and endorsed from MoHP, the MSS tailored for Ayurveda Health Facilities. MSS for four different level of the Ayruveda Heath Facilities have been developed – MSS for Ayurveda Aushadhalaya, MSS for District level Ayurveda Health Centers, MSS for Province Level Ayruveda Hospital and MSS for Central Level(federal)Ayurveda Hospital. (Fig 21.5) There are three major components of MSS- Governance and management, clinical service management and support service management and with clinical section focused on the Ayurveda services. This achievement by DoAA signifies a noteworthy milestone, laying a strong foundation for delivery of quality Ayurveda services. MSS for Ayurveda Health Facilities is poised to boost operational efficiency, and streamline management processes, and ultimately contribute to the exemplary Ayurveda services. In FY 2081/82, MSS (Minimum Service Standard) for Ayurveda has been conducted at provincial and district level Ayurveda health facilities for the provision of exemplary Ayurveda healthcare services.



Figure 21.5 MSS for different level of Ayurveda Health Facilities

Box 21.3 SWOT Analysis of DoAA

Strengths	Opportunities
• Rich unbroken source of Knowledge, Everlasting fundamentals and concepts. • Renewed worldwide interest in Ayurveda and Alternative systems. • Preventive and Adjunctive role of Ayurveda in Chronic Non-Communicable Diseases (CNCD) and Lifestyle diseases. • Dedicated leadership and DoAA team. • Implementation of MSS for all level of Ayurveda health facilities which will help evidence-based budgeting and planning for strengthening readiness and service availability • Biodiversity and huge natural resources. • Deep rooted tradition, strong cultural support & centuries old history • Panchakarma and Yoga as an essential and widely popularized for NCDs. • Kshara sutra/Kshara Karma as popular and widely popularized and non-relapsing parasurgical procedures in Anorectal diseases like haemorrhoids and Fistula.	• Enabling policy environment for Ayurveda services • Strengthen the process of integration of AHMIS to HMIS • Establishment of Ayurveda Institutions in each local level & Ayurveda unit in each basic hospital. • Integrated expansion of alternative medicine systems through existing and upcoming health service delivery units. • Implementation of research alongside clinical practice to promote evidence-based development of Ayurveda and Alternative Medicine. • Long tradition of using natural resources (as medicines or economic resources)
Weaknesses	**Threats**
• Limited opportunities for Ayurvedic HR in terms of employment (both in Govt. and private sector) and limited entry into diversified education fields. • Allocation of insufficient Budget for sustainable development of Ayurveda Institutions • Insufficient evidence generation and research. • Insufficient production, broadcasting and dissemination of health-related messages and materials for publicity of Ayurveda • No provision of health insurance in Ayurveda services	• Quackery in Ayurveda • Commercial exploitation of Panchakarma as Spa • Lack of Awareness about the strengths of Ayurveda among general public, allied healthcare professionals, bureaucrats, corporates, politicians etc.

21.2 Homeopathic Services

21.2.1 Overview of Homeopathy Services

Homeopathy was discovered by Dr. Samuel Hahnemann of Germany in (1796 AD). This is based on the fixed principle of “similia similibus curentur” i.e.,Like cures Like.Medicines are proved on healthy human beings. Medicine is prescribed on the basis of totality of sign and symptoms of an individual and other diagnostic services as necessary.

Pashupati Homoeopathic Hospital is the only one federal level Homoeopathic Hospital providing homoeopathic health services to the people of Nepal in the public sector since 2010 BS. This hospital is located in Pulchowk, Harihar Bhawan, Lalitpur. The homoeopathic system is very effective health system which is economic, reliable and has very few adverse effects. The hospital provides OPD service with medicines free of cost, Physiotherapy Services, Laboratory Services to the general public. However, the Hospital has already done setup for expansion of IPD services and ready to serve the expanded IPD services and is collaborating with the ministry of Health and population for allocation of the human resources based on the organization and management survey of 2076 and 2078, and budget allocation too.

The number of patients is increasing day by day. Some of the referred cases are also treated here like Psoriasis, Allergic Rhinitis, Migraine, Rheumatism, Urticaria, PCOS and other skin diseases; Psychological disorders like Stress, Anxiety, Depression; Non-Communicable diseases like Hypertension, Diabetes, Obesity, Asthma; and some surgical cases like Nephrolithiasis, Cholelithiasis, Hemorrhoids, Uterine fibroids, Polyp, Cyst, etc., and all other general diseases.

Box 21.4 Strategies adopted for increasing coverage and reach of homeopathic services

Awareness raising on Homeopathy services	Seminars and health camps for reaching out to the users on successful treatment of certain problems seen effective through homeopathic services like- Warts, Corn, Allergic Rhinitis, Urticaria, Rheumatism, Hemorrhoids, Nephrolithiasis, Cholelithiasis, Uterine fibroids, Polyp, Cyst, etc.
Preventive Services	Counselling and awareness raising
Curative Health Services	Medicines are distributed for free of cost. Nominal charges are applied for OPD tickets, Physiotherapy Services and Laboratory Services
Modality of delivery	Hospital based Health camps run in different parts of the country by the hospital
Cost-effectiveness of Homeopathy services	Government has to bear minimum cost for medicine

21.2.2 Key Service Indicators

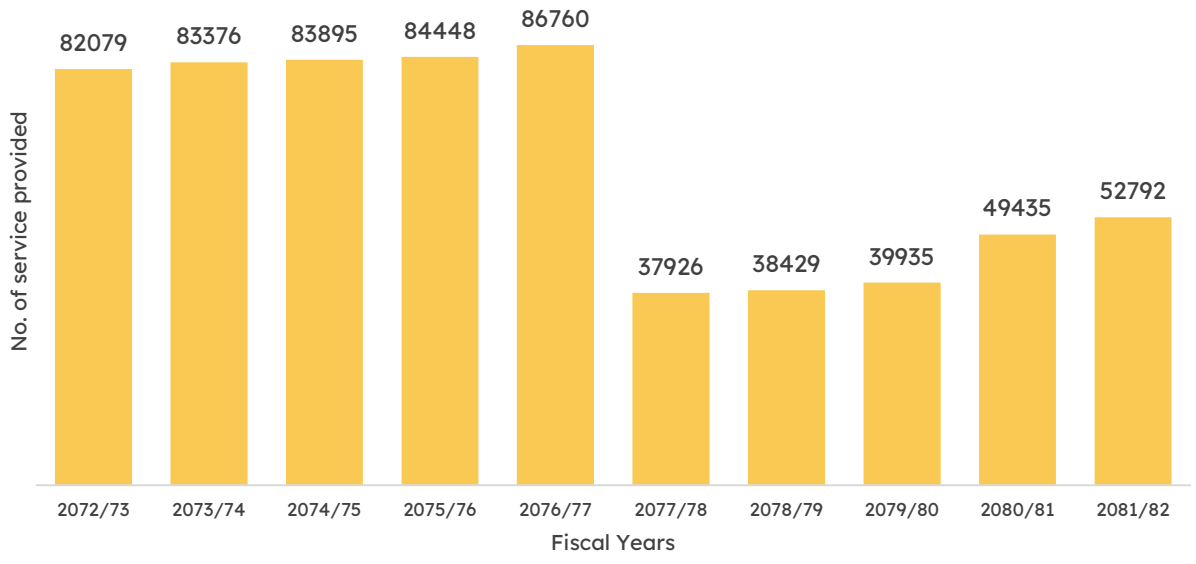
Users of BHS Homeopathy services in FY 2081/82

A total of 26,462 users accessed BHS Homeopathy services. The most common homeopathy services utilized by the users was treatment of Arthritis (7,800 users). (table 21.2) Likewise, Pashupati Homeopathy Chikitsalaya provided clinical health services to 52,792 users in FY 2081/82, and the number of users has been increased gradually in last five years. (figure 21.6)

Table 21.2 Users of BHS Homeopathy services in FY 2081/82

BHS Homeopathy Services	Service Users
Warts / Corn Treatment	4080
Skin Allergy Diagnosis and treatment	2304
Tonsilitis Diagnosis and Treatment	4012
Acidity/ Gastritis Diagnosis and Treatment	7150
Leucoderma/ Vitiligo Diagnosis and Treatment	1116
Arthritis Diagnosis and Treatment	7800
Total	**26,462**

Source: Homeopathy Hospital/DoAA

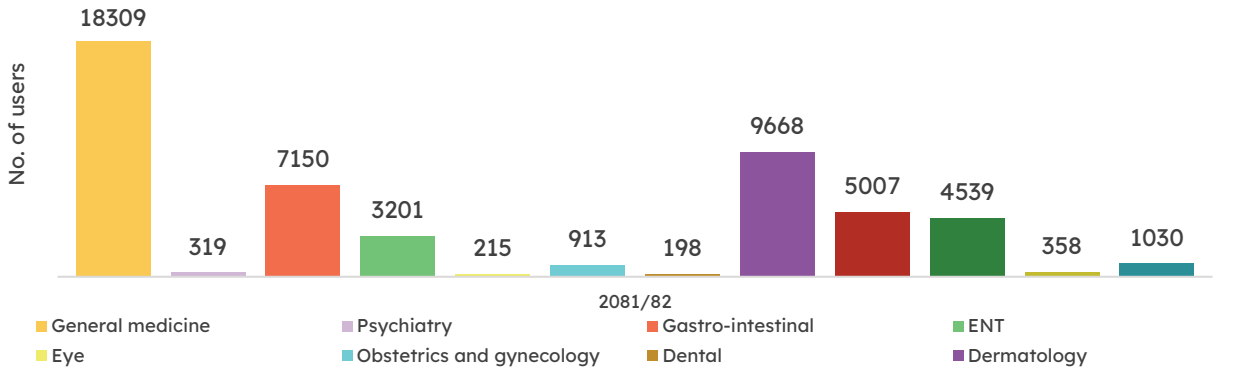


Source: Homeopathy Hospital/DoAA

Figure 21.6 Clinical Health Service Provided by Pashupati Homeopathy Chikitsalaya during last 10 years

Common services accessed by users of Homeopathy services

The users presented in the Pashupati Homeopathy Chikitsalaya mostly accessed general medicine related services (18,309 users), followed by skin-related (9,668 users), and gastro-intestinal services (7,150 users). Very few of the users accessed medical services for dental problems (198 users), eye problems (215 users), and psychiatry problems (319 users). Likewise, health camps were organized to provide homeopathy services, and a total of 1,030 users were served through the camps. (figure 21.7)



Source: Homeopathy Hospital/DoAA

Figure 21.7 Services commonly assessed by users of homeopathic service

Financial allocation and expenditure for homeopathic services

In FY 2081/82, a total of NPR 3,37,45,000 was allocated for homeopathic services, an increment in the budget allocation for homeopathic services compared to previous FY. Of the total budget, only NPR 3,27,36,632 were utilized, contributing to an expenditure rate of 97%. Similarly, NPR 13,00,000 was allocated for conducting health camps, of which NPR 1,62,500 was withheld, achieving the expenditure rate of only 87.25%.

Table 21.3 Summary of Financial Allocation/Expenditure

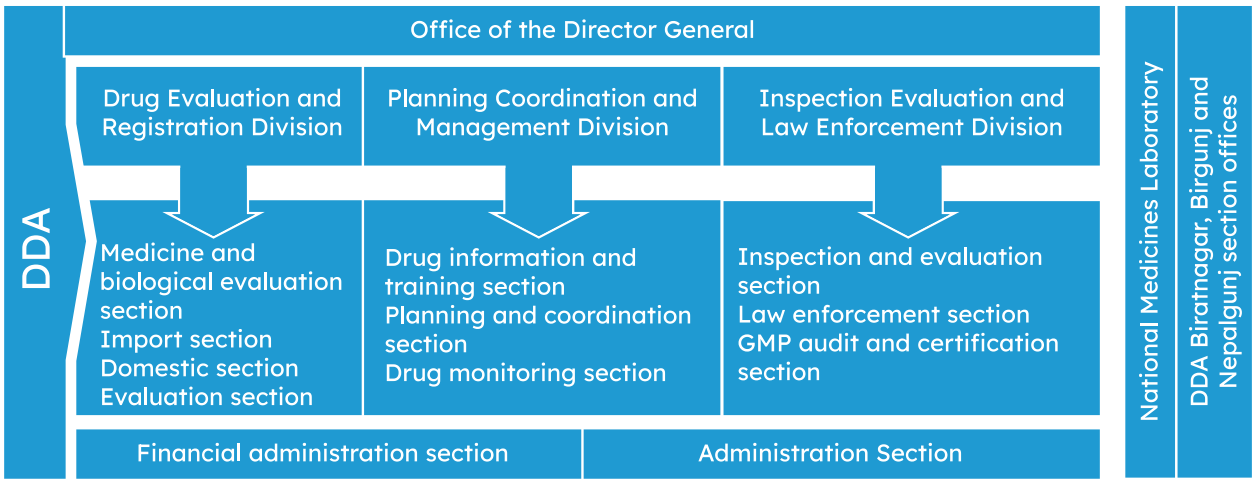
Fiscal Year		Total Budget Allocation (NPR)	Expenditure (NPR)	Expenditure (percentage)
2081/82		3,37,45,000	3,27,36,632	97%
2081/82	Total Financial Allocation of Health Camp	13,00,000	11,37,500 (Withheld amount: 1,62,500)	87.25%

Source: DoAA

Box 21.5 SWOT Analysis of Homeopathy Services

Strengths	Opportunities
• Homeopathic hospital is providing service to outdoor patients free of cost (All medicines) • Annual health camps to increase coverage • Providing Homeopathic Basic Health Service.	• O and M survey report submitted to MoHP for strengthening and expansion of homeopathy services • Including Homeopathy in National level plan and policy like, Psychological disorders, Non-Communicable diseases, BHS etc. • Expansion of the services in all seven provinces • Increasing interest of people and stakeholders • Expansion of the basic health service in all province by allocating manpower HA in Homeopathy
Weaknesses	**Threats**
• Limited budget to manage medicines as per demand • Limited Homeopathic health workers for extension of the services • Due to unavailability of diagnostic services including USG, X-ray etc. patients need to be referred only for investigations • Indoor service is not in service despite 6 beded approved federal Hospital. • Lack of MSS and Health Insurance Program of GON. • Lack of budget for building infrastructures and extension of the health services and development as academic institution	• Limited opportunities for the HR in homeopathy including career ladder in government services • Exclusion of Homeopathic Services in National level plan and policy.

22 Department of Drug Administration (DDA)



22.1 An Overview of DDA

The Department of Drug Administration (DDA) was established on Kartik 1st, 2036 B.S. as the central body responsible for implementing the provisions of the Drug Act 2035 (1978). Its primary aim is to ensure public access to quality medicines, prevent pharmaceutical misuse, regulate misinformation, and oversee all drug-related activities, including production, marketing, distribution, export, import, and storage. DDA prohibits the use of medicines that fail to meet quality, safety and efficacy standards. The government, non-governmental organizations, and private institutions work in coordination to implement drug regulations in line with the National Drug Policy 1995.

The National Drug policy outlines strategies and actions on various aspects of medicine-related activities, including production, import, export, storage, supply, sales, distribution, quality assessment, regulatory control, rational use, prudent use of antimicrobials and information flow. The DDA's primary goal is to supervise and regulate allopathic, ayurvedic, Homeopathic, veterinary, and traditional medicines. This includes preventing the misuse and abuse of medicines and their raw materials, curbing false and misleading advertisements, and ensuring the availability of safe, efficacious, and high-quality medicines to the public. The DDA oversees the entire spectrum of medicine-related activities, including the biological clock of pharmaceutical and biological products in a country. It operates through three major divisions: Drug Evaluation and Registration; Planning, Coordination and Management, and Monitoring, Evaluation and Law Enforcement, one laboratory i.e. National Medicines Laboratory (NML). Additionally, it has three branch offices at Biratnagar, Birgunj and Nepalgunj. However, the current number of regional offices is insufficient to fulfill all of roles, functions and responsibilities. Establishing the offices as per the federal provision is deemed necessity for proper management, inspection and drug regulatory functions. In addition, it is necessary to regulate health technology products and cosmetics which are currently not regulated.

The Department plays a crucial role in implementation of drug codes, laws, regulations and the National Drug Policy. The Department is responsible for all regulatory functions, including personnel management, administration, financial management, approval of clinical trials, and overseeing imports and exports. The Department also enforces Law and take actions against violations of Drug Act, as defined in the Drug Investigation and Inspection Rule 2040. NML functions as a chief national testing laboratory.

Box 22.1 Drug Act 2035 (1978) and supporting tools

Under the Drug Act 2035 (1978), the following regulations and codes have been implemented as supporting tools for its active enforcement:

- Drug advisory committee and consultative council regulation, 2037
- Drug registration regulation, 2038
- Inquiry and inspection regulation, 2040
- Drug standard regulation, 2043
- Drug donation guidelines, 2060
- Drug sales and distribution codes, 2080
- National Codes on Good Manufacturing Practices, 2082
- Medicine registration guidance, 2073

Box 22.2 Vision, Mission and Quality Policy

Vision

To become a regulatory authority that protect and promote public health, ensuring access to safe, effective, and quality-assured medicines and health technology products.

Mission

To develop as a competent, transparent, and accountable regulatory authority by adhering to internationally recognized good regulatory practices and adopting evidence-based decision-making processes, ensuring the availability of safe, effective, and quality medicines and health technology products at accessible and affordable prices.

Quality Policy

The Department of Drug Administration (DDA) is committed to protecting and promoting the health of Nepalese people through good governance and evidence-based decisions, ensuring equitable access to safe, efficacious, and quality-assured medicines and allied pharmaceutical substances in accordance with the Drugs Act, Regulations, and Guidelines.

DDA shall work through an efficacious, transparent, impartial, credible, and timely manner, ensuring the implementation of a continuously improved Quality Management System.

Drug Evaluation and Registration Division:

The Drug Evaluation and Registration Division includes the Import and Export Section, Industry Section and Pharmacy Registration Section. This division registers the medicine and grants marketing authorization for sales and distribution based on thorough scientific evaluation of their quality, safety and efficacy.

Import Section:

To scientifically evaluate and register foreign pharmaceutical manufacturers and their products for import and to issue recommendation letters for their import and export of domestic medicines, and to process and renew recommendation letters for import–export activities in accordance with regulatory requirements and review, authorize, and permit clinical trials.

Industry Section: Regulates national pharmaceutical industries to ensure compliance with established standards. It issues recommendation letters for the establishment of pharmaceutical industries, including issuance and renewal of Product Manufacturing and marketing Licenses. The section also approves layout of pharmaceutical industries and registers new pharmaceutical products.

Pharmacy Registration Section:

Responsible for registration and issuance of certificates for retail and wholesale pharmacy outlets. It also issues certificates to individuals authorized to sell medicines and maintains an updated record of pharmacies.

Planning, Co-ordination and Management Division

This Division includes the Drug Information and Training Section, Planning Section and Drug Monitoring section.

Drug Information and Training Section:

It is responsible for disseminating information on medicines including adverse effects, contraindications, drug interactions, storage conditions, and other relevant details to ensure safe and informed use. It is also responsible for publishing and distributing the Drug Bulletin of Nepal (DBN) to health institutions, pharmaceutical industries, medical doctors, health personnel, pharmacists, and other concerned individuals and organizations. The section also revises the National List of Essential Medicines and the Nepalese National Formulary list. It is also responsible for recommending the import of narcotic, psychotropic, and precursor substances while liaising with the International Narcotics Control Board (INCB) to maintain regulatory compliance and international coordination. It also maintains the records of vyabasahi (orientation) and conducting refresher training.

Planning section: Prepares yearly planning for activities conducted by DDA and regional offices. It coordinates with Ministry, other departments, government and non -government organizations.

Drug Monitoring Section: It manages the collection, assessment, and forwarding of ADR reports, received from regional pharmacovigilance centers via VigiFlow to Uppsala Monitoring Centre (UMC) under the WHO Programme for International Drug Monitoring. It also implements risk-based post-marketing surveillance activities to monitor the quality of the marketed drugs.

Monitoring, Evaluation and Law Enforcement Division:

This Division includes the Law section, Monitoring and Evaluation section and GMP Audit and Certification section. It ensures regulatory standards are maintained and promotes compliance and safety in the pharmaceutical sector. The division conducts inspections of drug industries, wholesale and retail pharmacies, and hospital pharmacies. It also coordinates Good Manufacturing Practice (GMP) audits within and outside the country.

Law Section: Filing cases in court against violations of the Drug Act and provides legal assistance to the Department. It also conducts training sessions for Drug Inspectors and engages in surveillance related to pharmacy practice.

GMP Audit and certification section:

It conducts WHO GMP certification and recertification related activities. It prepares work plans for national and foreign industry audits and takes necessary actions in cases of non-compliance.

Monitoring and Evaluation Section:

It conducts inspection of wholesale and retail pharmacies, and hospital pharmacies.

Administration section: Manages human resources, including recruitment, posting, promotion, transfer. It also manages premises, buildings and the library.

Account section

This section oversees financial management, including revenue collection and audit processes. It also handles financial aspects, procurement and monitoring of regional offices

Branch Offices

DDA has its branch offices in Biratnagar, Birgunj and Nepalgunj. These offices carry out the delegated responsibilities including investigation, inspection, and Pharmacy registration and renewal.

National Medicines Laboratory (NML)

Established in 2020 (1964), the National Medicine Laboratory (NML), formerly known as the Royal Drug Research Laboratory (RDRL), acts as the principal drug regulatory laboratory in the country which is responsible for pre and post market testing of medicine, analysis, and validation of analytical method and advises the Department on matters like standard, quality and efficacy of medicines, vaccines and biologicals. Designated as a National Drug Control Laboratory, NML comprises sections dedicated to chemical analysis, microbiology, pharmacology, and instrumental analysis. The samples are tested and analyses for drug quality as per the Drugs Act, 2035 (1978), the medicines having substandard quality are recalled or withdrawn or banned. However, can also provide Lot Release Certificates for vaccines imported into Nepal with standard, quality and efficacy of medicines. In addition, the laboratory is also responsible for review and validation of analytical methods of non-pharmacopeial products, conduction of training on Good Laboratory Practices and audit of laboratories of National Pharmaceutical industries.

Box 22.3 Major Strategies of DDA

- Formulate and update necessary laws, regulations, procedures, guidelines, and standards.
- Ensure sustainable and adequate financial resources for regulatory functions.
- Develop skilled and competent human resources and enhance their capacity.
- Develop and expand modern infrastructure, laboratory facilities, and digital regulatory systems.
- Expand the scope of regulatory services and effectively deliver them to provincial and local levels to ensure good governance.
- Establish and fully implement an integrated and interoperable information management system (e-DDA).
- Achieve Maturity Level 3 in accordance with the World Health Organization Global Benchmarking Tool (GBT) and establish the institution as a stable, credible, and internationally recognized regulatory authority.
- Strengthening of National Medicines Laboratory (NML) as National reference Laboratory on medicines.
- Promotion of rational use of medicines.
- Encouragement to promote and establish pharmaceutical industries to achieve self-reliance in the production of essential medicines.
- Prevention of antibiotic misuse to combat antimicrobial resistance.
- Strengthening national industry to comply with WHO-Good Manufacturing Practices (GMP) standards

22.2 Major activities in FY 2081/82

S. N	Activities
1	Implementation of the Guideline for the Management of Pharmaceutical Waste.
2	Development of SOPs/Checklists for Good Pharmacy Practice (GPP) / Good Storage and Distribution Practice (GSDP) and conduction of training for trainers.
3	Conducted orientation programs on GPP/GSDP for importers and wholesalers.
4	Interaction program with hospital management and health workers to improve the functionality of Drug and Therapeutics Committee (DTC) and address issues related to medicine shortages.
5	Training for drug inspectors on GMP Audit/Inspection.
6	Interaction program on pharmacovigilance and Adverse Drug Reaction reporting with regional center hospitals of national pharmacovigilance program.
7	Workshop on monitoring and optimizing antimicrobial use in Nepal with stakeholders, along with training on the WHO AMC Excel Template and data analysis.
8	Disseminated information regarding medicine misuse, overuse, registration, recall, prohibition, and published the Annual Bulletin - 2081.
9	In accordance with the honorable Minister-level decision dated 2081/07/04, formation of the Medicine Price Policy Recommendation Committee, where DDA operated as secretariat, and submitted the report to the Ministry of Health and Population for implementation.
10	Preparation of O&M Survey report and submission it to the ministry.

S. N	Activities
11	Different activities carried out for the processing of the regulation of the Health Technology Products.
12	Conducted training for drug inspectors on Raman Spectroscopy.
13	Preparation of Protocol for Surveillance of Antimicrobial Use in Nepal.
14	Preparation and approval of the Drug Sales and Distribution Code 2081.
15	Awareness on the rational use of medicines by different media.
16	Regular publication of Drug Bulletin of Nepal (DBN).
17	Audit/inspection of domestic drug industries for WHO Good Manufacturing Practice (GMP) compliance.
18	Inspection of retail & wholesale pharmacies for compliance.
19	Post marketing quality analysis of drugs available in market.
20	Audit of domestic manufacturer laboratory for compliance of Good Laboratory Practice (GLP)
21	Take legal and administrative action for violation of regulatory standards
22	Recall of medicine from the market which failed to comply the quality standard

22.3 Status of Activities in FY 2081/82

In FY 2081/82, DDA conducted 2,791 inspections of the drug retailers and wholesalers for quality assurance, 53% more than the targeted inspections. Likewise, the targeted information to public by different media was disseminated more than targeted in the FY 2081/82. Likewise, 648 drug sample analysis were performed. In addition, there were gaps in fulfilling the targeted activities in inspection of domestic pharmaceutical industries (73.83%) and publication of bulletin (66.67%). (Table 22.1)

Table 22.1 DDA key activities targets and achievement in FY 2081/82

S. N	Activities	Target	Achievement in FY 2081/82	
			Number	%
1	Drug information to the public by different media	30	46	153
2	Publication of Drug Bulletin of Nepal	3	2	66.67
3	Inspection of domestic Pharmaceutical Industries	111	82	73.83
4	Inspection to drug retailers & wholesalers	2300	2791	121.3
5	Drug sample Analysis	NA	648	NA
6	Audit of Pharmaceutical Analytical Laboratories	30	29	96.67

Source: DDA

In FY 2081/82, there were remarkable regulatory activities like renew of 15,059 pharmacies, registration of 2,064 new pharmacies, de-registration of 1,158 pharmacies, 97 cases filed against violation of Drug Act 2035, and 28 medicines were recalled from the market due to inferior quality. (Table 22.2)

Table 22.2 Major regulatory activities of DDA in FY 2080/81

Activities	Number of events
Registration of new foreign pharmaceutical Industry	16
Registration of new medicine (import)	315
Renew of import license	3923
Issue of marketing license	483
Issue of product license	628
Import license for raw material for domestic industry	688
Registration of new pharmacy	2064
Renew of pharmacy	15059
Renewal of *Vyawasayi Mananyata Pramanpatra*	1551
De-registration of pharmacy	1158
Filing of legal case against the violation of Drug Act 2035	97
Recall of medicine from market due to inferior quality	28

Source: DDA

Performance of Drug Regulatory Maturity Level of National Regulatory Authority

Currently, the maturity of the national regulatory authority is ML-1, and projected to achieve ML-3 by 2027, sustain it to 2030. (figure 22.1).

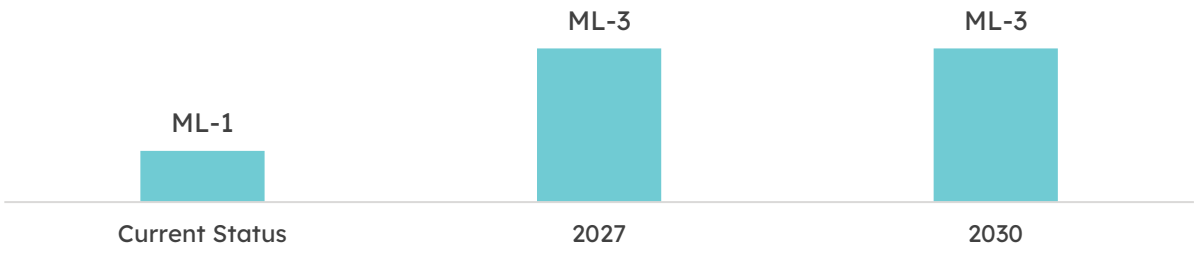
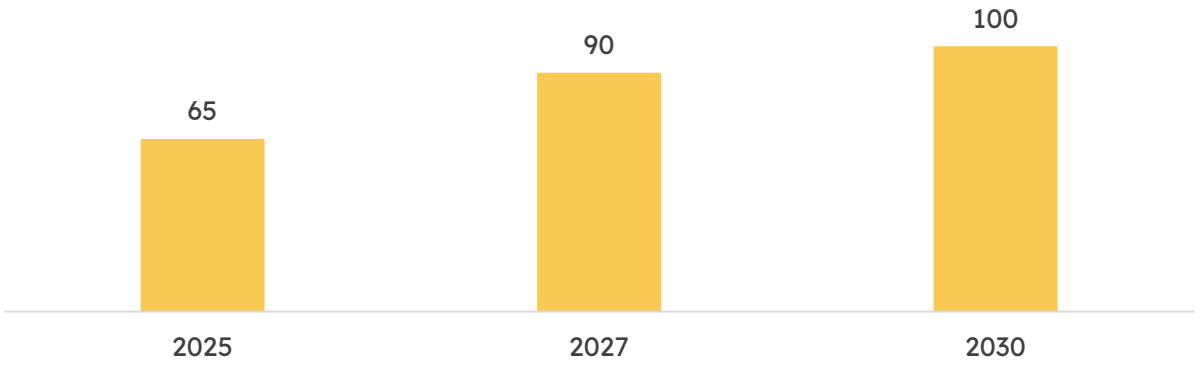


Figure 22.1 Maturity level of national regulatory authority

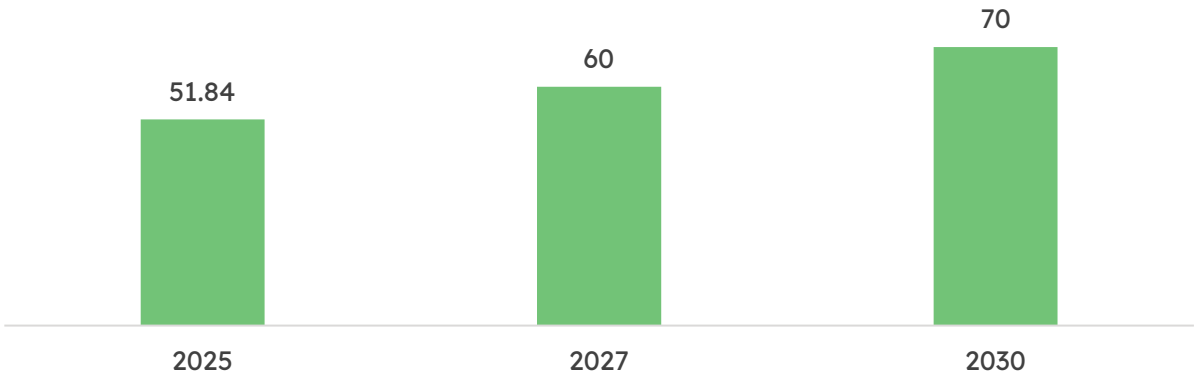
Source: DDA



Source: DDA

Figure 22.2 Percentage of WHO GMP certified domestic manufactures of drug

Currently, there are 65% WHO GMP certified domestic pharmaceutical industries and it has been forecasted to be 90% by 2027, and 100% by 2030 (figure 22.2).



Source: DDA

Figure 22.3 Domestic production of essential medicines

Currently, the domestic production of essential medicine is around 51%, indicating the greater dependency on imports of medicine. Nonetheless, the domestic production has been forecasted to increase to 60% by 2027, and 70% by 2030. (figure 22.3).

Box 22.4 SWOT Analysis of DDA

Strengths	Opportunities
• Presence of a legal framework • Existence of National Quality Control Laboratory (i.e NML) • Implementation of Good Manufacturing Practices (GMP) by companies. • -Continuous market surveillance and legal enforcement. • Experienced regulatory workforce with long-standing institutional knowledge. • Functional coordination with hospitals, pharmaceutical industries, and development partners.	• Constitutional provision prioritizes medicines defining under shared responsibilities, allowing federal–provincial collaboration. • Development of a full digital regulatory platform to improve transparency and efficiency. • Expansion into high-technology pharmaceutical production. • Policy support from National Health Policy 2019 and the 16th Periodic Plan prioritizing regulatory strengthening. • International technical and financial support opportunities. • Regulation of Health and Technology Products • Accreditation of NML as per ISO 17025 and DDA as per ISO 9001
Weaknesses	**Threats**
• Lack of organizational structure as per federal provision • Limited human resource (Only about 115 staff at the DDA and less than 24 drug inspectors nationwide) for effective monitoring. • Outdated infrastructure and lack of modern laboratory facilities. • Limited budget and resource constraints. • Absence of a fully digital regulatory system. • Lack of pharmacovigilance reporting for herbal and Ayurvedic medicines. • Lack of dynamic price regulation mechanism • Inadequate interdepartmental coordination	• Lack of strong legal provisions for Pharmacovigilance, Post-Marketing Surveillance, Medicine price regulation and Medicine Promotion. • Inconsistent supply of quality medicines and medical products. • Irrational medicine use and lack of good pharmacy practice. • Less domestic production of essential and high-technology medicines. • Weak export promotion mechanisms. • Weak regulation and supply systems for medical devices. • Rising antimicrobial resistance (AMR). • Open borders facilitating illegal drug trafficking. • Online pharmacy and advertisement

23 Health Insurance Program

23.1 Overview of the Program

The Health Insurance Program (HIP) in Nepal, implemented by the Government of Nepal (GoN), aims to enhance access to quality healthcare services while reducing out-of-pocket expenses and the financial burden of catastrophic health expenditures. Initiated in fiscal year 2072/73 under the Social Health Security Development Committee, the program is now managed by the Health Insurance Board (HIB) as an autonomous entity, in line with the Health Insurance Act, 2074 and Health Insurance Regulation, 2075. The ultimate goal of HIP is to contribute to achieve SDG target 3.8, a commitment for universal health coverage (UHC), financial risk protection, and access to quality essential health services for all.

Box 23.1 Key Objectives of HIP

- Provide financial protection to the public through pre-payment mechanisms and risk pooling
- Promote equitable mobilization and utilization of financial resources and instruments.
- To strengthen quality, efficiency, and accountability across health service delivery systems.

23.2 Major Activities in FY 2081/82

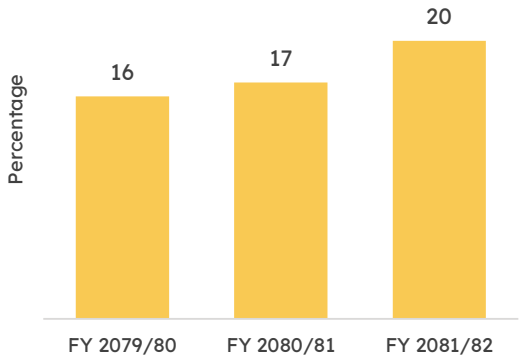
In FY 2081/82, the Health Insurance Program undertook significant activities, including:

- First Amendment of Health Insurance Act 2074
- First Amendment of Health Insurance Act 2075
- First Amendment of Insurance Claims Review and Evaluation Procedure, 2078
- Formulation and development of the Health Insurance Strategic Roadmap 2081/82–2086/87
- Reimbursement of NPR 12,815,442,993.00 for the claim valuated in FY 2080/81
- Guideline development for Enrolling Ultra-Poor Households in the Health Insurance Program, 2082
- Implementation of revised Benefit Package
- Training of Insurance Management Information System (IMIS) to 342 human resources of 156 service providers
- Empanelment of 32 new health facilities

23.3 Key Program Indicators for HIP

Active Population Coverage of Health Insurance

The figure 23.1 depicts the percentage of active insuree coverage over the past three fiscal years. The national enrollment status of active insuree has shown a gradual increment over the past three FYs, rising from 16% in FY 2079/80 to 20% (5,970,403 people) in FY 2081/82, reflecting a collective commitment to achieving comprehensive coverage for the population. This progress highlights the efforts to extend health insurance benefits across all provinces.

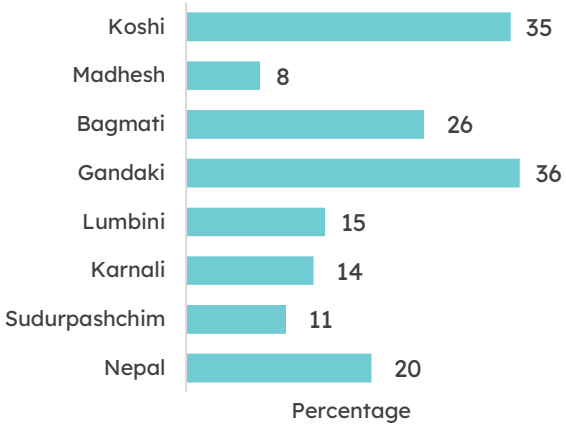


Source: NSO and IMIS/HIB

Figure 23.1 Active Population Coverage by Health Insurance in FY 2079/80 - FY 2081/82

Note: Population from census 2078 used as denominator

The figure 23.2 represents the percentage of active insuree coverage at province level in FY 2081/82. Gandaki province has the highest percentage of active insuree (i.e. 36% of total population of Gandaki province), followed by Koshi province (35%), while Madhesh province has the lowest active insuree coverage (8% of total population).



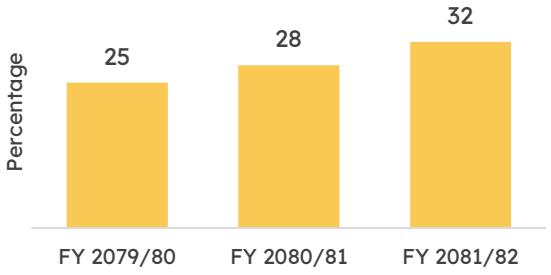
Source: NSO and IMIS/HIB

Figure 23.2 Percentage of active population across provinces in FY 2081/82

Note: Population of Respective Province from census 2078 used as denominator

Active Household Coverage of Health Insurance

The figure 23.3 depicts the percentage of household coverage for the active household across the last three fiscal years. In FY 2079/80, the percentage of active households was recorded at 25%, however, in FY 2081/82, the percentage was increased to 32% (2,128,830 households), reflecting a steady growth in household coverage over the three fiscal year.

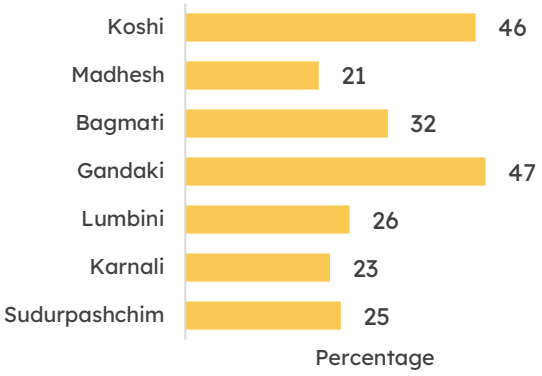


Source: NSO and IMIS/HIB

Figure 23.3 Active Household Coverage by Health Insurance in FY 2079/80 - FY 2081/82

Note: Household from census 2078 used as denominator

The figure 23.4 represents the percentage of active households at province level in FY 2081/82. Gandaki province has the highest percentage of active households i.e. 47% of total household of Gandaki province while it was lowest in Madhesh province (21%).



Source: NSO and IMIS/HIB

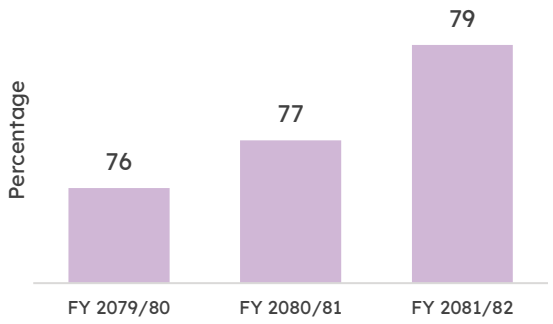
Figure 23.4 Percentage of active households across province in FY 2081/82

Note: Household of Respective province from census 2078 used as denominator

Percentage of insuree renewing the policy

The percentage of insuree renewing policy among the total active insuree of the respective years of Health Insurance (HI) from FY 2079/80 to FY 2081/82 is shown in figure 23.5. The percentage of insuree renewing the policy was 76% in both FY 2079/80, and FY 2080/81, and then it reached 79% in 2081/82. In FY 2081/82 total number of active insure was 5,970,403 and among them 4,742,416 has renewed the policy.

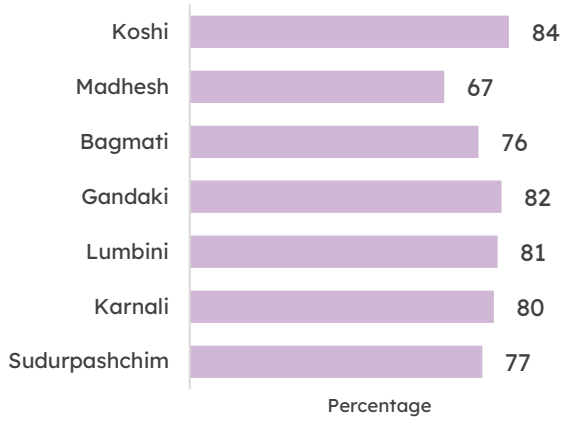
This indicates a positive trend in the proportion of individuals who are renewing their health insurance policies, suggesting increasing satisfaction and perceived value of the insurance coverage.



Source: IMIS/HIB

Figure 23.5 Percentage of insuree renewing the policy of HI in FY 2079/80-2081/82

The figure 23.6 represents the province wise status of insuree renewing the policy in FY 2081/82. Among the total active insuree of the respective province, the percentage of insuree renewing the policy was highest in Koshi province (84%) and lowest in Madhesh province (67%).



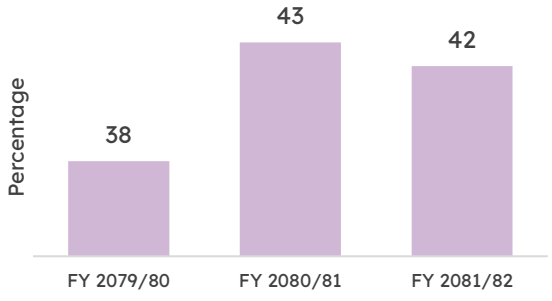
Source: IMIS/HIB

Figure 23.6 Percentage of insuree renewing the policy across province in FY 2081/82.

Service Utilization

The figure 23.7 represents the service utilization of active insuree in Health Insurance (HI) across the three years from FY 2079/80 to 2081/82. Service utilization among the total active insuree remained stationary at 43% in past two fiscal years.

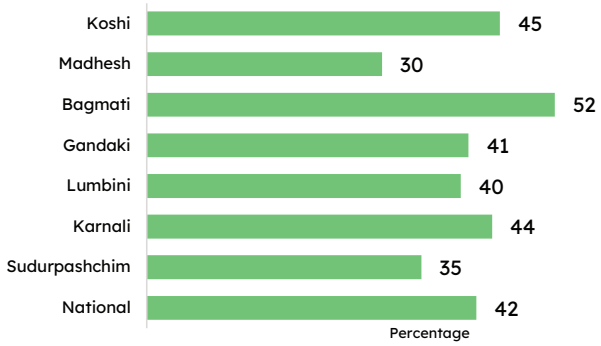
Among the total active insure of 5,970,403 in FY 2081/82, the number of insuree utilizing the service was 25,11,405 (42%). This suggests sustained adoption and use of health insurance services during this time.



Source: IMIS/HIB

Figure 23.7 Service Utilization of HI in FY 2079/80 – 2081/82

The figure 23.8 represents the percentage of insuree utilizing the service among total active insuree of respective province in FY 2081/82. Bagmati province has highest percentage of insuree utilizing service (52%) while Madhesh province has lowest (30%).



Source: IMIS/HIB

Figure 23.8 Percentage of insuree utilizing the service across province in FY 2081/82

Cumulative Health Insurance Coverage for FY 2081/82

The table 23.1 provides a summary of cumulative coverage indicators related to insurance, detailing both numerical figures and percentages for four key categories. A total of 3,024,288 families/household, representing 43% of the total families/household are insured. In terms of the total population, 98,74,415 (33%), have insurance coverage, indicating significant potential for expanding access.

Table 23.1 Cumulative coverage of health insurance till FY 2081/82

Cumulative Coverage Indicators	Number	%
Total Families Insured	3,022,002	45
Total Population Insured	9,635,704	33

Source: IMIS/HIB

Empaneled health service providers for health insurance

As of FY 2081/82, a total of 486 health facilities is empaneled under the health insurance program, an increase from 454 in FY 2080/81. These include 409 government hospitals, 31 community hospitals, and 46 private hospitals across all provinces. Bagmati province has the highest number of empaneled health service providers (118 providers), followed by Koshi (113 providers). There are no private health service providers for health insurance in Sudurpashchim and Karnali provinces. (table 23.2)

Table 23.2 Empaneled Health Service Providers for Health Insurance till FY 2081/82

Province	Community	Government	Private	Total
Koshi	5	87	21	113
Madhesh	3	48	7	58
Bagmati	11	95	10	116
Gandaki	1	54	4	59
Lumbini	7	55	4	66
Karnali	3	33	0	36
Sudurpashchim	2	33	0	35
Total	**32**	**405**	**46**	**483**

Source: IMIS/HIB

Box 23.2 SWOT Analysis of HIP

Strengths	Opportunities
• Strong legal framework supported by the Constitutional mandate, Health Insurance Act, 2074 and Health Insurance Regulation, 2075 • Expanded coverage across all districts • Increasing population coverage • Strong government commitment and prioritization of health insurance • Equity based program	• Inter-governmental coordination • Inclusion of a large formal sector in the health insurance program • Use of routine claims data for evidence-based decision-making • Greater inclusion of low-income and vulnerable populations • Strong international commitment to Universal Health Coverage (UHC) • Collaboration with external development partners in the health sector • Integration with digital health governance for strategic purchasing
Weaknesses	**Threats**
• Lack of permanent organizational structure • Unfilled permanent staff positions • Insufficient budget allocation • Supply-side constraints: shortages of drugs, diagnostics, and human resources • Delays in claims settlement affecting provider trust.	• Inadequate rationale for the selection of health services • Limited understanding of the concept of solidarity • Fragmented social health protection programs • Adverse selection due to voluntary enrollment. • Provider dissatisfaction leading to potential service withdrawal.

24 Councils for Health Professionals and Health Research

Nepal Medical Council	Nepal Nursing Council	Nepal Ayurvedic Medical Council	Nepal Pharmacy Council	Nepal Health Professional Council	Nepal Health Research Council	Medical Education Commission

Ministry of Health and Population has five councils for health professional and one health research council as autonomous bodies dedicated to ensure best treatment and services to its citizens from the professionals maintaining their integrity and ethics in practices. These councils are mandated to regulate their respective practitioners/professionals for quality assurance of the services that they provide including health research. The major principles abiding these councils being-justice, autonomy, non-maleficence and beneficence. In addition, guided by Nepal Medical Education Act, 2075, Medical Education Commission (MEC) has been established in 2076 (2019) for the regulation of health progressional education in Nepal. The commission is mandated for the quality assurance in the process of the production of the health professionals. Prior to the establishment of MEC, respective councils were mandated for quality control of their related health professional education. This chapter covers the details for each council, key guiding documents/ important milestones, major activities, achievements and challenges of the respective councils.

24.1 Nepal Medical Council

24.1.1 About the council

The Nepal Medical Council (NMC) is a regulatory body established under NMC Act 2020 B.S. to protect public health by ensuring efficient and ethical medical practice by the practitioners licensed to it. The act came into function with the endorsement of Nepal Medical Council Regulation 2024 (1968). At present NMC has the mandate to regulate the practitioners, their capacity building, standardization and advancing of practices and ensuring ethical practices. The decisions of NMC in regards to the patients or professionals can also be challenged in the court.

The NMC consists 19 members, including 1 Chairperson, 1 Vice Chairperson, 16 Members and 1 Registrar. The NMC has various committees established for specific responsibilities, which includes licensing examinations, registration, policy formulation, ethical investigations, educations and Continuing Professional Development. The composition of the committees includes medical professionals and has powers to establish sub-units for better efficiency in their functioning. While the Registrar is the chief executive to whom is entrusted the implementation of policies, carrying of registration records, and handle overall administrative responsibilities of the NMC.Further details about NMC and its structure are available to its stakeholders including the public through its website: https://www.nmc.org.np/. All the services provided by the council are provided through online portal and provision of and written application has been halted.

24.1.2 Rights, Duties and Responsibilities of the Council

Following are the rights, duties, and responsibilities of the NMC.

1. Licensing Examination

The NMC conduct licensing exams for MBBS and BDS graduates, as well as special exams for postgraduates.

2. Registration

The NMC certifies medical/dental professionals after they pass licensing examinations.

3. Policy Formulation

The NMC sets polices and standards for the regulation and functioning of the medical professions.

4. Ethical Investigations

The NMC formulate a code of conduct and investigate ethical violations. Likewise, any registered practitioners and doctors later identified with fake documents are deregistered for the council.

5. Continuing Professional Development

The NMC strengthens the Continuing Professional Development (CPD) program based on the need of medical practitioners. NMC uses an integrated data management system called CPD database as an official repository for the information on the continued evidence-based education of licensed doctors.

6. Certifying for Good Standing

Good standing certificate is required for registration of Nepali medical practitioner in the specified country's medical practice regulating authority. The NMC issues a good standing certificate upon a request of the registered doctors.

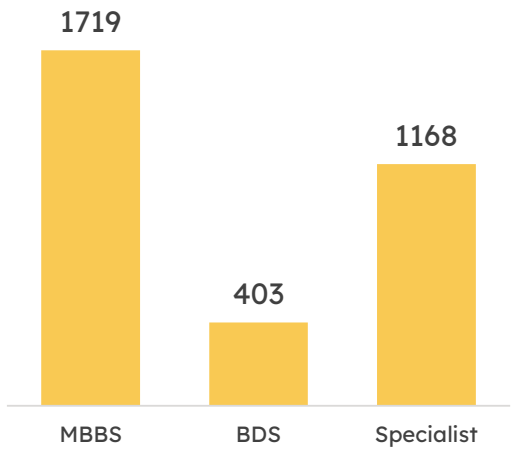
24.1.3 Major Activities in FY 2081/82

1. Conducted licensing examinations: 3 undergraduate exams and 2 postgraduate exams, with enhanced standards and improved exam security
2. Completed registration and renewal of medical practitioners and specialists in a timely and organized manner
3. Coordination with international bodies
   i. Coordination with international medical councils through MoHP for regulator cooperation
   ii. Advanced discussion on bilateral and mutual recognition of medical degrees with India and Maldives
   iii. Strengthened cross-border verification process to support transparency and practitioner mobility
4. Digital transformation and service delivery
   i. Upgraded key digital services for registration, exam, and good standing certificates
   ii. Started QR-based authentication for all NMC certificates and practitioner documents
   iii. Developed an automated online appointment and helpdesk system for faster service
   iv. Launched a structured CPD/CME tracking system linked to practitioner registration
   v. Established a regulatory data dashboard to monitor trends in complaints, licensing, and workforce distribution
   vi. Created a digital archive of practitioner records for secured long-term storage

24.1.4 Key achievements in FY 2081/82

Cumulative status of NMC registration.

As of FY 2081/82, a total of 39,486 medical practitioners (undergraduates) is registered in NMC. In FY 2081/82, a total of 2,122 undergraduate level doctors (MBBS: 1719; BDS: 403), and 1,168 specialist doctors were registered in NMC. As of FY 2081/82, a total of 12,063 doctors is registered as specialist (figure 24.1). As of FY 2081/82, a total of 220 foreign national doctors are registered in NMC.

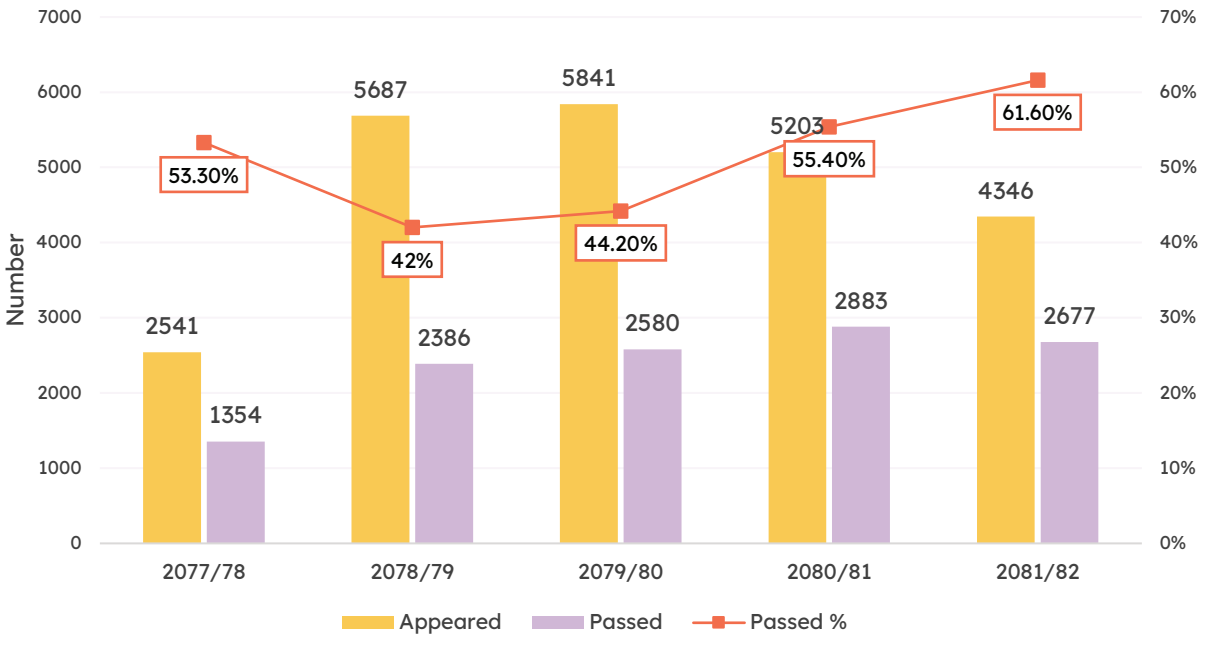


Source: NMC/MoHP

Figure 24.1 Status of doctors registered in NMC in FY 2081/82

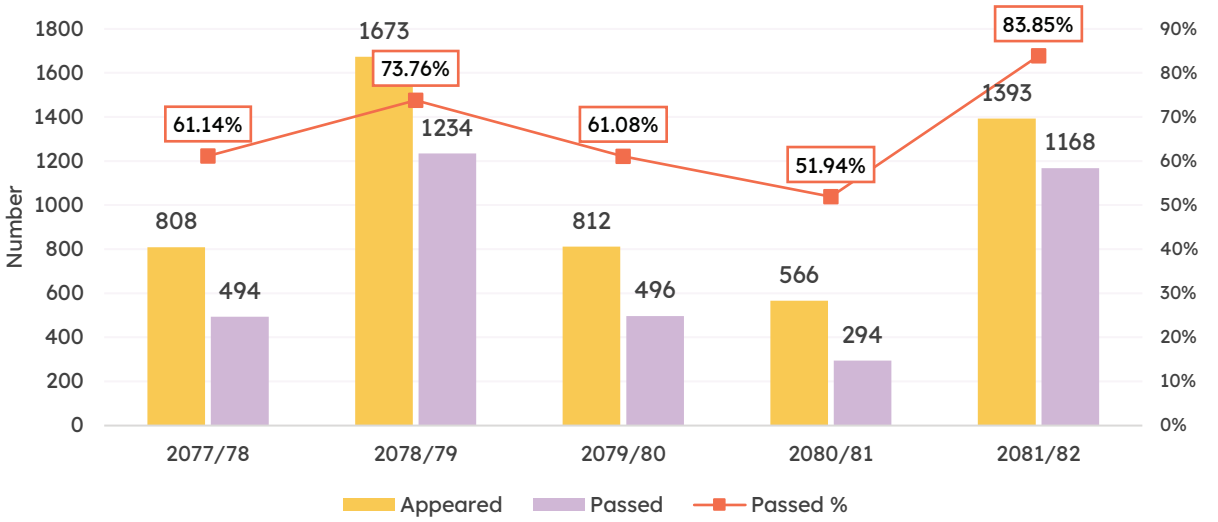
Pass rates of licensing examination for doctors

The pass rates for bachelor level licensing examination were around 61% (figure 24.2) and special licensing examination were around 84%. (figure 24.3) There is fluctuation in the pass rates in last five years in both the examination.



Source: NMC/MoHP

Figure 24.2 NMC undergraduate licensing examination result: pass percentage (2077/78 – 81/82)



Source: NMC/MoHP

Figure 24.3 NMC licensing special examination result: pass percentage (FY 2077/78 – 81/82)

Issuance of good standing certificates

In FY 2081/82, a total of 2,681 good standing cerficates were issued to the registered doctors by NMC, of which highest were isssued for USA (587), followed by UK (550).

Status of complaints on ethical investigations

In FY 2081/82, a total of 51 complaints were registered for ethical investigations, of which 1 complaint was withheld, and 27 complaints are in active trials. Verdict was issued for 23 cases.

Challenges of NMC

1. Regulatory and Legal Challenges
   - Increasing number of complex complaints requiring detailed investigation and legal scrutiny
   - Pressure to make disciplinary decisions quickly while ensuring due process
   - Ambiguities in existing laws and regulations that need updating to reflect current medical practice

2. Human Resource and Capacity Limitations
   - Limited number of inspectors, assessors, and subject experts to meet growing workload
   - High expectations from stakeholders despite limited staff and operational resources
   - Difficulty managing increasing registration, verification, and disciplinary cases with existing manpower

3. Coordination Challenges
   - Gaps in coordination with universities, the Ministry of Health, and health institutions
   - Inconsistent communication from some colleges leading to delays in regulatory processes
   - Limited international cooperation mechanisms for verification of foreign graduates

4. Digital and Administrative Challenges
   - Need for faster modernization of digital systems, including online registration and verification
   - Technical difficulties in managing digital records and integrating older physical files
   - Limited IT manpower and dependency on external vendors

5. External Pressure and Government Risks
   - Attempts by external groups or individuals to influence regulatory decisions
   - Political or institutional interference in accreditation or disciplinary matters
   - Need to safeguard autonomy and credibility of the Council

6. Challenges related to Foreign-Educated Graduates
   - Verification issues with institutions in countries where regulatory systems are weak
   - Increasing cases related to BSMD/MD pathways, program duration, and irregularities
   - Stakeholder pressure in decisions involving foreign universities and agencies

Way Forward

- Strengthen internal governance, ethics, and documentation systems
- Reduce processing time for registration and verification services
- Expand helpdesk and online support for practitioners, including foreign graduates
- Enhance international engagement and adopt global best practices
- Secure adequate budget for inspections, training, and IT modernization
- Upgrade office infrastructure and improve the working environment

24.2 Nepal Ayurveda Medical Council

24.2.1 About the council

Nepal Ayurveda Medical Council (NAMC) was established under the act, Ayurveda Medical Council Act, 2045 (1988). NAMC also has the mandate to regulate practitioners, their capacity building, standardization and advancing of practices and ensuring ethical practices. In addition to the avenues of practitioners, the act also incorporates the Ayurveda Medicine production and control and perception-based sell of the ayruveda medicines. The council ensures the values of Ayurveda, ancient system of medicine, are practiced safely and effectively. The details on NAMC and its structure are available to its stakeholders including the public through its website: https://namc.org.np/.

24.2.2 Rights, Duties and Responsibilities of the council

Registration of practitioners

NAMC conducts licensing examination for registration of the Ayurveda practitioner, periodically. One can practice only after passing the licensing examination. The Ayurveda practitioners include doctors with postgraduate in Ayurveda (MD), Bachelor of Ayurveda & Modern Medicine & Surgery (BAMMS), Bachelor of Ayurveda Medicine & Surgery (BAMS), Ayurveda Health Assistant (AHA) and Auxiliary Ayurveda Health Workers (AAHW). The first three categories (doctors) are registered in AMAC. Foreigners who wish to practice Ayurveda Medicine in Nepal are provisionally registered with NAMC for one year at a time.

24.2.3 Major Activities in FY 2081/82

1. Registration of the BAMS Ayurveda Doctors by Licensing Exam.
2. Registration of PG Doctors and Ayurveda Paramedics.
3. Routine Regulatory Functions- Registration & Renewal.
4. Licensing Examination Guideline for Ayurveda Health Workers (under development).
5. Recognition to various universities, academia, and colleges of India
6. Development of code of conduct for Ayurveda doctors
7. Preparation of telemedicine guidelines
8. Preparation of treatment protocol of some diseases and parameters for Kshaara-sutra
9. Online application and computerized licensing examination
10. Monitoring, evaluation, and follow-up of Ayruveda practitioners and efforts to minimize and control malpractice
11. Preparation of Karyavidhi (procedural and by-regulations) for election of board members of the NAMC
12. Guidelines, Procedural Documents Prepared (some under process).
13. Continue Professional Development (CPD) Committee formed (work undergoing).

24.2.4 Key achievements in FY 2081/82

Registration of the Ayurveda professionals

As of FY 2081/82, a total of 4 PhD, 187 MD/MS/PG, 1125 BAMS/equivalent doctors, and 12 Ayurveda B. Pharmacy have been registered in NAMC. (table 24.1)

Table 24. 1 Registered Ayurveda Health Professionals in NAMC cumulative FY 2081/82

Category	Total Number
Ph.D.	4
MD/MS/PG	187
BAMS/equivalent	1125
Ayurveda Bachelors in Pharmacy	11
AHA/Equivalent	1982
AAHW/TSLC	3374
Traditional healers	19
Total	**6512**

Source: NAMC/MoHP

Challenges of NAMC

- Inadequate budget allocation for regular operational activities of NAMC
- Lack of sufficient grant from federal government (MoHP)
- Lack of infrastructure
- Lack of amendment of laws of council as per the need

Way Forward

- Regular grant from federal government (MoHP)
- Developoment of infrastructure including space, land, and building
- Amendment of laws of council (e.g. inclusion of alternative medicines such as Naturopathy, Unani, Homeopathy, Sowa-rigpa, Chinese medicine systems, etc.)
- Provision of registration of alternative medical practitioners along with ayurveda in NAMC

24.3 Nepal Nursing Council

24.3.1 About the council

Nepal Nursing Council (NNC) was established under NNC Act 2052 (1996). It came into operation on 2053-03-02 (16 June 1996). NNC is an autonomous body formed to maintain quality nursing and midwifery education for the provision of quality nursing and midwifery services to the public. The main functions of NNC are to register the nurse and midwife through licensing examination and manage the registration of the qualified nursing/midwifery professionals, formulate

policy required to operate these professions smoothly and provide better care to the public. NNC further monitors the quality of care, formulate professional code of conduct and regulate the professional practices. The council develops scope of practice for nursing and midwifery professionals. NNC also publishes the annual journal. The details on NNC and its structure are available to its stakeholders including the public through its website: https://nnc.org.np/.

24.3.2 Rights, Duties, and Responsibilities of the Council

1. Registration of practitioners

NNC conducts licensing examination for registration of nurses and midwives. These examinations work as the barrier for nurses and midwives to be deployed in the clinical arena. NNC registers both nationals as well as international nurses.

2. Code of Conduct

NNC has endorsed its Code of Ethics and Professional Code of Conduct for Registered Nurses and Midwives in Nepal 2076 (2019). All registered nurses and midwives should abide by the professional code of ethics and conducts.

3. Continuing Professional Development

The NNC is strengthening the CPD and Continuing Nursing Education (CNE) based on the need of nurses and midwifes. Likewise, CPD/CNE software development in on progress and has been initiated

4. Certifying for Good Standing

Good standing certificate is required for registration of Nepali nurses in the specified country's nursing practice regulating authority. The certificate is requested for promotion, residency training, fellowship training and employment.

24.3.3 Major Activities in FY 2081/82

1. Hospital service quality assurance assessment of 5 hospitals in the valley and 4 hospitals in the different provinces
2. Completed registration and renewal of medical practitioners and specialists in a timely and organized manner
3. Computer based licensing exam of all streams
4. Continuation of CNME/CPD program

24.3.4 Key achievements in FY 2081/82

Status of nursing workforce registered

As of FY 2081/82, a total of 86,358 nursing workforce is registered in NNC, of which 37, 852 are ANMs. In FY 2081/82, 1,689 PCL nurses, 503 B. Sc. Nurses, 42 Bachelor level midwifes, and 225 specialist nurses (MN/M.Sc.) were registered in NNC. (table 24.2) Likewise, a total of 6,604 nursing workforce has been renewed.

Table 24.2 Status of nursing workforce registered

Nursing Categories	New registered number in 2081/82
ANM	-
PCL NURSING	1689
B.SC. NURSING	503
Bachelor of Midwifery Science (BMS)	42
Specialist Nurses (MN/M.Sc.)	225
Total Registered in NNC	**86,358**

Source: NAMC/MoHP

Note: Nepal Nursing Council initially registered nursing professionals in two categories: Auxiliary Nurse Midwives (ANM) and Registered Nurses, based solely on application. Later, starting from May 11, 2012, the Council began administering exams for nurses to facilitate their registration. This same examination process applies to both B.Sc. and PCL nurses, allowing them to be registered as Registered Nurses.

Specialist registration commenced in 2021 with application-based registration, and from July 2023, computer-based examinations were introduced. The validity of the license is six years, meaning that renewal and re-registration records will only be available after this period has elapsed. Similarly, B.Sc. and PCL Nursing examinations began separately in December 2022, so their renewal and re-registration statuses will also be available after six years.

Status of good standing certificate issues

In FY 2081/82, a total of 6,172 good standing certificates were issues from NNC.

Challenges of NNC

- Difficulties in conducting licensing examinations due to lack of designated exam hall
- Potential risk of shutdown of online system due to the lack of support and maintenance for the government-owned server
- Lack of amendment of the Nursing council act
- High failure rate of candidates in licensing examination

Way Forward

- Recognition of BNS program and fellowship program
- Allocation of land for building exam hall

24.4 Nepal Pharmacy Council

24.4.1 About the Council

The roots of establishment of Nepal Pharmacy Council (NPC) lies in the National Drug Policy 2051 (1995) Section 4.4c which stated aiming to promulgate legislative measures to register pharmacy manpower engaged in the pharmacy profession. Nepal Pharmacy Council (NPC) was established in 2058 (2001). NPC is mandated to register the pharmacists and

pharmacy assistants and regulate their practices ensuring right person available for dispensing the medicines at the pharmacy as well as development of the pharmaceutical products. The details on NPC and its structure are available to its stakeholders including the public through its website: https://nepalpharmacycouncil.org.np/.

24.4.2 Rights, Duties, and Responsibilities of the Council

Registration of Personnel

NPC conducts licensing examination for registration of the pharmacists and pharmacy assistants, periodically. The examination activities are strengthened with inclusion of thumb and bar code for applicants similar to NMC license examination. The examination process is further complemented by the skill test before registration of the personnel to the council.

Code of Conduct

All professionals registered in the council are to abide by the code of conduct. In addition to the practitioners, NPC also furnishes the code of conduct for pharmacy that they need to abide by.

Continuing Professional Development

NPC conducts AMR training for pharmacist.

Issuance of No-Objection Letter

NPC issues No-Objection letter for the students applying for studies abroad for diploma level.

Cancellation of Registration

NPC also works on de-registration of pharmacist and pharmacy assistant

Hospital pharmacy directives

NPC contributed in revision of Hospital Pharmacy Directive.

24.4.3 Major Activities in FY 2081/82

1. Digitalization of NPC
2. An online update system to track the workplace and professional activities of pharmacists
3. No Objection Letters and Good Standing Letters are generated through the online system, featuring QR codes, based on the online application.
4. The publication of the Fiscal Year Calendar for the first time in NPC history, provides several benefits to pharmacists and the pharmacy profession, including better planning, timely participation in activities, and improved coordination.
5. Online Certification and validation.
6. All update and New Certification with compulsory Barcode.
7. Specialization Update (Master's in Pharmacy) – Digital Submission.
8. Investigation on rational use of medicine is ongoing, involving two dispensing errors and one wrong-prescription.
9. Introduction of mandatory dress code for professional identification

24.4.4 Key achievements in FY 2081/82

Registered human resources in NPC

As of FY 2081/82, a total of 24,004 pharmacy professionals are registered in NPC, of which 8,053 are registered pharmacists, and 15,951 are registered pharmacy assistants. Thirtee eight registered pharmacy professionals were de-registered from NPC (death/rejected).

Pass rate of licensing examination of pharmacy professionals

In FY 2081/82, a total of 6,138 bachelor level candidates and 9,285 diploma level candidates appeared in licensing examination, of which 1,960 and 3,671 candidates passed bachelor level and diploma level, respectively. (figure 24.4)

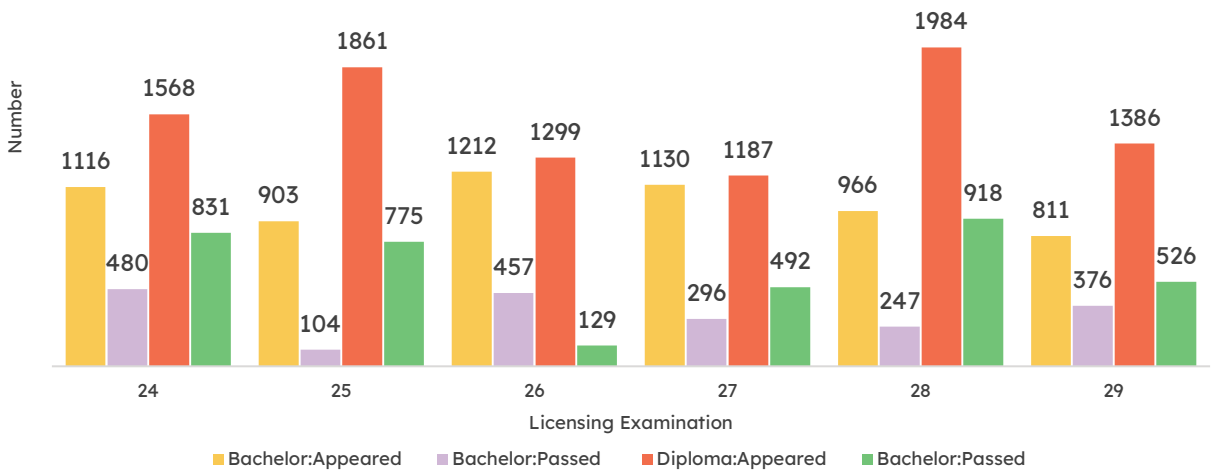


Figure 24.4 NPC licensing examination result: Bachelor and Diploma level (2081/82)

Challenges of NPC

- Renting of licensure certificates by pharmacists or pharmacy assistants, often through unethical practices like “Dhami” and “Babsyai,” remains a major concern.
- Government and non-government hospitals are not recruiting the required number of pharmacists as per the Hospital Pharmacy Directive 2072.
- Despite amendments to the NPC Act and regulations, community pharmacies are still not formally recognized as part of the pharmacy profession under NPC Act 2075
- The regulatory authority has shown little enforcement regarding pharmacists’ professional dress code during practice.
- There has been uncontrolled growth of diploma and bachelor pharmacy colleges over the last two years, with more than 100 new diploma colleges established.

24.5 Nepal Health Professional Council

24.5.1 About the Council

Nepal Health Professional Council (NHPC) was established under Nepal Health Professional Council Act 2053 (1997). All allied health courses, health personnel other than the one registered in the five aforementioned councils, are registered through NHPC. It is the umbrella organization for regulation of all the allied medical sciences/ allied health professionals. The details on NHPC and its structure are available to its stakeholders including the public through its website: https://nhpc.gov.np/.

24.5.2 Rights, Duties, and Responsibilities of the Council

Registration of Personnel

NHPC conducts subject specific licensing examinations for 37 categories of health professionals registered in NHPC.

Code of Conduct

NHPC has endorsed the code of conduct for various health professionals that they need to abide by

Continuing Professional Development

NHPC realizes that there is need of initiating CPD in the respective fields.

Issuance of Good Standing

NHPC issues good standing certificate for the students applying for studies abroad, promotions and other purposes.

24.5.3 Major Activities in FY 2081/82

1. Improvement of Information system
2. Strengthening of financial capacity of council
3. Launched a “Mentor Series” program to support Health Assistant (HA) licensing exam candidates.
4. Initiated preparations for implementing a national CPD (Continuing Professional Development) program for health professionals.
5. Initiated Online Payment System
6. Bar code system - Under process.
7. Paper less Service - Under process.
8. Regulatory Activities for Respective Professionals-
   - License examination for registration.
   - License renewal.
   - Good standing certificate.
   - Verification.

24.5.4 Key Achievements in FY 2081/82

Pass rate of licensing examination of health workforce in FY 2081/82

In FY 2081/82, a total of 13,056 PCl level, 3,048 Bachelor level, and 368 Masters level health workforce appeared for licensing examination, of which 6,223 PCL level, 1,191 Bachelor level, and 202 Masters level health workforce passed the licesning examination. (table 24.3)

Table 24. 3 Pass rates in licensing examination conducted by NHPC in FY 2081/82

Licensing examination	Appeared	Passed Number	Pass (%)
Certificate level	13,056	6,223	47.66%
Bachelors’ level	3,084	1,191	38.61
Masters’ level	368	202	54.89
Total	**16,508**	**7,618**	**46.14%**

Source: NHPC/MoHP

Challenges of NHPC

- Lack of own examination hall
- Inter council coordination and collaboration
- Diverse set of programs and require contextual health personnel to represent them in the council

Way Forward

- Strengthen the licensing examination system to improve workforce quality.
- Create an inter-council coordination mechanism for unified regulation.
- Expand and modernize service delivery facilities, including digital access.
- Establish a monitoring and evaluation unit to ensure compliance and reduce malpractice.
- Implement a structured CPD framework for ongoing competency development.
- Promote evidence-based policy-making through research and data use.
- Enhance stakeholder engagement with training institutions and associations.
- Prioritize digital transformation for licensing, renewal, and CPD tracking.

24.6 Nepal Health Research Council

24.6.1 About the council

Nepal Health Research Council (NHRC) is the national apical body for promoting health research across the country. NHRC was established in 2048 (1991) under Nepal Health Research Council Act. It was mandated to promote and coordinate health research regulation, evidence generation, translation of evidence into policy and practice, and capacity building of national scientists in the areas of health research and evidence. NHRC also serves as the main national institution responsible for technical and ethical review of proposals submitted by individual health researchers, national authorities, NGOs, INGOs and universities. After review, Ethical Review Board (ERB) of NHRC approves these proposals. ERB is accredited by Forum for Ethical Review Committee in the Asian and Western Pacific Region. The details on NHRC and its structure are available to its stakeholders including the public through its website: https://nhrc.gov.np/. Also refer to https://nhrc.gov.np/about/nhrc-milestone/ for the major milestones of its journey from its establishment.

24.6.2 Rights, Duties, and Responsibilities of the Council

Research Activities

NHRC carries out research on its own on national health issues aligning with the national health priorities.

Capacity Building

The capacity-building roles of NHRC encompass providing education, organizing training on various aspects of health system research to national scientists with special emphasis on promoting the research competency of young researchers.

Research Grants

Additionally, NHRC has been providing health research grants to the researchers in order to enhance the research activities throughout the country.

Workshops/Seminar

NHRC conducts workshops and dissemination programs to facilitate uptake of research findings by the policymakers into health system policies and practices.

NHRC Journal

Similarly, NHRC facilitates access to research finding from different research reports, journals, books, magazines through the library digital database and the NHRC Journal. The detail of the NHRC journal and process of publication is available at: http://jnhrc.com.np/index.php/jnhrc .

24.6.3 Key achievements in FY 2081/82

Research and Publications in Priority Areas in FY 2081/82

- Research Uptake (policy brief on dengue prevention and control)
- End-line and Acceptability Study on Rice Fortification Program in Nepal
- Prevalence of Selected Non-Communicable Diseases among Children and
- Adolescents in Nepal: A Cross-Sectional Pilot Study
- Assessing the Perception of Health Professionals on Climate Change and Health in Nepal
- Socioeconomic Status and Barriers to Education and Health Insurance among the Musahar Community in Budhiganga Rural Municipality of Morang District
- In Vitro and In Silico Approaches Toward Antidiabetic Drug Discovery from Nepalese Medicinal Plants used Traditionally for Diabetes like Diseases
- Factors Affecting Childhood Exposures to Urban Particulates in Nepal (FACE-UP)
- Global Youth Tobacco Survey
- Assessment of Preparedness of COVID-19 Vaccination Program at Local Government Level in Nepal
- Population-Based Cancer Registry
- Study on Hemoglobinopathies and Glucose-6-Phosphate Dehydrogenase (G6PD) Deficiency in Terai Districts of Nepal

Ethical Review Board (ERB)

The Ethical Review Board (ERB) of the Nepal Health Research Council(NHRC) received a total of 816 health research protocols for ethical clearance in FY 2081/82, of which a total of 655 protocols were approved, and 9 protocols were withdrawn. For the review of submitted protocols, 25 ERB meetings and 46 expedited review meetings were conducted. Likewise, 1 training/workshop was conducted for ERB members.

Institutional Review Committees (IRCs)

There are a total of 64 IRCs established across the country to promote health research at the institutional level, especially in health science universities, institutes, colleges, and hospitals. Of the toal 64 IRCs, 6 IRCs are inactive. Every year, a team from NHRC inspects the Institutional Review Committees approved by NHRC. During Fiscal Year 2081/82, 10 IRCs were visited for monitoring and evaluation. Likewise, 7 training/workshops were conducted to IRC members.

Capacity Building and Promotion for Research

NHRC conducted training on Health Research Proposal Development in 7 different provinces (1 training per province). The number of particpants were limited to 30 participants per training, and the duration of the training was 6 days.

Promotion for Research Information

NHRC organized Eleventh National Summit of Health and Population Scientist in Nepal with a theme “Health, Climate and Population Dynamics: Buidling Resilient Health System for a Sustainable and Equitable Future” from 10-12th April, 2025 in Kathmandu. More than 1,200 particpants attended the summit in-person, whereas,

several hundreds of particpants joined virtually via social network platforms such as zoom, youtube, facebook live, etc.

Publication of Journal

NHRC published 3 issues of Journal of Nepal Health Research Health Council (JNHRC). The published issues were as follows;

1. Issue 66 Jan-Mar Vol. 23 No. 01 (2025)
2. Issue 65 Oct-Dec Vol. 22 No. 04 (2024)
3. Issue 64 July-Sep Vol. 22 No. 03 (2024)

Challenges

- Inadequate availability of laboratories for research sample analysis
- Research initiatives constrained by the limited budget hindering the ability to generalize at national levels
- Inadequate funding from the government, national and international partners to support national level research initiatives and infrastructures
- Retention of qualified, trained, and skilled researcher
- Preservation of intellectual property right

Way Forward

- Plan to retain skilled researcher
- Collaboration across disciplines
- Collaboration across border
- Research for both science and policy

24.7 Medical Education Commission

24.7.1 About the Commission

As per provision of the National Medical Education Act 2075, in the context of the essence and spirit of the reports of the commission, committee and task force formed to improve medical education at different times; Medical Education Commission has been established to:

- Increase the investment of the state in the field of medical education,
- Develop medical education in line with the national needs of nepal,
- Regulate medical education in integrated and efficient way,
- Organize the work related to the establishment and operation of medical institutions,
- Maintain quality, professionalism, institutional accountability, geographical balance and social justice in medical education,
- Ensure equal access of all students including the deprived.

The Act defines medical education as education of all disciplines and levels related to the health profession (Health Professional Education).

It is chaired by the Prime Minster of Nepal, and co-chaired by the Health Minister and Education Minister of Nepal. It conducts entrance examination for undergraduates and post-graduates medical and health sciences degree. The details of MEC and its structure can be found publicly through its website: https://www.mec.gov.np

24.7.2 Rights, Duties, and Responsibilities of the Commission

Primarily, confined to the National Medical Education Act, 2075, and National Medical Education Regulations, 2077 (with amendments), and various procedures such as Medical Education Commission Fund Operation Procedure, 2077, National Board of Medical Specialties Program Operation Procedure, 2077, and Quality Assessment Procedure of Reputable Institutions Teaching Medical Education, 2077, MEC has the following rights, duties and responsibilities.

- To determine the national policy to be adopted in the field of medical education
- To determine the policy standards and criteria related to medical education
- To organize and manage integrated entrance exam for the students of bachelor, postgraduate or higher levels who wants to study in Nepal and abroad
- To develop and implement matching system for the selection of student's based on priority of pass results
- To construct an integrated annual educational calendar for medical education programs
- To provide letter of intent, recommend affiliation, accreditation, determine tuition fees and seat for educational institution providing medical education
- To formulate polices for academic upgrading and research to improve quality of medical education
- To coordinate and collaborate with national and international bodies working in the field of medical education
- To determine the curriculum, teaching methods and degree standards related to medical education
- To issue eligibility letter to those who wants to pursue medical education abroad
- To make the plans related to periodic assessment, projection and supply of manpower required for national health service and medical education system
- To perform the activities related to the National Board of Medical Specialties Program
- To direct universities, health sciences academies and institutions, and CTEVT on areas related to medical education.

25 Health Development Partners

25.1 Aid Harmonization in Health Sector

Since 2058/59 (2002), the Government of Nepal (GoN) has implemented key policies to support the Sector-Wide Approach (SWAp) in the health sector, aiming to achieve Universal Health Coverage (UHC) in alignment with the Sustainable Development Goals (SDGs). The Foreign Aid Policy (FAP) 2002 and Development Cooperation Policy (DCP) 2014 provide a foundational framework for effectively implementing SWAp, ensuring better coordination of external funding.

Nepal's Health Sector Strategies play a crucial role in SWAp implementation by requiring Health Development Partners (HDPs) to align theirt support with national policies, strengthening government ownership. Under the leadership of the Ministry of Health and Population (MoHP), HDPs are jointly accountable for implementation, performance monitoring, and achieving health sector goals.

The Nepal Health Sector Strategic Plan 2023-2030 and the Annual Work Plan and Budget (AWPB) have guided health sector investments, ensuring alignment through Joint Financial Agreements between the Ministry of Health and Population (MoHP) and Health Development Partners (HDPs). This chapter highlights key contributors, their areas of investment, geographical coverage, and the financial commitments made in the health sector for FY 2080/81, as reported by HDPs.

25.2 Mapping of HDPs based on Major Programs of Investment

Based on information received from Health Development Partners (HDPs), divisions, and centers, a mapping of development partners has been conducted according to their major program investments. The thematic areas are primarily aligned with the chapters of this report, while additional common themes, identified from annual reports, have also been included. (Table 25.1)

Table 25.1 Mapping of Development Partners based on Major Programs of Investment

Thematic areas	Development Partners Contributing in the area
Maternal and Newborn Health	UNICEF, UNFPA, WHO, US-DOS ADRA Nepal, CARE Nepal, FAIRMED Foundation Nepal, Medic Mobile, Nick Simons Foundation International, One Heart Worldwide, Save the Children, PHASE Nepal, FHI 360 Nepal
Child Health and Immunization	UNICEF, WHO, US DOS CARE Nepal, Save the Children, United Mission to Nepal, FHI 360 Nepal PHASE Nepal
Nutrition	UNICEF, WHO, US-DOS, FHI 360 Nepal ADRA Nepal, World Vision International Nepal Nepali Technical Assistance Group, PHASE Nepal
Sexual and Reproductive Health and Rights (Family planning)	UNFPA, WHO, US-DOS ADRA Nepal, GIZADRA Nepal, CARE Nepal FHI 360 Nepal, Ipas Nepal, Nepal CRS Company
Primary Health Care	UNICEF, UNFPA, WHO, US-DOS CARE Nepal, FAIRMED Foundation Nepal, FHI 360 Nepal, Medic Mobile, One Heart Worldwide, Save the Children, United Mission to Nepal Nepal CRS Company, PHASE Nepal
Non communicable disease	WHO, UNICEF, FHI 360 Nepal, US-DOS
Mental health	UNICEF, WHO, UNFPA, United Mission to Nepal
Surveillance	WHO, FHI 360 Nepal Office, US-DOS
Communicable disease including Tuberculosis and HIV	WHO, Global Fund, IoM, FAIRMED Foundation Nepal, Save the Children, US-DOS, Japan Anti TB Association support, Damien Foundation, BNMT TB Nepal, BWSN, KIDS, Trisuli +, NATA, JANTRA, INTERPID Nepal, BNMT, NYMAT Nepal

Thematic areas	Development Partners Contributing in the area
International Health Regulation	WHO, US-DOS
Curative services	WHO, ADRA Nepal, Nick Simons Foundation International, One Heart Worldwide, US-DOS
Disability and rehabilitation	WHO, US-DOS, FAIRMED Foundation Nepal
Gender based violence prevention and response, OCMC and medico-legal services	UNFPA, WHO, British Embassy Kathmandu, FAIRMED Foundation Nepal, Ipas Nepal
Strengthening public health laboratories	WHO, FHI 360 Nepal, Nick Simons Foundation International, , US-DOS
Health education information and communication	UNICEF, UNFPA, WHO
Logistics management	UNFPA, WHO, British Embassy Kathmandu, ADRA Nepal, FHI 360 Nepal, US-DOS
Health information management	WHO, UNFPA, GIZ, ADRA Nepal, FHI 360 Nepal, Medic Mobile, US-DOS
Health Infrastructure management	WHO, British Embassy Kathmandu,
Healthcare waste management	WHO, GIZ, UNFPA, FHI 360 Nepal, ADRA Nepal
Water, sanitation and hygiene (WASH)	WHO, UNICEF, GIZ, ADRA Nepal, United Mission to Nepal (UMN)
Digital health	WHO, GIZ, CARE Nepal, Medic Mobile, Nick Simons Foundation International
Health Insurance and social protection	WHO, GIZ
Community mobilization and awareness program	WHO, CARE Nepal, PHASE Nepal
Private sector quality health care delivery	CARE Nepal, FHI 360 Nepal, Nepal CRS Company
Resilient Livelihood	World Vision International Nepal
Health System Strengthening	WHO, UNICEF, UNFPA, World Bank British Embassy Kathmandu, GIZ, , US-DOS ADRA Nepal, CARE Nepal, FAIRMED Foundation Nepal, FHI 360 Nepal, Nick Simons Foundation International, Save the Children, United Mission to Nepal,
Disaster response	UNFPA, UNICEF, WHO, World Bank, Ipas Nepal, World Vision International Nepal, Nepali Technical Assistance Group

Source: Annual report submitted by divisions/centers, health development partners

The details of the areas covered, geographical coverage and budgetary allocation and absorptions of the major health development partners are detailed in Table 25.2.

Table 25.2 Health Development Partners Major Area of Work, Geographical Coverage and Budget Expenditure in FY 2081/82

Organization	Major Program Focus	Geographical Coverage Provinces/ Districts/ LLGs	Budget* for Health Sector FY 2081/82 *Currency conversion factors used [1 USD= NRs.138.49 1£ = NRs.179.58, 1 Euro =150.62	
			Total allocated budget (NRs in million)	Budget absorption rate (%)
Multi-lateral agencies/organizations				
WHO	• Support to strengthen health systems capacity through policy, strategy, plan, guideline and protocol development, implementation and monitoring including focused area of GPW13, SDGs, UHC and Nepal Health Sector Strategic Plan 2022-2030. • VPD surveillance and technical support to strengthen national immunization programme. • Strengthen prevention, detection, and response capacities to health emergencies and disasters as IHR following an all-hazard and multisectoral approach. • Strengthening Disease Control and Elimination interventions including end the epidemic of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis and other priority communicable diseases. • Strengthening Disease Control and Elimination interventions including end the epidemic of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis and other priority communicable diseases. • Support prevention and control of non-communicable diseases and strengthen mental health programs by supporting policy development and multisector coordination • Maternal and Child Health programme	Nation-wide	1259.01	

Organization	Major Program Focus	Geographical Coverage Provinces/ Districts/ LLGs	Budget* for Health Sector FY 2081/82 *Currency conversion factors used [1 USD= NRs.138.49 1£ = NRs.179.58, 1 Euro =150.62	
			Total allocated budget (NRs in million)	Budget absorption rate (%)
UNICEF	**Maternal and Newborn Health**: • Strengthening Quality of MNCH care at all levels: • Support in capacity enhancement • Developing/updating MNH guiding documents • Instrumental support to BC, BEONC, SNCU.	4 provinces	506	100%
	Child Health including Immunization: • Vaccine forecasting, procurement, shipment and management. • Digitalization and Zero Dose Work in Community and FID initiative. • Immunization Demand and SBC. • Cold Chain and Immunization HR Support.	Nation wide		
	Child and Adolescent Mental Health: • Contribution to National Action Plan on Suicide Prevention 2024-2030 and National mental Health Strategy and Action Plan 2020. • Support in Telemental Health services. • Contribution to Mental health and Psychosocial Support Strategy (MHPSS) development. • Support in development of Socio emotional Learning package. • Strengthened service delivery through mental health nurses based on National Mental Health Program 2022. • Provided Children and Adolescent Mental Health training to different levels of health workers.	77 districts		
	Health System Strengthening including Emergency response: • Support in national level strategic documents (guideline on Hemophilia and Rheumatic heart disease, national guideline on PEN Plus). • PEN plus service delivery by 4 PEN plus clinic and capacity building of health workers in PEN Plus. • Evidence generation on NCD in children and adolescents. • Supply chain strengthening- supply of childhood cancer medicines. • Strengthening community based integrated disease surveillance for pandemic preparedness for early detection in Nepal. • Emergency response (cholera, flood).	77 districts		
UNFPA	**1. Sexual and Reproductive Health and Rights Program** A. Family Planning, adolescents sexual and reproductive health including FP commodities B. Maternal and Newborn Health C. Reproductive health morbidities including cervical cancer, fistula, PoP D. Improvement of climate adaptive capacity in Nepal for improving Maternal and Newborn Health care services E. Comprehensive sexuality education F. Safe Abortion Service G. Health sector response to GBV **2. Health System Strengthening including emergency response** **3. Population and development**	Nation-wide with provincial offices in Madhesh, Lumbini, Sudurpaschim, Koshi and Karnali Provinces.	NPR 733.997 million	

Organization	Major Program Focus	Geographical Coverage Provinces/ Districts/ LLGs	Budget* for Health Sector FY 2081/82 *Currency conversion factors used [1 USD= NRs.138.49 1£ = NRs.179.58, 1 Euro =150.62	
			Total allocated budget (NRs in million)	Budget absorption rate (%)

World Bank	**Health System Strengthening:**
	• Improving readiness of healthcare delivery system and quality of care
	  • Biomedical equipment repair and maintenance system established and functional in Koshi and Gandaki Provinces
	• Enhancing health emergency preparedness and response capacity at sub-national levels
	  • Functional RRT established in Koshi and Gandaki Provinces
	  • Climate sensitive prioritized disease surveillance system established in Koshi and Gandaki Province
	Health Financing:
	• Support on capacity building activities in health financing for UHC
		National and Provincial (Koshi and Gandaki)	Total amount disbursed in the treasury: NPR 1,786,439,447.2	

Bilateral Agencies/Organizations				
British Embassy Kathmandu	**1. Governance and Evidence-Based Planning** **Key Focus:** Strengthen inclusive, data-driven planning, governance and accountability **Core Actions:** • Data-driven, equity-focused planning and budgeting • Identifying bottlenecks in maternal health and public financial management • Identifying bottlenecks and co-develop a strategic, forward-looking roadmap for improving efficiency, transparency, and accountability in the health sector procurement system • Health sector budget analysis • Strengthening systems for procurement of health supplies • Health Workforce Planning **2. Quality of Care and Inclusion** **Key Focus:** Improve service quality and equity to health **Core Actions:** • Improve quality, equity in health through respectful care and practice audits • Build stakeholder capacity for inclusive and responsive social service delivery **3. Social Sector Resilience and Emergency Preparedness** **Key Focus:** Strengthen continuity resilience and responsiveness of essential services during emergencies **Core Actions:** • Strengthening local systems for continuity of essential services during emergencies • Enhance institutional readiness for disaster response and women-responsive services	Federal Level, Madhesh and Lumbini Province	N/A	N/A

Organization	Major Program Focus	Geographical Coverage Provinces/ Districts/ LLGs	Budget* for Health Sector FY 2081/82 *Currency conversion factors used [1 USD= NRs.138.49 1£ = NRs.179.58, 1 Euro =150.62	
			Total allocated budget (NRs in million)	Budget absorption rate (%)
GDC/KfW (German Development Cooperation)	**1. Recovery Programme (Phase II):** • Reconstruction of earthquake affected infrastructure along with equipment.	**1. Recovery Programme (Phase II):** • Jhaukhel – Health Post • Sankhu- Primary Hospital • Dolakha- Health Post • Melbisauni- Primary Hospital	NPR 286.18 million	
	2. Improvement of Mother and Child Care in Rural Area (IMCCR) • Construction of new infrastructures along with equipment. • Strengthening referral pathway for Mother/ Child care	**3. IMCCR** • Maternal and Perinatal Centre • Dadeldhura • Health Posts in • Bagarkot, • Chatttiwan, • Kotila • Malladehi	NPR 301.24 million	
	4. Improvement of Mother and Childcare in Urban Area/Paropakar (IMCCU) • Decongestion of Paropakar Maternity Women's Hospital Nepal/Prasuti Griha project with construction of 2 satellite hospitals in Kathmandu peripherals	**5. IMCCU** • Chandragiri Municipality • Mahalaxmi Municipality	NPR 120.50 million	

Organization	Major Program Focus	Geographical Coverage Provinces/ Districts/ LLGs	Budget* for Health Sector FY 2081/82 *Currency conversion factors used [1 USD= NRs.138.49 1£ = NRs.179.58, 1 Euro =150.62	
			Total allocated budget (NRs in million)	Budget absorption rate (%)
GIZ Health Sector Support Project: **1. Support to the Health Sector Strategy II (S2HSS II)** **2. Support for Nepal's national Gender Equality and Social Inclusion Strategy in the Health Sector (S2GESI)**	**Health System Strengthening and Social Health Protection:** • Technical assistance to MoHP and subnational governments for implementation of the Nepal Health Sector Strategic Plan (NHSSP). • Strengthening federal health governance, intergovernmental coordination, and institutional capacity at provincial and local levels. **Digitalization of health systems,** including strengthening health information systems, digital reporting tools, data use for decision-making, and support for interoperability and digital governance mechanisms. • Support to evidence-based planning, budgeting, and public financial management in the health sector. • Quality improvement of primary health care services. • Strengthening monitoring and reporting systems. • Technical support to the **Health Insurance Board (HIB)** to strengthen social health insurance implementation, governance systems, claim management mechanisms, and enrollment expansion toward Universal Health Coverage (UHC). **Gender Equality and Social Inclusion (GESI) in Health:** • Institutionalization of the Health Sector GESI Strategy. • Integration of GESI-responsive planning and budgeting at federal and subnational levels. • Capacity strengthening of health care facility for equitable and inclusive service delivery. • Improving access to health services for marginalized and vulnerable populations.	Sudur Pachhim Province: Alital Rural Municipality, Tribeni Municipality, Panchadebal Binayak Municipality Lumbini Province: Bijayanagar Rural Municipality, Jhimruk Rural Municipality, Nepalgunj Sub-Metropolitan City	Total EUR 2.2 million (S2HSS II: EUR 1.6 million and S2GESI: EUR 0.6 million) 100%	
IOM	**System strengthening:** • Provided technical support to strengthen health system capacity through development of policy documents (guidelines/protocols) especially targeting migrants health issues • Provided technical support to implement Nepal Health Sector-Strategic Plan, 2023-2030, especially the migrant's health related agenda **National TB Control Program:** • Supported National Tuberculosis Control Center through processing of Sputum sample culture when the National Tuberculosis Reference Laboratory was rendered inoperable due to severe flooding. IOM-Nepal also donated 300 Xpert MTB/XDR cartridges to the NTCC for supporting smooth operation of TB detection services. **Medical logistics:** • Donated medical logistics including patient monitors oxygen concentrators, oxygen cylinders, CPAP machine and patient trolley bed to the Department of Health Services in October 2025	National	NPR 5.7 million	100%

Organization	Major Program Focus	Geographical Coverage Provinces/ Districts/ LLGs	Budget* for Health Sector FY 2081/82 *Currency conversion factors used [1 USD= NRs.138.49 1£ = NRs.179.58, 1 Euro =150.62	
			Total allocated budget (NRs in million)	Budget absorption rate (%)
JICA	**1. Reproductive, Maternal, Newborn, Child Health and Nutrition (Technical Cooperation Project for Improving Continuum of Care for Mothers and Children through the utilization of MCH Handbook)** • Improvement of quality continuum of care for mothers and children through effective utilization of an integrated MCH Handbook • Capacity building of service providers and FCHVs • Procurement of essential MCH care equipment • Evaluation Study of the Pilot implementation of the integrated MCH Handbook • Country-focused training for effective use of MCH Handbook in Japan and Indonesia Knowledge Co-creation Program in Japan (UHC and CoC, Maternal Health etc.)	• Gandaki Province: Gharapjhong, Thasang, Galkot, Shuklagandaki, Machhapuchchhre, Ajirkot • Lumbini Province: Rapti, Maharajgunj, Lumbini (For the pilot implementation)	N/A	N/A
KOICA	**1. Project** A. Subsequent management of Improving Maternal and Child Health Care in Mugu B. The Second Phase Project for Establishing the Nepal-Korea Friendship C. Initiative to strengthen community health and Education D. Adolescents SRHR (Sexual and Reproductive Health and Rights) improvement in Bardiya district, Nepal (Phase 2)	**Nation-wide in Madhesh, Lumbini, Sudurpaschim, Karnali, Kandaki Provinces.**	NPR 345.45 million A. 32.50 B. 248.90 C. 13.27 D. 50.78	100%
	2. Global Doctor Volunteer Dispatch	**Bagmati Province/ Kathmandu**	NPR 26.79 million	
	3. Global Degree Program A. Master's Degree Program in Global Health Security B. Doctor's Degree Program in Global Health Security C. Master's Degree Program in Infectious Disease	**Korea**	NPR 7.61 million A. 2.93 B. 1.76 C. 2.92	
	4. Invitational Training A. Capacity Building on Strengthening Health Emergency Coordination and Operation System in Nepal B. Developing Effective Health Insurance System in Nepal through Capacity Building Support	**Korea**	NPR 30.39 million A. 15.33 B. 15.06	
International Non-government Organization (INGO)				
Adventist Development and Relief Agency (ADRA), Nepal	Maternal, Newborn, Child health, Nutrition, WASH, SRHR and Disaster and Emergency Response through Comprehensive SRH Camps	Madhesh, Lumbini, Karnali and Sudurpashchim	122.5	
Nick Simons Institute	Curative health, Capacity Building, Clinical Training	All 7 Provinces	720.83	
Save the Children	Maternal and Newborn Health, Adolescent health, TB, HIV, Malaria, emergency response	All 7 Provinces	342.67	
FHI360 Nepal	HIV, Procurement Supply Chain Management, Air quality management, Global Health Security (Anti-Microbial Resistance, Lab and Surveillance System Strengthening, Emergency Response), Nutrition, MNCH	All 77 districts of 7 Provinces	1456.50	

Organization	Major Program Focus	Geographical Coverage Provinces/ Districts/ LLGs	Budget* for Health Sector FY 2081/82 *Currency conversion factors used [1 USD= NRs.138.49 1£ = NRs.179.58, 1 Euro =150.62	
			Total allocated budget (NRs in million)	Budget absorption rate (%)
Care Nepal	Nutrition, Maternal and Newborn Health, ASRH	Madhesh, Lumbini, Karnali	1024.75	
Ipas Nepal	SRHR, Climate chnage and Health	Lumbini	137.61	
		Karnali	82.56	
One Heart Worldwide	Maternal and newborn health	Madhesh	166.94	
		Karnali	190.81	
Medecins du Monde (MdM) France	Environmental Health, Strengthening of Primary Health Care Services	Bagmati	16.88	
		Lumbini	12.73	
WVI Nepal	Nutrition, Maternal and Newborn Health, resilient livelihood	All 7 Provinces, more focus on Madhesh, Karnali, and Sudurpashchim	89.82	
Good Neighbors Intl Nepal	MCH, ASRH, Local Health System Strengthening, WASH	All 7 Provinces	279.52	
Lutheran World Relief (LWR)	Maternal, Newborn and Child Health (MNCH)	Lumbini	NA	
AMDA-MINDS	Maternal and Child Health	Sudurpashchim	26.41	
FAIRMED Foundation Nepal	Neglected Tropical disease, Maternal and newborn health and Disability	Koshi	30.09	
	Neglected Tropical disease, Maternal and newborn health and Disability	Madhesh	7.86	
	Neglected Tropical disease, Maternal and newborn health and Disability	Bagmati	47.14	
	Neglected Tropical disease, Maternal and newborn health and Disability	Gandaki	34.43	
	Neglected Tropical disease, Maternal and newborn health and Disability	Lumbini	93.91	
ReSurge Intl Nepal	Reconstructive Surgery, Development and support	All 7 Provinces (via camps)	54.85	
Marie Stopes International	Sexual and Reproductive Health, Social Marketing, Public Service Strengthening	All 7 Provinces	416.09	
Tdh Foundation	Perinatal health, IPC/WASH in Healthcare Facilities, climate and Environmental Education in Schools, System Stregthening, Research	Lumbini	205.43	
World Neighbors	Community and Reproductive Health (C&RH)	Koshi and Bagmati	1.00	
Seva Foundation USA/Seva Canada Society	Eye Health	All 7 Provinces	138.05	
Plan International Nepal	Maternal and Child Nutrition, Early Childhood Development and SRHR	Madhesh, Bagmati, Lumbini, Karnali, and Sudurpashchim	75.00	
United Mission to Nepal	Reproductive health, ASRH, MCH, Mental health, WASH,Health system strengthening	Madhesh, Lumbini, Karnali, and Sudurpashchim	NA	

Source: NJAR, 2081/82

Note: This is not the exhaustive, there are many federal, provincial and LLGs level registered NGOs and private companies that are contributing in health sectors.

Key Issues and Challenges

- Higher expectations from local, provincial, and federal governments that extend beyond the defined project scope.
- Limited reporting of private sector service delivery within government information systems.
- Challenges in integrating digital health systems and ensuring consistent data reporting.
- Funding gaps and constraints in resource mobilization.
- Capacity-building limitations and sustainability challenges for health initiatives.
- Low prioritization of neglected tropical diseases (NTDs), hospital waste management, and mental health services.
- Operational issues, including delays in approvals for INGO/NGO-supported programs.

Way forward

- Strengthen coordination, collaboration, and partnership at all levels of government to contribute to the five strategic objectives of the NHS Strategic Plan 2023-2030 (prioritised activities)
- Initiated further dialogues to strengthen the integration of private-sector engagement
- Enhance capacity-building initiatives and knowledge-sharing platforms
- Implement Quality Improvement Programs and initiatives.
- Strengthen partnership and Coordination through knowledge sharing and advocacy including dissemination of best practices, lessons learned and advocacy for policy and systems strengthening.
- Ensure sustainability by integrating programs into national systems.
- Endorsement and implementation of standard operating procedures (SOP)
- Facilitate a supportive environment for INGOs, particularly by improving and expediting the Social Welfare Council (SWC) project approval process.

DoHS acknowledges its partnership with the health development partners' organizations and their large contributions to Nepal's health sector. The partners have also provided technical assistance in their areas of expertise.

Annex for Family Planning and Reproductive Health Program (Chapter 6)

Annex Table 6.1 Adjusted current user of FP permanent method and mCPR (FY 2081/82)

Organaization Unit	Adjusted Current Users for FP Permanent Methods			Total Current Users	Target pop - Female pop aged 15-49 years	Adjusted CPR
	Female	Male	Total			
Nepal	**856,037**	**250,125**	**1,106,162**	**2,511,456**	**8,540,438**	**29.4**
1. Koshi Province	**168,386**	**28,883**	**197,269**	**422,961**	**1,425,644**	**29.7**
TAPLEJUNG	26	1,531	1,557	8,661	27,305	31.7
SANKHUWASABHA	288	1,947	2,235	14,431	37,596	38.4
SOLUKHUMBU	132	589	722	7,283	24,644	29.6
OKHALDHUNGA	530	1,419	1,949	11,416	32,436	35.2
KHOTANG	205	1,576	1,781	13,881	38,959	35.6
BHOJPUR	203	1,774	1,977	10,885	35,176	30.9
DHANKUTA	1,384	1,225	2,609	9,782	36,995	26.4
TERHATHUM	109	1,192	1,301	6,261	20,687	30.3
PANCHTHAR	407	1,491	1,899	14,694	41,581	35.3
ILAM	5,136	1,215	6,350	25,238	72,528	34.8
JHAPA	41,556	5,721	47,277	76,796	313,169	24.5
MORANG	75,736	4,045	79,781	128,890	355,079	36.3
SUNSARI	39,601	2,671	42,272	74,965	292,400	25.6
UDAYAPUR	3,074	2,486	5,560	19,778	97,089	20.4
2. Madhesh Province	**384,725**	**9,772**	**394,496**	**580,594**	**1,734,288**	**33.5**
SAPTARI	44,442	447	44,888	69,491	198,328	35.0
SIRAHA	39,016	1,317	40,333	60,420	211,683	28.5
DHANUSA	65,709	1,210	66,919	84,835	251,758	33.7
MAHOTTARI	36,005	719	36,724	53,427	202,413	26.4
SARLAHI	61,938	2,013	63,950	111,413	239,125	46.6
RAUTAHAT	38,717	689	39,406	58,296	230,048	25.3
BARA	30,484	1,101	31,586	47,496	212,786	22.3
PARSA	68,415	2,276	70,690	95,218	188,147	50.6
3. Bagmati Province	**76,064**	**94,788**	**170,852**	**446,759**	**1,909,174**	**23.4**
DOLAKHA	2,175	2,970	5,145	12,752	40,752	31.3
SINDHUPALCHOK	1,501	4,617	6,118	22,047	61,724	35.7
RASUWA	456	1,305	1,761	4,839	10,887	44.4
DHADING	1,176	6,179	7,355	23302	82,375	28.3
NUWAKOT	4,742	4,675	9,417	17,886	65,095	27.5
KATHMANDU	26,595	13,442	40,037	108,249	733,635	14.8
BHAKTAPUR	6,751	2,396	9,147	24,016	153,980	15.6
LALITPUR	7,991	14,271	22,262	60,546	183,339	33.0
KAVREPALANCHOK	7,592	6,119	13,711	37,981	92,968	40.9
RAMECHHAP	194	2,307	2,501	15,060	39,054	38.6
SINDHULI	4,191	3,183	7,374	26,515	80,612	32.9
MAKWANPUR	3,170	14,283	17,452	38,890	133,277	29.2
CHITWAN	9,529	19,042	28,572	54,677	231,476	23.6

Organaization Unit	Adjusted Current Users for FP Permanent Methods			Total Current Users	Target pop - Female pop aged 15-49 years	Adjusted CPR
	Female	Male	Total			
4. Gandaki Province	**44,901**	**38,575**	**83,476**	**186,575**	**691,585**	**27.0**
GORKHA	4,909	4,634	9,543	21,001	60,646	34.6
MANANG	0	122	122	479	986	48.6
MUSTANG	199	200	399	1,361	2,750	49.5
MYAGDI	884	2,236	3,120	11,679	25,313	46.1
KASKI	11,157	9,198	20,355	40,861	203,730	20.1
LAMJUNG	1,671	4,068	5,739	13,505	37,667	35.9
TANAHU	4,712	5,000	9,712	25,795	88,938	29.0
NAWALPARASI EAST	10,924	3,001	13,925	25,367	115,478	22.0
SYANGJA	6,833	2,849	9,681	17,455	61,620	28.3
PARBAT	794	3,097	3,892	9,946	31,333	31.7
BAGLUNG	2,819	4,170	6,988	19,126	63,124	30.3
5. Lumbini Province	**119,118**	**27,150**	**146,268**	**471,403**	**1,551,247**	**30.4**
RUKUM EAST	85	465	549	4,909	14,056	34.9
ROLPA	599	2,317	2,915	23,392	63,963	36.6
PYUTHAN	1,900	1,713	3,613	23,944	64,412	37.2
GULMI	4,301	2,309	6,610	18,775	60,754	30.9
ARGHAKHANCHI	2,413	2,194	4,607	14,601	44,680	32.7
PALPA	6,920	3,671	10,591	26,337	64,804	40.6
NAWALPARASI WEST	14,885	2,911	17,796	40,386	117,204	34.5
RUPANDEHI	28,046	2,505	30,550	90,977	362,954	25.1
KAPILBASTU	11,901	169	12,070	54,092	208,588	25.9
DANG	14,452	2,879	17,332	73,458	218,400	33.6
BANKE	12,170	3,720	15,889	50,234	191,577	26.2
BARDIYA	21,447	2,299	23,746	50,298	139,855	36.0
6. Karnali Province	**9,501**	**28,249**	**37,750**	**133,662**	**455,136**	**29.4**
DOLPA	12	620	632	4,020	10,439	38.5
MUGU	26	1,246	1,272	4,670	15,997	29.2
HUMLA	53	1,660	1,713	4,217	12,994	32.5
JUMLA	104	4,654	4,758	8,920	30,940	28.8
KALIKOT	23	2,304	2,327	10,196	36,008	28.3
DAILEKH	103	3,250	3,353	14,730	64,471	22.8
JAJARKOT	288	2,763	3,051	13,176	49,016	26.9
RUKUM WEST	129	1,371	1,500	10,759	44,854	24.0
SALYAN	620	3,384	4,003	20,631	63,174	32.7
SURKHET	8,143	6,997	15,141	42,343	127,243	33.3
7. Sudurpashchim Province	**53,343**	**22,708**	**76,051**	**269,501**	**773,364**	**34.8**
BAJURA	1,087	2,614	3,701	13,218	34,349	38.5
BAJHANG	427	3,444	3,871	16,411	46,690	35.1
DARCHULA	651	1,612	2,263	12,326	34,214	36.0
BAITADI	1,987	2,264	4,250	23,280	63,062	36.9
DADELDHURA	981	1,733	2,714	13,173	36,825	35.8
DOTI	1,833	2,835	4,668	19,645	53,673	36.6
ACHHAM	720	2,090	2,811	17,701	56,187	31.5
KAILALI	29,895	3,333	33,229	101,692	288,618	35.2
KANCHANPUR	15,761	2,782	18,543	52,057	159,746	32.6

Annex for Non-Communicable Diseases and Mental Health Programs (Chapter 8)

Annex Table 8.1 Service utilization status by province FY 2081/82

Indicators	Nepal	Koshi	Madhesh	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim
Number of Hypertension cases on treatment	1,681,953	418,231	155,923	446,059	197,658	294,324	64,736	105,022
Number of Diabetes cases on treatment	800,726	246,349	82,037	252,067	55,235	115,445	16,803	32,790
Number of COPD cases on treatment	325,135	75,186	29,382	100,889	19,810	43,511	19,882	36,475
Number of cancer cases on treatment	98,080	11,727	206	85,400	245	223	154	125
Number of CVDs on treatment	42,825	11,407	3,141	18,348	1,901	6,941	502	585
Number of mental health cases on treatment	281,570	62,716	22,068	78,885	11,260	57,163	37,621	11,857
Cases of Burn Injury and Scalds	79,630	8,867	20,278	14,439	8,487	13,572	6,516	7,471

Annex for Communicable Diseases, IHR and One Health (Chapter 10)

Annex Table 10.1 District-wise morbidity mapping of Lymphatic Filariasis for FY 2081/82

SN	District	Hydrocele	Lymphodema		Both	Total
			Male	Female		
1	Panchthar	134	17	39	3	193
2	Jhapa	1,207	400	412	45	2,064
3	Bhojpur	9	10	0	0	19
4	Terathum	29	2	3	0	34
5	Dhankuta	96	20	18	1	135
6	Sunsari	649	129	222	1	1,001
7	Morang	1,911	362	720	25	3,020
8	Okhaldhunga	85	12	28	1	126
9	Udaypur	186	75	124	2	387
10	Siraha	572	112	152	6	842
11	Saptari	1,183	148	271	15	1,617
12	Dhanusha	525	200	311	32	1,068
13	Mahottari	935	212	395	2	1,544
14	Sarlahi	1,475	499	0	7	1,981
15	Bara	706	55	148	8	917
16	Parsa	1,035	218	404	33	1,690
17	Ramechhap	115	47	44	2	208
18	Sindhupalchok	396	205	311	26	938
19	Kavrepalanchok	345	57	192	0	594
20	Nuwakot	1,562	210	487	0	2,259
21	Dhading	1,342	194	630	28	2,194
22	Kathmandu	281	156	497	10	944
23	Lalitpur	115	52	204	6	377

SN	District	Hydrocele	Lymphodema		Both	Total
			Male	Female		
24	Bhaktapur	126	119	345	4	594
25	Chitwan	247	55	44	3	349
26	Makawanpur	247	34	85	7	373
27	Kaski	249	71	202	0	522
28	Lamjung	172	12	31	2	217
29	Tanahun	6	0	2	0	8
30	Syangja	64	11	29	0	104
31	Gorkha	171	12	25	1	209
32	Nawalpur	25	10	14	0	49
33	Baglung	158	29	56	0	243
34	Myagdi	32	8	17	0	57
35	Parbat	48	9	0	0	57
36	Nawalparasi	313	27	98	5	443
37	Rupandehi	830	88	221	17	1,156
38	Kapilvastu	1,855	265	578	29	2,727
39	Arghakhachi	70	10	27	3	110
40	Palpa	196	52	75	2	325
41	Rolpa	268	39	85	4	396
42	Rukum East	81	6	32	4	123
43	Pyuthan	167	1	4	0	172
44	Dang	1,614	132	298	16	2,060
45	Banke	1,850	127	243	13	2,233
46	Bardia	2,524	141	323	30	3,018
47	Rukum West	100	11	14	1	126
48	Salyan	46	13	3	0	62
49	Bajhang	54	9	16	7	86
50	Achham	25	4	11	0	40
51	Bajura	0	2	0	0	2
52	Doti	145	37	87	0	269
53	Kailali	3,362	248	482	14	4,106
54	Darchula	43	1	8	0	52
55	Baitadi	62	13	47	2	124
56	Dadeldhura	36	6	17	0	59
57	Kanchanpur	2,580	180	471	14	3,245
58	Sindhuli					
59	Illam					
60	Solokhumbuu					
61	Rautahat					
62	Surkhet					
63	Kalikot					
64	Julma	**Morbidity Estimation Survey Completed and Analysis Ongoing**				
65	Humla					
66	Mugu					
67	Dolpa					
68	Dailekh					
69	Jajarkot					
	Total	**32,659**	**5,586**	**9,190**	**431**	**47,868**

Annex Table 10.2 Comparison of leprosy indicators

Indicators	2068/69 (2011/12)	2069/70 (2012/13)	2070/71 (2013/14)	2071/72 (2014/15)	2072/73 (2015/16)	2073/74 (2016/17)	2074/75 (2017/18)	2075/76 (2018/19)	2076/77 (2019/20)	2077/78 (2020/21)	2078/79 (2021/22)	2079/80 (2022/23)	2080/81 (2023/24	2081/82 (2024/25)
New cases	3,481	3,253	3,223	3,053	3,054	3,215	3,249	3,282	2,044	2,173	2,285	2,522	2472	2,409
New case detection rate	12.2	11.9	11.18	11.01	10.67	11.23	11.2	11.2	6.22	7.2	7.81	8.5	8.41	8.16
Under Treatment cases at the end	2,430	2,228	2,271	2,461	2,559	2,626	2,882	2,921	1,853	2,197	2,373	2,510	2706	2,608
PR/10,000 population	0.85	0.82	0.83	0.89	0.89	0.92	0.99	0.99	0.69	0.73	0.81	0.85	0.92	0.88
No. new child cases	218	136	204	236	220	220	202	260	141	101	73	181	136	91
Proportion child cases	6.26	4.24	6.33	7.73	7.2	6.84	6.22	7.92	7.61	4.65	3.19	7.2	5.5	3.78
New G2D cases	110	94	109	135	109	87	133	156	101	95	170	189	157	154
Proportion of new G2D cases	3.16	2.89	3.38	4.42	3.57	2.71	4.09	4.75	5.45	4.37	7.44	7.5	6.35	6.39
G2D rate/ 100,0000	3.9	3.5	4	4.9	3.8	3.3	4.1	5.3	3.39	3.15	5.81	6.66	5.34	5.22
New G2D Child cases	N/A	N/A	N/A	N/A	N/A	N/A	2	2	6	1	4	8	2	1
Proportion G2D Child cases	N/A	N/A	N/A	N/A	N/A	N/A	0.06	0.06	0.32	0.05	0.18	0.3	0.08	0.04
New female cases	1,100	1,004	1,143	1,100	1,169	1,361	1,375	1,376	770	796	989	1,049	1042	1012
Proportion female cases	31.6	30.8	35.5	36	38.3	42.3	42.3	41.9	41.6	36.6	43.3	41.6	42.15	42.01
Released from treatment	3,190	3,374	3,187	2,800	2,902	3,040	2,852	3,221	2,817	1,855	2,086	2,261	2107	2155
No. Defaulters (Lost to follow up)	24	43	24	38	44	57	93	142	153	62	79	95	125	124
No. relapse cases	25	14	11	8	12	15	21	36	19	16	28	19	25	29

Annex Table 10.3 Service utilization of VBDs and zoonotic disease status by province FY 2081/82

Indicators	Nepal	Province						
		Koshi	Madhesh	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim
Number of blood sample collected for malaria diagnosis	451,362	35,461	48,973	63,619	40,568	126,884	42,632	93,225

Annex for National Tuberculosis Control Program (Chapter 11)

Annex Table 11.1 DR TB treatment sites

Province	Districts	Palika	DRTB Treatment Center
Koshi	SUNSARI	Dharan Sub-Metropolitan City	Bpkihs Dharan Sunsari
	JHAPA	Bhadrapur Municipality	Provincial Hospital Bhadrapur
	MORANG	Biratnagar Metropolitan City	Nepal Anti Tuberclosis Association (Nata) Morang
	OKHALDHUNGA	Siddhicharan Municipality	Okhaldhunga Community Hospital Okhaldhunga
Madhesh	RAUTAHAT	Chandrapur Municipality	Chandranigahapur Hosptial Rautahat
	DHANUSA	Mithila Municipality	Lalgadh Hospital Dhanusa
	SIRAHA	Mirchaiya Municipality	Mirchaiya Hospital Siraha
	PARSA	Birgunj Metropolitan City	National Medical Hospital Parsa
	SARLAHI	Lalbandi Municipality	Lalbandi Phc Sarlahi
Bagmati	KATHMANDU	Kathmandu Metropolitan City	Genetup Kathmandu
	BHAKTAPUR	Madhyapur Thimi Municipality	National Tuberculosis Control Centre Bhaktapur
	NUWAKOT	Bidur Municipality	District Trisuli Hospital Nuwakot
	SINDHULI	Kamalamai Municipality	District Hospital Sindhuli
	BHAKTAPUR	Bhaktapur Municipality	Bhaktapur Hospital Bhaktapur
Gandaki	BAGLUNG	Baglung Municipality	Dhaulagiri Hospital Baglung
	NAWALPARASI EAST	Kawasoti Municipality	Midpoint District Hospital Nawalparasi East
	KASKI	Pokhara Metropolitan City	Tuberculosis Treatment Center Pokhara
Lumbini	RUPANDEHI	Butwal Sub-Metropolitan City	Lumbini Provincial Hospital Rupandehi
	DANG	Ghorahi Sub-Metropolitan City	Rapti Academy Of Health Science Dang
	BANKE	Nepalganj Sub-Metropolitan City	Tb-Nepal Banke
	KAPILBASTU	Shivraj Municipality	Basic Health Service Hospital Chandoruta
Karnali	JUMLA	Chandannath Municipality	Karnali Academy Of Health Science Jumla
	SURKHET	Birendranagar Municipality	Provincial Hospital Surkhet
Sudurpashchim	ACHHAM	Sanphebagar Municipality	Bayalpata Hospital (Nyaya Health) Achham
	DADELDHURA	Amargadhi Municipality	Dadeldhura Hospital Dadeldhura
	KAILALI	Godawari Municipality	Laxminarayan Referral Hospital Kailali
	KANCHANPUR	Bhimdatta Municipality	Mahakali Provincial Hospital Kanchanpur
	KAILALI	Dhangadhi Sub-Metropolitan City	Seti Zonal Hospital Kailali
	DOTI	Dipayal Silgadhi Municipality	District Hospital Doti
	BAJURA	Badimalika Municipality	District Hospital Bajura
	KAILALI	Dhangadhi Sub-Metropolitan City	Geta Hospital Kailali

Annex Table 11.2 Three-years case notification trend of TB Free Initiative LLGs

Province	Districts	Palikas	TB Case Notification (Trend)		
			FY 2079/80	FY 2080/81	FY 2081/82
Kosh	DHANKUTA	Chaubise Rural Municipality	7	8	11
Koshi	JHAPA	Mechinagar Municipality	205	205	210
Koshi	MORANG	Kerabari Rural Municipality	42	42	41
Koshi	SUNSARI	Itahari Sub-Metropolitan City	205	222	243
Madhesh	DHANUSA	Laxminiya Rural Municipality	124	123	66
Madhesh	SARLAHI	Hariwan Municipality	119	135	121

Province	Districts	Palikas	TB Case Notification (Trend)		
			FY 2079/80	FY 2080/81	FY 2081/82
Madhesh	BARA	Nijagadh Municipality	95	131	93
Bagmati	KATHMANDU	Shankharapur Municipality	54	32	40
Bagmati	BHAKTAPUR	Changunarayan Municipality	71	53	74
Bagmati	KAVREPALANCHOK	Dhulikhel Municipality	57	50	38
Bagmati	MAKWANPUR	Thaha Municipality	34	88	30
Gandaki	KASKI	Rupa Rural Municipality	2	7	9
Gandaki	TANAHU	Bhanu Municipality	33	43	25
Gandaki	SYANGJA	Walling Municipality	84	79	89
Lumbini	RUPANDEHI	Butwal Sub-Metropolitan City	429	443	425
Lumbini	KAPILBASTU	Banganga Municipality	159	183	171
Lumbini	BANKE	Kohalpur Municipality	189	194	164
Karnali	DAILEKH	Dullu Municipality	31	36	32
Karnali	SALYAN	Kapurkot Rural Municipality	39	31	38
Karnali	SURKHET	Gurbhakot Municipality	65	84	71
Sudurpashchim	BAJHANG	Jayaprithbi Municipality	28	33	21
Sudurpashchim	DADELDHURA	Ajayameru Rural Municipality	9	12	14
Sudurpashchim	DADELDHURA	Ganyapdhura Rural Municipality	8	15	9
Sudurpashchim	KAILALI	Tikapur Municipality	176	182	172
Sudurpashchim	KANCHANPUR	Krishnapur Municipality	78	108	106
Koshi	TAPLEJUNG	Phungling Municipality		20	11
Koshi	SANKHUWASABHA	Makalu Rural Municipality		8	12
Koshi	OKHALDHUNGA	Chishankhu Gadhi Rural Municipality		1	1
Koshi	KHOTANG	Halesi Tuwachung Municipality		12	13
Koshi	KHOTANG	Diktel Rupakot Majhuwagadhi Municipality		16	17
Koshi	DHANKUTA	Dhankuta Municipality		15	37
Koshi	TERHATHUM	Phedap Rural Municipality		7	5
Koshi	TERHATHUM	Menchhayayem Rural Municipality		4	5
Koshi	PANCHTHAR	Phidim Municipality		27	24
Koshi	ILAM	Ilam Municipality		41	38
Koshi	JHAPA	Shivasatakshi Municipality		77	56
Koshi	JHAPA	Birtamod Municipality		135	147
Koshi	MORANG	Biratnagar Metropolitan City		322	362
Koshi	SUNSARI	Ramdhuni Municipality		87	86
Koshi	UDAYAPUR	Triyuga Municipality		90	89
Madhesh	SAPTARI	Kanchanrup Municipality		49	56
Madhesh	SAPTARI	BodeBarsain Municipality		41	38
Madhesh	SIRAHA	Mirchaiya Municipality		86	62
Madhesh	DHANUSA	Bateshwor Rural Municipality		109	39
Madhesh	DHANUSA	Shahidnagar Municipality		61	73
Madhesh	DHANUSA	Janakpur Sub-Metropolitan City		345	339
Madhesh	MAHOTTARI	Gaushala Municipality		171	153
Madhesh	MAHOTTARI	Ekadara Rural Municipality		29	39
Madhesh	MAHOTTARI	Gaushala Municipality		171	153
Madhesh	MAHOTTARI	Ekadara Rural Municipality		29	39
Madhesh	SARLAHI	Lalbandi Municipality		140	188

Province	Districts	Palikas	TB Case Notification (Trend)		
			FY 2079/80	FY 2080/81	FY 2081/82
Madhesh	RAUTAHAT	Chandrapur Municipality		138	120
Madhesh	RAUTAHAT	Gaur Municipality		74	85
Madhesh	BARA	Kolhabi Municipality		95	103
Madhesh	BARA	Mahagadhimai Municipality		110	111
Madhesh	PARSA	Jirabhawani Rural Municipality		28	36
Madhesh	PARSA	Chhipaharmai Rural Municipality		36	49
Bagmati	SINDHUPALCHOK	Helambu Rural Municipality		13	11
Bagmati	SINDHUPALCHOK	Choutara Sangachowkgadhi Municipality		42	21
Bagmati	SINDHUPALCHOK	Bahrabise Municipality		41	27
Bagmati	DHADING	Nilkhantha Municipality		78	66
Bagmati	NUWAKOT	Bidur Municipality		63	77
Bagmati	NUWAKOT	Belkotgadhi Municipality		26	20
Bagmati	KATHMANDU	Kageshwori Manahara Municipality		173	176
Bagmati	KATHMANDU	Budhanilkhantha Municipality		298	260
Bagmati	BHAKTAPUR	Madhyapur Thimi Municipality		234	207
Bagmati	BHAKTAPUR	Suryabinayak Municipality		173	164
Bagmati	LALITPUR	Mahalaxmi Municipality		189	220
Bagmati	LALITPUR	Godawari Municipality		194	149
Bagmati	KAVREPALANCHOK	Bhumlu Rural Municipality		23	17
Bagmati	KAVREPALANCHOK	Banepa Municipality		70	87
Bagmati	RAMECHHAP	Manthali Municipality		33	32
Bagmati	SINDHULI	Dudhouli Municipality		94	50
Bagmati	SINDHULI	Kamalamai Municipality		91	110
Bagmati	MAKWANPUR	Bagmati Rural Municipality		74	85
Bagmati	CHITWAN	Ratnanagar Municipality		106	134
Bagmati	CHITWAN	Khairahani Municipality		103	102
Gandaki	GORKHA	Palungtar Municipality		38	28
Gandaki	GORKHA	Gorkha Municipality		60	60
Gandaki	LAMJUNG	Besishahar Municipality		37	31
Gandaki	TANAHU	Byas Municipality		97	80
Gandaki	TANAHU	Myagde Rural Municipality		16	16
Gandaki	NAWALPARASI EAST	Gaidakot Municipality		116	127
Gandaki	NAWALPARASI EAST	Devchuli Municipality		99	118
Gandaki	SYANGJA	Bhirkot Municipaity		26	48
Gandaki	SYANGJA	Galyang Municipality		62	56
Gandaki	PARBAT	Kushma Municipality		18	28
Gandaki	PARBAT	Phalebas Municipality		4	5
Gandaki	BAGLUNG	Badigad Rural Municipality		152	65
Gandaki	BAGLUNG	Galkot Municipality		15	34
Lumbini	ROLPA	Rolpa Municipality		53	38
Lumbini	PYUTHAN	Sarumarani Rural Municipality		40	34
Lumbini	GULMI	Musikot Municipality		51	66
Lumbini	ARGHAKHANCHI	Chhatradev Rural Municipality		29	16

Province	Districts	Palikas	TB Case Notification (Trend)		
			FY 2079/80	FY 2080/81	FY 2081/82
Lumbini	PALPA	Tansen Municipality		67	66
Lumbini	NAWALPARASI WEST	Ramgram Municipality		86	94
Lumbini	RUPANDEHI	Suddhodhan Rural Municipality		77	68
Lumbini	RUPANDEHI	Tilottama Municipality		271	273
Lumbini	KAPILBASTU	Buddhabhumi Municipality		107	102
Lumbini	KAPILBASTU	Maharajganj Municipality		83	86
Lumbini	DANG	Tulsipur Sub-Metropolitan City		371	399
Lumbini	DANG	Gadhawa Rural Municipality		65	47
Lumbini	BANKE	Khajura Rural Municipality		135	136
Lumbini	BANKE	Nepalganj Sub-Metropolitan City		321	309
Lumbini	BARDIYA	Rajapur Municipality		90	70
Karnali	JUMLA	Chandannath Municipality		14	17
Karnali	KALIKOT	Khandachakra Municipality		30	22
Karnali	DAILEKH	Naumule Rural Municipality		15	8
Karnali	JAJARKOT	Bheri Municipality		29	31
Karnali	JAJARKOT	Nalagad Municipality		39	31
Karnali	RUKUM WEST	Aathabisakot Municipality		76	68
Karnali	RUKUM WEST	Musikot Municipality		52	56
Karnali	SALYAN	Sharada Municipality		34	30
Karnali	SURKHET	Birendranagar Municipality		250	245
Karnali	SURKHET	Panchapuri Municipality		45	55
Sudurpashchim	BAJHANG	Thalara Rural Municipality		12	12
Sudurpashchim	DARCHULA	Malikarjun Rural Municipality		9	21
Sudurpashchim	BAITADI	Puchaundi Municipality		27	41
Sudurpashchim	BAITADI	Surnaya Rural Municipality		15	19
Sudurpashchim	DADELDHURA	Amargadhi Municipality		32	37
Sudurpashchim	DOTI	Jorayal Rural Municipality		18	22
Sudurpashchim	ACHHAM	Bannigadhi Jayagadh Rural Municipality		14	10
Sudurpashchim	KAILALI	Ghodaghodi Municipality		116	137
Sudurpashchim	KAILALI	Lamki Chuha Municipality		164	124
Sudurpashchim	KANCHANPUR	Dodharachadani Municipality		114	129
Sudurpashchim	KANCHANPUR	Laljhadi Rural Municipality		51	72
Koshi	OKHALDHUNGA	Sunkoshi Rural Municipality		11	15
Koshi	ILAM	Deumai Municipality		6	6
Koshi Province	ILAM	Mai Municipality		40	35
Koshi Province	MORANG	Pathari Shanishchare Municipality		89	113
Madhesh	SIRAHA	Golbazar Municipality		102	106
Madhesh	DHANUSA	Mithila Municipality		72	82
Madhesh	SARLAHI	Haripur Municipality		144	106
Madhesh	SARLAHI	Basbariya Rural Municipality		34	47
Madhesh	RAUTAHAT	Gujara Municipality		64	77
Madhesh	PARSA	Birgunj Metropolitan City		552	651
Madhesh	PARSA	Bahudarmai Municipality		68	88

Province	Districts	Palikas	TB Case Notification (Trend)		
			FY 2079/80	FY 2080/81	FY 2081/82
Bagmati	SINDHUPALCHOK	Melamchi Municipality		16	26
Bagmati	KATHMANDU	Tokha Municipality		216	229
Bagmati	KATHMANDU	Kirtipur Municipality		102	101
Bagmati	KATHMANDU	Chandragiri Municipality		188	226
Gandaki	SYANGJA	Putalibazar Municipality		43	33
Gandaki	BAGLUNG	Baglung Municipality		44	40
Gandaki	BAGLUNG	Kathekhola Rural Municipality		14	15
Lumbini	NAWALPARASI WEST	Bardaghat Municipality		100	112
Lumbini	KAPILBASTU	Shuddhodhan Rural Municipality		63	75
Lumbini	DANG	Rapti Rural Municipality		95	82
Karnali	DAILEKH	Aathbis Municipality		21	15
Sudurpashchim	KAILALI	Godawari Municipality		165	180
Sudurpashchim	KAILALI	Joshipur Rural Municipality		55	42
Sudurpashchim	KANCHANPUR	Belouri Municipality		73	56

Source: NTCC/DoHS

Annex for HIV and STIs Control and Management Program (Chapter 12)

Annex Table 12.1 Number of HIV patients treated for opportunistic infection among TB patients

Number of HIV patients treated for opportunistic infection	Koshi	Madhesh	Bagmati	Gandaki	Lumbini	Karnali	Sudurpaschim	Nepal
FY 2081/82	2,814	580	389	49	874	223	1,798	6,727
FY 2080/81	2,167	620	531	95	755	97	1258	5,523
FY 2079/80	1,666	630	1,130	163	739	86	1,350	5,764

Source: NCASC/DoHS

Annex for Curative Services and Medio-legal Services (Chapter 13)

Annex Table 13.1 Inpatient Outcome detail (Age-group wise)

Age Group	Recovered/ Cured		Stable		Referred Out		DOPR/LAMA		Absconded		Death < 48 Hours		Death ≥ 48 Hours	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
0-7 Days	26,435	33,850	1,435	1,654	699	1,059	1,563	2,182	34	28	0	0	175	317
8-28 Days	12,116	15,337	462	566	189	301	543	759	9	5	0	0	0	0
29 Days - <1 Yr	17,506	26,571	894	1,437	477	759	1,107	1,923	15	19	76	116	81	114
01 - 04 Yrs	31,102	43,952	1,693	2,531	651	953	1,839	2,848	30	34	45	62	50	84
05 - 14 Yrs	41,344	60,847	2,849	4,344	927	1,252	2,346	3,040	59	47	60	70	80	98
15 - 19 Yrs	48,944	36,455	3,055	3,187	966	649	2,385	1,934	59	34	68	62	65	75
20 - 29 Yrs	244,414	74,170	9,266	6,417	3,327	1,329	7,312	4,399	190	82	197	216	195	244
30 - 39 Yrs	156,010	76,809	8,793	6,858	1,972	1,512	4,933	4,260	113	64	240	368	309	379
40 - 49 Yrs	137,933	79,467	7,876	7,056	1,580	1,591	4,032	4,531	52	55	350	500	444	629
50 - 59 Yrs	91,336	84,659	7,622	7,214	1,705	2,041	4,478	4,919	73	52	503	697	685	904
60-69 Yrs	87,488	84,096	6,730	6,602	1,958	1,911	5,084	4,832	73	35	605	867	900	1,060
≥ 70 Yrs	85,642	85,559	8,709	9,286	2,815	2,843	8,252	8,230	127	62	1,184	1,456	1,754	2,065
Total	**980270**	**701772**	**59384**	**57152**	**17266**	**16200**	**43874**	**43857**	**834**	**517**	**3328**	**4414**	**4738**	**5969**

Annex Table 13.2 Curative Services utilization according to provinces, FY 2081/82

Indicators	Nepal	Koshi	Madhesh	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim
Acute gastroenteritis cases	357,417	57,705	63,169	89,469	34,261	56,180	29,645	26,988
Measles	513	85	18	67	22	21	7	293
Mumps	14,741	3,402	1,723	3,300	1,252	2,451	993	1620
Rubella	82	18	17	13	3	11	9	11
Intestinal worms infected	515,648	93,385	226,424	64,527	26,862	53,056	26,726	24,668
Patients treated for Lower Respiratory Tract Infections(LRTI)	810,173	164,325	174,061	139,971	62,926	121,245	61,043	86,602
Number of patients treated for Upper Respiratory Tract Infection(URTIs)	1,476,319	249,171	242,182	252,566	143,892	274,241	147,540	166,727

Annex for Disability Inclusive Health, Rehabilitation Services and Road Safety (Chapter 15)

Annex Table 15.1 Diagnosis of the rehabilitation service among new users

Diagnosis	Number of clients	% of Clients
Diseases of the musculoskeletal system or connective tissue (FA00-FC0Z)	214,815	71.22
Diseases of the nervous system (8A00-8E7Z)	28,169	9.34
Diseases of the respiratory system (CA00-CB7Z)	14,930	4.95
Injury, poisoning or certain other consequences of external causes (NA00-NF2Z)	12,363	4.1
Mental, behavioral or neurodevelopmental disorders (6A00-6E8Z)	6,221	2.06
Diseases of the circulatory system (BA00-BE2Z)	6,043	2
Diseases of the genitourinary system (GA00-GC8Z)	2,983	0.99
Neoplasms (2A00-2F9Z	2,456	0.81
Diseases of skin (EA00-EM0Z)	2,284	0.76
Symptoms, signs or clinical findings, not elsewhere classified (MA00-MH2Y)	2,006	0.67
Developmental anomaly (LA00-LD9Z)	1,634	0.54
Pregnancy, childbirth or the puerperium (JA00-JB6Z)	1,300	0.43
Certain infectious and parasitic diseases (1A00-0Z)	1,141	0.38
Endocrine, nutritional and metabolic diseases (5A00-5D46)	1,021	0.34
Disease of the immune system (4A00-4B4Z)	763	0.25
Sleep-wake disorders (7A00-7B2Z)	649	0.22
Diseases of the digestive system (DA00-DE2Z)	508	0.17
Diseases of the blood or blood-forming organs (3A00-3C0Z)	522	0.17
Diseases of the ear and mastoid process (AA00-AC0Z)	480	0.16
Diseases of the visual system (9A00-9E1Z)	296	0.14
External causes of morbidity or mortality (PA00-PL2Z)	330	0.11
Supplementary chapter traditional medicine conditions (Module I (SA00-SJ3Z)	236	0.08
Conditions related to sexual health (HA00-HA8Z)	217	0.07
Certain conditions originating in the perinatal period (KA00-KD5Z)	126	0.04
Factors influencing health status or contact with health services (QA00-QF4Z)	118	0.04
Total	**301,611**	**100**

Annex for Human Resource in Health and Health Finance Management (Chapter 20)

Annex Table 20.1 Type and number of DoHS workforce, fiscal year 2081/82

SN	Types of human resources	Grade/level	Sanctioned	Fulfilled
1	Director General	12th (Additional Secretary)	1	1
2	Director	11th (G.H.S.)	2	2
3	Director	11th (PHA)	1	1
4	Director	11th (HI)	1	1
5	Director	11th (G.Nur.)	1	1
6	Senior/Sub Health Administrator	9/10th (PHA)	1	1
7	Senior General Nursing	9/10th (GN)	1	1
8	Senior Community Nursing Administrator	9/10th (PHN/CN)	1	1
9	Senior Public Health Administrator	9/10th(H.I)	3	2
10	Chief Medical Officer/Medical Superintendent	9/10th(G.H.S.)	2	2
11	Senior/Consultant Medical Generalist	9/10th(MG)	3	3
12	Senior/Consultant Dermatologist	9/10th(D&V)	1	1
13	Senior/Consultant Gynaecology and Obstetrics	9/10th (G/O)	1	1
14	Senior/Consultant Psychiatric	9/10th (Psy)	1	0
15	Senior/Sub-Health Administrator	9/10th (Integrated Chikitsak)	2	2
16	Chief Nutrition Officer	9/10th(H.I)	1	1
17	Senior/Consultant Dental Surgeon	9/10th(Denti.)	1	1
18	Director/Deputy Director/Senior Demographer	Gazetted II (Stat.)	1	1
19	Under Secretary	Gazetted II	1	1
20	Under-Secretary (Finance)	Gazetted II	1	1
21	Section Officer	Gazetted III	7	7
22	Account Officer	Gazetted III	2	2
23	Legal Officer	Gazetted III	1	1
24	Statistics Officer/Demographer	Gazetted III	5	5
25	Pharmacist	7/8th (Phar)	2	1
26	Senior/Public Health Officer	7/8th(H.I)	8	8
27	Nutrition Officer	7/8th(H.I)	1	1
28	Medical Officer	8th	7	7
29	Senior/Medical Lab Technologist	7/8th(G.M.L.)	1	0
30	Senior/Community Nursing Officer	7/8th(PHN/CN)	7	7
31	Senior/Nursing Officer	7/8th(GN)	5	5
32	Entomologist	7/8th(HI)	1	1
33	Veterinary Doctor	Gazetted III(Agri/Vet.)	1	1
34	Computer Officer	Gazetted III	3	3
35	Mechanical Engineer	Gazetted III	1	1
36	Biomedical Engineer	7/8th (Bibi.)	2	2
37	Architect Engineer	Gazetted III	1	1
38	TB/leprosy Officer	7th (HI)	1	0
39	Nayab Subba	Non gazetted I	8	8
40	Health Assistant/Public Health Inspector	5/6th(HI)	6	6
41	Cold Chain Assistant	4/5th(HI)	0	0
42	Lab Assistant	4/5/6th (G.M.L.)	2	2
43	Light Vehicle Driver	Not classified	7	7
44	Office Assistant (Peon)	Not classified	8	8
Total			**114**	**109**

Source: Analysis of Nepal health facility survey 2021, MD/Unicef

Annex for Trend of Health Services Coverage, MoHP

Department of Health Services
Trend of Health Service Coverage Fact Sheets
FY 2079/2080 to 2081/82 (AD 2022/23 to 2024/25)

Indicators	2079/80 (2022/23)	2080/81 (2023/24)	2081/82 (2024/25)	Koshi	Madhesh	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	SDG Target 2030	Source
NUMBER OF HEALTH FACILITIES												
Public health facilities	7932	8068	8100	1393	1278	1441	980	1138	882	988		HMIS
Non-public health facilities	2551	2178	2451	188	191	1562	122	254	65	69		HMIS
Basic Health Service Center	7582	7651	7865	1404	1240	1402	955	1082	832	950		HMIS
Basic Hospitals (5 - 15 Beds)	246	249	413	112	41	136	21	42	28	33		HMIS
General Hospitals (25 - 50 Beds)	333	305	305	43	53	72	56	49	14	18		HMIS
General Hospitals (100 - 300 Beds)	79	69	72	7	15	25	9	12	3	1		HMIS
Specialized Hospitals (100 beds and Above)	28	27	23	4	0	12	0	3	0	4		HMIS
Super Speciality Hospitals (50+ Beds)	22	24	20	1	0	15	1	2	0	1		HMIS
Academy and Teaching Hospital (300+ Beds)	29	29	28	3	2	13	3	6	1	0		HMIS
Other Type of Health Facilities (Ploy clinic, Diagnostic center, clinics, dialysis center, Eye center etc.)	2164	1892	1825	7	118	1328	57	196	69	50		HMIS
REPORTING STATUS												
Public hospitals (%)	95	90.4	97.01	93.75	95.68	96.28	97.29	96.929	100	99.67		HMIS
Non public hospitals (%)	66.6	64.5	67.11	84.05	59.63	57.46	88.36	76.095	99.57	84.08		HMIS
BSHC (%)			100	100	100	100	100	100	99.83	99.75		HMIS
PHC-ORC (%)			95.17	97.49	96	84.64	98.1	100	98.13	97.16		HMIS
FCHVs (%)	96.1	99.6	97.6	97.13	98.55	97.09	98.02	98.72	93.98	98.36		HMIS
IMMUNIZATION PROGRAMME												
BCG coverage (%)	102.2	95.2	87.7	76.8	106.3	81.9	64.9	92.3	92.4	77.1		HMIS
DPT-HepB-Hib1 coverage (%)	100.64	95.56	86.7	76.8	107.0	73.8	76.2	89.2	94.8	78.1	95	HMIS
DPT-HepB-Hib3 coverage (%)	98.6	96.2	86.2	76.9	105.8	73.3	76.0	89.2	93.5	78.3		HMIS
MR2 coverage (12-23 months) (%)	94.7	100.7	95.7	88.1	111.0	85.6	91.7	99.1	100.8	86.2		HMIS
Fully immunized children (%)	84.1	95.9	92.5	87.0	104.8	79.8	90.3	97.8	100.4	85.0	95	HMIS
Dropout rate DPT-Hep B-Hib 1 vs 3 (%)	2	-0.6	0.5	-0.19	1.14	0.65	0.18	0.02	1.42	-0.25		HMIS
Dropout rate DPT-Hep B-Hib 1 vs MR 2 (%)	5.76	-4.48	-6.61	-11.31	-0.01	-11.99	-16.82	-6.91	-2.2	-5.99		HMIS
Pregnant women who received TD2 and TD2+ (%)	72	68.2	64.26	53.75	84.89	48.07	52.31	71.07	68.7	59.11		HMIS

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NUTRITION PROGRAMME												
Children aged 0-11 months registered for growth monitoring (%)	109.2	102.6	92.0	84	109	72	92.3	99	104	86		HMIS
Average Number of visits among children aged 0-23 months registerd for growth monitoring	6	9	11	8	9	8	14	14	14	14		HMIS
Underweight children among new GM visits (0-23 month) (%)	3	2.1	2	1.61	2.03	1.08	1.27	2.69	2.07	2.48		HMIS
Pregnant women who received 180 tablets of Iron (%)	75	65.5	63.86	60.2	68.6	43.4	65.7	79.3	80.8	60.4		HMIS
INTEGRATED MANAGEMENT OF NEONATAL & CHILDHOOD ILLNESS (IMNCI) PROGRAMME												
Incidence of ARI per 1,000 under five years children	609	640	616	647	572	468	567	575	992	857		HMIS
% of severe pneumonia cases among new cases	0.14	0.09	0.08	0.07	0.03	0.07	0.03	0.02	0.17	0.2		HMIS
% of children U5 years with Pneumonia treated with antibiotics (Amoxicillin) (%)	102	100.8	101.34	100.54	102.33	102.86	99.91	100.08	100.24	102.52		HMIS
Incidence of diarrhea per 1,000 under five years children	333	347	318	247	368	201	203	320	647	439		HMIS
% of children under 5 with diarrhea treated with ORS and zinc	95.8	97	97.68	95.8	95.93	97.23	99.33	99.95	98.73	98.91		HMIS
SAFE MOTHERHOOD PROGRAMME												
% of Pregnant women who attended four ANC visits as per protocol	94	88	84	79	90	80	125	82	91	62	90	HMIS
% of pregnant women who had at least eight ANC visits as per protocol	43	61	57	45	60	64	67	59	62	42	90	HMIS
% of Institutional deliveries among the expected live births	83	78	73	70	70	70	55	88	85	74	90	HMIS
% of Institutional deliveries among the total reported			99	99	99	99	99	99	97	99		HMIS
% of Deliveries conducted by skilled birth attendant (SBA trained ANMs)	45.8	37.5	34.6	30.0	40.9	20.1	17.2	41.9	53.3	44.1		HMIS
% of Deliveries conducted by skilled health personnel	34	36.5	35.29	36.65	26.01	47.1	35.39	41.34	26.3	25.91		HMIS
% of Deliveries conducted by skilled health attendant + skilled health personnel	80	74	70	67	67	67	53	83	80	70		HMIS
% of Mothers who had four PNC check-ups as per protocol	26.5	37.8	42.9	32.0	46.1	27.0	33.2	60.0	57.4	52.6		HMIS
FAMILY PLANNING PROGRAMME												
Contraceptive prevalence rate (CPR Adjusted) (%) among MWRA	38	40	38.4	38.6	42.3	31.2	35.2	40	38.1	46.1		HMIS
Contraceptive prevalence rate (CPR Adjusted) (%) among WRA	31	31	29.4	29.7	33.5	23.4	27	30.4	29.4	34.8		HMIS
% of modern contraceptives new acceptors among WRA	6.9	6.6	9.77	8.69	9.15	7.41	8.54	11.22	15.07	14.07		HMIS

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FEMALE COMMUNITY HEALTH VOLUNTEERS PROGRAMME (FCHVs)												
Number of FCHVs	50665	50396	50404	8558	7630	9230	5795	8927	4249	6015		HMIS
% of mothers' group meeting held	96.2	96.8	97.38	95.9	97.67	96.68	98.14	98.65	94.8	99.26		HMIS
CURATIVE SERVICES												
% of population utilizing Emergency services at hospitals	10	11.2	12.1	12.1	5.3	22.3	14.6	9.8	5.5	10.4		HMIS
% of population utilizing inpatients services at hospitals	5.4	6.1	6.57	10.44	3.19	9.77	5.89	5	3.69	5.29		HMIS
% of inpatients who referred out	1.8	1.7	1.72	1.33	1.73	1.23	2.53	2.73	3.57	1.85		HMIS
Bed occupancy rate (%)	50.5	52.1	52.97	62.55	43.58	52.31	53.37	58.32	42.5	39.42		HMIS
Average length of stay at hospital (days)	3.6	3.6	3.35	2.27	2.82	4.45	3.37	4.28	3.3	1.64		HMIS
LEPROSY CONTROL PROGRAMME												
New case detection rate (NCDR) per 100,000 population	8.5	8.41	8.2	8.8	13.7	3.1	3.4	11.1	4.9	6.4		HMIS
Prevalence rate (PR) per 10,000 population	0.85	0.92	0.88	0.87	1.28	0.43	0.55	1.23	0.65	0.80		HMIS
REHABILITATION AND DISABILITY MANAGEMENT PROGRAMME												
Number of patients utilizing Rehabilitation Services	238628	420261	575683	54611	10711	363469	29341	64095	28869	24587		HMIS
Number of people with disability utilizing rehabilitation services (new cases)	98210	152951	233551	35154	2658	150739	12930	14945	10957	6168		HMIS
NCD PROGRAMME												
Cases of Cardiovascular Disease	19262	30330	42825	11407	3141	18348	1901	6941	502	585		HMIS
Cases of Diabetes Mellitus	312342	584347	800726	246349	82037	252067	55235	115445	16803	32790		HMIS
Cases of COPD	185857	259110	325135	75186	29382	100889	19810	43511	19882	36475		HMIS
Cases of Cancer	67382	97387	98080	11727	206	85400	245	223	154	125		HMIS
Cases of Burn Injury and Scalds	79567	80698	79630	8867	20278	14439	8487	13572	6516	7471		HMIS
ZOONOTIC DISEASE CONTROL PROGRAMME												
Cases of Animal Bites	119392	210301	223510	42904	21080	80185	19022	37135	5456	17728		HMIS
Cases of Snake Bites	9120	8181	10144	2983	1366	1236	1456	2407	322	374		HMIS

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VECTOR BORNE DISEASE CONTROL PROGRAMME												
Annual Blood Examination Rate (ABER) (%)	4.6	4.6	4.2	3.2	3.8	3.5	3.6	7.3	3.4	3.7		HMIS
Annual parasite incidence (API) per 1,000	0.05	0.07	0.11	0.02	0.15	0.05	0.02	0.25	0.04	0.13		MDIS, EDCD
Number of indigenous malaria cases*	24	24	37	0	1	1	0	18	3	14		MDIS,EDCD
Total Malaria positive Cases	533	791	1167	21	192	94	27	440	56	337		MDIS, EDCD
Percentage of PF among Malaria Positive case	28.3	22	23.9	38.1	17.7	31.9	48.1	30.2	12.5	16.0		MDIS, EDCD
Dengue Cases (in number)	56338	48883	54350	6863	2845	23969	11086	5016	2705	1866		HMIS
New Kala-azar Cases (in number)	199	225	227	36	24	38	6	44	48	31		EDCD
NURSING AND SOCIAL SECURITY												
Number of new registered cases in OCMC	9597	12861	13502	1451	3012	1782	691	2714	1552	2300		HMIS
% of physical violence among the total new registered cases	31.2	26.8	27.8	27.91	20.98	25.87	38.93	35.52	26.68	26.48		HMIS
Number of schools having health and nursing services	1011	1387	1407	196	118	848	53	36	98	58		NSSD
Number of new registered cases in geriatric services	21372	61812	54756	7642	3507	6244	15531	7890	813	13129		HMIS
TUBERCULOSIS CONTROL PROGRAMME												
Case notification rate (all forms of TB)/100,000 population	126	139	133	96	153	143	115	151	90	136	20	HMIS
Treatment success rate (%)	92.4	92.1	92.31	90.09	92.39	92.83	91.25	94.06	93.17	89.94		HMIS
HIV/AIDS AND STI PROGRAMME												
HIV Positivity rate (%)	0.5	0.5	0.5	0.4	0.6	1.4	0.6	0.4	0.5	0.2		HMIS
Percentage of HIV positive pregnant women attending antenatal clinics (ANC), delivery and post-natal care (PNC)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0	0.01		HMIS
HIV new cases	2578	2406	2186	268	492	643	160	412	47	164		HMIS
Percentage of people living with HIV currently receiving antiretroviral therapy among estimated PLHIV	81	85	79	72	81	82	79	79	79	74	95	HMIS, National HIV Estimate
HEALTH TRAINING PROGRAMME												
Number of trained Health professionals	17444	14121	13105	1404	1475	2842	1762	1918	1542	2162		NHTC

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AYURVEDA AND ALTERNATIVE MEDICINE												
Federal/Central Ayurveda HealthFacilities			5	0	0	5	0	0	0	0		AHMIS
Provincial Ayurveda and Alternative Hospital			6	1	0	0	2	1	1	1		AHMIS
District Level Ayurveda and Alternative Hospital			14	13	0	0	0	1	0	0		AHMIS
District Level Ayurveda and Alternative Health Facilities/ Ayurveda Health Centre			58	14	8	0	9	10	9	8		AHMIS
Local Leve Ayurveda Hospital			1	0	0	0	0	1	0	0		AHMIS
Ayurveda Aushadhalaya (Ayurveda Dispensaries)			304									AHMIS
FREE AYURVEDA BASIC HEALTH SERVICES												
Purva Panchkarma service (Number)	392249	486594	603245	95616	52058	163776	61851	89622	46593	93729		AHMIS
Yog Service (Number)	150560	237056	217280	24922	28098	29567	31584	64992	18816	19301		AHMIS
Stanpayi Aamako lagi Satawari Vitaran {Satawari (galactagogue medicines) under the Lactating Mother program} (Number)	58755	57734	51508	6071	7356	7986	4519	12032	4916	8628		AHMIS
HEALTH INSURANCE COVERAGE												
Population Coverage (%)	25	28	33	55	13	38	51	26	31	24		HIB
Household coverage (%)	33	39	45	67	28	44	63	38	40	37		HIB
Percentage of Active Population (%)	16	17	20	34	7	26	35	14	14	11		HIB
Percentage of Active Household (%)	25	28	32	46	21	32	47	26	23	25		HIB
Proportion of insuree renewable (%)	76	77	84	89	72	82	85	85	84	83		HIB
Service utilization (%)	38	43	43	46	32	46	44	39	47	37		HIB
LMIS												
LMIS Reporting Status	98.3	98.7	97.9	97.2	95.2	97.21	98.2	99.2	99.7	98.7		eLMIS
eLMIS live sites	3353	5425	6809	1017	902	1463	982	1173	646	626		eLMIS
Total Number of Impoverished Patients Provided with Treatment Support for Serious Diseases, 2081/82	35284	41845	53577	Kidney Patient	Cancer Disease	Heart Disease	Head Injury	Spinal Injury	Parkinson's	Alzheimer's	Sickle Cell Anemia	
				12073	28678	8410	980	1253	108	44	2031	NSSD

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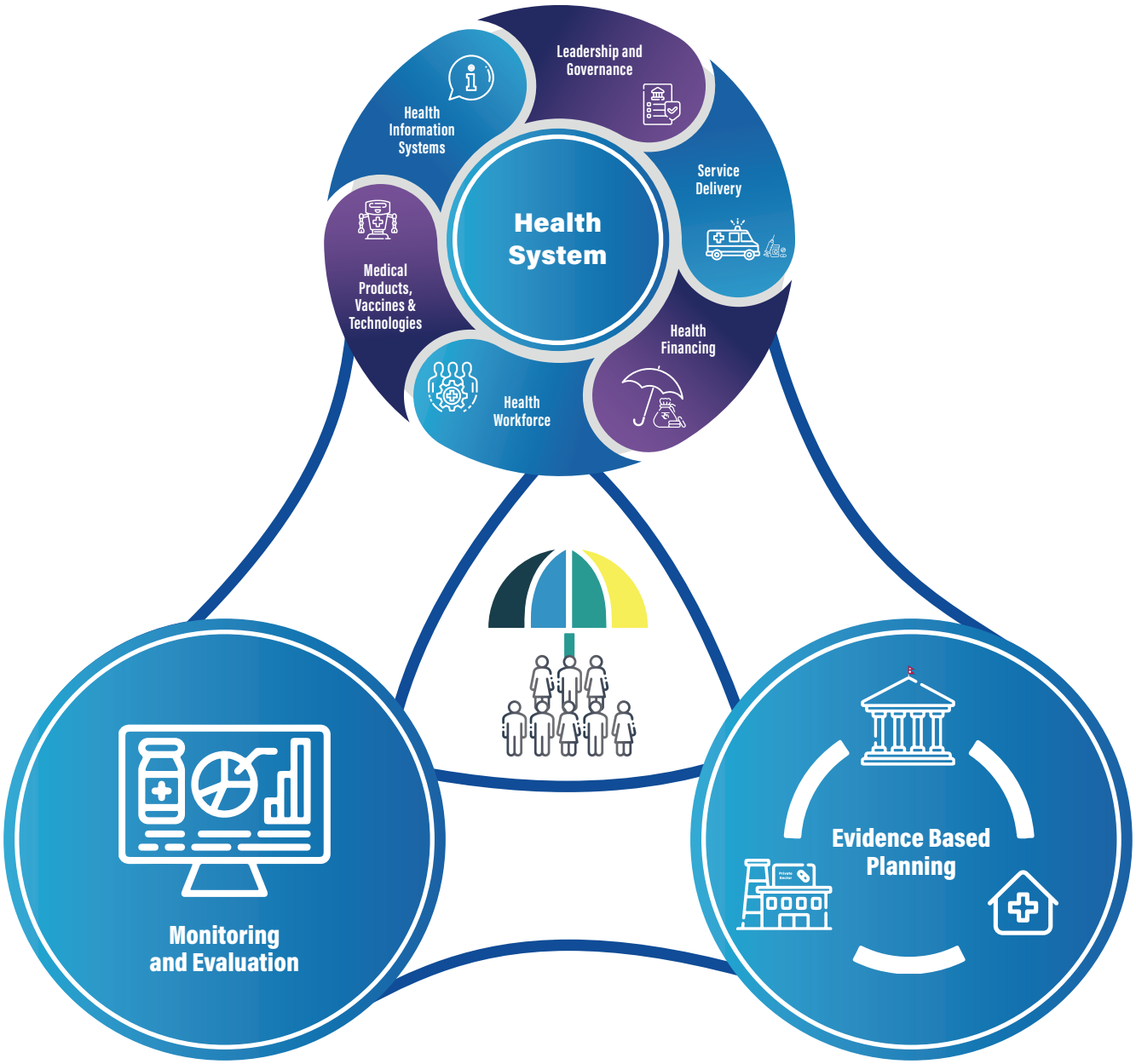
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Nepali Fiscal Years and the corresponding Gregorian Years

Nepali Fiscal Year	Gregorian Year
2060/61	2003/04
2061/62	2004/05
2062/63	2005/06
2063/64	2006/07
2064/65	2007/08
2065/66	2008/09
2066/67	2009/10
2067/68	2010/11
2068/69	2011/12
2069/70	2012/13
2070/71	2013/14
2071/72	2014/15
2072/73	2015/16
2073/74	2016/17
2074/75	2017/18
2075/76	2018/19
2076/77	2019/20
2077/78	2020/21
2078/79	2021/22
2079/80	2022/23
2080/81	2023/24
2081/82	2024/25
2082/83	2025/26
2083/84	2026/27
2084/85	2027/28
2085/86	2028/29



Government of Nepal

Ministry of Health and Population

Department of Health Services

Kathmandu, Nepal