Bagamati Province Government
Ministry of Health
Health Directorate
Hetauda, Nepal

ANNUAL HEALTH REPORT

FY 2081/82 (2024/25)

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Government of Bagamati Province

Ministry of Health

Kiran Thapa Magar
Hon'ble Minister

Hetauda, Nepal



MESSAGE

It is my great pleasure to present the Annual Health Report of Bagamati Province for the FY 2081/82, a key document reflecting our collective efforts to operationalize the fundamental right to health as guaranteed by the Constitution of Nepal within the federal governance framework.

Bagamati Province, as the nation's political and economic hub, continues to play a leading role in health service delivery, despite its geographical diversity, rapid urbanization, demographic changes, and a growing burden of non-communicable diseases. It remains committed to ensuring equitable, accessible, high-quality, and accountable health services for all.

During FY 2081/82, Bagamati Province made significant progress in health sectors such as nutrition, maternal and child health, immunization, disease control, emergency services, traditional medicine, health information systems, and human resource management. However, challenges remain, including declining growth monitoring coverage, rising low birth weight, reduced antenatal care visits, and lower institutional deliveries, highlighting the need to strengthen coverage, quality, behavior change, and accountability. The provincial government remains committed to achieving Universal Health Coverage and the Sustainable Development Goals through coordinated and collaborative efforts.

Looking ahead, we are focused on building a healthy and prosperous Bagamati through data-driven decision-making, improved service quality, a strengthened health workforce, expanded digital health systems, and community-centered approaches to reduce health inequities.

Lastly, I would like to express my sincere appreciation to the Health Directorate, Bagamati Province, and all contributors to this Annual Health Report, which will guide future policy and planning.

Kiran Thapa Magar
Minister

Government of Bagamati Province

Ministry of Health

Hetauda, Nepal



MESSAGE

I am pleased to present the Annual Health Report of Bagamati Province for FY 2081/82, documenting the province's performance, achievements, challenges, and lessons learned in the health sector. This report serves as an important tool for accountability, transparency, and evidence-based planning, aligned with federal governance and the constitutional right to health.

In FY 2081/82, notable progress was achieved across multiple health areas, including nutrition, maternal and child health, immunization, family planning, disease control, emergency preparedness, health logistics, Ayurveda and alternative medicine, and health information systems. The expansion and improved functionality of health facilities, along with strengthened reporting through DHIS2 and other systems, supported improved health outcomes. However, ongoing challenges persist, such as reduced service utilization in some programs, data quality issues, urban–rural inequities, human resource and supply chain constraints, and the growing burden of non-communicable diseases and population aging. In response, the Ministry has emphasized strengthened monitoring, routine data quality assurance, integrated supervision, and evidence-based decision-making.

I extend sincere appreciation to all health workers, administrative and technical staff, development partners, FCHVs, and all contributors to the provincial health system. Their dedication and professionalism have been critical to the province's progress.

Lastly, I would like to extend my appreciation to the Health Directorate and all individuals involved in preparing this Annual Report, which will serve as a valuable reference for policymakers, planners, program managers, and development partners in shaping future health sector priorities and interventions.

Dr Sumitra Gautam
Province Secretary
Minister of Health, Bagamati Province

Government of Bagamati Province
Ministry of Health
Health Directorate
Hetauda, Nepal



FORWORD

It gives me great pleasure to present the Annual Health Report of Bagamati Province for Fiscal Year 2081/82. This report reflects our collective efforts to strengthen the provincial health system in alignment with the National Health Policy 2076, the Nepal Health Sector Strategic Plan 2079/80–2087/88, the priorities of the Ministry of Health, Bagamati Province, and our shared commitment to achieving the Sustainable Development Goals (SDGs) and Universal Health Coverage (UHC) under the leadership and guidance of the Honorable Health Minister and Health Secretary of Bagamati Province. The report is based on evidence generated through DHIS2/HMIS, AHMIS, and surveillance systems. It presents a comprehensive picture of service delivery, program performance and system challenges of Bagamati Province.

The year under review demonstrates both encouraging progress and important areas for improvement. We have expanded access to essential services through outreach clinics, school health nurses, free blood bag services, and strengthened curative and emergency care networks. Surveillance and outbreak response systems were mobilized effectively in the face of increasing Dengue, Scrub typhus, Japanese Encephalitis, and other communicable disease threats. Screening and service delivery for non-communicable diseases and mental health have grown substantially, while safe motherhood services, immunization, nutrition, and family welfare programs continue to be prioritized. At the same time, declining trends in some immunization and nutrition indicators, rising disease incidence, financial execution gaps in selected programs, and imbalances in human resource deployment remind us that sustained effort, better coordination, and evidence-based planning are essential.

I extend sincere thanks to all health workers, health institutions, technical teams, External Development Partners, local governments, FCHVs, and stakeholders whose dedication and collaboration have strengthened service delivery and health information systems across the province. I am particularly grateful to the staff of the Health Directorate and our External Development Partners for their technical support, collaboration, and valuable contribution in bringing this Annual Health Report into shape.

This report is not only a record of performance but also a tool for learning and accountability. I encourage all concerned stakeholders to use these findings to improve the quality of care, health financing, human resource management, surveillance, and preparedness, so that together we can continue advancing equitable, resilient, and people-centered health services for every citizen of Bagamati Province.

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Dr Narendra Kumar Jha
Director

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ACRONYM

AHR	Annual Health Report
ALOS	Average Length of Stay
AMR	Antimicrobial Resistance
APD	Acid Peptic Disease
ASRH	Adolescent Sexual and Reproductive Health
ATM	Automated Teller Machine
BCC	Behavioral Change Communication
BHS	Basic Health Services
BEmONC	Basic Emergency Obstetric and Newborn care
CBIMNCI	Community Based Integrated Management of Newborn and Childhood Illness
CEmONC	Comprehensive Emergency Obstetric and Newborn care
CT	Computed Tomography
DRTB	Drug-resistant Tuberculosis
EHCS	Essential health Care Services
EHS	Extended Health Service
eLMIS	Electronic Logistic Management Information System
EMR	Electronic Medical Record
EWARS	Early Warning and Reporting System
FCHVs	Female Community Health Volunteers
FP	Family Planning
FY	Fiscal Year
HMIS	Health Management Information System
ICD	International Classification of Disease
ICU	Intensive Care Unit
IEC	Information, Education and Communication
IHR	International Health Regulation
IVM	Integrated Vector Management
LBW	Low Birth Weight
LLGs	Local Level Governments
MDGS	Millennium Development Goals

MDR	Multi-Drug Resistance
MLP	Mid-Level Practicum
MRI	Magnetic Resonance Imaging
MSS	Minimum Service Standard
NCDs	Non-Communicable Diseases
NDHS	Nepal Demographic and Health Survey
NTDS	Neglected Tropical Diseases
OCMC	One Stop Crisis Management Centre
OPD	Out Patient Department
RCCE	Risk Communication and Community Engagement
SCM	Supply Chain Management
SDGs	Sustainable Development Goals
SSU	Social Service Unit
UNICEF	United Nations Children's Fund
UHC	Universal Health Coverage
VPDs	Vaccine Preventable Disease
WASH	Water, Sanitation and Hygiene
WHO	World Health Organization

EXECUTIVE SUMMARY

Bagamati province, established by the Constitution of Nepal is the largest province by area and it is the second largest province by population. Bagamati province has an area of 20,300 km2 which is about 13.79% of the total area of Nepal. The total population of Bagamati province is 6,116,866 of which 49.84% are male and 50.16% are female. Among 13 districts, population distribution is highest in Kathmandu (2,017,532). After the country's transition to federal setting, the responsibility of health in province was entrusted to the Ministry of Social Development. Later, in 2078, the Ministry of Social Development in Bagamati Province was split to two ministries, one of which is the Ministry of Health.

The Bagamati Provincial Health Directorate directly comes under Ministry of Health of Province which provides technical backstopping and program monitoring to district health systems. Its major objective is to reach the preventive, curative and promotional health services up to the doorsteps of people and monitoring and supervision of health services.

The annual report of Bagamati province, Ministry of Health, Health Directorate, is for the fiscal year of 2081/82. The report has been developed based on the data compiled from DHIS2/HMIS, presentations of Public Health Offices, development partners, and other stakeholders presented in annual review meeting. The report mainly focuses on performance of different health sector of Bagamati province including health program indicators, major targets, activities conducted and achievements. Similarly, this report also outlines problems, issues, constraints and recommendations that health institutions can take to improve their performance and achieve targets. Below is the meticulous summary of contents within each chapter of annual health report.

FAMILY WELFARE

Child Health and Immunization

National Immunization Program is a priority program of government of Nepal which was launched as "Expanded program on Immunization" in 2034 BS. It aims at reducing child morbidity, mortality and disability associated with vaccine preventable diseases. Currently there are 13 antigens-BCG, DPT HepB-Hib (Penta), Rota, PCV, OPV (bOPV), fIPV, Measles and Rubella (MR), JE, Typhoid and TD provided through 3173 sessions (EPI clinics-2965) in Bagamati province. The BCG coverage decreased by 22 % in FY 2081/82 compared to FY 2080/81. DPT HepB-Hib-1 and DPT HepB-Hib-3 coverage have been gradual decline trend. The MR2 coverage in FY 2081/82 was 85.3%, which is lower than the 107.3% recorded in FY 2080/81. However, the percentage of fully immunized children in Bagamati Province decreased to 79.56 % in 2081/82 from 95.8% in FY 2080/81 from 88% in FY 2079/80. Among the districts, Kavrepalanchok reported the highest coverage at 105.27%, followed by Lalitpur with 92.98.% fully immunized children.

Community Based Integrated Management of Neonatal and Childhood Illness (CBIMNCI)

Community Based Integrated Management of Neonatal and Childhood Illness (CB-IMNCI) program aims to improve newborn and child survival by promoting healthy growth and development. The program addresses major causes of morbidity and mortality among under-five children, including Pneumonia, Diarrhoea, Malaria, Measles and Malnutrition, and also focuses on key newborn conditions such as birth asphyxia, bacterial infection, jaundice, hypothermia, low birth weight, and breastfeeding problems.

In FY 2081/82, the incidence of diarrhoea among under-five children in Bagamati Province increased sharply to 200.5 per 1,000 under-five population, compared to previous years, while the incidence of

pneumonia declined to around 23 per 1,000 under-five children. Regarding CB-IMNCI service coverage in FY 2081/82, 69.9% of deliveries were institutional, 40.5% of newborns received chlorhexidine (CHX) gel application to the umbilical cord, and 21.7% of infants aged 0–2 months with Possible Severe Bacterial Infection (PSBI) received a complete dose of gentamycin. Treatment coverage remained high for childhood illnesses, with 102.9% of reported pneumonia cases among under-five children treated with antibiotics and 97.2% of under-five children with diarrhoea treated with zinc and ORS, indicating strong case management performance despite rising disease incidence.

Nutrition program

Nutrition program is a priority program of the government of Nepal. Its main motto is to achieve the nutritional well-being of all people so that they can maintain a healthy life and contribute to the country's socio-economic development. As per NDHS report 2022, prevalence of stunting in children was 18%, prevalence of wasting in children was 4.5% and prevalence of underweight in children was 10.5% while 43% children aged 6-59 months were anemic in Bagamati province. The provincial government has high-level commitment to improve the nutritional status of infant, young children, adolescents and pregnant and lactating mother. In Bagamati province, 71.68% children aged 0-11 months and 6.82 % children aged 12-23 months were registered for growth monitoring in FY 2081/82. The average number of visits among children aged 0-23 months registered for growth monitoring has been increased to 7.86 which was 6.33 in previous fiscal year. There is decreasing trend of underweight children (1.08%) among new growth monitoring visits of children aged 0-23 months than FY 2080/81 (1.19%). There is decreasing trend of pregnant women receiving 180 tablets of Iron from 54.03 % in FY 2080/81 to 43.27% in FY 2081/82. Regarding the trend of postpartum mothers who received vitamin A supplements, the trend seems to be decreasing (51.75%) than previous FY (54.7%).

Proper IYCF practices can help to prevent malnutrition and other health consequences in children. IYCF program has been running in all 77 districts of Nepal since FY 2072/73. In Bagamati province, 64.08 % of children exclusively breastfed for 6 months who were registered for growth monitoring in FY 2081/82.

Safe Motherhood and Newborn Health

The National Safe Motherhood Program aims to reduce maternal and neonatal morbidity and mortality and improve maternal and neonatal health through preventive and promotive activities by addressing avoidable factors that cause death during pregnancy, childbirth, and the postpartum period. The Safe Motherhood Program initiated in 1997 has made significant progress with the formulation of a safe motherhood policy in 1998. In Bagamati province there were 447 birthing centers, 32 CEONC service sites and 70 BEONC service sites in FY 2081/82. Percentage of pregnant women who had eight ANC was 64% in FY 2081/82 which decreased slightly from FY 2079/80 (119%). Percentage of institutional deliveries in Bagamati province was 69.9% but 45.5% percent of institutional deliveries in the province were conducted by caesarean section. The percentage of mothers who received four postnatal care visits as per protocol at HF among expected live births decreased to 26.9% in FY 2081/82 from 28.2% in FY 2080/81.

Family Planning and Reproductive Health

Nepal's health programs prioritize family planning and reproductive health as essential components aimed at improving individual and family well-being by enabling people to make informed choices about their reproductive lives. The contraceptive prevalence rate of Bagamati Province in FY 2081/82 is 23 which is in decreasing trend than previous fiscal years.

Adolescent Sexual and Reproductive Health

National Adolescent Sexual and Reproductive Health is one of the priority programs which aims to promote the sexual and reproductive health status of adolescents. There were 191 Adolescent Friendly Service Sites in the Bagamati Province in FY 2081/82.

Safe Abortion Services

Many women face unwanted pregnancy, including complications due to limited access to family planning information and services. Nepal legalized abortion in 2002 to reduce maternal morbidity and mortality through unsafe abortion.

According to Safe Motherhood and Reproductive Health Right Act 2075, the law permits abortion with the consent of pregnant women for any indication up to 12 weeks gestation and up to 28 weeks of gestation in special conditions like rape, insist, fetus abnormalities, mental condition, immune suppression disease. Safe abortion service is in increasing trend in Bagamati Province in three fiscal years where 24,884 safe abortion service were provided to women in FY 2081/82.

The use of post abortion contraceptives inclined from 54.3 % in 2080/81 to 58.74% in 2081/82 in Bagamati Province. Similarly, among women aged 20 years and above, the use of both medical and surgical safe abortion services showed a steady increasing trend at the provincial level, while medical safe abortion services among adolescents (<20 years) declined and surgical services in this age group increased steadily.

Primary Health Care Outreach Clinic

Primary Health Care Outreach Clinics (PHC-ORC), initiated in 1994 (2051 BS), continue to play a crucial role in expanding equitable access to essential primary health services in Bagamati Province by delivering maternal and newborn care, family planning, child health services, health education, and basic first aid at the community level. In FY 2081/82, PHC-ORCs served an average of 19.6 clients per clinic, reflecting an overall improvement compared to FY 2079/80, with a slight decline from the previous year. Program implementation remained strong, with 95.9% of planned clinics successfully conducted across the province, indicating improved operational efficiency over the past three years. While districts such as Kavrepalanchok, Bhaktapur, and Chitawan demonstrated high coverage and service utilization, lower performance in some urban districts highlights the need for targeted interventions to reduce disparities and further strengthen outreach-based primary health care delivery.

Communicable Diseases

Malaria

Malaria is a mosquito-borne infectious disease that possess a public health challenge in Nepal. Government of Nepal has set a vision of malaria elimination by 2026. For assessing the risk areas, malaria micro-stratification process is conducted on annual basis. The total positive cases of malaria are in little bit fluctuating trend in Bagamati province which was 46 cases in FY 2079/80, 58 cases in FY 2080/81 and 56 cases in FY 2081/82. The proportion of Plasmodium Falciparum infections among total malaria positive cases has been increasing trend i.e. FY 2079/80 (39), FY 2080/81 (21), and FY 2081/82 (29) in Bagamati province. The malaria parasite incidence (API) remained unchanged with o.03 in 2079/80 to 2081/82.

Kala-azar

In Nepal, efforts are being made to eliminate Kala-azar. The elimination of Kala-azar is defined as achieving an annual incidence of less than 1 case per 10,000 population at the district level. In Bagamati province, the cases of Kala-azar have increased from 38 in FY 2079/80, 22 in FY 2080/81 and 38 cases from 2081/82. However, there has been a noticeable geographical expansion of cases at the national level in recent years. Kathmandu (11), Lalitpur (7) and Makawanpur (7) have recorded the highest number of cases in FY 2081/82.

Lymphatic Filariasis

Lymphatic Filariasis, commonly known as elephantiasis, is a neglected tropical disease. Nepal has set a national target to eliminate Lymphatic- Filariasis by the year 2030. The LF Morbidity and Disability Prevention (MMDP) survey was successfully completed in Bagamati Province, which includes 10 districts. In fiscal year 2081/82, morbidity mapping was conducted in Sindhuli district; however, the analysis has not yet been completed. In the remaining district, Rasuwa, morbidity mapping is planned for the next fiscal year.

Dengue

Dengue, a mosquito-borne disease emerged in Nepal in the form of Dengue Fever (DF), Dengue Hemorrhagic Fever (DHF) and Dengue Shock Syndrome (DSS). The first documented case] of dengue in Nepal was reported in 2004 then after the country has faced multiple dengue outbreaks between 2006 and 2024. There is drastic increase in dengue cases, 23969 cases were seen FY 2081/82 in Bagamati province where Kathmandu (10380) followed by Bhaktapur (4547), Chitawan (4063) and Makawanpur (1,348) had case report greater than 1,000.

Scrub Typhus

Scrub typhus is an infectious disease transmitted by larval mites infected with the Orientia tsutsugamushi bacterium. After the devastating earthquake in 2015, scrub typhus outbreaks were reported throughout Nepal, resulting in numerous cases of illness and death. Scrub typhus cases are in increasing trend with 1,290 cases in FY 2079/80 to 1,839 cases in FY 2080/81 and to 3,063 cases in FY 2081/82 in Bagamati province.

Tuberculosis

Tuberculosis (TB) remains a major public health problem in Nepal. TB is curable with medicine and is preventable. Based on the global and national commitments to reach the END TB targets, NTCC has developed its National Strategic plan 2021/22-2025/26 which envisions for TB Free Nepal by 2050. In Bagamati province, the trend in Case notification rate for all forms of TB per 1 Lakh population in FY 2081/82 was recorded as 142.8 per 1 lakh population with similar trend in treatment success rate (92.8%). In Bagamati Province, in FY 2081/82, 8933 all forms of TB Cases were notified which still sows a gap of nearly 38% against the projection. Of the total reported cases 58% were male and 42% were female). Out of 8933 TB Case, 4671 (52%) were pulmonary bacteriologically confirmed (PBC) cases, 1111 (12%) were pulmonary clinically diagnosed (PCD) cases and 3151 (35%) were extrapulmonary TB cases.

Leprosy

The goal of National Leprosy Elimination Program is to eliminate leprosy (interruption of transmission of leprosy) at the subnational level (municipality). Interruption of transmission of leprosy is defined

as zero new autochthonous child leprosy cases for consecutive five years at the municipality level. The new case detection rate (NCDR) of leprosy per 100,000 at risk population in 2080/81 was 2.62 which has increased to 3.1 in FY 2081/82 in Bagamati province. Out of 13 districts, three districts i.e. Rasuwa, Dhading and Bhaktapur reported zero NCDR in FY 2081/82. Prevalence rate of leprosy per 10,000 population in Bagamati province is in increasing trend (0.19 in FY 2079/80, 0.26 in FY 2080/81, 0.43 in FY 2081/82). All 13 districts have reported prevalence rate of leprosy per 10,000 population as less than 1 with Kathmandu at highest prevalence rate of 0.83, followed by Chitawan at 0.60, Sindhuli at 0.30, Lalitpur at 0.29, Makawanpur at 0.23, Ramechhap at 0.13, Sindhupalchok and Nuwakot at 0.08 each, Dhading and Dolakha at 0.06 each, Bhaktapur at 0.02 while Kavrepalanchok and Rasuwa reported a prevalence rate of zero.

HIV and AIDS

The first case of HIV was identified in 1988 AD in Nepal, Nepal has embarked on a fast-tract approach towards ending the AIDS epidemic as a public health threat by 2030, through achieving the ambitious target of 95-95-95 by 2026. By 2026, 95% of all people living with HIV (PLHIV) will know their HIV status, 95% of all people with diagnosed HIV infection will receive sustained antiretroviral therapy (ART) and 95% of all people receiving antiretroviral therapy will have viral suppression. In FY 2081/82, 21,229 risk population were tested for HIV of which 727 were confirmed for HIV. Bagamati Province in on track in achieving the first 95 targets of the 95-95-95 targets by 2026 while second and third 95 targets are yet to be achieved. 99% of the estimated cases know their status, while only 84% of the known cases know are on ART and only 84% of the infected cases have a suppressed viral load. By the end of Ashad 082, Bagamati province attributes to 26% (7104) HIV cases currently on ART. Similarly, during FY 081/82, 94992 pregnant women were screened for HIV of which 13 were diagnosed with HIV infection.

Zoonotic and other Communicable Diseases

The government has set a goal to eliminate rabies by 2030. In this context, public and animal health authorities are prioritizing efforts to eradicate rabies as a significant public health concern. Dog bite cases showed a slightly decreasing trend, with 76,130 cases reported in FY 2081/82 compared to 85,910 in FY 2080/81 and 16,771 in FY 2079/80. Similarly, cases of other suspected animal bites also declined, with 2,819 cases in FY 2081/82, 3,890 in FY 2080/81, and 1,433 in FY 2079/80.

In fiscal year 2081/82, non-poisonous snakebite cases showed an increasing trend, while poisonous cases demonstrated a decline, with 229 cases reported in 2081/82 compared to 243 cases in 2080/81.

Non-Communicable Diseases (NCDs) & Mental Health

Non-communicable diseases (NCDs) are progressively emerging as an additional challenge for the healthcare system of the country which lead to premature deaths, poverty and threaten national economies. Government of Nepal has endorsed the Package of Essential Non-Communicable Disease Interventions (PEN) for primary care in low-resource setting with target to reduce NCDs. Top five NCD cases reported in FY 2081/82 in Bagamati province were hypertension (331,917), followed by diabetes mellitus (266,386), COPD (111,295), asthma (48130) and CKD (19823).

Mental health problems are major challenges which are rapidly increasing in present context. Top five mental health conditions reported in FY 2081/82 in Bagamati province were Depression (28,645), bipolar disorder (9298), psychosis (8933), dementia (8263) and alcohol use disorder (6560).

Public Health Surveillance

Public health surveillance in Bagamati Province remains a cornerstone of disease prevention and control during FY 2081/82, supported by a comprehensive, multi-system approach. Major programs in surveillance include Early Warning and Reporting System (EWARS), Drinking Water Quality Surveillance, Surveillance and Outbreak Response Management and analysis System (SORMAS) and Integrated vector Surveillance (IVS). There are a total of 37 sentinel sites that report to Early Warning and Reporting System (EWARS). A total of 19 diseases in EWARS have been reported in the period 2020-2024, achieving a high overall reporting rate of 93 %. Surveillance data from 2020–2024 demonstrated increasing trends in climate- and vector-sensitive diseases such as dengue, acute gastroenteritis, scrub typhus, and SARI, highlighting the importance of sustained vigilance. Drinking Water Quality Surveillance was strengthened through an active provincial committee and stakeholder orientations, while Integrated Vector Surveillance was conducted at selected sentinel sites to inform evidence-based vector control interventions. In addition, Bagamati Province initiated the pilot implementation of the digital Surveillance and Outbreak Response Management and Analysis System (SORMAS), laying the foundation for real-time reporting and enhanced outbreak analytics. Despite progress, challenges such as limited laboratory capacity, incomplete SORMAS rollout, and constrained coverage of vector surveillance remain areas for further strengthening.

Outbreak Management

In FY 2081/82, Bagamati Province demonstrated strong outbreak preparedness and response capacity through effective coordination among federal, provincial, district, and local governments. Multiple disease outbreaks—including cholera in Kathmandu and Lalitpur, measles in Lalitpur, dengue across several districts, and foodborne and poisoning incidents—were promptly investigated and managed, limiting morbidity and mortality. A total of 256 outbreak-related cases were reported, with 252 recoveries and four deaths. The activation of Provincial, District, and Local Rapid Response Teams, dissemination of updated guidelines, regular contingency planning meetings, timely logistics support, and continuous risk communication played a critical role in outbreak containment. Border health desks (Sindhupalchok and Rasuwa) at key entry points further supported early detection of imported health threats. While response mechanisms are well established, gaps such as inactive rapid response teams in some districts, delayed reporting, and limited diagnostic capacity underscore the need for sustained investment, strengthened digital integration, and enhanced multi-sectoral coordination to address emerging and re-emerging public health threats.

Curative Services

The aim of curative services (emergency, outpatient, and in-patient) is to reduce morbidity and mortality by ensuring early diagnosis, prompt treatment, and referral through the health network from PHC outreach to the specialized hospitals. According to the updated categorization of health facilities in Bagamati province, there are 13 provincial hospitals, 83 Basic hospitals (5-15 beds), 82 General Hospital (25-50 beds), 25 General Hospital (100-300 beds), 12 Specialized Hospitals (100 and above), 18 Super Specialty Hospitals (50+ Beds/Organization) and 13 Academy and Teaching Hospital (300+ Beds).

Minimum Service Standards (MSS) is a comprehensive tool for the service readiness and availability of tool for optimal requirements of the hospitals to provide minimum services that are expected from them. In FY 2081/82, MSS evaluation was carried out in 6 Primary Level Hospitals, 4 Secondary A Level Hospitals and 6 Secondary B Level Hospitals in FY 2081/82, Chautara Hospital achieved the highest MSS score (93%) among all assessed.

The percentage of the population utilizing the OPD services increased to 93.91% in FY 2081/82 from 60.9% in FY 2080/81 in Bagamati Province. Bed occupancy rate in FY 2081/82 was 52.31% with average length of hospital stay of 4.45 days in Bagamati Province.

SOCIAL SECURITY AND OTHER PUBLIC HEALTH PROGRAMS

One-stop Crisis Management Centers (OCMCs)

One-stop Crisis Management Centers (OCMCs) aim to provide comprehensive and integrated services to survivors of Gender Based Violence. There are 19 OCMCs situated in Bagamati Province. In FY 2081/82, 1728 cases were newly registered in OCMC with 515 follow up cases and 1319 number of perpetrators. The most reported cases among the total clients served by the OCMCs were physical violence (452) followed by rape (364) and sexual assault (297) in FY 2081/82.

Social Service Units (SSU)

The concept of Social Service Unit (SSU) was started after a pilot program in 8 hospitals for a period of 2 years (FY 2069/70 and FY 2070/71).

Currently 13 hospitals provide SSU services in Bagamati province. In Bagamati province in FY 2081/82, 2,099 ultra-poor or poor citizens, 377 helpless people, 175 people with disability, 2,742 senior citizens, 20 survivors of GBV and 16 FCHVs utilized services from SSU.

Top five mental health conditions reported in FY 2081/82 in Bagamati province were Depression (28,645), bipolar disorder (9298), psychosis (8933), dementia (8263) and alcohol use disorder (6560).

Health Education Information and Communication Centre (HEICC)

Health Education Information and Communication Centre is the program under health education information and communication section of provincial health directorate. It aims to plan, implement, monitor and evaluate health promotion programs within a province. It is responsible for developing, producing and disseminating health messages and materials to promote and support health programs and services. Major activities carried by this section in FY 2081/82 in Bagamati province were Advocacy program for media persons and health workers regarding health promotion services, Awareness program regarding various non-communicable diseases, mental health, infectious disease control, and zoonotic disease prevention and control, Communication program regarding the reduction of tobacco product consumption and alcohol consumption, Risk communication and communication engagement program, Local level advocacy program for healthy villages/cities, Health promotion campaign and celebration of health-related days. Monitoring, advocacy, and coordination for health promotion. Provincial level review of health education, information, and communication, including health promotion programs

Provincial Health Emergency Operations Centre (PHEOC)

The Provincial Health Emergency Operations Centre (PHEOC) of Bagamati Province functioned as a central coordination hub for health emergency and disaster preparedness and response in FY 2081/82, strengthening leadership, coordination, surveillance, and information management across all levels of governance. During the year, PHEOC supported the finalization of provincial, district, and municipal emergency preparedness and response plans; expanded Rapid Response Committees and Teams to 53 local units; enhanced disease surveillance and outbreak investigation for priority threats; improved hospital readiness and safety assessments; and provided timely coordination and technical support during floods, landslides, and disease outbreaks. Through capacity building, partner

coordination, data system strengthening, and advocacy on issues such as antimicrobial resistance, PHEOC significantly contributed to improved preparedness, effective response, and resilient health emergency management in the province.

Ayurveda and Alternative Medicine

In Bagamati Province, Ayurveda and alternative medicine services are provided through a network of 13 Ayurveda and Alternative Hospitals, 50 Ayurveda Aushadhalayas, and 51 Citizen Ayurveda Health Centers, and service utilization has demonstrated a steady upward trend. In fiscal year 2081/82, Panchakarma services were utilized by 163,776 clients, yoga services by 29,567, Jesthanagarik (senior citizen) services by 71,188, laboratory services by 54,460, physiotherapy services by 21,176, and acupuncture services by 34,783, reflecting sustained growth over the past three years. Notwithstanding these improvements, marked inter-district disparities persist in service utilization, largely attributable to constraints in infrastructure, human resources, training opportunities, and the availability of essential medicines, underscoring the need for systematic expansion and strengthening of Ayurveda and alternative medicine services at all local levels.

REPORTING STATUS

Health Management Information System (HMIS)

Nepal's Integrated Health Information Management System (IHIMS), operationalized through DHIS2, has substantially improved routine health reporting by integrating multiple vertical programmes into a single national platform. In Bagamati Province, reporting performance in FY 2081/82 shows consistently high completeness across service delivery points. All Basic Health Service Centers (BHSCs) achieved 100% reporting completeness for three consecutive years (FY 2079/80–2081/82), while timeliness increased to 85.1% in FY 2081/82, up from 78.9% in FY 2080/81. District-wise analysis indicates 100% completeness across all districts, though timeliness remains lowest in Chitawan, followed by Bhaktapur.

For hospitals (including polyclinics), reporting performance improved over time, though it remained comparatively lower than BHSCs. In FY 2081/82, completeness was highest in Rasuwa, Sindhupalchowk, and Kavrepalanchowk, while Nuwakot and Lalitpur recorded the lowest completeness and timeliness. Among 13 provincial hospitals, 100% reporting completeness was achieved, with Bhaktapur Hospital and Bajrabarahi Chapagaun Hospital attaining 100% timeliness, whereas Ramechhap and Rasuwa Hospitals showed the lowest timeliness. Despite strong completeness, challenges persist in timely reporting, human resource capacity, and data use for decision-making, particularly in metropolitan areas and tertiary and private hospitals.

Ayurvedic Health Management Information System (AHMIS)

The Ayurvedic Health Management Information System (AHMIS) is a national reporting system in Nepal designed to collect and manage data from Ayurveda and alternative medicine services, contributing to annual health reporting and evidence-based planning within the public health system. Analysis of Bagamati Province shows strong district-wise reporting performance, with several districts achieving 100 percent completeness and timeliness, and others like Kathmandu and Nuwakot exceeding 97 percent. However, the provincial average remains lower at 78.3 percent, indicating gaps in a few districts. Similarly, most provincial Ayurveda and Alternative Medicine hospitals demonstrate excellent reporting performance, while Dolakha, Sindhupalchowk, and Rasuwa hospitals show comparatively lower reporting status in FY 2081/82, highlighting areas for improvement.

PROVINCIAL PROGRAMS

School Health Nurse Program

The School Health Nurse (SHN) program is an innovative and distinctive health initiative of Bagamati Province. It aims to educate and raise awareness among students from the school level on various aspects of health, including hygiene, nutrition, mental health, sexual and reproductive health, and communicable and non-communicable diseases, to promote a healthy lifestyle. Bagamati Province launched the SHN program in the fiscal year 2075/76 as a pilot initiative under the "One School, One Nurse" model. Currently, the program is being implemented across all 119 local levels of Bagamati Province, with a total of 848 school health nurses actively serving in the region.

Free Blood Bag Program for blood transfusion

Bagamati province has been running the free blood bag program since 2078. The program mainly focuses on economically disadvantaged people who are permanent resident of Bagamati province and need urgent blood transfusions by providing free blood bags. In FY 2081/82, A total of 11221 recipients received blood transfusion services through this program in Bagamati province.

Chief Minister People Health Program

Non-Communicable Disease accounts for more than half of mortality in the Bagamati province. To address the rising burden of Non-Communicable Diseases, Government of Bagamati Province designed and implemented the Chief Ministers Public Health Program- an exemplary program of the Bagamati Province. This program is being implemented since FY 2076/77 and comprises various programs related to the problem of NCD. In FY 2081/82, altogether 48674 females and 80478 males were screened for NCD through Public Health Office, 2092 females and 1907 males were screened for NCD through Hospital & a total of 10110 individuals were screened for NCD through Ayurveda Health Centre.

FEDERAL SPECIAL GRANT PROGRAMS

The Federal Special Grant Program in Bagamati Province is a multi-sectoral health investment initiative designed to address persistent gaps in adolescent reproductive health, maternal and child nutrition, urban health risks, and system-level service capacity, particularly for marginalized and high-risk populations. It combines targeted service delivery (e.g., adolescent SRH education in 74 rural municipalities, strengthened maternity and neonatal care in remote hill and mountain districts, and urban NCD prevention and screening in major cities) with health system strengthening through facility upgrades, workforce training, essential medicine access, and evidence-generating research on mental health and NCD services. Complementary efforts include psychosocial support for migrant families under the SaMi program, hospital and health institution strengthening across constituencies, and expansion of urban and community health units to improve equitable access. Program monitoring shows moderate-to-strong financial utilization in several districts alongside implementation gaps in some areas, while recent research highlights a functional but strained NCD medicine supply system and critical deficiencies in mental health services—informing recommendations for decentralized procurement, workforce capacity building, better forecasting, and stronger infrastructure to ensure more responsive, equitable, and sustainable provincial health services.

HEALTH FINANCE MANAGEMENT

Health Finance Management in Bagamati Province operates within Nepal's federal governance structure, where responsibility for resource mobilization and utilization is shared across federal, provincial, and local levels. Financing is primarily sourced from federal and provincial government allocations, complemented by out-of-pocket expenditure, social health insurance, and donor contributions. In FY 2081/82, the Health Directorate recorded an overall financial achievement of 59.2%, indicating moderate budget utilization with significant variation across programs. High-performing initiatives such as the Special Grant Program (99.9%) and Health System Strengthening Program (97.45%) demonstrate strong financial absorption and management capacity, while lower-performing areas—such as Epidemic Disease Control (22.99%) and the National Employment Promotion Program(27.41%)—highlight implementation and procedural constraints. District-level and hospital-level data show wide disparities in financial performance, reflecting differences in administrative capacity, procurement efficiency, and local operational challenges.

HUMAN RESOURCE MANAGEMENT

Human resource management in Bagamati Province's health sector shows a comparatively strong workforce base but persistent structural imbalances. At the provincial level, 1,571 sanctioned posts exist, yet 2,422 personnel are currently working through adjustment, deputation, and contractual arrangements, indicating over-engagement in some categories alongside planning inconsistencies. Approximately 66% of provincial human resources are concentrated in hospitals, reflecting high demand for secondary and tertiary care, while Provincial Public Health Offices and provincial-level institutions each account for about 9%, and Ayurveda and alternative hospitals around 8%. At the local level, an estimated 7,500 health workers form the backbone of frontline service delivery.

SUPPORTING PROGRAMS

Health Training Center

Health Training Center established 2019 AD is the major administrative and technical unit of health training in Bagamati province. It coordinates and manages all health-related training through one door under MoH. AAC, ECCT, ASBA, SBA, Implant, IUCD, PPIUCD, ASRH, GBV, RUSG, CNBC (SNCU), VIA, CRYO, VIA/CRYO, STI, SAS (CAC, MA, 2nd Trimester Abortion Care), Minilap, NSV, CoFP Counseling, OTTM, MLP, ICU, Pediatric Nursing Care, Medico-legal, IP trainings were provided in the FY 2081/82.

Health Logistic Management Center

Health Logistics Management Center (HLMC) was established in FY 2075/76 as a key wing of Ministry of Health for the management of essential medicines, vaccines, health commodities and biomedical equipment in the province. Logistics management ensures proper procurement, storage, and transportation, delivery of quality medicines and health commodities in right quantity to the service delivery points.

Provincial Public Health Laboratory

Provincial Public Health Laboratory is one of the central entities of Ministry of Health (MoH), Bagamati Province for quality laboratory services, disease surveillance and research which has been functioning since 15th Shrawan, 2076. It is a referral laboratory of the province which looks after the provincial hospital laboratory, Public Health Office laboratory, District Ayurveda Health Centre laboratory and other government laboratory network to maintain quality laboratory result. Provision of training related to non-communicable diseases, infectious diseases, quality control as a part of skill development to laboratory manpower has provided quality service in complete diagnostic services and disease surveillance. Public Health Laboratory, Bagamati province, have been now connected with 262 Microscopic Centers within 13 districts of Bagamati province.

Ayurveda Aushadhi Utpadan Kendra

The Ayurveda Aushadhi Utpadan Kendra in Ratnanagar, Chitawan—established by Bagamati Province after federalization—made significant progress in FY 2081/82 toward becoming a self-reliant, GMP-oriented provincial producer of essential Ayurvedic medicines, with its own approved formulary covering 117 drugs and an initial focus on supplying 13 provincial Ayurveda and alternative hospitals. The center operationalized key infrastructure including GMP-compliant production areas, an air handling unit, tablet punching machine, and quality control laboratory, and began licensed production of 10 essential Ayurvedic churna formulations, distributing thousands of units to support public health services. Financial performance was strong, with overall expenditure reaching about 91% of the total allocated budget, alongside high physical progress, indicating effective operationalization of a newly established manufacturing facility. Human resources have been structured with permanent technical and administrative posts, though some vacancies and skill gaps remain.

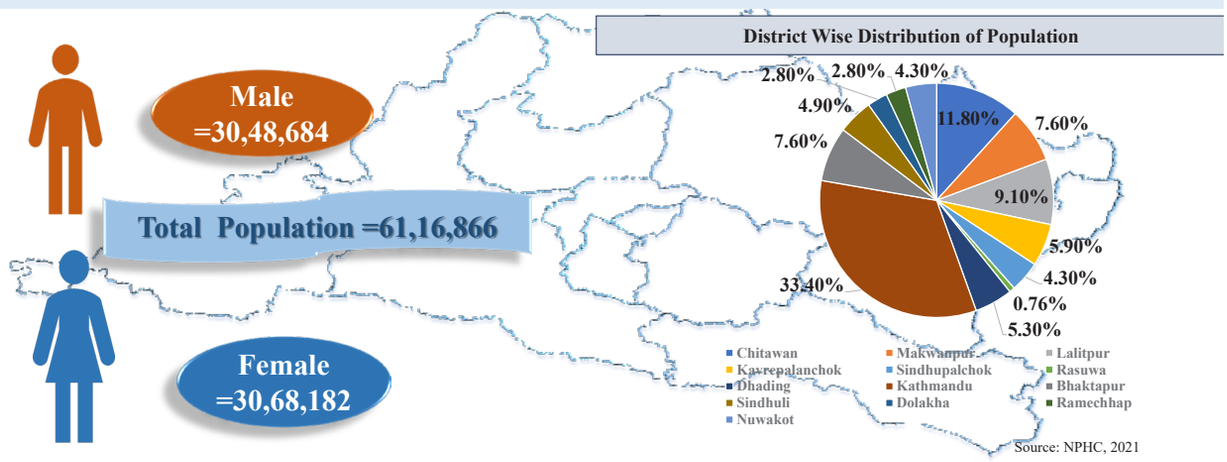
BAGAMATI PROVINCE HEALTH IN FACTS AND FIGURES (2081/82)

Ministry of Health

Health Directorate

Hetauda, Nepal

General Information



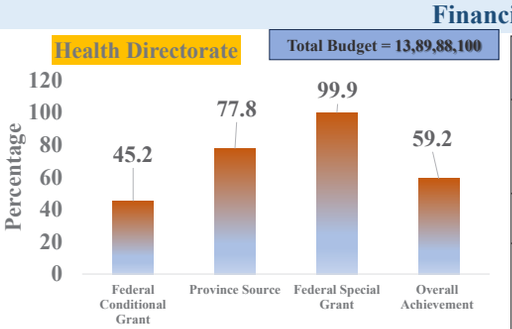
Target population of FY.2081/082 Source: DHIS 2

Organization Name	Total population	Population under 1 year	Population (6-11 Months)	Population (12 - 23 Months)	Population (12-59 Month)	Population (6-59 Months)	Female population aged 15-49 years	Adolescent Population Aged 10-19 Years Female	Adolescent Population Aged 10-19 Years	Married Female population aged 15-49 years	Total expected pregnancies	Total expected live birth
Bagamati Province	62,56,218	1,00,335	41,514	96,918	3,71,660	4,21,830	19,09,174	5,60,065	11,63,943	14,30,497	1,22,340	1,01,623

Service Delivery Sites of Bagamati Province

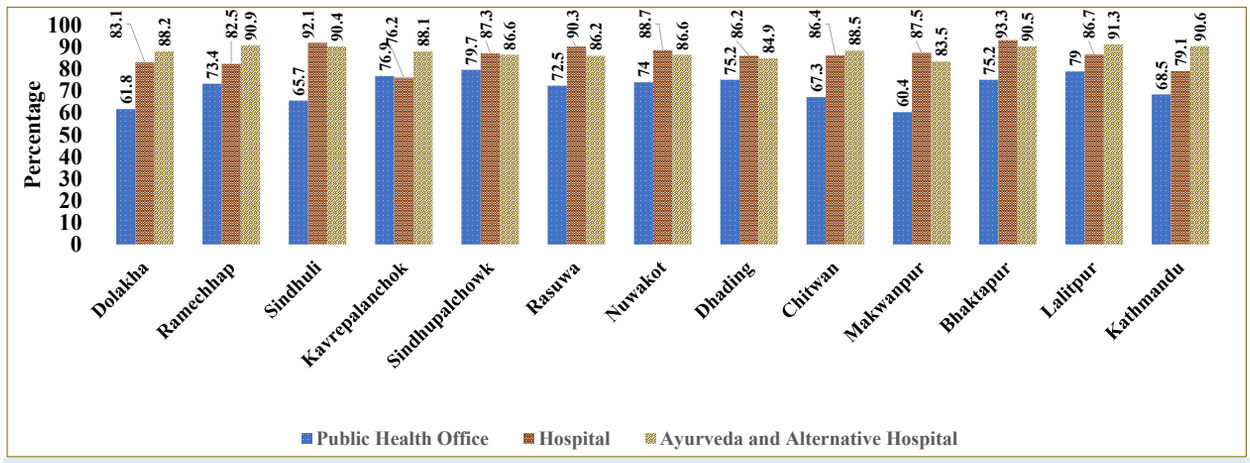
Service Delivery Sites	Total	Service Delivery Sites	Total
Health Posts	615	Academy and Teaching Hospital (300+ Bed)	14
Basic Health Service Center	318	Ayurveda and Alternative Hospital	13
Community Health Unit	207	Non- Public Facilities	1,703
Urban Health Unit	144	Birthing Center	505
PHCC	25	CEONC Site	47
Basic Hospitals (5 - 15 Beds)	87	BEONC Site	90
General Hospitals (25 - 50 Beds)	82	Safe Abortion Site	294
General Hospitals (100 - 300 Beds)	26	ASRH Site	339
Specialized Hospitals (100 and above)	12	FCHV	9,596
Super Specialty Hospitals (50+Beds)	18	DR Center	2
PHC/ORC	1,874	EPI Clinics	2,594

Financial Achievement 2081/82



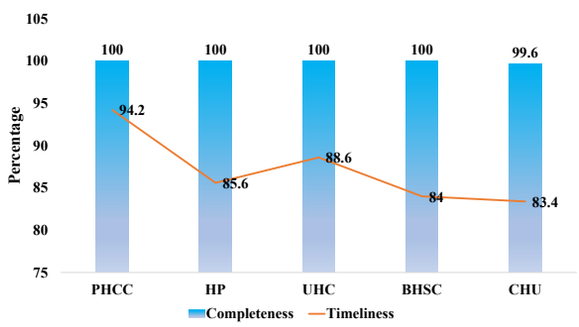
	Total Budget (Rs)	Expenditure (Rs)	Expenditure (%)
Public Health Office	1,04,57,46,660	74,54,19,454.85	71.3
Hospital	1,41,78,70,000	1,23,65,83,845.68	87.2
Ayurveda and Alternative Hospital	26,28,84,000	23,16,51,224.90	88.1

Financial Achievement 2081/82 (%)

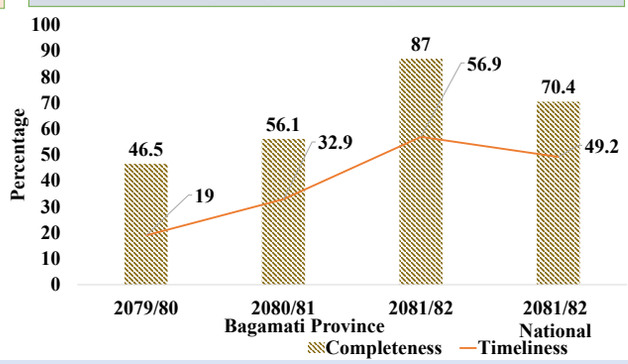


Health Facilities Reporting Status 2081/82 (%)

Reporting Status of Health Facilities 2081/82 (%)

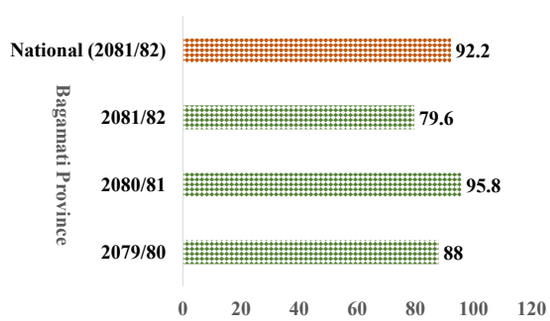


Reporting Status of Hospital (%)

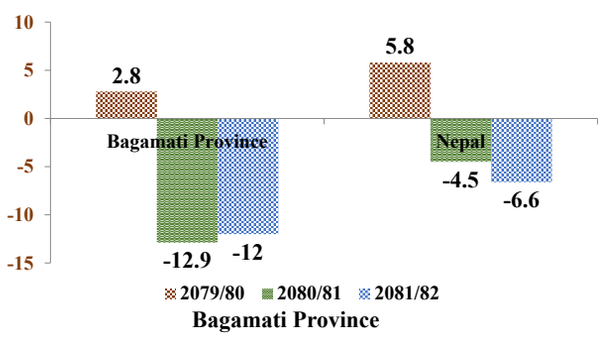


Immunization Coverage

Trend of Fully Immunized Children (%)

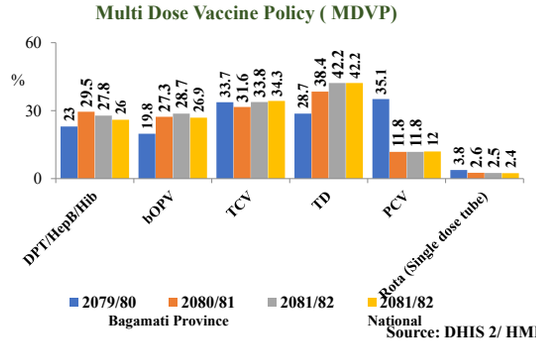


(DPT-HepB-Hib1 vs MR2 dropout rate)



Trend of Vaccine Wastage Rate (%)

Multi Dose Vaccine Policy (MDVP)

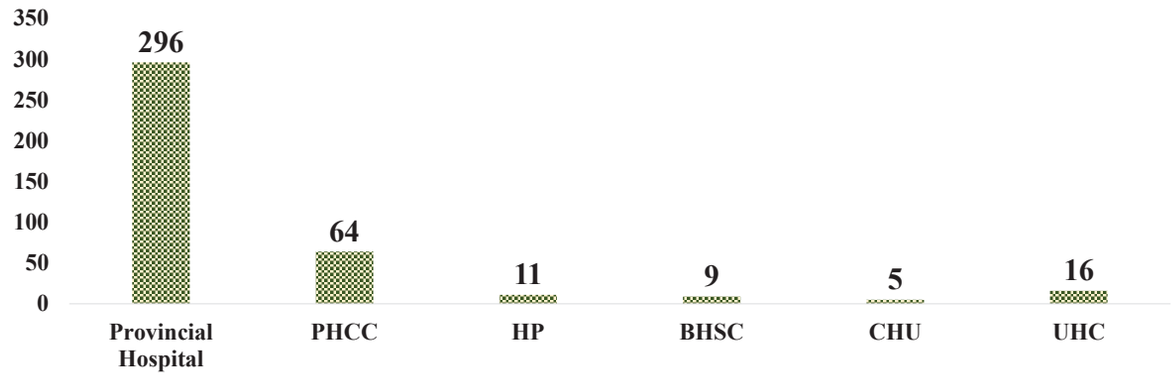


Source: DHIS 2/ HMIS

Access and Utilization of Immunization Services (2081/82)

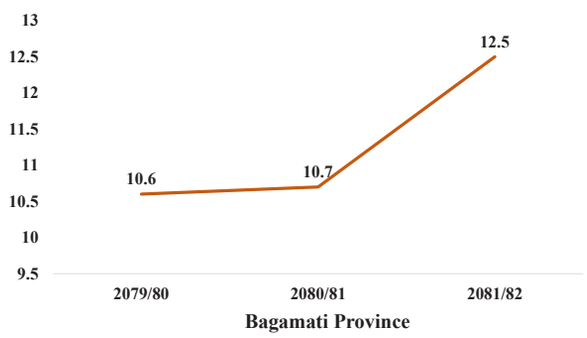
Category 1 (Less Problem) High Coverage(>90%) Low Dropout(<10%)	Category 2 (Problem) High Coverage(>90%) High Dropout(>10%)	Category 3 (Problem) Low Coverage(<90%) Low Dropout(<10%)	Category 4 (Problem) Low Coverage(<90%) High Dropout(>10%)
Kavrepalanchok		Dolakha Sindhuli Ramechhap Rasuwa Chitwan Dhading Sindhupalchok Nuwakot Makwanpur Kathmandu Lalitpur Bhaktapur	

Average Number of People Served by Health Facilities /Day (2081/82)

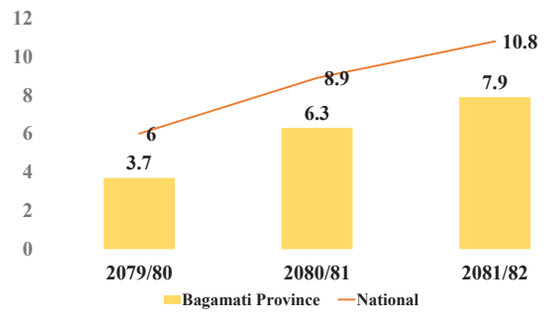


Nutrition Programme

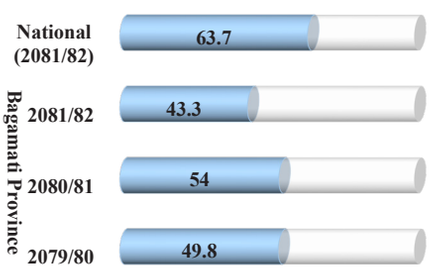
% of newborns with low birth weight (<2.5kg) among total delivery by HWs



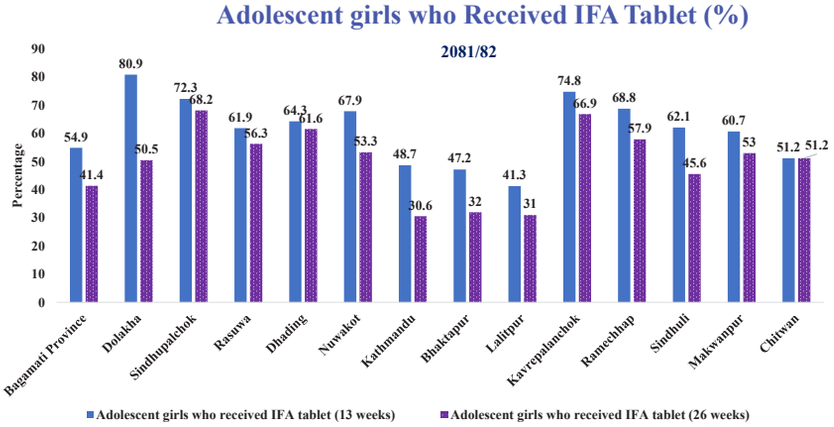
Average number of visits among children aged 0-23 months registered for growth monitoring



Trend of Pregnant Women who Received 180 Tablets of Iron (%)

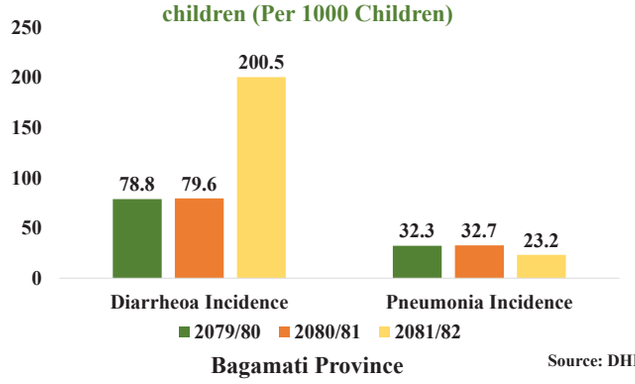


Adolescent girls who Received IFA Tablet (%)

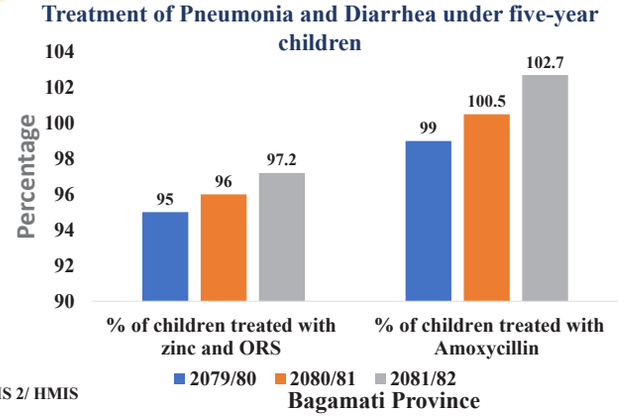


Integrated Management of Neonatal and Childhood Illness (IMNCI) Programme

Incidence of Pneumonia and Diarrhea under five-year children (Per 1000 Children)



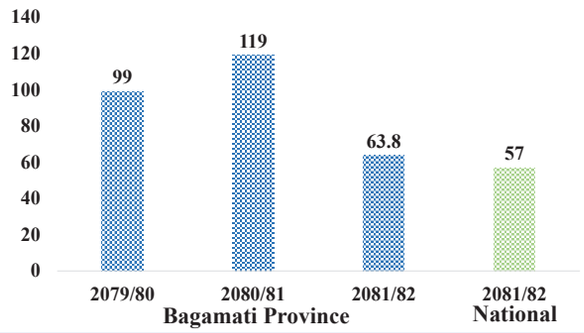
Treatment of Pneumonia and Diarrhea under five-year children



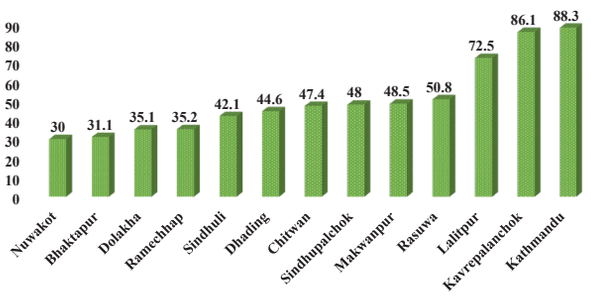
Source: DHIS 2/ HMIS

Safe Motherhood Programme

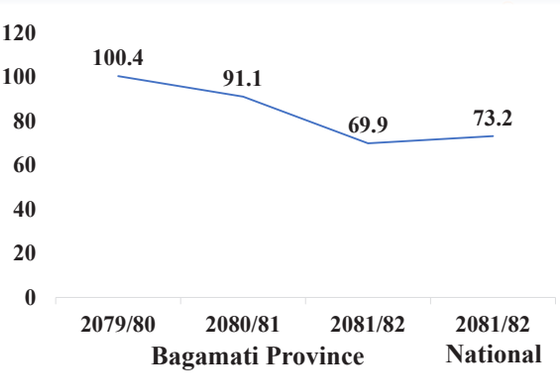
Trend of Pregnant Women Who Attended Eight ANC Visits as Per Protocol (%)

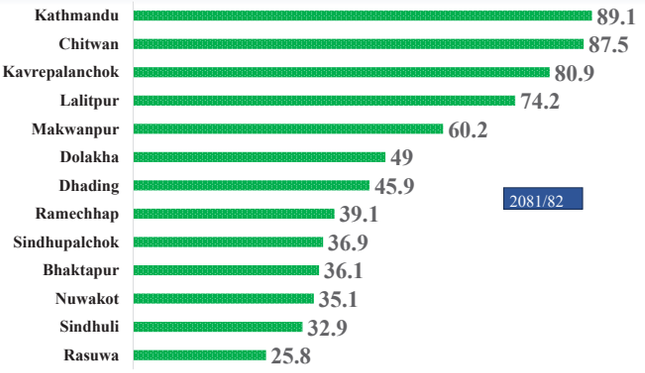


District wise Pregnant Women Who Attended Eight ANC Visits as Per Protocol FY 2081/82(%)

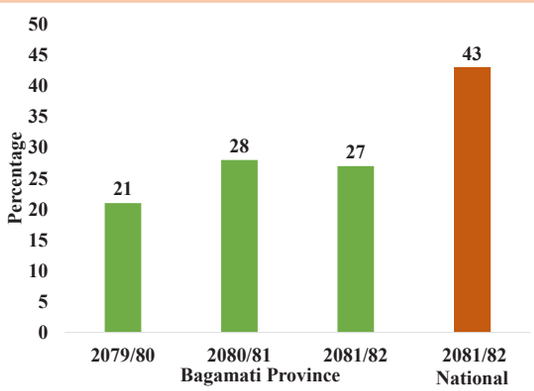


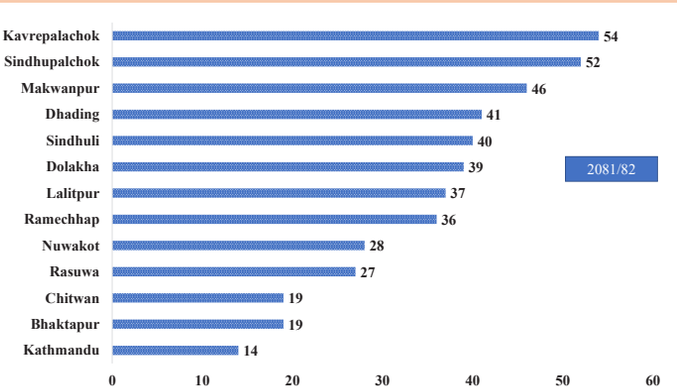
Percentage of Institutional Deliveries





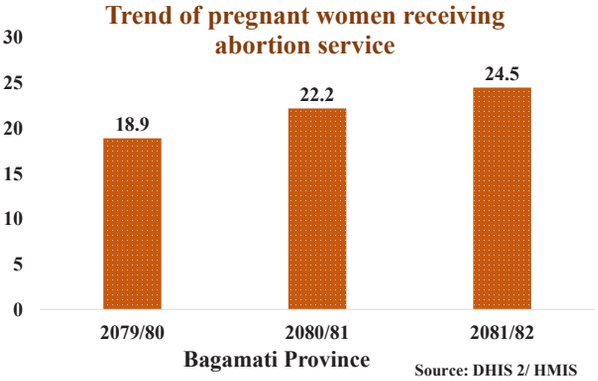
Mothers who had Four PNC Check-up as Per Protocol (%)





Status of Safe Abortion Service (%)

Trend of pregnant women receiving abortion service



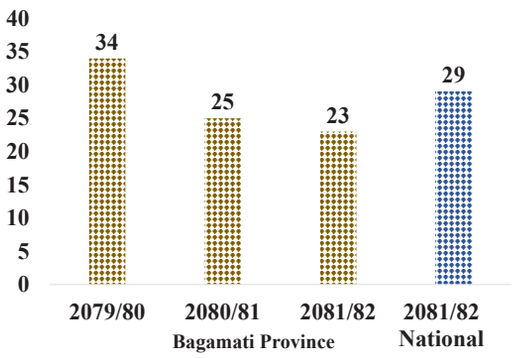
Source: DHIS 2/ HMIS

Trend of women who received contraceptives after abortion

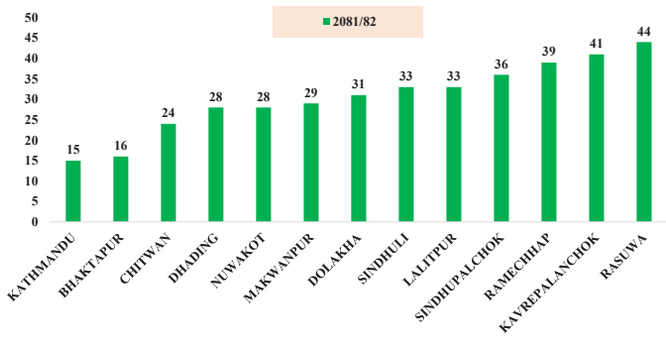


Status of Family Planning Service (%)

Trend of Contraceptive Prevalence Rate (%)

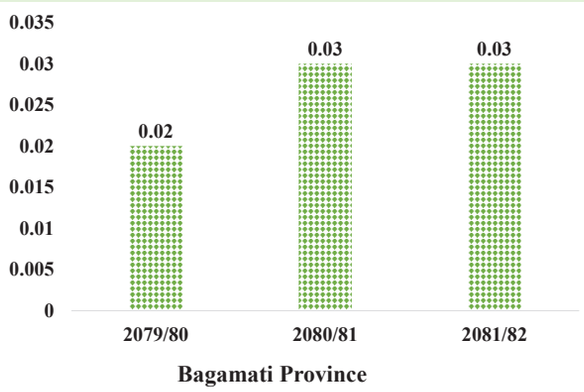


District Wise Status of Contraceptive Prevalence Rate (%)

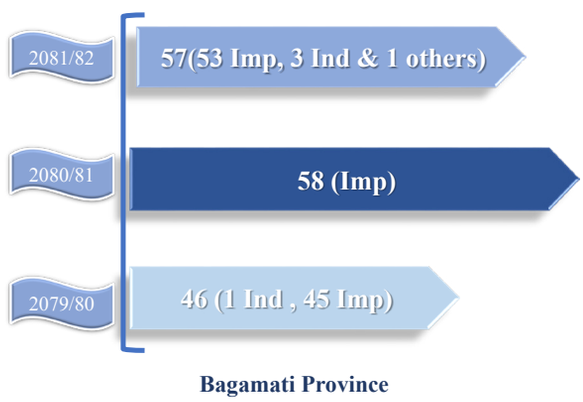


Malaria, Dengue and Kala-azar Programme

Annual parasite incidence (API) per 1000 population risk



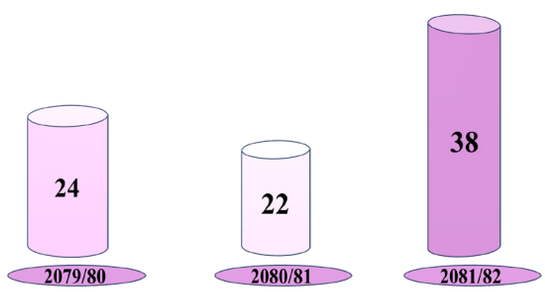
Trend of Malaria Cases (N)



Trend of Dengue Cases (N)

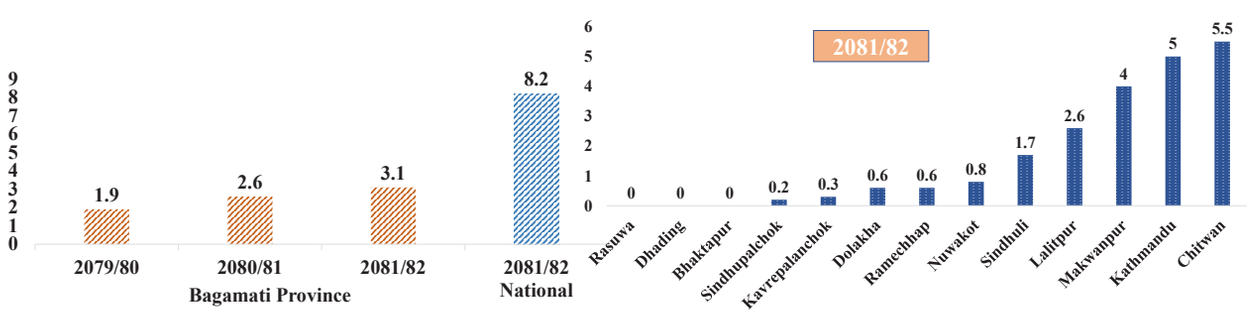


Trend of Kala-azar Cases (N)



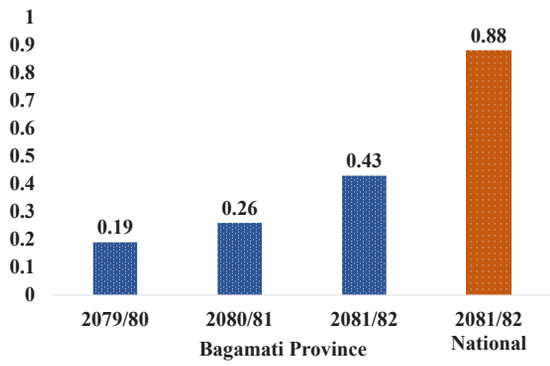
Leprosy Programme

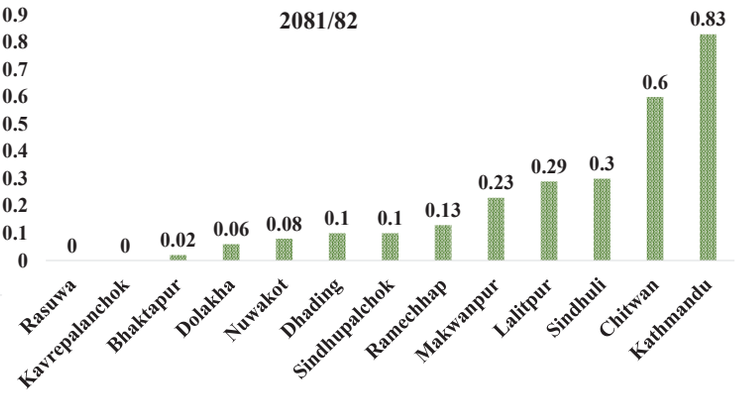
New Case Detection Rate of Leprosy



Source: DHIS 2/ HMIS

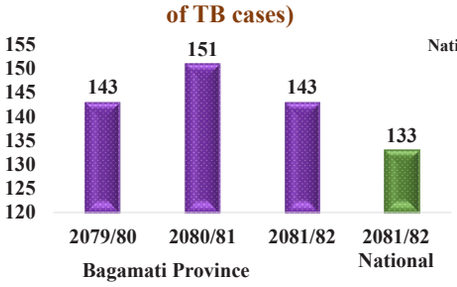
Prevalence of leprosy per 10000 Population



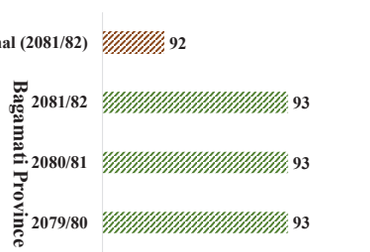


Tuberculosis Programme

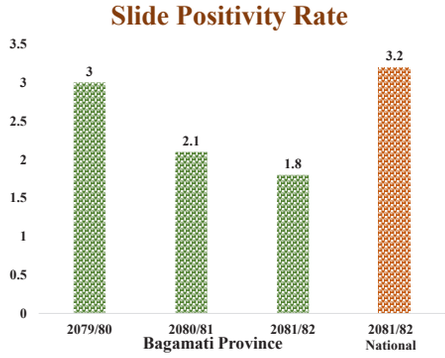
Case Notification Rate (all forms of TB cases)



Treatment Success Rate

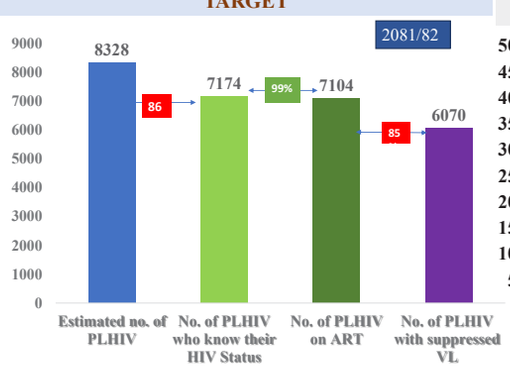


Slide Positivity Rate

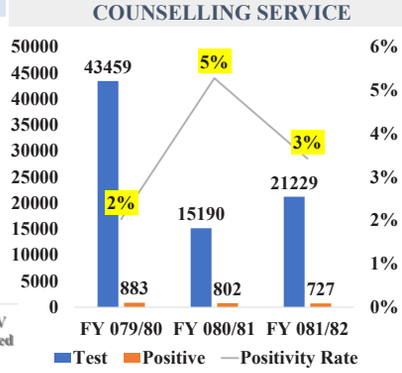


HIV/AIDS and STD Programme

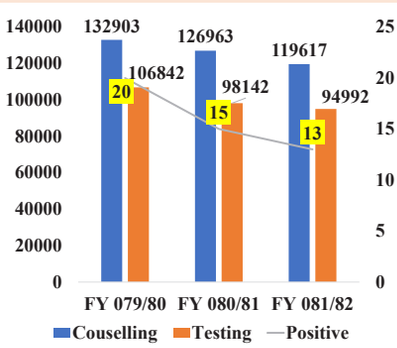
HIV Program – PROGRESS TOWARD 95-95-95 TARGET



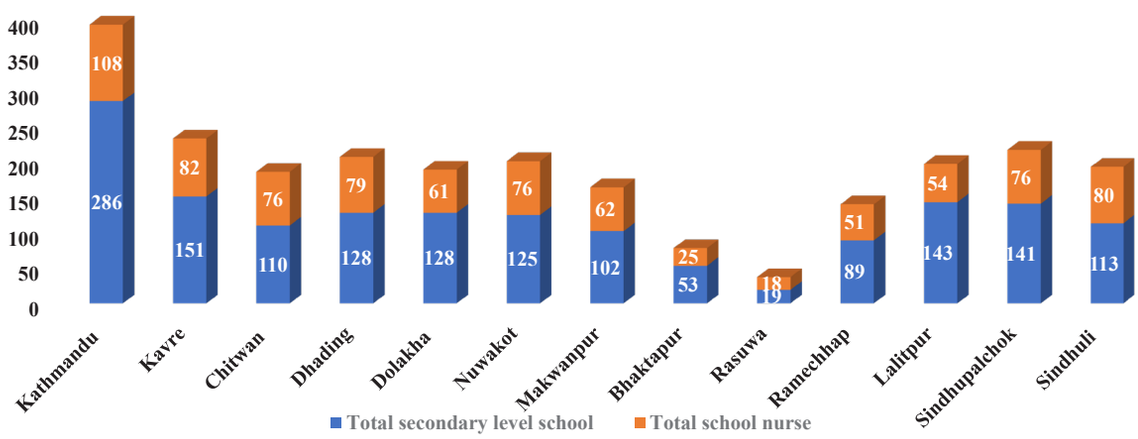
HIV TESTING AND COUNSELLING SERVICE



PMTCT Services in Number



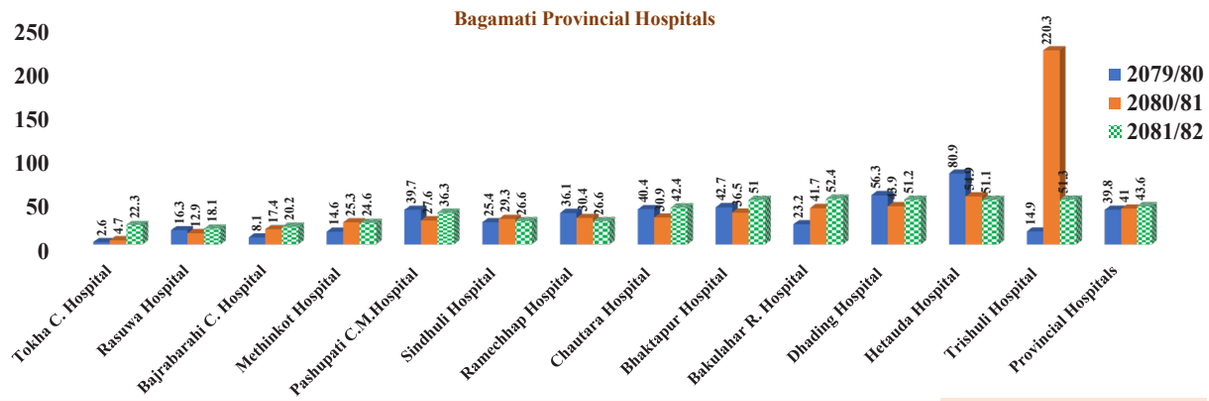
School Health Nurse Programme Implemented School



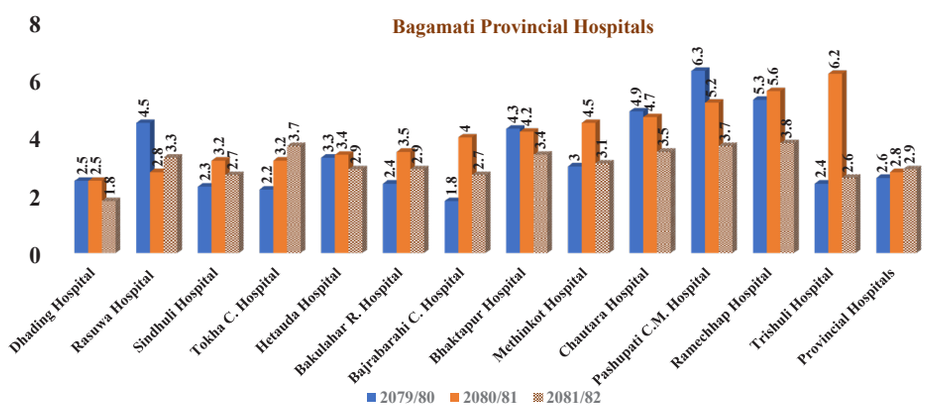
Source: DHIS 2/ HMIS

Provincial Hospital Service

Trend of Bed Occupancy Rate (%)



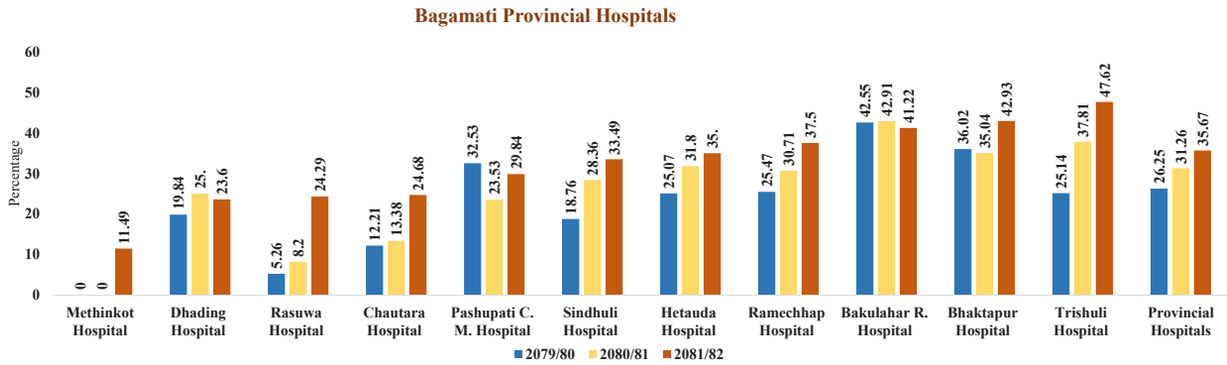
Trend of Average Length of Stay at Hospital (Days)



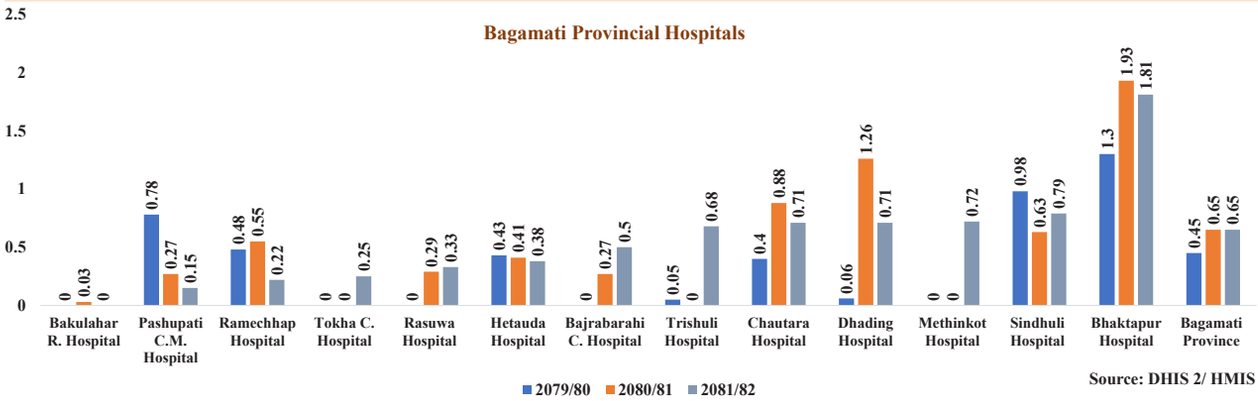
Top Five Morbidity

Disease	Number
Hypertension	46061 (6.8%)
Diabetes Mellitus	37077 (5.5%)
Dermatitis/Eczema	34953 (5.1%)
Fever	30844 (4.5%)
Gastritis (APD)	25264 (3.7%)

Percentage of deliveries by caesarean section among reported deliveries

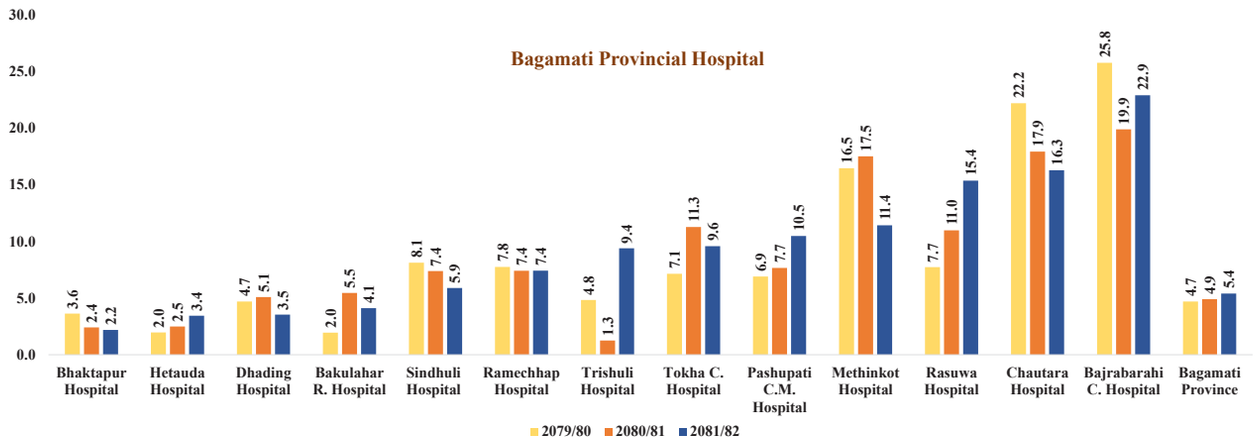


Trend of Hospital Death Rate

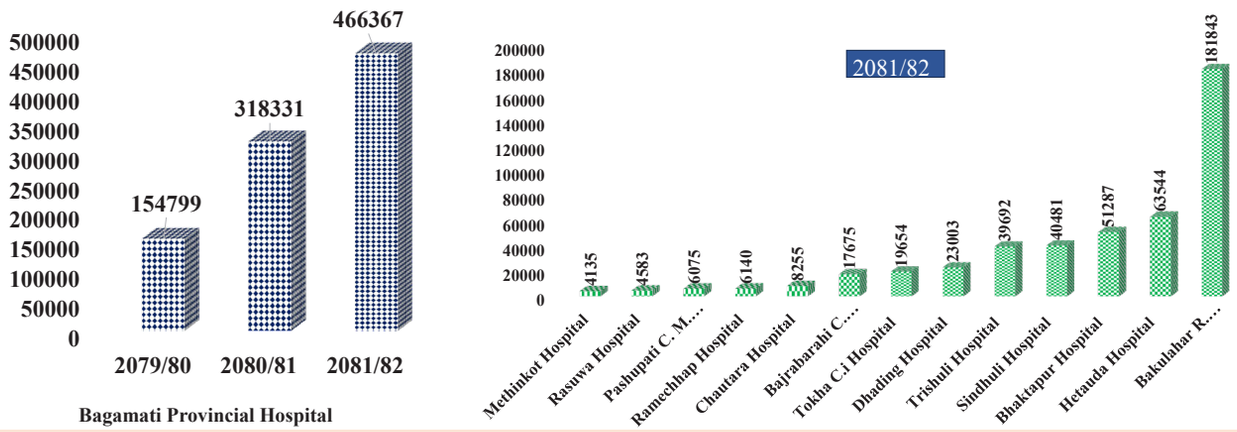


Source: DHIS 2/ HMIS

Percentage of Inpatient who were Referred Out

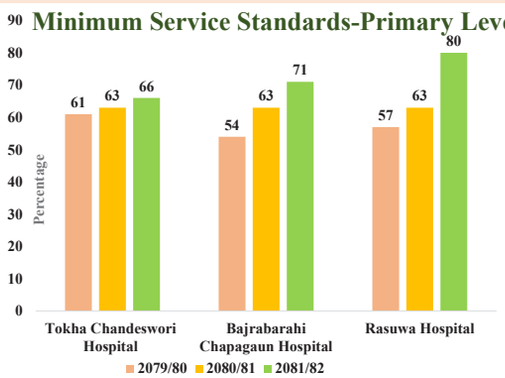


Total number of New OPD Visit (N)

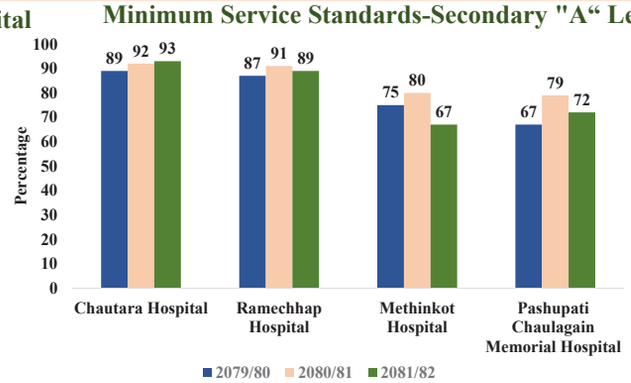


Minimum Service Standard (MSS)

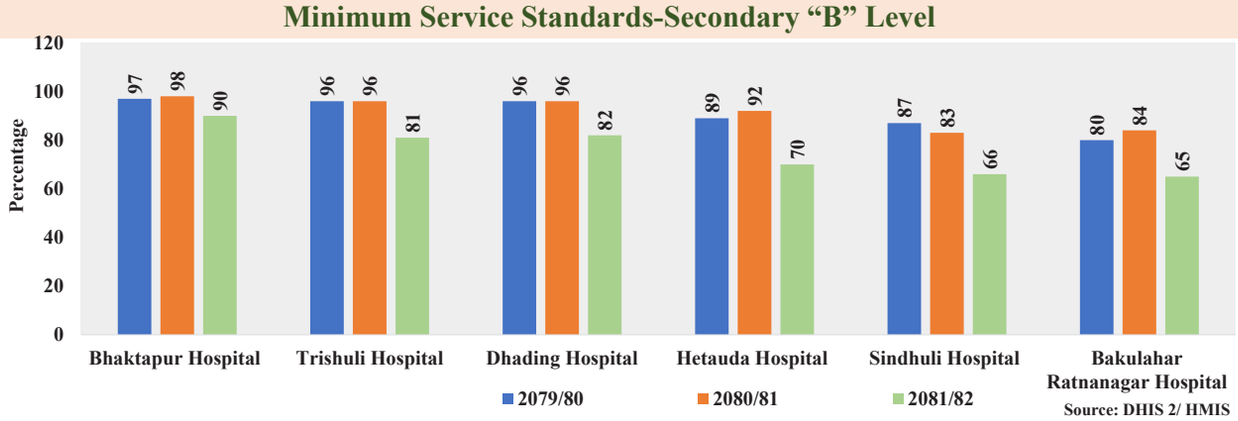
Minimum Service Standards-Primary Level Hospital



Minimum Service Standards-Secondary "A“ Level



Minimum Service Standards-Secondary “B” Level

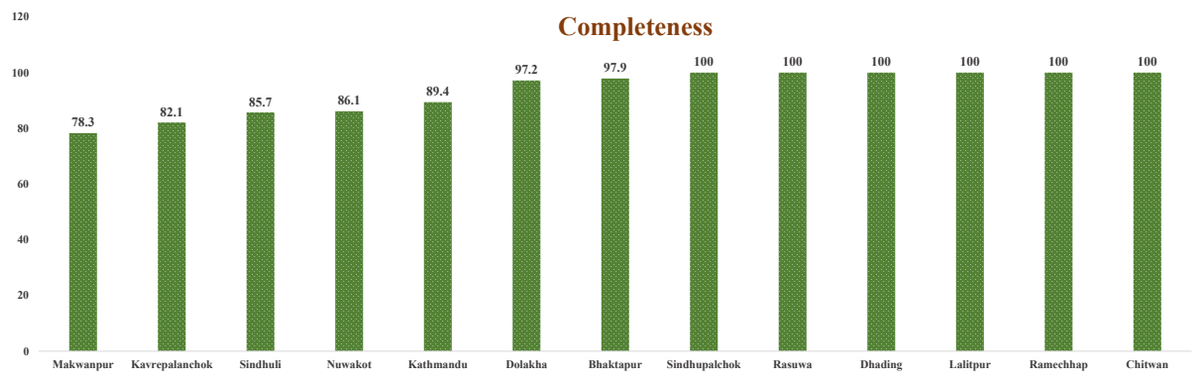


Source: DHIS 2/ HMIS

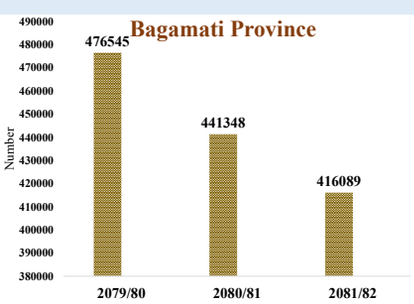
Ayurveda and Alternative Medicine Service

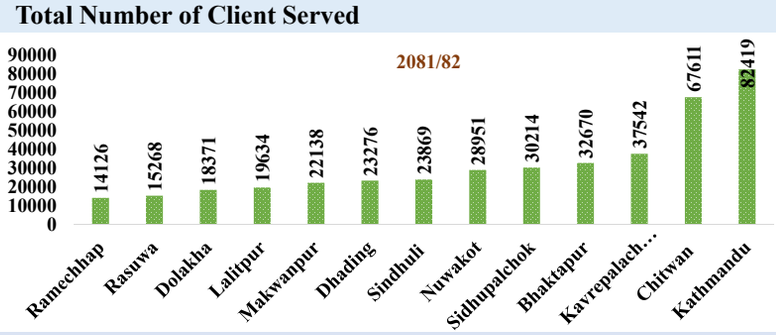
Health Facilities	FY 2081/82 by District													
	2081/82	Dolakha	Sindhupalchok	Rasuwa	Dhading	Nuwakot	Kathmandu	Bhaktapur	Lalitpur	Kavrepalanchowk	Ramechhap	Sindhuli	Makawanpur	Chitwan
Ayurveda and Alternative Medicine Hospital	13	1	1	1	1	1	1	1	1	1	1	1	1	1
Ayurveda Aushadhalaya	50	2	5	2	4	7	5	2	2	4	1	5	3	8
Nagarik Aarogya Sewa Kendra	52	4	4	3	5	4	4	3	4	4	4	4	6	3
Total Number of Ayurveda Health Facilities	115	7	10	6	10	12	10	6	7	9	6	10	10	12

Reporting status of Ayurveda and Alternative Medicine Hospitals (2081/82)

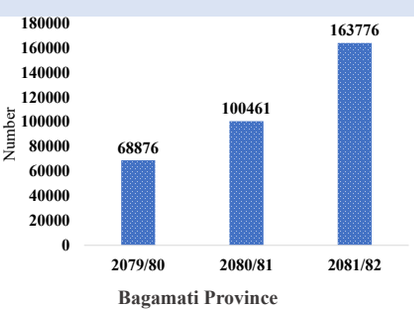


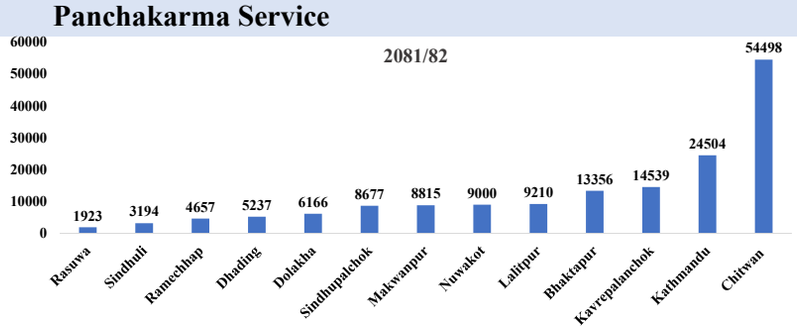
Total Number of Client Served



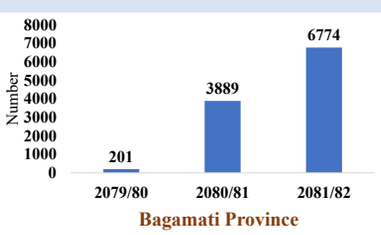


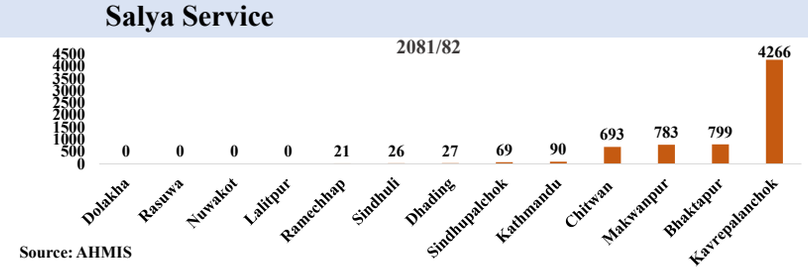
Panchakarma Service





Salya Service





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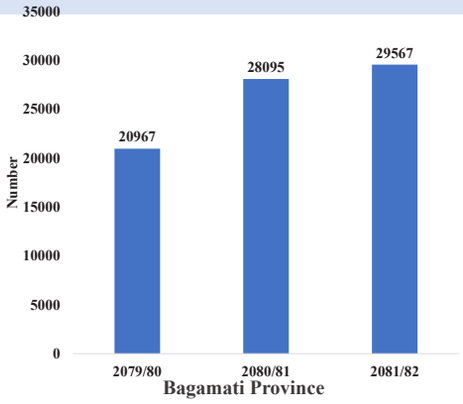
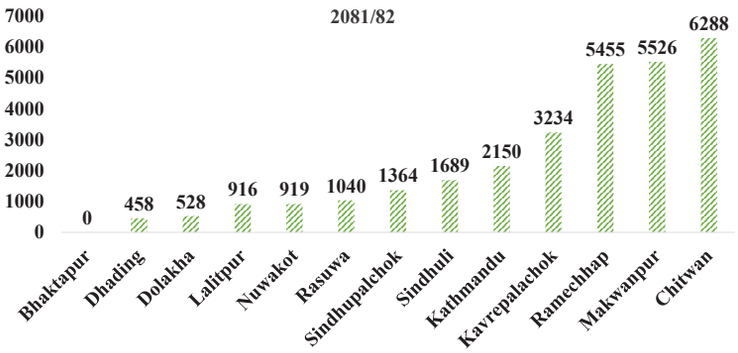
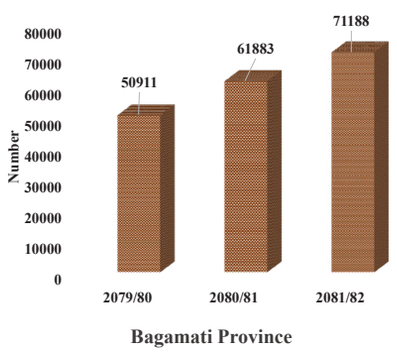
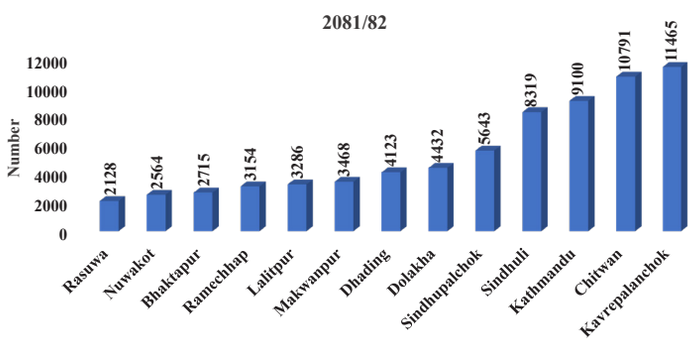
Yoga Service



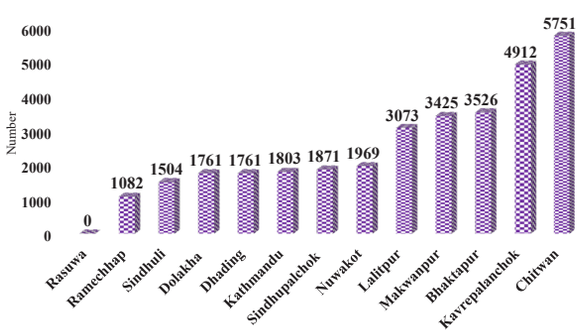


Jesthanagarik Service

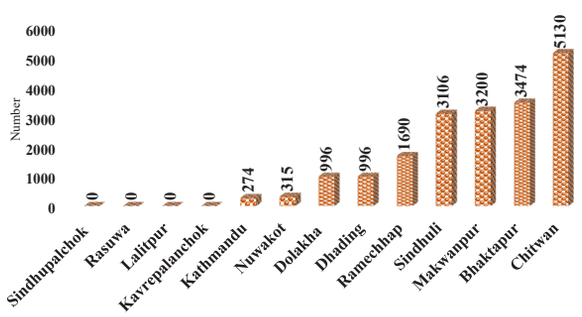




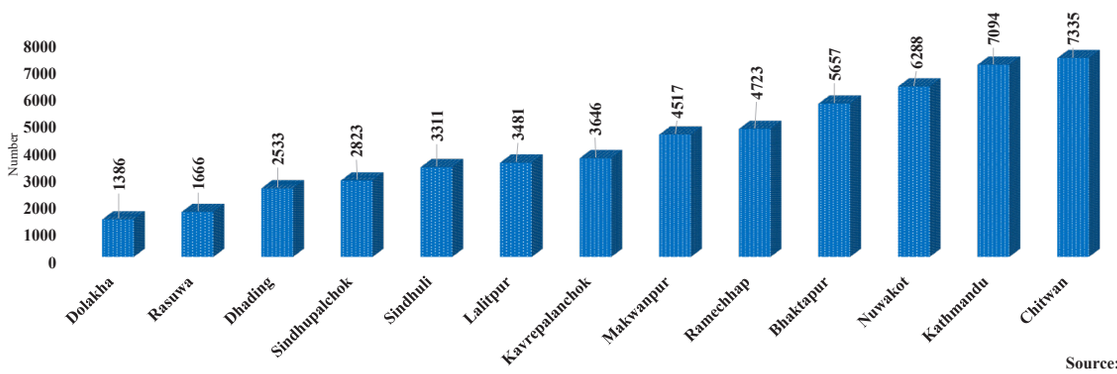
Acupuncture Service (2081/82)



Physiotherapy Service (2081/82)



Laboratory Service (2081/82)



Source: AHMIS

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CHAPTER
01

OVERVIEW OF BAGAMATI PROVINCE

1.1 Introduction

Background

The Provinces of Nepal were established on 20 September 2015 in accordance with Schedule 4 of the Constitution of Nepal. These provinces were formed by grouping the existing districts, with the country being divided into seven provinces. One of these provinces is Bagamati Province, which includes 13 districts: Dolakha, Sindhupalchok, Rasuwa, Dhading, Nuwakot, Kathmandu, Bhaktapur, Lalitpur, Kavrepalanchok, Ramechhap, Sindhuli, Makawanpur, and Chitawan.

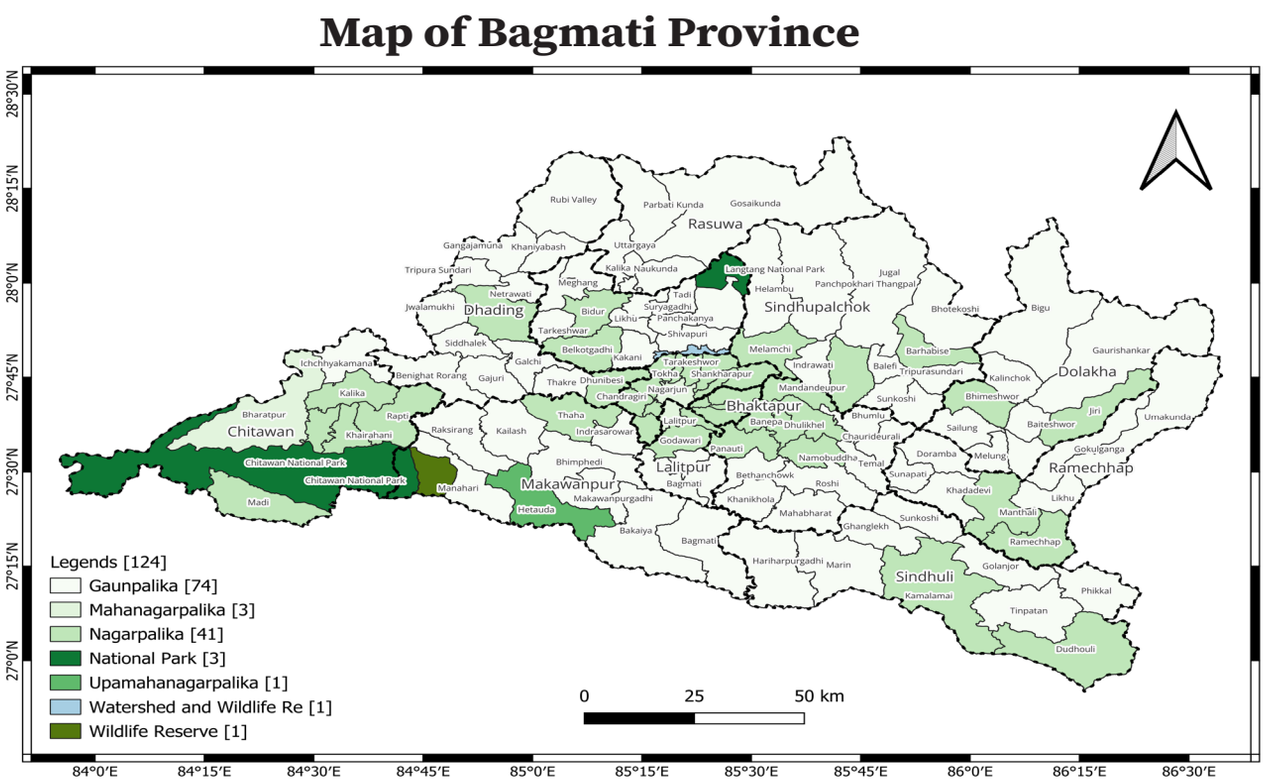


Figure 1.1 Diagrammatic representation of the Bagamati Province

Geographic Features

Bagamati Province is situated in central Nepal, extending from the upper Himalayan region to parts of the Terai region. The elevation within the province ranges from 141 meters at Golaghat in Chitawan District to 7,422 meters at Ganesh Himal. Covering an area of 20,300 km^2, it represents about 13.79% of Nepal's total area. Bagamati is the fifth largest province by area, consisting of 13 districts, and is the second most populous province in the country. Bagamati Province is bordered to the north by the Tibet Autonomous Region of China, to the west by Gandaki Province, to the east by Koshi Province, and to the south by Madhesh Province and the Indian state of Bihar. With Hetauda as its provincial headquarters, the province is also the home to the country's capital Kathmandu.

Demographic features

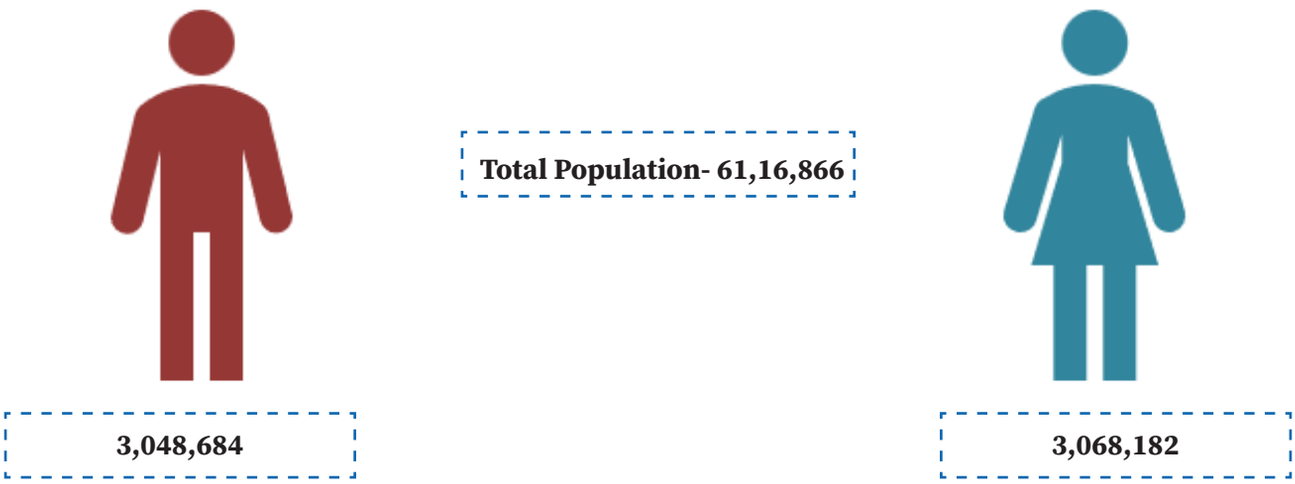


Figure 1.2 Population distribution

Table 1.1 District-wise Population Distribution of Bagamati Province

District	Metropolitian	Sub-Metropolitan	Municipalities	Rural Municipalities	Number of Local Units	Total Population
Kathmandu	1	0	10	0	11	2,017,532
Kavrepalanchok	0	0	6	7	13	366,879
Chitawan	1	0	5	1	7	722,168
Dolakha	0	0	2	7	9	172,726
Dhading	0	0	2	11	13	322,751
Nuwakot	0	0	2	10	12	262,981
Bhaktapur	0	0	4	0	4	430,408
Makawanpur	0	1	1	8	10	461,053
Rasuwa	0	0	0	5	5	45,554
Ramechhap	0	0	2	6	8	170,620
Lalitpur	1	0	2	3	6	548,401
Sindhupalchok	0	0	3	9	12	262.852
Sindhuli	0	0	2	7	9	300,117
Bagamati Province	3	1	41	74	119	6,116,866

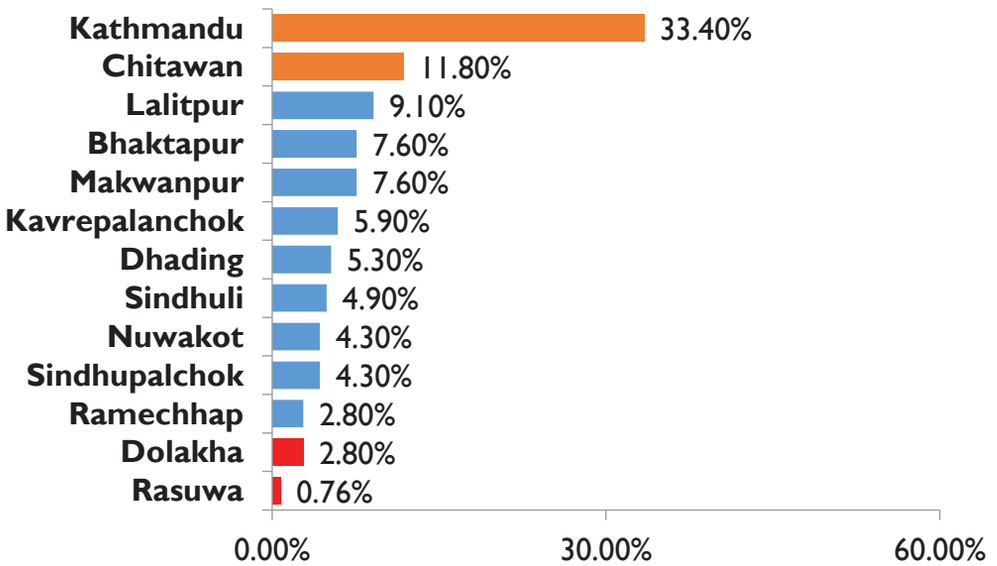


Figure 1.3 District-wise Population distribution of Bagamati Province

Source: NHPC 2021

According to the National Population and Housing Census 2021 the total population of Bagamati province was 6,116,866 of which 49.8% were male and 50.1% were female and while looking at the district wise Population Distribution, Kathmandu district has the highest population followed by the Chitawan district.

Population Pyramid of Bagmati Province

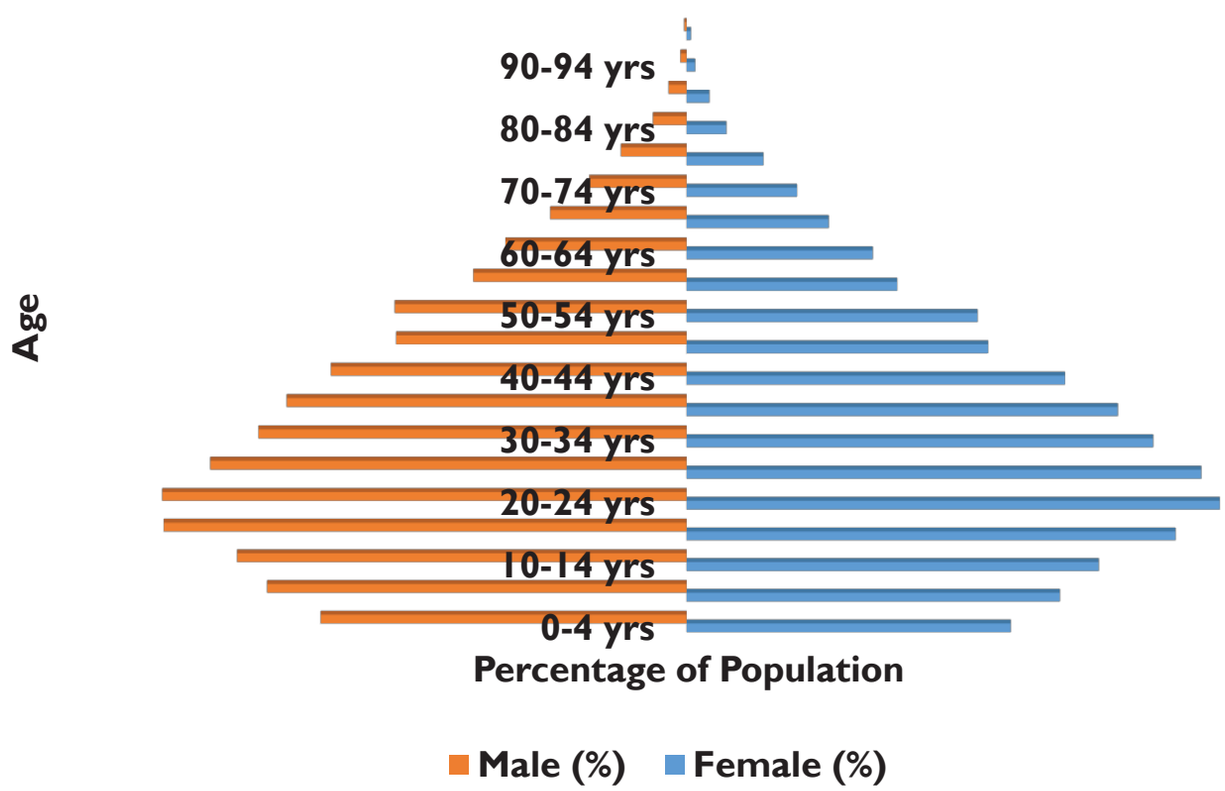


Figure 1.4 Population Pyramid of Bagamati Province

Source: NHPC 2021

The above diagram represents the population pyramid of Bagamati Province based on the data of NHPC 2021. The pyramid suggests a declining birth rate since the younger population is smaller than the working-age group. The higher number of people in the working-age group indicates that the province may experience economic growth in the near future. An aging population trend is evident, which could create a future burden on healthcare and social security systems.

Population characteristics of Bagamati Province

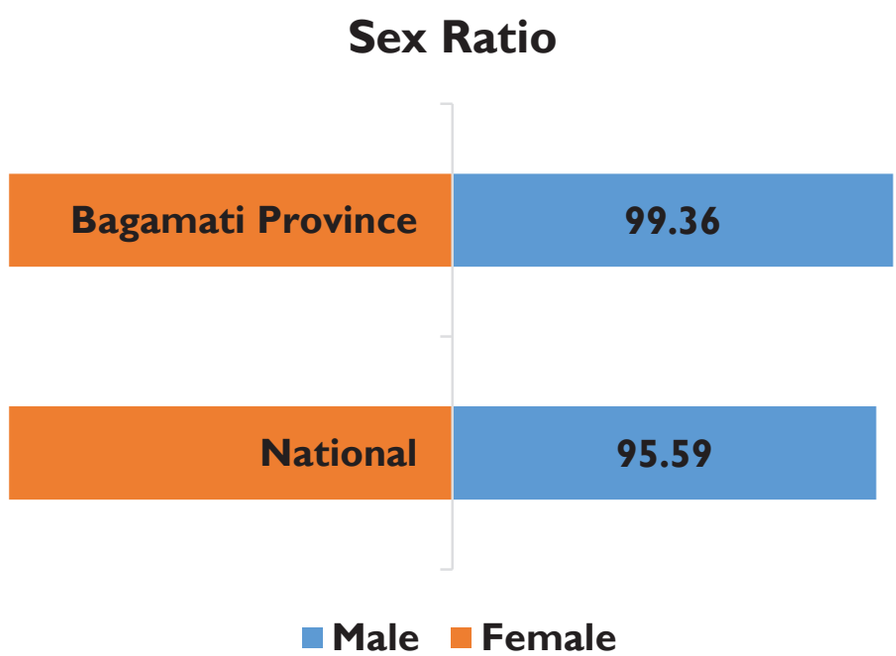


Figure 1.5 Sex Ratio (NHPC 2021)

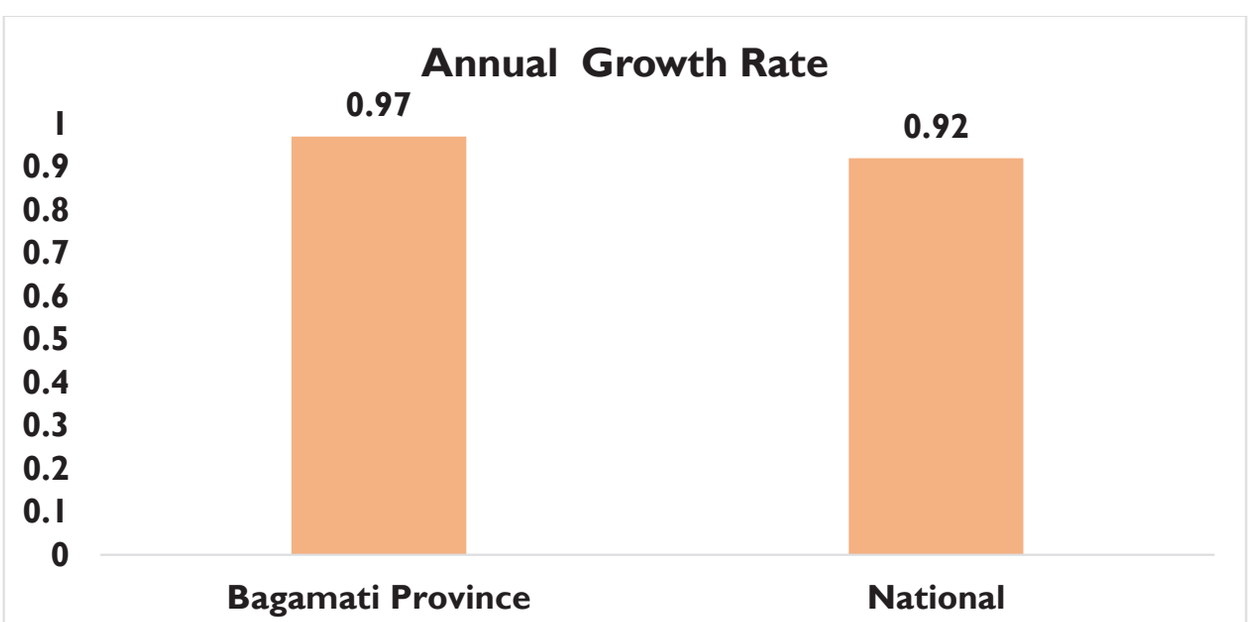


Figure 1.6 Annual Growth Rate (NHPC 2021)

The preceding figures illustrates the Sex ratio and Annual growth rate of Bagamati Province. The total population of Bagamati province comprises of 99.36 males per 100 females and the annual growth rate was 0.97. While comparing the sex ratio and annual growth rate of Bagamati province with national data it was higher than the national.

Important vital statistics

Table 1.2 Important Vital Statistics

Indicator	Bagamati Province (2016)	Bagamati Province (2022)	National (NDHS 2022)
Total Fertility Rate (TFR)	1.8	1.6	2.1
Neonatal Mortality Rate (NMR)	17	18	21
Infant Mortality Rate (IMR)	29	21	28
Under 5 Mortality Rate	36	24	33
Maternal Mortality Rate (MMR)		98 (NHPC 2021)	151

The above table showed the important vital statistics of Bagamati province. According to the table the total fertility Rate was 1.6, Neonatal Mortality Rate was 18, Infant Mortality rate was 21, Under 5 Mortality Rate was 24 and Maternal Mortality rate was 98. All the indicators of the Bagamati province are lower than the National.

1.2 Health Service Delivery System of Bagamati Province

Ministry of Health Bagamati Province

Following the country's transition to a federal setting saw the establishment of province ministries and other provincial entities under their jurisdiction. In this process, the responsibility of health was entrusted to the Ministry of Social Development. Later, in 2078, the Ministry of Social Development in Bagamati Province was split to two ministries, one of which is the Ministry of Health.

The MoH provides guidance to Health Directorate as well as local-level governments to deliver promotional, preventive, diagnostic, curative, and palliative health care services and carries out its functions of related policy development, planning, human resource management, financial management and monitoring and evaluation.

Health Directorate

The Bagamati Provincial Health Directorates provide technical backstopping and programmes monitoring to district health systems and come directly under the Ministry of Health of Province. It is the chief technical and administrative unit which ensures proper management of preventive and curative health services through various health institutions in the province.

Objectives:

To reach the preventive, curative and promotional health services up to the doorsteps of people.

Monitoring and supervision of health services.

The main responsibilities of Health Directorate include:

- Planning and budgeting the health programs within the province.
- Ensure effective implementation of health programs in the province.
- Determine the requirement of manpower for health institutions in the province.
- Ensure supply of drugs, equipment, instruments, and other materials at different health institutions in the province.
- Manage the immediate solution of problems arising from natural disasters and epidemics in the province at different levels.
- Foster coordination with external development partners for effective delivery of resources and health services in the province.

Organogram

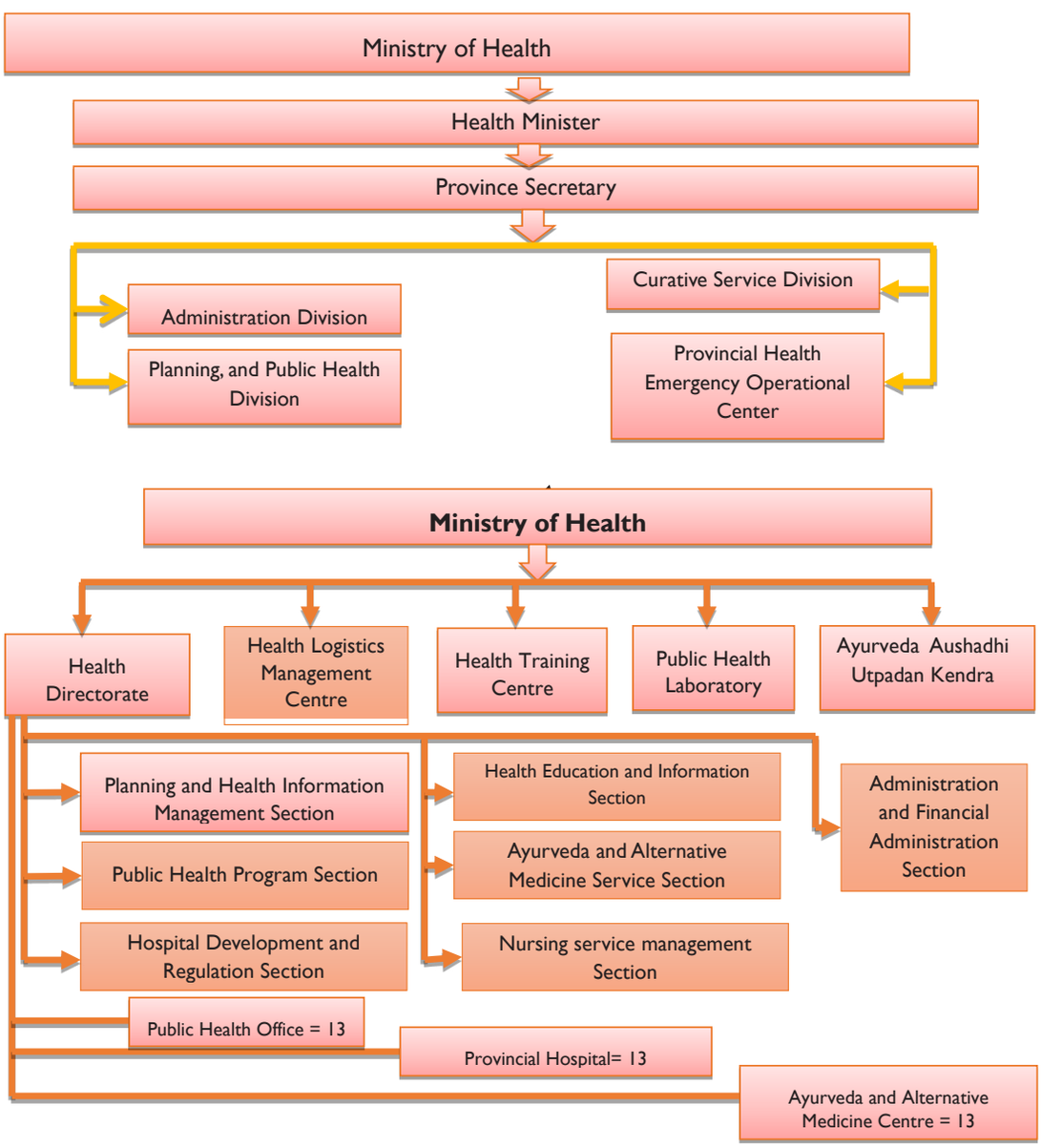


Figure 1.7 Organogram of Health System of Bagamati Province

Health Service Delivery Unit of Bagamati Province

Table 1.3 Health Service Delivery Units of Bagamati Province

Organizational Unit	Dolakha	Sindhu palchok	Rasuwa	Dhading	Nuwakot	Kathmandu	Bhaktapur	Lalitpur	Kavre palanchok	Ramechhap	Sindhuli	Makawan pur	Chitawan	Total
Basic Health Service Center	16	15	3	46	10	19	3	26	39	7	23	52	59	318
Health Posts	51	74	16	44	64	54	20	37	84	50	49	38	34	615
PHCC	1	2	0	2	2	2	1	3	4	2	3	2	1	25
Community Health Unit	21	34	14	21	25	0	1	3	18	15	41	8	6	207
Urban Health Unit	5	7	0	2	8	57	7	17	7	16	2	5	11	144
Basic Hospitals (5 - 15 Beds)	4	4	1	12	4	24	0	1	8	4	3	4	18	87
General Hospitals (100 - 300 Beds)	1	0	0	0	0	14	3	7	0	0	0	0	1	26
General Hospitals (25 - 50 Beds)	2	1	1	1	1	45	6	6	3	1	1	3	11	82
Specialized Hospitals (100 and above)	0	0	0	0	0	10	0	0	0	0	0	0	2	12
Super Specialty Hospitals	0	0	0	0	0	10	3	3	0	0	0	0	2	18
Academy and Teaching Hospital	0	0	0	0	0	8	0	2	1	0	0	1	2	14
No. of Health Facilities (Ayurveda)	3	6	6	8	10	19	5	7	6	2	6	4	10	92
Non- Public Facilities	9	10	1	19	10	1217	58	203	24	5	21	22	104	1703
Birthing Center	53	55	18	74	57	17	1	18	47	44	39	58	24	505
CEONC Site	1	3	3	2	1	13	9	4	3	2	0	4	2	47
BEONC Site	12	6	6	8	3	15	0	10	5	5	4	9	7	90
Safe Abortion Site	12	12	4	35	18	66	11	30	22	26	10	29	19	294
ASRH Site	40	22	28	32	25	5	2	21	23	16	33	86	6	339
PHC-ORC	133	205	28	163	188	67	21	93	363	148	207	198	60	1874
Immunization Centre	170	249	53	234	227	197	68	143	367	201	237	242	206	2594
FCHV	1254	711	245	465	1107	1620	261	795	937	753	498	472	462	9596

Source: HMIS/DHIS2/HD

The above table shows the district wise data of health service delivery unit of Bagamati Province. According to the updated categorization of health facilities there are 318 BHSU,615 Health post, 25 PHCC, 87 Basic Hospitals (5-15 beds), 82 General Hospital (25-50 beds),26 General Hospital (100-300 beds), 12 Specialized Hospitals (100 and above),18 Super Specialty Hospitals (50+ Beds/Organ) and 14 Academy and Teaching Hospital (300+ Beds).

The table also shows the total number of safe abortion sites, CEONC sites, BEONC sites and birthing centers. All together there are about 505 birthing center, 47 CEONC site, 90 BEONC site and 294 safe abortion sites in Bagamati province.

1.3 Importance of Annual Report

The Constitution of Nepal has ensured the right to demand and receive information on any matter of his/her interest or of public interest. Good Governance Act 2008, clause 41 vividly mentions every department and other government agencies shall, every year, prepare an annual report and submit it within the described period. In line with the Constitution of Nepal and Good Governance Act, Bagamati Province has published this Annual Report of fiscal year 2081/82 . The report has been developed based on the data compiled from DHIS2/HMIS and presentations made at annual review meetings by Public Health Offices, hospitals, development partners, and other stakeholders.

This report mainly focuses on performance of different health Sector of Bagamati province in FY 2081/82 on following areas:

- Major targets activities and achievements.
- Health Programme's indicators.
- Problems, issues, constraints, and recommendations on improving performance and achieving targets.

1.4. Sources of Information in the Report

The primary data source for this report was the Health Management Information System (HMIS), with information downloaded from the DHIS2 system after the national annual review workshop. The data were analyzed to assess progress across various health programs and activities. Additional information was obtained from other systems including eLMIS, disease surveillance systems, sentinel reporting, EWARS, and the Ayurveda Reporting System (ARS). Inputs from local, district, and provincial annual review meetings were also incorporated. The Annual Health Report Preparation Committee compiled, reviewed, and organized all relevant data into structured sections and chapters for the report.

CHAPTER
02

FAMILY WELFARE

2.1. Child Health and Immunization

Background of the Immunization Program

Vaccines are essential tools for safeguarding public health, offering a cost-effective and life-saving approach to disease prevention. The National Immunization Program (NIP) of Nepal, a key priority initiative of Nepal government, plays a vital role in reducing child morbidity and mortality. It has made a significant impact by protecting children from a range of communicable diseases, thereby decreasing morbidity and mortality rates, particularly among infants.

Immunization services in Nepal are provided through various channels, including health institutions, external vaccination centers, and mobile teams. Following the eradication of smallpox in 1977 (2034 BS), Nepal expanded its vaccination program to districts such as Dhanusha, Rupandehi, and Sindhupalchok. By 2005, the country had successfully eliminated maternal and neonatal tetanus, a status it has maintained to the present day. Initially offering BCG and DPT vaccines, the program gradually expanded to include vaccines for polio and tetanus by 1988 (2045 BS).

The expanded program now targets six major diseases: tuberculosis, diphtheria, pertussis, tetanus, polio, and measles. In subsequent years, additional vaccines were introduced for hepatitis B (2003/2060 BS), Japanese encephalitis (2007/2064 BS), and Haemophilus influenzae type B (2009/2066 BS). By 2014 (2071 BS), the program had grown to include 13 vaccines, including injectable polio (fIPV), pneumococcal, and rotavirus vaccines. The most recent addition, the typhoid vaccine, was introduced in 2021 (2078 BS). These vaccines are administered through various platforms, including institutional clinics, outpatient services, and mobile vaccination units.

Target and Program Expansion

In 2012, the National Immunization Advisory Committee recommended the inclusion of vaccines for diarrhea, typhoid, rotavirus, and cholera in the routine immunization schedule. This expansion was accompanied by hygiene promotion initiatives, wherein parents were educated on the importance of hygiene before their children received vaccinations.

Current Status of the Immunization Program

At present, the NIP provides free immunization services for children under 15 months of age and pregnant women. These services cover 13 communicable diseases, including tuberculosis, hepatitis B, polio, rubella, pneumonia, Japanese encephalitis, and typhoid. Immunization is facilitated through over 16,000 vaccination centers nationwide, including 2,594 centers in Bagamati Province. These services are delivered by institutional, external, and mobile units, with additional support from private and non-governmental health organizations.

Key Achievements of the National Immunization Program (2081/82)

- Bagamati Province has been officially declared as having achieved full immunization coverage.
- All districts have successfully achieved full immunization coverage.
- Comprehensive microplanning has been developed at both district and local levels.
- Two supplementary campaigns, covering bOPV and the HPV have been successfully implemented.
- The annual review meeting for the immunization program was held, introducing innovative models for improvement.
- Post-COVID-19, the cold chain infrastructure in Bagamati Province has been enhanced and is now fully operational.
- A program-specific feedback mechanism has been established to provide real-time updates on immunization coverage and dropout rates at the district level.
- District Data Management Committee (DMC) meetings have been held regularly, with monthly feedback shared across districts.
- Ongoing supervision, monitoring, and on-site coaching are being carried out at district and sub-district levels to address program requirements and challenges effectively.
- Cold Chain Surveillance Group has been established at the local level across Bagamati Province to provide support and manage cold chain–related issues through this mechanism.
- Two batches of cold chain training were conducted for cold chain focal persons across Bagamati Province.

The achievements reflect the continuous efforts of the Nepalese government to strengthen its immunization program, ensuring broader coverage and sustained protection against vaccine-preventable diseases.

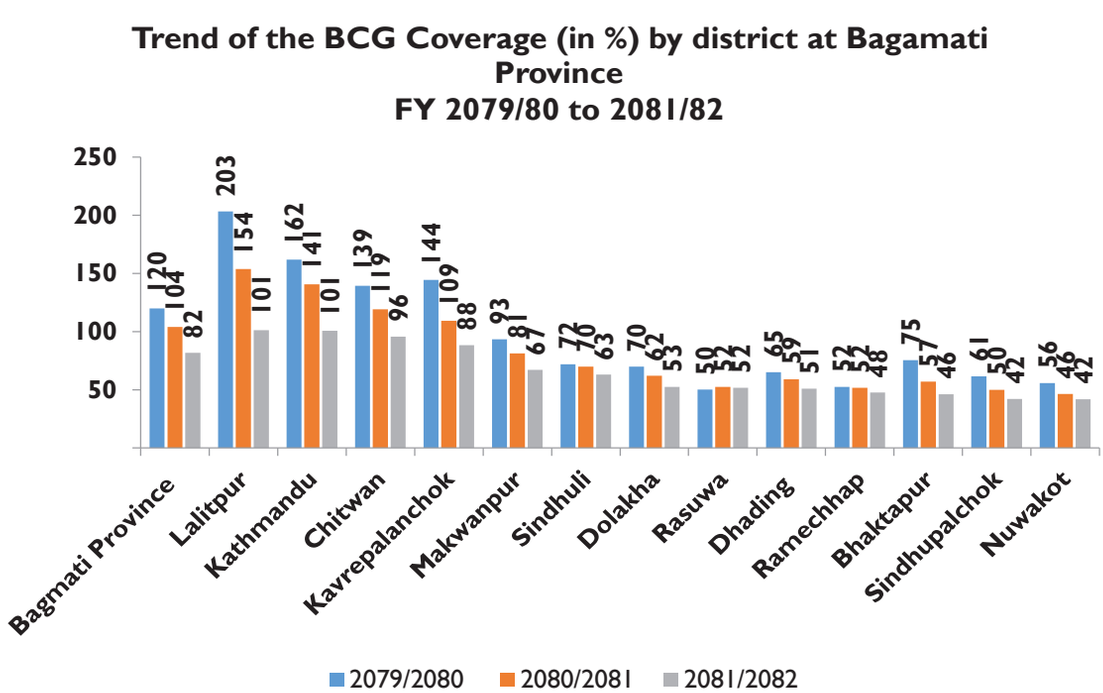


Figure 2.1 Trend of the BCG Coverage (in %) by district at Bagamati Province

Source: HMIS/DHIS2

The three years trend of BCG coverage in Bagamati Province shows a general decline over the observed periods across most of the districts. While initial coverages were high (2079/80), often exceeding 100% in districts like Lalitpur and Kathmandu, indicating strong immunization performance or possibility of over-reporting, with consistent decrease in subsequent periods. Districts such as Nuwakot, Sindhupalchok, Bhaktapur, Ramechhap, Dhading, Rasuwa, Dolkha, Sindhuli and Makawanpur continue to report comparatively low coverage, suggesting gaps in accessibility or data accuracy. Overall, the trend reflects a downward shift in BCG coverage that may require targeted interventions to sustain and improve immunization performance across all districts.

DPT-Hep B-Hib 1 Vs DPT-Hep B-Hib-3 Coverage

Table 2.1 DPT-Hep B-Hib 1 Vs DPT-Hep B-Hib-3 Coverage in Districts of Bagamati Province

Organization	2079 / 2080		2080 / 2081		2081/ 2082	
	DPT-HepB-Hib1	DPT-HepB-Hib3	DPT-HepB-Hib1	DPT-HepB-Hib3	DPT-HepB-Hib1	DPT-HepB-Hib3
Bagamati Province	109.4	107.9	94.6	97.4	73.1	73.6
Kavrepalanchok	111.5	107.5	111.1	112.7	96.1	98.6
Lalitpur	145.2	139.1	119.3	123.6	80.6	83.0
Makawanpur	104.9	100.7	93.1	94.6	79.2	79.0
Sindhuli	82.0	77.7	87.6	87.6	78.7	77.3
Dhading	95.7	92.8	89.4	88.2	75.0	75.1
Rasuwa	70.2	72.5	82.2	87.0	75.2	73.0
Nuwakot	95.9	92.2	86.1	86.7	73.1	72.3
Sindhupalchok	98.5	95.3	84.4	83.0	69.6	71.5
Kathmandu	120.0	120.8	97.8	102.1	69.2	70.5
Bhaktapur	128.9	136.1	94.4	102.1	73.8	70.2
Ramechhap	75.6	75.8	74.2	76.0	71.8	68.2
Chitawan	107.9	105.6	85.4	87.9	65.0	66.1
Dolakha	81.0	80.0	74.3	77.0	66.6	64.9

Source: HMIS/DHIS2

The coverage trend of DPT-HepB-Hib1 and DPT-HepB-Hib3 in Bagamati Province from fiscal years 2079/80 to 2081/82 indicates a gradual decline in most districts. Provincial coverage exceeded 100% in 2079/80, reflecting strong outreach and service delivery while it had fallen below 75% in 2081/82. Among 13 districts, only Kavrepalanchok had achieved more than 95% coverage while the remaining districts reported coverage below 90% for the pentavalent vaccine.

Districts such as Dolakha, Chitawan, and Ramechhap consistently recorded lower coverage levels. Overall, the declining trend observed over the past two fiscal years (2080/81 and 2081/82) highlights the need to strengthen and sustain routine immunization services.

Measles/Rubella I and II Coverage

Table 2.2 Measles/Rubella I and II Coverage (%)

Organization	2079/2080		2080/2081		2081/2082	
	MR -I	MR- II	MR -I	MR- II	MR -I	MR- II
Bagamati Province	110.1	105.6	105.3	107.3	76.6	85.3
Kavrepalanchok	106.6	106.2	116.5	119.5	98.3	105.5
Lalitpur	144.1	129.9	135.7	129.2	87.6	94.0
Makawanpur	102.7	96.1	99.1	100.7	81.4	91.7
Sindhuli	77.4	75.0	90.0	92.9	81.5	89.8
Rasuwa	74.6	79.0	90.6	100.0	80.6	89.2
Bhaktapur	140.7	129.5	115.9	116.6	78.0	89.0
Dhading	92.1	87.4	90.7	93.4	76.7	84.0
Sindhupalchok	96.8	102.3	88.7	91.8	71.2	82.8
Nuwakot	92.6	89.6	91.8	95.0	72.8	82.4
Kathmandu	124.9	119.2	111.9	115.3	73.2	81.3
Chitawan	108.3	104.9	97.9	100.4	69.7	80.2
Ramechhap	75.1	75.7	82.0	87.8	71.3	75.5
Dolakha	79.2	81.2	78.8	82.4	66.8	74.5

Source: HMIS/DHIS2

The measles-rubella (MR) coverage trend in Bagamati Province over the three fiscal years 2079/80 to 2081/2082 shows a clear decline in both MR-I and MR-II coverage. The provincial coverage decreased from 110.12% and 105.57% in 2079/2080 to 105.28%, 107.3% in 2080/2081, followed

by a sharp drop to 76.63% and 85.32% in 2081/2082, respectively. This downward trend suggests possible challenges such as reporting gaps, reduced vaccination outreach centres, or post-campaign fatigue. District-wise, Lalitpur, Bhaktapur, and Kathmandu initially recorded the highest coverage rates, exceeding 120% in 2079/80, but all these districts experienced notable decline in 2081/2082.

In contrast, Kavrepalanchok district demonstrated relatively stable performance, maintaining high coverage in fiscal year 2081/82. Districts such as Dolakha, Ramechhap, Chitawan, Kathmandu, Nuwakot and Sindhupalchok consistently remained below provincial averages, highlighting areas requiring special focus. Overall, while coverage remained high in earlier years, likely due to catch-up activities, the significant reduction in 2081/2082 emphasized the need for improved microplanning, accurate target population estimation, and enhanced follow-up mechanisms to sustain immunization performance across the province.

Province and District Wise Coverage of the Immunization Service in FY 2081/2082

The table below presents a district-wise analysis of immunization service coverage for Bagamati Province in fiscal year 2081/82. The data reveals considerable variation in the percentage of children immunized with key vaccines such as BCG, DPT-HepB-Hib, and measles-rubella among districts with an average coverage rate of DPT-HepB-Hib3 (73.11%) and MR2 (85.32%) of Bagamati Province. Among districts, Kavrepalanchok showed the highest coverage in most of the indicators, exceeding

100% for several vaccines, indicating improved reporting or catch-up vaccination efforts.

Conversely, Kathmandu, Ramechhap, and Dolakha recorded relatively lower coverage and Bhaktapur, Rasuwa and Chitawan districts have shown higher dropout rates, suggesting challenges in service delivery or follow-up activities. Most of the districts were unable to maintain DPT-HepB-Hib3 and MR2 coverage rates above 95%. The data highlights the need for targeted interventions in districts with lower performance to ensure equitable immunization coverage across the province and to minimize dropout rates between successive doses.

Table 2.3 Province and District-Wise Coverage of the Immunization Service

Organization	Coverage Indicators (2081/82)										Dropout (2081/82)
	children fully immunized as per NIP schedule	%of children under one year immunized with BCG	% of children under one year immunized with DPT-HepB-Hib3	% of children months immunized against measles/rubella 1	% of children aged 12-23 months immunized with measles/rubella 2	% of children under one year immunized with DPT-HepB-Hib1	% of children under one year immunized with OPV 3	% of children under one year immunized with PCV 3	% of children immunized with TCV	DPT-HepB-Hib dropuout rate (DPT-HepB-Hib 1 vs 3)	DPT-HepB-Hib1 vs MR2 dropout rate
Bagamati Province	79.56	81.65	73.11	76.63	85.32	73.59	72.99	76.73	85.82	.65	-11.99
Kavrepalanchok	105.27	88.2	96.08	98.29	105.52	98.55	96.08	98.25	105.52	2.5	-4.71
Lalitpur	92.98	101.18	80.64	87.58	94.01	82.96	80.78	87.63	95.47	2.79	-8.96
Sindhuli	89.52	63.06	78.69	81.45	89.75	77.31	78.67	81.43	89.75	-1.78	-11.97
Rasuwa	89.22	51.74	75.21	80.62	89.22	72.95	75.36	80.47	89.22	-3.09	-20.82
Bhaktapur	88.91	46.2	73.77	77.97	88.97	70.24	73.77	77.97	88.97	-5.03	-21.95
Makawanpur	86.58	67.14	79.23	81.38	91.69	78.96	79.29	81.24	91.78	-.34	-12.55
Dhading	84.01	50.99	75.01	76.72	84.01	75.07	75.01	76.72	84.01	.08	-9.43
Sindhupalchok	82.53	42.04	69.61	71.16	82.76	71.48	69.61	70.71	82.79	2.61	-13.95
Nuwakot	82.23	41.87	73.08	72.76	82.39	72.32	72.89	72.68	82.37	-1.05	-11.61
Chitawan	77.99	95.56	65.03	69.65	80.21	66.08	64.95	69.42	80.54	1.58	-17.26
Ramechhap	75.54	47.69	71.78	71.28	75.54	68.24	71.78	71.32	75.54	-5.19	-8.58
Dolakha	74.81	52.51	66.61	66.83	74.46	64.91	66.57	66.78	74.85	-2.63	-12.21
Kathmandu	67.62	100.61	69.22	73.2	81.33	70.52	68.89	73.62	82.19	1.84	-10.58

Source: HMIS/DHIS2

Vaccine Wastage Rate of the Immunization Program in Bagamati Province (All Antigens 2079/80-2081/82)

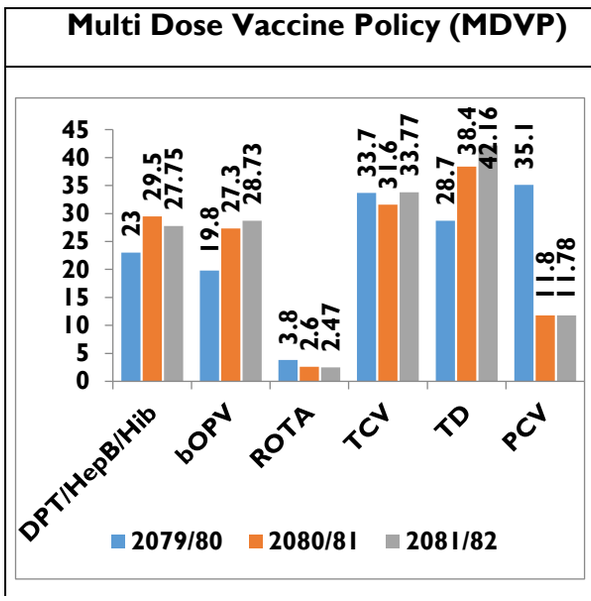


Figure 2.2 Multi Dose Vaccine Policy (MDVP)

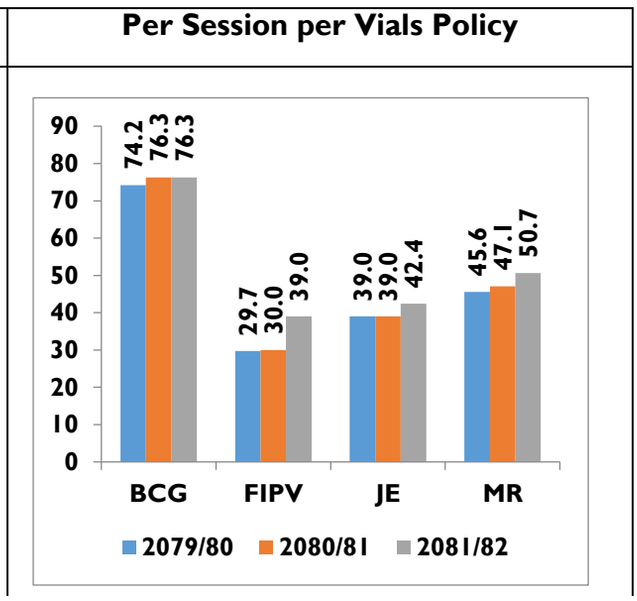


Figure 2.3 Per Session per Vials Policy

Source: HMIS/DHIS2

The figure above illustrates antigen-wise immunization coverage across three fiscal years (FY 2079/80–2081/82). Overall, coverage improved for most vaccines, with the highest levels observed in FY 2081/82. In the first panel, DPT-HepB-Hib, bOPV, and TCV show steady increases, indicating strengthening routine immunization services. Rota vaccine coverage remains consistently low despite marginal improvement, while TD coverage increased substantially and became one of the highest by FY 2081/82. In contrast, PCV coverage declined after FY 2079/80 and remained low thereafter.

Similarly, BCG coverage remained high and stable across all years. FIPV, JE, and MR vaccines demonstrated progressive improvements, particularly in FY 2081/82. Overall, the figure reflects continued gains in immunization performance, alongside persistent coverage gaps for Rota and PCV that warrant focused programmatic attention.

Table 2.4 Wastage Rate of the Immunization Program (All Antigen) 2081/82 (Bagamati Province)

Indicators	Bagamati	Dolakha	Sindhupalchok	Rasuwa	Dhading	Nuwakot	Kathmandu	Bhaktapur	Lalitpur	Kavrepalanchok	Ramechhap	Sindhuli	Makawanpur	Chitawan
Vaccine Wastage Rate (BCG)	76.27	89.87	91.37	91.27	89.62	91.19	55.56	79.94	63	83.41	91.14	90.78	84.55	71.31
Vaccine Wastage Rate (MR)	50.67	71.98	69.75	72.09	66.21	70.36	28	39.33	37.71	65.61	74.65	65.7	52.23	43.91
Vaccine Wastage Rate (DPT/HepB/Hib)	27.75	49.47	45.61	51.92	37.14	42.47	16.03	14.61	21.44	38.85	52.67	37.75	28.16	24.97
Vaccine Wastage Rate (fIPV)	39.02	51.15	49.25	51.48	48.46	49.75	22.71	27.47	38.49	57.61	53.67	44.64	32.58	50.07
Vaccine Wastage Rate (JE)	42.41	64.07	58.37	63.51	57.71	63.58	24.19	33.24	30.71	55.93	66.75	58.95	46.69	35.97
Vaccine Wastage Rate (TCV)	33.77	56.01	50.02	55.77	48.37	50.55	20.75	19.99	26.1	45.08	56.68	45.35	37.69	28.64
Vaccine Wastage Rate (PCV)	11.78	25.15	21.02	29.47	17.58	22.37	5.22	6.71	8.82	16.58	27	20.62	13.62	10.61
Vaccine Wastage Rate (Rota)	2.47	8.37	0.36	8.88	1.02	10.08	1.17	0.12	2.08	0.3	3.52	10.37	3.74	1.33
Vaccine Wastage Rate (OPV)	28.73	49.22	45.71	52.68	39.38	43.12	16.99	16.4	22.47	39.18	53.05	39.37	29.31	25.9
Vaccine Wastage Rate (Td)	42.16	67.42	68.54	69.22	56.68	67.01	18.27	30.16	30.04	60.39	72.56	57.97	46.11	41.69

Source: HMIS/DHIS2

The analysis of vaccine wastage rates in Bagamati Province for FY 2081/82 indicates notable disparities across both antigens and districts, underscoring inefficiencies in vaccine utilization. The highest provincial wastage was recorded for BCG (76.27%), followed by JE (42.41%), Tt (42.16%), and Fipv (39.02%) in 2081/82, whereas Rota (2.47%) and PCV (11.78%) exhibited the lowest wastage rates. These findings aligned with national trends, as BCG showed high wastage due to multi-dose vials and limited shelf life after opening. District-level analysis indicated notably high BCG vaccine wastage in Sindhupalchok (91.37%) followed by Rasuwa (91.27%), Nuwakot (91.19%), Ramechhap (91.14%), and Sindhuli (90.78%) respectively, likely to be associated with small immunization session sizes, limited trained health workers, and challenges in maintaining the cold chain. Conversely, Kathmandu (55.56%) and Lalitpur (63%) demonstrated more effective vaccine management, suggesting stronger planning and higher client attendance

Overall, the findings highlighted the need to strengthen vaccine forecasting, microplanning, and session management across the province. Enhancing cold chain systems, redistributing vaccines efficiently, and providing refresher training for vaccinators are essential to minimize wastage. Furthermore, promoting community engagement to improve turnout and exploring smaller vial presentations for high-wastage vaccines could significantly improve vaccine utilization efficiency in Bagamati Province.

The table below presents a detailed classification of immunization service categories across districts in Bagamati Province based on DPT-HepB-Hib1 coverage and the dropout rate between the first dose of DPT-HepB-Hib1 (Penta-1) and the Measles-Rubella 2 (MR2) vaccine. Among the 13 districts, Kavepalanchok is classified as Category I, while the remaining twelve districts are classified as Category-III. Regarding the classification of 119 local levels within Bagamati Province, 53 are categorized as Category-I, 65 as Category-III and only one local level, Gokulganga rural municipality of the Ramechhap district has been reported as category IV. None of the local level is classified as category- II.

Table 2.5 Immunization Service Category by Local levels of District (2081/82)

District	District Category	Total Municipality	Local Levels Category			
			Category I	Category II	Category III	Category IV
			High coverage (≥90%) Low drop-out (<10%)	High coverage (≥90%) High dropout (≥10%)	Low coverage (<90%) Low drop-out (<10%)	Low coverage (<90%) High drop-out (≥10%)
Dhading	III	13	1	0	12	0
Bhaktapur	III	4	1	0	3	0
Lalitpur	III	6	2	0	4	0
Sindhuli	III	9	0	0	9	0
Nuwakot	III	12	0	0	12	0
Dolakha	III	9	0	0	9	0
Kathmandu	III	11	1	0	10	0
Ramechhap	III	8	1	0	6	1 (Gokulganga)
Chitawan	III	7	1	0	6	0
Makawanpur	III	10	3	0	7	0
Rasuwa	III	5	0	0	5	0
Sindhupalchok	III	12	1	0	11	0
Kavrepalanchok	I	13	6	0	7	0
Kavrepalanchok	I	13	6	0	7	0
Total		119	53	0	65	1

Source: HMIS/DHIS2

Full Immunization Declaration (FID) Status

Achieving the goals and objectives of the National Vaccination Program such as disease control, prevention, and eradication along with the Sustainable Development Goals, appears to be significantly influenced by this initiative. Vaccination is a right of children, ensuring their health and well-being, as recognized by Nepal's Constitution 2072 and the Vaccination Act 2072.

To guarantee that all children receive complete vaccination, the "Search and Immunize" strategy has been implemented with the leadership and support of local governments, in collaboration with various stakeholders. Under this approach, full vaccination is annually declared and sustained at the ward level, ensuring no child is left behind. This program has been in operation since 2069.

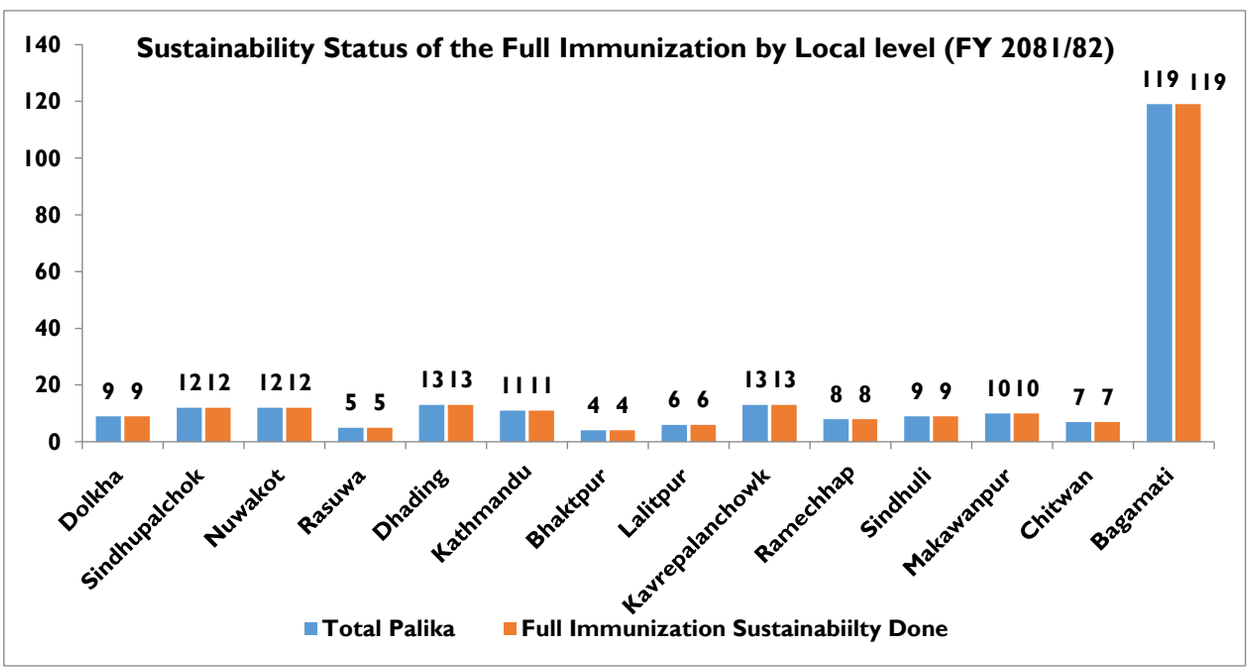


Figure 2.4 Sustainability Status of Full Immunization by Local level (FY 2081/82)

Source: HMIS/DHIS2

In the fiscal year 2081/82, all 13 districts of Bagamati Province have achieved full immunization status, leading to the province being declared Fully Immunized (FI). Among the 119 local levels, each had successfully sustained this achievement. The declaration was made in the collaboration of key stakeholders representing the entire province.

HPV Vaccination Campaign

Cervical cancer is a preventable disease and is curable if detected early and timely treated. However, it remains one of the most common cancers and causes of cancer-related deaths in women across the globe. It remains the fourth most frequent cancer in women with an estimated 604,000 new cases and 342,000 deaths in 2020. About 90% of these deaths due to cervical cancer occurred in Low and Middle-income Countries. In Nepal, there were estimated 2,244 new cervical cancer cases and 1,493 deaths in 2020.

The global strategy to accelerate the elimination of cervical cancer as a public health problem was published by WHO in November 2020 and three targets are set to achieve by 2030. (i) A vision of a world where cervical cancer is eliminated as a public health problem; (ii) a threshold of 4 per 100 000 women-years for elimination as a public health problem; and (iii) following 90-70-90 targets that must

be met by 2030 for countries to be on the path towards cervical cancer elimination, which means 90% of girls fully vaccinated with HPV vaccine by age 15 years, 70% of women are screened with a high-performance test by 35 years of age and again by 45 years of age, and 90% of women identified with cervical disease receive treatment.

Due to high burden of cervical cancer- the leading cause of cancer among women in Nepal, and successful experience of the HPV vaccine demonstration program, the Ministry of Health and Population (MoHP), Government of Nepal had planned to introduce HPV vaccine into Routine Immunization from 2024 with support from Gavi, the Vaccine Alliance, following a successful implementation of a demonstration program that was conducted in two districts- Kaski and Chitawan, covering the two successive cohorts in 2016 and 2017. MoHP had also conducted HPV demonstration program in September 2023 to study the feasibility and acceptance of HPV vaccine in the federalization context. The vaccination service was provided through provincial hospitals in seven provinces. The high acceptance of HPV vaccine and slow utilization in hospital-based vaccination service were the key lessons learnt from this program.

Therefore, mixed approach was adopted as vaccination service delivery strategy, i.e. school-based vaccination for schoolgirls (grade-based), including health facility-based vaccination for out-of-school girls (age-based) and girls missed at school, and outreach sessions to cover out-of-school girls or missed schoolgirls spread over a geographic area.

The age group selected for routine vaccination was 6th grade for school girls and 10 years age for out-of-school girls and for multi-age cohort vaccination, it was for 7 to 10 grades for schoolgirls and 11 to 14 years age for out-of-school girls. Therefore, in the introduction year, the vaccination service was made available for grade 6 to 10 schoolgirls and age 10 to 14 years for out-of-school girls. School-based vaccination service delivery strategy was adopted as an opportunity to establish a strong school health platform, wherein, together with HPV vaccination, a concept of full immunization school and promotion of menstrual hygiene were also integrated. Cervical cancer screening awareness and demand generation were also utilized during this program since it is low among eligible age group of women in Nepal.

The HPV vaccination program was implemented as a nationwide campaign approach conducted from 22nd Magh to 6th Falgun 2081.

Table 2.6 HPV Campaign Coverage 2081/82

S. No.	District	FWD Target	District Microplanning Target	Achievements	Coverage% by FWD target	Coverage% by District Microplanning target
1	Nuwakot	13836	11178	11160	81	100
2	Dolakha	8221	6520	6480	79	99
3	Ramechhap	8490	7078	6955	82	98
4	Kavrepalanchok	18992	16113	15745	83	98
5	Sindhupalchok	12956	10468	10129	78	97
6	Sindhuli	18182	14622	14082	77	96
7	Rasuwa	2037	1686	1620	80	96
8	Dhading	17150	14573	13826	81	95
9	Makawanpur	25307	22713	20092	79	88

10	Bhaktapur	23299	19295	16376	70	85
11	Chitawan	36523	31570	26472	72	84
12	Lalitpur	36230	31985	25425	70	79
13	Kathmandu	113612	111104	88108	78	79
	Bagamati	334835	298905	256470	77	86

Source: HMIS/DHIS2

The HPV vaccination coverage was 77% in Bagamati Province, achieved based on the FWD target, while coverage reached 86% according to district micro-planning targets. Nuwakot achieved 100% coverage, followed by Dolakha (99%) Ramechhap (98%), Sindhupalchok (97%), Rasuwa (96%), and Dhading (95%). The remaining districts achieved coverage ranging from 79% to 88% based on their micro-planning targets. Detailed information is presented in Table 2.1.6.

bOPV Campaign Coverage (2081/82)

Nepal, along with 10 other countries in the South-East Asia Region, was declared polio-free in 2014. This remarkable achievement was possible due to the absence of new wild polio cases since 2010 and sustained since then. This has been achieved because of high immunization coverage rates and high-quality surveillance of acute flaccid paralysis (AFP) cases. The vaccine preventable diseases surveillance is ongoing throughout the country. AFP surveillance as a part of VPD surveillance has been ongoing throughout the country since 1998. National Immunization Program has been able to achieve and maintain high quality certification standard AFP surveillance indicators, above global and regional indicators, since then and even during the COVID-19 pandemic period.

The National Public Health Laboratory (NPHL), Department of Health Services (DoHS) had started environmental surveillance for poliovirus from five sites of Kathmandu valley in 2017. Considering the risk of importation of Wild Polio Virus, NPHL expanded environmental surveillance in three major cities- Biratnagar (Koshi province) and Janakpur (Madhesh Province) in 2022 and Pokhara (Gandaki Province) from April 2024.

On 13 July 2024, the National Institute of Health, Bangkok, Thailand- WHO Polio-Regional Reference Laboratory in South-East Asia Region reported the presence of Vaccine Derived Polio Virus type-3 (VDPV3) in one environmental sample (sewage sample) collected on 26th May 2024 from Tukucha, Bagamati confluence, located in Kathmandu Metropolitan City, Bagamati Province. As per global guideline for responding to polio event, Department of Health Services, Ministry of Health, and Population with technical support of WHO, UNICEF and other key stakeholders initiated the response plan for this event. Among the five sets of response actions, the Family Welfare Division, Department of Health Services had planned to conduct preventive rapid Oral Polio Vaccination Campaign in the three districts of Kathmandu valley- Kathmandu, Bhaktapur and Lalitpur. The remaining four activities including investigation, risk assessment, surveillance enhancement, strategic advocacy, and communication, were also caried out side-by-side. However, the subsequent sample collected and tested from the same site on 4 June 2024 did not show any discordant.

The preventive rapid response vaccination campaign was conducted in close coordination with the Provincial Health Directorate of Bagamati Province and Public Health Offices of the three districts with the aim of closing the immunity gap of all under five children of Kathmandu Valley. Although this VDPV3 detection from environment sewage sample was just an event, considering the risk, the preventive vaccination campaign should be initiated as early as possible.

Two members of vaccinator team comprising vaccinator and female community health volunteer (FCHV) conducted “House-to-House”, school-based and health facility-based vaccination campaign

in each ward of three districts. Altogether, 290,119 children had received OPV vaccine achieving 104% coverage.

Rapid convenience monitoring was conducted in 251 high-risk communities, identified 387 missed children out of 3,638 children and informed to nearby FCHVs of the concerned area to vaccinate. Onsite supervision and monitoring conducted by respective health in-charge, municipality health section, district level Public Health Offices, provincial health directorate, FWD and health partners including WHO, UNICEF and other key partners.

Table 2.7 bOPV Campaign Coverage 2081/82

District	Target Population 0 to under 5 years children (HMIS)	Target Population 0 to under 5 years children (Microplanning)	Total children vaccinated	Coverage (%) (Microplanning)	Coverage (%) (HMIS)
Kathmandu	118476	187128	209008	176	112
Bhaktapur	29005	44380	42189	145	95
Lalitpur	31626	48173	52618	166	109
Bagamati	179107	279681	303815	170	109

Source: HMIS/DHIS2

In fiscal year 2081/82, a bOPV special campaign was conducted in three districts of Bagamati Province. Based on targets set through microplanning, the province achieved 170% coverage, while coverage reached 109% against the HMIS targets provided by the Family Welfare Division. All three districts recorded more than 140% coverage based on microplanning targets.

Cold Chain details

Overview of cold chain:

The cold chain is a system designed to store and transport vaccines at the recommended temperatures, maintaining their effectiveness from production to administration (Fig.2.5). Various types of cold chain equipment, including both electronic and non-electronic models, are utilized to store and transport vaccines under optimal temperature conditions.

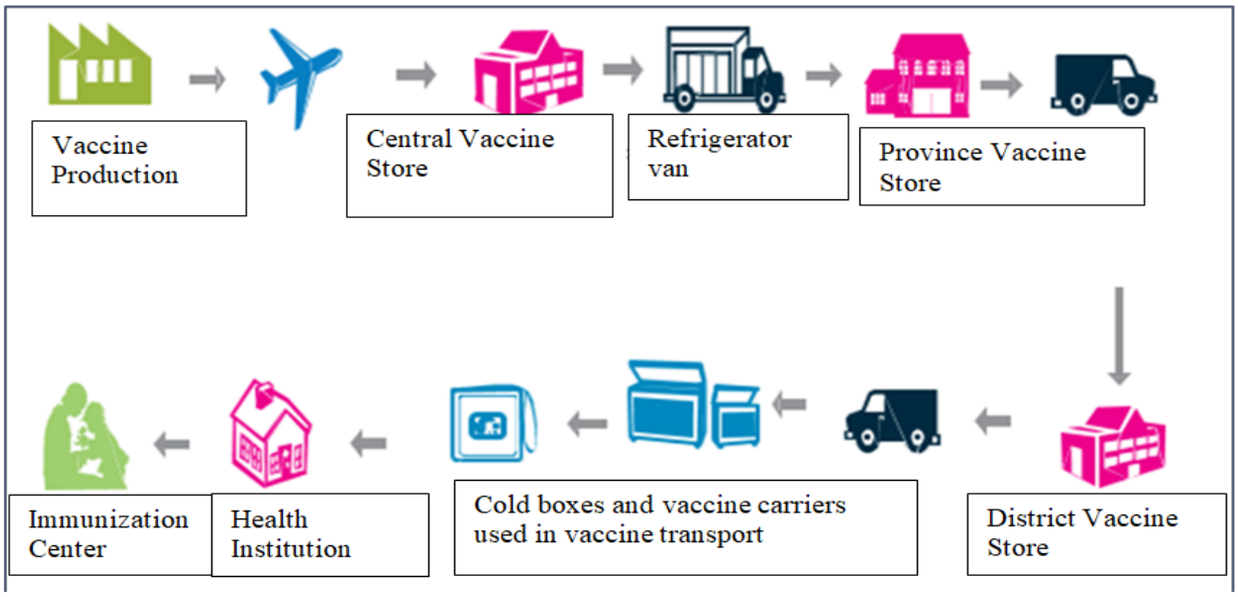


Figure 2.5 : Overview of Cold Chain

The Figure 2.5 shows cold chain equipment status. The cold chain equipment are both electrical and non-electrical, used for storing vaccines and/or transporting them at appropriate temperatures.

A walk-in cooler is crucial for maintaining the integrity of vaccines by keeping them at the required temperatures. A walk-in cooler is a large, insulated room designed to maintain 2° C to 8°C temperatures for the storage of vaccines.

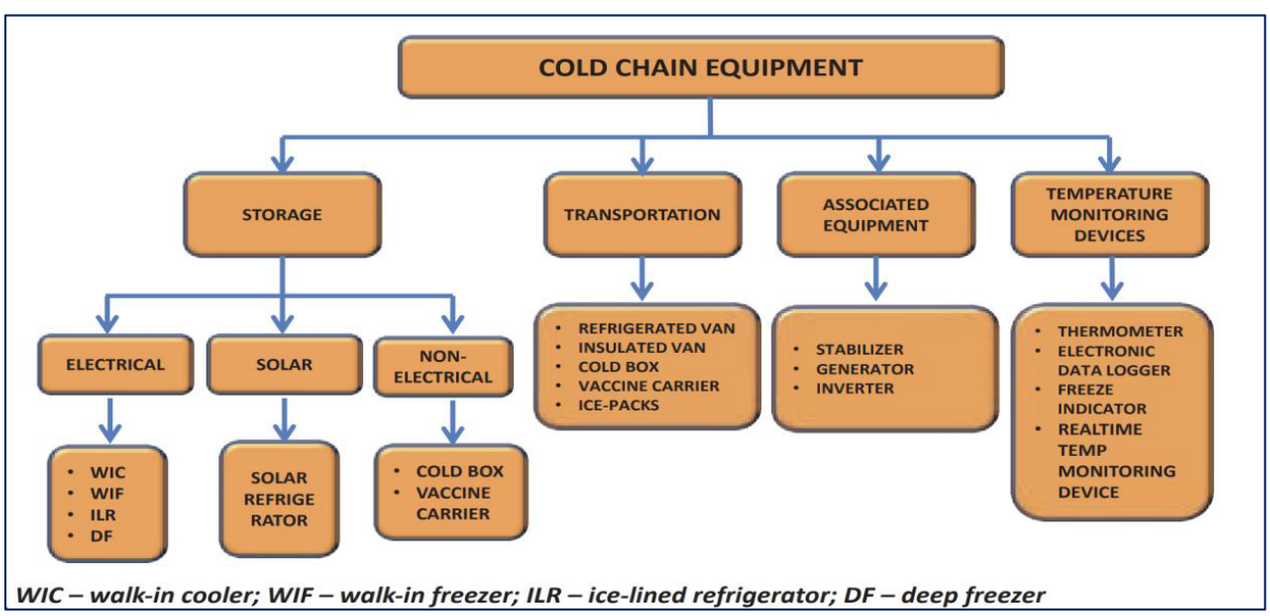


Figure 2.6 Cold chain equipment

An ILR maintains a cabinet temperature between +2°C and +8°C. It is used to store UIP vaccines at the PHC and districts levels. An ILR with a top-opening lid prevents loss of cold air during door opening and can keep vaccines safe with as little as 8 hours electricity supply in a 24-hour period. ILRs are available in two sizes – large (for districts) and small (for PHCs).

Deep Freezer maintains the cabinet temperature between -15°C and -25°C. Unlike the ILR, the DF has little or limited holdover time, which is dependent on the number of frozen ice packs in it and the frequency of opening. At the district and distribution/supply level, DF is used only for preparation of ice packs and at sub-national levels, DFs have been supplied for storage of recommended vaccines such as OPV and preparation of ice packs.

A cold box is an insulated box used for transportation and emergency storage of vaccines and ice packs. It is available in two sizes, large and small. It is used to collect and transport large quantities of vaccines. Cold boxes store vaccines for transfer up to 5 days, if necessary for outreach sessions or when there is a power cut. Cold boxes are used for storing frozen ice packs, e.g. during emergencies and before campaigns and store vaccines in case of breakdown of ILR, as a contingency measure.

Do's	Don'ts
Ice Line Refrigerator (ILR): - • Keep all vaccines including those returned under open vial policy in the basket supplied along with the ILR. • Store diluents at +2°C to +8°C at least 24 hours before use. • Leave space in between the vaccine boxes. • Place a thermometer in the basket in between the vaccines. • Keep freeze-sensitive vaccines at the top of the basket. • Keep heat-sensitive vaccines in the bottom of the basket. • Arrange vaccines as per their expiry dates. (Early expiry should be kept above the later expiry ones).	Ice Line Refrigerator (ILR): - • Do not store any other drugs/non-UIP vaccines in the ILR. • Do not open the ILR frequently. • Do not keep food or drinking water in the ILR. • Do not keep vaccines which have expired and have crossed the discard point of VVM. • Do not disturb the thermostat setting frequently. • Do not place heavy weight on the ILR. • Do not store excess stock of vaccines, i.e. more than the maximum stock.
Deep Freezer (DF): - • Use DF only for preparation of ice packs at the national, sub-national, district and distribution/supply level cold chain points. • Use DF to store OPV at sub-national level. • Keep frozen ice packs in the vaccine storing DF to increase the holdover time.	Deep Freezer (DF): - • Do not keep any vaccine in the DF at district and distribution/supply level. • Never keep diluents in the deep freezer. At sub-national level do not use the same DF for simultaneously storing vaccines and preparing ice packs.

Capacity and Number of Cold Chain Equipment of Bagamati Province (2081/82)

Table 2.8 Status of Cold Chain Equipment of Bagamati Province

District	Cold Chain Capacity (Liter)		Cold Chain Equipment (No.)					Cold Chain Point
	ILR	DF	Combo	DF	ILR	WIC	Total	
Bhaktapur	3500	1020		8	43		51	40
Chitawan	7900	1150	1	15	21	1	38	11
Dhading	2730	1280	2	14	29		45	14
Dolakha	2080	870	1	13	26		40	17
Kathmandu	16480	1870	3	19	90	1	113	22
Kavrepalanchok	3740	1550	3	19	43		65	74
Lalitpur	3260	1100	3	8	37		48	24
Makawanpur	3380	1020		16	33		49	23
Nuwakot	2400	1150	1	14	23		38	15
Ramechhap	2590	960		13	23		36	10
Rasuwa	880	450	1	3	9		13	7
Sindhuli	2590	1930	1	16	25		42	15
Sindhupalchok	3380	760	1	15	27		43	13
Hetauda + Bhaktapur	19290	3125		10	1	2	13	2
Bagamati	74200	18235	17	183	430	4	634	287

Source: HMIS/DHIS2

The above table shows the Cold chain equipment capacity (in liters) and equipment status in Bagamati Province. Bagamati Province has a total ILR capacity of 74,200 liters and DF capacity of 18,235 liters. A total of 634 units of cold chain equipment have been recorded and installed across the province. Among these, 430 ILRs, 183 DFs, 17 combo units, and 4 WICs are functional and distributed across 287 cold chain points.

Vaccine Preventable Diseases (VPDs) Surveillance

A key objective of the Comprehensive Multi-Year Plan for Immunization (CMYPI) 2017–2021 was to accelerate progress in controlling, eliminating, and eradicating vaccine-preventable diseases (VPDs). The plan focuses on strategies such as sustaining polio-free status to support global eradication efforts, achieving measles elimination and rubella/congenital rubella syndrome (CRS) control by 2019, enhancing Japanese Encephalitis (JE) control, maintaining maternal and neonatal tetanus (MNT) elimination, accelerating hepatitis B vaccination, and strengthening VPD surveillance. Achieving high routine immunization coverage, along with comprehensive disease surveillance, is essential for monitoring progress and informing interventions.

Nepal's commitment to polio eradication began with the establishment of Acute Flaccid Paralysis (AFP) surveillance in 1998. By 2003, surveillance for measles, rubella, and neonatal tetanus was integrated into the AFP/polio network, followed by the inclusion of JE (acute encephalitis syndrome) surveillance in 2004. With support from WHO-IPD, these surveillance activities are conducted

nationwide through 734 weekly zero-reporting sites, 630 case-based measles surveillance sites, and 817 informers. Additionally, sentinel surveillance for invasive bacterial diseases (IBD), rotavirus, and CRS is operational across the country.

Since 2009, sentinel surveillance for invasive bacterial diseases—covering pneumococcus, Haemophilus influenzae type b (Hib), and meningococcus—has been conducted at Patan Hospital. Rotavirus surveillance has also been carried out at Kanti Children's Hospital since the same year. Data from IBD sentinel sites informed the introduction of the Hib vaccine in 2009 and the pneumococcal conjugate vaccine in 2015 into Nepal's routine immunization schedule. Similarly, rotavirus surveillance data supported the recommendation to introduce the rotavirus vaccine. To broaden geographic representation, rotavirus surveillance was expanded in February 2018 to include the B.P. Koirala Institute of Health Sciences and Nepalgunj Medical College. Sentinel surveillance for CRS is conducted at four facilities in the Kathmandu Valley: Kanti Children's Hospital, Tribhuvan University Teaching Hospital (Pediatric Department), Patan Academy of Health Sciences, and Tilganga Eye Hospital.

Bagamati Province has established 174 reporting sites with timely submission of weekly report from dedicated focal person. Vaccine-Preventable Diseases (VPDs) surveillance has been conducted for an extended period through close coordination with districts and reporting and informer sites, as surveillance remains a core intervention of the program.

Major achievements on VPD surveillance (2081/82)

- Successfully achieved key surveillance indicators for Acute Flaccid Paralysis (AFP) and Measles/ Rubella.
- Conducted orientation programs on vaccine-preventable diseases across Bagamati Province, with participation from 872 health workers and medical doctors from various reporting sites.
- Delivered sub-district-level Vaccine-Preventable Disease Surveillance training to 2,452 participants, including medical doctors, healthcare workers, laboratory personnel, and medical recorders from designated reporting units across Bagamati Province.
- Organized advocacy and interaction meetings with NEPAS members in Kathmandu, Hetauda, and Chitawan, sensitizing a total of 160 doctors on vaccine-preventable diseases (VPDs), case identification, and notification.
- Provided support during the Vaccine-Derived Poliovirus (VDPV) event with intensified polio surveillance.
- Assisted districts during suspected outbreaks of Measles and Japanese Encephalitis (JE).
- Provided technical support and facilitation for various activities during the Measles-Rubella (MR), Supplemental Immunization Activities (SIA), and Inactivated Polio Vaccine (IPV) campaigns.
- Managed Adverse Events Following Immunization (AEFI) cases during the national immunization campaign across Bagamati Province.
- Organized orientation programs for journalists to support the Measles-Rubella (MR) and Inactivated Polio Vaccine (IPV) campaigns.
- Monthly submission of technical reports to the Health Directorate Office.
- Coordinated with districts and local levels to enhance program performance and outcomes.
- Provided technical support to the Health Directorate and districts for vaccine-preventable disease (VPD)-related planning meetings, workshops, orientations, and advocacy sessions.
- Conducted onsite coaching at reporting sites for improved reporting and case management.

Status of AFP cases in Bagamati Province (2081/82)

All 13 districts reported AFP cases, represented by different colors. Kathmandu and Makawanpur recorded the highest number of cases (23 each), followed by Lalitpur (18), Kavrepalanchok (17), Chitawan (11), and Bhaktapur (10). The remaining districts reported nine or fewer AFP cases. Most districts demonstrated an increasing trend in AFP case reporting, indicating challenges within the AFP surveillance system and highlighting the need to strengthen monitoring and evaluation plans in the future.

District-wise Trend of AFP cases of Bagamati Province

The table below presents the total number of reported AFP cases by district at the provincial level over the last three fiscal years (2079/80 to 2081/82). In 2080/81, all 13 districts reported AFP cases, showing an increasing trend compared to the previous year. In 2081/82, Bagamati Province reported 125 cases, compared to 76 cases in 2080/81 and 45 cases in 2079/80.

Table 2.9 Trend of AFP cases by district of Bagamati Province (FY 2079/80 to 2081/82)

Districts	Year 2079/080 (17-07-2022 to 16-07-2023)	Year 2080/081 (17-07-2023 to 15-07-2024)	Year 2081/82 (17-7-24 to 16-7-2025)
	AFP Cases	AFP Cases	AFP Cases
Kathmandu	10	11	23
Lalitpur	2	5	18
Bhaktapur	2	5	10
Kavrepalanchok	4	10	17
Sindhupalchok	0	5	2
Dolakha	0	3	9
Ramechhap	0	1	2
Sindhuli	0	4	4
Chitawan	9	9	11
Dhading	2	2	2
Makawanpur	10	18	23
Nuwakot	5	1	2
Rasuwa	1	2	2
Total	45	76	125

Source: HMIS/DHIS2

Table 2.10 Reported AES and Confirmed JE Cases in Bagamati Province (2079/80 to 2081/82)

Districts	Year 2079/080 (17-07-2022 to 16-07-2023)		Year 2080/081 (17-07-2023 to 15-07-2024)		Year 2081/82 (17-7-24 to 16-7-2025)	
	AES Case	JE Confirmed	AES Case	JE Confirmed	AES Case	JE Confirmed
Kathmandu	63	2	74	4	59	2
Lalitpur	37	0	28	1	23	0
Bhaktapur	10	0	20	2	18	2
Kavrepalanchok	31	2	35	1	28	0
Sindhupalchok	5	0	11	1	13	0
Dolakha	4	0	3	0	6	0
Ramechhap	6	1	10	1	11	0
Sindhuli	15	4	9	4	11	2
Chitawan	46	11	18	6	24	3
Dhading	8	1	14	0	8	0
Makawanpur	24	5	11	2	13	0
Nuwakot	6	0	6	0	3	0
Rasuwa	2	0	1	0	0	0
Bagamati Total	257	26	240	22	228	9

Source: HMIS/DHIS2

The above table shows status of AES and JE cases reported across the Bagamati Province. In fiscal year 2081/82, Bagamati Province reported a slight decrease in AES cases with 180 cases compared to 240 in 2080/81 and 257 in 2079/80. Similarly, laboratory confirmed JE cases also followed a declining trend, with 6 cases in 2081/82, 22 in 2080/81, and 26 in 2079/80. All the laboratory-confirmed cases were recorded in Kathmandu, Bhaktapur and Sindhuli (each district 2) in fiscal year 2081/82.

Table 2.11 Suspected MR, Confirmed Measles and Confirmed Rubella Cases by District at Bagamati Province (2079/80 to 2081/82)

District	Year 2079/080 (17-07-2022 to 16-07-2023)			Year 2080/081 (17-07-2023 to 15-07-2024)			Year 2081/82 (17-7-24 to 16-7-2025)		
	Suspected MR cases	Confirmed Measles	Confirmed Rubella	Suspected MR cases	Confirmed Measles	Confirmed Rubella	Suspected MR cases	Confirmed Measles	Confirmed Rubella
Kathmandu	215	18	3	90	19	1	96	1	0
Lalitpur	63	2	1	29	5	0	61	0	0
Bhaktapur	89	1	1	98	3	2	72	0	0
Kavrepalanchok	92	3	2	77	4	1	73	0	0
Sindhupalchok	63	0	1	35	2	0	57	0	0
Dolakha	14	0	0	51	2	2	40	0	0
Ramechhap	13	0	0	8	0	0	24	0	0
Sindhuli	13	0	1	23	2	2	42	1	0
Chitawan	80	6	0	33	0	0	27	0	1
Dhading	31	1	0	50	0	1	24	1	0
Makawanpur	56	1	2	97	3	1	43	3	2
Nuwakot	20	1	0	13	2	0	21	0	0
Rasuwa	3	0	0	3	0	0	8	1	1
Total	752	33	11	607	42	10	588	7	4

Source: HMIS/DHIS2

The above table highlights the reported status of suspected MR, confirmed measles, and confirmed rubella cases by districts in Bagamati Province. NMNR is a key indicator for MR surveillance, which requires an MR surveillance rate of at least 2 suspected cases per 100,000 population to effectively monitor measles and rubella.

In Bagamati Province, suspected MR cases have shown a slightly decreasing trend, with 588 cases reported in 2081/82, 607 in 2080/81, and 752 in 2079/90 respectively. Confirmed measles cases, however, have shown decreasing trend. The highest number of measles cases was reported in Makawanpur (3), followed by one each from Kathmandu, Dhading, Rasuwa and Sindhuli respectively in FY 2081/82.

Rubella cases, on the other hand, have shown a slight decreasing trend compared to the previous year. Detailed information is presented in the table 2.1.11.

Issues/Challenges

1) Insufficient Awareness and Misconceptions: Insufficient awareness about the importance of immunization in certain communities. Presence of myths and misconceptions about vaccines leading to hesitancy among some religious groups.

2) Human Resource Constraints: Inadequate number of trained healthcare workers, particularly in rural areas. High turnover of staff leading to inconsistent service delivery.

3) Data Management and Monitoring: Inaccurate or incomplete immunization records. Poor monitoring and reporting mechanisms, leading to challenges in identifying unvaccinated children.

4) Cold chain maintenance challenges: Untrained and no dedicated Human resources.

5) Underreporting of VPD cases,especially in marginalized areas due to a lack of awareness, and cultural barriers that prevent communities from seeking timely medical care.

6) Inefficient coordination and communication between different levels of health administration (national, regional, district) hinder the timely sharing of information and response to VPD outbreaks.

7) Inconsistency in VPD related data.

Recommendation/Suggestions

1) Engagement of community and religious, traditional healers to promote immunization and address cultural barriers. Support in organizing and mobilizing local resources for outreach activities, RRT team to be equipped with necessary logistics like VTM.

2) Provision of continuous training and capacity building for healthcare workers utilizing the AWPB.

3) Strengthening data management systems for accurate tracking of immunization coverage (digitalization). Endorsement of EIRS.

4) Upgrade Cold Chain Infrastructure, Capacity Building and Training to the dedicated staffs of the district level cold chain, sub store. Implement Real-Time Monitoring Systems.

5) Coordination meeting, VPD review meetings and dedicated focal points in every district and local levels especially for VPDs.

6) Maintain a channel for Regular feedback mechanisms to ensure data accuracy including VPD cases and RI.

Hygiene Promotion through Routine Immunization Program (HPTRI)

The Hygiene Promotion through the Routine Immunization Program, launched in 2020 at national scale while introducing Rota virus vaccine in routine immunization. The immunization clinic is contact point to deliver behavioral practices on hygiene promotion. Key beneficiaries, mothers and guardians, visit these clinics seven times for child vaccinations for routine immunization for the 15 months of period during child vaccination cycle. The program focuses on promoting hygiene behaviors among mothers and guardians while they wait for their children to receive vaccines.

This program aims to bring about positive changes in the hygiene behaviors of mothers and guardians who visited immunization clinics, thereby protecting children from waterborne diseases and significantly reducing child mortality. The hygiene sessions conduction rate and the number of participation of mothers and guardians in the program are detailed below.

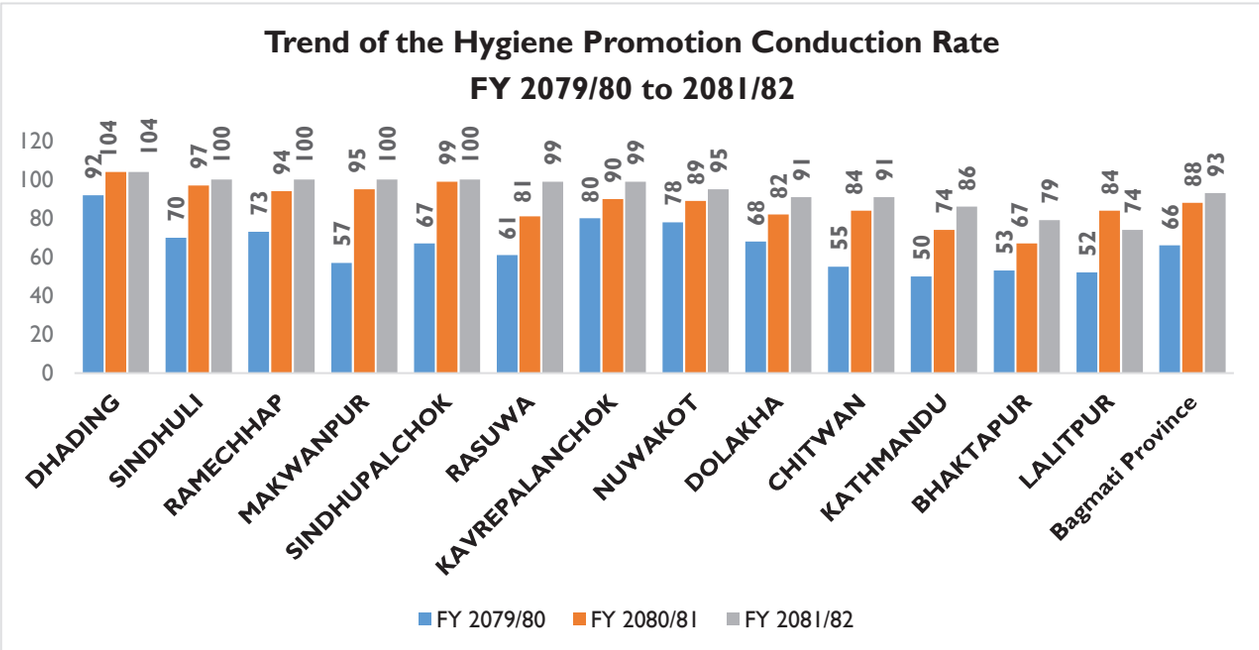


Figure 2.7 District-wise hygiene promotion conduction rate (2079/80 to 2081/82)

Source: HMIS/DHIS2

The above figure illustrates the district-wise hygiene promotion session conduction rates across 13 districts of Bagamati Province over three fiscal years: FY 2079/80, FY 2080/81, and FY 2081/82. Overall, the bar shows a positive trend, with most districts consistently conducting hygiene promotion session over time. In FY 2081/82, Sindhuli, Dhading, Remechhap, Makawanpur and Sindhupalchok achieved 100% conduction rates and followed by Rasuwa (99%), Kavre (99%) Nuwakot (95 %), Dolkha (91%) and Kathmandu (86%), indicating full coverage of hygiene sessions. In contrast, Bhaktapur and Lalitpur recorded the lowest conduction rates (below 80%) in FY 2081/82. At the provincial level, the average hygiene promotion conduction rate increased from about 66% in FY 2079/80 to around 93% in FY 2081/82, reflecting steady improvement and strengthened mothers/guardian participation in hygiene promotion sessions.

Table 2.12 Number of mothers/guardians participated in hygiene promotion session

Districts	2079/80	2080/81	2081/82
Dhading	6807	7807	7309
Bhaktapur	3650	4609	5521
Lalitpur	3356	6039	6706
Sindhuli	4329	5798	6465
Nuwakot	3623	4120	4166
Dolakha	2249	2546	2349
Kathmandu	8437	14621	19246
Ramechhap	2315	3203	3216
Chitawan	5619	9137	8703

Makawanpur	6145	10024	9007
Rasuwa	1115	763	852
Sindhupalchok	3482	5559	5330
Kavrepalanchok	6535	7209	7778
Bagamati Province	57665	81433	86647

Source: HMIS/DHIS2

The above table presents the number of mothers and guardians who participated in hygiene promotion sessions (multiple times) across districts of Bagamati Province during fiscal years 2079/80 to 2081/82. Overall participation increased steadily from 57,665 in FY 2079/80 to 86,647 in FY 2081/82, indicating growing community engagement. Kathmandu recorded the highest participation, rising sharply from 8,437 to 19,246 participants over the three years. Similarly, Lalitpur, Chitawan, and Makawanpur also showed notable improvements. In contrast, Rasuwa, Dolakha, and Ramechhap had the lowest participation and smallest growth. The data suggests that while hygiene promotion sessions are conducted across the province, participation remains higher in urban and easily accessible districts compared to remote areas.

Major Achievement of the National Immunization Program (2081/82)

- Two supplementary campaigns, bOPV and the HPV have been successfully implemented.
- All districts have declared full immunization status.
- Comprehensive microplanning has been developed at all levels (district and local levels).
- Annual review meeting of the immunization program was conducted with innovative model.
- The cold chain equipment in Bagamati Province has been enhanced post-COVID 19 and is now fully operational.
- A program-specific feedback mechanism has been established, providing updates on low coverage and dropout rates by district at the local level.
- District Data Management Committee (DMC) meetings have been conducted since last year, with feedback shared monthly across all districts.
- Supervision, monitoring, and onsite coaching are being conducted at district and sub-district levels as needed to address program requirements and challenges.

Innovative Activities of the National Immunization Program

- Development of uniform forms & formats to standardize recording and reporting of cold chain performance across all levels.
- Preparation of standardized distribution plans that align with microplanning at the province, district, LLG, and distribution center levels. Complete EVMA at all stores, introduce a grading system similar to MSS scoring, and publish results at the provincial level.
- Strengthening of online CCEI system or integrating it with eLMIS or PAMS for better tracking and management.
- Provision of sufficient budget to maintain EVM standards in vaccine stores, including fire extinguisher purchases, maintenance, and fuel.

Issues and Challenges of the Immunization Program

- Due to a lack of physical infrastructure, immunization sessions are conducted in schools and other venues, such as palika halls, which may affect vaccine quality.
- Immunization centers and sessions are not effectively established in hard-to-reach areas.
- There is a shortage of trained personnel in mountainous and hilly districts.
- Advocacy is needed for sufficient budget allocation for spare parts, vaccine transport, and preventive maintenance to ensure vaccine quality.
- Health and hygiene promotion activities during immunization sessions remain inadequate.
- Vaccine wastage rates are increasing due to challenges in vaccine distribution and sub-center operations at the local level.
- Supervision of vaccine storage and transportation from CVS to PVS, DVS, and sub-centers needs to be strengthened, with a focus on proper recording, monitoring, and feedback.
- Designated positions for cold chain focal persons should be created at provincial, district, and local levels, with clear responsibilities for vaccine management. Additionally, refrigerator technicians should be assigned at the provincial level for cold chain equipment (CCE) maintenance.
- There is an insufficient supply of equipment for maintaining and repairing cold chain systems.
- Information, Education, and Communication (IEC) and Behavior Change Communication (BCC) messages for parents on the importance of immunization remain inadequate.
- Timely provision of hygiene promotion materials from local authorities to health facilities is not ensured.
- Infrastructure challenges include inadequate space, limited handwashing facilities, and high attendance of mothers and parents at immunization clinics.
- There is limited engagement and ownership from local governments.

Suggestion for improvement

- Reevaluate existing immunization centers and sessions in hard-to-reach areas and establish physical infrastructure where needed.
- Conduct timely orientation programs in hilly and mountainous districts to develop trained human resources.
- Provide cold chain equipment for maintenance and repair to ensure service quality.
- Establish a backup system for vaccine distribution and sub-centers to maintain service quality.
- Strengthen cold chain capacity at district and local levels.
- Implement drone delivery for vaccines in mountainous districts where road access is limited year.

2.2 Community-Based Integrated Management of Neonatal and Childhood Illness (CB-IMNCI)

Community-Based Integrated Management of Neonatal and Childhood Illness (CB-IMNCI) program is an integrated package of CB-IMCI and CB-NCP Program initiated on 2071/6/28. The program addresses the major issues associated with sick newborns including birth asphyxia, bacterial infection, jaundice, hypothermia, and low birth weight. The program also targets the problems associated with under five children including Pneumonia, Diarrhoea, Malaria, Measles and Malnutrition. CBIMNCI also covers the services like management of infection, jaundice, hyperthermia, and counseling on breastfeeding for newborn & young infants less than 2 months of age. This interventions support SDG-3.2 ending preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to 12 per 1000 live births and under-5 mortality to 25 per 1000 live births.

The CBIMNCI programme aims to provide targeted services to 90 % of the estimated population by 2030 as outlined in "Vision 90 by 30".

Goal:

Improve newborn and child survival and healthy growth and development.

Targets:

Indicators (per 1000 live births)	SDG, By 2030	Revised SDG target by 2030	NENAP, by 2035
Neonatal Mortality Rate	12	15	11
Under-five Mortality Rate	20	25	21

Key interventions

Newborn Specific Interventions

- Promotion of birth preparedness plan
- Promotion of essential newborn care practices and postnatal care to mothers and newborns
- Identification and management of non-breathing babies at birth
- Identification and management of preterm and low birth weight babies
- Management of sepsis among young infants (0-59 days) including diarrhea

Child Specific Interventions

- Case management of children aged 2-59 months for 5 major childhood killer diseases (Pneumonia, Diarrhoea, Malnutrition, Measles and Malaria)

Cross Cutting Interventions

- Behavior change communications for healthy pregnancy, safe delivery and promoting personal hygiene and sanitation
- Improved knowledge related to Immunization and Nutrition and care of sick children
- Improved inter personal communication skills of HWs sand FCHVs

CB-IMNCI Program Monitoring Key Indicators

- % of institutional delivery
- % of newborn who had applied chlorhexidine gel immediately after birth
- % of infants (0-2 months) with PSBI receiving complete dose of injection Gentamycin
- % of under five children with pneumonia treated with antibiotics
- % of under five children with diarrhea treated with ORS and Zinc
- Stock out of 5 key CB-IMNCI commodities at health facility (ORS, Zinc, Gentamycin, Amoxicillin, CHX)

Major Activities

- Review of free newborn care program with provincial hospitals and other associated supporting stakeholders
- Supervision and monitoring of IMNCI program
- Conducted onsite coaching
- Routine data quatilty assessment

Major Achievements

CB-IMNCI Program Monitoring Indicators

Table 2.13 CB-IMNCI program monitoring indicators by district (FY 2081/82)

District	% of institutional deliveries	% of newborns applied chlorhexidine (CHX) gel	% of PSBI cases received complete dose of gentamycin	% of pneumonia cases treated with antibiotics	% of children under five years with diarrhoea treated with zinc and ORS
Dolakha	49	103.1	60	100.4	101
Sindupalchok	36.9	78.5	11.1	99.9	99.2
Rasuwa	25.8	89	66.7	100	99.3
Dhading	45.9	91.5	57.1	100.3	99.9
Nuwakot	35.1	88.6	37.5	100	92.6
Kathmandu	89	9.8	0	97.1	98.8
Bhaktapur	36.1	13.5	0	101.8	82
Lalitpur	74.2	89.3	0	100.1	99.7
Kavrepalanchok	80.9	39.2	43.9	101.9	99.8
Ramechhap	39.1	80	25	100	99.4
Sindhuli	32.9	72.3	72.7	162.1	98.7

Makawanpur	60.2	68.6	4.8	99.9	94.0
Chitawan	87.5	57	8.7	78.3	98.2
Bagamati	69.9	40.5	21.7	102.9	97.2

Source: HMIS/DHIS2

In fiscal year 2081/82, provincial average for institutional deliveries was 69.9% with Kathmandu having highest rate (89%) and Rasuwa having the lowest rate (25.8%). Of all reported live births, chlorhexidine was applied to umbilical cords of 40.5% newborns. There was a variance in CHX use by district, with Dolakha having the highest use (103.1%) and Kathmandu having the lowest (9.8%). Likewise, 21.7% of PSBI cases among under two month old infants received a complete dose of Gentamycin at provincial level. Dolakha,Rasuwa, Dhading and Sindhuli has administered a complete dose of Gentamycin in fifty percent PSBI cases whereas three districts i.e. Kathmandu, Bhaktapur and Lalitpur district have not administered a complete dose of Gentamycin in PSBI cases at all.

Similarly, 102.9% of pneumonia cases among under-five children were treated with antibiotics at the provincial level, with all districts except Chitawan (78.3%) reporting over 95% coverage. The provincial coverage for children under five with diarrhoea treated with Zinc and ORS was 97.2%, the highest being in Dolakha (101%) and the lowest in Bhaktapur (82%).

In fiscal year 2081/82, a total of 217 cases of Possible Severe Bacterial Infections (PSBI) among infants under two months were reported across Bagamati Province, showing a slight increase from 177 cases in 2080/81 and 199 in 2079/80. Kathmandu (24), Bhaktapur (50), and Kavrepalanchok (41) reported the highest PSBI cases in 2081/82, suggesting improved detection or reporting from urban and peri-urban areas.

Similarly, 440 cases of neonatal jaundice were reported in 2081/82, marking a slight decline from 457 cases in 2080/81, but still higher than 259 cases in 2079/80, indicating a general upward trend over the three years. The majority of cases in 2081/82 were concentrated in Kathmandu (79) and Bhaktapur (122), reflecting greater case identification in hospitals with advanced neonatal care services.

Low birth weight or breastfeeding problems

A total of 274 neonatal referrals were recorded in 2081/82, equal to the number reported in 2079/80 but slightly lower than 308 referrals in 2080/81, showing fluctuating referral patterns. Chitawan (50), Kathmandu (45), and Kavrepalanchok (36) reported the highest referrals.

Only one neonatal death was reported in 2081/82 from Bhaktapur district, while no deaths were recorded in 2080/81, and three deaths were reported in 2079/80, indicating an overall decline in neonatal mortality in health facilities across the province.

Key achievements for management of diarrhea in 2-59 months children

For health care practitioners, CB-IMNCI initiative has produced an environment that facilitates improved diagnosis, categorization, and management of diarrheal illnesses. Three categories have been established for diarrhoea according to IMNCI protocol: “No Dehydration,” “Some Dehydration,” and “Severe Dehydration.” The reported number and classification of total new diarrhea cases has presented in Table below;

Table 2.14 Classification of diarrheal cases by district (2-59 months children)

District	Estimated <5 years population that are prone to diarrhoea			Incidence of diarrhoea/1000 <5years population		
	FY 2079/80	FY 2080/81	FY 2081/82	FY 2079/80	FY 2080/81	FY 2081/82
Bagamati Province	424621	396521	471995	78.8	79.6	200.48
Dolakha	13273	11505	11203	137.8	128.1	328.97
Sindupalchok	18421	17917	17164	166.5	142.5	278.64
Rasuwa	4800	3730	3258	165.3	163.8	601.53
Dhading	26056	23069	22590	150.7	137.9	223.63
Nuwakot	20723	18285	17847	77.7	77.8	317.17
Kathmandu	122504	117994	169173	25.5	34.7	99.41
Bhaktapur	25706	28757	36976	57.8	37.1	127.75
Lalitpur	31898	31433	41897	57.2	71.9	196.15
Kavrepalanchok	28212	23861	24027	120.1	123.7	311.84
Ramechhap	13734	10552	10556	97.7	100.1	498.82
Sindhuli	30168	23741	22847	101.6	123.1	401.45
Makawanpur	38235	36044	36666	104.7	111	356.6
Chitawan	50931	49633	57791	78.7	79.9	151.56

Source: HMIS/DHIS2

In fiscal year 2081/82, a total of 65,538 diarrhoea cases among children aged 2–59 months were reported through the FCHV/CBIMNCI program in Bagamati Province, showing a decline of 6.3% compared to 69,917 cases in 2080/81 and a 20% reduction from 82,190 cases in 2079/80. The highest number of diarrhoea cases in 2081/82 was reported from Kathmandu (13,162), followed by Makawanpur (9,374) and Kavrepalanchok (5,996), whereas Rasuwa (1,435) and Dolakha (2,460) had the lowest counts.

Based on CBIMNCI classification, 27,676 cases (42.2%) were diagnosed with no dehydration, 2,230 cases (3.4%) with some dehydration, and 121 cases (0.2%) with severe dehydration in 2081/82. Compared to the previous fiscal year, the proportion of severe dehydration cases more than doubled (from 50 to 121), largely due to a sharp increase in Bhaktapur (72 cases). Meanwhile, the total number of cases with “no dehydration” decreased slightly from 29,249 in 2080/81, reflecting either improved early management at community level or reduced overall incidence.

Overall, the three-year trend (2079/80–2081/82) indicates a gradual decline in total diarrhoea cases, stable distribution of mild cases, but a mild rise in severe dehydration cases, warranting strengthened case management and timely referral in high-burden districts such as Bhaktapur, Kathmandu, and Makawanpur.

Table 2.15 Trends in classification of diarrhea cases by incidence (2079/80-81/82)

Indicators	Year	Bagamati Province	Dolakha	Sindhupalchok	Rasuwa	Dhading	Nuwakot	Kathmandu	Bhaktapur	Lalitpur	Kavrepalanchok	Ramechhap	Sindhuli	Makawanpur	Chitawan
FCHV Program-CBIMNCI-(2-59 months)- Total Diarrhoea Cases	2079/80	82190	4051	4672	1799	3677	6647	12683	3777	7172	6933	6149	6506	11239	6885
	2080/81	69917	3421	2873	1497	2519	5307	11993	3576	6486	5563	5112	6018	9547	6005
	2081/82	65538	2460	2633	1435	1978	4200	13162	3319	5996	4897	4366	6219	9374	5499
CBIMNC I-(2-59 Months)-Classification -No dehydration	2079/80	30693	1708	2877	772	3482	1411	2855	1338	1780	3169	1236	2583	3780	3702
	2080/81	29249	1388	2415	587	2909	1319	3704	1018	2178	2835	969	2532	3702	3693
	2081/82	27676	1185	2071	515	2991	1418	3632	975	2236	2503	870	2635	3564	3081
CBIMNCI-(2-59 Months)-Classification-Some dehydration	2079/80	2791	113	189	21	438	197	271	118	45	220	106	476	222	303
	2080/81	2203	79	130	22	255	99	379	47	75	109	84	386	288	250
	2081/82	2230	72	121	25	129	93	204	406	70	146	77	392	249	246
CBIMNCI-(2-59 Months)-Classification-Severe dehydration	2079/80	53	3	1	1	8	1	0	30	0	0	0	6	1	2
	2080/81	50	2	1	0	9	2	7	0	3	0	0	0	4	22
	2081/82	121	1	0	1	0	0	0	72	1	14	1	7	5	19

Source: HMIS/DHIS2

In fiscal year 2081/82, the incidence of diarrhoea among children under five years in Bagamati Province reached 200.5 per 1,000 population, showing a sharp increase compared to 79.6 in 2080/81 and 78.8 in 2079/80. This notable rise may be attributed to improved case reporting through the FCHV and CBIMNCI networks or to post-monsoon outbreaks in several hill districts. At the district level, the highest incidence in 2081/82 was observed in Rasuwa (601.5/1,000), followed by Ramechhap (498.8/1,000) and Sindhuli (401.5/1,000), indicating a significant disease burden in rural hill areas with limited water and sanitation infrastructure. Conversely, the lowest incidence was recorded in Kathmandu (99.4/1,000), likely reflecting better access to clean water, sanitation, and prompt health services. Most districts showed a rising trend over the three years, with sharp increases from 2080/81 to 2081/82 in nearly all areasespecially Dolakha, Kavrepalanchok, Nuwakot, and Makawanpur, each reporting over a threefold increase in incidence rates. The estimated under-five population also rose to 471,995 in FY 2081/82, from 396,521 in the previous year, partly influencing the overall provincial rate. Overall, the data indicate a significant upsurge in diarrhoeal morbidity across Bagamati Province in FY 2081/82, emphasizing the need to strengthen WASH (Water, Sanitation and Hygiene) interventions, seasonal outbreak preparedness, and community-level case management to prevent dehydration and reduce disease transmission in high-risk districts such as Rasuwa, Ramechhap, and Sindhuli.

IMNCI Program Status

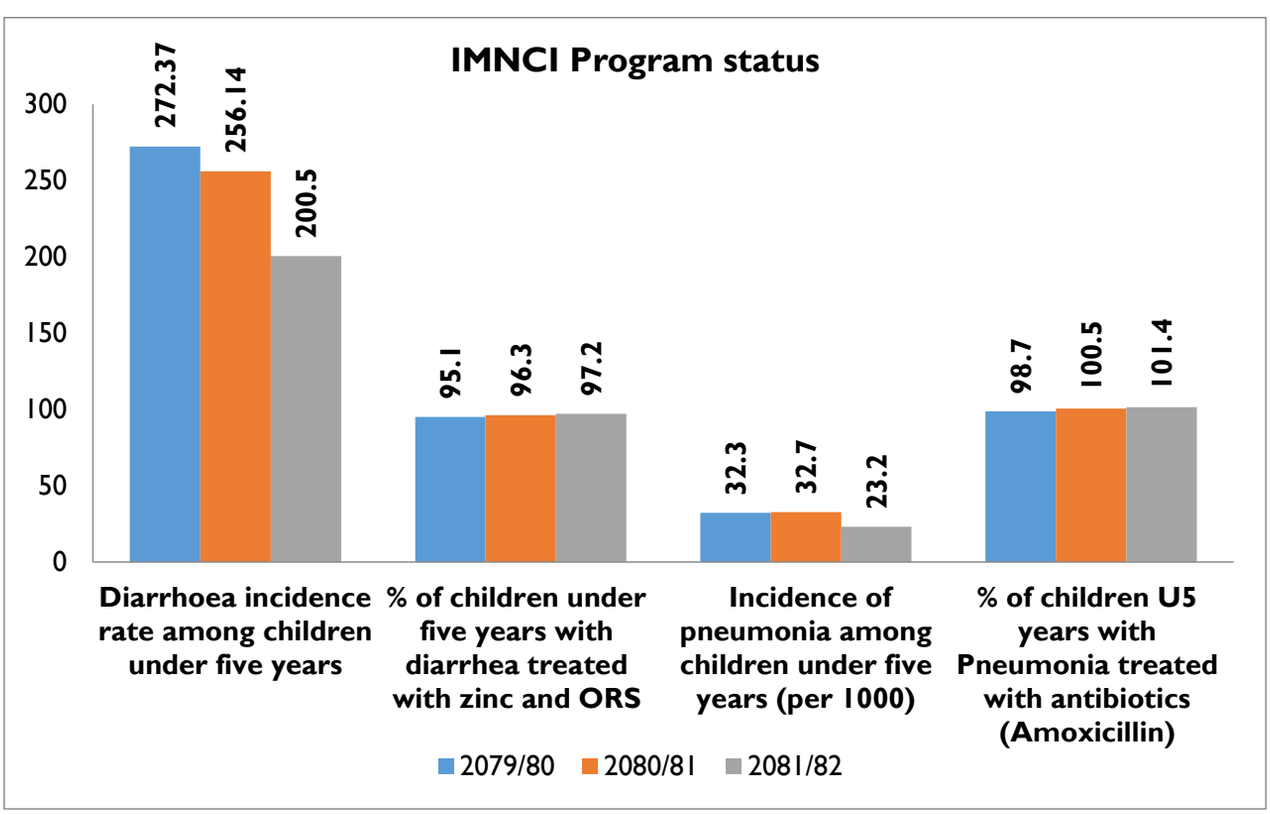


Figure 2.8 Program status of IMNCI

Source: HMIS/DHIS2

The figure above represents the provincial status of IMNCI of last three fiscal years from 2079/80 to 2081/82. In children under five years, the data shows that incidence of Diarrhoea has decreased to around 200 per 1000. However, the incidence of Pneumonia has decreased to around 23 per 1000.

The percentage of children under five years with Pneumonia treated with antibiotics increased by one percentage from 100.5 in FY 2080/81 to 101.4 in FY 2081/82, and that of Diarrhea treated with ORS and Zinc increased from 96.3 in FY 2080/81 to 97.2 in FY 2081/82.

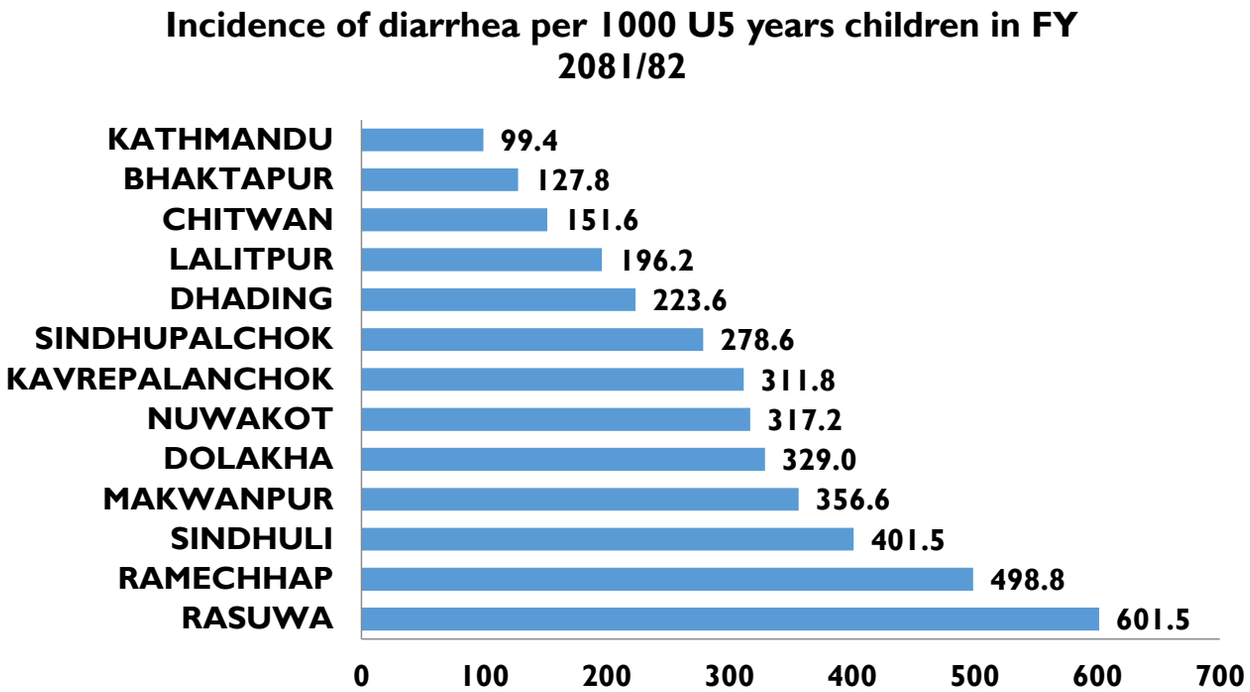


Figure 2.9 Incidence of diarrhea per 1000 U5 years children in FY 2081/82

The above figure shows the highest incidence of diarrhea per 1000 U5 children in FY 2081/82 in Rasuwa (601.5) followed by Ramechhap (498.8) and lowest in Kathmandu (99.4).

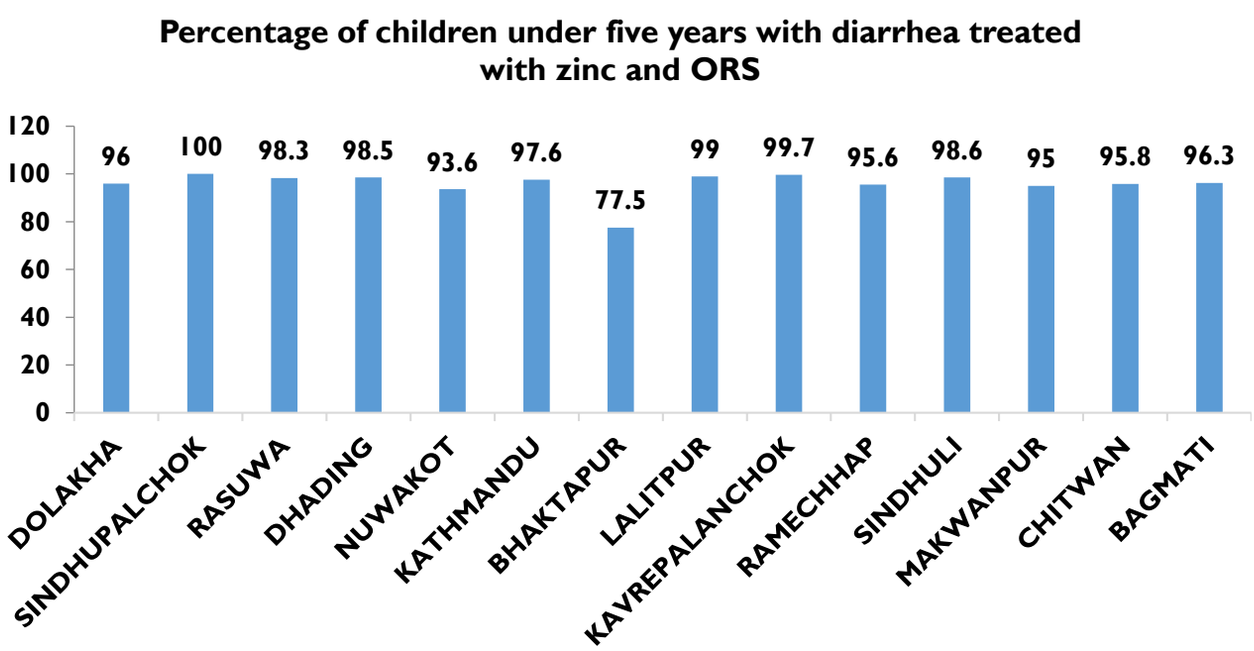


Figure 2.10 Percentage of children under five years with diarrhea treated with zinc and ORS in FY 2081/82.

The above figure shows that 100 % of children under five years with diarrhea was treated with zinc and ORS in Sindhupalchok which is the highest whereas it was lowest in Bhaktapur (77.5%).

Incidence of Pneumonia cases

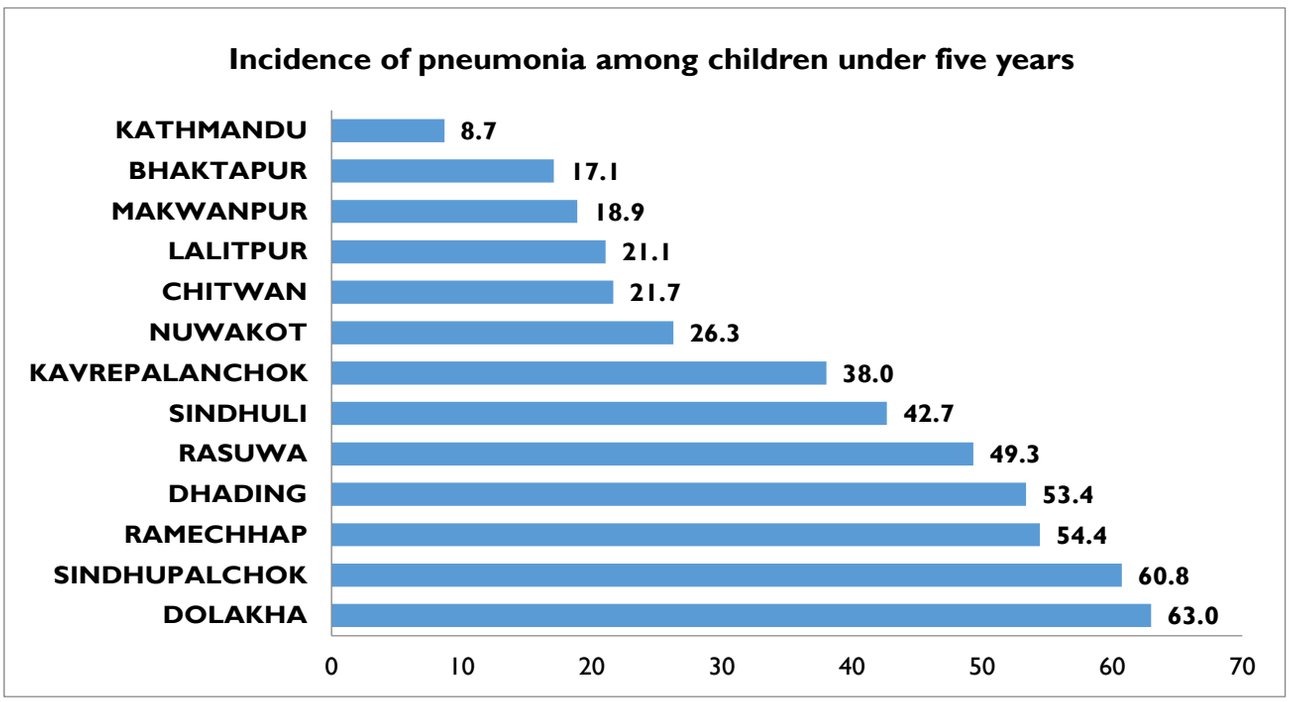


Figure 2.11 Incidence of pneumonia among under five children per 1000 in FY 2081/82.

Source: HMIS/DHIS2

The above figure shows the highest incidence of Pneumonia among under five children in Dolakha district (63.0) followed by Sindhupalchok (60.8) and lowest in Kathmandu district (8.7) in the FY 2081/82.

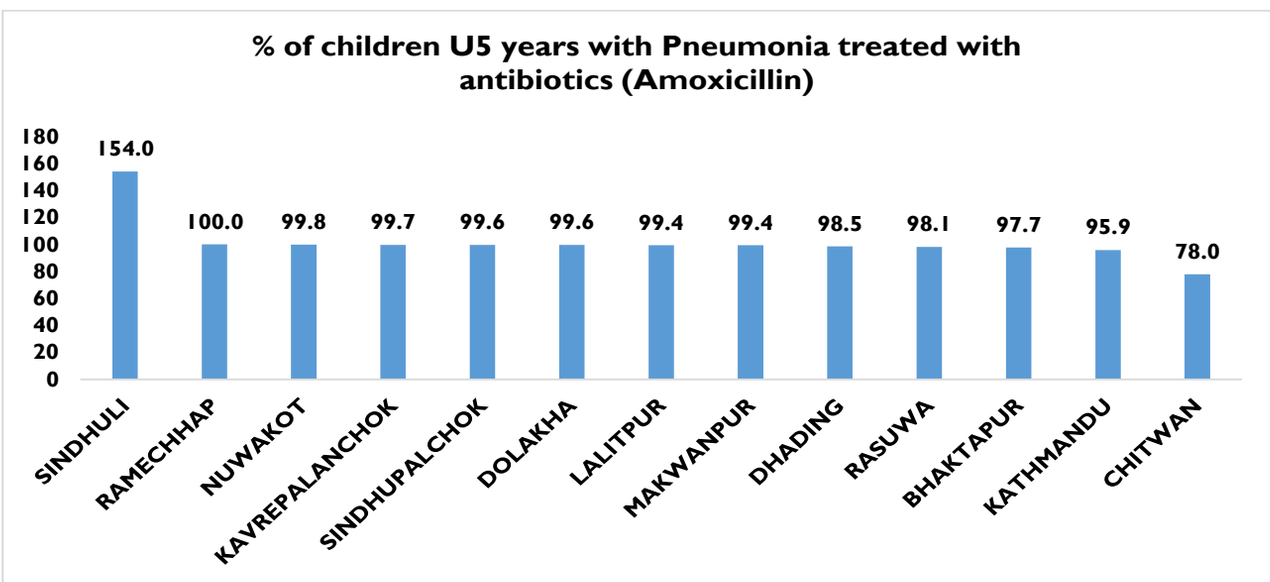


Figure 2.12 Percentage of children U5 years with Pneumonia treated with antibiotics (Amoxicillin) in FY2081/82.

Source: HMIS/DHIS2

The figure above shows that Sindhuli district has treated the highest percentage of U5 children with Pneumonia with antibiotics (154%) while Kathmandu treated the lowest percentage (96.5%). .

Problems, constraints and action to be taken and responsibilities

Issues/Challenges	Action to be taken	Responsibilities
Poor data quality	- Carry out RDQA-online/offline - Strengthen regular feedback mechanisms and upervision and monitoring	Health Directorate
Lack of dedicated focal persons to monitor CBIMNCI program and related data	Appoint a designated focal person at each health facility to oversee the implementation and monitoring of CBIMNCI activities	Health Section (Municipality)
Lack of equipment to deliver newborn and chid health services at service delivery points	Conduct a comprehensive need assessment and develop a detailed procurement plan	Public Health Office, Health Section (Municipality)
Difficulty in implementing free newborn care guidelines	Enhance coordination and collaboration between hospitals and municipalities to ensure effective implementation of newborn care guidelines	Health Directorate, Public Health Office, Health Section (Municipality)
Limited engagement of private sectors	Ensure and encourage involvement of private sector to ensure quality services are provided with proper follow-up of childhood treatment protocols at each level	MOH, Health Directorate, Public Health Office, Health Section (Municipality)
Difficulty in mobilizing CBIMNCI trained manpower in all health institutions	Training should be provided to new health workers and those who have missed the training before.	Provincial Health Training Centre, Public Health Offices
Inadequate budget allocation for CBIMNCI Programs at local level	Advocacy for increased resource allocation Performance based funding	Health Directorate, Public Health Office, Health Section (Municipality)

2.3 Nutrition program

Nutrition is a globally recognized development agenda, also a base of survival, growth and development, a prerequisite of accelerated attainment of all the Sustainable Development Goals (SDGs) and can foster socio- economic development. Good Nutrition is a key driver of development and economic growth whereas under nutrition incurs significant productivity losses for individuals and ultimately for the nation. The Government of Nepal (GON) is committed to ensuring that all its citizens have access to adequate nutritious food, healthcare and other social services that impact nutrition outcomes. The Constitution (2015) ensures the right to food, health and nutrition to all citizens in Nepal. Malnutrition continues to be a significant impediment to health, social and

economic development. Nutrition program is a priority program for the government of Nepal. Its main motto is to achieve the nutritional well-being of all people so that they can maintain a healthy life and contribute to the country's socio-economic development.

Nepal has made significant progress in reducing stunting among children under 5 years. The prevalence of stunting decreased from 57 percent in 2001 to 25 percent in 2022 NDHS and according to the recent Multiple Indicator Cluster Survey (MICS 2019), stunting has reduced to 32 percent. Similarly, wasting among children under 5 years was 11 percent in 2001, 8 percent in 2022 according to NDHS data and the MICS 2019 shows wasting at 12 percent. However, the prevalence of overweight remained constant i.e.1 percent from 2001 to 2022 NDHS. In Bagamati province, stunting was 18% percent in the NDHS 2022, 22.9 percent in MICS 2019. Wasting among children under 5 years was 4.7 percent in MISC 2019.

The province government has a high-level commitment and has given top priority to nutrition programs to improve the nutritional status of children, pregnant women, lactating mothers, and adolescents of Bagamati province. The Ministry of Health and Health Directorate is accountable to provide nutrition services in the province in coordination and collaboration with federal & local governments and supporting development partners. The province has been developing policies, strategies, and guidelines of nutrition programs in the context of the province in alignment with National policies and strategies.

Key Policy documents

The National Nutrition Strategy, 2077

The National Nutrition Strategy 2077 is the ten-year nutritional strategy from 2077-2087(2020-2030) that will be modified as per required. After The Constitution of Nepal 2072 BS, national strategy on nutrition is needed to be revised and updated as per existing National Health Policy 2076. This strategy has been prepared to incorporate the nutrition related strategies included in the fifteenth plan 2076/77-2080/81. The main aim of the strategy is to address all forms of malnutrition by implementing nutrition-specific and sensitive interventions through the health sector and providing strategic and programmatic direction for nutrition interventions in Nepal through health sectors.

Basic principles and concepts:

i. Federally structured nutrition plan and activities

ii. Gender equality and social inclusion

iii. Program expansion to underserved groups and communities

iv. Transparency, responsibility, and accountability

v. Good governance

vi. Evidence-based nutrition service

vii. Private sector engagement

viii. Mobilization of local resources

ix. Community participation.

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 SDGs by 2030

Objectives:

1. Improve the nutritional status of infant, young children, adolescent girls and women by increasing access to nutrition specific and nutrition sensitive services.
2. Improve the quality of nutrition specific and nutrition sensitive interventions and build capacity of the service providers.
3. Increase the demand of nutrition specific and nutrition sensitive interventions through public awareness
4. Promote good nutrition behaviors and inhibit harmful behaviors.
5. To increase the scope of nutrition services in accordance with time

Strategies

1. Update and expand multi-sectoral nutrition program
2. Adopt short-term, medium-term and long-term measures to improve micro-nutrition
3. Strengthening and development of school health programs and nutrition education
4. Promoting domestics production by encouraging the consumption of nutritious and healthy foods.

Multi-sector Nutrition Plan (MSNP-III 2023-2030) - which is a broader national policy framework for nutrition, within and beyond the health sector, coordinated by the National Planning Commission (NPC), provides national policy guidance for nutrition-specific and nutrition-sensitive interventions as well as creating an enabling environment for nutrition interventions throughout the country.

The National Health Policy, 2076- focuses on improving nutrition through the effective promotion of quality, nutritious foods produced locally.

Strategies

i) promotion of dietary diversification

ii) food fortification

iii) micronutrient supplementation and

iv) public health measures.

The first two are the Food-based Approach and the other two are Non-Food Based Approach.

Nepal, being an early riser of the Scaling-up Nutrition (SUN) movement has initiated the multi-sector approach in nutrition interventions with formulation and effective implementation of Multi-sector Nutrition Plan (MSNP). It envisions the reduction of childhood stunting with the scaling- up of nutrition-sensitive and nutrition-specific intervention. Under the MSNP framework, the health sector is responsible for nutrition-specific interventions.

- Fortifying diets of young children aged 6-23 months with multiple micronutrient powder.
- Promoting iodized salt.
- Deworming of children aged 12-59 months.

Nutrition interventions

The Ministry of Health Population and Family Welfare Division has been implementing several nutritional specific interventions to address maternal, adolescent and child malnutrition. The major National Nutritional Program that are implemented as follows:

A. Nationwide programme

i. Maternal, Infant and Young Child Nutrition (MIYCN)

ii. Growth Monitoring and Promotion (GMP)

iii. Control and Prevention of Iron Deficiency Anemia

iv. Control and Preventions of Vitamin A Deficiency Disorders

v. Control and Prevention of Iodine Deficiency Disorders

vi. Control of Intestinal Helminths Infestations

vii. School Health and Nutrition Program (Adolescent IFA distribution)

viii. Nutrition in emergency

B. Scale up programme

i. Integrated Infant and Young Child Feeding and Multiple Micronutrient Powder (Balvita) Community Promotion Program

ii. Integrated Management of Acute Malnutrition (IMAM) Program

iii. Maternal and Child Health and Nutrition (MCHN) Program

iv. Maternal Baby Friendly Hospital Initiative (MBFHI)

v. Nutrition Rehabilitation Center (NRC)

Major activities conducted in FY 2081/82

- Skill upgrade Orientation for Health workers & Teachers on School Health & Nutrition Programs.
- Skill upgrade Orientation for Inspector & Health workers on BMS Product (selling & Control) Act 2049 & Regulation 2051.
- Monitoring and supervision of Nutrition specific programs.

- Annual Review of Provincial Level Nutrition Program (Data validation, Data verification & RDQA)
- Capacity Building and Onsite Coaching for Hospitals with Inpatient Treatment Center
- Mothers Baby Friendly Hospital Initiatives (MBFHI) Scale up Programs.

Major achievements in Nutrition program (2081/82)

The figure below shows the comparative trend of the percentage of children aged 0–11 months registered for growth monitoring in Bagamati Province over the past three fiscal years, with coverage exceeding 100% in earlier years. At the provincial level, registration declined steadily over time, decreasing from 115.66% in FY 2079/80 to 99.02% in FY 2080/81, and further dropping to 71.68% in FY 2081/82, indicating a substantial overall reduction in growth monitoring registration. Compared to both FY 2079/80 and FY 2080/81, FY 2081/82 shows a significant decline in registration across all districts. Districts that previously recorded coverage above 100% experienced notable reductions. Lalitpur declined from 128.34% in FY 2079/80 and 160.77% in FY 2080/81 to 101.05% in FY 2081/82. Similarly, Kavrepalanchok decreased from 169.76% and 141.56% to 96.34%, Bhaktapur from 159.66% and 114.12% to 85.33%, and Makawanpur from 122.44% and 103.13% to 85.59%.Other districts also showed consistent downward trends when compared to both previous fiscal years. Kathmandu declined from 96.70% in FY 2079/80 and 87.24% in FY 2080/81 to 56.17% in FY 2081/82. Ramechhap dropped from 73.37% and 69.37% to 56.58%, while Nuwakot decreased from 104.71% and 84.25% to 61.96%.

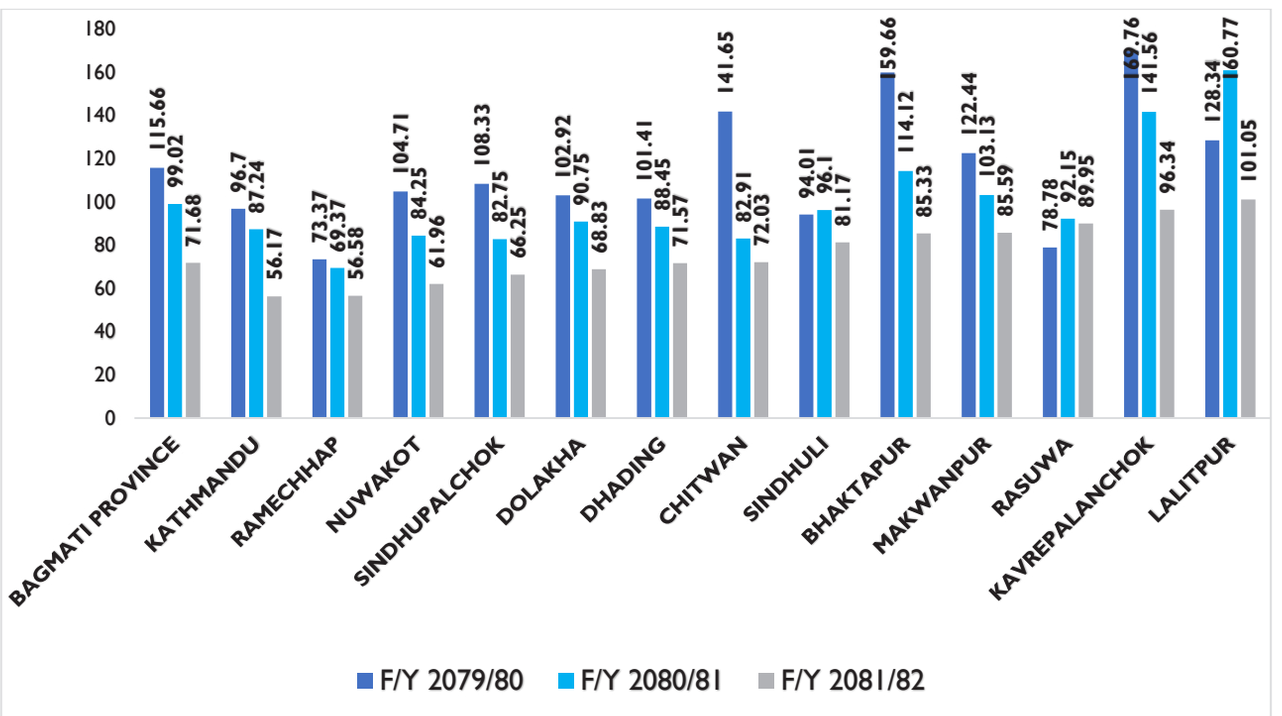


Figure 2.13 Percentage of children aged 0-11 months registered for growth monitoring

Source: HMIS/DHIS2

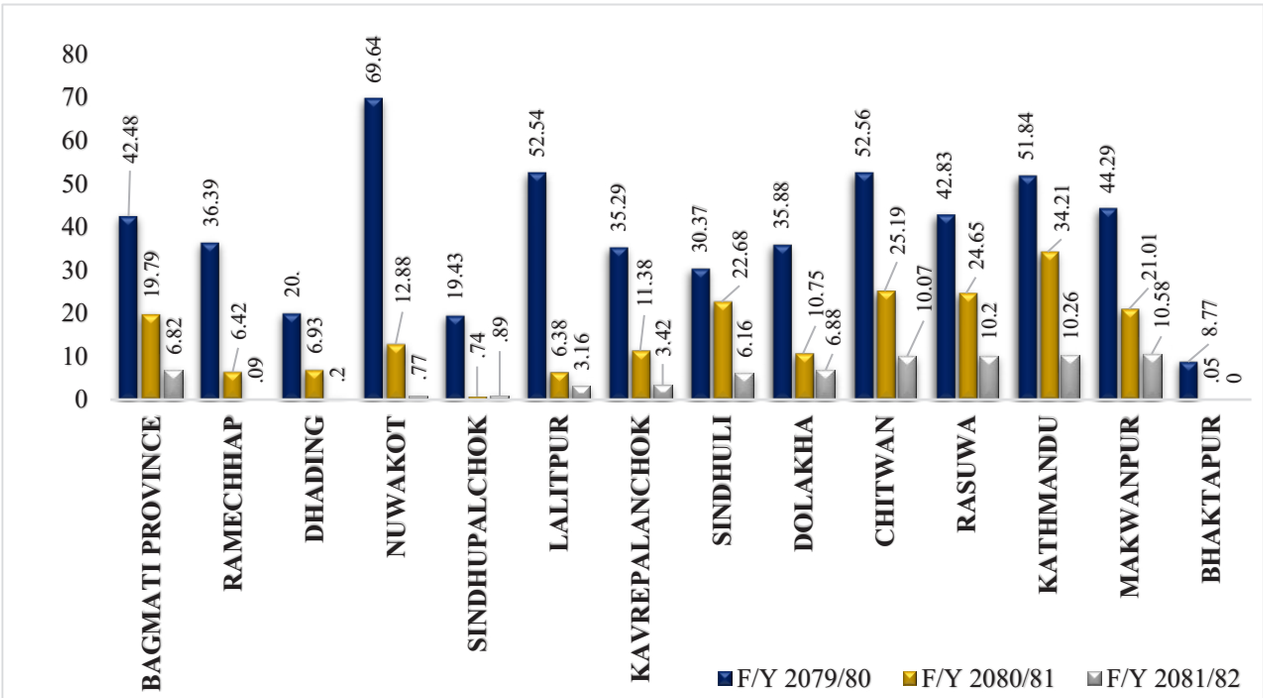


Figure 2.14 Percentage of children aged 12-23 months registered for growth monitoring

Source: HMIS/DHIS2

The above figure shows the comparative trend of the percentage of children aged 12–23 months registered for growth monitoring in Bagamati Province over the past three fiscal years, indicating a consistent downward trajectory across the region. At the provincial level, registration declined steadily over time, decreasing from 42.48% in FY 2079/80 to 19.79% in FY 2080/81, and further dropping to 6.82% in FY 2081/82, reflecting a substantial overall reduction in growth monitoring registration for this age group. Compared to both FY 2079/80 and FY 2080/81, FY 2081/82 shows a significant decline in registration across all districts. Districts that previously recorded higher coverage experienced notable reductions. Nuwakot declined from 69.64% in FY 2079/80 and 12.88% in FY 2080/81 to 0.77% in FY 2081/82. Similarly, Lalitpur decreased from 52.54% and 6.38% to 3.16%, Chitwan from 52.56% and 25.19% to 10.07%, and Kathmandu from 51.84% and 34.21% to 10.26%.Other districts also showed consistent downward trends when compared to both previous fiscal years. Makawanpur declined from 44.29% in FY 2079/80 and 21.01% in FY 2080/81 to 10.58% in FY 2081/82. Rasuwa dropped from 42.83% and 24.65% to 10.20%, while Sindhuli decreased from 30.37% and 22.68% to 6.16%. Some districts, such as Bhaktapur (8.77% to 0.05% to 0%) and Sindhupalchok (19.43% to 0.89% to 0%), recorded extremely low or nearly negligible coverage in FY 2081/82.

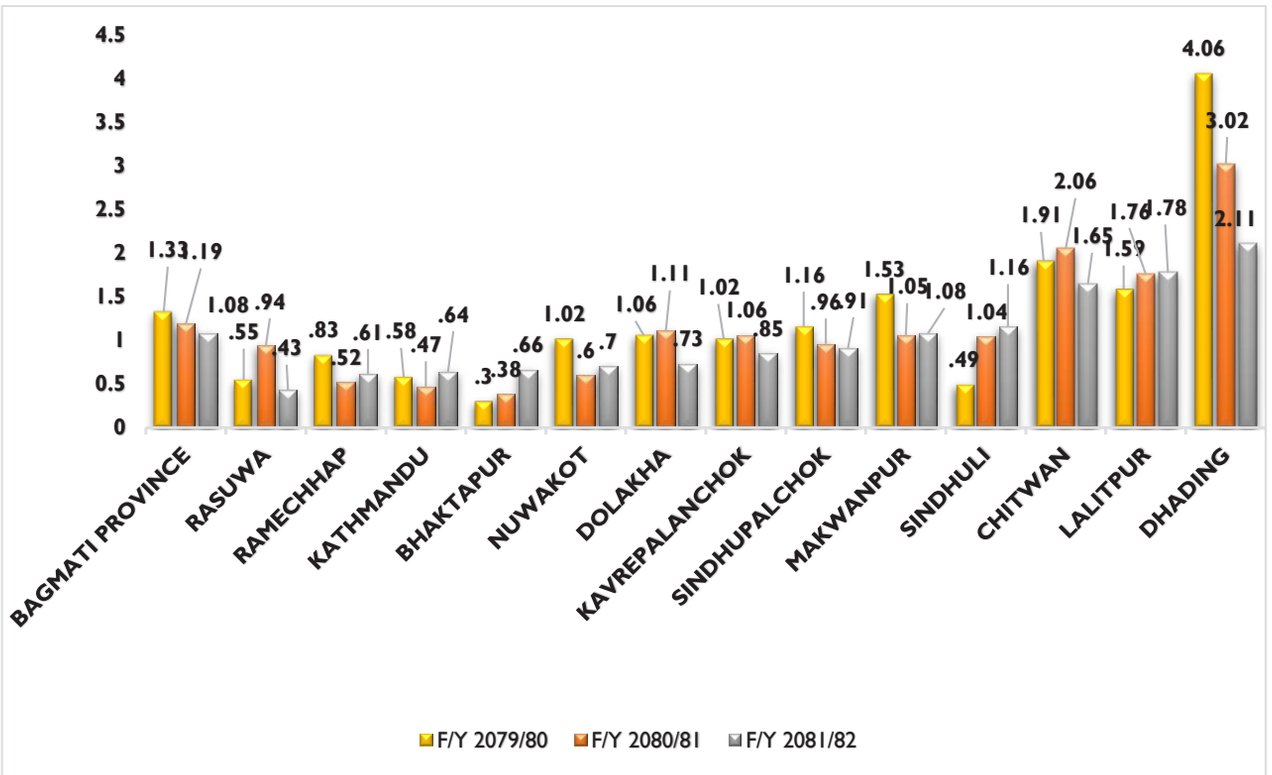


Figure 2.15 Percentage of children aged 0-23 months registered for growth monitoring who were underweight

Source: HMIS/DHIS2

The above figure shows the comparative trend of the percentage of children aged 0–23 months registered for growth monitoring (new) who are underweight in Bagamati Province over the past three fiscal years. At the provincial level, the prevalence of underweight children showed a slight decline over time, decreasing from 1.33% in FY 2079/80 to 1.19% in FY 2080/81, and further dropping to 1.08% in FY 2081/82, indicating a marginal overall improvement in nutritional status. Compared to both F/Y 2079/80 and F/Y 2080/81, F/Y 2081/82 shows varying levels of registration across districts. Districts that previously recorded higher coverage experienced notable reductions. Dhading declined from 4.06% in F/Y 2079/80 and 3.02% in F/Y 2080/81 to 2.11% in F/Y 2081/82. Similarly, Chitwan decreased from 1.91% and 2.06% to 1.65%.Other districts showed mixed or upward trends. Lalitpur increased from 1.59% in F/Y 2079/80 and 1.76% in F/Y 2080/81 to 1.78% in F/Y 2081/82. Sindhuli also showed a consistent upward trajectory, rising from 0.49% in F/Y 2079/80 and 1.04% in F/Y 2080/81 to 1.16% in F/Y 2081/82. Likewise, Bhaktapur rose from 0.33% in F/Y 2079/80 and 0.38% in F/Y 2080/81 to 0.66% in F/Y 2081/82, and Kathmandu increased from 0.58% and 0.47% to 0.64%. Districts like Makwanpur showed fluctuations, decreasing from 1.53% in F/Y 2079/80 to 1.05% in F/Y 2080/81 and remaining relatively steady at 1.08% in F/Y 2081/82.

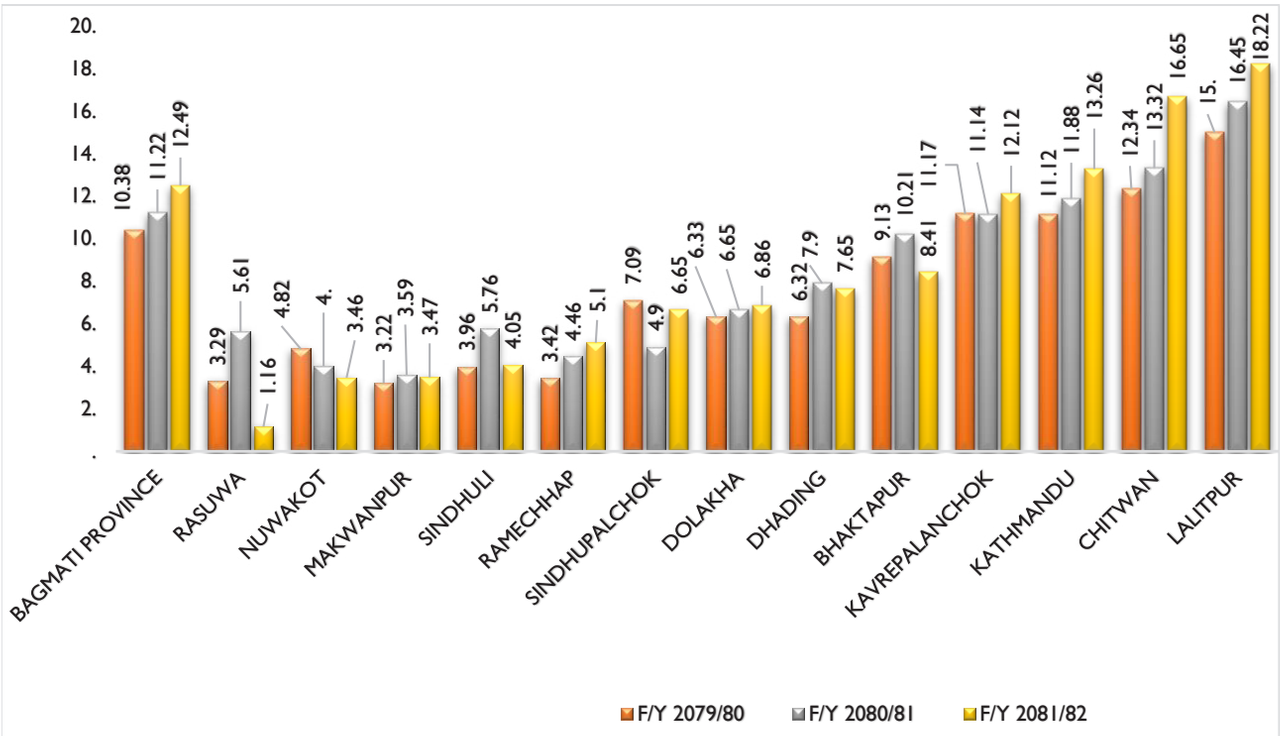


Figure 2.16 Percentage of newborns with low birth weight (<2.5kg) among total delivery by HW

Source: HMIS/DHIS2

The figure above shows the comparative trend of the percentage of newborns with low birth weight (<2.5kg) among total deliveries by health workers in Bagamati Province over the past three fiscal years, indicating a generally increasing trend. At the provincial level, the prevalence of low birth weight rose steadily, increasing from 10.38% in FY 2079/80 to 11.22% in FY 2080/81, and further climbing to 12.49% in FY 2081/82, reflecting a growing concern in neonatal health outcomes. In F/Y 2081/82, while many districts sustained high performance, some experienced notable declines compared to previous years. Rasuwa continued to demonstrate optimal performance with 100% coverage, supported by strong results in Makwanpur (99.66%), Dolakha (99.65%), and Sindhupalchok (99.42%). Conversely, urban-centric districts showed marked decreases in F/Y 2081/82; Kathmandu recorded the lowest rate (20.58%), significantly down from its 80/81 peak, while Chitwan also declined to 56.06%.

Infant and Young Child Feeding (IYCF)

Infant and young child feeding is the practice of feeding infants and young children from birth to two years of age which is a critical aspect of child survival, growth, and development. Infant and young child feeding practice includes early initiation of breastfeeding; immediately after birth, within one-hour, exclusive breastfeeding for the first six months, timely introduction of complementary foods after the age of six months and continued breastfeeding for 2 years or beyond. Proper IYCF practices can help to prevent malnutrition and other health consequences in children. IYCF program has been running in all 77 districts of Nepal since FY 2072/73.

The figure below shows the comparative trend of the percentage of newborns who initiated breastfeeding within one hour of birth in Bagamati Province over the past three fiscal years, highlighting a mixed but generally stable trend across the region. At the provincial level, early initiation of breastfeeding showed an initial increase from 54.39% in FY 2079/80 to 71.38% in FY 2080/81, before declining to 52.41% in FY 2081/82, indicating a notable fluctuation in provincial performance. In F/Y 2081/82,

while many districts sustained high performance, some experienced notable declines compared to previous years. Rasuwa continued to demonstrate optimal performance with 100% coverage, supported by strong results in Makwanpur (99.66%), Dolakha (99.65%), and Sindhupalchok (99.42%). Conversely, urban-centric districts showed marked decreases in F/Y 2081/82; Kathmandu recorded the lowest rate (20.58%), significantly down from its 80/81 peak, while Chitwan also declined to 56.06%.

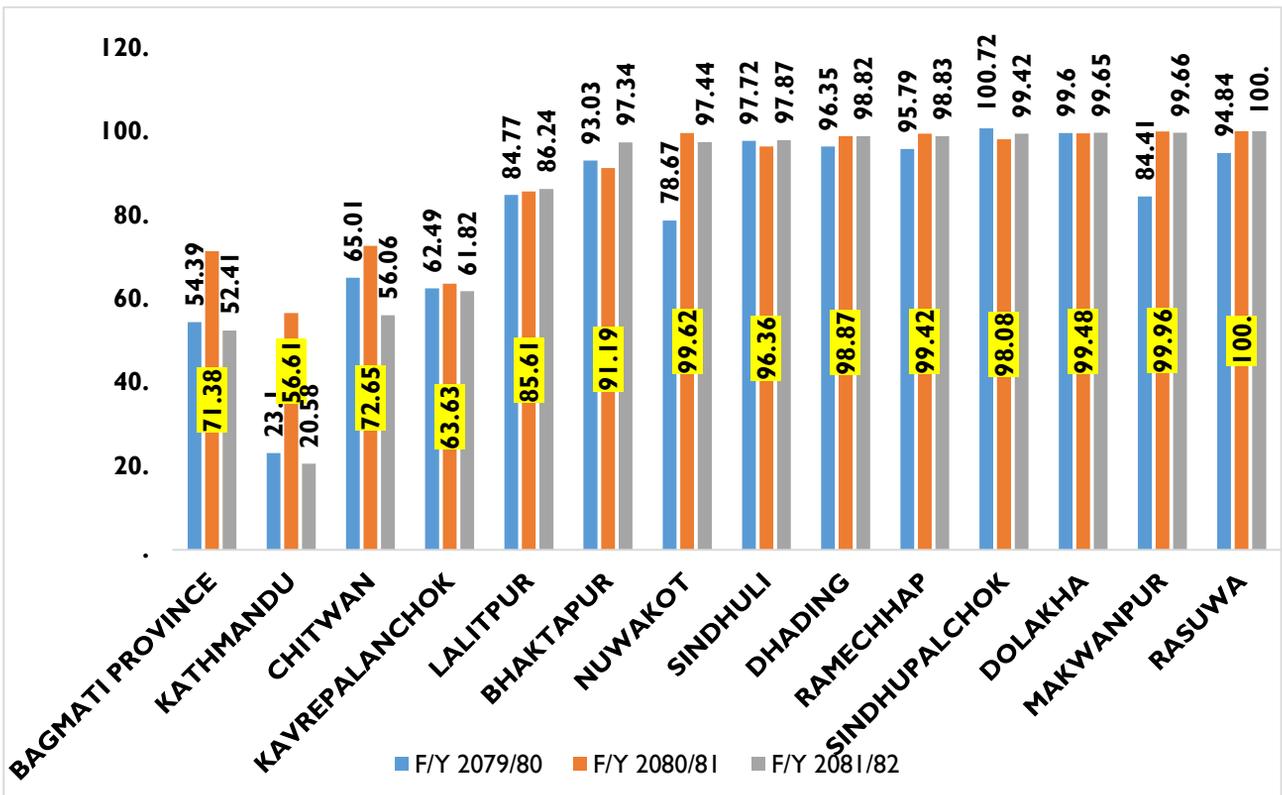


Figure 2.17 Percentage of newborns who initiated breastfeeding within one hour

Source: HMIS/DHIS2

The figure below shows the comparative trend of the percentage of children below 6 months who were exclusively breastfed among those registered for growth monitoring in Bagamati Province over the past three fiscal years, indicating a general upward trend in most areas. At the provincial level, the rate of exclusive breastfeeding increased steadily over time, rising from 49.24% in FY 2079/80 to 60.73% in FY 2080/81, and further increasing to 64.08% in FY 2081/82, reflecting an overall improvement in infant feeding practices.In F/Y 2081/82, the exclusive breastfeeding rate showed sustained progress in many districts compared to the previous fiscal years. Ramechhap recorded the highest rate (96.23%), followed by Nuwakot (91.9%), Sindhupalchok (87.63%), and Sindhuli (85.43%). The remaining districts recorded varied coverage, with Lalitpur (46.76%) showing the lowest registration. Similarly, other districts with comparatively lower rates were Chitwan (50.37%) and Bhaktapur (52.2%), indicating urban-centric areas that require more targeted improvement in exclusive breastfeeding service coverage and counseling.

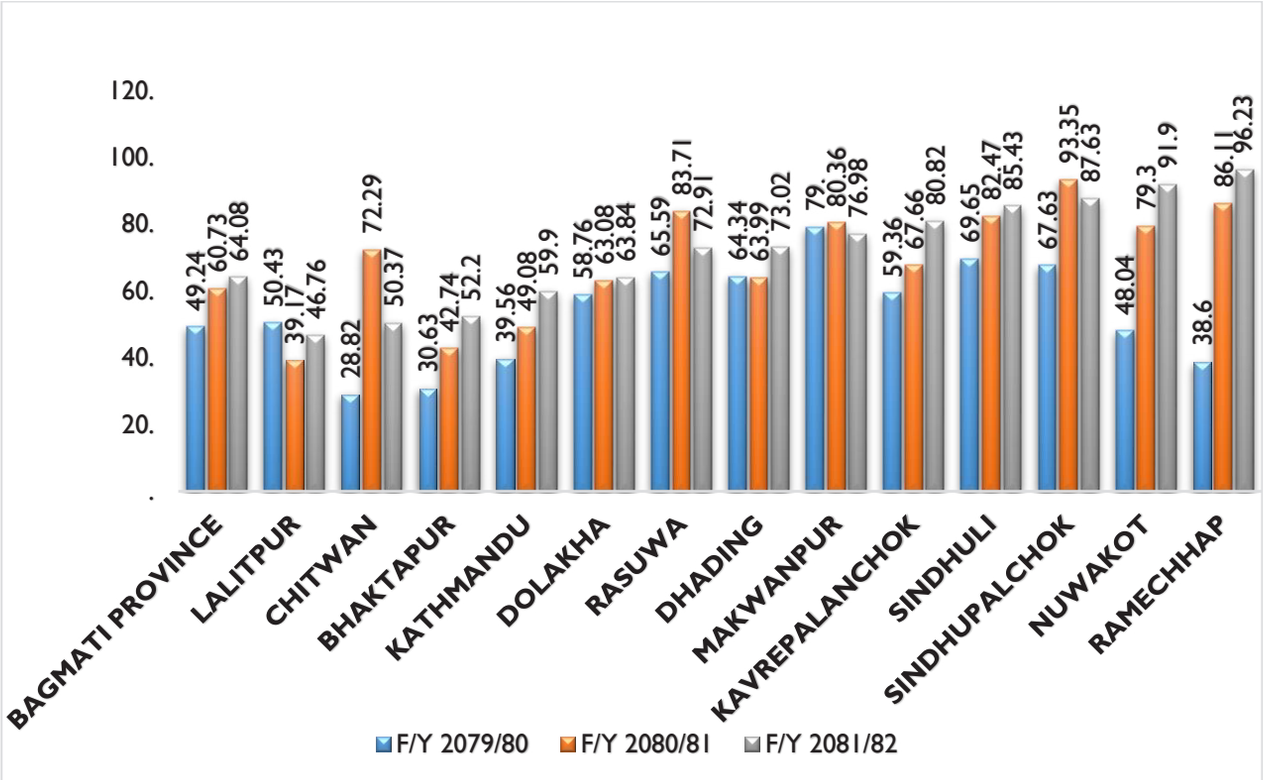


Figure 2.18 Percentage of children below 6 months exclusively breastfed among registered for growth monitoring

Source: HMIS/DHIS2

Issues, Recommendation and Responsibilities of Nutrition program

Provincial Annual Review 2080/81 identified following issues and recommended actions to be taken with clear responsibility at different level of authority and health entities.

Issues/Challenges	Action to be taken	Responsibilities
Limited Quality and Updated Nutrition Data.	Implement onsite coaching and RDQA to improve data quality. Activate the District Data Management Committee to enhance coverage.	MOH, HD, Public Health Office
Lack of Data from Private and Community Hospitals	Developing a system for recording and reporting malnourished children from private and community hospitals.	MOH/HD/ Public Health Office
Lack of disaster nutrition preparedness and response plan of province and district.	Making district level disaster nutrition preparedness and response plan. Making province level disaster nutrition preparedness and response plan Providing necessary materials for the effective operation of the nutrition program on time.	MOH/PHEOC/ HD/Public Health Office

No significant increase in growth monitoring rate	Conducting community level growth monitoring program by mapping local levels where growth monitoring is low. Finding malnourished children at the community level and making arrangements for treatment and referral. Arrangements for weighing children who come to seek services for other reasons.	Public Health Office/Local Level
Limited Iron Tablet Distribution to Adolescent Girls	Strengthening school health and nutrition programs. Encouragingactive participation of school nurse	HD/Public Health Office/ Local Level
Low Coverage of Exclusive Breastfeeding and Complementary Feeding	Advocacy to promote exclusive breastfeeding and to ensure full breastfeeding by working women.	HD/Public Health Office/ Local Level
Baalvita not being supplied in sufficient quantity Strengthen supply management of baby food.	To orient the health workers regarding the distribution of baalvita	HD/HLMC/ Public Health Office
Failure to establish and operate breastfeeding rooms in health institutions and other offices	Setting standards for breastfeeding rooms Establishment and operation of breastfeeding rooms in various offices including health institutions	FWD/HD/Public Health Office
Ineffective referral system from the community to the nutrition rehabilitation center	Orienting health service providers and female community health volunteers regarding referral system Arranging contact tracing of defaulter malnourished children.	HD/Public Health Office/ Local Level
Widespread access and consumption of food that harms the body in the community	Promotion of nutrition to discourage the consumption of harmful foods in coordination with the concerned agencies related to agriculture and nutrition.	Local level
Unable to expand and operate OTC as required	Initiative to develop OTC as required Providing necessary materials to actively operate O.T.C.	HD/HLMC/ Public Health Office/Local Level
Unable to expand and operate ITC as required	Initiative to develop ITC as required Providing necessary materials to actively operate I.T.C. (For Example unavilibility of F75,F100 etc.)	HD/HLMC/ Public Health Office/Province Hospital
Lack of training for local health workers on time	Conducting capacity building programs regularly to health workers Providing CNSI training to physicians	HTC/HD/Public Health Office/ Local Level

Lack of technical supervision and on-site coaching	Integrated technical supervision and on-site coaching program	FWD/HD/Public Health Office
Lack of proper Management &Process for Nutrition Friendly Health Facility Declaration.	Nutrition Friendly Health Facility Related committe & Responsible person shoud take proper Action.	FWD/HD/Public Health Office

2.4. Safe Motherhood and Newborn Health

Introduction

The fundamental right of citizens to free basic health services from the State is included in the constitution of Nepal, 2015 and Maternal and Newborn Health (MNH) has always been given high priority in Nepal. The Right to safe motherhood and reproductive health act 2018 and its regulation respect, preserve and commit to fulfilling the right of women to safe motherhood and reproductive health services and ensure their safety, quality and accessibility. The Public Health Service Act 2018 and its regulation 2020 has consider safe motherhood and newborn health service as basic health services. The National Safe Motherhood Program aims to reduce maternal and neonatal morbidity and mortality and improve maternal and neonatal health through preventive and promotive activities and by addressing avoidable factors that cause death during pregnancy, childbirth, and the postpartum period. Evidence suggests that three delays are important factors for maternal and newborn morbidity and mortality in Nepal (delays in seeking care, reaching care, and receiving care). The following major strategies have been adopted to reduce risks during pregnancy and childbirth and address factors associated with mortality and morbidity:

- Promoting birth preparedness and complication readiness including awareness raising and improving preparedness for funds, transport, and blood transfusion.
- Expansion of 24 hours birthing facilities alongside Aama Suraksha Programme promotes antenatal check-ups and institutional delivery.
- The expansion of 24-hour emergency obstetric care services (basic and comprehensive) at selected health facilities in all districts.

The Safe Motherhood Program initiated in 1997 has made significant progress with formulation of safe motherhood policy in 1998. The national maternal mortality ratio of nation is 151/100000 live birth (NDHS, 2022). The Sustainable Development goal has committed to one of the important target to reduce the maternal mortality ratio to less than 70 per 100000 live births and reduce the newborn mortality rate to less than 12 per 1000live births by 2030. The Nepal Health Sector Strategy (NHSS) identifies equity and quality of care gaps as areas of concern for achieving the maternal health sustainable development goal (SDG) target, and gives guidance for improving quality of care, equitable distribution of health services and utilization and universal health coverage with better financing mechanism to reduce financial hardship and out of pocket expenditure for ill health.

Strategies of the Safe Motherhood Program

Promoting inter-sectoral coordination and collaboration at federal, provincial, districts and local levels to ensure commitment and action for promoting safe motherhood with a focus on poor and excluded groups.

1. Strengthening and expanding delivery by skilled birth attendants and providing basic and comprehensive obstetric care services at all levels. Interventions include:

- Developing the infrastructure for delivery and emergency obstetric care.

- Standardizing basic maternity care and emergency obstetric care at appropriate levels of the health care system.
- Strengthening human resource management —training and deployment of advanced skilled birth attendant (ASBA), SBA, Anesthesia Assistant and contracting short-term human resources for expansion of services sites.
- Establishing a functional referral system with airlifting for emergency referrals from remote areas, the provision of stretchers in Palika wards and emergency referral funds in all remote districts; and

2. Strengthening community-based awareness on birth preparedness and complication readiness through FCHVs and increasing access to maternal health information and services.
3. Supporting activities that raise the status of women in society.
4. Promoting research on safe motherhood helps to improved planning, higher quality services and more cost-effective interventions.

Major Activities of FY 2081/82

Table 2.16 Major Activities done in Bagamati Province FY 2081/82

S.N	Program	Place	No. of Participants	Remarks
1.	Orientation on MPDSR and Birth Defect programme	Dhading (Naubise PHC)	20	Medical Officer, Nursing staff
2.	MNH Programme supervision and monitoring	3 hospitals (Rasuwa Hospital, Pashupati Chaulagai Smriti Hospital,Ramechhap Hospital,)	10-15 participants in each hospital	MNH clinical onsite coaching was done on 3 hospitals of Bagmati Province
3.	Expansion and strengthening of Family planning service after abortion and postpartum	5 Hospitals(Sindhuli Hospital, Hetauda Hospital, Methinkot Hospital, Pashupati chaulagai smriti Hospital, Dhading Hospital)	30-35	Gynaecologist, MDGP, Medical Officer, Nursing Staff
4.	RH morbidity service	Bhaktapur Hospital	20-30	VH surgery of uterine prolapse cases
5.	SRHR\PRHCC\TWG meeting	HD, Hetauda	25	Committee members
6.	MNH clinical mentor refresher training and review	Bhaktapur Hospital	50	Nursing staff(Mentor)
7.	KMC and SNCU orientation	Kathmandu	30	Pediatrician, MDGP, Medical Officer, Nursing Staff

8.	MPDSR orientation and review	Kathmandu	40-45	Gynaecologist, Pediatrician, Nursing Staff and Medical Recorder
10.	Orientation and Review of High C-section rate hospitals using Robson Classification	Kathmandu	35	Gynaecologist and Nursing Staff

Distribution of Facilities for Emergency Obstetric and Newborn Care (EONC) Services

Table 2.17 Emergency Obstetric and Newborn Care (EONC) Services distribution in health facilities

District	Birthing Center	BEONC	CEONC
Chitawan	24	7	2
Makawanpur	58	9	4
Sindhuli	39	4	0
Ramechhap	44	5	2
Kavrepalanchok	47	5	3
Lalitpur	18	10	4
Bhaktapur	1	0	9
Kathmandu	17	15	13
Nuwakot	57	3	1
Dhading	74	8	2
Rasuwa	18	6	3
Sindhupalchok	55	6	3
Dolakha	53	12	1
Bagamati	505	90	347

Source: HMIS/DHIS2

Key Indicator of MNH Program

Antenatal Care

The MOHP in Nepal recommends four ANC visit at 4th month (12-16 weeks of gestation), 6th month (20-24 weeks of gestation), 8th month (28-32 weeks of gestation) and 9th month (36- 40 weeks of gestation) (Family Health Division 2016). The World Health Organization (WHO) has changed its earlier recommendation of four ANC visits to minimum of eight ANC contacts in its 2016 ANC model. Women should receive the following services and general health check-ups during these visits:

- Monitoring of blood pressure, weight, and fetal heart rate
- IEC and BCC on pregnancy, childbirth, and early newborn care, as well as family planning
- Information on danger signs during pregnancy, childbirth, and the postpartum period, as well as prompt referral to appropriate health facilities.
- Early detection and management of pregnancy complications.
- All pregnant women receive tetanus toxoid and diphtheria (Td) immunization, iron folic acid tablets, and deworming tablets, as well as malaria prophylaxis as needed.

GoN and WHO 2016 ANC Model

Table 2.18 GoN and WHO 2016 ANC Models

ANC visit according to national protocol	2016 WHO ANC model
First trimester	
Visit 1: 12-16 weeks (4 month)	Contact 1: up to 12 weeks
Second trimester	
Visit 2: 20-24 weeks (6 month)	Contact 2: 20 weeks Contact 3: 26 weeks
Third trimester	
Visit 3: 28-32 weeks (8 month) Visit 4: 36-40 weeks (9 month)	Contact 4: 30 weeks Contact 5: 34 weeks Contact 6: 36 weeks Contact 7: 38 weeks Contact 8: 40 weeks
Return for delivery at 41 weeks if not given birth	

Women should receive the following services and general health check-ups during these visits:

- Monitoring of blood pressure, weight, and fetal heart rate
- IEC and BCC on pregnancy, childbirth, and early newborn care, as well as family planning
- Information on danger signs during pregnancy, childbirth, and the postpartum period, as well as prompt referral to appropriate health facilities.
- Early detection and management of pregnancy complications.
- All pregnant women receive tetanus toxoid and diphtheria (Td) immunization, iron folic acid tablets, and deworming tablets, as well as malaria prophylaxis as needed.

Percentage of Pregnant Women Who Attended Eight ANC Visits as per protocol

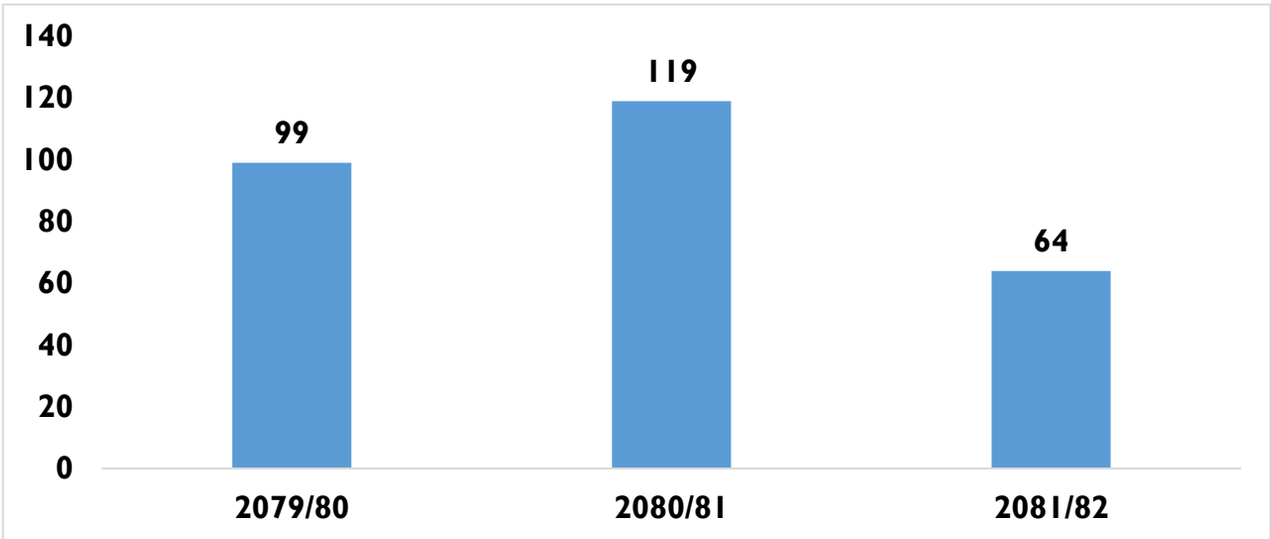


Figure 2.19 Percentage of Pregnant Women Who Attended Eight ANC Visits as per protocol

Source: HMIS/DHIS2

The above figure shows the three-year trends of pregnant women who attended eight ANC visits as per protocol. In the FY 2079/80, the percentage is 99% which increased to 119% in the next year, but decreased to 64% in the FY 2081/82.

District-wise trend of Pregnant Women Who Attended Eight ANC Visits as per protocol

The below figure shows the district-wise trend of pregnant women who attended eight ANC visits as per protocol in FY 2081/82. Kathmandu has the highest number at 88.3%, indicating the highest adherence to the ANC visit protocol whereas Nuwakot has the lowest number at 30%. The figure shows that urban districts, particularly in the Kathmandu Valley, have significantly higher numbers of pregnant women attending the required ANC visits compared to more rural or remote districts. This trend often reflects better access to healthcare facilities, higher awareness, and more robust healthcare systems in urban areas.

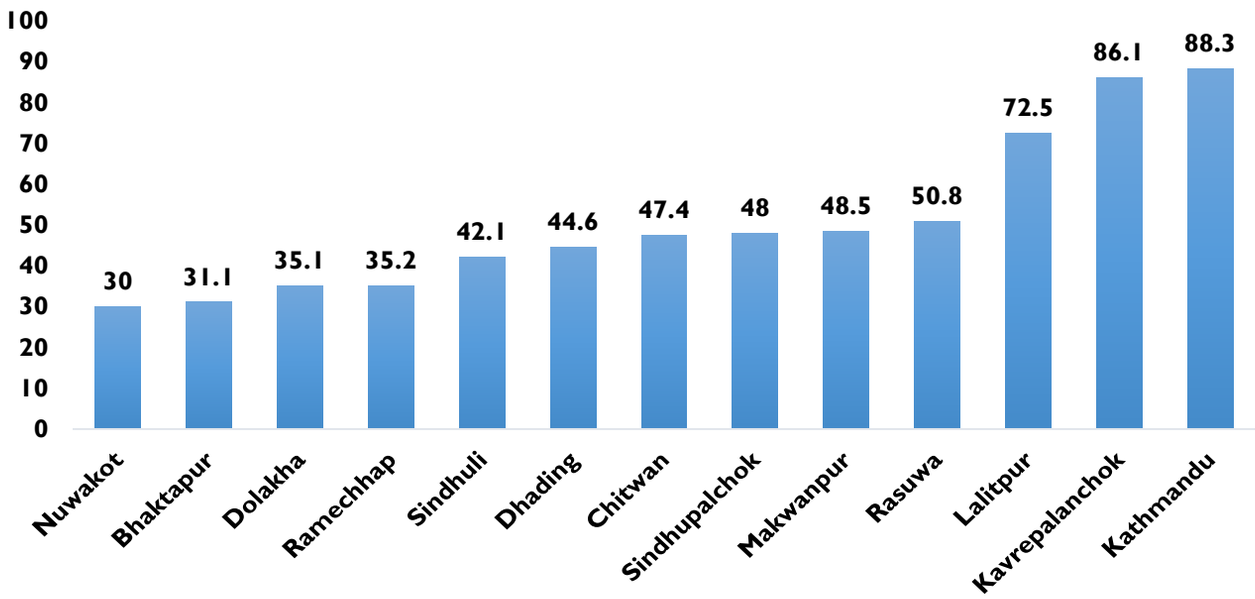


Figure 2.20 District wise trend of Pregnant Women Who Attended Eight ANC Visits as per protocol

Source: HMIS/DHIS2

Safe Delivery

Safe delivery care includes:

- Skilled birth attendance at home and institutional deliveries,
- Early detection of complicated cases and management or referral (after providing obstetric first aid) to an appropriate health facility with 24-hour emergency obstetric services, and
- Registration of births and maternal and neonatal deaths.

Although women are encouraged to give birth in a facility, home delivery with clean delivery kits, misoprostol to prevent post-partum hemorrhage, and early detection of danger signs and complications are important components of delivery care in settings where institutional delivery services are not available or are not used by the women.

Percentage of pregnant women delivering at the health facilities

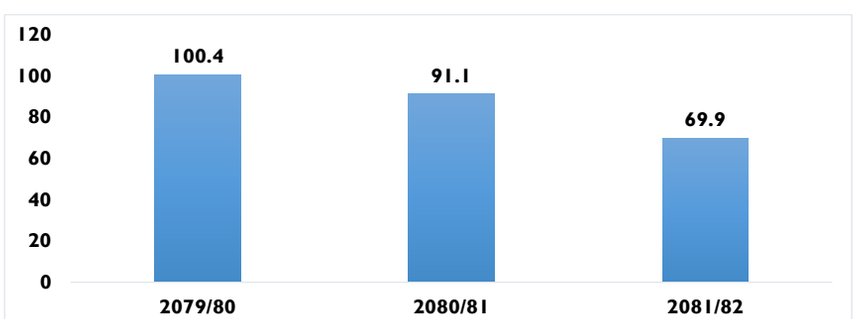


Figure 2.21 Percentage of pregnant women delivering at the health facilities

Source: HMIS/DHIS2

The above figure illustrates the percentage of pregnant women delivering at health facilities over three Fiscal years. In Fiscal year 2079/80, 100.4% of pregnant women delivered at health facilities whereas in FY 2080/81 it was decreased to 91.1%, indicating majority of deliveries at health Facilities. But the percentage significantly dropped to 69.9%, showing a decline compared to the previous year.

District-wise trend of pregnant women delivering at the health facilities

The figure below reflects the trend of pregnant women delivered at the health facilities: Kathmandu and Chitawan recorded relatively higher rates of institutional deliveries, likely attributable to better access to healthcare facilities. In contrast, districts such as Rasuwa and Sindhuli exhibited lower rates, which may be due to limited access and availability of healthcare services.

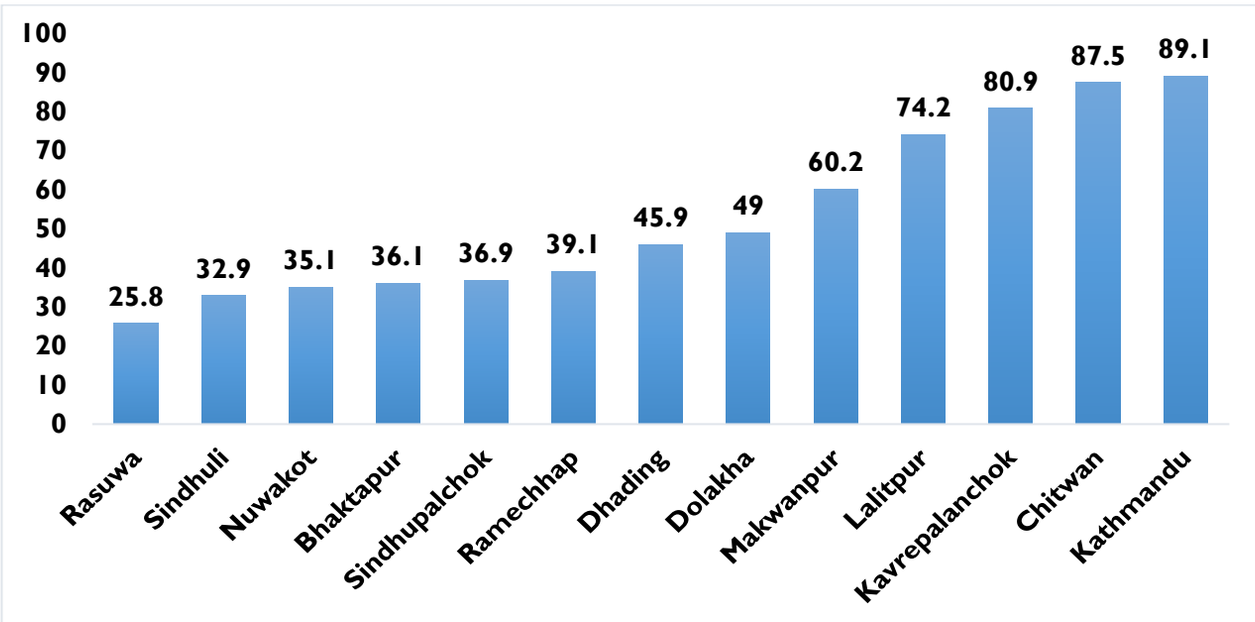


Figure 2.22 District wise trend of pregnant women delivered at the health facilities

Source: HMIS/DHIS2

Percentage of Normal Deliveries among reported deliveries

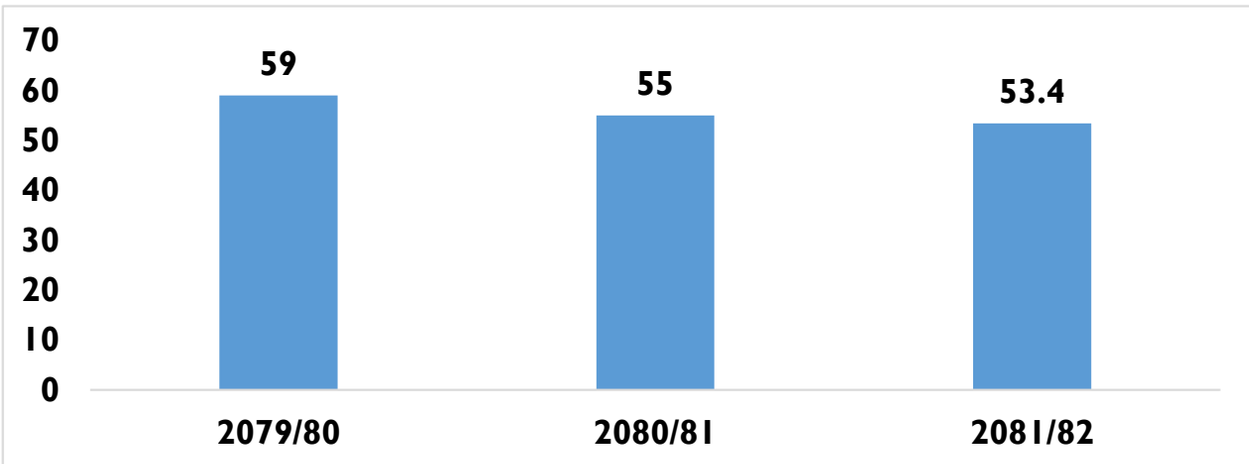


Figure 2.23 Percentage of normal deliveries among reported deliveries

Source: HMIS/DHIS2

The chart above demonstrates the percentage of normal deliveries among reported deliveries of three fiscal years. The trend of normal deliveries seems to decrease over the year, from 59% normal deliveries in FY 2079/80, 55% in FY 2080/81, and 53.4% in FY 2081/82.

District-wise trend of normal deliveries among the reported deliveries

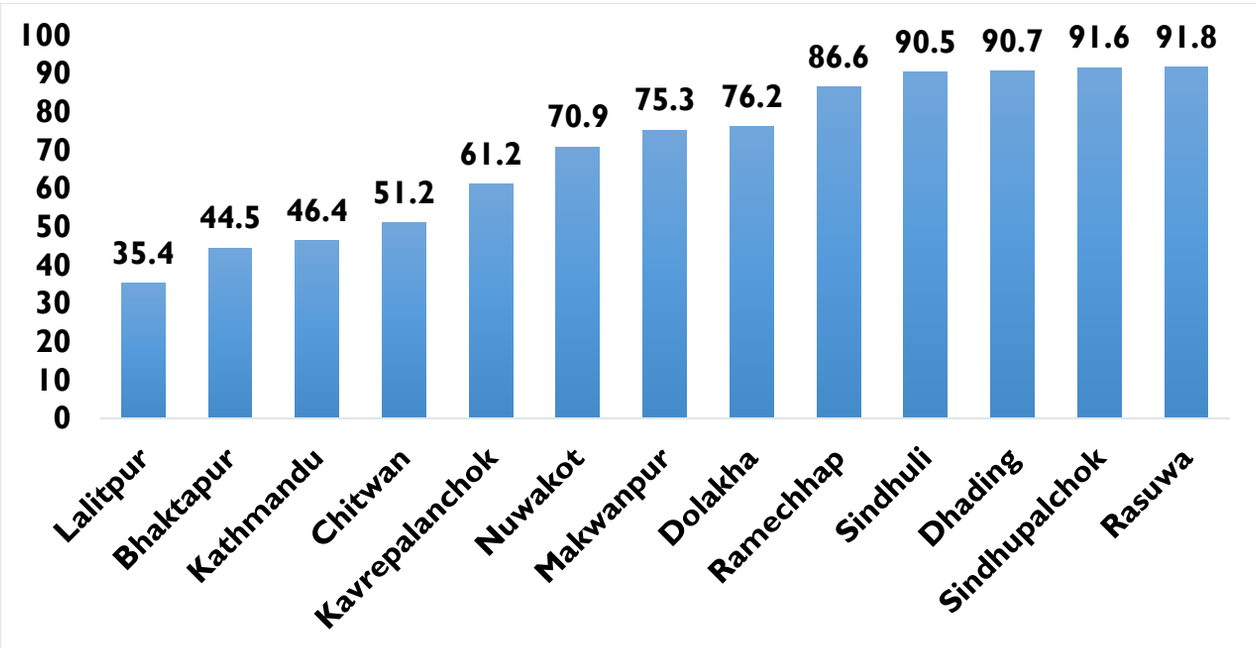


Figure 2.24 District-wise trend of normal deliveries among the reported deliveries

Source: HMIS/DHIS2

The bar diagram above illustrates the district-wise percentage of normal deliveries among reported deliveries for the fiscal year 2081/82. Rasuwa recorded the highest percentage of normal deliveries, followed closely by Sindhupalchok, Dhading, and Sindhuli, each reporting rates above 90%. In contrast, Lalitpur had the lowest percentage of normal deliveries.

Cesarean section (CS) rate among deliveries

The figure below illustrates the rate of Cesarean deliveries among reported deliveries. The rate of Cesarean deliveries was 41.1% in FY 2079/80, and decreased to 40% in FY 2080/81 but increased the following year making 45.5% in the FY 2081/82.

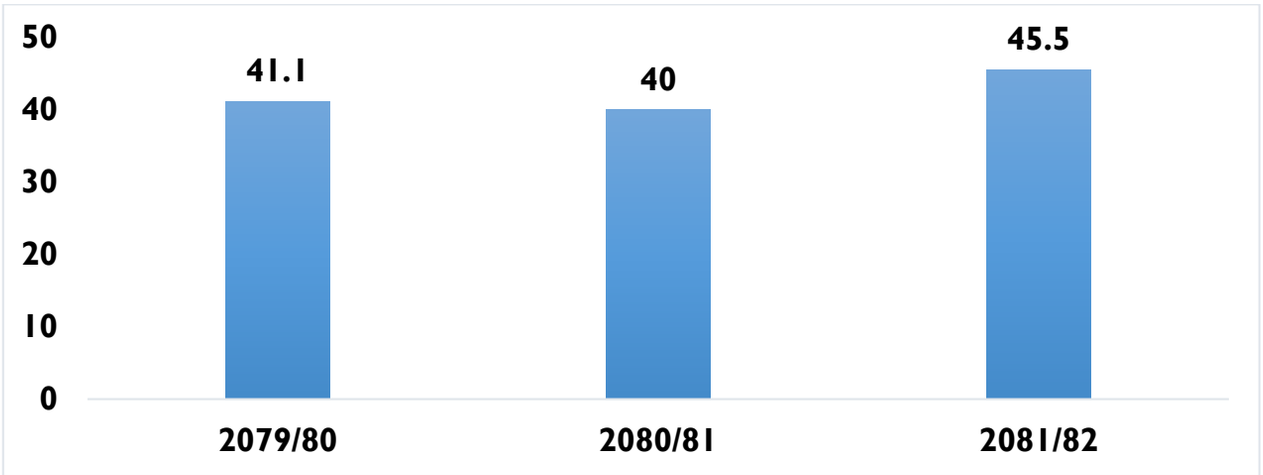


Figure 2.25 CS rate among Deliveries

Source: HMIS/DHIS2

District-wise trend of CS rate among deliveries

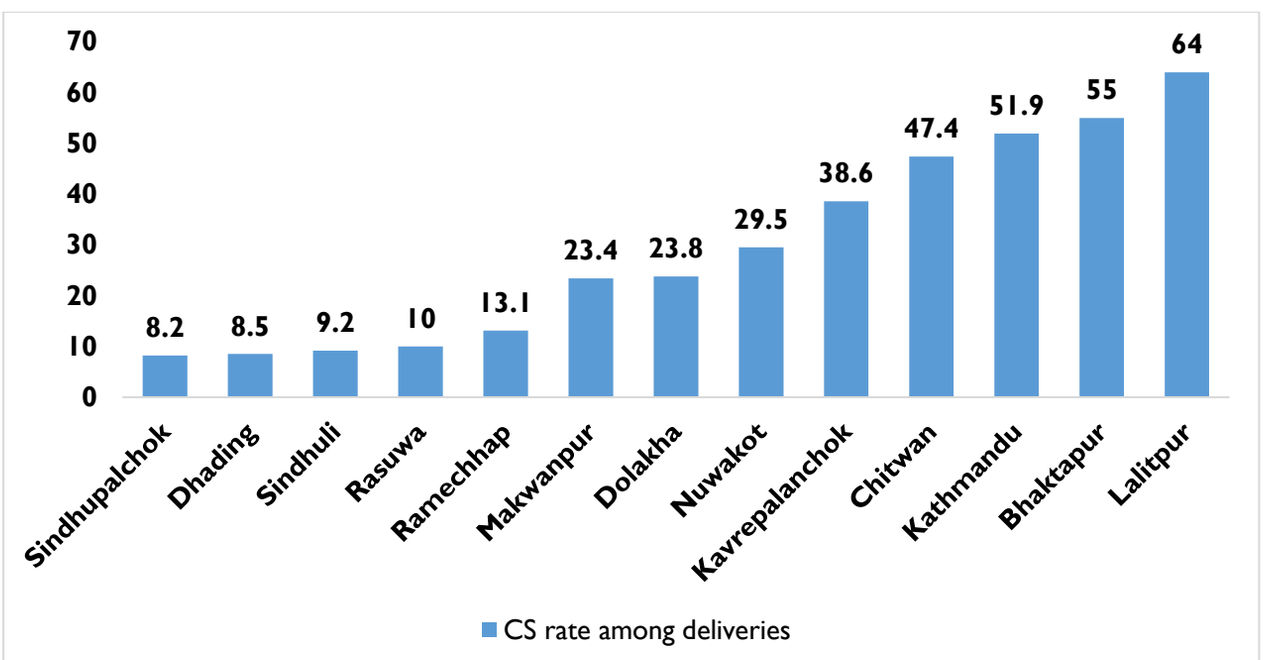


Figure 2.26 District wise trend of CS rate among deliveries

Source: HMIS/DHIS2

The bar diagram above represents the rate of Cesarean section among total deliveries in the FY 2081/82. Lalitpur district had the highest rate of Cesarean section i.e. 64% and Sindhupalchok had the lowest rate with 8.2%

Trends in number of women with obstetric complications

Table 2.19 Trends in number of women with obstetric complications

Province/District	No. of woman with obstetric complications		
	FY 2079/80	FY 2080/81	FY 2081/82
Dolakha	323	93	145
Sindhupalchok	400	154	249
Rasuwa	19	9	7
Dhading	570	168	550
Nuwakot	181	54	187
Kathmandu	5976	6760	4812
Bhaktapur	366	181	398
Lalitpur	367	582	899
Kavrepalanchok	405	280	379
Ramechhap	88	64	45
Sindhuli	239	94	161
Makawanpur	327	207	447
Chitawan	3344	1768	1931
Bagamati Province	12,605	10,414	10,210

Source: HMIS/DHIS2

The above table presents the number of women experiencing obstetric complications across various districts in Bagamati Province over three fiscal years (2079/80, 2080/81 and 2081/82). Obstetric complications include abortion complication, antepartum haemorrhage, eclampsia, pre-eclampsia, ectopic pregnancy, hyperemesis gravidarum, obstructed labor, postpartum haemorrhage, pregnancy induced hypertension, prolonged labor, puerperal sepsis, and retained placenta contributing to maternal death. While looking at the overall trend of province the total number of cases has declined significantly over the years.

Iron Folic Acid Supplement

The figure below shows the percentage of women who received a 180-day supply of Iron-Folic Acid during pregnancy. The coverage slightly increased from 53.8% in 2079/80 to 54% in 2080/81, indicating relative stability during this period. However, in 2081/82, the coverage declined noticeably to 43.3%, reflecting a significant decrease compared to the previous two years. Overall, the trend suggests stability in the first two years followed by a marked reduction in the most recent year. Addressing potential barriers—such as awareness, accessibility, and compliance—could help bridge this gap further.

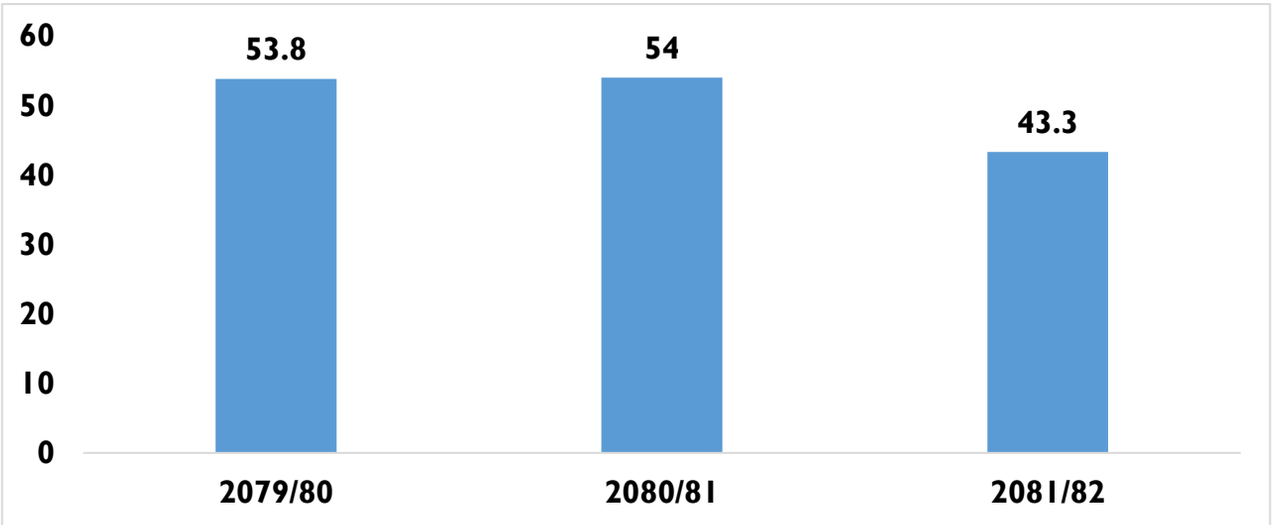


Figure 2.27 Percentage of women who received a 180-day supply of Iron Folic Acid during pregnancy

Source: HMIS/DHIS2

District-wise trend of pregnant women who received a 180-day supply of Iron Folic Acid

The figure below illustrates the district-wise distribution of pregnant women who received a 180-day supply of Iron Folic Acid (IFA) in FY 2081/82. Kavrepalanchok recorded the highest coverage, followed by Sindhupalchok, while Kathmandu reported the lowest percentage, with only 13.8% of pregnant women receiving the IFA supplement.

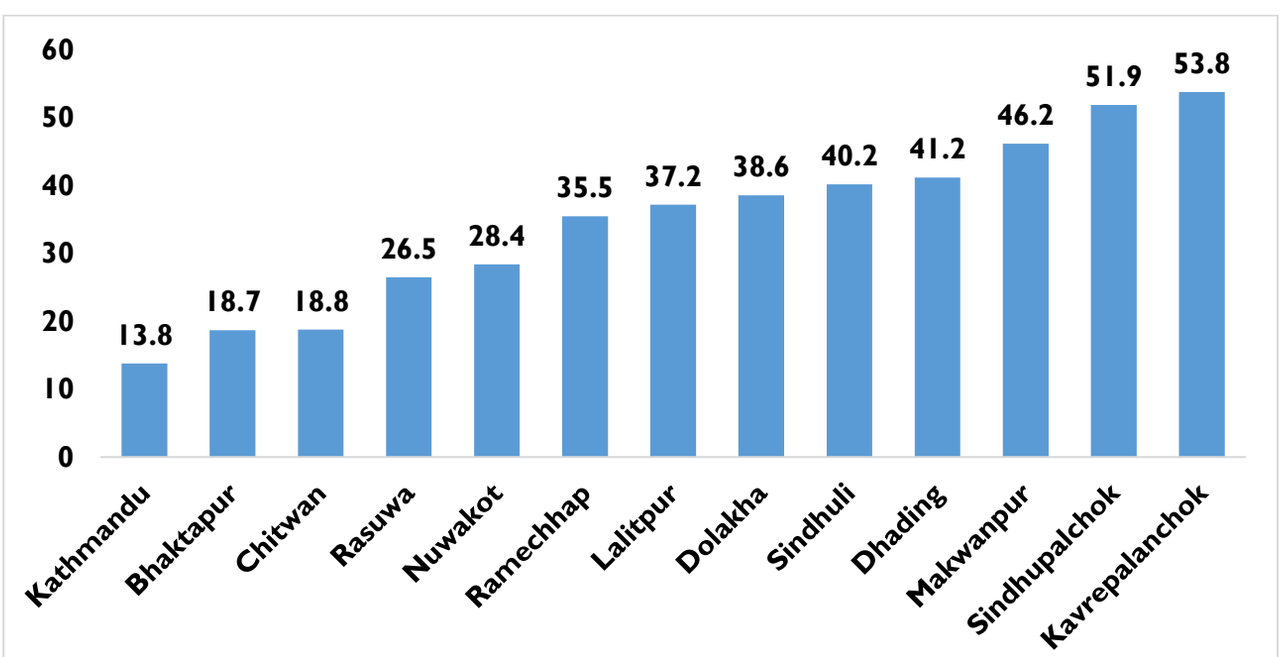


Figure 2.28 District wise trend of pregnant women who received a 180-day supply of Iron Folic Acid

Source: HMIS/DHIS2

Postnatal Care (PNC)

The postnatal period is a critical time in the lives of both mothers and their newborn children. Most maternal and neonatal deaths occur during this time. Yet, this is the most neglected period for the provision of quality care. As per the national protocol, at least four postnatal checkups are recommended for all mothers and newborns: first as early as possible within 24 hours of birth, second on the third day, the third between the seventh to fourteeth day and fourth within six weeks after delivery. The postnatal care services include the following:

- Identifying and managing complications in mothers and newborns, as well as referring them to appropriate health facilities.
- Promotion of exclusive breastfeeding.
- Postnatal vitamin A and iron supplementation for mothers, as well as personal hygiene and nutrition education.
- Immunization of newborns.
- Counseling and services for postnatal family planning

PNC check -up within 24 hours of delivery

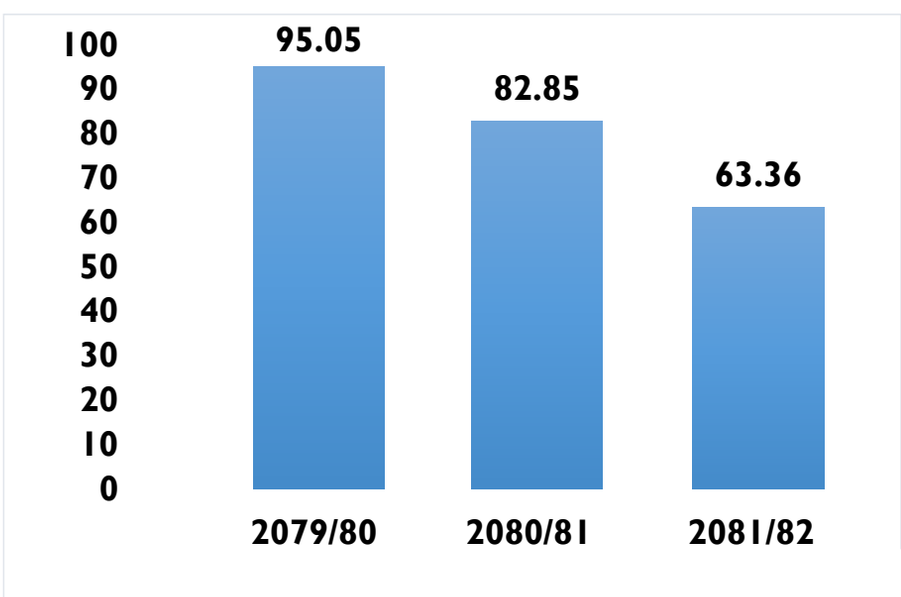


Figure 2.29 Coverage of PNC check -up within 24 hours of delivery

Source: HMIS/DHIS2

The above figure illustrates the percentage of women who had PNC check-up within 24 hours as per protocol. In FY 2079/80, 95.05% of women received PNC check-up within 24 hours, which decreased to 82.85% in the fiscal year 2080/81 as well as, in FY 2081/82, the percentage declined to 63.36%.

District-wise PNC check-up within 24 hours of delivery

The figure below presents the district-wise percentage of women who received PNC check-up within 24 hours of delivery as per protocol in FY 2081/82. Kathmandu reported the highest coverage at 81.42%. Kavrepalanchok and Lalitpur recorded the second and third-highest percentage at 80.35% and 74.22%, respectively, while Rasuwa reported the lowest rate at 27.29%.

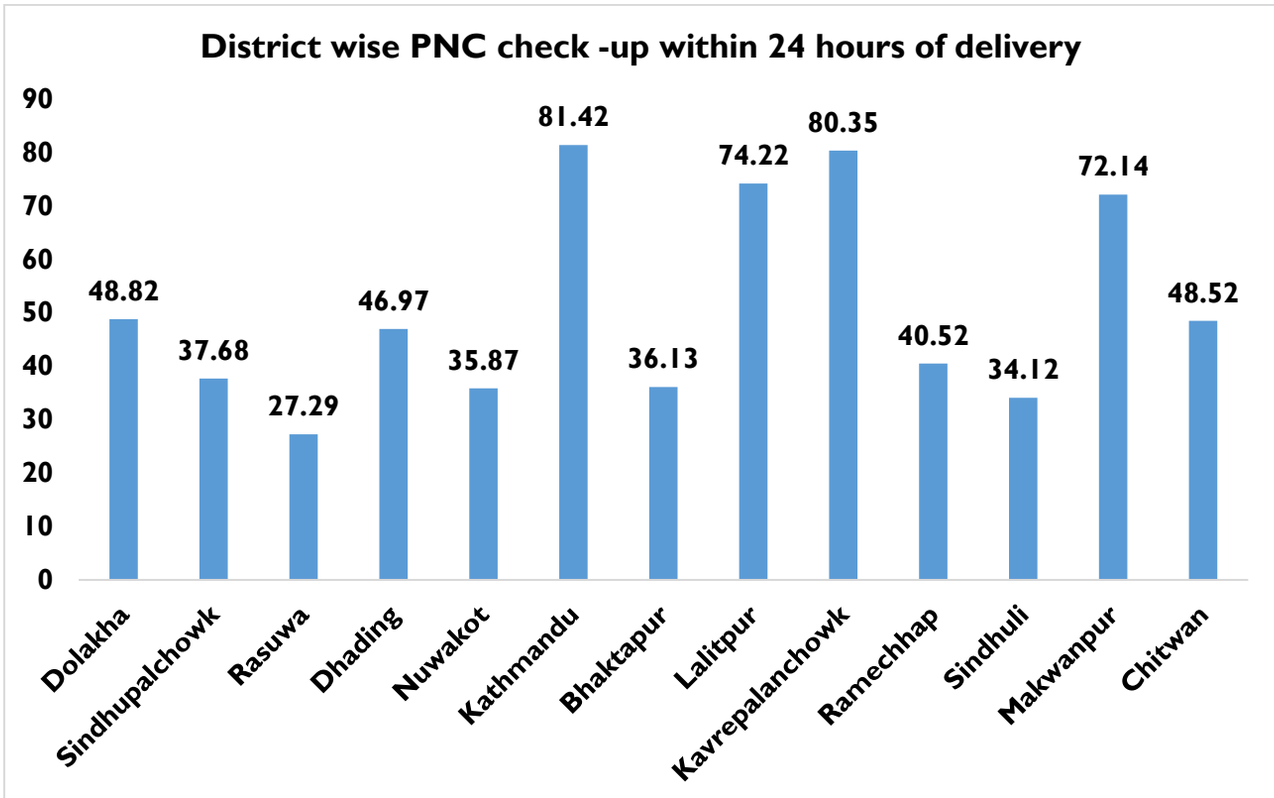


Figure 2.30 District wise PNC check -up within 24 hours of delivery

Source: HMIS/DHIS2

Women who had 4 PNC Checkups

The figure below illustrates the percentage of women who completed four PNC check-ups as per protocol. In FY 2079/80, 21% of women received all four PNC check-ups, which increased to 28.2% in the following fiscal year. However, in FY 2081/82, the percentage declined to 26.9%.

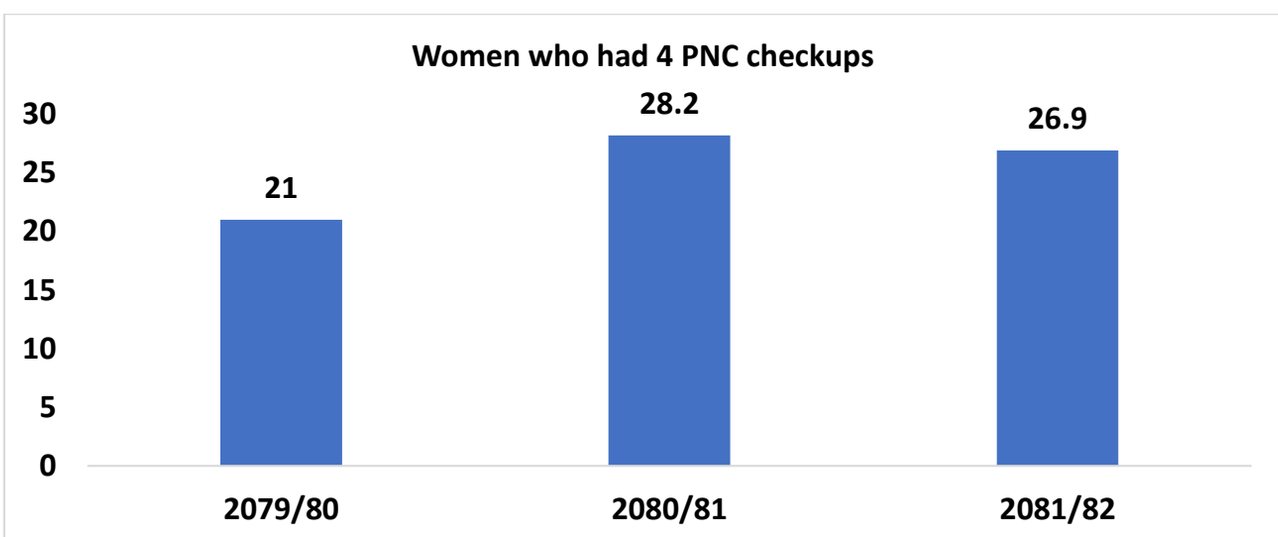


Figure 2.31 Percentage of women who had 4 PNC checkups

Source: HMIS/DHIS2

Women who had 4 PNC Checkups (District-wise)

The figure below presents the district-wise percentage of women who received four postnatal care (PNC) check-ups as per protocol in FY 2081/82. Kavrepalanchok reported the highest coverage at 53.8%. Bhaktapur and Chitawan recorded the second- and third-lowest percentages at 18.7% and 18.8%, respectively, while Kathmandu reported the lowest rate at 13.8%.

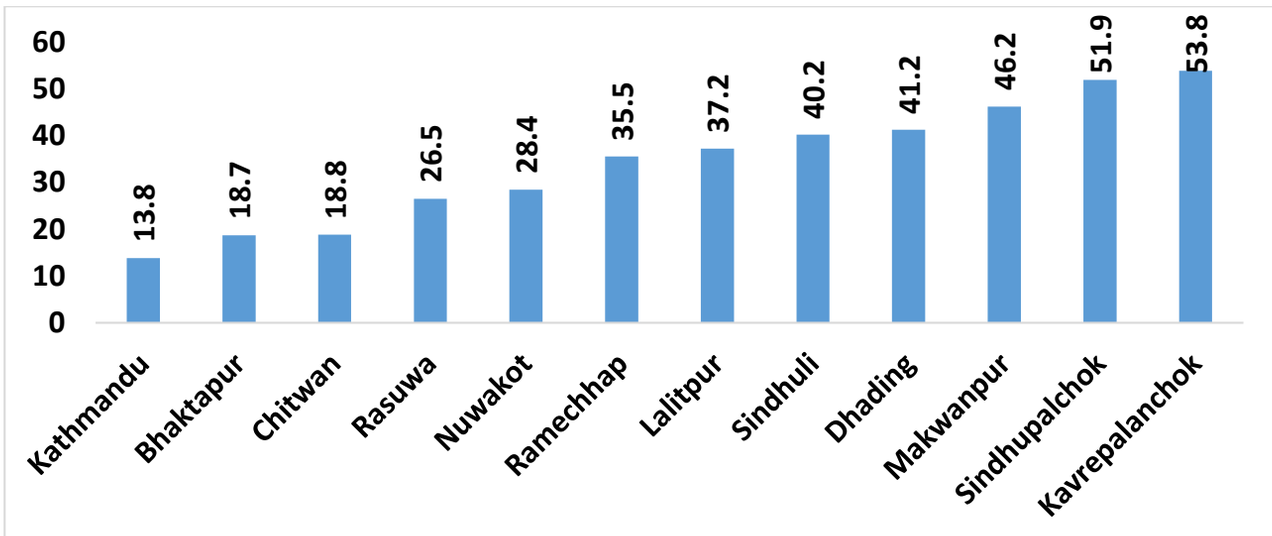


Figure 2.32 District wise percentage of women who had 4 PNC Checkup as per protocol

Source: HMIS/DHIS2

Percentage of postpartum women who received Vit A supplementation

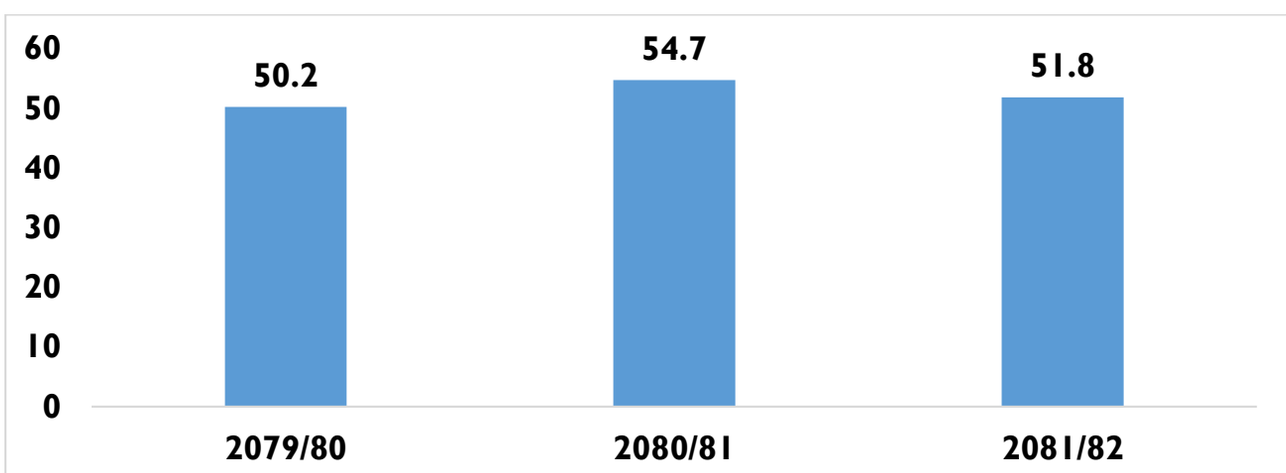


Figure 2.33 Percentage of postpartum women who received Vit. A supplementation

Source: HMIS/DHIS 2

The above figure presents the percentage of postpartum women who received Vitamin A supplementation. In FY 2079/80, 50.2% of women received Vitamin A, which increased to 54.7% in the following fiscal year, and declined to 51.8% in FY 2081/82.

District-wise trend of percentage of postpartum women who received Vit. A supplementation

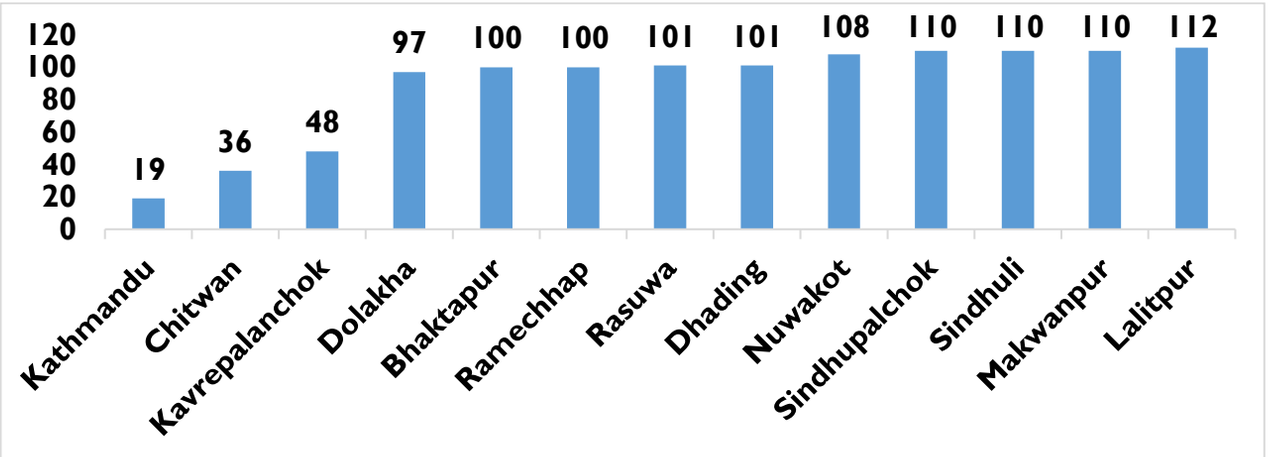


Figure 2.34 District-wise Percentage of postpartum women who received Vit A supplementation

Source: HMIS/DHIS 2

The above figure presents the district-wise percentage of postpartum women who received Vitamin A supplementation in FY 2081/82. Districts such as Lalitpur (112%), Makawanpur, Sindhuli, and Sindhupalchok (110%) recorded the highest coverage, while Kathmandu reported the lowest coverage at 19%.

Issues, Action to be taken, and Responsibilities of Safe Motherhood program

Issues/ Challenges	Action to be taken	Responsibilities
Lack of 8 – ANC contact	Awareness programme should be launched.	MOH,HD,HO and all local levels
Lack of 4-PNC visits according to protocol	Mobilization of health personnel's from local level. Awareness programme should be provided to consumers.	MOH, Local Level
Drop out of Medical officer and nursing staff of remote areas Birthing center/ CEONC.	Along with quality training, remuneration should be provided for the staff.	MOH,HD
Regular and insufficient supply of Iron Folic Acid Tablets	Procurement process should be delegated to provincial and local level. Inventory management system should be developed.	MOH
Lack of SBA trained staff	Provision of SBA training on regular basis. SBA trained staffs should be mobilized in every birthing centre.	MOH, HTC,HD

Remarks	Action to be taken	Responsibilities
Lack of Blood bank in some CEONC/hospitals.	Hospital should collaborate with the Red Cross and blood banks to provide emergency obstetric care.	MOH,HD, Provincial hospital
Poor data entry system for maternal and neonatal morbidity and mortality.	RMNACH and MPDSR web-based system should be activated in all hospital/district.	MOH, HD, Provincial hospital.
Lack of MPDSR review.	MPDSR committee should be organized and the report should be done in MOH and HD after any maternal and neonatal death.	MOH, HD, Provincial hospital

2.5 Family Planning and Reproductive Health

Introduction

Family planning and reproductive health are recognized as fundamental rights in the Constitution of Nepal (2072 BS) and are included in the basic health service package under the Public Health Service Act (2075 BS). Consequently, Nepal's health programs prioritize family planning and reproductive health as essential components aimed at improving individual and family well-being by enabling people to make informed choices about their reproductive lives.

Furthermore, the importance of ensuring the availability and accessibility of rights-based family planning services is reinforced in the Safe Motherhood and Reproductive Health Rights Act (2075 BS), its Regulation (2077 BS), the 16th Five-Year Periodic Plan (2081/82–2085/86 BS), and the Safe Motherhood and Newborn Health Roadmap (2076–2087 BS).

In 2023, the Government of Nepal endorsed the FP2030 commitment, adopting the vision: "By the end of 2030, every individual and family will lead a healthy, happy and prosperous life, fully exercising their sexual and reproductive health and rights." To realize this vision, six key commitments have been outlined, focusing on health governance, equitable contraceptive access, adolescent and youth needs, commodity security, behavior change, and increased budgeting for family planning programs.

Major Achievements in the Family Planning Program

Contraceptive Prevalence Rate (unadjusted) among WRA

The figure below represents the trend of contraceptive prevalence rate (unadjusted) among women of reproductive age of Bagamati Province. It shows that Contraceptive prevalence rate has drastically decreased from 34 to 23 percent from FY 2079/80 to 2081/82. While comparing with the National CPR of FY 2081/82, the CPR of Bagamati Province is lower than national level.

Contraceptive Prevalence Rate

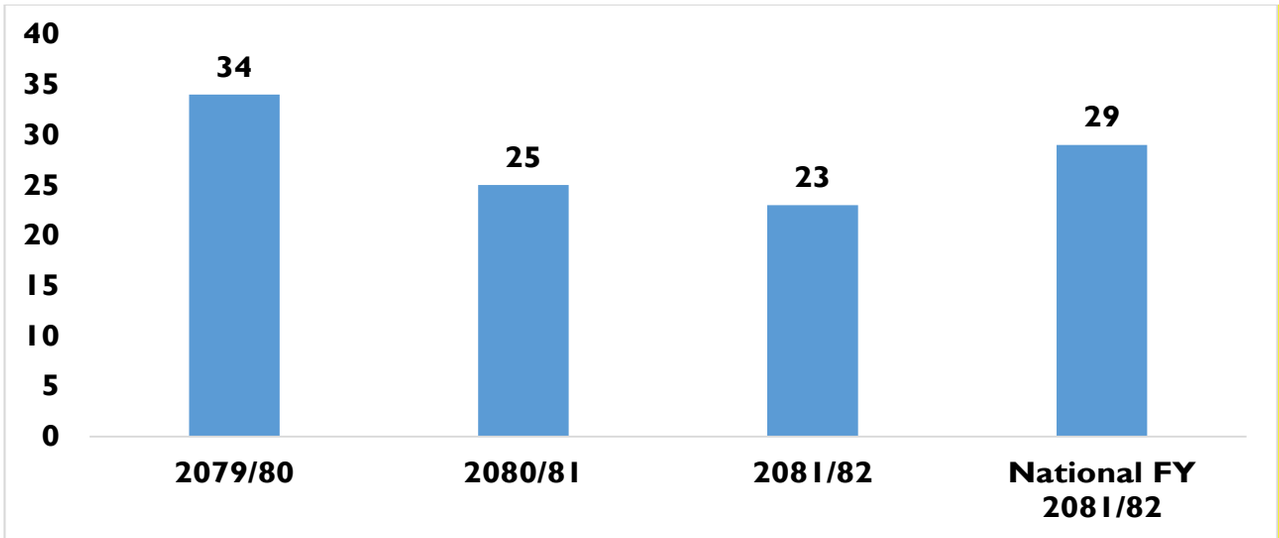


Figure 2.35 CPR in Bagamati Province

Source: HMIS/DHIS2

District-Wise CPR in Bagamati Province (FY 2081/082)

The figure below indicates district wise trend of CPR in Bagamati Province of FY 2081/82. Rasuwa has the highest CPR (44%) followed by Kavrepalanchok CPR (41%) and Ramechhap (39%) while Kathmandu has the lowest CPR (15%) followed by Bhaktapur CPR (16%).

Chitawan has CPR of 24% which is similar to province average while other districts like Dhading, Nuwakot, Makawanpur, Dolakha, Sindhuli, Lalitpur and Sindhupalchok have CPR above Provincial average.

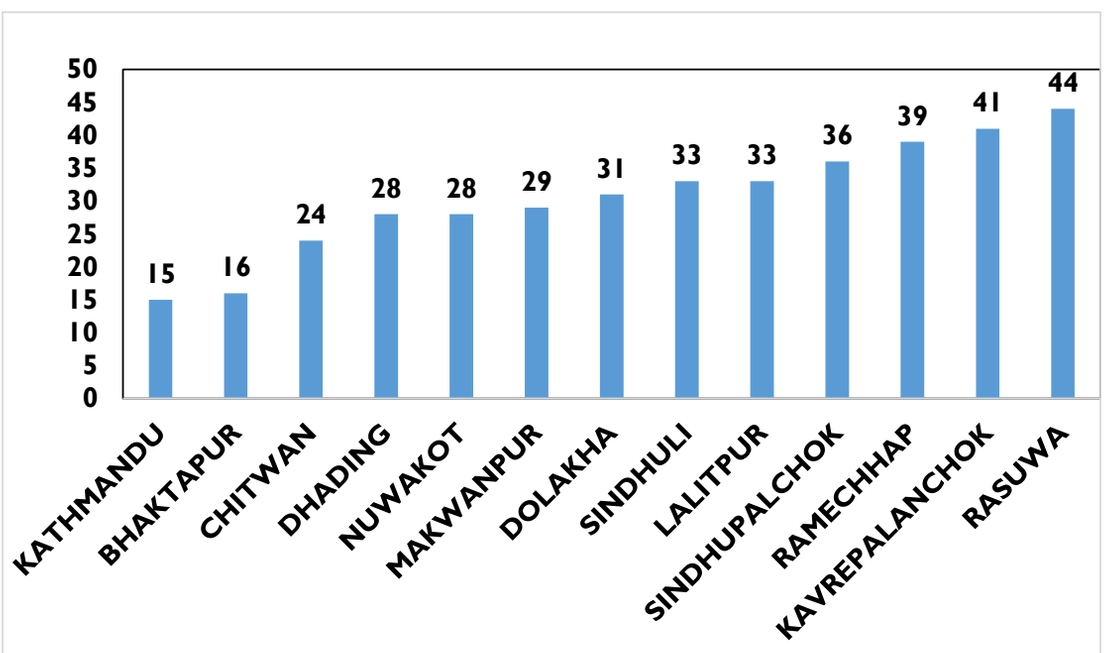


Figure 2.36 District-wise trend of CPR in Bagamati Province

Source: HMIS/DHIS2

New acceptor of FP methods among MWRA (FY 2081/82)

The figure below illustrates the district-wise status of new acceptors of FP methods among MWRA in the fiscal year 2081/82. Among the districts of Bagamati Province, Rasuwa (18.48%) has the highest percentage of new acceptors of contraceptive methods for spacing , while Bhaktapur (4.81%) has the lowest . Four districts have new accepter below 10% while remaining districts have above 10%.

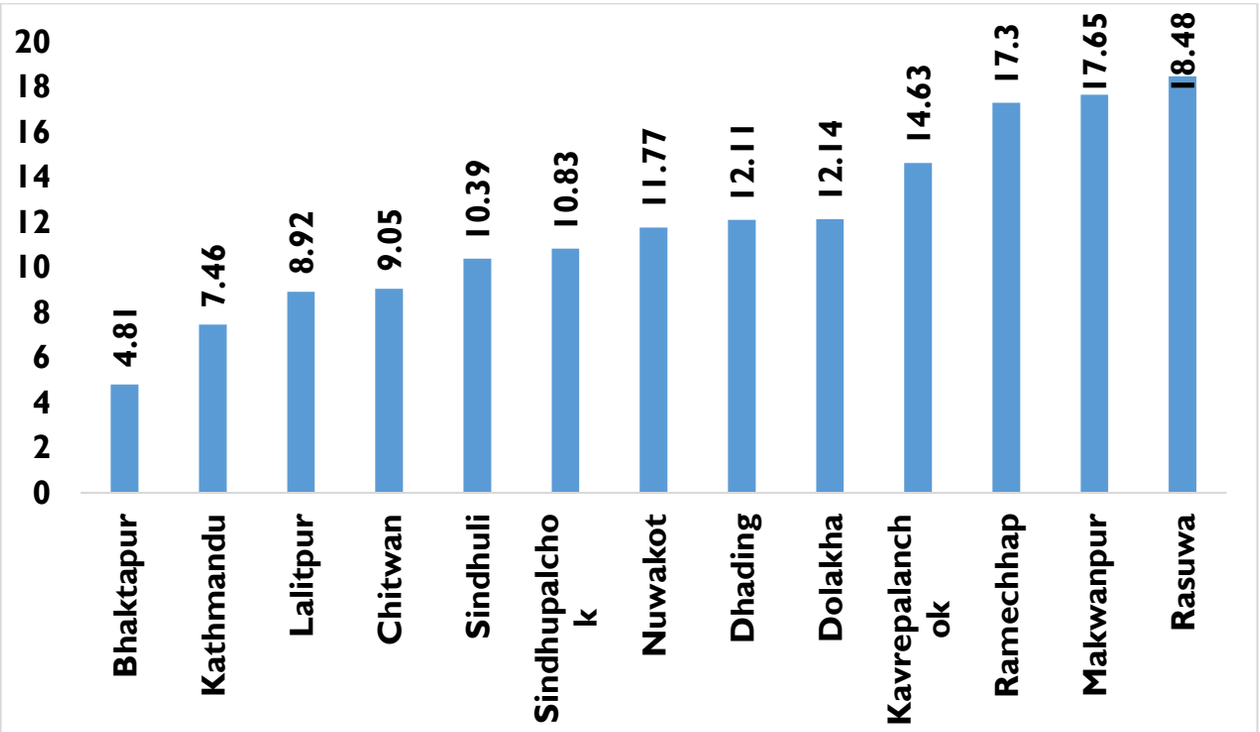


Figure 2.37 District-wise status of new accepter of FP methods among MWRA (FY 2081/82)

Source:HMIS/DHIS2

2.6 Safe abortion services

Background

Global and national evidence shows that many women face unwanted pregnancy including due to limited access to family planning information and services. Such women who cannot access safe abortion services in a timely way are at a high risk of developing complications due to unsafe abortions, or in the worst case, suicide due to social pressure. Thus, there was a need to make safe abortion services available, accessible, and affordable to all women with unwanted pregnancies. WHO has defined the four key components of comprehensive abortion care as:

- Pre and post counselling on safe abortion methods and post-abortion contraceptive methods.
- Termination of pregnancies as per the national law and protocol.
- Diagnosis and treatment of existing reproductive tract infections; and
- Provide contraceptive methods as per informed choice and follow-up for post-abortion complication management.

Nepal legalized abortion in 2002 to reduce maternal morbidity and mortality through unsafe abortion. The first ever Comprehensive Abortion Care (CAC) service was started at the Maternity Hospital, Kathmandu, in March 2004. First trimester surgical abortion was made available throughout the country in 2004. Second trimester abortion training began in 2007 and medical abortion was introduced in 2009.

According to Safe motherhood and Reproductive Health Right Act 2075, the law permits abortion with the consent of pregnant women for any indication up to 12 weeks gestation and up to 28 weeks of gestation in special conditions like rape, insist, fetus abnormalities, mental condition, immune suppression disease. Similarly, this Act has adopted that only licensed health worker who has fulfilled the prescribed standards and qualification and is listed as safe abortion service provider shall have to provide the pregnant woman with safe abortion service pursuant.

Safe abortion services received

Safe abortion services increased from 19,225 in FY 2079/80 to 22,231 in FY 2080/81 and to 24,884 in FY 2081/82. Rasuwa district has the lowest number of safe abortion services due to the lack of listed service sites and service providers. While, Kathmandu district had the highest number of safe abortion services, followed by Chitawan district.

Table 2.20 Trends of safe abortion services by adolescents (FY 2079/80-2081/82)

Trends of safe abortion services received by adolescents			
District	FY 2079/80	FY 2080/81	FY 2081/82
Dolakha	17	17	7
Sindhupalchok	5	6	9
Rasuwa	0	0	1
Dhading	46	73	34
Nuwakot	6	8	17
Kathmandu	699	909	868
Bhaktapur	23	109	84
Lalitpur	84	121	197
Kavrepalanchok	58	42	49
Ramechhap	21	14	19
Sindhuli	34	18	39
Makawanpur	61	89	72
Chitawan	307	266	278
Bagamati Province	1361	1672	1672

Source: HMIS/DHIS2

The table above presents the number of adolescents using safe abortion services. The number increased in FY 2080/81 and remained same in the following year. In FY 2081/82, the highest use of safe abortion service among adolescent was seen in Kathmandu district followed by Chitawan and least use was seen in Rasuwa.

RH related training sites in Bagamati Province

Table 2.21 RH related training sites in Bagamati Province

S.N.	Name of training sites	Types of Training
1.	Paropakar maternity hospitral thapathali	MA, MVA and second trimester safe abortion training Implant, IUCD
2.	CFWC, Chhetrapati Kathmandu	Implant, IUCD, Minilap, NSV
3.	Bharatpur Hospital	MA, MVA and second trimester safe abortion training Implant, IUCD
4.	Kathmandu Model Hospital	MA, MVA, 2nd trimester abortion care, CAC
5.	Kathmandu Medical College	MA, MVA and second trimester safe abortion training Implant, IUCD
6.	FPAN ,Pulchok, Lalitpur	MA, MVA, Implant, IUCD, Minilap, NSV
7.	Marie Stops Nepal, Satdobato	Implant, IUCD, Minilap, NSV, CoFP Counseling, MA
8.	FPAN, Chitawan	Implant, IUCD, , CoFP Counseling, MA
9.	Marie Stops Chitawan	Implant, IUCD, Minilap, NSV, CoFP Counseling, MA

Women who received contraceptives after abortion

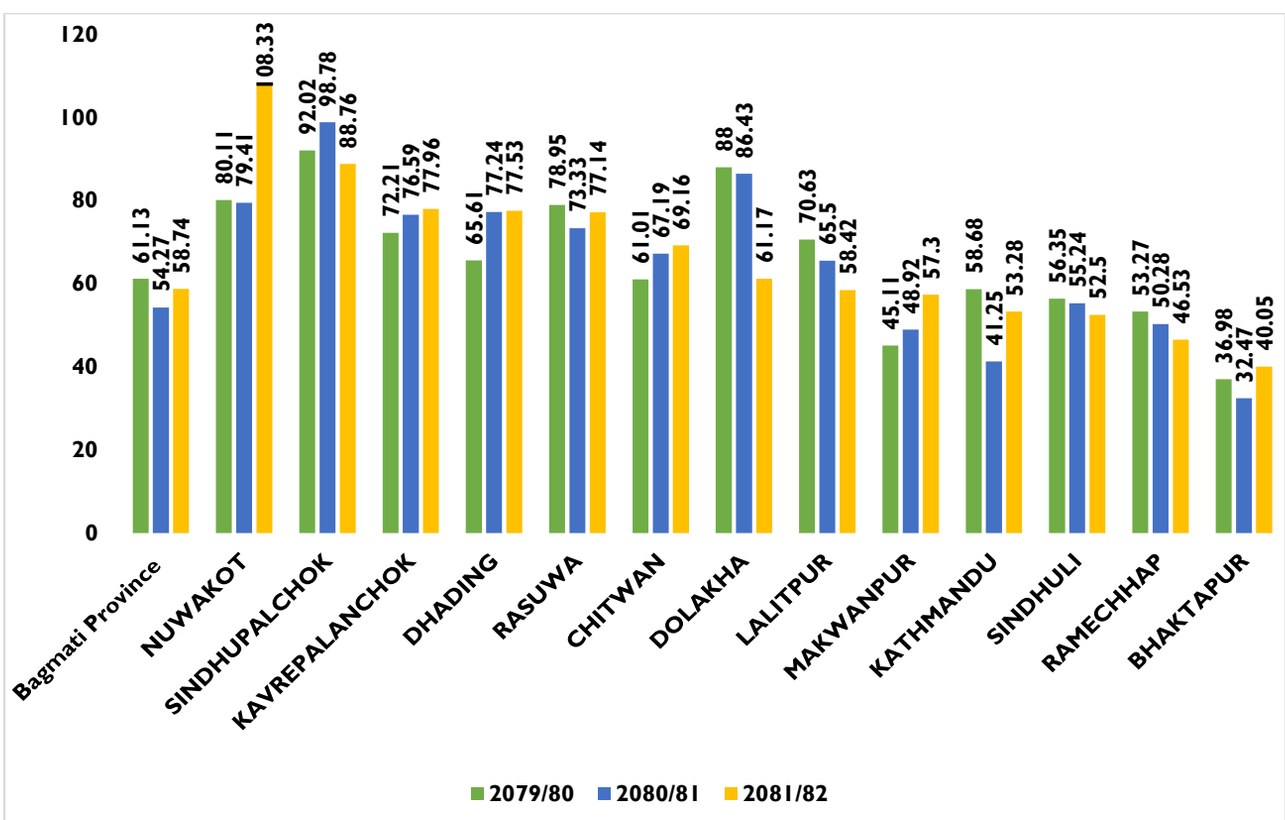


Figure 2.38 Percentage of women who received contraceptives after abortion

Source: HMIS/DHIS 2

Above figure shows that the percentage of women aged 20 years and above who received contraceptives after abortion increased from the last fiscal year 2080/81 from 54.27% to 58.74% at the provincial level (Bagamati Province). Nuwakot district consistently reported the highest rates of 108.33% by 2081/82, followed by Kavrepalanchok, while Bhaktapur had the lowest at around 40.05%.

No. of women who have received Safe Abortion Services (<20 years)

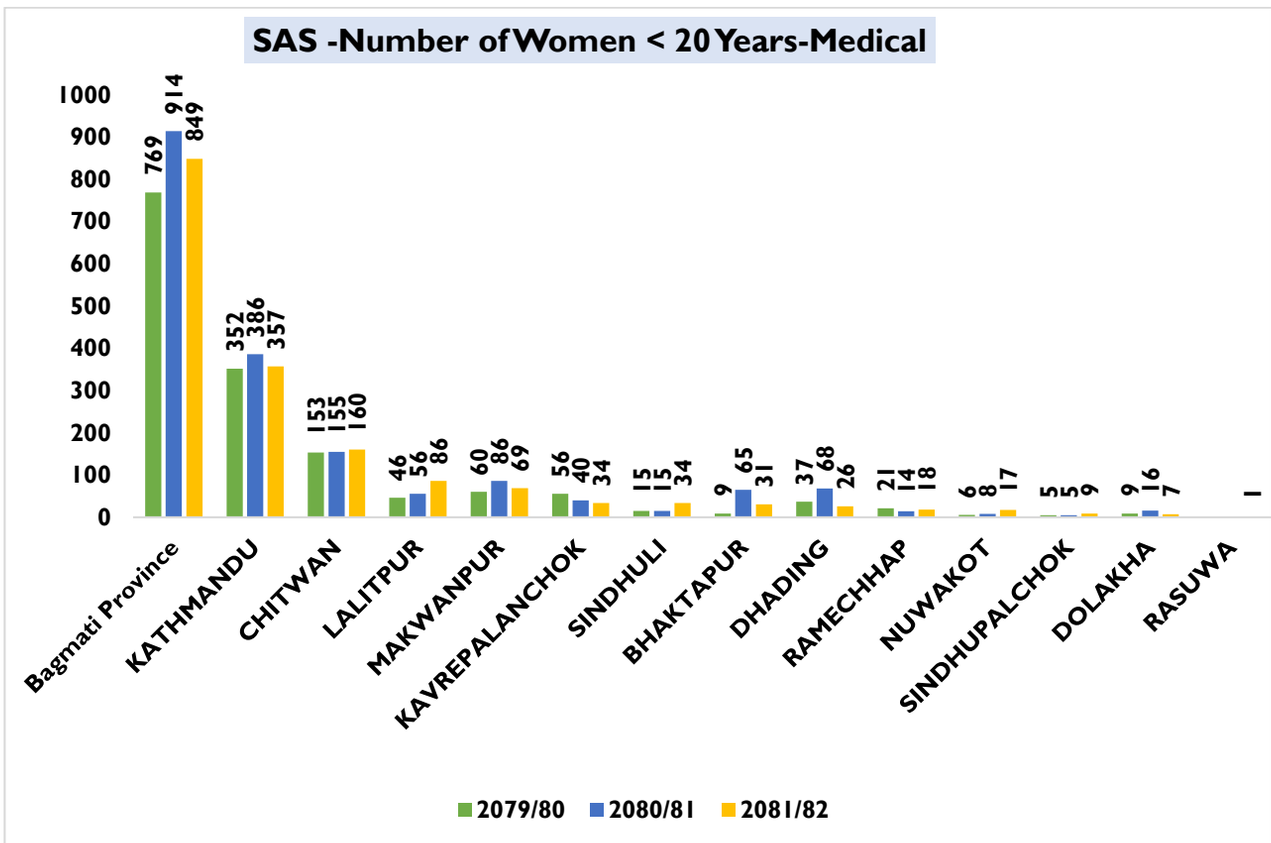


Figure 2.39 No. of women who have received Safe Abortion Services (<20 years)-Medical

Source: HMIS/DHIS 2

Above figure shows that the number of women aged below 20 years receiving medical safe abortion services decreased from the FY 2080/81 (914) to FY 2081/82 (849). Kathmandu district consistently reported the highest number of adolescent receiving medical SAS cases with 357 users, followed by Chitawan at 160 and Lalitpur at 86 whereas, Rasuwa being at the lowest with 1.

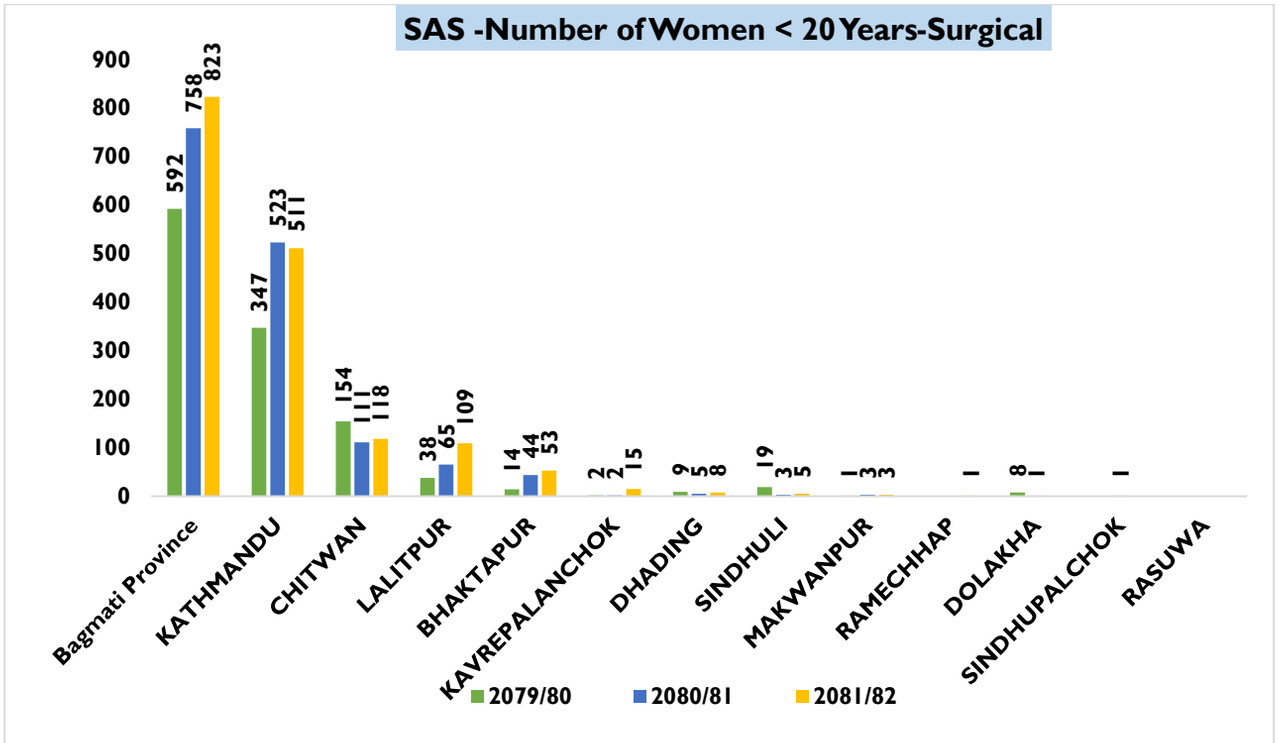


Figure 2.40 No. of women who have received Safe Abortion Services (<20 years)-Surgical

Source: HMIS/DHIS 2

Above figure shows that the surgical safe abortion services among women aged below 20 years showed an overall increasing trend from FY 2079/80 (592) to FY 2081/82 (823) across the three fiscal years. Kathmandu accounted for the highest number of 511 adolescent accessing surgical SAS cases, with Chitawan and Lalitpur reporting at the 2nd and 3rd highest. Most remaining districts reported very low numbers, often in single digits like Rasuwa with 0.

Women who have accessed Safe Abortion Services (≥ 20 years)

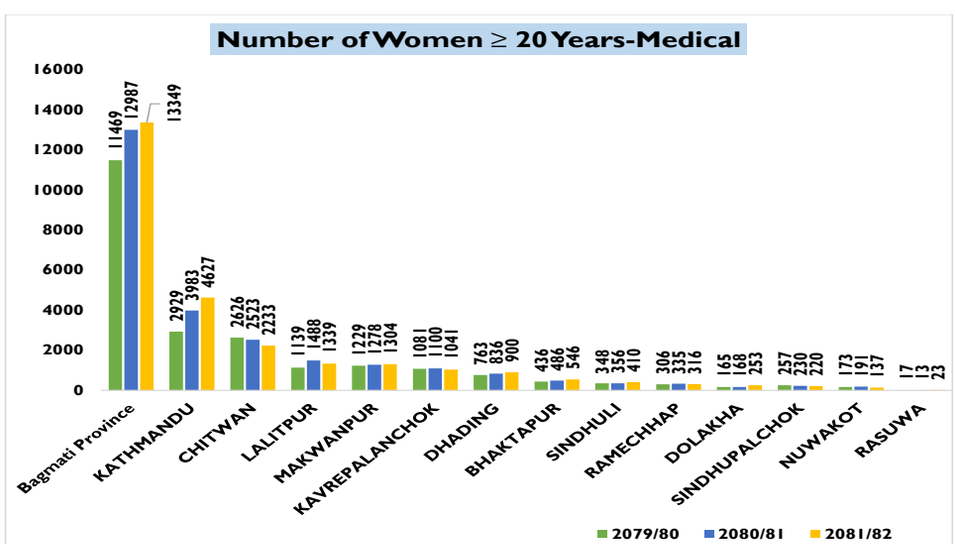


Figure 2.41 No. of women who have accessed Safe Abortion Services (≥ 20 years)

Source: HMIS/DHIS 2

Above figure shows that the medical safe abortion service utilization among women aged 20 years and above increased steadily from FY 2079/80 (11469) to FY 2081/82 (13349) consecutively at the provincial level throughout the three fiscal years. Kathmandu district consistently reported the highest service accessed location with 4627, followed by Chitawan and Lalitpur. All districts showed some level of increase, though wide variation persisted with Rasuwa being the lowest with 23 having declined number of women accessing safe abortion services.

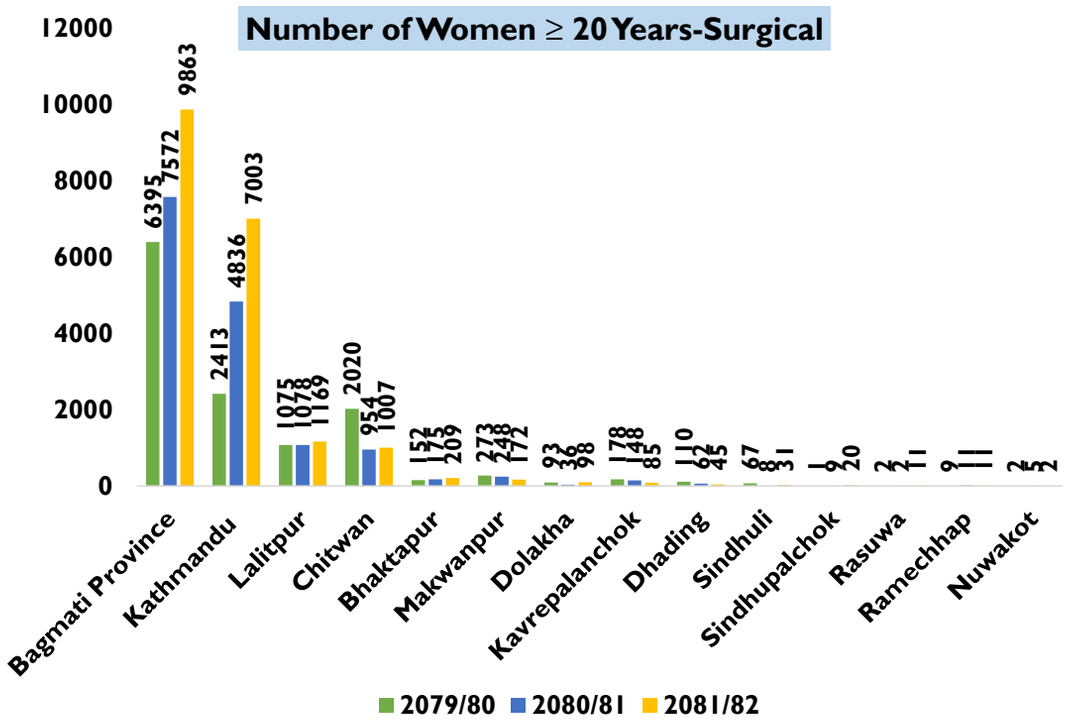


Figure 2.42 No. of women who have accessed Safe Abortion Services (≥ 20 years)

Source: HMIS/DHIS 2

Above figure shows that the surgical safe abortion service utilization among women aged 20 years and above increased steadily from FY 2079/80 (6395) to FY 2081/82 (9863) at the provincial level throughout the three fiscal years. Kathmandu district consistently reported the highest service accessed location with 7003, followed by Lalitpur and Chitawan. All districts showed some level of increment, where Nuwakot (2) had the least no. of women who have accessed Safe Abortion Services.

2.7 Adolescent Sexual and Reproductive Health

Background

National Adolescent Sexual and Reproductive Health is one of the priority programs of Family Welfare Division (FWD), Department of Health Services. The criteria of adolescent-friendly services (AFS) include, among others, the availability of trained staff as well as information materials on adolescent sexual and reproductive health, the delivery of services in a confidential way, adolescent-friendly opening hours, the display of the AFS logo as well as the inclusion of two adolescents in the HFOMC. According to NDHS 2022, the Adolescent Fertility Rate (AFR) is 71 per 1000 women aged 15 to 19. The SDG aims to bring the rate of teenage pregnancies down to 30 per 1000. Nepal is one of the countries in South Asia in developing and endorsing the first National Adolescent Health and Development (NAHD) Strategy 2000. To address the needs of emerging issues of adolescents in the changing context, the NAHD strategy was revised and endorsed in 2018.

Goal

The overall goal of the National ASRH Program is to promote the sexual and reproductive health status of adolescents.

Objectives

- To increase the availability of and access to quality information on adolescent health and development, and provide opportunities to build the respective knowledge and skills of adolescents, service providers and educators.
- To increase accessibility and utilization of adolescent health and counseling services.
- To create safe and supportive environment for adolescents in order to improve their legal, social and economic status, and
- To create awareness through BCC campaigns and at national, districts and community level through FCHVs and mothers' groups.

Key Interventions Area for ASRH program

- School health nurse program
- ASRH site certification
- Capacity building of health workers
- Scale up and strengthen health facilities for Adolescent Friendly Services
- Establishment of Adolescent Friendly Information Corners (AFICs) in schools
- ASRH training to health workers
- Menstrual Hygiene management
- Comprehensive Sexuality Education (CSE) in School
- Advocacy

ASRH sites in Bagamati Province

Table 2.22 AFS sites according to district

AFS sites according to district	
District	Number
Dolakha	40
Sindhupalchok	22
Rasuwa	28
Dhading	32
Nuwakot	25
Kathmandu	5
Bhaktapur	2

Lalitpur	21
Kavrepalanchok	23
Ramechhap	16
Sindhuli	33
Makawanpur	86
Chitawan	6
Bagamati Province (Total)	**339**

Service utilization

Family Planning Service

Table 2.23 District-wise new users of contraceptive in FY 2081/82

District	New users of Depo- provera among <20years age	New users of IUCD among <20years age	New users of Implant among <20years age	New users of Pills among <20years age
Dolakha	46	125	6	12
Sindhupalchok	124	0	19	58
Rasuwa	36	0	4	9
Dhading	256	0	30	55
Nuwakot	115	2	33	24
Kathmandu	634	86	290	1179
Bhaktapur	89	3	11	33
Lalitpur	52	2	41	65
Kavrepalanchok	168	13	87	22
Ramechhap	56	0	11	14
Sindhuli	82	1	68	28
Makawanpur	397	2	146	111
Chitawan	222	16	133	200
Bagamati Province	2277	125	879	1810

Source: HMIS/DHIS2

The table above shows the mix method of new users of the contraceptives. Depo-provera is the most preferred contraceptive method among adolescents and pills is the second preferred method.

Issues, Action to be taken and Responsibilities of ASRH Program

Issues / Challenges	Action to be taken	Responsibilities
High prevalence of early marriage and teenage pregnancy	Intensify community awareness activities and comprehensive sexuality education in schools	MOHP (Federal, Provincial), Local Level
Less priority and inadequate resource allocation for ASRH program.	Sensitization/advocacy with decision makers at province level and local level for increased investment in adolescents and youths	MOHP (Federal, Provincial), Local Level and ASRH partners
Increased use of SAS by adolescent girls	Community awareness programme should be launched. Act and regulations regarding SAS should be implemented, evaluated and reviewed.	
Low CPR and high unmet need for contraception among vulnerable populations including adolescents	Intensify information and awareness programs targeted to adolescents. Strengthen Adolescent Friendly Service Sites and information corners. Capacitate health workers regarding adolescent responsive service provision.	MOHP (Federal, Provincial), Local Level
Declining trends in the utilization of sexual and reproductive health services by adolescents in many districts	Strengthen adolescent friendly service sites Ensure functional integration of ASRH issues and services in the school nurse program Intensify adolescent-focused community and school awareness activities and comprehensive sexuality education	FWD, Province, Local Level and ASRH partners
Inadequate trained human resources on ASRH in health facilities	Strengthen ASRH clinical training sites and develop the capacity of service providers with behavioral and skill focused competency based ASRH training" at all health facilities and specially AFS sites	FWD, MOH, Local Level

2.8 Primary Health Care Outreach Clinic

Primary health care outreach clinics (PHC-ORC) was initiated in 1994 (2051 BS) to bring health services closer to the communities. These clinics aim to improve access to basic health services, including family planning, child health and safe motherhood. These clinics are service extension sites of PHCs and health posts. The primary responsibility for conducting outreach clinics is held by ANMs and paramedics. FCHVs and local NGOs, and community-based organizations (CBOs) support health workers to conduct clinics, including recording and reporting. Based on the local needs, PHC/ORCs are conducted every month at fixed locations of the VDC on specific dates and time. The clinics are conducted within half an hour's walking distance for the population residing in that area.

Services to be provided by PHC-ORCs according to the PHC-ORC strategy

Safe motherhood and newborn care

- Antenatal, postnatal, and newborn care
- Iron supplement distribution
- Referral if danger signs identified

Family planning

- DMPA (Depo-Provera) pills and condoms
- Monitoring of continuous use
- Education and counselling on family planning methods and emergency contraception
- Counselling and referral for IUCDs, implants, and VSC services
- Tracing defaulters.

Child health

- Growth monitoring of children under 3 years
- Treatment of pneumonia and diarrhea

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.

Achievements regarding PHC ORC of FY 2081/82

Table 2.24 Trends in client served by PHC ORC (2079/80-2081/82)

District	Average number of clients served per PHC ORC		
	2079/80	2080/81	2081/82
Dolakha	13	12.9	13.6
Sindhupalchok	18.4	20.1	20.4
Rasuwa	12.7	12.6	12.8

Dhading	20.4	20.6	20.5
Nuwakot	15.2	17.1	17.3
Kathmandu	18.8	20.7	15.1
Bhaktapur	15.6	18.1	22.3
Lalitpur	17.6	16.9	16.5
Kavrepalanchok	18.1	24.4	23.9
Ramechhap	14.1	15.7	16.8
Sindhuli	16.5	18.2	19.3
Makawanpur	21.2	22.4	21.6
Chitawan	17.6	19.7	22.3
Bagamati Province	17.4	19.7	19.6

Source: HMIS/DHIS2

The table above shows the average number of clients served per PHC ORC in three fiscal years. The average number of clients served per PHC ORC has increased in 2080/81 and slightly decreased in the following year, 2081/82 trend in each year in Bagamati province.

Table 2.25 Trends in percentage of planned PHC ORC conducted

District	Trends in percentage of planned PHC ORC conducted		
	2079/80	2080/81	2081/82
Dolakha	83.9	88.6	93.6
Sindhupalchok	90.1	98.8	98.6
Rasuwa	78.8	89.1	87.3
Dhading	95.4	94	97.9
Nuwakot	89.9	92.2	93.9
Kathmandu	85.9	88.2	82.9
Bhaktapur	70.6	96.4	97.6
Lalitpur	92.6	95.6	96.8
Kavrepalanchok	97	99.4	99.5
Ramechhap	97.1	98.3	98.9
Sindhuli	89.2	87.4	94.1
Makawanpur	92.5	95.9	95.6
Chitawan	85.9	96	97.4
Bagamati Province	91.3	94.8	95.9

Source: HMIS/DHIS2

The table above shows the outreach clinic conduction percentage by district for the last three fiscal years (2079/80-2081/82). The highest percentage (99.5) can be seen in Kavrepalanchok district whereas the least (82.9) in Kathmandu district out of total planned clinics in FY 2081/82.

Issue/Challenges, Action to be Taken and Responsible Person

Issues/ Challenges	Action Planned	Responsibilities
Inadequate skilled human resources for recording and reporting at various levels, particularly at LLGs and Hospitals.	Conduct O&M surveys to update and assess the existing human resources involved in recording and reporting, with a focus on LLGs and Hospitals.	MoH, HD, Public Health Office, LLG
Low reporting rate and delays in on-time reporting, particularly in metropolitan cities, tertiary public hospitals, and private hospitals in Kathmandu, Lalitpur, and Chitawan.	Implement interventions to improve recording and reporting processes, focusing on metropolitan cities, tertiary hospitals, and private hospitals in Kathmandu, Lalitpur, and Chitawan.	MoH, HD, Public Health Office, LLG
Limited capacity for data analysis, especially at the LLG and health facility levels, and insufficient use of data for decision-making.	Prioritize knowledge and skill transfer on data analysis and its application in planning at the LLG and health facility levels.	MoH, HD, Public Health Office, LLG

CHAPTER
03

COMMUNICABLE DISEASES

3.1 Tuberculosis

Background

Tuberculosis (TB) is a communicable disease and remains a significant public health challenge in Nepal. It is one of the leading causes of mortality both globally and nationally and represents the foremost cause of death attributable to a single infectious agent, exceeding HIV/AIDS. TB is caused by "Mycobacterium tuberculosis" and is transmitted through airborne particles released when individuals with active TB expel bacteria, such as during coughing. The disease predominantly affects the lungs (pulmonary TB) but may also involve other organs and systems (extrapulmonary TB). An estimated one-quarter of the global population is infected with "Mycobacterium tuberculosis", a proportion that is comparable in the Nepalese context.

TB can affect individuals of all ages and geographic settings; however, the burden of disease is highest among adults, with incidence rates nearly twice as high among males compared to females. Globally, approximately 30 high TB burden countries account for nearly 90 percent of all TB cases annually. TB is strongly associated with poverty and is frequently accompanied by socioeconomic vulnerability, marginalization, stigma, and discrimination among affected populations. Although TB is both preventable and curable, with treatment success rates approaching 90 percent, access to timely diagnosis and quality care remains suboptimal. In Nepal, an estimated 58 percent of individuals with TB are not reached by diagnostic and treatment services, underscoring persistent gaps in universal health coverage, despite ongoing efforts to scale up preventive treatment among contacts.

Status of TB epidemic

In Nepal, an estimated 68,000 people fell ill with TB in FY 2081/82. National Tuberculosis Programme (NTP) registered 39,151 all forms of TB cases (39% female and 61% male). Out of 39,151 all forms of TB cases, 22,821 (58%) were pulmonary bacteriologically confirmed (PBC) cases, 5539 (14%) were pulmonary clinically diagnosed (PCD) cases, and 10791 (28%) were extrapulmonary TB cases. Geographically, most people who reported TB were from terai region.

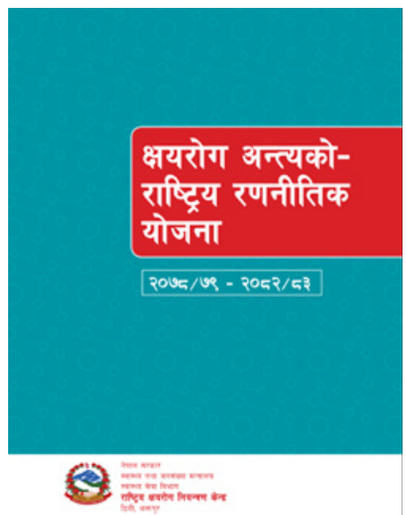
In Bagamati Province, in FY 2081/82, 8933 all forms of TB Cases were notified, which still shows a gap of nearly 38% against the projection. Of the total reported cases, 58% were male and 42% were female. Out of 8933 TB Case, 4671 (52%) were pulmonary bacteriologically confirmed (PBC) cases, 1111 (12%) were pulmonary clinically diagnosed (PCD) cases and 3151 (35%) were extrapulmonary TB cases.

Drug-resistant TB continues to be a public health threat. Globally, the estimated annual number of people who developed MDR-TB or RR-TB (MDR/RR-TB) was relatively flat between 2020 and 2022. In 2022, the estimated proportion of people with TB who had MDR/RR-TB was 3.3% among new cases and 17% among those previously treated. In 2022, an estimated 410,000 people fell ill with MDR/RR-TB around the globe, while people who started on treatment were 1,75,650. In Bagamati Province in FY 2081/82 only 93 were put on DR TB Treatments.

Preventive therapy was provided to children under the age of five who were in close contact with individuals diagnosed with tuberculosis. In Bagamati Province, 672 children were identified in household contract tracing, and 433 were eligible for TPT. Among the eligible, 367 were enrolled in TPT during FY 2081/82 (Source: NTPMIS Tracker).

Global Declarations and Commitments for TB program

Based on global and national commitments to reach the set END TB targets, NTCC has developed its National Strategic plan 2021/22-2025/26 for TB, which envisions a TB-free Nepal and aims to significantly reduce TB incidence and mortality while eliminating catastrophic costs for TB-affected households. The plan focuses on strengthening political commitment, governance, and sustainable financing; ensuring early case detection through expanded active case finding, improved diagnostics, and robust laboratory networks; and providing quality, patient-centered treatment and prevention services for drug-sensitive and drug-resistant TB.



Indicators, Milestones and Targets

Table 3.1 Indicators, Milestones and Targets of Tuberculosis

INDICATORS	MILESTONES		TARGETS	
	2020	2025	SDG 2030	2020
Reduction in number of TB deaths compared with 2015 (%)	35%	75%	Reduction in number of TB deaths compared with 2015 (%)	35%
Reduction in TB incidence rate compared with 2015 (%)	20% (<85/100 000)	50% (<55/100 000)	Reduction in TB incidence rate compared with 2015 (%)	20% (<85/100 000)
TB Affected Families facing catastrophic costs due to TB (%)	ZERO	ZERO	TB Affected Families facing catastrophic costs due to TB (%)	ZERO

Progress towards Service Coverage and Disease burden of TB

Institutional Coverage in Bagamati Province

Nepal adopted the DOTS strategy in 1996 and achieved nationwide coverage in 2001. All DOTS centres are integrated into public health services or run through NTP partner organizations in the public and private sectors. In 2081/82, 1223 institutions were offering TB diagnosis and DOTS-based TB control services in the Bagamati Provinces. To increase access to treatment services, NTP has developed partnerships with different organizations, including private nursing homes, polyclinics, I/NGO health clinics, prisons, refugee camps, police hospitals, medical colleges, and municipalities.

Table 3.2 Institutional coverage of TB in FY 2081/82

District	DOTS	DMC	Gene Xpert	DR Center	DR Sub Center	DR Hostel
Dolakha	59	5	1	0	1	0
Sindhupalchok	101	5	1	0	1	0
Rasuwa	25	3	0	0	0	0
Dhading	70	21	1	0	1	0
Nuwakot	82	11	1	1	1	0
Kathmandu	161	51	10	1	5	1
Bhaktapur	46	12	1	1	2	0
Lalitpur	78	13	2	0	1	0
Kavrepalanchok	169	15	1	0	2	0
Ramechhap	93	2	0	0	1	0
Sindhuli	74	13	1	1	2	0
Makawanpur	91	23	1	0	2	0
Chitawan	108	30	4	0	3	0
Total	1157	+-15	24	4	22	1

Source: HMIS/DHIS2

TB Indicators

Case Notification Rate

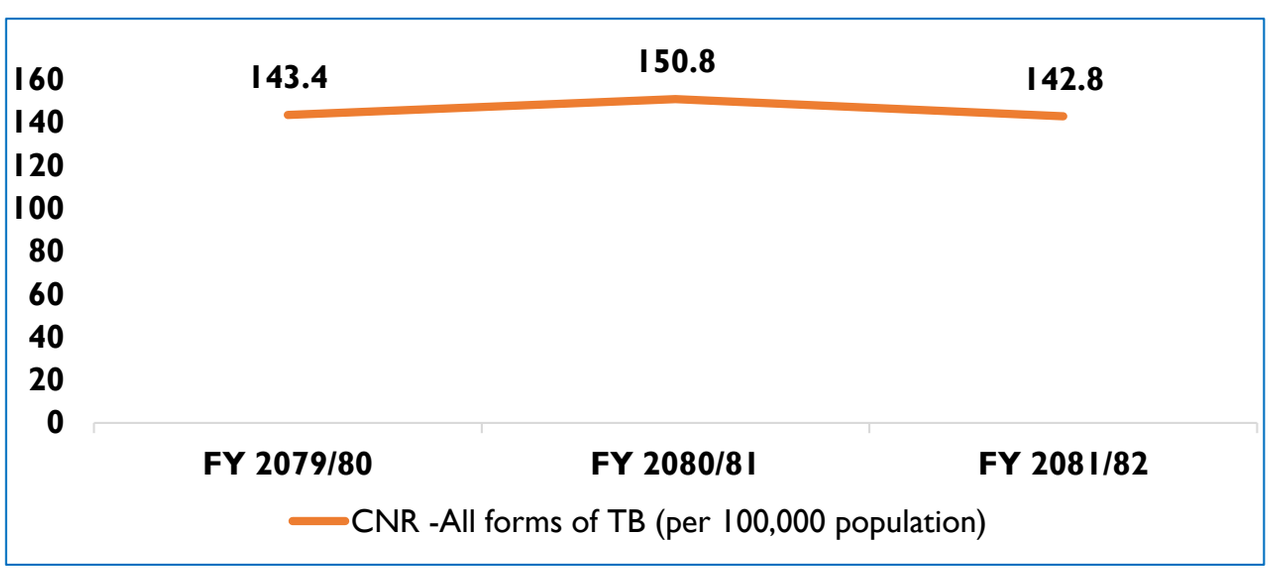


Figure 3.1 Trend of CNR of Bagamati Province

Source: HMIS/DHIS2

The above figure describes the status of the case notification rate. While looking at the figure, the case notification rate of all forms of TB per 100,000 population has increased in FY 2080/81 and decreased in FY 081/82. The decrease was more associated with resource gaps in the country due to transition of the principal recipient of the global fund program, where there were no active case finding activities for nearly three months.

District-wise Case Notification Rate

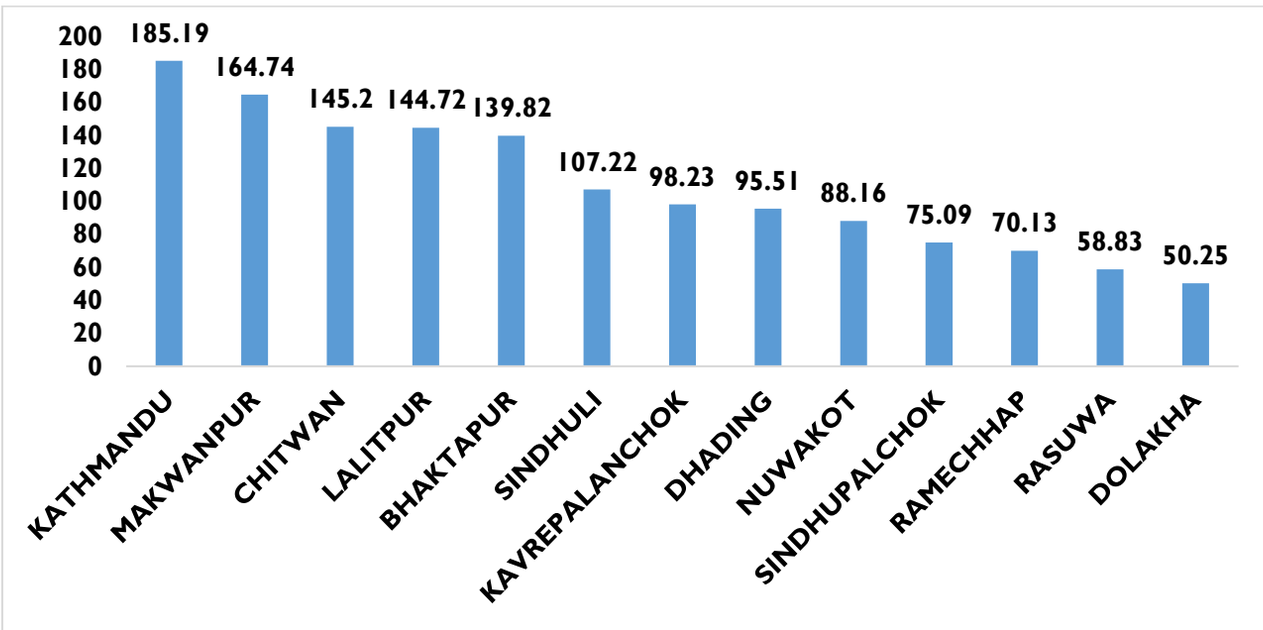


Figure 3.2 District-wise status of case notification rate (all forms of TB)/100,000 pop¬n

Source: HMIS/DHIS2

The above figure shows the case notification rate of districts in FY 081/82. The highest case notification rate has been recorded in Kathmandu, while the lowest in Dolakha. The majority of the districts where global fund programs are being implemented have demonstrated better case notification rates in comparison to other districts.

Treatment Success Rate

The figure below describes the status treatment success rate of three years. The treatment success rate in Bagamati province has been consistently above the national target of 92%. This also supports the case holding capacity of DOTS centers in Bagamati province resulting in cure and treatment completeness of the cases enrolled for treatment.

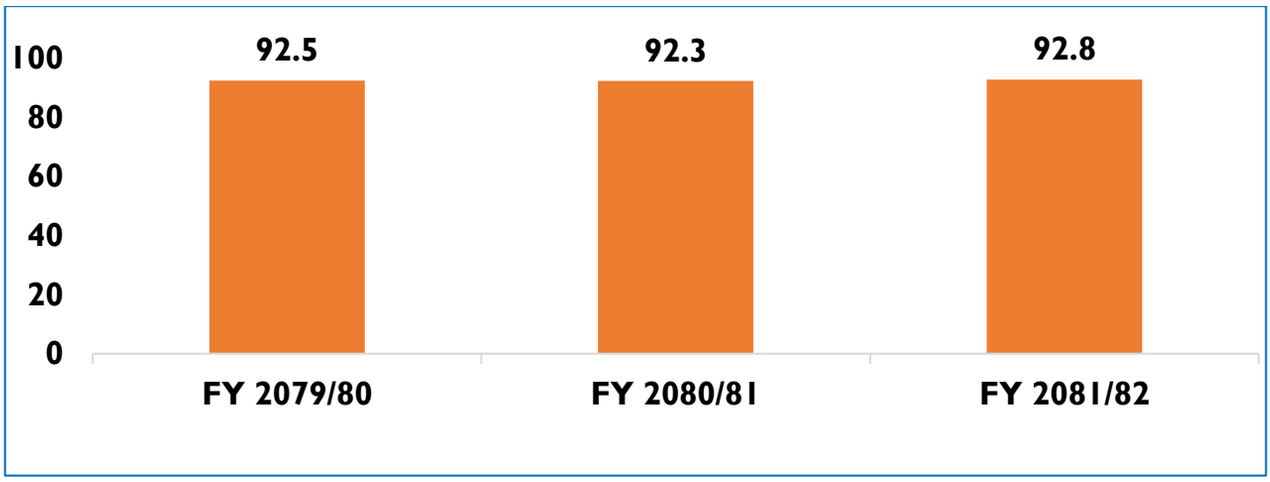


Figure 3.3 Trend of Treatment Success Rate

Source: HMIS/DHIS2

District-wise Treatment Success Rate

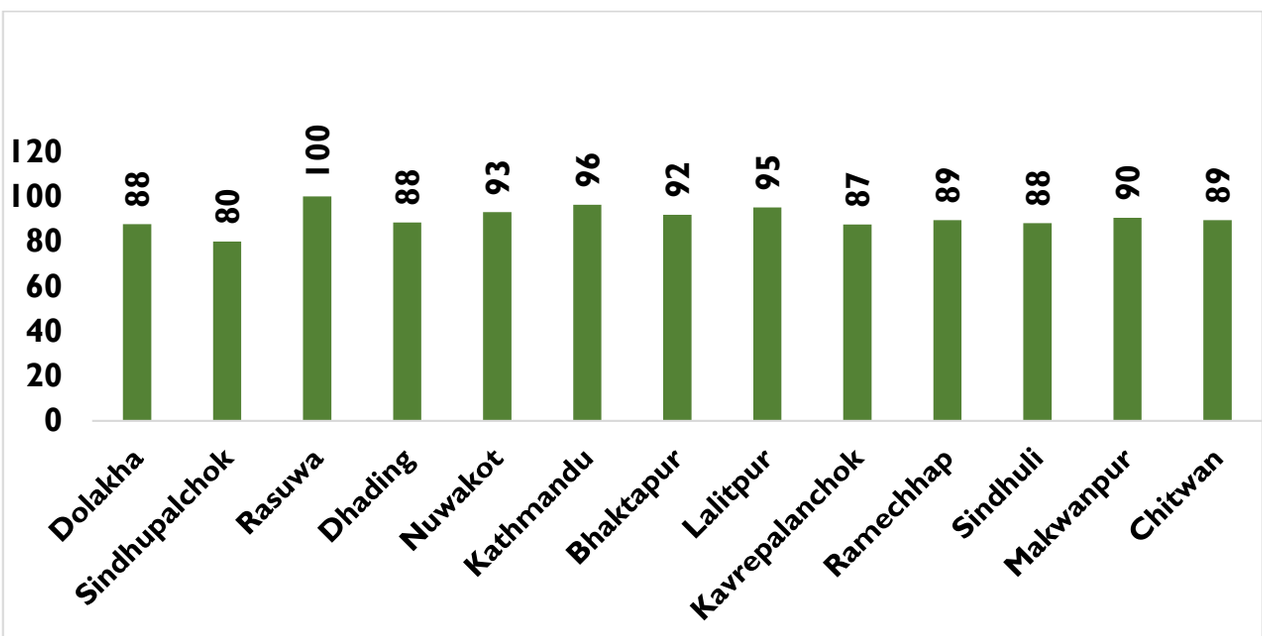


Figure 3.4 District-wise Treatment Success Rate

Source: HMIS/DHIS2

The above figure shows the treatment success rate of TB cases in each district of Bagamati province. In FY 081/82, Rasuwa recorded the highest treatment success rate of 100% followed by Kathmandu, Lalitpur, Nuwakot and Bhaktapur. These districts accounts for enrollment of highest number of cases. Some districts like Sindhupalchok, Kavre, Sindhuli and Chitawan have lower treatment success rate.

Gap in TB Program district-wise in Bagamati Province on the basis of Target Vs Achievement

In Bagamati Province, an estimated 38% gap in tuberculosis (TB) case detection has been observed, indicating the need for intensified efforts to improve identification of TB cases. This gap can be

reduced through the expansion of active case finding, increased outpatient department (OPD)–based presumptive TB screening, strengthened contact tracing, and the implementation of AI-based X-ray screening camps targeting vulnerable and hard-to-reach populations. Although TB diagnostic gaps are evident across all districts, mountain and selected hilly districts require particular attention to enhance TB case notification. The absence of Global Fund–supported activities in these areas further underscores the need for additional targeted support to strengthen TB case detection and notification.

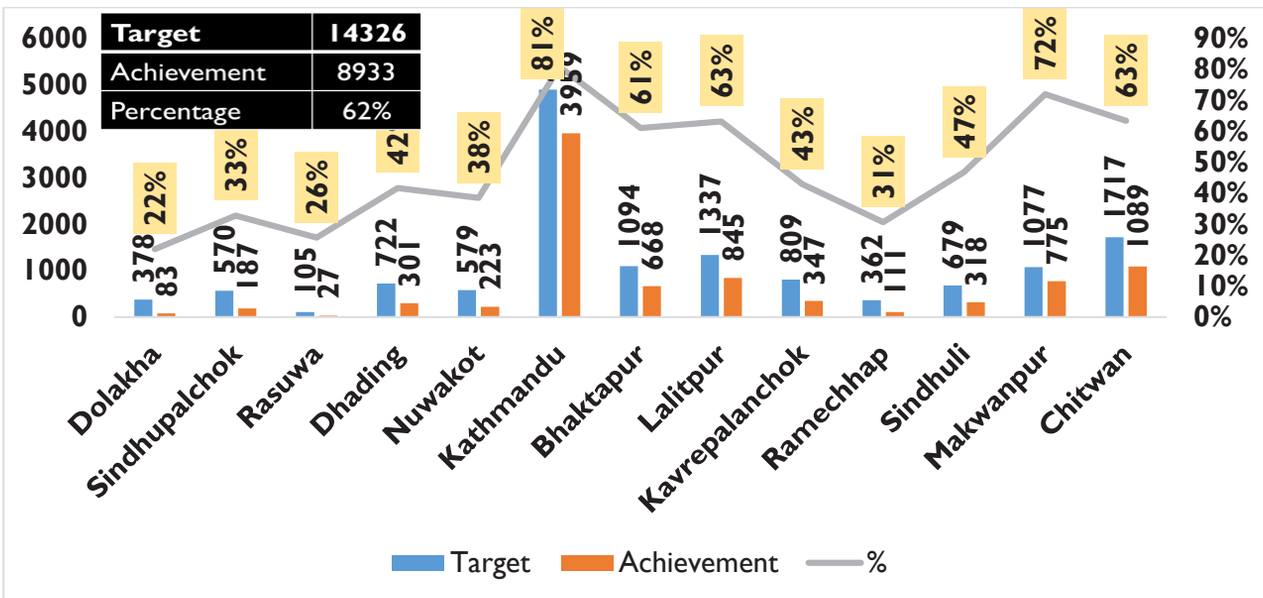


Figure 3.5 Gap in TB Program district-wise in Bagamati Province on the basis of Target Vs Achievement

Source: HMIS/DHIS2

DR-TB Notification (Case Finding) FY 2081/82

In FY 2081/82, a total 93 DR Patients were enrolled for treatment in all the DR centers of Bagamati Province, which is quite lower then the target.

Table 3.3 DR-TB Notification (Case Finding) FY 2081/82

Case Registration	New		Relapse		After Failure of first line treatment with FLD		After failure of re-treatment with FLD		After failure of treatment with Hr		After failure of treatment with SLD		TALF		Other Previously Treated		Unknown Previous TB treatment history		Total
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	
RR/MDR (SSTR)	9	16	7	1	3	2	0	0	0	0	0	0	0	0	0	0	0	0	38
RR/MDR (LTR)	13	11	2	5	2	5	0	0	0	0	0	1	0	0	0	0	0	0	39
Pre-XDR	4	8	0	2	1	0	0	0	0	0	0	1	0	0	0	0	0	0	16
XDR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Source: NTPMIS

Trend of DR-TB Treatment Success Rate and Mortality Rate

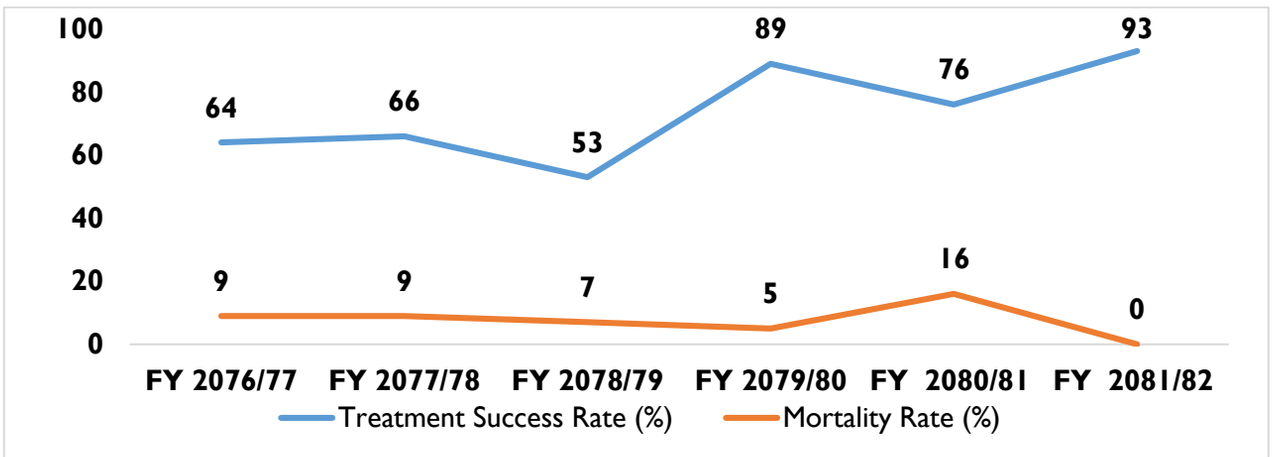


Figure 3.6 Trend of DR-TB Treatment Success Rate and Mortality Rate

Source: NTPMIS

In FY 081/82, there has been improved treatment success rate in Bagamati province with no death recorded. Introduction of new regimen in treatment of DR TB cases have been effective in managing DR TB cases with reduction in the treatment duration and improved treatment outcome.

Activities Conducted in FY 2081/82

- Provincial Level Cohort Workshop
- eTB and DHIS training. DR, Sub DR and GX Cohort Analysis Workshop.
- Provincial Level Committee formation for TB Free Palika Nepal and PPM Commitee
- CME to major Central and Provincial level Hospital.
- Ancillary medicine for DR patients and transportation cost for patients.
- AI induced x ray based active cases finding in vulnerable and hard to reach population
- Supportive Supervision

Issues, Recommendations, and Responsibilities

Provincial Annual Review 2081/82 identified the following problems/constraints and recommended actions to be taken with clear responsibility at different levels of authority and health entities.

Issues	Recommendation	Responsibilities
Service delivery related		
High gap between estimated case and notified cases	Active case detection in target, vulnerable population and hard to reach population with access to gene x-pert testing facilities.	NTCC
	Initiation of screening of TB presumptive cases using x ray facilities	MoH
	Increasing referral of TB presumptive from non-testing sites to testing sites	HD

Issues	Recommendation	Responsibilities
Service delivery related		
Increased rifampicin resistant (RR) primary loss to follow up cases.	Proper documentation of contacts of RR cases at diagnostic sites and regular follow up for enrollment.	NTCC
	Regular review and follow up of the cases to ensure enrollment status in support of gene xpert sites, DR centers and implementing partners.	MoH
	Case based quarterly review system in DR TB review	HD
Decreasing trend of Pulmonary Clinically diagnosed cases.	Conducting effective and regular CME program in private and governments institutions	NTCC, MoSD
	Review with private sectors on trimester basis.	HD, Local Government NTCC, HLMC
Shortage of Cartridge and not properly management of Logistic Supply	Discuss with NTCC and Province Health Logistic and sort out the issue and manage the channel for distribution and cartridge shortage management.	HD
Health Laboratory Management due to shortage of Laboratory Human resources.	Request with Province Health Laboratory to manage lab human resources in needed place.	PPHL, HD
Information related		
Error in internal consistency of data in DHIS 2, eTB, Gene Xpert online and Online DR TB entry.	Regular desk review on quality of data by implementing partners and HD.	HD/NTCC
	Follow up to Local Level for increasing the quality and internal consistency of data.	
	Onsite coaching and joint monitoring from HD team	
	Visit Gene Xpert and DR sites	
Governance related		
Lack of monitoring and evaluation from central and NTCC team	Improve the monitoring visit as per need	MoHP, NTCC
Lack of proper coordination between local government	Capacity development of Public Health Office as technical expert for TB program	HD
	Increasing onsite coaching and technical support from Public Health Office to local government	Public Health Offices

3.2 Leprosy

Introduction

Leprosy, or Hansen's disease, is caused by Mycobacterium leprae, an acid-fast, rod-shaped bacillus. With ancient roots, it is likely transmitted through droplets during prolonged contact with untreated patients. Primarily affecting the skin, peripheral nerves, respiratory mucosa, and eyes, leprosy is curable. Early diagnosis and treatment in the initial stages can prevent disability. Apart from physical deformity, persons affected by leprosy also face stigmatization and discrimination.

National Leprosy Strategy (2021 -2025)

The National Leprosy Strategy (2021 -2025) highly considered the previous National Leprosy Strategy (2016 -2020), findings and recommendations from the In-depth Review of the National Leprosy Program 2019, National Roadmap for Zero Leprosy- Nepal (2021-2030) as well as the different health policies and plans of Nepal. It also considers The World Health Organization's Global Guidelines on: Towards Zero Leprosy: Global Leprosy (Hansen's Disease) Strategy (2021-2030).

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.

Targets of National Leprosy Strategy

S.N.	Targets	2019* (baseline)	2025
Target 1	Mapping of districts/municipalities including human re¬sources	√	updated
Target 2	Number of municipalities with zero new child autochtho¬nous cases over consecutive 5 years period	605**/753	700/753
Target 3	Number of municipalities with zero leprosy cases	65	377
Target 4	Number of annual new leprosy cases reduced to	3282	2462 (25 % reduction from base¬line)
Target 5	Rate of new leprosy cases with G2D (per million popu¬lation)	5.3	< 1
Target 6	New child leprosy case detection rate (per million child population)	30	< 6
Target 7	Number of child cases among new leprosy cases reduced to	260 (7.9 % child case proportion among new leprosy cases)	50 (2% child case proportion among new leprosy cases)
Target 8	Number of child G2D among new child leprosy cases	2 of 260 new child cases	0
Target 9	Discriminatory laws	Discriminatory law exists	Zero discrimination as a result of no discriminatory laws and complaints reporting system in place
Target 10	Roll out of preventive chemoprophylaxis	-	50 % coverage among eligible contacts
Target 11	Household contact examination of an index case within 3 months of case detection	-	75 % of index case

Current Leprosy Situation

Following the continuous efforts from the Leprosy Control Program, MoHP, and the support from WHO and other partners, leprosy was declared elimination as a public health problem at the national level in 2010.

In the fiscal year 2081/82 (2024/2025), the registered prevalence remained below the elimination threshold with the national registered Prevalence Rate of 0.88/10,000 population. Out of 77 districts, 14 districts reported PR, more than 1.

Major Activities of FY 2081/82

- Conducted orientation program regarding rapid identification of disabilities, counseling, and referral services.
- Procurement and distribution of aid for persons with disabilities due to leprosy and other disabilities.
- Conducted Early Detection, Counselling and Referral Orientation of Disability to Health Workers.
- Conducted Disability and Rehabilitation Management Training for Medical Officer.
- Celebrated World Leprosy Day and Disability Day.
- Conducted Leprosy and disability Management Annual Review.

Trend of New Case Detection Rate (NCDR)

The figure illustrates three year trend of the new case detection rate (NCDR) of Bagamati Province. In fiscal year 2081/82, Bagamati Province experienced a slight increase in the new case detection rate (NCDR) compared to the previous year, primarily due to enhanced active case detection (ACD) efforts implemented at the field level throughout the province.

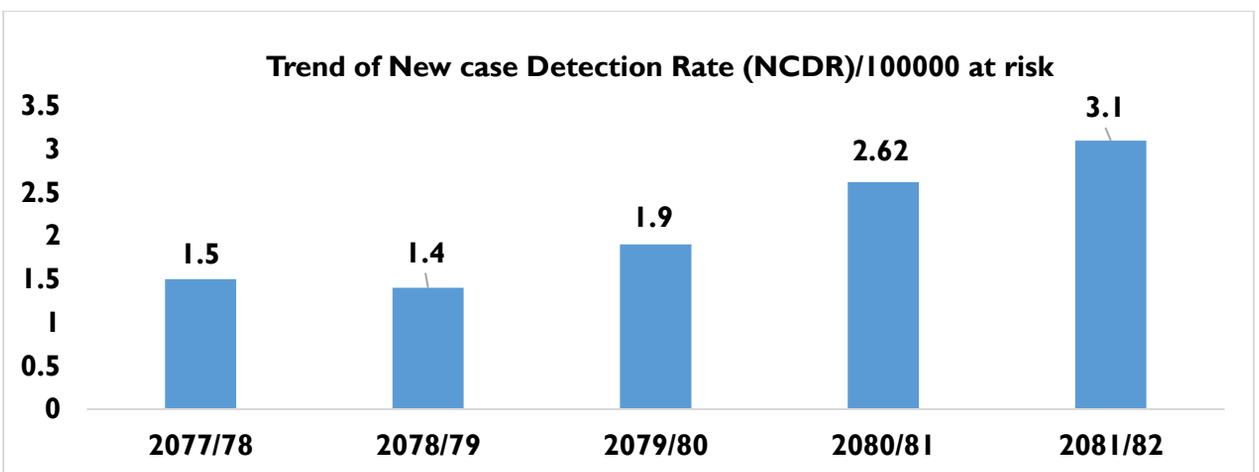


Figure 3.7 Trend of New Case Detection Rate (NCDR)/100000 at risk

Source: HMIS/DHIS2

District-wise status of new case detection rate (NCDR)/ 100000 Population

The figure illustrates the district-wise trend of the new case detection rate (NCDR) across Bagamati Province. In fiscal year 2081/82, Chitawan recorded the highest NCDR at 5.47, followed by Kathmandu at 5.01, Makawanpur at 4.04, Lalitpur at 2.57, Sindhuli at 1.69, Sindhupalchok at 0.08, Nuwakot at 0.79, Ramechhap at 0.63, Dolakha at 0.61 and Kavre at 0.28, The remaining districts, including Bhaktapur, Dhading and, Rasuwa, reported zero NCDR.

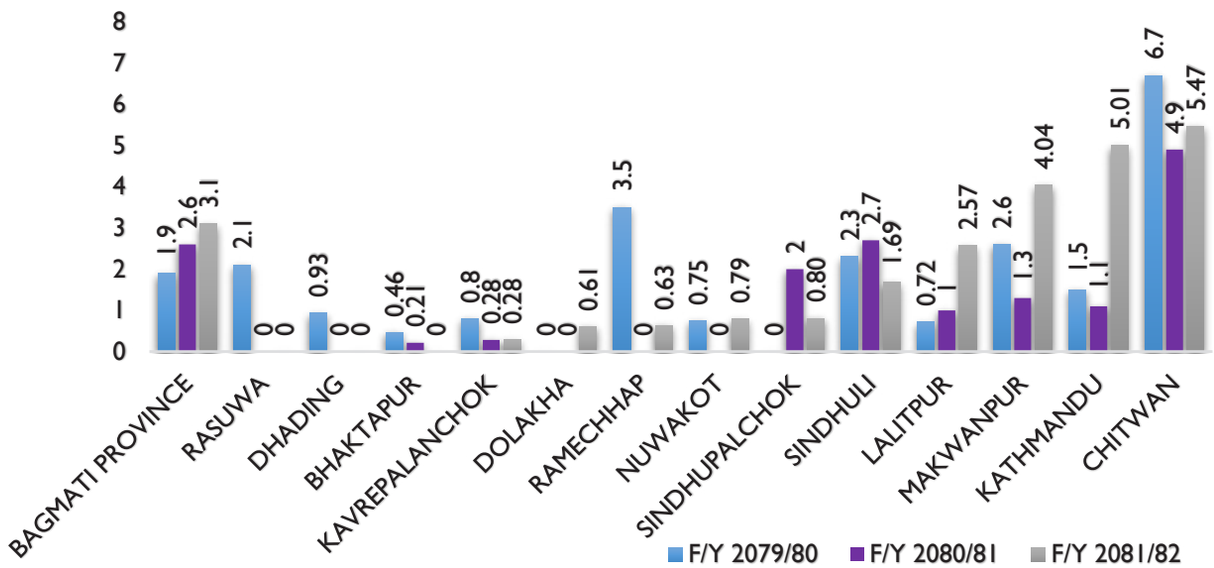


Figure 3.8 District-wise status of new case detection rate (NCDR)

Source: HMIS/DHIS2

Trend of Prevalence Rate (PR)

The figure illustrates the trend of prevalence rate (PR) per 10,000 population over five fiscal years. The prevalence rate was 0.15 in 2077/78, followed by a slight decline to 0.14 in 2078/79. From 2079/80 onward, a consistent increasing trend is observed, with the PR rising to 0.19 in 2079/80, 0.26 in 2080/81, and reaching the highest level of 0.43 in 2081/82.

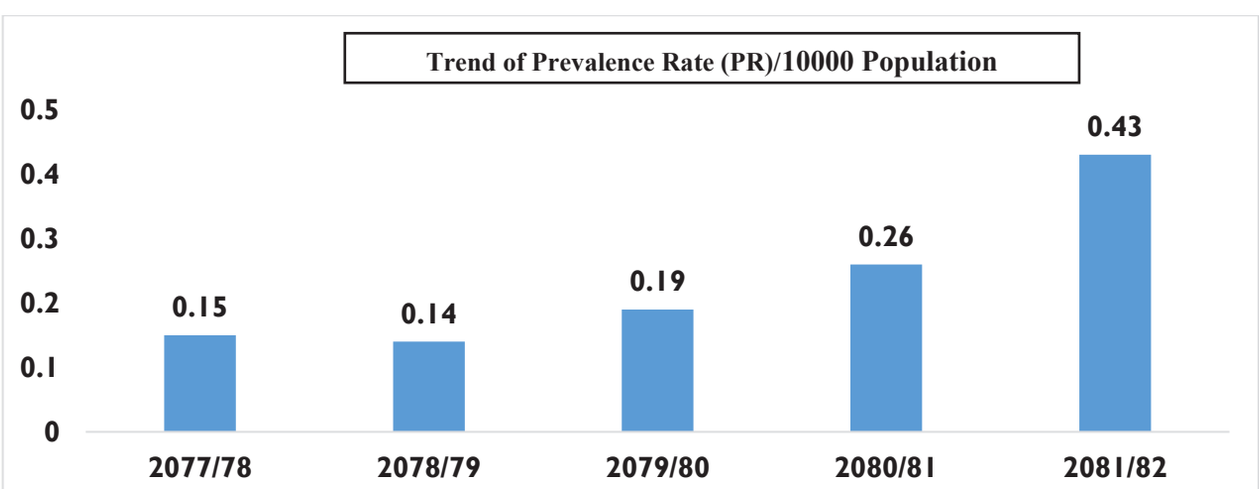


Figure 3.9 Trend of Prevalence Rate (PR) of Leprosy per 10,000 population

Source: HMIS/DHIS2

District-wise status of Prevalence Rate (PR) of Leprosy

The figure shows the district-wise prevalence rate of leprosy per 10,000 population across Bagamati Province. The provincial prevalence rate has shown a slight increase compared to the previous fiscal year. Kathmandu reported the highest prevalence rate at 0.83, followed by Chitawan at 0.60, Sindhuli

at 0.30, Lalitpur at 0.029, Makawanpur at 0.23, Ramechhap at 0.13, Sindhupalchok and Nuwakot at 0.08 each, Dhading and Dolakha at 0.06 each, Bhaktapur at 0.02 and., Kavrepalanchok and Rasuwa reported a prevalence rate of zero. All 13 districts have been recorded at less than 1 prevalence rate.

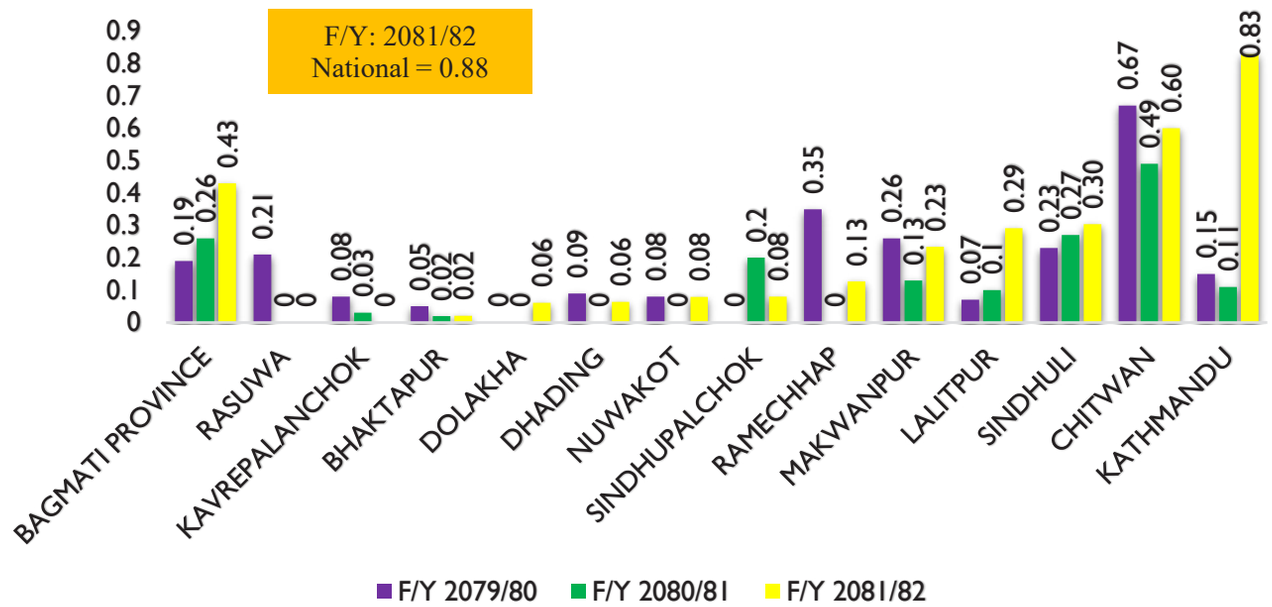


Figure 3.10 District-wise Trend of Prevalence Rate of Leprosy per 10,000 populations

Source: HMIS/DHIS2

Issues, Recommendations and Responsibilities

Issues/Challenges	Recommendation	Responsibilities
Issues related to the accuracy and underreporting of leprosy cases in the DHIS system	Encourage and supervise the health worker for accurate reporting of leprosy cases.	MoH, HD, PHO Local Government
Insufficient training for newly recruited health workers and a lack of refresher trainings	Yearly training on the updated treatment protocol.	MOHP, DOHS
Challenges in reaction and complication management at the periphery	Recruiting qualified health worker and arranging a proper referral system.	MoHP,DOHS,MoH
Poor motivation of health workers	Refresher Training, Onsite Coaching	MoH, HD, Local Government
No Annual Review Budget and Activities at all Level	Budget and activities Need to be Allocated	MoHP,DOHS,MoH

3.3 HIV & AIDS and STI

Introduction

With the first case of HIV identification in 1988, Nepal started its policy response to the epidemic of HIV through its first National Policy on Acquired Immunity Deficiency Syndrome (AIDS) and Sexually Transmitted Diseases (STDs) Control, 1995 (2052 BS). Taking the dynamic nature of the epidemic of HIV into consideration, Nepal revisited its first national policy in 1995 and endorsed the latest version: National Policy on Human Immunodeficiency Virus (HIV) and Sexually Transmitted Infections (STIs), 2011. With the new national HIV strategic plan, Nepal has embarked on a Fast-Track approach towards ending the AIDS epidemic as a public health threat by 2030, through achieving the ambitious target of 95-95-95 by 2026. By 2026, 95% of all people living with HIV (PLHIV) will know their HIV status, 95% of all people with diagnosed HIV infection will receive sustained antiretroviral therapy (ART), and 95% of all people receiving antiretroviral therapy will have viral suppression.

Pursuant to its goal of achieving universal access to prevention, treatment care and support, HIV Testing Services (HTS) has been a strategic focus in the national response to HIV ever since Nepal started its response to HIV. The first-ever HTS began in 1995 with the approach of voluntary Client-Initiated Testing and Counseling (CITC). Moving further from its previous approach of voluntary CITC, the national HIV testing and counselling program has been later widened to include Provider-Initiated Testing and Counseling (PITC), as well as CITC, as crucial components of the nation's fight against HIV. With the expansion of HIV Testing and Counseling (HTC) sites across the country, there has been a parallel development. National Guidelines on HTC was formulated in 2003 and updated in 2007, 2009 and 2011 while later the separate guidelines were merged as a comprehensive guideline on treating and preventing HIV in 2014. The community-based testing approach has also been initiated in key population as suggested by National HIV Testing and Treatment Guidelines, 2017. Nepal has also moved forward to implement the community-led testing and self-testing approach to maximize HIV testing among key populations of HIV. For this approach, National Guidelines on Community Led HIV Testing in Nepal 2017 was also endorsed and currently CLT services are implemented in 20 districts targeting MSM and TG, 27 districts targeting PWID and 17 districts targeting FSW.

Human resources for HTC have been trained for public health facilities as well as NGOs-run HTS sites. Along with HTS, detection and management of Sexually Transmitted Infections (STIs) have also been a strategic focus and integral part of the national response to HIV ever since Nepal started its response to HIV. Over the years, STI clinics have been operating across the country maintaining their linkage with the basis of the National STI Case Management guideline which was developed in 1995 and revised in 2009 and 2014.

Vision, Mission, Goal & Objectives

Based on the NATIONAL HIV STRATEGIC PLAN, a global vision, a global goal and a set of global targets, all of which are fully aligned with the vision, goal and targets of the multi-sectoral UNAIDS strategy and the Sustainable Development Goals.

Vision

Ending AIDS epidemic in Nepal by 2030.

Mission

To provide inclusive, equitable and accessible services throughout the HIV care continuum.

Goals

- To prevent new HIV infections
- To improve HIV related health outcomes of PLHIV
- To reduce HIV related inequalities among PLHIV and KPs

Targets by 2026

1. Identify 95 % of the estimated PLHIV
2. Treat 95 % of people diagnosed with HIV
3. Attain viral load suppression for 95 % of PLHIV on ART
4. Reduce 90% of new HIV infections (baseline as of 2010)
5. Eliminate vertical transmission of HIV
6. Achieve case rate of congenital syphilis of ≤50 per 100 000 live births.

Priorities

1. Accelerating HIV prevention services among key populations.
2. Expanding innovative and effective testing approaches with universal access to comprehensive treatment, care, support, VL testing and suppression services.
3. Elimination of vertical transmission and syphilis.
4. Scaling up of HIV-sensitive social protection services to key and vulnerable populations.
5. Addressing human rights and gender in HIV response.
6. Strengthening effective, inclusive, and accountable HIV governance.

ART sites in Bagamati Province

Table 3.4 ART sites in Bagamati Province

SN	Districts	ART Sites	HTC sites	OST Sites	Viral load testing	EID collection site	PMTCT
1	Dolakha	1	1	0	0	1	87
2	Sindhupalchok	1	1	0	0	1	123
3	Rasuwa	0	0	0	0	0	32
4	Dhading	1	1	0	0	1	79
5	Nuwakot	1	1	0	0	1	94
6	Kathmandu	6 (1 NGO + 5 GoN)	5	2 (TUTH and SPARSHA)	1 (NPHL)	6 (1 NGO + 5 GoN)	138
7	Bhaktapur	1	1	1 (SPARSHA)	0	1	46

8	Lalitpur	1 (NGO run)	1	2 (SPARHSHA and Mental Hos)	0	1 (NGO run)	66
9	Kavrepalanchok	1	1	0	0	1	141
10	Ramechhap	0	0	0	0	0	89
11	Sindhuli	1	1	0	0	1	109
12	Makawanpur	1	1	0	0	1	95
13	Chitawan	2	2	1 (SPARSHA)	1 (Gene Xpert)	2	17
	Total	17	16	6	2	17	1176

Source: HMIS/DHIS2

List of OST sites in Bagamati Province

- Tribhuvan University Teaching Hospital (TUTH), Kathmandu (Social Support Unit)
- Patan Hospital, Lalitpur (Social Support Unit)
- SPARSHA- Nirnay (Medical Unit), Chitawan
- Aavash Samuha, Bhaktapur
- SPARSHA Nepal, Lalitpur
- Saarathi Nepal, Kathmandu

List of Dispensing sites of OST

- SPARSHA- Nepal, Battisputali, Kathmandu
- SPARSHA- Nepal, Sankhamul, Lalitpur

Key Activities in FY 081/82

The majority of the activities under HIV program are designed based on the national strategy plan and budget is allocated accordingly at the federal and provincial level. Certain local level has initiated to practice allocation of budget and activities at the local level, especially to support children affected by AIDS. Under the federal grant, key activities implemented in Bagamati province are listed below:

- HIV screening in prison inmates
- Review of PMTCT program
- Orientation to school children on stigma and discrimination related to HIV
- PSA broadcasting on HIV/AIDS stigma and discrimination through local radio/FM

- Quarterly coordination meeting with relevant stakeholders of HIV program
- Province-level data review and HIV program review workshop
- Celebration of World AIDS Day 2023
- Procurement and supply of nutrition packets for PLHIVs
- Procurement and supply of medicine for STIs and OIs
- HIV diagnosis and STI training to lab personnels
- Human rights and medical ethics training for health workers
- PMTCT training to service providers

Major Achievement

HIV Testing and Counseling at HTC

The table given below presents the three-year trend of HIV testing and positive cases reported at HTC in Bagamati Province. HIV testing through HTC services showed a marked decline in 2080/81 (15,190 tests) compared to 2079/80 (43,459 tests), followed by a partial recovery in 2081/82 (21,229 tests). Despite fluctuations in testing volume, the number of HIV-positive cases detected remained relatively high, with 883 cases in 2079/80, 820 in 2080/81, and 727 in 2081/82. Consequently, the test positivity rate increased notably in 2080/81 compared to 2079/80 and then declined in 2081/82, indicating variations in testing coverage and targeting over the three fiscal years.

Table 3.5 Trend of HIV testing and counselling

SN	Indicator	Fiscal Year		
		2079/80	2080/81	2081/82
1.	HIV testing in HTC	43459	15190	21229
2	HIV found positive in HTC	883	820	727

District-wise HIV Testing and Counselling at HTC center

In FY 081/82, Makawanpur, Kathmandu and Dhading attributes to more than two-thirds of the total tests. These districts have tested 9559, 5896 and 3009 persons respectively. Zero tests in Ramechhap and Rasuwa are because of no availability of ART-associated HTC sites. In FY 081/82 total of 727 new HIV infected cases were detected of which Kathmandu accounts for 504, with a positivity rate of 9%. Higher positivity rate in Bhaktapur is associated with testing of clients who were already positive during community-led testing. 3.42% positivity rate was recorded during the year.

HIV Screening under Prevention, Care and Support Program

HIV Prevention, Care and Support program is one of the key components to reach the 95-95-95 target of ending HIV epidemic by 2030. Several external development partners in support of different community-based organizations are conducting HIV prevention care and support program. Behavior change and communication (BCC) services, Community home-based care (CHBC), Community care center (CCC), Community-led testing (CLT), HIV self-testing, HIV recency testing, Pre-exposure prophylaxis (PreP) are the key services under HIV prevention care and support program.

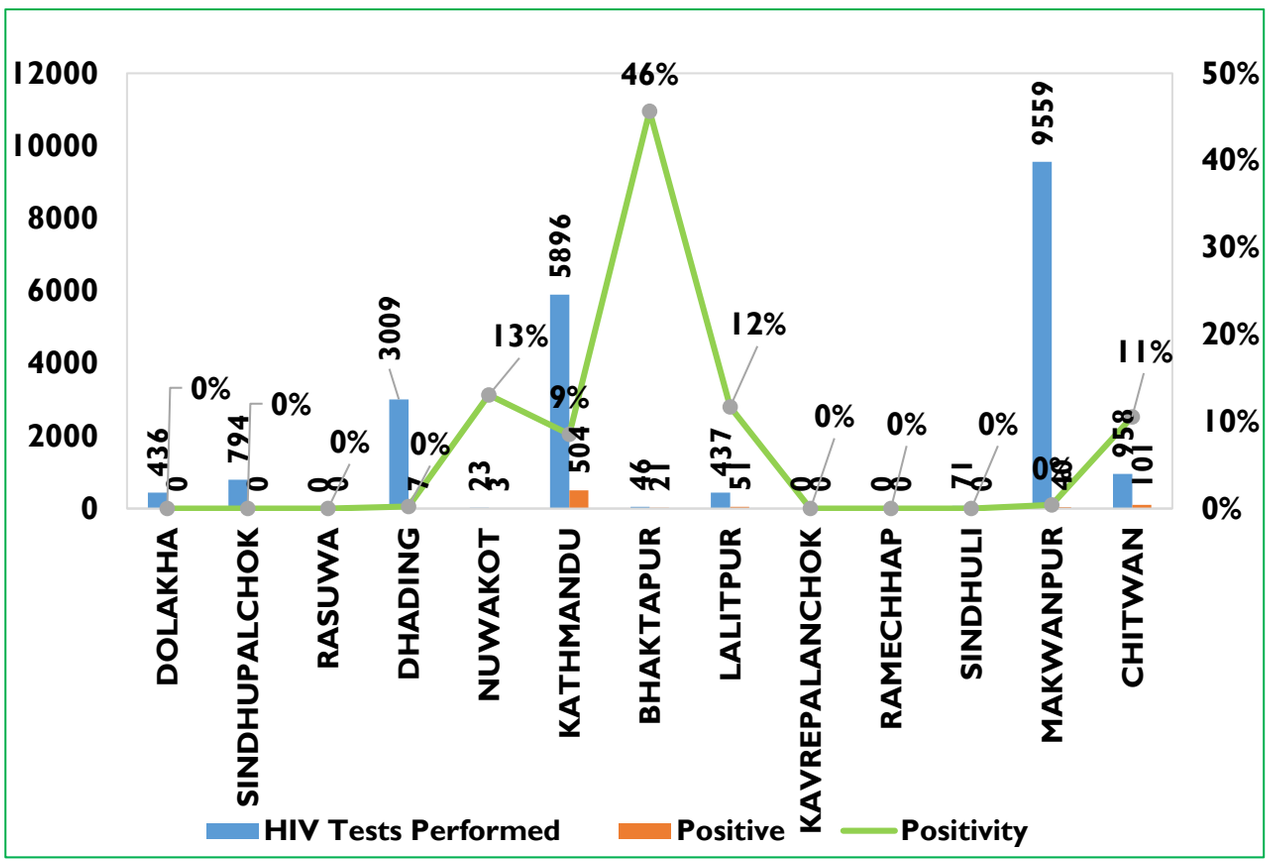


Figure 3.11 District-wise HIV testing and counselling at HTC center.

Source: HMIS/DHIS2

In FY 080/81, NCASC revised HMIS recording and reporting tools of HIV program, incorporating the services under prevention care and support program to be reflected under HMIS report. Based on this, separate data set HIV prevention, care and support was incorporated in HMIS reporting tools for which different recording tools were developed and supplied to partner organizations. These tools are used by partner organizations to record all their services and report in HMIS on monthly basis. Below table reflect the service provided under HIV prevention care and support program in Bagamati province in FY 081-82. Number in the below table are based on the availability of services in the district. Rasuwa, Dolakha and Ramechhap don't have prevention services from any non-government organization.

Table 3.6 District-wise prevention program services

District	# of CHBC services	# of CCC Service	# of BCC services	# CLT	# of Index testing	# of PrEP services	# of self testing	# of PEP service	# Tested for Hep C
Dolakha	0	0	0	0	0	0	0	0	0
Sindhupalchok	177	137	0	30	0	0	0	0	0
Rasuwa	0	0	0	0	0	0	0	0	0

Dhading	238	91	0	99	0	0	13	0	0
Nuwakot	509	67	0	269	0	0	0	0	0
Kathmandu	5090	390	33037	10775	203	395	1541	0	584
Bhaktapur	1081	0	11278	1875	50	89	408	0	283
Lalitpur	2396	129	9985	5381	45	177	535	12	381
Kavrepalanchok	193	89	0	67	16	0	0	0	0
Ramechhap	0	0	0	0	0	0	0	0	0
Sindhuli	131	0	0	32	2	0	0	0	0
Makawanpur	1179	84	9103	2305	125	91	328	8	284
Chitawan	2917	148	28743	12651	54	192	459	0	465
Total	13932	1135	92146	33484	495	944	3284	20	1997

Source: HMIS/DHIS2

Prevention of Mother-to-Child Transmission

With a target of achieving zero vertical transmission of HIV, the PMTCT program is being implemented at the majority of service delivery points in Bagamati province. There has been screening of all pregnant mothers with determine test kit for HIV during ANC visits and during delivery. Over the three fiscal years, the number of pregnant women counselled and tested for HIV has gradually declined. HIV testing decreased from 106,842 in 2079/80 to 98,141 in 2080/81, and further to 94,992 in 2081/82, indicating a reduction in service uptake or coverage over time. A similar downward trend is observed in counselling coverage, which declined from 132,903 in 2079/80 to 126,962 in 2080/81 and 119,617 in 2081/82.

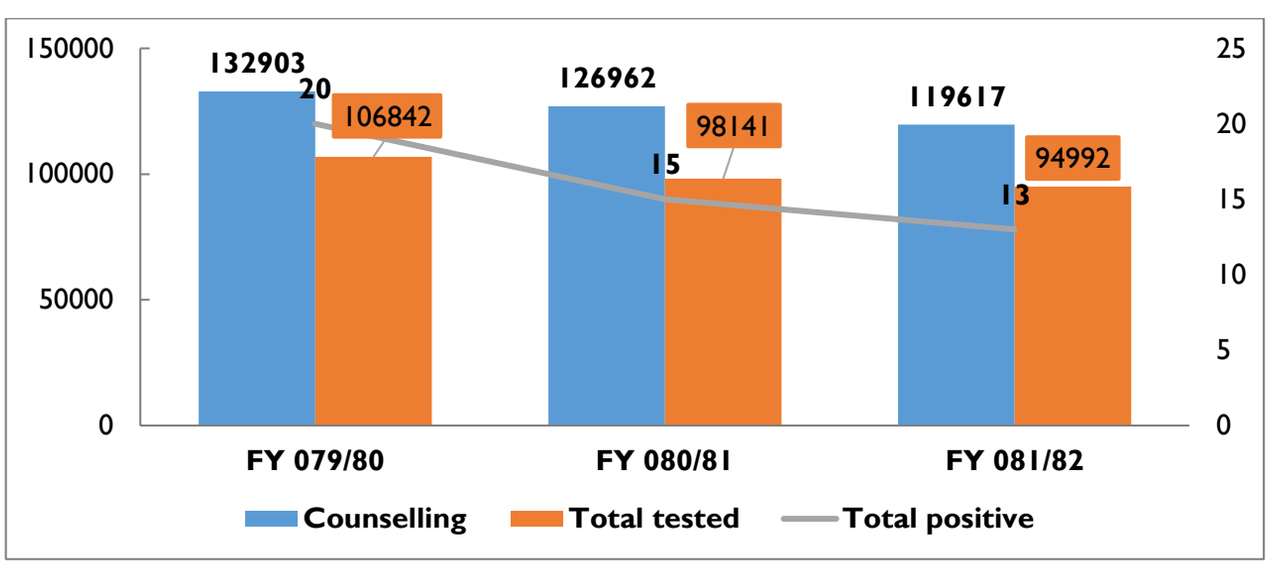


Figure 3.12 Three-year trend of HIV testing and number of HIV Positive in PMTC

Source: HMIS/DHIS2

The number of HIV-positive cases detected through PMTCT also shows a decreasing trend, falling from 20 cases in 2079/80 to 15 cases in 2080/81 and 13 cases in 2081/82. While this may reflect a low and possibly declining prevalence among pregnant women, the concurrent reduction in testing coverage suggests that fewer cases may also be due to reduced testing. Overall, the trend highlights the need

to strengthen and sustain PMTCT service coverage, ensure universal HIV testing among pregnant women, and closely monitor testing gaps to prevent missed opportunities for early detection and prevention of mother-to-child transmission.

PMTCT Coverage by District

This figure illustrates district-wise coverage of HIV counselling, HIV testing, and HIV-positive cases among pregnant, intrapartum, and postpartum women in Bagamati Province. Overall, the number of women receiving counselling is consistently higher than those undergoing HIV testing across all districts, indicating some drop-off between counselling and actual testing. Kathmandu shows the highest service volume, with about 43,517 women counselled and 41,358 tested, reflecting its large population and better service availability. Other high-volume districts include Chitawan, Lalitpur, Bhaktapur, and Makawanpur, while mountain and remote districts such as Dolakha, Rasuwa, Ramechhap, and Sindhuli report substantially lower numbers of counselled and tested women.

The number of HIV-positive cases detected is very low across all districts, shown by the line graph, with Kathmandu reporting the highest absolute number, followed by a few cases in districts like Chitawan, Makawanpur, and Lalitpur. This pattern suggests that while overall HIV prevalence among pregnant and postpartum women remains low, higher case detection corresponds to districts with greater testing coverage. The figure highlights the need to improve testing uptake after counselling, particularly in low-volume and hard-to-reach districts, to ensure early identification and prevention of mother-to-child transmission of HIV.

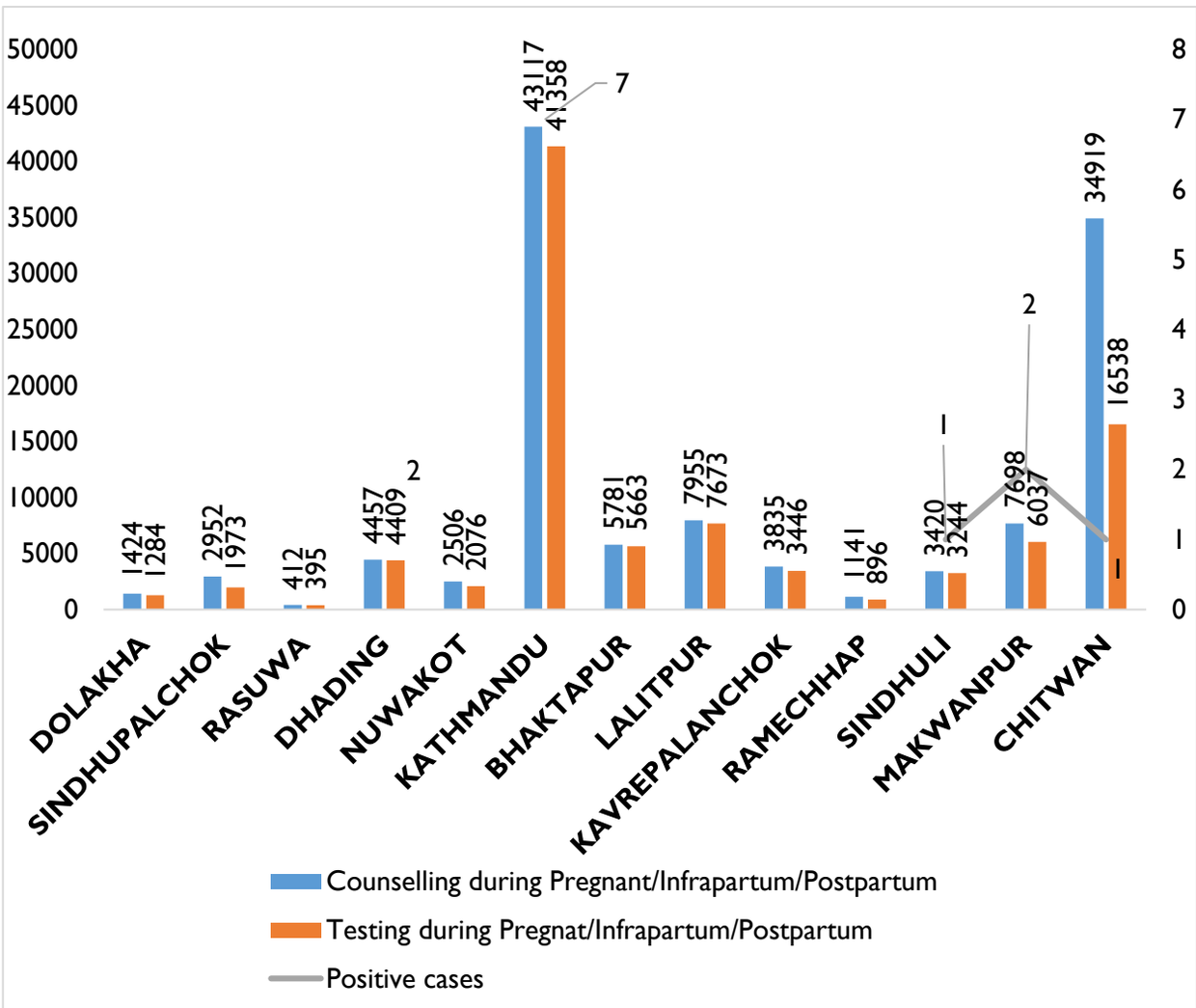


Figure 3.13 District-wise PMTCT coverage in FY 2081/82

Source: HMIS/DHIS2

Achievement against the 95-95-95 strategy

The country HIV program is mainly based on set targets under the National HIV Strategy Plan 2026 and the sustainable development goal. By 2026, it is estimated to reach at least 95% of the estimated PLHIV, treat at least 95% of the identified PLHIV, and get a viral load suppression below 1000 copies in at least 95% of the PLHIV under treatment. Majoring the achievement of FY 081/82, it shows that Bagamati province has achieved first 95 while achieving the second and the third 95s should be the priority of the upcoming years. The figure shows the achievement against the set targets.

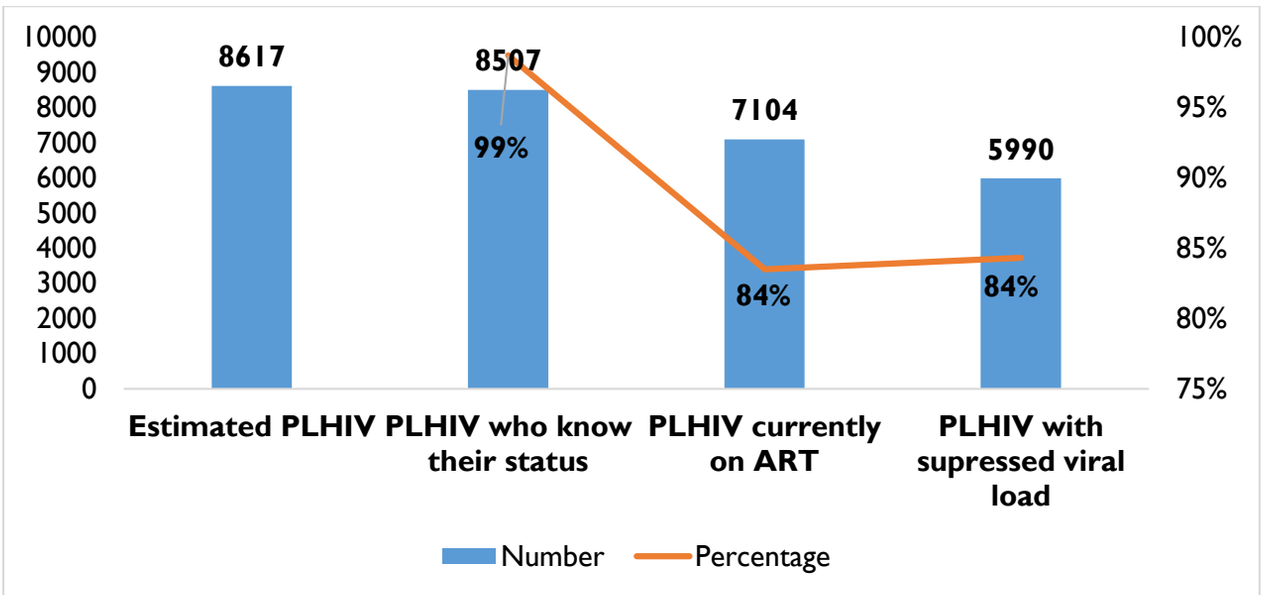


Figure 3.14 Achievement against the 95-95-95 strategy

Source: HMIS/DHIS2

PLHIV Currently on treatment

The figure presents the district-wise distribution of cases along with their percentage contribution. Kathmandu accounts for the largest share, with 4,205 cases (59%), indicating a substantial concentration of cases in the capital district. This is followed by Chitawan with 1,223 cases (17%) and Lalitpur with 583 cases (8%). Makawanpur (328; 5%) and Nuwakot (194; 3%) contribute relatively smaller proportions. The remaining districts—Bhaktapur (151; 2%), Dhading (138; 2%), Kavrepalanchok (101; 1%), Sindhupalchok (88; 1%), Sindhuli (70; 1%), and Dolakha (23; <1%)—each account for a minimal share, while Rasuwa and Ramechhap report no cases.

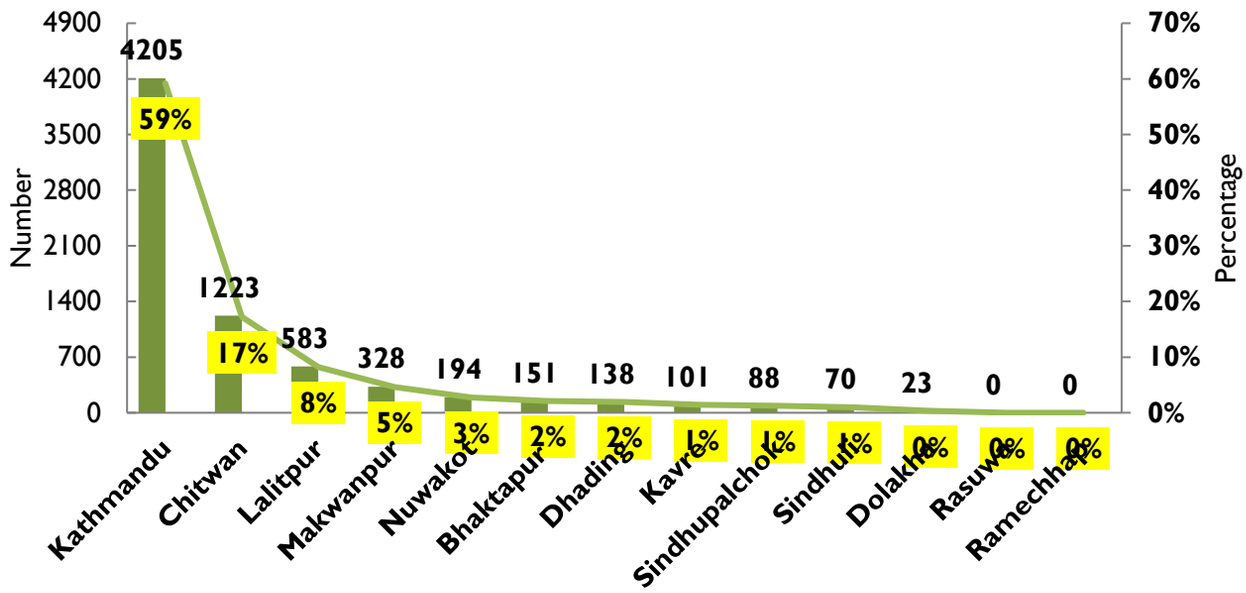


Figure 3.15 PLHIV currently on treatment as of Ashar 2081

Source: HMIS/DHIS2

Issues, Recommendations, and Responsibilities

Provincial Annual Review 2081/82 identified the following problems/constraints and recommended actions to be taken with clear responsibility at different levels of authority and health entities.

Issue/ Challenges	Recommendation	Responsibilities
Service delivery related		
Unable to reach the first and third 95 of the 95-95-95 target	Expansion of viral load testing facilities (at least in the districts where there are more than one thousand clients under ART Regular collection of blood samples for viral load sample testing Managing storage facility at ART sites for viral load sample Increase testing of risk population specially the migrant population	HD/MoH/ NCASC
Inadequate intervention to deal with coinfection like hepatitis	Develop guideline and protocol to deal with the hepatitis cases of PLHIV (linking with better service sites, transportation support to PLHIV to reach the sites)	NCASC
Inadequate coverage of PMTCT	Ensure regular supply of determined test kits at PMTCT sites. Review of PMTCT program in the annual or semi-annual review of palika and district	NCASC, HD and HLMC
Information related		

Majority of cases are being reporting under other category which is the issue of risk classification	Onsite coaching to the ART sites for proper classification of the PLHIV Including the risk groups like spouse of migrants and prison inmates in reporting system of HMIS	NCASC
Data quality in different reporting portal	Timely review of data through the data management committee feedback to the district and service sites	HD/Public Health Office/ Service sites

3.4 Malaria

Background

Malaria is a mosquito-borne infectious disease that poses a public health challenge in Nepal. The disease is primarily transmitted to humans through the bites of infected female Anopheles mosquitoes. Malaria is endemic in certain parts of Nepal, with the Terai region (southern plains) being the most affected area. However, the cases have also been reported in the hilly and mountainous regions. Malaria in Nepal exhibits seasonality, with the peak transmission occurring before and after the rainy season.

To better understand and combat malaria, Nepal has adopted a micro-stratification approach. Nepal's "malaria micro-stratification process" began at the district level in 2066/67 (2010). To enhance community-level risk stratification and accurately define the total population at risk, micro-stratification was performed at the ward level within LLGs.

The methodology used for malaria risk stratification is based on the malaria burden, information on the spatial distribution of key determinants of transmission risk, including climate, ecology, and the presence or abundance of key vector species and vulnerability in terms of human population movement. The method is explained in the 2018 micro-stratification study report, and it was recommended by the Epidemiology and Disease Control Division (EDCD) and Malaria Technical Working Group (TWG). Based on this method, micro stratification 2024 was updated, and the wards were designated as high, low, and no risk wards. According to the malaria microstratification done in 2025, Bagamati Province has one ward classified as high-risk, 375 wards classified as low risk, while the remaining 745 wards categorized as risk-free.

Distribution of Malaria Risk Ward of Bagamati Province

Table 3.7 Distribution of Malaria Risk Ward

Province	High Risk wards	Low Risk Wards	No Risk Wards
Bagamati	1	375	745

Nepal's National Malaria Strategic Plan (NMSP, 2025–2030 updated)

Nepal has made substantial strides towards the path of malaria elimination, in the path identified by the National Malaria Strategic Plan (NMSP-2014-2025), in line with the World Health Organization's (WHO) Global Technical Strategy (GTS) for Malaria (2016-2030). However, the progress has stagnated due to the continued detection of indigenous malaria cases: 36 in 2022 and 16 in 2023. This has led to a deviation from the original target of zero indigenous cases by 2022 and achieving the targeted malaria elimination by 2025, prompting a need for a revised elimination timeline, with intensification of interventions reaching elimination by 2030.

A comprehensive evaluation, including the implementation experiences of the current NMSP and the 2023 independent malaria program review, has underscored critical challenges within the National Malaria Elimination Program. Addressing these challenges requires concrete, elimination-oriented interventions, enhanced leadership, ownership, accountability, and concerted efforts across all levels of the Health System (Federal, Provincial, and Municipal/Local Levels). To expedite progress for elimination and prevent the re-establishment of Malaria in areas declared malaria-free, the NMSP (2014-2025) has been revised with updated targets and elimination-specific strategies.

This revised NMSP reflects insights from the 2023 independent program review recommendations, interventions recommended by the WHO-GTS (2021 update), and inputs solicited from the national program team, key implementing partners and the national and international technical experts.

Vision:

Malaria Free Nepal

Mission:

Universal access to early detection, prompt treatment and response for malaria elimination

Goal:

- To achieve zero indigenous malaria case by 2026 and sustain thereafter
- To strengthen the system for prevention of re-establishment (PoR)

Objectives:

- To ensure proportional and equitable access to quality assured diagnosis and treatment in health facilities as per federal structure and implement effective preventive measures to achieve malaria elimination.
- To achieve these goals and attain malaria-free status by 2030, the NMSP delineates five key strategies with major activities.

Major activities carried out in FY 2081/82

- Formation of Provincial Malaria Elimination Steering Committee under the chairmanship of Hon'ble minister of Health of Bagamati province.
- Conducted integrated vector surveillance activities across various areas within the province.
- Initiated private sector engagement by orienting health workers on malaria diagnosis, treatment, and the timely recording and reporting of data through DHIS2.
- Strengthened the case-based surveillance system with a web-based recording and reporting platform for districts, alongside the full implementation of the Malaria Disease Information System (MDIS) in the province.
- Conducted detailed case investigations and fever surveys around identified positive index cases.
- Ensured a consistent supply of malaria rapid diagnostic tests (mRDTs) and anti-malaria drugs to Service Delivery Points (SDPs).
- Carried out supportive supervision visits to SDPs to enhance service quality.
- Celebrated World Malaria Day on April 25, 2025.

Status of Malaria Program

In the fiscal year 2081/82, the Annual Blood Examination Rate (ABER) declined sharply to 3.5 compared with the previous year, when calculated based on the malaria-risk population. During 2080/81, Kathmandu district recorded the highest ABER (665.65), followed by Lalitpur (60.67), Dolakha (9.02), Ramechhap (7.43), and Bhaktapur (7.30). These differences largely reflect variations in the size of the malaria-risk population across districts. In contrast, the Annual Parasite Incidence (API) remained unchanged at 0.03 in 2079/80 to 2081/82. The both indicators were derived using the EDCD-provided denominators, including micro-stratification data.

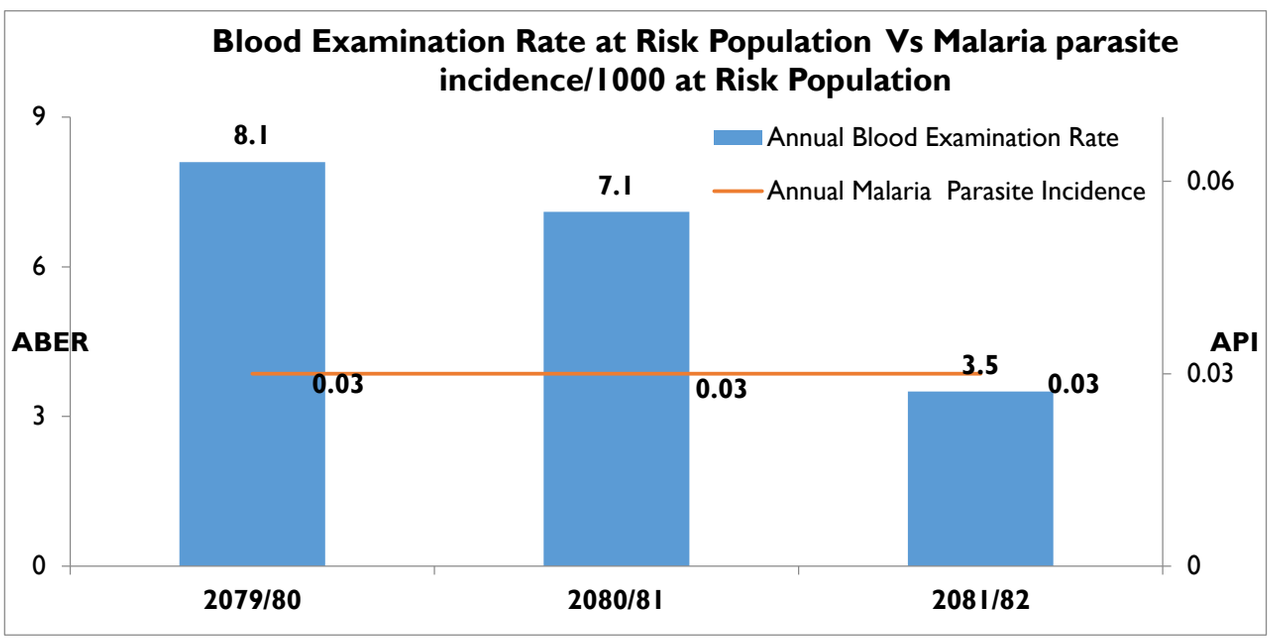


Figure 3.16 Annual Blood Slide Examination Rate (ABER) per 100 and Annual Parasite Incidence (API) per 1000 Population risk

Source: HMIS/DHIS2/MDIS

Malaria Epidemiological Trend (FY 2079/80- 2081/82)

The table presents key malaria indicators, showing an overall decline in confirmed malaria cases, largely influenced by an increase in cases associated with travel history, indicating imported malaria. Slight increases were observed in infections caused by Plasmodium falciparum and Plasmodium vivax. Importantly, one indigenous malaria case was reported in fiscal year 2081/82. Furthermore, probable or clinically suspected malaria cases decreased markedly, reaching zero in FY 2081/82.

Table 3.8 Malaria epidemiological information (FY 2079/80–2081/82)

Items /indicators	2079/80	2080/81	2081/82
Total population (risk population)	1,739,994	1760525	1818137
Total slide examined	140876	125808	63619
Total positive cases	46	58	56
Total indigenous cases	0	0	3
Total imported cases	45	58	53
Total P. falciparum (Pf) cases *	18	21	32

% of Pf of total cases*	39	36	56
Total indigenous Pf cases *	1	0	3
Total imported Pf cases *	17	21	29
Total P. vivax (Pv) cases+Ovale**	28	37	25
Total indigenous Pv cases+Ovale**	0	0	1
Total imported Pv cases +Ovale**	28	37	24
Annual blood examination rate	8.1	7.1	3.5
Annual Parasite Incidence	0.03	0.03	0.03
Annual Pf incidence	0.01	0.01	0.00
Slide positivity rate	0.03	0.05	0.09
Slide Pf positivity rate *	0.01	0.02	0.05
Death from Malaria	0	0	0
Probable/clinical suspected malaria cases	82	0	0

SWOT analysis of Malaria Elimination Program

Strengths	Weakness
Strong national and political commitment to malaria elimination by 2030	Limited entomological surveillance capacity at provincial level
Existence of a Provincial Malaria Elimination Steering Committee	Inadequate human resources dedicated exclusively to malaria elimination activities
Functional malaria disease surveillance system with case reporting and investigation mechanism	Irregular monitoring and supervision at the local level due to competing health priorities
Availability of trained health workers and laboratory services at provincial and local levels for malaria diagnosis and treatment	Limited provincial budget for malaria elimination activities
Free diagnosis and treatment of malaria in public health facilities	

Opportunities	Threats
Availability of updated micro stratification data to support evidence based planning	Risk of imported malaria cases due to migration from malaria endemic countries
Scope for strengthening cross border and inter provincial coordination to address imported malaria cases	Low community risk perception in wards classified as low risk and no risk
Continued technical and financial support from federal level and external development partners	Competing public health emergencies diverting resources and attention from malaria elimination activities
	Occurrence of indigenous malaria cases indicating potential for localized transmission and risk of resurgence

3.5 Kala-azar

Background

Leishmaniasis is a disease caused by an intracellular protozoan parasite, with 20 different Leishmania species capable of causing human infections. These parasites are transmitted through the bites of infected female phlebotomine sandflies, which require a blood meal to reproduce. Leishmaniasis manifests in three primary clinical forms:

I. Visceral leishmaniasis (VL) or kala-azar with its dermal sequel –post kala azar dermal leishmaniasis (PKDL).

II. Self – healing or Chronic cutaneous leishmaniasis (CL)

III. Mutilating mucosal or mucocutaneous leishmaniasis

Kala-azar is characterized by persistent symptoms such as prolonged fever, weight loss, weakness, anemia, and enlarged liver and spleen. If left untreated, patients typically succumb to intercurrent infections within approximately two years.

In Nepal, efforts are being made to eliminate Kala-azar. The elimination of Kala-azar is defined as achieving an annual incidence of less than 1 case per 10,000 population at the district level. The governments of Nepal have committed to the WHO regional strategy for Kala-azar elimination and have signed a memorandum of understanding (MoU) to enhance collaboration in regional elimination efforts, in conjunction with Bangladesh and India.

Kala-azar Elimination Program

Goal, objectives, and strategies

Goal:

Contribute to mitigation of poverty in kala-azar endemic districts of Nepal by reducing the morbidity and mortality of the disease and assisting in the development of equitable health systems.

Objectives

- Reduce the incidence of kala-azar in endemic communities with special emphasis on poor, vulnerable and unreached populations.
- Reduce case fatality rates from kala-azar to ZERO.
- Detect and treat post-Kala-azar Dermal Leishmaniasis (PKDL) to reduce the parasite reservoir.
- Prevent and manage Kala-azar HIV–TB co-infections.

Strategies

Nepal has adopted the following strategies for the elimination of Kala-azar.

- Early diagnosis and complete treatment
- Integrated vector management
- Effective disease and vector surveillance

- Social mobilization and partnerships
- Improve programme management.
- Clinical and implementation research

Major Activities carried out in FY 2081/82

- Assistance was extended to Kavepalanchok, Sindhuli and Makawanpur districts for the implementation of indoor residual spraying (IRS).
- Timely recording and reporting of Kala-azar cases, along with the provision of diagnostic kits and medicines to treatment centers, was carried out in close coordination with the federal government.
- Case investigation was performed at district and local level
- Coordination and support were provided to the diagnostic and treatment center.
- Supervision and monitoring of vector borne and neglected tropical disease and necessary support was provided to the hospitals.
- Integrated annual review meeting was conducted at all districts and hospitals with an aim to review the progress update on NTDs/VBDs in district.
- IEC and BCC activities were conducted at different levels.

Status and trend of Kala-azar cases (FY 2079/80 to 2081/82)

The number of Kala-azar cases in Bagamati Province showed the increasing trend in FY 2081/82 compared to FY 2080/81. At the national level, however, the disease has demonstrated a notable expansion in geographical distribution in recent years. Findings from the transmission assessment survey identified Kavre, Makawanpur, and Sindhuli as endemic districts. Kala-azar cases have been gradually rising in Kathmandu, Lalitpur, Makawanpur, Sindhuli and Kavre in FY 2081/82. Importantly, all cases referred from non-endemic districts across Nepal were ultimately reported in Kathmandu for treatment.

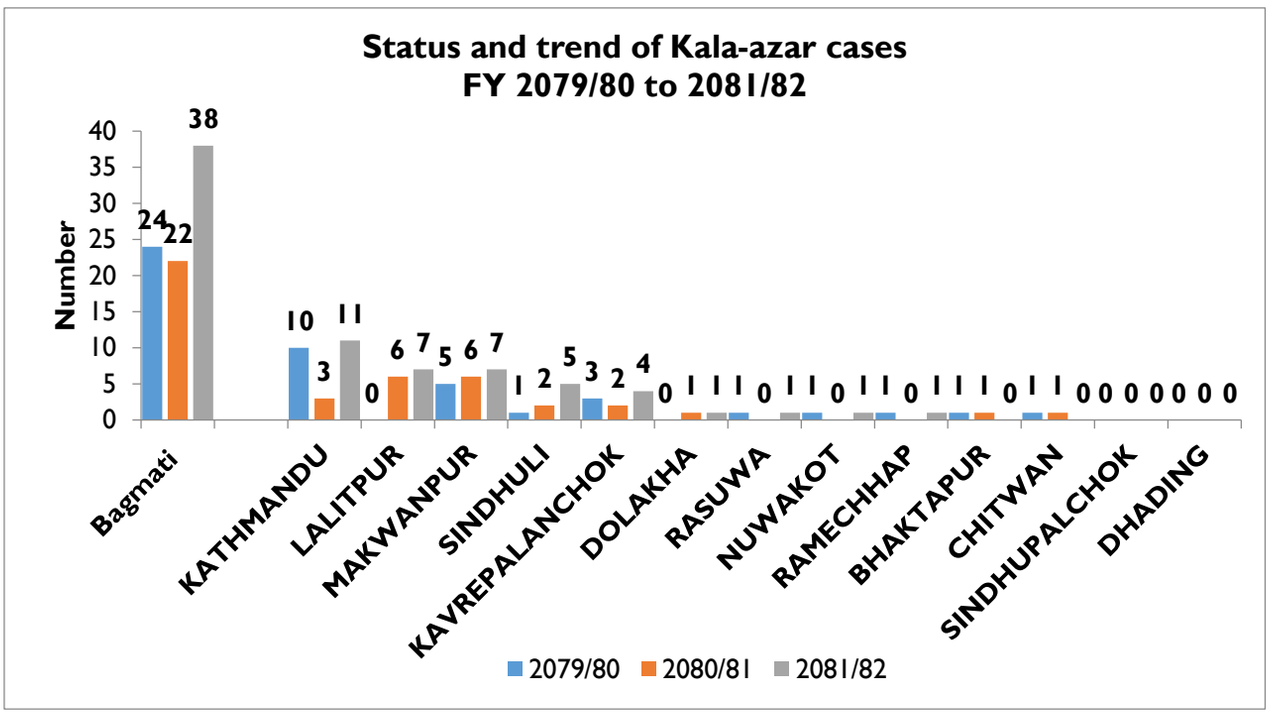


Figure 3.17 Status and trend of Kala-azar cases (2079/80 to 2081/82)

SWOT analysis of Kala-azar elimination program

Strengths	Weakness
HMIS and EWARS in place for surveillance of kala-azar.	Epidemiological sifting of the VL cases
Availability of free drugs and diagnostics for early case detection and timely treatment	Inadequate implementation of indoor residual spraying (IRS) especially in endemic districts
Multi-disciplinary approach to address challenges related to kala-azar elimination	Gaps in consistent supervision and monitoring of Kala-azar control interventions at local level
SOPs for ACD, IRS	Late diagnosis of Kala-azar cases due to low community awareness about the disease, particularly among poor and marginalaized communities
Active case detection through an index case–based approach	Increased indirect and treatment costs and complications resulting from delayed case detection
Opportunities	**Threats**
Scope for verification and reclassification of endemicity status in endemic or endemic doubtful districts reporting new cases	Emergence and increasing detection of other forms of leishmaniasis
Potential to enhance integrated disease and vector surveillance system	Risk of localized transmission or outbreaks in areas with inadequate vector control coverage
Integration of kala-azar elimination activities with other vector borne diseases at provincial and local level	Environmental and climatic changes potentially influencing sandfly vector distribution and density

3.6 Lymphatic Filariasis

Background

Lymphatic filariasis (LF), commonly referred to as elephantiasis, is a mosquito-borne parasitic disease. It is a painful and severely disfiguring neglected tropical disease, frequently linked to areas with poor sanitation and inadequate housing conditions. Infection is often acquired during childhood, while the visible clinical manifestations may appear later in life, leading to temporary or permanent disability, pain, and social stigma.

LF is transmitted by several mosquito species, including Culex, Anopheles, and Aedes, and is caused by thread-like filarial worms (nematodes). Globally, about 90% of LF infections are caused by Wuchereria bancrofti, with the remaining cases due to Brugia species (Brugia malayi and Brugia timori). In Nepal, however, Wuchereria bancrofti is the only known causative species responsible for lymphatic filariasis.

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.

Strategies

1. **Interruption of Transmission by Mass Drug Administration (MDA):**

   Initially, two-drug regimens, Diethylcarbamazine (DEC) and Albendazole (ALB), known as

DA MDA, were administered yearly for six years. Now, in newly endemic and Transmission Assessment Survey failure districts, a three-drug regimen— Ivermectin, DEC, and Albendazole, known as IDA MDA—is used annually for 2 years. Given that humans are the sole reservoir of this filaria, MDA stands out as the most effective strategy for elimination.

2. **Morbidity Management and Disability Prevention (MMDP):**

   Morbidity management involves essential package of care (EPC) or self-care services supported by intensive yet simple, effective, and locally tailored hygiene techniques. This recommended essential package of care includes:

- Treatment for episodes of adenolymphangitis (ADL) or acute attack
- Management of lymphoedema to prevent both progression of disease and episodes of ADL (hygiene, skin and wound care, elevation, exercise, and suitable footwear).
- Surgery for hydrocoele (in W. bancrofti endemic areas) MDA or individual treatment to destroy any remaining adult parasites and microfilaria.

3. **Integrated Vector Management:**

   This strategy focuses on comprehensive approaches to vector control and reduction. The population at risk of this disease benefits from integrated vector management measures implemented for malaria, dengue and kala-azar control. These measures include Indoor Residual Spraying (IRS) and the use of Long-Lasting Insecticidal Nets (LLINs). Additionally, community engagement plays a crucial role, promoting the use of regular bed nets and advocating for environmental sanitation through various integrated programs. This comprehensive approach aims to create a synergistic impact, effectively addressing the multifaceted challenges associated with vector-borne diseases like Lymphatic Filariasis.

LF burden in Nepal

Nepal was one of the 72 countries listed by WHO as being endemic for lymphatic filariasis. Initially, the LF vector was identified between 300 and 5800 feet. However, the 2014 study reported the vector presence up to 6890 feet in Nepal. A series of LF mapping initiatives conducted between 2001 and 2012, utilizing Immunochromatography Test cards (ICT), revealed that the average baseline prevalence of LF in Nepal was 13 percent, ranging from less than 1 percent to as high as 39.8 percent in certain districts. Based on the ICT survey, along with morbidity reporting, vector density, sanitation status, and geo-ecological considerations, 64 out of 77 districts were considered endemic, with an initial at-risk population totalling 25 million.

Status of MDA Implementation

In the 2080/81, Mass Drug Administration (MDA) was carried out across 7 districts, wherein all districts implemented the triple drug therapy (IDA) regimen comprising ivermectin, diethylcarbamazine and albendazole. The MDA campaign demonstrated notable success, as all districts exceeded the recommended epidemiological coverage threshold (>65%). Among the 7 districts, 6 achieved an impressive epidemiological coverage of over 80%.

To gauge the effectiveness of the MDA campaign, comprehensive independent assessments were concurrently conducted, employing various measures such as spot compliance assessments and evaluations utilizing the WHO-recommended Supervisors' Coverage Tool (SCT). Both spot coverage and SCT assessments were anticipated to provide a closer approximation of the true coverage achieved by the MDA.

Table 3.9 Status of MDA implementation

Status of MDA Implementation								
Number of endemic district	MDA not started/ not at scale	MDA at scale	IDA 2nd round	IDA 3rd round	EMS Passed/ IIS Planned	TAS 1 passed	TAS 2 passed	TAS 3 passed
64 districts	0	64 districts	6 districts (Jhapa, Rasuwa, Dhanusha, Mahottari, Rautahat, Sarlahi)	1 districts	4 districts (Morang, Dang, Banke, Kailali)	53 districts	47 districts	28 districts

MDA is necessary to reduce community infection levels below a threshold, preventing mosquitoes from spreading parasites and new infections. Coverage is monitored at each MDA round to determine whether the goal of achieving at least 65% coverage of the total population was met. The Epidemiology and Disease Control Division (EDCD) conducts post-MDA Coverage Surveys, Pre-Transmission Assessment Surveys, and Transmission Assessment Surveys (I, II, & III)

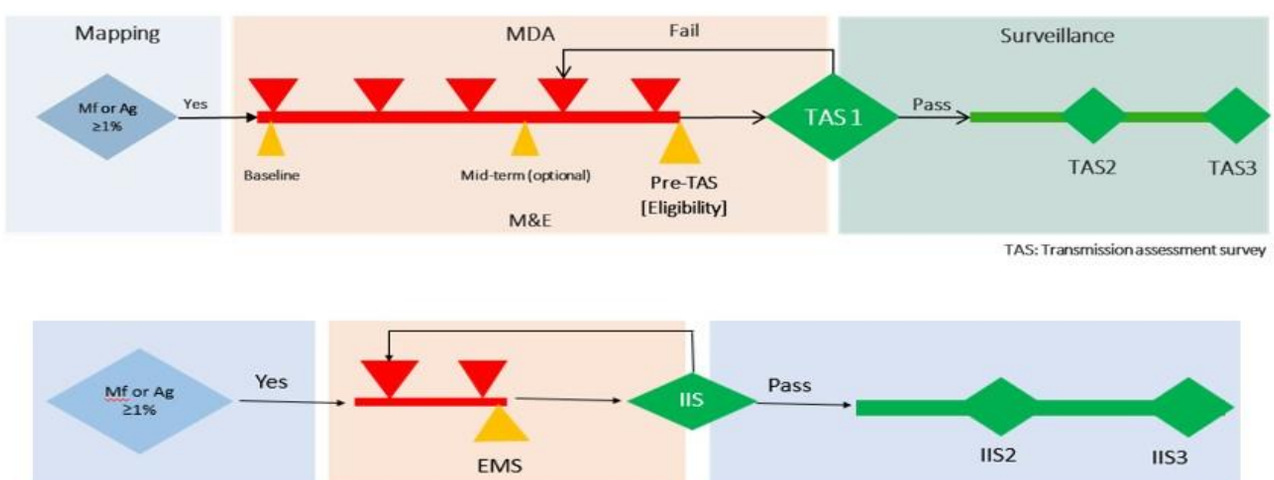


Figure 3.18 Monitoring and Evaluation of MDA program

to monitor Lymphatic Filariasis Elimination activities using WHO guidelines. TAS surveys are performed for DA (two-drug regimen) MDA activities. In districts implementing IDA (three-drug regimen) MDA, Epidemiological Monitoring Surveys (EMS) and IDA Impact Surveys (IIS) are conducted following WHO provisional guidelines. In the fiscal year 2080/81, TAS-1 Surveys were conducted in Bara, Lamjung, Parbat, and Baglung. EMS took place in Morang, Kapilvastu, Dang, Banke and Kailali. All of these districts except Kapilvastu successfully passed these surveys.

Coverage of MDA in Bagamati Province of FY 2081/82

Bagamati Province consists of 13 districts, all of which have completed the Mass Drug Administration (MDA) campaign, met the established targets, and passed the Transmission Assessment Survey. In addition, a survey conducted in Dolakha district confirmed the absence of lymphatic filariasis (LF) transmission in the area.

Morbidity Mapping and Disability Prevention

The second strategy of the LF elimination program emphasizes morbidity mapping and disability prevention. The LF Morbidity and Disability Prevention (MMDP) survey was completed in Bagamati Province, which includes 10 districts. In fiscal year 2081/82, morbidity mapping was conducted in Sindhuli district; however, the analysis has not yet been completed. In the remaining district, Rasuwa, morbidity mapping is planned for the next fiscal year.

The survey results indicate that a total of 8,830 LF cases have been identified in Bagamati Province. Out of these, 4,776 cases were hydrocele, 3,968 cases (both male and female) were lymphedema, and 86 cases presented with both conditions. Detailed information is provided in table given below.

Table 3.10 District-wise LF morbidity report of FY 2081/82

SN	Districts	Morbidity				Total
		Hydrocele	Lymphedema		Both	
			M	F		
1	Ramechhap	115	47	44	2	208
2	Sindhupalchok	396	205	311	26	938
3	Kavrepalanchok	345	57	192	0	594
4	Nuwakot	1562	210	487	0	2259
5	Dhading	1342	194	630	28	2194
6	Kathmandu	281	156	497	10	944
7	Lalitpur	115	52	204	6	377
8	Bhaktapur	126	119	345	4	594
9	Chitawan	247	55	44	3	349
10	Makawanpur	247	34	85	7	373
11	Sindhuli	Morbidity mapping has been conducted; however, analysis has not yet been completed.				
12	Rasuwa	Planning for the next year				
	Bagamati	4776	1129	2839	86	8830

SWOT Analysis of LF Elimination Program

Strengths	Weakness
Strong national commitment to LF elimination aligned with WHO target and MOH strategies	Inadequate documentation and follow up of chronic LF morbidity cases
Availability of standard treatment guidelines Successful implementation of MDA in endemic districts	Variation in local level ownership and prioritization of LF elimination activities
Experience and capacity of FCHVs in MDA delivery and community mobilization	High population mobility, especially in urban districts, affecting treatment coverage.
Established surveillance system, including Transmission Assessment Surveys (TAS)	
Opportunities	**Threats**
Expansion of post MDA surveillance and TAS to verify elimination status	Risk of reintroduction or residual transmission due to population movement
Use of urban focused and migrant sensitive strategies to improve coverage	Competing public health priorities affecting resource allocation
Strengthening MMDP services	
Increased engagement of local governments	

Dengue

Background

Dengue is a disease that is transmitted to humans through the bites of infected mosquitoes, namely Aedes aegypti and Aedes albopictus, making it a vector-borne illness. Dengue is prevalent in most provinces of Nepal and has witnessed a surge in cases in recent years. The first documented case of dengue in Nepal was reported in 2004, involving a foreign individual in Chitawan district. Since then, Nepal has seen a gradual increase in dengue cases, primarily in the tropical lowlands and subtropical hilly regions, including the capital city, Kathmandu. The country has faced multiple dengue outbreaks between 2006 and 2024.

Dengue virus has emerged as a major public health concern in Nepal due to its widespread presence throughout the year, with cases reported from all 77 districts in the country. Entomological surveillance conducted in the major cities in 2022 also showed the presence of Aedes aegypti in all three areas and Aedes albopictus in cities. However, the density of the albopictus vectors were presented in the cities.

Major Activities carried out in FY 2081/82

- Conducted orientation to multi-stakeholders at local levels for advocacy on dengue prevention and control including support for search and destroy activities.
- Conducted 'search and destroy' activities at local levels to search for the potential breeding sites of Aedes mosquitoes and destroy them.
- Conducted advocacy and sensitization meetings to elected representatives from various levels.
- Regular communication and collaboration with the relevant levels, partners, and stakeholders to

enhance the recording, reporting and dengue response.

- Prevention and control, which is regularly distributed through online and social media channels.
- Dengue test diagnostic kits are being supplied to hospitals and districts on a need basis.
- A joint program review of vector borne disease, including dengue, was undertaken by a team of national experts.
- Routine surveillance of Dengue through EWARS
- Vector surveillance activities conducted at provincial/ Districts levels.
- Regular logistic supply of dengue RDT kits to peripheral level health facilities

Dengue Control Program

Goal

To reduce the morbidity and mortality due to dengue fever, dengue haemorrhagic 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 is directed towards containment and source reduction

Annual Trend of Dengue Cases (FY 2078/79-2081/82)

The figure shows marked year-to-year variation in dengue cases in Bagamati Province over the last three fiscal years. Dengue cases peaked in FY 2079/80 followed by a substantial decline in FY 2080/81 and then a moderate resurgence in FY 2081/82. This pattern suggests a cyclical epidemic trend in the dengue epidemiology. The significant reduction in the number of dengue cases in FY 2080/81 can be attributed to post outbreak immunity, strengthened dengue control and response activities and less favorable climatic conditions for mosquito breeding compared to the FY 2079/80. However, there is continued endemic transmission of dengue in Bagamati province.

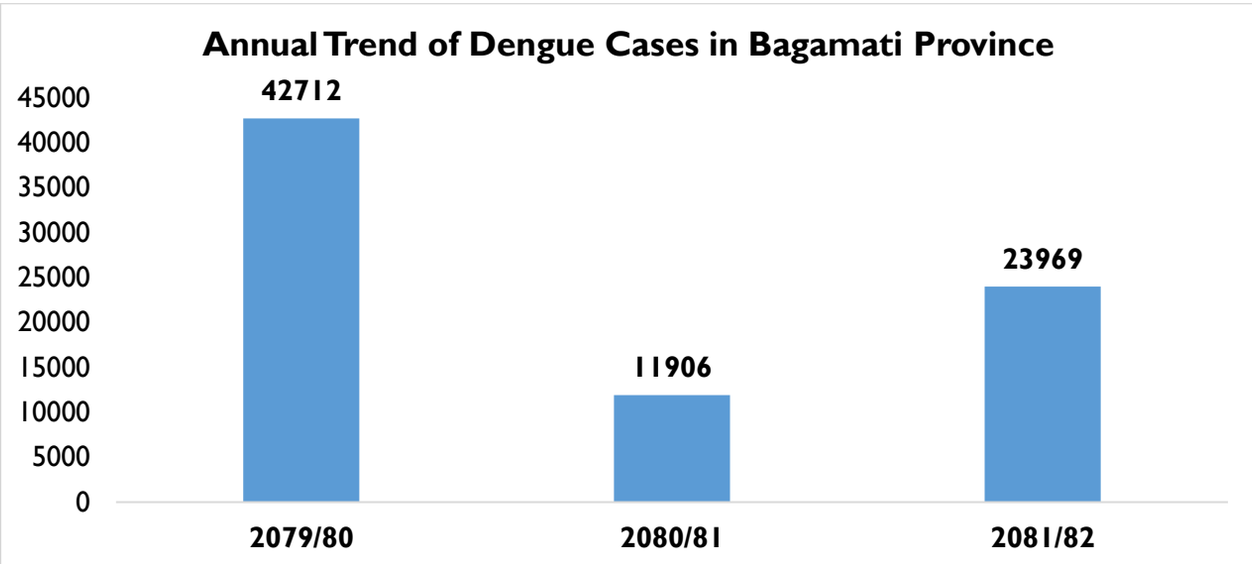


Figure 3.19 Annual trend of dengue cases (FY 2079/80-2081/82)

District-wise Annual trend of Dengue cases (FY 2079/80- 2081/82)

The number of reported dengue cases increased in FY 2081/82, reaching 23,969 cases compared to FY 2080/81. In FY 2081/82, Kathmandu district reported the highest number of cases (10,380), followed by Bhaktapur (4,547), Chitawan (4,063), and Makawanpur (1,348). The remaining districts also reported dengue cases ranging from 47 to 1,201, reflecting an overall increasing trend compared to the previous fiscal year. Higher number of dengue cases in Kathmandu, Bhaktapur, Chitawan and Makawanpur are likely due to high population density, rapid urbanization, favourable climatic conditions, increased human mobility, established Aedes vector presence, and better surveillance and reporting mechanisms.

Table 3.11 District-wise Annual trend of Dengue Cases

Organization	2079/80	2080/81	2081/82
Bagamati Province	42712	11906	23969
Kathmandu	14406	3186	10380
Bhaktapur	6180	522	4547
Chitawan	3231	1779	4063
Makawanpur	5844	893	1348
Lalitpur	9631	1459	1201
Dhading	1796	3545	850
Sindhuli	179	33	418
Kavrepalanchok	567	209	382
Ramechhap	241	38	280
Nuwakot	293	91	190
Dolakha	109	81	172

Sindhupalchok	221	67	91
Rasuwa	14	3	47

Source: HMIS/DHIS2/EWARS

It is important to note that the number of dengue cases reported by hospitals, Public Health Offices, and Primary Health Care Centers (PHCCs) through the Early Warning and Reporting System (EWARS) may differ from those reported via the Health Management Information System (HMIS)/District Health Information System (DHIS2) or direct case reports to the program. The HMIS typically consolidates aggregate data from various hospitals and health facilities, while EWARS actively collects data directly from hospitals. District-level verification is conducted using a detailed line listing report of all cases.

SWOT analysis of Dengue Control Program

Strengths	Weakness
Availability of National Guidelines on Prevention, Management and Control of Dengue in Nepal.	Reactive nature of dengue response, with interventions often intensified only during outbreaks
Surveillance through EWARS and DHIS2.	Limited entomological surveillance and routine vector density monitoring, especially at the municipal level
Availability of dengue register for better recording and reporting.	Inadequate human resources and logistics dedicated specifically to dengue prevention and control
Availability National Guidelines on Integrated Vector Management (IVM)	Inadequae training and orientation for newly recruited health workers and refresher training for focal persons and managers.
	Under/over reporting of dengue in HMIS.

Opportunities	Threats
Scope for strengthening community engagement and school based awareness programs on dengue	Climate change and its impact on mosquito populations and dengue transmission with shift of disease from low land regions to higher elevations.
Collaboration with regional and international organizations for dengue control efforts.	Difficulty in controlling the spread of dengue in densely populated urban areas.
Prospects for integration of technology in surveillance and response systems, such as Epidemic Intelligence from Open Sources (EIOS)	Limited engagement of other concerned ministries besides the Ministry of Health in the prevention and control of mosquitoes.
Increased collaboration and coordination among all levels of government	Insufficient community and multi-stakeholder engagement in dengue control efforts at local levels

3.7 Scrub Typhus

Background

Scrub typhus is an infectious disease transmitted by larval mites infected with the Orientia tsutsugamushi bacterium. These mites, commonly referred to as chiggers, are extremely tiny, measuring only 0.15–0.3 mm in length and can only be observed through a microscope or magnifying glass. The bite of an infected mite may result in a distinctive black eschar, which is a valuable clinical indicator for diagnosing scrub typhus. It's important to note that scrub typhus does not spread from person to person.

Nepal has seen various studies that confirm cases of scrub typhus infection. For instance, in 1981, an examination of 188 samples from eastern Nepal revealed that 19 individuals had antibodies to scrub typhus. In 2004, an analysis of blood samples from fever-afflicted patients in Patan Hospital, located in the Kathmandu Valley, showed that 3.2% of the cases tested positive for scrub typhus through serology. Furthermore, after the devastating earthquake in 2015, scrub typhus outbreaks were reported throughout Nepal, resulting in numerous cases of illness and death. While the surveillance system for scrub typhus is not yet well-established, data from the Early Warning and Reporting System (EWARS) indicated a certain number of scrub typhus cases.

Major activities carried out in FY 2081/82

- Surveillance and case reporting through EWARS and DHIS 2
- Distribution of IEC/BCC materials through local health facilities
- Coordination with Public Health Offices and local levels for scrub typhus control activities

Trend of Scrub Typhus cases in Bagamati province

According to the table below, scrub typhus cases in Bagamati Province increased markedly in FY 2081/82, reaching 3,063 cases, which represents a significant rise compared to previous years. Chitawan district reported the highest number of cases (920), followed by Kathmandu (641), Sindhuli (398), Dhading (372), Ramechhap (241), Makawanpur (214) and Kavre (101). Higher scrub typhus cases in Chitawan, Kathmandu, Sindhuli and other districts are likely due to favourable ecological conditions for chigger mites, increased agricultural and outdoor exposure, peri urban expansion into forested areas, seasonal climatic factors. The remaining districts reported between 3 and 99 cases.

Table 3.12 Trend of Scrub Typhus cases reported to EWARS from FY 2079/80 to 2081/82

Organization	2079/80	2080/81	2081/82
Bagamati province	1290	1838	3063
Chitawan	605	552	920
Kathmandu	255	706	641
Sindhuli	53	101	398
Dhading	74	202	372
Ramechhap	5	28	241
Makawanpur	130	164	214
Kavrepalanchok	139	34	101
Lalitpur	14	8	99

Sindhupalchok	3	8	33
Dolakha	5	12	28
Bhaktapur	5	5	9
Nuwakot	2	0	4
Rasuwa	0	18	3

Source: HD/EWARS

SWOT Analysis of Scrub Typhus Control Program

Strengths	Weakness
National guidelines for the diagnosis, management, and prevention of Scrub Typhus in Nepal	Absence of a well-established national surveillance system for scrub typhus
Efforts are being made to raise community awareness about transmission risks and prevention strategies.	Insufficient community awareness about transmission, prevention and early care seeking behavior
Priority is being given to building the capacity of health workers to ensure timely diagnosis and effective management.	
Availability National Guidelines on Integrated Vector Management (IVM)	

Opportunities	Threats
Absence of a well-established national surveillance system for scrub typhus	Annual increase in reported cases
Insufficient community awareness about transmission, prevention and early care seeking behavior	Low risk perception among communities
	Environmental and climatic factors favoring rodent and mite populations, increasing transmission risk

3.8 Zoonotic Diseases and Other Communicable Diseases

Background

Zoonosis describes an infectious disease transmitted from non-human primates to humans. Zoonotic pathogens, which may be bacterial, viral, parasitic, or involve unconventional agents, spread through direct contact or via contaminated food, water, or environmental sources. These diseases pose a serious threat to global health security. About 60% of current human infectious diseases are of animal origin, and at least 70% of emerging infectious diseases, such as Ebola, Zika, and influenza, are linked to animals. Each year, five new human diseases are identified, with three stemming from animal sources. Furthermore, 80% of pathogens with bioterrorism potential are zoonotic.

The Health Directorate collaborates with various sectors, including livestock, wildlife, agriculture, environment, the public, and non-governmental organizations, while working closely with the Ministry of Health (MOH) and the Epidemiology and Disease Control Division (EDCD). The Zoonotic

and Other Communicable Disease Control Section at EDCD emphasizes public health initiatives to combat zoonotic diseases. To effectively allocate resources and maximize health benefits for both humans and animals, ten zoonotic diseases have been prioritized using the One Health approach.

Major activities carried out in FY 2081/82:

- Conducted Snakebite Case Management Training to the health workers engaged in snakebite treatment centres within Bagamati province
- Provide support to the Ministry of Health (MoH) in formulating policies and strategies.
- Formation of Provincial One Health Steering Committee, with support from EDCD
- Coordinate with different stakeholders to manage zoonotic disease outbreaks efficiently.
- Collaborate with the Logistics Management Centre to manage vaccines for diseases such as rabies and snake bites.
- Responded to Rabies outbreak in coordination with Public Health Office, Dhading
- Support districts in organizing orientation and refresher training programs on zoonotic diseases control
- Facilitate and assist in conducting information management training and local programs focused on zoonotic disease management.
- Work with multi-sector authorities to mitigate the health sector's impact during natural disasters and execute response plans.
- Facilitate and coordinate preventive and curative services delivery through provincial and local channels, particularly for displaced communities following natural disasters.
- Oversee and facilitate the management of buffer stocks for essential medicines and other outbreak/epidemic control logistics.
- Conducted awareness programs on rabies for school students and the general public.

3.8.1 Rabies

Rabies is primarily a disease affecting warm-blooded animals such as dogs, jackals, mongooses, and wild cats. While rabies cases are nearly always fatal, the disease is entirely preventable through vaccination and increased awareness about safe human-animal interactions. Children account for 40% of all dog bite cases. It is estimated that nearly half of Nepal's population is at high risk of rabies, with another quarter at moderate risk. Annually, around 75,000 cases of rabies are reported in pets, along with more than 100 human cases, with the Terai region being the most affected.

To address this public health challenge, the government has set a goal to eliminate rabies by 2030. In this context, public and animal health authorities are prioritizing efforts to eradicate rabies as a significant public health concern.

The table illustrates the status of dog bites and other suspected animal bite cases in Bagamati Province from FY 2079/80 to FY 2081/82. Dog bite cases showed a slightly decreasing trend, with 76,130 cases reported in FY 2081/82 compared to 85,910 in FY 2080/81 and 16,771 in FY 2079/80. Similarly, cases of other suspected animal bites also declined, with 2,819 cases in FY 2081/82, 3,890 in FY 2080/81, and 1,433 in FY 2079/80.

Table 3.13 Status of reported animal bites (Dog bite and others) in Bagamati Province

Organization	2079 /2080			2080 / 2081			2081 / 2082		
	Dog Bite	Animal Bite	Total	Dog Bite	Animal Bite	Total	Dog Bite	Animal Bite	Total
Bagamati Province	16771	1433	18204	85910	3890	89800	76130	2819	78949
Dolakha	971	34	1005	870	261	1131	1014	92	1106
Sindhupalchok	1062	38	1100	982	89	1071	1212	106	1318
Rasuwa	104	5	109	154	3	157	154	19	173
Dhading	1210	143	1353	2098	171	2269	2401	233	2634
Nuwakot	199	29	228	581	23	604	750	93	843
Kathmandu	4859	511	5370	70548	549	71097	56315	591	56906
Bhaktapur	1366	82	1448	1143	114	1257	1134	115	1249
Lalitpur	520	67	587	899	80	979	1319	78	1397
Kavrepalanchok	3251	187	3438	3313	386	3699	3835	314	4149
Ramechhap	639	13	652	406	14	420	284	21	305
Sindhuli	663	33	696	1234	290	1524	1321	95	1416
Makawanpur	386	53	439	1215	1457	2672	1426	287	1713
Chitawan	1541	238	1779	2467	453	2920	4965	775	5740

In FY 2081/82, Kathmandu district reported the highest number of dog bite cases (56,315), followed by Chitawan (4,965), Kavrepalanchok (3,835), Dhading (2,401), Sindhuli (1,321), Makawanpur (1,319), and Sindhupalchok (1,212). The remaining districts reported between 254 and 1,134 cases.

Regarding other suspected animal bite cases, Chitawan reported the highest number (775), followed by Kathmandu (590) and Kavrepalanchok (314). Overall, the table indicates a declining trend in both dog bite and other animal bite cases across all districts, although minor fluctuations were observed in some areas. This trend highlights important programmatic and public health implications, emphasizing the need for continued surveillance, timely interventions, and strengthened preventive measures.

SWOT Analysis of Rabies Control Program

Strengths	Weakness
Strong national policy commitment to rabies prevention and control under One health approach	Limited availability and uneven distribution of Post Exposure Prophylaxis services at peripheral level
Availability of Post Exposure Prophylaxis and rabies immunoglobulin (RIG) at designated health facilities	Weak dog population management, including stray dog control
Surveillance through EWARS	Inconsistent data sharing between human health and veterinary sectors
Presence of referral hospitals and treatment centres, especially in Kathmandu valley	

Opportunities	Threats
Expansion of One health coordination mechanisms at provincial and local levels	High human mobility and urbanization, increasing exposure risk
Use of local government resources and urban municipal engagement following federalization	Low compliance with responsible pet ownership practices
Strengthening bite case management and risk assessment training for health workers	Competing public health priorities affecting funding and program focus

3.8.2 Snake bites

Around 10,000 snake bite cases are estimated annually, of which about 10 percent are poisonous bites. Twenty-one of the 89 species of snakes found in Nepal are poisonous. The mortality rate is about 10 percent among poisonous bite cases. The 26 Terai districts are highly affected. The free distribution of anti-snake venom serum (ASVS) began in 1999/2000. Indian quadrivalent ASVS is being used now. As per the DoHS annual report, there are 88 snake bite treatment centres are in the country for snakebite management in collaboration with Nepal army, Nepal Red Cross Society, community members. In addition to these, other hospitals in Kathmandu valley has been getting ASVS on basis of cases they manage.

Bagamati Province has notified approximately 11 snake bite treatment centers, such as Bharatpur Hospital (Chitawan), Bir Hospital, Kanti Children's Hospital, TUTH, Patan Hospital, Sukraraj Hospital (Teku), Sindhuli Hospital, Nepal Police Hospital (Dudhauli, Sindhuli), Sirthauli Primary Health Center, Dudhauli Primary Health Center, and Harsahi Health Post (Sindhuli).

Status of Snakebite cases in Bagamati Province

The table presents a summary of snakebite cases in Bagamati province, classified into poisonous and non-poisonous categories. In fiscal year 2081/82, non-poisonous snakebite cases showed an increasing trend, while poisonous cases demonstrated a decline, with 229 cases reported in 2081/82 compared to 243 cases in 2080/81. Dhading district reported the highest number of poisonous snake bite cases (73), followed by Kathmandu (35), Sindhuli (34), and Chitawan (24). Higher cases of snakebite in these districts may be due to favourable ecological conditions, occupational exposure, rural and peri urban settlement patterns, seasonal agricultural activities and better access to treatment and reporting facilities.

Table 3.14 Snake bite cases in Bagamati Province from FY 2079/80 to 2081/82

Organization	2079 /2080		2080 / 2081		2081 / 2082	
	Non Poisonous	Poisonous	Non Poisonous	Poisonous	Non Poisonous	Poisonous
Bagamati Province	882	106	746	243	1007	229
Dolakha	59	11	33	5	35	2
Sindhupalchok	86	13	78	5	109	20
Rasuwa	8	11	10	17	15	13
Dhading	94	17	77	131	170	73
Nuwakot	14	3	22	3	24	1
Kathmandu	37	6	16	11	47	35

Bhaktapur	4	1	16	1	7	3
Lalitpur	15	2	13	1	9	1
Kavrepalanchok	60	13	43	6	98	16
Ramechhap	15	4	24	4	20	5
Sindhuli	293	2	293	46	366	34
Makawanpur	92	4	53	6	55	2
Chitawan	105	19	68	7	52	24

SWOT Analysis of Snakebite Control Program

Strengths	Weakness
Availability of national guidelines for snakebite management	Uneven distribution of snakebite treatment services, especially in remote and hilly areas
Presence of snake bite treatment centres in key districts	Limited snakebite surveillance and reporting quality, including under reporting
Availability of ASVS and essential supportive care at designated health facilities	
Experience of health workers in clinical management of snakebite cases in high burden districts	
Opportunities	**Threats**
Expansion of snakebite treatment capacity at strategically located health facilities	High occupational exposure among agricultural and forest dependent populations
Capacity building of health workers through refresher trainings and mentorship	Delayed care seeking due to geographical barriers and socio cultural beliefs
Engagement of local governments and community organizations in prevention efforts	

CHAPTER
04

NON COMMUNICABLE DISEASES AND MENTAL HEALTH

4.1 Non Communicable Diseases (NCDs)

Non-communicable diseases (NCDs) represent the foremost public health emergency of the 21st century. Unlike other conditions, NCDs are chronic conditions that develop gradually but impose profound and long-lasting impacts on individuals, families, communities, and health systems. Their onset and progression are largely influenced by lifestyle behaviors, environmental exposures, and metabolic risk factors—many of which are preventable or modifiable through public health interventions.

Five Major NCDs

- **Cardiovascular diseases (CVDs) –** including heart disease and stroke, the leading cause of NCD mortality.
- **Cancers –** a diverse group of malignant conditions contributing significantly to premature deaths.
- **Chronic respiratory diseases –** such as chronic obstructive pulmonary disease (COPD) and asthma.
- **Diabetes mellitus –** including complications such as kidney disease.
- **Mental health and neurological disorders –** increasingly recognized as major contributors to disability and reduced quality of life.

Five Major Risk Factors

- **Tobacco use –** both smoking and smokeless forms remain prevalent.
- **Unhealthy diet –** low fruit and vegetable intake, high salt, sugar, and fat consumption.
- **Physical inactivity –** sedentary lifestyles, especially in urban areas.
- **Use of alcohol –** associated with increased risk of multiple NCDs.
- **Air pollution –** exacerbating cardiovascular and respiratory conditions along with other underlying conditions.

Globally, NCDs account for around 80% of premature deaths, with the heaviest burden shouldered by low- and middle-income countries (LMICs) such as Nepal. Within this context, Bagamati Province, the most urbanized and economically dynamic region of Nepal, faces distinctive challenges in addressing NCDs. Epidemiological as well as Demographic Transitions followed by Urbanization and Industrialization, Rapid lifestyle transitions and Exposure to metabolic as well as environmental risk exposures have amplified the risk and prevalence of these chronic conditions, highlighting the urgent need for comprehensive, multi-sectoral public health strategies for prevention, early detection, and management.

Nepal is experiencing a rapid epidemiological transition, with NCDs overtaking infectious diseases as the leading cause of death. The WHO STEPS Survey Nepal 2019 provides nationally representative

data on adults aged 15–69 years, highlighting the prevalence of key risk factors:

- Insufficient fruit/vegetable intake: 97%
- Tobacco use: 17%
- Harmful alcohol consumption: 6.8%
- Physical inactivity: 7–8%
- Overweight/Obesity: 24%
- Raised blood pressure: 24.5%
- Raised blood glucose: 5.8%
- Raised cholesterol: 11%



On average, each adult has two NCD risk factors, indicating clustering that heightens vulnerability. This clustering effect means that individuals are often exposed to multiple risks simultaneously, increasing the likelihood of developing chronic conditions.

Bagamati Province, home to Kathmandu Valley and Nepal's capital city, demonstrates distinctive risk factor patterns compared to other provinces:

Overweight/Obesity:

- Prevalence is 43%, nearly double the national average.
- This is the highest among all provinces, reflecting urban lifestyles, dietary transitions, and socio economic influences.

Metabolic risks:

- Higher prevalence of obesity, hypertension, and diabetes compared to rural provinces.
- Urbanization, sedentary work environments, and processed food consumption are key drivers.

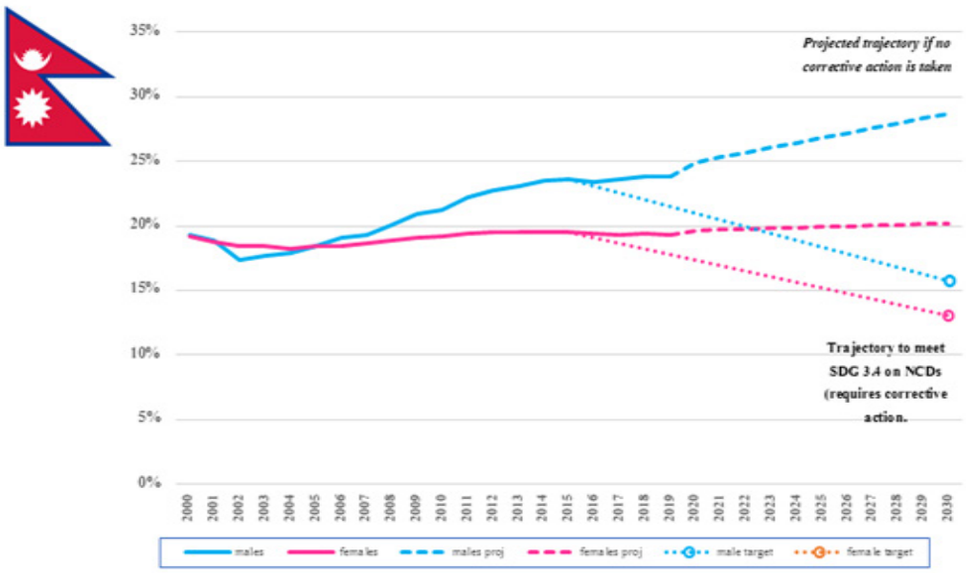
Environmental risks:

- Air pollution in Kathmandu Valley adds a significant burden, compounding cardiovascular and respiratory risks.

The Government of Nepal has endorsed the Multisectoral Action Plan (MSAP) for NCDs 2021–2025, which emphasizes interventions that are practical, high-impact for health, culturally and politically acceptable, and financially feasible through coordinated efforts across multiple sectors and stakeholders. The Sustainable Development Goals (SDGs) have provided renewed momentum to accelerate progress in addressing NCDs, their risk factors, and underlying determinants. Achieving the SDG targets in Nepal requires strategic investment in interventions that reduce the NCD burden, improve population health, and advance progress across multiple SDGs.

Bagamati Province has marked a significant achievement as the first province to establish both the Provincial Level High-Level Committee and the Provincial Level Coordination Committee for the effective implementation of MSAP-II, demonstrating leadership in provincial NCD governance and multisectoral collaboration.

SDG 3.4 (NCDs) By 2030, reduce by one-third pre-mature mortality from NCDs through prevention and treatment
Nepal: Where do we stand today?



Extending the 9 voluntary global NCD targets for 2025 to 2030



MSAP 2021 – 2025

- **25% relative reduction in the overall mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases.**
- 10% relative reduction in the harmful use of alcohol, as appropriate, within the national context
- 10% relative reduction in prevalence of insufficient physical activity
- 30% relative reduction in mean population intake of salt/sodium
- 30% relative reduction in prevalence of current tobacco use
- **25% relative reduction in the prevalence of raised blood pressure**
- Halt the rise in diabetes and obesity
- **At least 50% of eligible people receive drug therapy and counselling (including glycemic control) to prevent heart attacks and strokes**
- **An 80% availability of the affordable basic technologies and essential medicines, including generics** required to treat major noncommunicable diseases in both public and private facilities

Table 4.1 Trend of Major NCDs of Bagamati Province

Trends of Major NCDs															
Diseases	Period	Bhaktapur	Chitawan	Dhading	Dolakha	Kathmandu	Kavrepalanchok	Lalitpur	Makawanpur	Nuwakot	Ramechhap	Rasuwa	Sindhuli	Sindhupalchok	Bagamati Province
Hypertension	2079/80	12062	31222	13469	3461	22476	10060	24208	11777	3863	4274	484	3715	4595	145666
	2080/81	29120	34842	23324	6335	48040	43735	30126	27497	7386	11131	2434	8271	11136	283377
	2081/82	46397	65848	16928	5524	121796	5181	26995	12326	10944	3946	2738	8545	4749	331917
Cardiovascular Diseases (CVDs)	2079/80	307	2479	53	24	2328	52	1529	104	35	36	14	216	33	7210
	2080/81	331	1995	161	37	4815	90	1690	771	25	257	76	169	118	10535
	2081/82	832	2757	201	74	6683	129	4081	964	1863	198	131	179	256	18348
Diabetes Mellitus (DM)	2079/80	7349	20645	4833	783	14451	3709	21534	4714	961	894	103	1104	2264	83344
	2080/81	27199	20496	8393	1843	34129	11085	43055	10576	1393	3529	626	3043	4759	170126
	2081/82	43953	59129	2553	2182	115854	2773	18006	6647	6430	1031	450	5511	1867	266386
COPD	2079/80	2837	8068	3766	1281	8031	2229	11363	17490	1524	1043	158	1068	2610	61468
	2080/81	10686	9220	5765	1652	13761	3749	12589	4955	2282	3577	1237	1999	3858	75330
	2081/82	13591	16809	6115	2154	39264	1618	14338	3338	6280	1247	1305	3356	1883	111295
Asthma	2079/80	511	4377	3534	1601	4909	1920	7293	1622	1262	1191	84	666	1859	30829
	2080/81	3506	5343	3541	1439	7140	2496	7199	1806	1941	1403	279	1530	2526	40149
	2081/82	7199	8710	1175	1087	12672	1290	6896	1684	1996	1036	254	3123	1008	48130

Ca Breast	2079/80	590	47	-	-	36	1	556	2	-	-	-	1	-	1233
	2080/81	614	27	-	-	31	-	675	4	2	-	-	-	-	1353
	2081/82	615	1595	12	8	276	1	139	3	1	2	-	3	3	2658
Ca Cervix	2079/80	588	11	-	-	33	1	176	1	-	-	-	1	-	811
	2080/81	453	-	-	-	39	3	383	4		-	-	-	-	882
	2081/82	360	64	3	5	120	1	64	2	1260	1	-	1	1	2499
Ca Lung	2079/80		677	1	-	138	-	49	5	-	11	2	5	-	1633
	2080/81		571	2	-	188	1	77	5	-	2	-	2	2	1511
	2081/82		664	1	-	222	-	129	7	11	-	1	-	1	1554
Road Traffic Injury (RTI)	2079/80	749	2373	687	111	2966	864	1027	891	291	248	19	288	595	711109
	2080/81	803	2678	579	184	4934	1552	1268	1298	228	288	78	603	798	15291
	2081/82	1381	3777	478	531	5621	2198	1526	1366	409	218	61	1196	614	19376
Chronic Kidney Disease (CKD)	2079/80	132	257	7	8	1082	2	7359	7	8	7	-	12	2	8883
	2080/81	281	569	31	2	1753	11	9605	60	18	14	-	46	25	12415
	2081/82	451	1573	9	9	2443	12	14782	35	359	56	9	59	26	19823

Source: HMIS/DHIS2

In FY 2081/82, Bagamati Province recorded a marked rise in major non-communicable diseases, indicating an increasing chronic disease burden alongside expanded health service utilization. Hypertension remained the leading NCD (331,917 cases), followed by diabetes mellitus (266,386) and COPD (111,295), with the highest caseloads concentrated in Kathmandu, Chitawan, Bhaktapur, and Lalitpur.

Cardiovascular diseases (18,348) and asthma (48,130) also demonstrated upward trends, reflecting the influence of lifestyle and environmental risk factors. The increase in chronic kidney disease (19,823 cases) suggests rising complications related to poorly controlled hypertension and diabetes. Furthermore, reported cases of breast (2,658) and cervical cancer (2,499) increased, likely attributable to improved screening and diagnostic capacity. Road traffic injuries (19,376 cases) remained a significant public health concern. Overall, the findings underscore the need for strengthened NCD prevention, early detection, comprehensive management, and injury prevention interventions in the province.



What causes the most deaths?

- Communicable, maternal, neonatal, and nutritional diseases
- Non-communicable diseases
- Injuries

Cause	2013 rank	2023 rank	Change in deaths per 100k, 2013-2023
COPD	1	1	↑ +14.7
Ischemic heart disease	2	2	↑ +7.8
Stroke	3	3	↑ +7.7
Lower respiratory infect	5	4	↓ −4.9
Neonatal disorders	4	5	↓ −15.5
Diabetes	7	6	↑ +7.1
Cirrhosis	8	7	↑ +0.0
Tuberculosis	6	8	↓ −6.2
Self-harm	10	9	↑ +0.7
Rheumatic heart disease	11	10	↑ +1.2

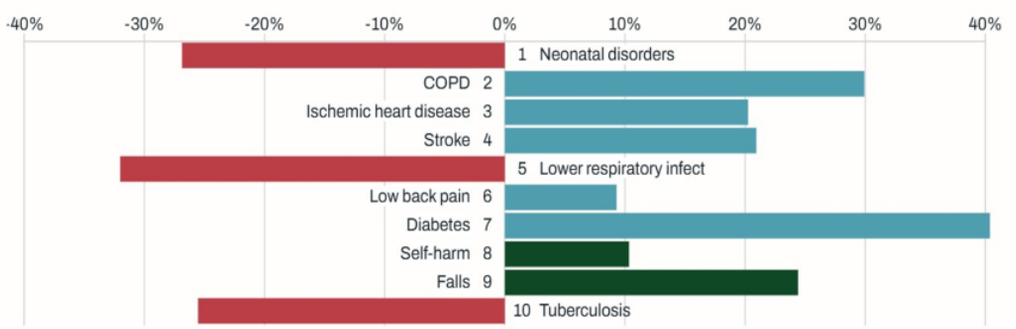
What risk factors drive the most death and disability combined?

- Metabolic risks
- Environmental/occupational risks
- Behavioral risks

Risk	2013 rank	2023 rank	Change in DALYs per 100k, 2013-2023
Air pollution	2	1	↓ −362.0
Malnutrition	1	2	↓ −2,276.0
Tobacco	3	3	↑ +77.1
High blood pressure	5	4	↑ +204.1
Occupational risks	4	5	↓ −40.3
High fasting plasma glucose	7	6	↑ +318.5
Dietary risks	6	7	↑ +207.4
High body-mass index	11	8	↑ +333.5
Kidney dysfunction	10	9	↑ +178.9
Other environmental	9	10	↑ +75.3

What causes the most death and disability combined?

- Communicable, maternal, neonatal, and nutritional diseases
- Non-communicable diseases
- Injuries



Global Burden of Disease, Country Profile-2023.

Global Burden of Disease, Country Profile-2023. https://www.healthdata.org/research-analysis/health-by-location/profiles/nepal

4.2 Mental Health

Mental health remains a priority public health concern within Bagamati Province, aligned with Nepal's national commitment under the National Mental Health Strategy and Action Plan (2020). The provincial approach emphasizes integration of mental health services within the broader health system, particularly primary health care and non-communicable disease (NCD) platforms, while strengthening secondary and tertiary level services. During the FY 2081/82, the province focused on governance strengthening, service expansion, suicide prevention, multisectoral coordination, and system integration, supported by dedicated provincial budget allocations.

The provincial program compliments national strategy which aligns with global initiatives such as the WHO Mental Health Gap Action Programme (mhGAP), aiming to build the capacity of non-specialist health workers to deliver essential mental health services. While gradual progress has been made, psychosocial and specialized mental health services remain concentrated mainly in tertiary hospitals and selected private facilities, posing access challenges for rural and underserved populations.

Factsheet (Source: National Mental Health Survey, Nepal-2020)

- Among the adult participants, 10% had any mental disorders in their lifetime, and 4.3% currently had any mental disorder.
- Lifetime and Current Mood disorders among adult participants were found to be 3% and 1.4% respectively.
- Neurotic and Stress related disorders (current) among adult participants was 3%.
- The prevalence of Suicidality (including current suicidal thoughts, lifetime suicidal attempt and future likelihood of suicidal thoughts) was found to be 7.2%.
- Majority of the adult participants (6.3%) had low Suicidality compared to moderate and high Suicidality.
- Current suicidal thoughts and Lifetime suicidal attempt were found to be 6.5% and 1.1% respectively.
- The prevalence of mental disorders among adolescents as found to be 5.2%. In adolescents, neurotic and stress related disorders were the most prevalent, with a prevalence of 2.8%. The prevalence of mental disorders was highest among adolescents in Koshi province (11.4%), among 16-years-olds (7.7%) and among females (5.3%). The Prevalence of current suicidal thoughts among adolescents was 3.9% while that of lifetime suicidal attempt was 0.7%.
- The prevalence of lifetime mental disorders was highest among the adults in Koshi province (13.9%), among 40–49-year-olds (13.3%) and among males (12.4%).
- The prevalence of current mental disorders was highest among the adults in Bagamati province (5.9%), among 40-49-year-olds (6.3%) and among females (5.1%).

The survey indicates that mental health disorders constitute a significant public health concern, affecting both adults and adolescents. The prevalence of lifetime and current mental disorders, mood disorders, neurotic and stress-related disorders, and suicidality highlights the need for sustained preventive, promotive, and curative interventions.

Notably, Bagamati Province demonstrates a comparatively higher prevalence of current mental disorders among adults, underscoring the importance of targeted provincial interventions. The presence of suicidal thoughts and attempts among both adults and adolescents further emphasizes the urgency of strengthening suicide prevention strategies and community-based mental health support systems.

Table 4.2 Trends of Mental Health Conditions

Trends of Mental Health Conditions															
Diseases	Period	Bhaktapur	Chitawan	Dhading	Dolakha	Kathmandu	Kavrepalanchok	Lalitpur	Makawanpur	Nuwakot	Ramechhap	Rasuwa	Sindhuli	Sindhupalchok	Bagamati Province
Alcohol Use Disorder	2079/80	21	906	24	8	340	114	1369	48	16	-	2	14	47	2909
	2080/81	30	662	37	87	851	91	2204	80	50	9	9	31	39	4180
	2081/82	98	769	7	122	747	269	4161	173	77	13	15	42	67	6560
Anxiety	2079/80	180	2905	374	25	2027	398	3666	103	23	187	10	95	174	10167
	2080/81	1568	872	615	111	3377	407	3781	519	110	313	168	222	190	12253
	2081/82	405	1463	42	73	2189	91	543	249	241	32	5	63	56	5452
Bipolar Disorder	2079/80	13	868	-	-	147	87	444	37	-	-	2	-	1	1599
	2080/81	378	563	2	-	586	58	852	39	4	-	17	-	6	2505
	2081/82	541	3809	7	25	1874	15	2034	778	10	76	33	77	19	9298
Conversion Disorder	2079/80	5	250	48	5	353	13	92	14	24	2	1	37	22	866
	2080/81	13	196	37	27	963	24	141	69	30	29	6	80	48	1663
	2081/82	141	482	62	46	759	48	207	90	25	41	6	54	61	2022
Dementia	2079/80	3	185	2	1	275	21	330	-	-	-	-	-	6	823
	2080/81	303	315	2	-	898	21	1500	4	1	1	4	-	1	3050
	2081/82	433	1063	12	2	4281	34	2171	104	40	5	14	98	6	8263

Depression	2079/80	126	4399	317	10	1669	310	2502	127	4	197	2	22	119	9804
	2080/81	396	4028	449	56	3022	278	3446	400	40	243	49	134	135	12676
	2081/82	13980	4913	196	152	13980	280	3486	3385	185	98	46	277	251	28645
Epilepsy	2079/80	18	904	131	48	538	56	107	135	4	103	3	218	26	2291
	2080/81	562	856	278	69	491	63	393	272	23	195	44	370	48	3664
	2081/82	621	3009	291	122	6080	67	1175	497	184	78	48	638	45	
Other Mental Disorder	2079/80	36	1162	33	5	988	49	2077	20	-	41	1	3	87	4502
	2080/81	2	477	27	24	1152	269	1794	413	22	81	18	6	96	4381
	2081/82	96	1757	43	32	1279	1358	2370	184	228	103	14	42	36	7542
Other Substance Use Disorder	2079/80	1	250	3	-	63	6	306	5	-	-	-	-	-	634
	2080/81	2242	194	2	-	109	15	103	9	1	1	2	-	-	2678
	2081/82	60	836	40	5	702	8	673	247	2	-	3	24	1	2601
Psychosis	2079/80	3	888	55	3	177	233	1237	12	5	9	-	1	6	2629
	2080/81	429	969	78	10	278	200	3219	86	28	63	22	20	65	5467
	2081/82	346	2544	45	97	3365	78	1737	560	13	62	16	63	7	8933

Source: HMIS/DHIS2

In FY 2081/82, Bagamati Province recorded a notable surge in reported mental health conditions, indicating a substantial increase in service utilization and case detection. Depression (28,645 cases) emerged as the leading condition, followed by bipolar disorder (9,298), psychosis (8,933), dementia (8,263), and alcohol use disorder (6,560). Significant numbers were also reported for other mental disorders (7,542) and anxiety (5,452). The highest case loads were concentrated in Kathmandu, Lalitpur, Chitawan, and Makawanpur, reflecting better access to mental health services and referral systems in these districts. Overall, the 2081/82 data highlight a rapidly growing mental health burden in the province and underscore the urgent need to strengthen prevention, early detection, and treatment services.

Provincial Commitment and Budgetary Prioritization

In recent years, the Ministry of Health, Bagamati Province, has progressively strengthened its commitment to mental health through dedicated provincial budget allocations. Mental health has been prioritized not only as a clinical service area but also as a cross-cutting public health concern linked with non-communicable diseases (NCDs), social wellbeing, and disaster preparedness.

Provincial investments have focused on:

- Expansion of service availability at secondary and tertiary care levels
- Institutionalization of coordination mechanisms for mental health and suicide prevention
- Capacity building of health workers
- Awareness, advocacy, and stigma reduction initiatives

Strengthening Governance and Multisectoral Coordination

A key achievement during the FY 081/82 has been the formation and functionalization of Multisectoral Action Plan (MSAP) coordination committees at both district and local levels. These committees address:

- Prevention and control of non-communicable diseases
- Suicide prevention
- Mental health promotion

The MSAP coordination mechanisms have enabled structured collaboration among Public Health Offices, local governments, education sector representatives, security agencies, civil society organizations, and other relevant stakeholders. Through regular meetings and joint planning processes, these platforms have facilitated the integration of mental health and suicide prevention priorities into district and municipal annual work plans.

Suicide Prevention Dialogues and Advocacy

With provincial financial and technical support, multiple policy dialogues, consultative meetings, and advocacy events on suicide prevention were conducted across districts. These dialogues focused on:

- Raising awareness on suicide risk factors and early warning signs
- Reducing stigma associated with mental illness and help-seeking
- Promoting responsible media reporting
- Strengthening referral linkages between community, primary care, and hospitals

These initiatives contributed to increased visibility of suicide prevention as a public health priority and promoted coordinated action across sectors.

Expansion of Specialist Mental Health Services

Building on the WHO Special Initiative for Mental Health (SIMH) and provincial policy priorities, specialist mental health clinic services have been established in all 13 Provincial Hospitals of Bagamati Province. These services are currently delivered on a daily, weekly, or monthly basis, depending on

hospital capacity and local needs, and are fully supported through provincial budget allocations.

The availability of specialist outpatient services at provincial hospitals has:

- Improved access to psychiatric consultation and follow-up care
- Reduced unnecessary referrals to central-level facilities
- Strengthened continuity of care for people living with mental health conditions

In addition to provincial hospitals, technical coordination and service delivery support have been provided through:

- 13 Public Health Offices, focusing on prevention, promotion, coordination, and monitoring
- 13 Ayurveda and Alternative Medicine Hospitals, contributing to holistic wellbeing, community outreach, and culturally appropriate approaches to mental health promotion

District-Level Innovations and Good Practices

Several districts have introduced context-specific innovations, supported by provincial guidance and financing. These include:

- Integration of mental health and suicide risk screening within NCD and primary health care services
- Strengthened referral pathways between health facilities, local governments, and community-based support mechanisms
- Community awareness campaigns utilizing local media, social media platforms, and culturally adapted IEC materials
- Engagement of schools, youth groups, women's groups, and community leaders in mental health promotion activities
- Use of routine HMIS and locally generated data for planning, monitoring, and joint supportive supervision

Provincial and district-level achievements and innovations were regularly disseminated through official websites, news outlets, and social media platforms of the Ministry of Health, Bagamati Province, Provincial Health Directorate, hospitals, and Public Health Offices, promoting transparency and public engagement.

Way Forward

Despite notable progress, challenges related to workforce availability, infrastructure, financing, stigma, and rural access persist. Continued investment, expansion of community-based services, strengthening of human resources, and enhanced data systems will be essential to sustain and scale up mental health services across the Province.

Overall, the collective efforts of the Ministry of Health, Bagamati Province, Provincial Health Directorate, hospitals, Public Health Offices, and local governments reflect a strong and evolving commitment to building a comprehensive, inclusive, and people-centered mental health system within the provincial health framework.

CHAPTER 05

CURATIVE SERVICE

5.1 Background

Bagamati province government emerged to ensure accessible, effective, and quality health services to raise the health status of people by delivering high quality health services at the province, district, and local level throughout the province. Curative services (emergency, outpatient, and in-patient) are a highly public demanded component of health services. The policy regarding curative health is aimed at providing appropriate diagnosis, treatment, and referral through the health network complementing preventive and promotive divisions from PHC outreach to the specialized hospitals.

5.2 Updated Categorization of Health Service of Bagamati Province

Table 5.1 Updated Categorization of Health Service of Bagamati Province (FY 2081/82)

S.N.	District	Basic Health Service Center	Basic Hospital (5 - 15 Beds)	General Hospital (25 - 50 Beds)	General Hospital (100 - 300 Beds)	Specialized Hospitals (100 and above)	Super Speciality Hospitals (50+ Beds/ Organization)	Academy and Teaching Hospital (300+ Beds)	Total
1	Dolakha	94	4	2	1	0	0	0	101
2	Sindhupalchok	132	4	1	0	0	0	0	137
3	Rasuwa	33	1	1	0	0	0	0	35
4	Dhading	115	12	1	0	0	0	0	128
5	Nuwakot	109	4	1	0	0	0	0	114
6	Kathmandu	122	24	45	14	10	10	8	233
7	Bhaktapur	32	0	6	3	0	3	0	44
8	Lalitpur	86	1	6	7	0	3	2	105
9	Kavrepalanchok	152	8	3	0	0	0	1	164
10	Ramechhap	90	4	1	0	0	0	0	95
11	Sindhuli	118	3	1	0	0	0	0	122
12	Makawanpur	105	4	3	0	0	0	1	113
13	Chitawan	111	18	11	1	2	2	2	147
Bagamati Province		1299	87	82	26	12	18	14	1548

Source: HMIS/DHIS2

According to the updated categorization of health facilities there are 1299 Basic Health Service Center, 87 Basic hospital (5-15 beds), 82 General Hospital (25-50 beds), 26 General Hospital (100-300 beds), 12 Specialized Hospitals (100 and above), 18 Super Specialty Hospitals (50+ beds/organization) & 14 Academy and Teaching Hospital (300+ Beds) in Bagamati province.

5.3 Activities carried out in fiscal year 2081/82

- Strengthening capacity of health facilities by providing training, onsite coaching, follow-ups, equipment supply and logistic support.
- Ensuring quality health services (Preventive, Promotive, Curative, Rehabilitative, Palliative) through existing health facilities and their respective departments.
- Regular Joint assessment and monitoring of public health facilities using standard tools (MSS and Clinical Audit) for optimum standard health care.
- Implementation of HRRS (Hospital Registration and Renewal System) using standard protocol for registration and renewal of private hospitals all over Bagamati Province to channelize them into system and to ensure accountability towards quality health service.
- Supervision and monitoring of health facilities on regular basis.
- Essential drugs and logistic support on need basis.

Major activities carried out in fiscal year 2081/82

Assessment of Minimum Service Standards (MSS) of Hospitals

Minimum Service Standards (MSS) ensure the readiness by assessing the availability of equipment and infrastructure to deliver minimum health services that are expected from the health facilities. These tools entail preparation of service provision and elements of service utilization that are deterministic towards functionality of hospital to enable working environment for providers and provide resources for quality health service provision. The primary aim of Minimum Service Standards is to improve the readiness of health facilities through self and joint assessment, using the information to identify existing gaps, develop action plans for improvement, and in providing management grants to implement the action plan based on contextual priority.

Implementation of MSS

Implementation Framework of MSS

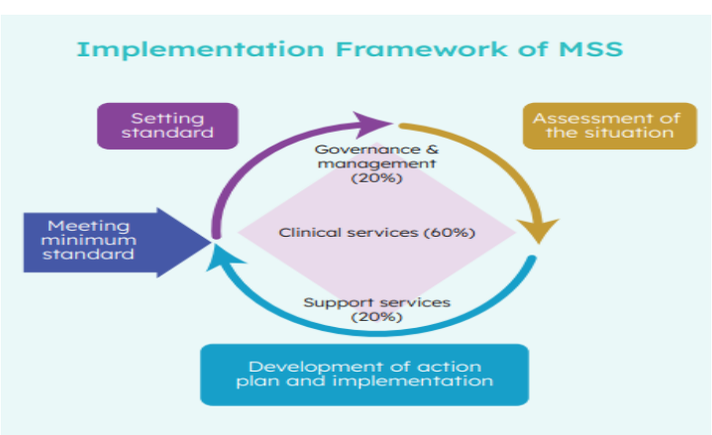


Figure 5.1 Implementation of Framework of MS

The MSS tools have been organized into three major sections: Governance and Management, Clinical Service Management and Hospital Support Service Management. The MSS is an important monitoring tool for all three levels of government for evidence-based planning and budgeting to improve the quality of hospital services.

Implementation of MSS in Bagamati Province

Bagamati province has successfully implemented the Minimum Service Standards (MSS) in hospitals since the fiscal year 2076/77. This initiative has significantly enhanced hospital readiness and improved the quality of services provided. The increasing scores of hospitals in Bagamati province indicate positive performance outcomes. The implementation of MSS at the provincial level encompasses budgeting for provincial health institutions, strategic follow-up planning, execution, and gap analysis to strengthen services. Additionally, it involves data collection and analysis to facilitate rational budgeting, as well as ongoing correspondence and support for Basic Hospitals and Basic Health Centers, with MSS implementation and follow-up coordinated through the respective local level.

Table 5.2 MSS Implemented Hospitals of Bagamati Province, FY 2081/82

S.N.	Provincial level (13)	Category
1	Hetauda Hospital, Makawanpur	Secondary B
2	Dhading Hospital, Dhading	Secondary B
3	Sindhuli Hospital, Sindhuli	Secondary B
4	Trishuli Hospital, Nuwakot	Secondary B
5	Bhaktapur Hospital, Bhaktapur	Secondary B
6	Bakulahar Ratnanagar Hospital, Chitawan	Secondary B
7	Pashupati Chaulagain Memorial Hospital, Dolakha	Secondary A
8	Methinkot Hosptial, Kavrepalanchok	Secondary A
9	Chautara Hospital, Sindhupalchok	Secondary A
10	Ramechhap Hospital, Ramechhap	Secondary A
11	Rasuwa Hospital, Rasuwa	Primary
12	Bajrabarahi Chapagaun Hospital, Lalitpur	Primary
13	Tokha Chandeshori Hospital, Kathmandu	Primary
S.N.	Local level (3)	Category
1	Baghauda Hospital, Chitawan	Primary
2	Jiri Hospital, Dolakha	Primary
3	Badegaun Hospital, Lalitpur	Primary

Source: MSS

The above table shows the list of MSS implemented hospitals of Bagamati Province along with their MSS categories. Altogether 6 Secondary B, 4 Secondary A and 6 Primary hospitals were assessed.

Finding MSS Evaluation of FY 2081/82

MSS Score of Primary Level Hospitals of FY 2081/82

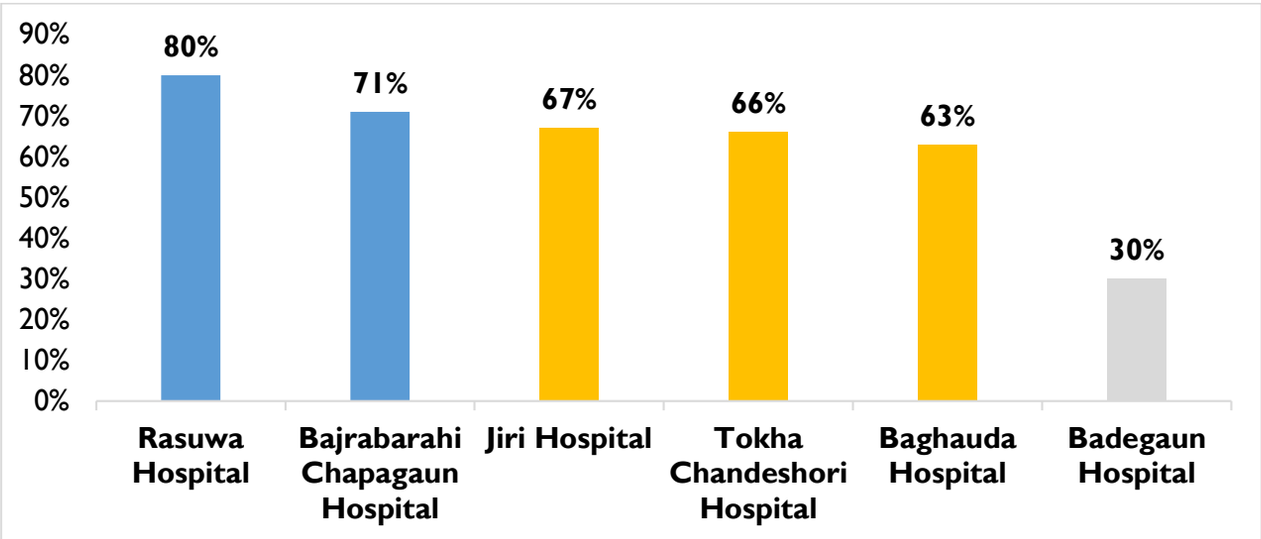


Figure 5.2 MSS Score of Primary Level Hospitals of FY 2081/82

Source: MSS

In FY 2081/82 MSS was assessed in 3 provincial level and 3 local level primary hospitals. Among the Primary level hospitals assessed in FY 2081/82, the highest score attained was of Rasuwa hospital (80%). A total of 2 hospitals scored within the 70 -85% range, earning the blue color code and 3 hospitals scored within 50-70 % range, indicating the yellow code on MSS Score Category and 1 local hospital scored below 50% earning white code. This indicated the need for improvement of health facilities in the local level.

MSS Score of Secondary A level Hospital

In FY 2081/82, MSS was assessed in 4 Secondary A level hospitals. Among the Secondary A level hospitals assessed in FY 2081/82, Chautara hospital achieved the highest MSS score, reaching an impressive 93%. Notably, 2 secondary A level hospitals of Bagamati province achieved a score within the 85-100% range, earning the green color code on the MSS score scale, 1 hospital scored 70-85% earning blue code and 1 hospital scored within the 50 -70% range, earning the yellow color code. MSS scoring system and the subsequent rankings have ignited a positive sense of competition among hospital leaderships, motivating them to strive for excellence and distinguish themselves as the best in their respective categories.

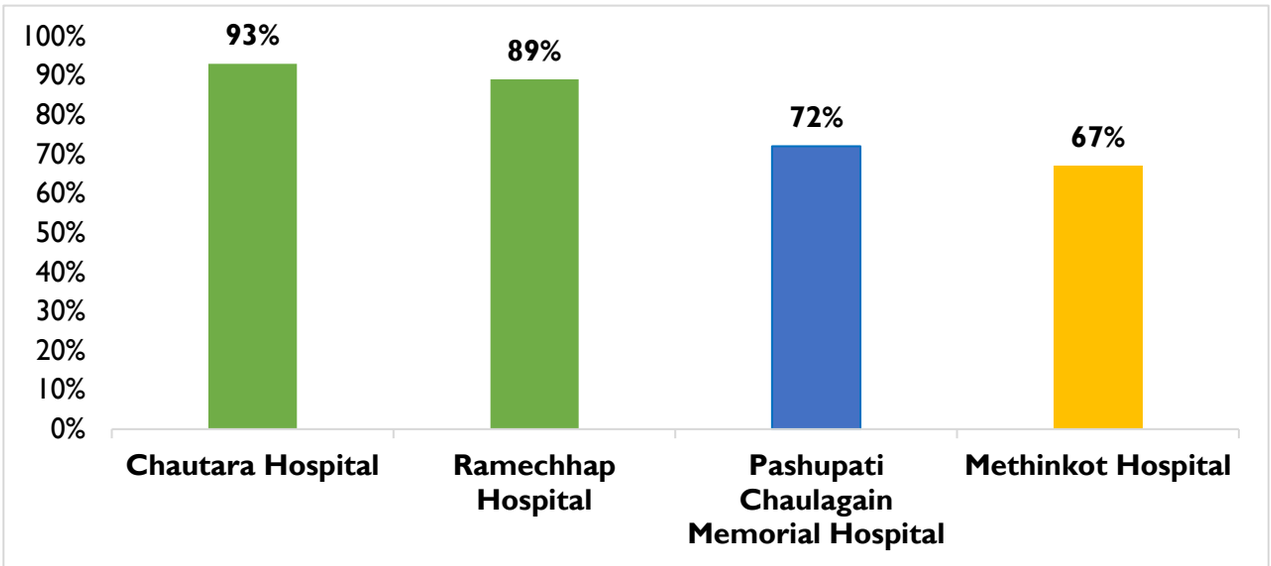


Figure 5.3 MSS Score of Secondary A level Hospital

Source: MSS

MSS Score of Secondary B level Hospital

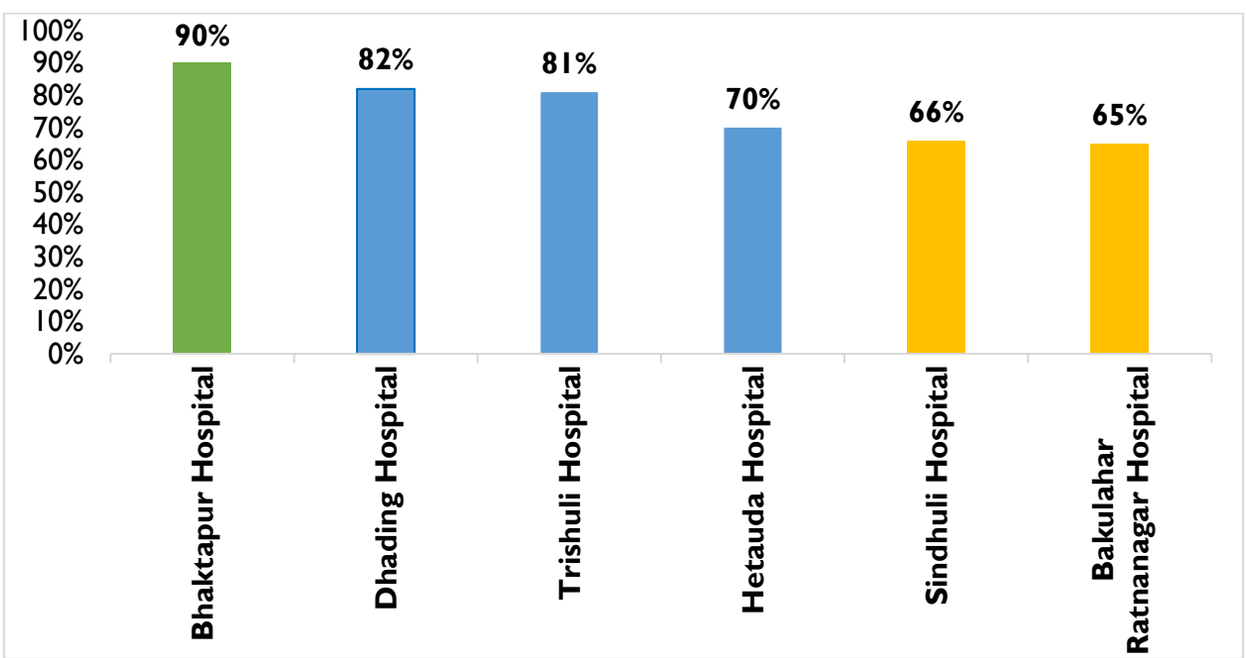


Figure 5.4 MSS Score of Secondary B level Hospital

Source: MSS

In FY 2081/82, MSS was assessed in 6 Secondary "B" level hospitals. Among the Secondary B level hospitals assessed in FY 2081/82, Bhaktapur hospital achieved the highest MSS score, reaching an impressive 90% earning green color code (85-100%). Additionally, 2 hospital scored within the 50 -70% range, earning the Yellow color code and 3 hospital scored within the 70-85 % range, earning

the Blue color code MSS scoring system and the subsequent rankings have ignited a positive sense of competition among hospital leaderships, motivating them to strive for excellence and distinguish themselves as the best in their respective categories.

Major Strengths of Hospitals under Bagamati Province

- ICU service is available at all secondary B level hospitals.
- Dialysis service is provided by Hetauda, Trishuli, Sindhuli, Dhading, Bakulahar Ratnanagar, Methinkot and Ramechhap hospital.
- CT scan service is provided at Hetauda Hospital, Trishuli Hospital, Bhaktapur Hospital and Sindhuli Hospital while MRI service is available at Hetauda Hospital only.
- Water ATM operates in partnership with Upatyaka Khanepani Ltd. at Bhaktapur Hospital.
- Psychiatric services, including both outpatient department (OPD) and inpatient ward care have been initiated at Hetauda Hospital and Bhaktapur Hospital, with additional outpatient services launched at Sindhuli Hospital, Dhading Hospital and Trishuli Hospital.
- Homeopathic service (OPD) has been started, and an SBA Training Center has been established at Hetauda Hospital.
- Staff insurance has been implemented at Trishuli Hospital, along with the development of the MLP training site.
- Provision of laparoscopic surgery, cystoscopy, Double-J stent removal, dialysis services, and echocardiogram services at Trishuli Hospital
- Bhaktapur hospital provides Gastrointestinal- Endoscopic surgery, laparoscopic surgery, endocrinology services which are additional to what MSS had proposed.
- Endoscopy service is available in Hetauda, Sindhuli, Trishuli, Dhading and Bakulahar Ratnanagar Hospital.
- Initiation of mammogram service (Dhading Hospital), laparoscopy services (Sindhuli Hospital) and EMR/EHS service (Chautara Hospital)
- Provision of automated laboratory report dispensing at Bakulahar Ratnanagar Hospital
- Nick Simons Institute supports human resources and grants to Trishuli Hospital, Rasuwa Hospital and Pashupati Chaulagain Memorial Hospital.

Areas to be improved in hospitals under Bagamati Province

- Some hospitals have not conducted social audits, which are essential for enhancing governance.
- Disaster preparedness plan is not present in several hospitals.
- Proper recording and reporting are insufficient in most hospitals; for instance, ICD codes are often not documented in OPD registers, and HMIS entries are incomplete.
- The installation and utilization of government-provided equipment (such as liquid waste management plants, dryers, oxygen plants, hemodialysis machines, and autoclaves) are delayed in some hospitals due to various factors.
- All hospitals should conduct internal self-assessments regularly.
- The implementation of Electronic Health Records (EHR) should be reconsidered.

- In some hospitals, the pharmacy formulary has not been updated.
- Maternity Waiting Homes (Kuruwa Ghar) should be established in certain areas.
- Some hospitals should implement a triage system in the emergency department.
- Hospital staff in some institutions should receive orientation on protocols 001 and 007.
- Delayed reimbursements from Health Insurance Board and medicine unavailability.

5.4 Major Indicators of FY 2081/82

Percentage of Population Utilizing Outpatient (OPD) Services in Bagamati Province

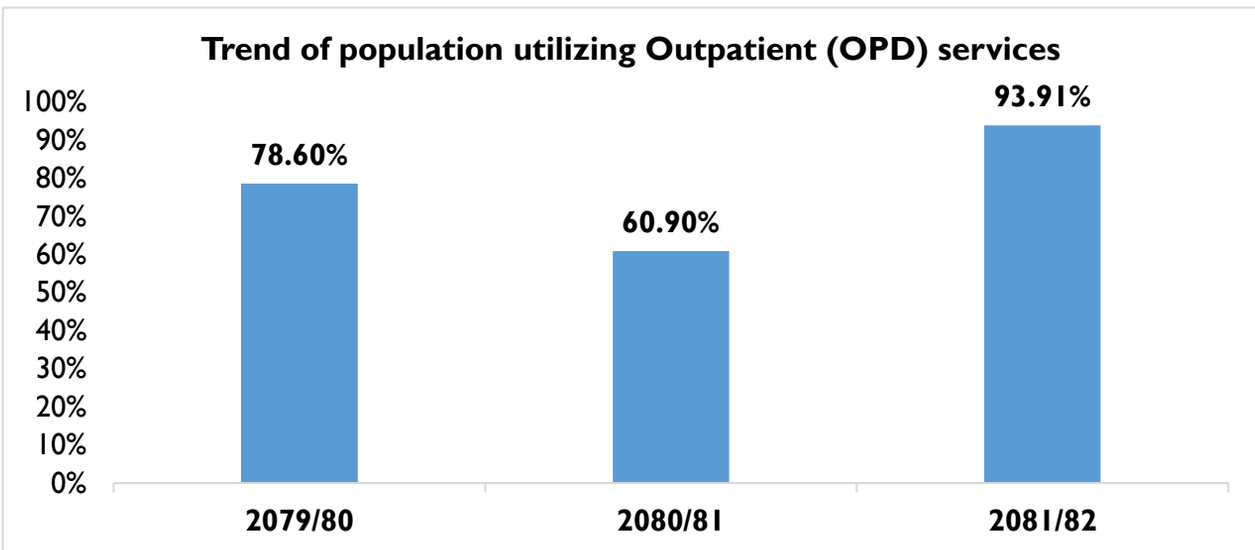


Figure 5.5 Percentage of Population Utilizing Outpatient (OPD) Services in Bagamati Province

Source: HMIS/DHIS2

Percentage of population utilizing outpatient (OPD) services measures how much of the population actually uses outpatient healthcare services at least once during a specified time period. It serves as a proxy for access, utilization and health-seeking behavior. The sharp decline in OPD utilization in FY 2080/81(60.90%) compared to FY 2079/80 (78.60%) may indicate temporary disruptions in service delivery, reduced care-seeking behavior, or access barriers such as workforce shortages, supply constraints, or socio-economic factors during that period. The substantial increase in FY 2081/82 (93.91%) suggests a strong recovery and improvement in access and utilization of outpatient services, possibly due to restoration of services, improved availability of health facilities, increased public awareness, and strengthened primary healthcare programs.

Most common Outpatients (OPD) morbidities

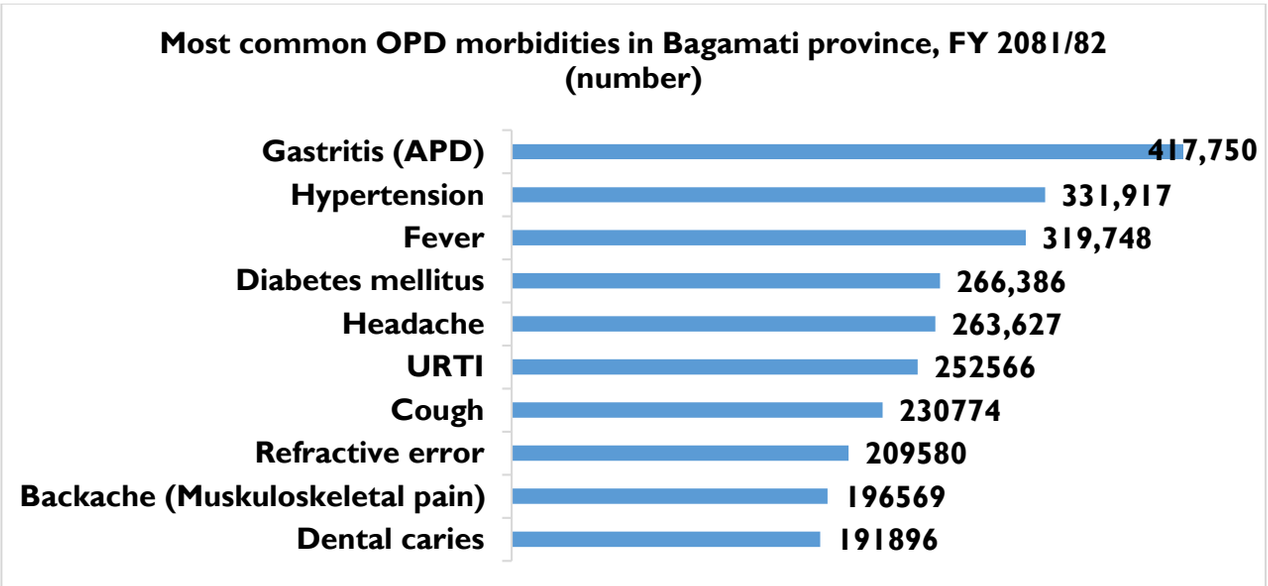


Figure 5.6 Most Common OPD morbidities in Bagamati province (FY 2081/82)

Source: HMIS/DHIS2

Gastritis (APD) was the most common OPD morbidity in Bagamati province (FY 2081/82) followed by Hypertension, fever, Diabetes mellitus, headache, URTI, cough, refractive error, backache and dental caries.

Table 5.3 Most Common OPD Morbidities in Bagamati Provincial Hospital (FY 2081/82)

S.N.	Morbidity	Number	Percentage	Rank 2080/81
1	Hypertension	46,061	6.8	1
2	Diabetes mellitus	37,077	5.5	3
3	Dermatitis/ Eczema	34,953	5.1	2
4	Fever	30,844	4.5	7
5	Gastritis (APD)	25,264	3.7	6
6	Abdominal Pain	22,355	3.3	5
7	Dental caries	20,835	3.1	4
8	URTI	19,692	2.9	9
9	Pyrexia of unknown origin	17,884	2.6	19
10	General Consideration on Pain	17,772	2.61	8

The above table shows the most common OPD morbidities in Bagamati Provincial Hospital in FY 2081/82 with their rank in previous fiscal year. Hypertension remains in the top first this fiscal year followed by diabetes mellitus, dermatitis/eczema, fever, gastritis, abdominal pain, dental caries, URTI, pyrexia of unknown origin and general consideration on pain.

Percentage of Population Utilizing Hospital Service

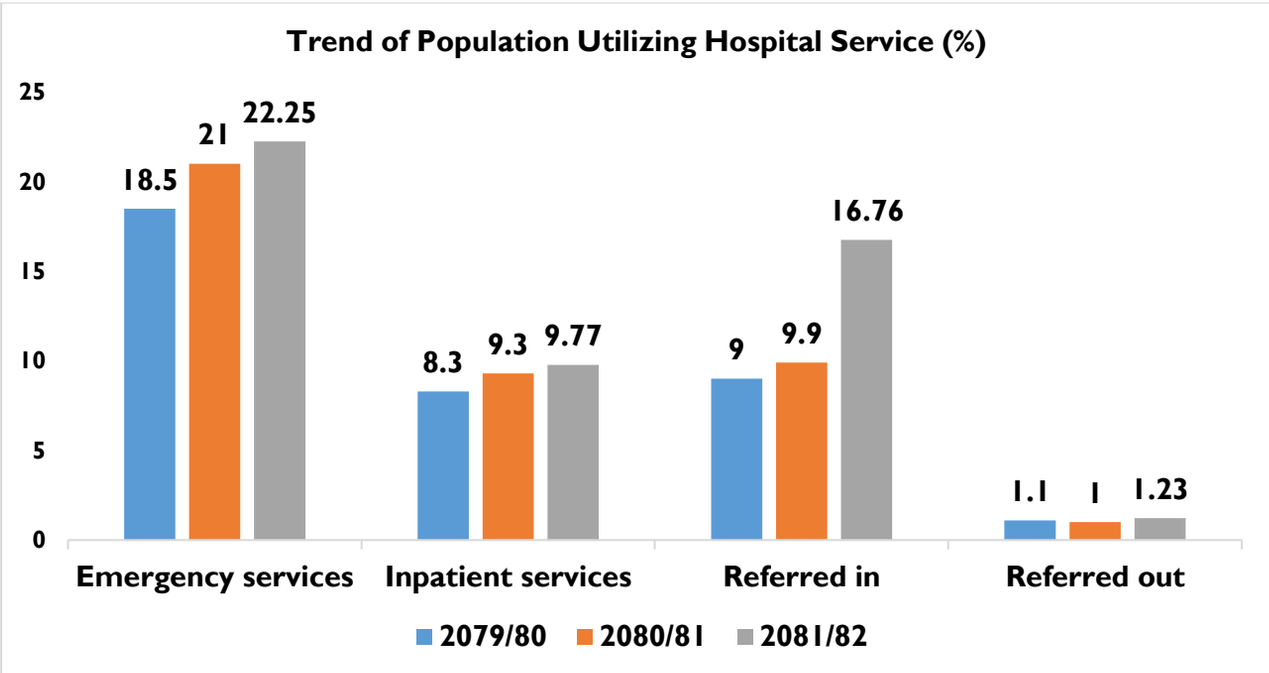


Figure 5.7 Trend of Population Utilizing Hospital Service in Bagamati Province

Source: HMIS/DHIS2

The above figure illustrates the trend of population utilizing hospital service. The increasing trend in emergency, inpatient, and referred-in service utilization from FY 2079/80 to FY 2081/82 indicates improved access, service availability, and referral linkages. The temporary decline in referred-out cases in FY 2080/81, followed by an increase in FY 2081/82, suggests short-term stabilization at lower levels of care, with subsequent strengthening of referral practices and case management.

Bed Occupancy Rate (%)

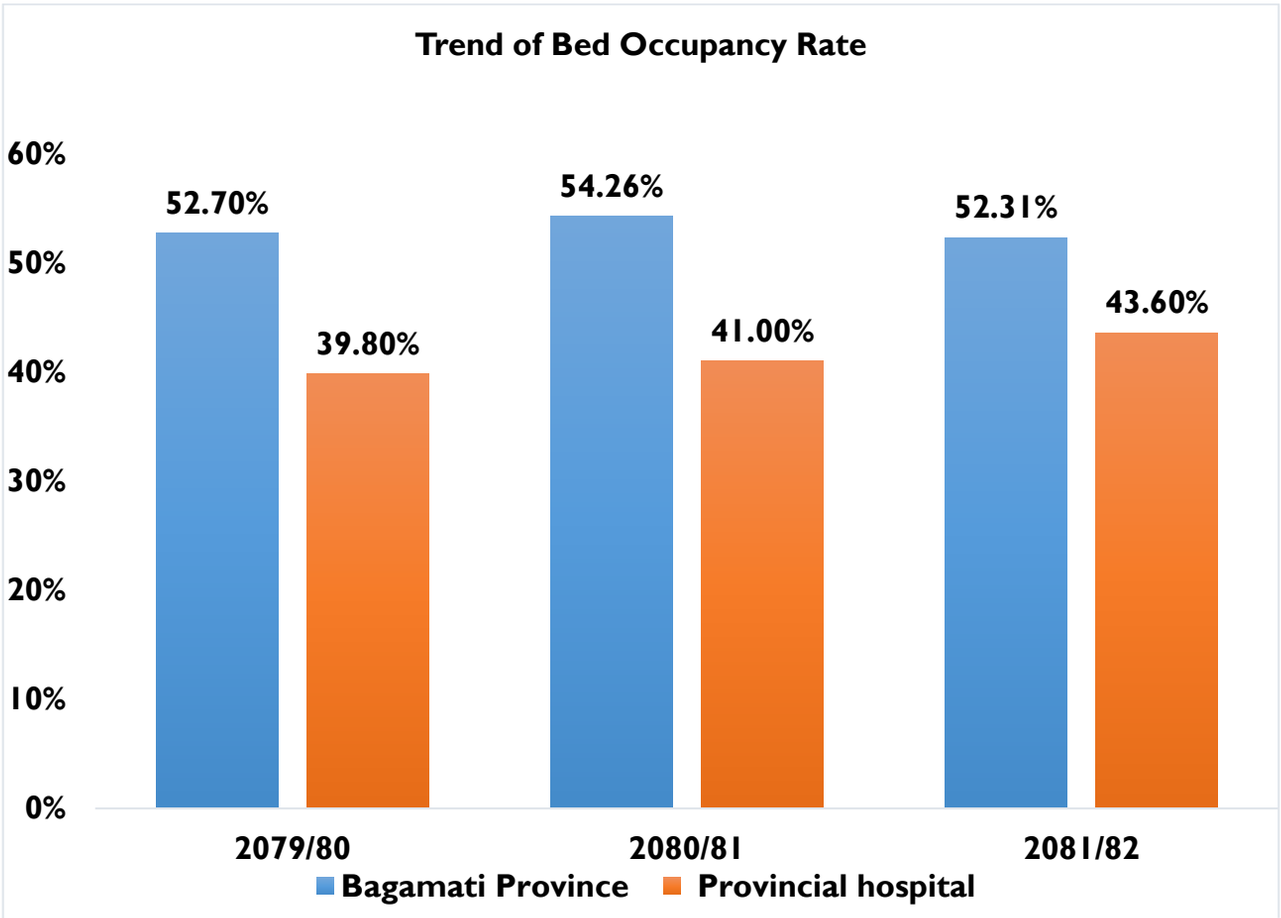


Figure 5.8 Trend of Bed Occupancy Rate

Bed occupancy rate in Bagamati province increased in FY 2080/81 (54.26%) as compared to FY 2079/80 (52.70%) but decreased to 52.31% in FY 2081/82. However, it is increasing trend in the provincial hospitals of Bagamati (39.80%, 41.00% and 43.60% respectively in FY 2079/ 80, 2080/81 and 2081/82). This upward trend suggests improved hospital bed utilization and potentially enhanced healthcare services. Although there is no universal standard for the optimal occupancy rate, many hospitals consider approximately 80% to be ideal.

Average length of stay at hospital (Days)

In hospital management Average length of stay (ALOS) at hospital is also a major indicator. For efficient bed management, a reduction in the number of inpatient days result in decreased risk of infection and an improved quality of treatment.

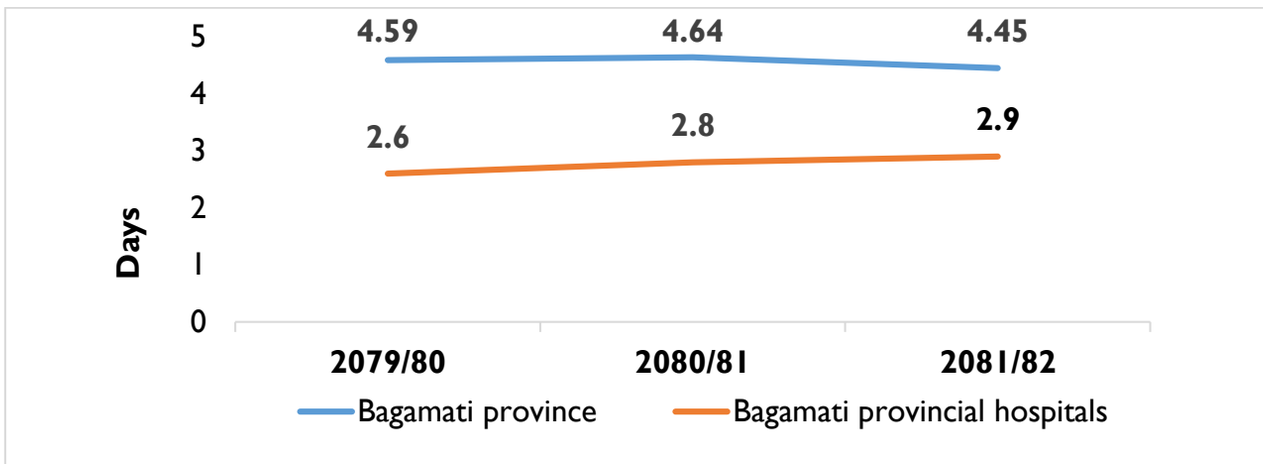


Figure 5.9 Trend of Average length of stay at hospital (Days)

Source: HMIS/DHIS2

The above figure shows the trend of Average length of stay (ALOS) at hospital in Bagamati province as a whole and also at Bagamati provincial hospitals. ALOS has decreased to 4.45 days in FY 2081/82 as compared to 4.59 days in FY 2079/80 and 4.64 days in FY 2080/81. However, ALOS is less in Bagamati provincial hospitals as compared to the province but is in increasing trend (2.6 days, 2.8 days and 2.9 days respectively in FY 2079/ 80, 2080/81 and 2081/82).

Issues/ Challenges

1. Lack of revised and adequate policies and SOPs
2. Human resource deficit and frequent turnover
3. Infrastructure and logistics issues
4. Budget constraints
5. Health insurance server issue and reimbursement issues
6. Hospital vandalism and weak control mechanism

CHAPTER

06

SOCIAL SECURITY AND OTHER PUBLIC HEALTH PROGRAMS

6.1 One Stop Crisis Management Centre (OCMC)

Gender-Based Violence (GBV) is indeed a significant issue globally, impacting individuals across various cultures and socioeconomic backgrounds. It is characterized by harmful acts perpetrated based on socially ascribed gender differences, resulting in physical, sexual, and psychological damage. GBV often arises from unequal power relations between men and women, with females disproportionately affected. Moreover, instances of GBV tend to escalate during times of emergencies, exacerbating the vulnerabilities of affected individuals.

To address this pervasive problem, governments and organizations worldwide have implemented various initiatives and interventions. One notable example is the establishment of One-stop Crisis Management Centers (OCMCs), which aim to provide comprehensive and integrated services to survivors of GBV. These centers play a crucial role in offering medical, legal, psychosocial, and other support services to individuals affected by GBV, thereby assisting them in coping with trauma and accessing justice.

In Nepal, the Ministry of Health and Population has taken steps to address GBV through the implementation of OCMCs. These centers are established under Clause 3 of the "National Action Plan 2010 against Gender-Based Violence" and are strategically located across different districts and provinces. Currently, there are 93 OCMCs operating in 77 districts nationwide, with 19 OCMCs specifically situated in the Bagamati province including government and private hospitals.

One stop Crisis Management Centres in Bagamati Province

1. Paropakar Maternity and Women's Hospital, Kathmandu
2. Patan Hospital, PAHS, Lalitpur
3. National Academy of Medical Sciences, Kathmandu
4. Kanti Children Hospital, Kathmandu
5. Bharatpur Hospital, Chitawan
6. Hetauda Hospital, Makawanpur
7. Dhading Hospital, Dhading
8. Chautara Hospital, Sindhupalchok
9. Charikot Primary Health Care Centre, Dolakha
10. Manthali Primary Health Care Centre, Ramechhap
11. Sindhuli Hospital, Sindhuli
12. Bhaktapur Hospital, Bhaktapur
13. Trishuli Hospital, Nuwakot

14. Rasuwa Hospital, Rasuwa
15. Dhulikhel Community Hospital, Kavrepalanchok
16. Ramechhap Hospital, Ramechhap
17. National Trauma Center, Kathmandu
18. Sukraraj Tropical and Infectious Disease Hospital
19. Thokarpa Adharbhut Hospital, Sindhupalchok

OCMC Services

One Stop Crisis Management Centres have been providing seven different types of services to Gender Based Violence survivors based on "Operational guideline on OCMC, 2077"



Figure 6.1 OCMC Services

Guiding Principles of OCMCs (Operational Guideline of OCMC, 2077)

- Ensuring health care, legal treatment, protection, safe housing, rehabilitation, counseling and other necessary services are available through a one-door system without any discrimination.
- Ending the situation where the GBV-affected victim does not have to frequently repeat the incident details to the relevant body and suffer repeated psychological trauma.
- Establishing a one-door system in service flow.
- Partnership and cooperation between local level, and related bodies/organizations for the integrated management of survivors of gender violence.
- Maintaining the safety and privacy of victims or victims of gender-based violence

- Preparing and following a code of conduct with the participation of all stakeholders and adherence to the Code of Conduct by all.

Target population of OCMC

- Physically and mentally disabled women and children who are at risk of GBV
- Women and children with ill mental health due to GBV who are wrecklessly living in home or public places
- Single women, women with disabilities, children and senior citizen women who are victims of GBV
- Women and children suffering from human trafficking and transportation
- Women and children who are or may be victims of violence as a result of armed conflict and natural disaster
- Women and Children with HIV/AIDs who are victims of GBV
- Transgender or sexual and gender minority populations

Major Achievements in FY 2081/82

Number of cases served in FY 2081/82

Table 6.1 Number of cases served in FY 2081/82

S.N.	Organizational Units	Number of new registered cases in OCMC	Number of perpetrators reported by OCMC cases	Number of follow-up cases registered in OCMC
1.	Sindhuli Hospital, Sindhuli	295	266	141
2.	Bhaktapur Hospital, Bhaktapur	119	107	73
3.	Chautara Hospital, Sindhupalchok	67	29	7
4.	Dhading Hospital, Dhading	68	62	
5.	Dhulikhel Hospital (Kathmandu University Teaching Hospital), Kavre	93	43	
6.	Hetauda Hospital, Makawanpur	199	209	88

7.	Kanti Children Hospital, Kathmandu	45	45	75
8.	Manthali Hospital, Ramechhap	53	10	
9.	NAMS (Bir Hospital) Kathmandu	68	67	6
10.	National Trauma Center, Kathmandu	55	55	2
11.	PAHS (Patan Hospital) Lalitpur	393	251	2
12.	Pashupati Chaulagain Memorial Hospital, Dolakha	71	44	17
13.	Ramechhap Hospital, Ramechhap	22	28	1
14.	Rasuwa hospital, Rasuwa	21	6	1
15.	Sukraraj Tropical and Infectious Disease Hospital	74		83
16.	Trisuli Hospital, Nuwakot	85	97	19
	Bagamati Province	1728	1319	515

Source: HMIS/DHIS2

The table shows that in FY 2081/082 out of 1728 new registered cases in OCMC, Patan Hospital had the highest number of cases (393) while Rasuwa had the least number of cases (21). Similarly, there were 515 follow up cases registered in OCMC with Sindhuli reporting the highest number (141) and Dhading, Dhulikhel and Manthali reporting zero cases. Likewise, among 1319 perpetrators reported by OCMC cases Sindhuli reported the highest number while Sukraraj Tropical and Infectious Disease Hospital reported zero number of perpetrators.

Service Utilization at OCMC by type of GBV

Table 6.2 Service utilization at OCMC by type of GBV in FY 2081/082

S.N	Organisational Unit	Forced marriage	Denial of resources	Emotional abuse	Harmful traditional practices	Physical Violence	Rape	Sexual Assault
1.	Chautara Hospital, Sindhupalchok	6	0	1	0	14	5	48
2.	Dhading Hospital, Dhading	2	0	0	0	17	24	27
3.	Trishuli Hospital, Nuwakot	7	23	5	0	32	25	14
4.	Pashupati Chaulagai Memmorial Hospital	0	17	8	0	24	3	29
5.	Bhaktapur Hospital, Bhaktapur	0	3	1	0	47	56	12
6.	Dhulikhel Hospital, Kavrepalanchok	0	0	0	0	40	20	8
7.	Manthali PHC, Ramechhap	0	0	0	0	1	3	7
8.	Sindhuli Hospital, Sindhuli	1	55	144	0	50	29	9

9.	Hetauda Hospital, Makawanpur	15	5	4	0	38	51	12
10.	Rauwa Hospital, Rasuwa	2	3	2	0	3	1	9
11.	Ramechhap Hospital, Ramechhap	0	6	2	0	10	0	1
12.	Kanti Children Hospital, Kathmandu	0	2	1	0	9	9	22
13.	NAMS (Bir Hospital) Kathmandu	1	2	8		53	1	7
14.	Sukraraj Tropical and Infectious Disease Hospital	0	0	3	1	7	0	63
15.	National Trauma Center, Kathmandu	0	3	8	0	44	0	1
16.	PAHS(Patan) Hospital, Lalitpur	1	22	2	1	63	137	28
	Bagamati Province	35	141	189	2	452	364	297

Source: HMIS/DHIS2

The table shows that in FY 2081/082, the most reported cases among the total clients served by the OCMCs were physical violence (452) followed by rape (364) and sexual assault (297). Patan hospital recorded the most cases of physical violence, while Manthali and Rasuwa hospital reported minimal cases in the FY 2081/082.

Type of GBV reported (in percentage) among new registered cases of OCMC in FY 2081/82

Table 6.3 Type of GBV reported (in percentage) among new registered cases of OCMC in FY 2081/82

S.N.	Organizational Unit	Emotional Violence	Denial of resources /opportunities/ services	Harmful traditional practices	Child/forced marriage related violence	Physical violence	Sexual assault
1	Sindhuli Hospital, Sindhuli	48.81	18.64		0.34	16.95	3.05
2	Bhaktapur Hospital, Bhaktapur	0.84	2.52			39.5	10.08
3	Chautara Hospital, Sindhupalchok	1.49			8.96	20.9	71.64
4	Dhading Hospital, Dhading				2.94	25	39.71
5	Dhulikhel Hospital, Kavre					43.01	8.6
6	Hetauda Hospital, Hetauda	2.01	2.51		7.54	19.1	6.03
7	Kanti Children Hospital, Kathmandu	2.22	4.44			20	48.89
8	Manthali Hospital, Ramechhap					1.89	13.21
9	Methinkot Hospital, Kavre						
10	NAMS(Bir Hospital), Kathmandu	11.76	2.94		1.47	77.94	10.29
11	National Trauma Center, Kathmandu	14.55	5.45			80	1.82
12	PAHS(Patan Hospital,Lalitpurr	0.51	5.6	0.25	0.25	16.03	7.12

13	Pashupati Chaulagai Memmorial Hospital, Dolakha	11.27	23.94			33.8	40.85
14	Ramechhap Hospital, Ramechhap	9.09	27.27			45.45	4.55
15	Rasuwa Hospital, Rasuwa	9.52	14.29		9.52	14.29	42.86
16	Sukraraj Tropical and Infectious Disease Hospital	4.05		1.35		9.46	85.14
17	Trisuli Hospital, Nuwakot	5.88	27.06		8.24	37.65	16.47

Source: HMIS/DHIS2

The figure illustrates that different types of GBV i.e. emotional violence, harmful traditional practices, sexual assault, physical violence, rape, denial of resources, child/ forced marriage were reported among new registered cases of OCMC in Bagamati province. Single case can be the victim of multiple type of GBV. In FY 2081/082, physical violence is the most reported type of GBV followed by rape and emotional violence and least being harmful traditional practices in Bagamati province.

OCMC Services Received by GBV survivors

Table 6.4 OCMC Services Received by GBV survivors in FY 2081/82

		Services received									
S.N.	Organizational Unit	Emergency Contraceptive	HIV Testing & Counselling	Treatment of Injury	Medico-legal	Physical examination	Pregnancy test	Psychological counselling	STI treatment	Safe abortion	Treatment of mental illness
1	Sindhuli Hospital, Sindhuli	22	39	50	41	269	41	293	18	2	38
3	Bhaktapur Hospital, Bhaktapur	15	54	47	95	119	50	118	2	2	7
4	Chautara Hospital, Sindhupalchok	9	50	23	23	64	31	56	0	0	0
5	Dhading Hospital, Dhading	0	39	27	69	63	44	68	0	3	1
6	Dhulikhel Hospital, Kavre	0	83	76	81	138	38	45	5	0	0
7	Hetauda Hospital, Hetauda	6	49	44	98	194	41	199	0	9	11
8	Kanti Children Hospital, Kathmandu	8	34	7	29	39	17	31	2	0	7
9	Manthali Hospital, Ramechhap	0	2	21	28	47	3	7	0	0	3
10	Methinkot Hospital, kavre	0	0	0	0	0	0	0	0	0	0
11	NAMS (Bir Hospital), Kathmandu	0	5	13	37	70	0	29	0	0	0
12	National Trauma Center, Kathmandu	0	0	55	0	56	0	56	0	0	0
13	PAHS (Patan Hospital) Lalitpur	0	5	52	1	49	10	1	3	3	130

14	Pashupati chaulagai Memmorial Hospital, Dolakha	11	18	40	16	85	20	79	6	1	12
15	Ramechhap Hospital, Ramechhap	0	1	15	0	20	1	18	0	1	0
16	Rasuwa Hospital, Rasuwa	1	8	2	5	8	0	12	0	0	0
17	Sukraraj Tropical and Infectious Disease Hospital	0	20	0	0	3	5	63	45	0	0
18	Trisuli Hospital, Nuwakot	8	32	35	34	106	33	106	0	1	43
	Bagamati Province	80	439	507	557	1330	334	1181	81	22	252

Source: HMIS/DHIS2

The table demonstrates that most of the survivors had physical examination (1330) done followed by psychological counseling (1181), medico-legal services (557) and treatment of injury (507) in FY 2081/082.

Issues/Challenges	Recommendation
Limited resources in service centres. High turnover rate of trained human resources. Limited awareness on gender-based violence management among community people. Fear and stigma in survivors of GBV that leads to non-reporting or under-reporting of case.	Allocation of adequate resources in service centres. Provision of training and orientation among health workers. Awareness and community participation on GBV management. Expansion or integration of OCMC services in all level of health facility.

6.2 Social Service Unit (SSU)

Poor people, senior citizens, helpless people, and people with disabilities have had difficulty getting health care for many years due to a lack of medicines, inability to pay for services through out-of-pocket, and other factors. In the spirit of the Interim Constitution and in recognition of the State's responsibility to provide health care services, the MoHP decided to operate a pilot program in eight hospitals for two years (fiscal years 2069/70-2070/71), to test the concept and collect experiences and learning. Following federalism, it is the province's responsibility to maintain and expand services in the remaining hospitals. In Bagamati Province, 13 hospitals provide social service units.

Major Achievements

Utilization of SSU services by the ultra-poor or poor citizens

Table 6.5 Utilization of SSU services by the ultra-poor or poor citizens

S.N.	Hospital/SSU	FY 2079/80	FY 2080/81	FY 2081/82
1	Pashupati Chaulagain Memorial Hospital, Dolakha	40	86	53
2	Chautara Hospital Sindhupalchok	127	88	89
3	Rasuwa Hospital ,Rasuwa	7	3	0
4	Dhading Hospital,Dhading	168	297	352
5	Trishuli Hospital, Nuwakot	61	12	0
6	Tokha Chandeshwori Hospital, Kathmandu	0	0	0
7	Bhaktapur Hospital, Bhaktapur	151	132	209
8	Bajrabarahi Chapagaun Hospital,Lalitpur	0	0	0
9	Methinkot Hospital, Kavre	32	144	244
10	Sindhuli Hospital,Sindhuli	195	296	220
11	Ramechhap Hospital,Ramechhap	0	251	238
12	Bakulahar Ratnanagar Hospital, Chitawan	0	465	
13	Hetauda Hospital, Makawanpur	543	577	694
	Total	1324	2351	2099

Source: HMIS/DHIS2

The table demonstrates that in fiscal year 2081/82, the utilization of SSU services by ultra-poor or poor citizens significantly decreased to a total of 2099 cases, compared to 2351 cases in fiscal year 2080/081. Hetauda hospital reported an increase cases, indicating enhanced outreach efforts. Dhading Hospital, Bhaktapur, Methinkot Hospital, Kavre experienced a significant rise, showcasing improved service accessibility.

Utilization of SSU services

Table 6.6 Utilization of SSU services by helpless people

S.N.	Hospital/SSU	FY 2079/80	FY 2080/81	FY 2081/82
1	Pashupati Chaulagain Memorial Hospital, Dolakha	1	17	79
2	Chautara Hospital Sindhupalchok	0	1	0
3	Rasuwa Hospital,Rasuwa	1	0	0
4	Dhading Hospital,Dhading	2	0	3
5	Trishuli Hospital, Nuwakot	4	4	0
6	Tokha Chandeshwori Hospital, Kathmandu	0	0	
7	Bhaktapur Hospital, Bhaktapur	68	108	181

8	Bajrabarahi Chapagaun Hospital,Lalitpur	0	0	
9	Methinkot Hospital, Kavre	3	34	39
10	Sindhuli Hospital,Sindhuli	0	9	5
11	Ramechhap Hospital,Ramechhap	0	0	1
12	Bakulahar Ratnanagar Hospital, Chitawan	0	0	
13	Hetauda Hospital, Makawanpur	127	104	69
	Total	206	277	377

Source: HMIS/DHIS2

The table presents the trends in the Utilization of SSU services by helpless people. Utilization increased from 277 in FY 2080/81 to 377 in FY 2081/82. Pashupati Chaulagai Memmorial Hospital, which saw a rise in cases from 17 to 79, demonstrated ongoing support for vulnerable individuals. Methinkot Hospital in Kavre also experienced a significant increase, from 34 to 39 cases, indicating enhanced inclusion efforts. Certain hospitals, including Tokha Chandeshwori Hospital, Kathmandu, reported no usage throughout all fiscal years. SSU provided free services to 277 helpless people from 7 hospitals.

Table 6.7 Utilization of SSU services by persons with disability

S.N.	Hospital/SSU	FY 2079/80	FY 2080/81	FY 2081/82
1	Pashupati Chaulagain Memorial Hospital, Dolakha	1	5	11
2	Chautara Hospital	31	32	12
3	Rasuwa Hospital	1	1	0
4	Dhading Hospital	9	5	20
5	Trishuli Hospital, Nuwakot	10	0	0
6	Tokha Chandeshwori Hospital, Kathmandu	0	0	0
7	Bhaktapur Hospital	41	11	27
8	Bajrabarahi Chapagaun Hospital	0	0	0
9	Methinkot Hospital, Kavre	3	16	21
10	Sindhuli Hospital	10	12	10
11	Ramechhap Hospital	0	4	4
12	Bakulahar Hospital, Chitawan	0	3	0
13	Hetauda Hospital	56	38	70
	Total	162	127	175

Source: HMIS/DHIS2

The table illustrates that health service utilization by persons with disabilities via SSU increased in five hospitals and decreased in three hospitals in FY 2081/82 compared to FY 2080/081. However, the highest number of people with disabilities utilizing health care services via SSU was reported at Hetauda hospital followed by Bhaktapur hospital, Methinkot Hospital and Dhading hospital. Pashupati Chaulagain Memorial Hospital, Dolakha increased cases from 5 to 11, while Rasuwa Trishuli Hospital, Nuwakot, recorded no cases this year.

Table 6.8 Utilization of SSU services by senior citizens

S.N.	Hospital/SSU	FY 2079/80	FY 2080/81	FY 2081/82
1	Pashupati Chaulagain Memorial Hospital, Dolakha	1146	193	23
2	Chautara Hospital Sindhupalchok	932	1290	527
3	Rasuwa Hospital,Rasuwa	49	61	303
4	Dhading Hospital,Dhading	326	380	242
5	Trishuli Hospital, Nuwakot	29	46	1
6	Tokha Chandeshwori Hospital, Kathmandu	0	0	0
7	Bhaktapur Hospital,Bhaktapur	48	176	524
8	Bajrabarahi Chapagaun Hospital, Lalitpur	0	0	0
9	Methinkot Hospital, Kavre	300	193	226
10	Sindhuli Hospital, Sindhuli	27	50	34
11	Ramechhap Hospital, Ramechhap	0	72	107
12	Bakulahar Ratnanagar Hospital, Chitawan	0	17	0
13	Hetauda Hospital, Makawanpur	702	215	755
	Total	3559	2693	2742

Source: HMIS/DHIS2

The table illustrates that total utilization of SSU services by senior citizens increased to 2,742 in FY 2081/82, from 2,693 in FY 2080/81. Bhaktapur Hospital maintained its position as the leader with 524 cases. Hetauda Hospital in Makawanpur recorded 755 cases, reflecting a steady incline. In the fiscal year 2081/82, 2742 elderly people benefited from the social service units of Bagamati Province's 13 hospitals.

Table 6.9 SSU services utilized by survivors of GBV and FCHVs

S.N.	Hospital/SSU	Survivors of GBV			FCHVs		
		2079/80	2080/81	2081/82	2079/80	2080/81	2081/82
1	Pashupati Chaulagain Memorial Hospital, Dolakha	0	2	0	1	1	0
2	Chautara Hospital	6	1	4	1	10	0
3	Rasuwa Hospital	0	0	0	1	3	0
4	Dhading Hospital	0	0	7	1	1	0
5	Trishuli Hospital, Nuwakot	0	0	0	1	0	0
6	Tokha Chandeshwori Hospital, Kathmandu	0	0	0	0	0	0
7	Bhaktapur Hospital	0	0	0	2	4	2
8	Bajrabarahi Chapagaun Hospital	0	0	0	0	0	0
9	Methinkot Hospital, Kavre	0	0	1	0	1	4
10	Sindhuli Hospital	0	0	0	1	0	4

11	Ramechhap Hospital	0	0	6	0	1	5
12	Bakulahar Hospital, Chitawan	0	0	0	0	0	0
13	Hetauda Hospital	0	4	2	1	2	1
	Total	6	7	20	9	23	16

Source: HMIS/DHIS2

The above table illustrates that total utilization of SSU by survivors of GBV has increased to 20 (7 in Dhading Hospital, 6 in Ramechhap Hospital, 4 in Chautara Hospital, 2 in Hetauda Hospital and 1 in Methinkot Hospital) in FY 2081/82 as compared to total of 7 in FY 2080/81. In the fiscal year 2081/82, 16 FCHVs benefited from the social service units of Bagamati Province hospitals (5 from Ramechhap Hospital, 4 from Sindhuli Hospital , 4 from Methinkot Hospital, 2 from Bhaktapur Hospital and 1 from Hetauda Hospital) which is lower as compared to FY 2080/81 (23).

6.3 Provincial Health Emergency Operation Centre (PHEOC)

A Provincial Health Emergency Operations Centre (PHEOC) serves as a physical hub where resources and information are organized to facilitate the coordination of crisis management activities. The terms “operations centers,” “situation rooms,” and “command centers” are also commonly used to describe PHEOCs. Timely implementation of a PHEOC is crucial to avoid common mistakes, such as unclear leadership leading to delayed decision-making, mismanagement of resources, and inadequate coordination. Past experiences underscore the importance of having a PHEOC in managing public health emergencies effectively. Participation in a PHEOC allows diverse teams to share knowledge and expertise, enabling staff members to provide essential data that supports decision-making and resource management. The functioning of a PHEOC relies on various elements, including physical infrastructure (including ICT), policies, plans, procedures, an information management system, and competent staff.



Figure 6.2 Provincial Health Emergency Operation Centre (PHEOC), Bagamati Province.

Objectives of PHEOC

The PHEOC’s main objectives include the following:

- Making operational decisions promptly based on the best information, plans, policies, and technical advice available.

- Working together with response partners to coordinate actions toward shared goals
- Gathering, compiling, analyzing, and presenting event data and information to help with response documentation and planning
- Purchasing and allocating response resources, such as providing services and supplies to the PHEOC and all responders
- Keeping an eye on financial obligations and offering PHEOC administrative support

Principles of emergency management Emergency management:

Emergency management involves organizing and overseeing resources and responsibilities to address all aspects of emergencies. To ensure a comprehensive and coordinated approach involving the public, nonprofit, and commercial sectors throughout the emergency management cycle, it is essential to establish plans, structures, and accountabilities. Past experiences highlight the importance of promptly implementing a Public Health Emergency Operations Center (PHEOC) as a crucial platform for managing public health emergencies. This platform plays a key role in preventing deficiencies in various areas, such as insufficient preparation and situational awareness leading to a lack of detailed planning. It also addresses coordination issues within and between organizations, minimizing redundant activities or response gaps. Additionally, the PHEOC helps prevent the overuse or underuse of specialized resources and expertise, ensuring their deployment to the appropriate location, time, and in the right numbers. Lastly, it enhances communication among different response elements and with the public and communities.

There are five key elements to any emergency management program:

1. **Risk assessment:** Identifying potential threats and assessing the risk they present.
2. **Prevention and mitigation:** Taking steps to prevent hazards from occurring or lessening their effects if they do.
3. **Preparedness:** Evaluating and enhancing the ability to react to situations.
4. **Response:** Employing the ability and capability to address an occurrence.
5. **Recovery:** The process of rebuilding capability, capacity, and infrastructure following an incident.

Applying Emergency Management Principles can help avoid some of the common challenges of response. The principles include:

- Using an all-hazards approach
- Using a modular and scalable Incident Management System
- Joint working with partners
- Having clear lines of accountability and manageable team sizes
- Having clearly defined roles and responsibilities
- Having clearly defined and practiced policies and procedures
- Using common terminology
- Having common structures, functions, and technology in place
- Good communication and engagement, particularly with communities

Major activities of PHEOC Bagamati in the fiscal year 2081/82:

1. The RRC/RRT advocacy program was initiated with financial support from USAID and technical support from WHO Health Emergencies at all local units. To date, 53 local units across 7 districts (Kathmandu, Lalitpur, Dolakha, Kavrepalanchok, Chitawan, Sindhuli and Makawanpur) have been covered.

2. Technical support was provided to the Ministry of Health (MOH) for the finalization and endorsement of the "Provincial Health Emergency and Disaster Preparedness and Response Plan." Additionally, support was given to districts and local units for finalizing Municipality and district-level health emergency and disaster preparedness and response plans.

3. At the provincial level, command, coordination, and communication for health emergency and disaster preparedness and response were strengthened.

4. An improved surveillance system was developed, focusing on diseases and outbreaks, particularly COVID-19, Dengue, and Cholera. Regular media coverage tracking of significant disasters, public health emergencies, and other health-related events was conducted, producing daily media monitoring reports.

5. Technical support was also provided for outbreak investigations as needed, ensuring accurate reporting and documentation of outbreaks and disasters.

6. Hospital readiness and response for disasters and health emergencies were enhanced, with improved coordination between hub and satellite hospitals.

7. The data repository was strengthened by collecting detailed information about the Rapid Response Teams (RRT) and Rapid Response Committees (RRC) established at local and district levels.

8. Immediate assistance and coordination support were delivered to the Ministry of Health (MOH) for flood and landslide victims in Bagamati Province. Coordination efforts involved WHO, Roshi Municipality, DPHO Kavrepalanchok, and MOH Bagamati to establish a temporary Medical Camp Kit (MCK) at Roshi Nagar Hospital, which had been destroyed by the flood and landslide in September.

9. Coordination for HeRAMS training was provided to the affected municipalities after the disaster, assisting them in assessing the functionality of damaged health facilities using the HeRAMS tool.

10. Support was extended to the Health Emergency Operation Center (HEOC) in conducting a Hospital Safety Index (HSI) evaluation of Bharatpur Hospital using the HSI+ tool. This process involved a 3-day training and a 3-day assessment, in collaboration with WHO, GHI, and CEAD consultants.

11. Support was also provided for the Surveillance Outbreak Response Management Analysis System (SORMAS) Training of Trainers (ToT) organized by the EDCD for provincial authorities and municipal-level SORMAS training for Public Health Officers (PHOs) and health section chiefs across all 119 municipalities in the province. The 3-day training, held in Sauraha Chitawan, was conducted in multiple batches, with full implementation scheduled for 2025.

12. Technical support was provided to Public Health Office, Kavre for reponse to ILI (Influenza Like Illness) outbreak in Bhumlu Rural Municipality.

13. Technical support was provided for the "Health Emergency and Disaster Preparedness and Response Plan" review meeting organized by the Health Directorate Office of Bagamati, involving all Public Health Offices from the Bagamati province.

14. Support was provided for activities related to Antimicrobial Resistance (AMR), including the promotion of awareness and advocacy efforts. This included coordinating and participating in the observance of World Antimicrobial Awareness Week (WAAW), held annually from November

18 to 25. The aim was to raise public awareness about the dangers of improper antimicrobial use and the growing threat of AMR. Various educational campaigns and community engagement activities were organized which was supported by the PHEOC to highlight the importance of responsible antimicrobial usage. These efforts were designed to encourage better practices in healthcare, agriculture, and the public to combat AMR effectively.

Outcome

Strengthened Health emergency and disaster preparedness and response at all levels of governance.

6.4 Heath education, information and communication

Background

Health promotion is the priority program under health education information and communication section of provincial health directorate. It aims to plan, implement, monitor and evaluate health promotion programs within a province. It is guided by National Health Communication Policy 2012, National Health Policy 2076 and many other relevant policies, guideline and is responsible for developing, producing and disseminating health messages and materials to promote and support health programs and services. Besides it also regulates the health messages produced and disseminated by other partner organizations and stakeholders through media.

Vision	Healthy, alert and conscious citizens oriented to happy life
Goal	To sustain healthy life of citizens by promoting healthy behavior, preventing and controlling diseases and increasing accessibility and maximum utilization of available health services.
Objectives	**General objective** To promote health awareness, motivate and guide the people to take actions that promote improved health status and to prevent disease through the efforts of the people themselves with optimum utilization of available resources. **Specific objectives** To mobilize and use modern and traditional communication multimedia and methods to raise health awareness, knowledge and promote healthy behavior among the general public. To strengthen, expand and implement health communication programs at Province levels.To generate, collect and mobilize resources to implement health information, education and communication programs by promoting participation, coordination and cooperation of relevant organizations and stakeholders for effective implementation of health communication programs. To prevent the unauthorized dissemination and duplication of health-related messages or information and IEC materials. To enhance capacity on health communication to develop, produce and disseminate quality, correct, authorized, uniform and appropriate health related messages and information. To provide quality health messages and information through appropriate media and methods to the citizens who otherwise have little access to such messages and information.

Strategies
Advocacy, health education, multi sectoral coordination and creating supportive environment are the core strategies for health promotion. The specific strategies are as follows:
Advocating with all levels of stakeholders for building healthy public policy and health in all policies.
Implementing a one-door integrated approach for all health IEC programs under MoH.
Mobilizing communication media, social media platform and technology, various methods and materials for health communication to promote health and prevent diseases.
Ensuring the quality, uniformity and standardization of health messages and materials through technical committees in provincial level as well as district level.
Encouraging the dissemination of health messages and information through public-private partnerships.
Building the capacity of health workers to plan and implement the IEC/BCC/SBCC programs coordinating with academia.
Introducing new communication technologies for health promotion and health communication.
Coordinating with academia for building the capacity of health workers on health promotion and health communication.
Strengthening, monitoring and supervising activities to support and determine the gaps in knowledge, attitudes and practices among target audiences and service provided.

Major Activities of HE&HC program conducted in provincial level in FY 2081/82

- Dissemination of Health message and information via mass media in province level including in time of epidemic and disaster.
- Celebration of world health day and other health related days, week and months.
- Monitoring and supervision of health promotion programs including health education information and communication at district level.
- Provide technical support to district and local level to develop and implement scientific IEC/BCC message and materials.
- Conducting the interaction with media and health journalists to advocate the health issues in national as well as local media platform.
- Collaborating with different stakeholders and developing partners for communicating health message and sensitizing the people of Bagamati province in various public health programs.
- Conducting the community interaction program on NCDs and Mental health issues at different sites of various districts to aware people and sensitize the change unhealthy behavior

Major Activities of HIEC conducted in district level in FY 2081/82

- Conducting the school health education program at schools with coordination of local level and school nurse.
- Celebration of world health day and other health related days, week and months.

- Monitoring and supervision of health promotion programs including health education information and communication at local level
- Storage and distribute the IEC/BCC materials at district level and local level to disseminate the message at community level
- Development, production and broadcasting of health messages through local mass media (local television, radio, F.M., online, local newspapers etc.) to sensitize the people to promote the health and prevent the disease.

Major achievement in F/Y 2081/82

Table 6.10 Number of people attending health education sessions

Organization	F/Y 2079/80	F/Y 2080/81	F/Y 2081/82
Bagamati province	123063	224199	316633
Rasuwa	1022	1497	2239
Dolakha	4151	4072	9106
Sindhuli	2629	1870	10047
Nuwakot	3317	12494	15202
Makawanpur	9258	21528	20098
Chitawan	7777	31901	20342
Lalitpur	7813	18666	24133
Kavrepalanchok	28584	28479	28883
Sindhupalchok	9561	16633	29025
Dhading	18354	26104	30726
Kathmandu	16763	22795	31543
Bhaktapur	3218	13271	38639
Ramechhap	10616	24889	56650

The above table shows the comparative trend of the total number of people attending health education sessions in Bagamati Province over the past three fiscal years, indicating a massive and steady increase in community engagement. At the provincial level, attendance grew exponentially, rising from 123,063 in FY 2079/80 to 224,199 in FY 2080/81, and further surging to 316,633 in FY 2081/82, reflecting a significant expansion in the reach of health education programs.In FY 2080/81, the number of attendees increased in nearly every district compared to FY 2079/80. Chitawan recorded the highest attendance for that year (31,901), followed by Kavrepalanchok (28,479), Dhading (26,104), and Ramechhap (24,889). The remaining districts recorded varied levels of participation, with Rasuwa (1,497) and Sindhuli (1,870) showing the lowest attendance for that year. Similarly, other districts with comparatively lower attendance numbers were Dolakha (4,072) and Nuwakot (12,494), indicating areas where health education outreach was still scaling up during that period.

Table 6.11 Number of people attending health education sessions

Organization unit	F/Y 2079/80	F/Y 2080/81	F/Y 2081/82
Bagamati province	4285	9092	5780
Sindhuli	95	382	48
Rasuwa	59	62	58
Dolakha	277	345	143
Bhaktapur	89	524	202
Chitawan	273	380	216
Kathmandu	373	664	306
Lalitpur	235	492	467
Makawanpur	516	517	556
Nuwakot	131	518	560
Kavrepalanchok	684	735	643
Sindhupalchok	452	1142	702
Dhading	643	846	828
Ramechhap	458	2485	1051

Table shows the comparative trend of the total number of health education sessions conducted across various districts in Bagamati Province over the past three fiscal years, indicating a period of significant growth followed by a moderate decline. At the provincial level, the number of sessions conducted more than doubled from 4,285 in FY 2079/80 to 9,092 in FY 2080/81, before decreasing to 5,780 in FY 2081/82, reflecting a substantial fluctuation in the frequency of health education activities. In FY 2080/81, the number of health education sessions conducted increased significantly compared to FY 2079/80 across nearly all districts. Ramechhap recorded the highest number of sessions for that year (2,485), followed by Sindhupalchok (1,142), Dhading (846), and Kavrepalanchok (735). The remaining districts recorded lower numbers of sessions, with Rasuwa (62) showing the lowest frequency for that year. Similarly, other districts with comparatively lower session counts were Sindhuli (382) and Dolakha (345), indicating areas where the volume of formal health education sessions remained relatively low despite the overall provincial surge.

Strengths	Weakness
Limited human resources to carry out health promotion activities at province and local level.	Appropriate budget allocation for health communication program.
Frequently changing behavior pattern of people and resistance to change.	Appropriate human resource management for launching health promotion activities smoothly.
Implementing “One School One Nurse program” in 848 Government school of Baghmati Province to promote the health of school going children.	Inadequate allocation of budget for health communication programme.
Experience of health workers in clinical management of snakebite cases in high burden districts	Frequently changing behavior pattern of people and resistance to change.
	Communication Barrier due to cultural diversity.

Opportunities	Threats
The policies have started for placing high priorities for modification of behavior and life styles to beat the triple burden of disease via health promotion and social behavior change communication intervention.	Rapid urbanization, globalization and changing human lifestyles.
Expansion of Health education graduates cadres at district level to manage and implement the health promotion program at district level.	Massive change in using pattern of communication mass and social media of people in current time of advanced technology and innovation.

CHAPTER

07 AYURVEDA AND ALTERNATIVE MEDICINE

7.1 Introduction

Ayurveda, widely recognized as one of the oldest holistic systems of medicine in the world, plays a vital role in promoting health and wellbeing through promotive, preventive, curative, and rehabilitative approaches. Rooted in a holistic understanding of body, mind, and environment, Ayurveda emphasizes healthy lifestyles, dietary regulation, disease prevention, and natural therapies, making it particularly relevant in the context of rising non-communicable diseases (NCDs).

In Nepal, formal efforts to integrate Ayurveda into the national health system began during the reign of King Tribhuvan. A major milestone was the establishment of the Department of Ayurveda in 2010 BS, which laid the institutional foundation for the development, regulation, and expansion of Ayurvedic services across the country. Since then, Ayurveda has evolved from a traditional practice to an integral component of Nepal's public healthcare delivery system.

The Constitution of Nepal recognizes Ayurveda and other traditional and alternative medical systems such as Naturopathy, Homeopathy, Unani, and Amchi as part of the national health framework. This constitutional backing is reinforced by several key policy instruments, including the National Ayurveda Policy 1996, the National Health Policy 2019, and the National Urban Health Policy 2015, all of which underscore the importance of expanding access to quality Ayurvedic and alternative health services. Furthermore, the Government of Nepal's Sixteenth Plan (2024/25–2028/29) outlines strategic interventions aimed at strengthening infrastructure, human resources, research, education, and service delivery in Ayurveda and complementary medicine, while promoting their integration with modern healthcare.

In Bagamati Province, the Ministry of Health is responsible for the overall planning, coordination, management, supervision, monitoring, and evaluation of Ayurveda and alternative medicine services. The province has developed a relatively extensive service delivery network, comprising 13 Ayurveda and Alternative Hospitals, 50 local-level Ayurveda Aushadhalayas, and 52 Citizen Ayurveda Health Centers. In addition, Healthy Lifestyle Programs are implemented through Primary Health Centers (PHCs) to promote preventive care, behavioral change, and management of lifestyle-related conditions using Ayurvedic principles.

Provincial health policies increasingly recognize the role of Ayurveda in strengthening primary healthcare, particularly in the prevention and management of non-communicable diseases such as hypertension, diabetes, obesity, and mental health conditions. By emphasizing cost-effective, culturally acceptable, and preventive healthcare solutions, Ayurveda and alternative medicine contribute significantly to improving health outcomes, reducing the burden on tertiary healthcare facilities, and advancing universal health coverage in Bagamati Province.

Strategies

- Provide preventive, promotive and curative health services in the rural areas.
- Establishment and development of Ayurveda institutions.
- Strengthen and expand the Ayurveda 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 co-ordination with Education Ministry, Forestry, local development sector and other NGO's and INGO's.
- National and International level training for the capacity enhancement of its human resources.

Number of Health Facilities

Table 7.1 Number of Health Facilities providing Ayurveda and Alternative Medicine Services

Ayurveda and Alternative Medicine Service														
Health Facilities	FY 2081/82 Total	FY 2081/82 by District												
		Dolakha	Sindhupalchok	Rasuwa	Dhading	Nuwakot	Kathmandu	Bhaktapur	Lalitpur	Kavrepalanchok	Ramechhap	Sindhuli	Makawanpur	Chitwan
Ayurveda and Alternative Medicine Hospital	13	1	1	1	1	1	1	1	1	1	1	1	1	1
Ayurveda Aushadhalaya	50	2	5	2	4	7	5	2	2	4	1	5	3	8
Nagarik Aarogya Sewa Kendra	52	4	4	3	5	4	4	3	4	4	4	4	6	3
Total Number of Ayurveda Health Facilities	115	7	10	6	10	12	10	6	7	9	6	10	10	12

Major Ayurveda service and programs

- OPD services
- Panchakarma (Purvakarma) service
- Distribution of galactogogue medicine to lactating mother
- Geriatric health promotion program
- School Ayurveda Health and Yoga program
- E class Laboratory service
- Paying pharmacy service
- National, International Yoga Day and National Health Day (Dhanwantari Diwas) celebration
- Production, publication and broadcasting of Ayurveda IEC materials
- Nasyakarma program to minimize the pollution related health hazard of province traffic police
- Ayurveda Life style management and health promotion program
- Chief Ministry Public Health Program

Major Activities conducted in FY (2081/82)

- Annual review of Ayurveda service program completed.
- Nagarik Aarogya Program
- Monitoring and evaluation of Ayurveda service program
- Panchakarma Vastikarma training for Ayurveda doctors
- Yoga training for Ayurveda doctors
- Abhyangkarta training on Purvakarma/ Panchakarma
- Supply management training for Ayurveda doctors and store managers
- Review meeting on Homeopathy services
- Preparation of a training manual on Purvakarma /Panchakarma for Abhyangkarta and Panchakarma Vastikarma for Ayurveda Practitioners
- Conducted onsite coaching

7.2 Major Achievements

Status of Panchakarma (Purvakarma) service

The utilization of Panchakarma (Purvakarma) services in Bagamati Province showed a steady and substantial increase over the three consecutive fiscal years. Service numbers rose from 68,876 in fiscal year 2079/80 to 100,461 in 2080/81, and further increased to 163,776 in 2081/82. The consistent upward trend indicates expanding service coverage and/or increased demand for Panchakarma services in the province.

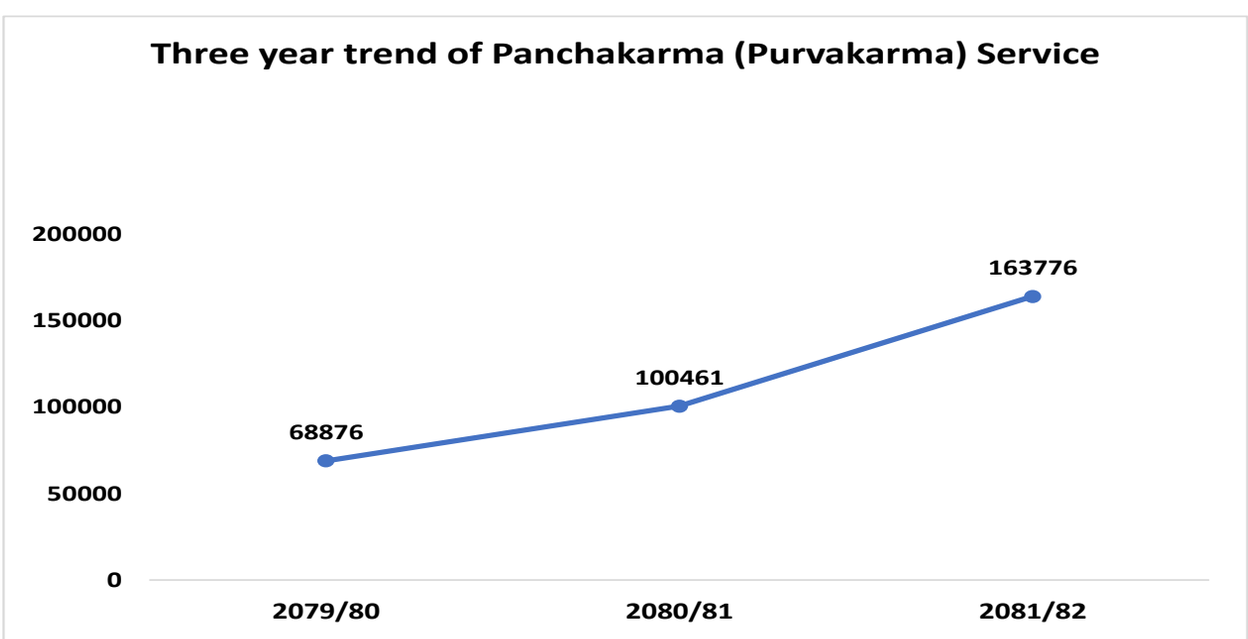


Figure 7.1Comparison of Panchakarma (Purvakarma) Service of three consecutive fiscal years in Bagamati Province

Source: AHMIS

In fiscal year 2081/82, the distribution of Panchakarma (Purvakarma) services across districts in Bagamati Province showed marked variation. Chitawan recorded the highest service utilization (54,498), followed by Kathmandu (24,504) and Kavrepalanchok (14,539), indicating a concentration of services in more populous and better-equipped districts. In contrast, districts such as Rasuwa (1,923) and Sindhuli (3,194) reported comparatively low service utilization.

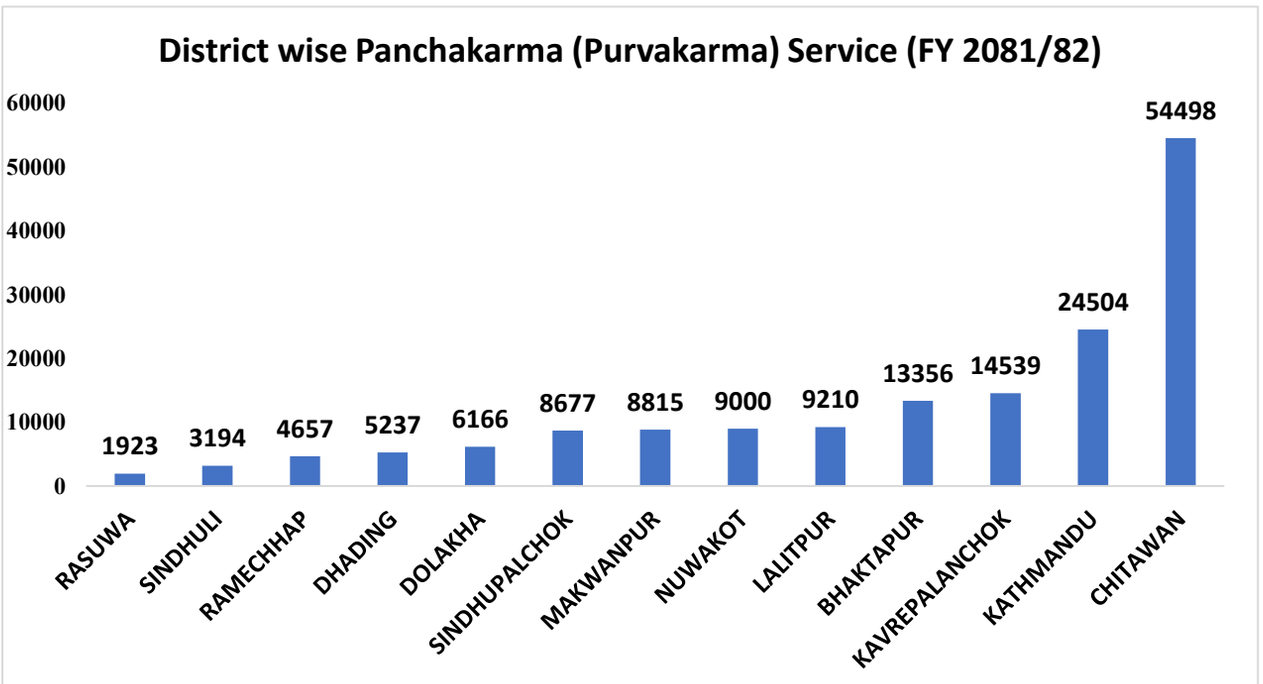


Figure 7.2 District wise Panchakarma (Purvakarma) Service (FY 2081/82)

Source: AHMIS

Status of Shalya Services

The utilization of Shalya Chikitsa services in Bagamati Province showed a steady increase over the three consecutive fiscal years. Service numbers rose from 201 in fiscal year 2079/80 to 3889 in 2080/81, and declined to 2508 in 2081/82. Despite the decline in the final year, the overall trend indicates expanded service availability and growing demand for Shalya Chikitsa services within the province.

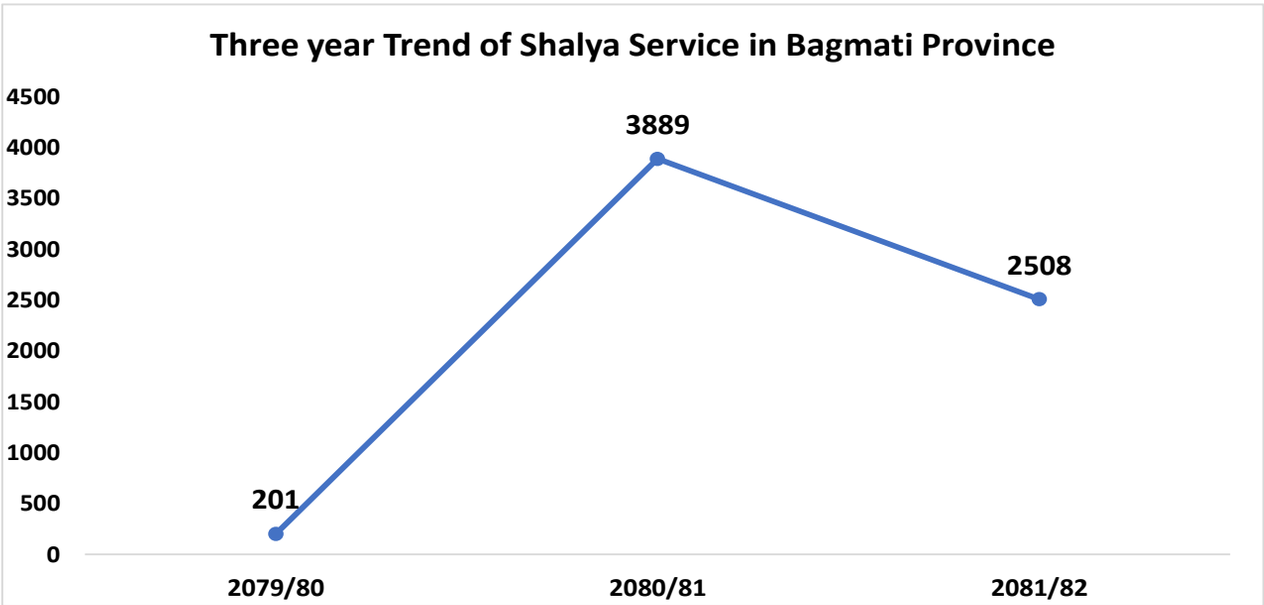


Figure 7.3 Three-year Trend of Shalya Service in Bagamati Province

Source: AHMIS

In fiscal year 2081/82, the distribution of Shalya Chikitsa services across districts in Bagamati Province was highly uneven. Bhaktapur, accounted for the highest service utilization, followed by Makawanpur, and Chitawan. In contrast, several districts including Dolakha, Nuwakot, Lalitpur, and Rasuwa reported no Shalya services, while others such as Ramechhap, Sindhuli, and Dhading recorded minimal utilization. This pronounced disparity indicates a concentration of Shalya Chikitsa services in selected districts, likely reflecting differences in service availability, infrastructure, and human resource capacity within the province.

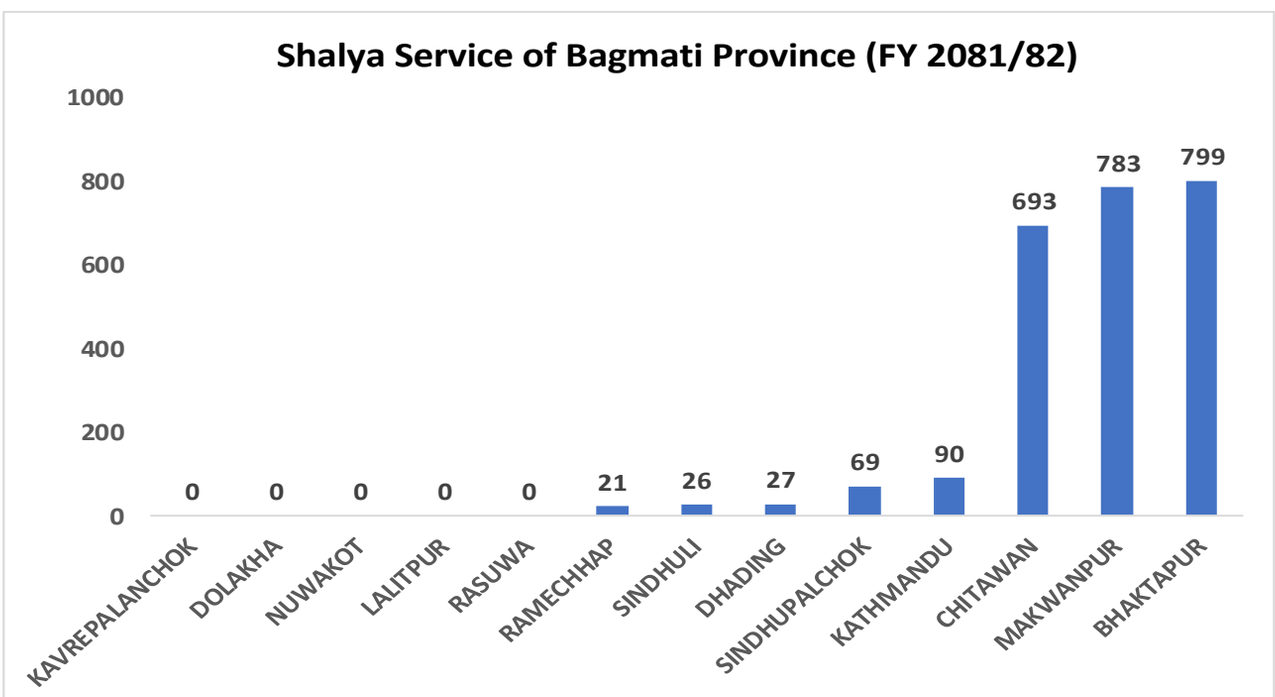


Figure 7.4 Shalya Service of Bagamati Province (FY 2081/82)

Source: AHMIS

Status of Yoga Services

The utilization of Yoga services in Bagamati Province showed a slight increase over the three consecutive fiscal years. Service numbers rose from 20967 in fiscal year 2079/80 to 28095 in 2080/81, and further increased to 29567 in 2081/82.

The district-wise distribution of yoga services shows that Chitawan district accounted for the highest number of yoga service recipients, followed by Makawanpur and Ramechhap. In contrast, Dhading recorded the lowest utilization, while Bhaktapur reported no yoga services during the fiscal year. Overall, the distribution reflects a marked imbalance in yoga service utilization across districts of the province.

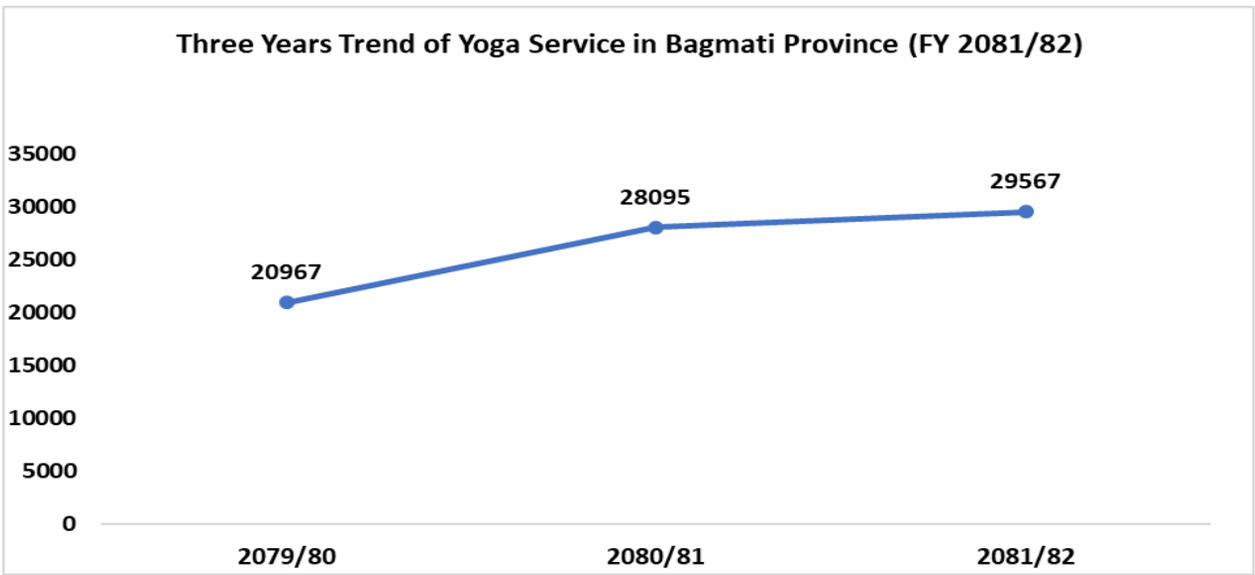


Figure 7.5 Three Years Trend of Yoga Service in Bagamati Province (FY 2081/82)

Source: AHMIS

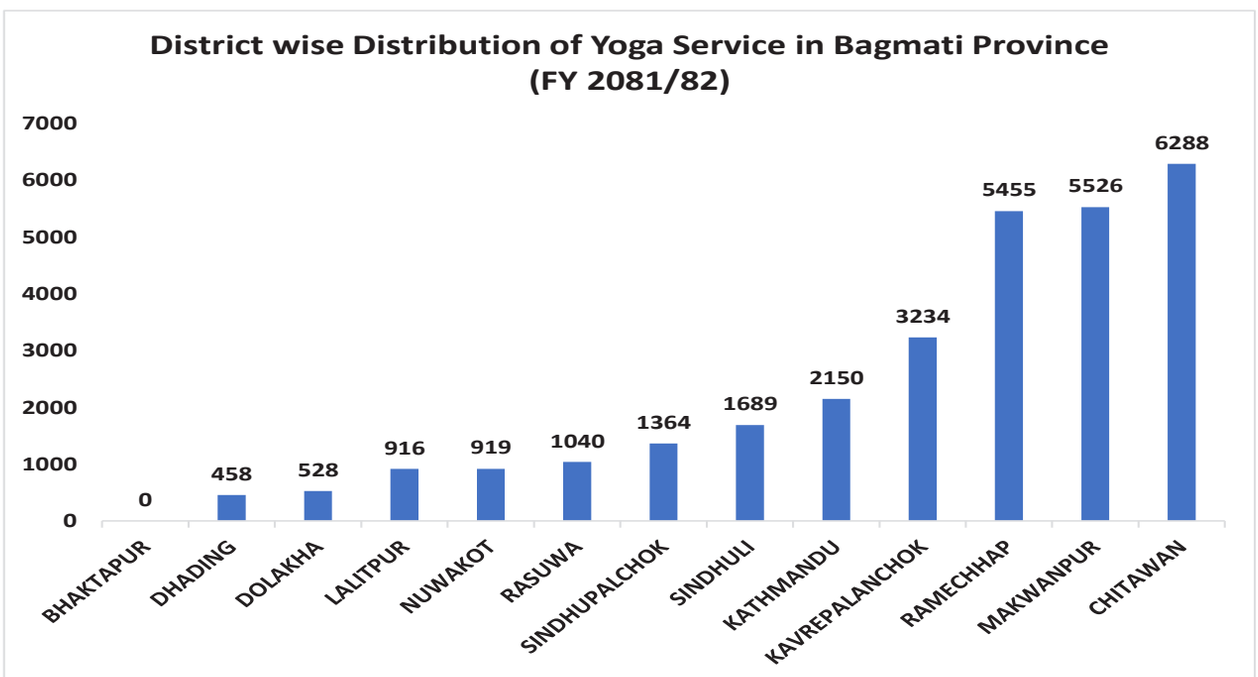


Figure 7.6 District-wise Distribution of Yoga Service in Bagamati Province (FY 2081/82)

Source: AHMIS

Jesthanagarik Service

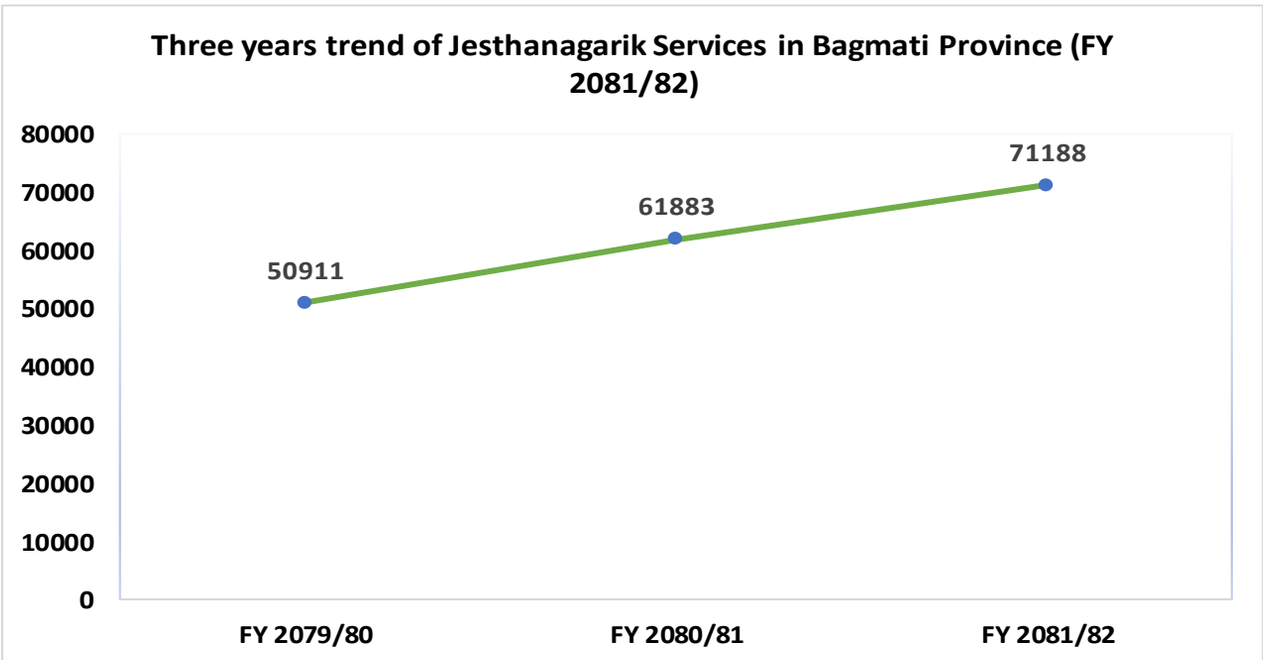


Figure 7.7 Three years trend of Jesthanagarik Services in Bagamati Province (FY 2081/82)

Source: AHMIS

The figure shows the three-year trend of Jesthanagarik (senior citizen) services in Bagamati Province. Service utilization increased steadily over the period, rising from 50,911 in FY 2079/80 to 61,883 in FY 2080/81, and further to 71,188 in FY 2081/82. This upward trend indicates a consistent growth in the coverage and utilization of services among senior citizens in the province.

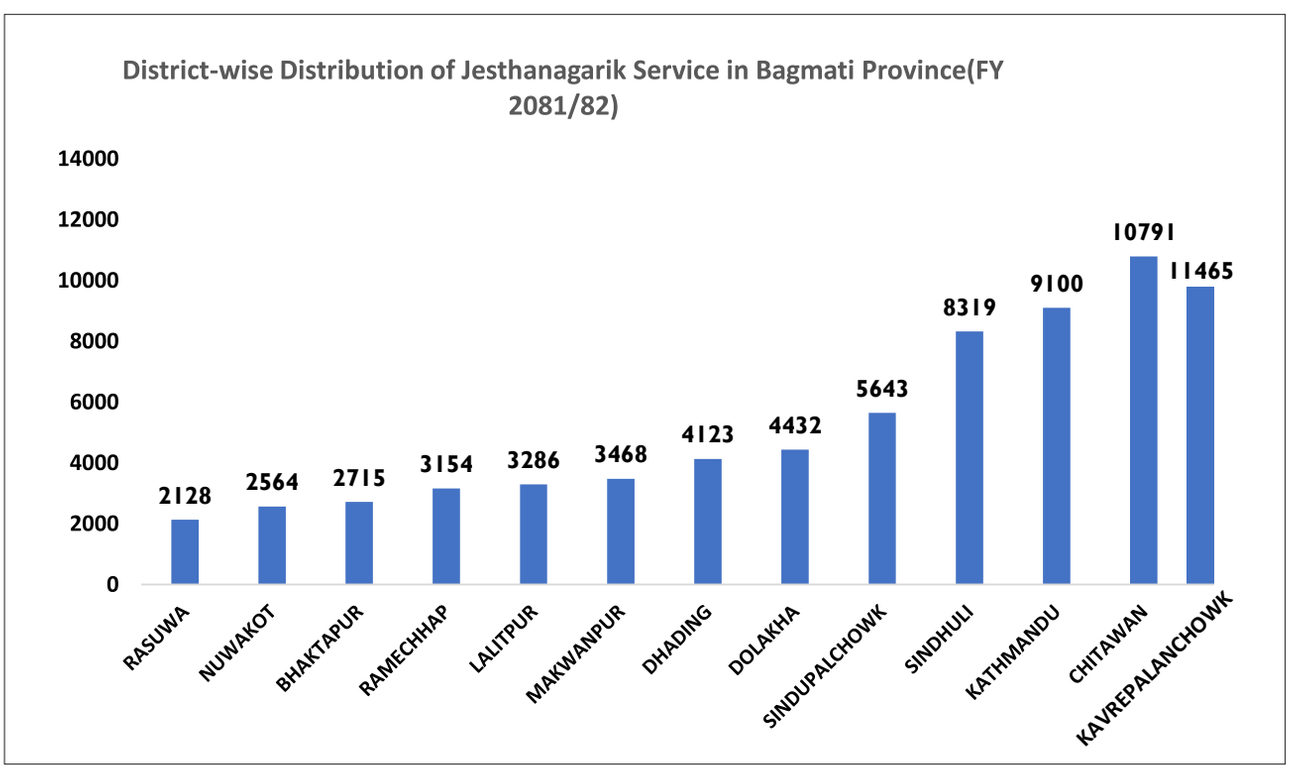


Figure 7.8 District-wise Distribution of Jesthanagarik Service in Bagamati Province (FY 2081/82)

Source:AHMIS

The figure presents the district-wise distribution of Jesthanagarik (senior citizen) services in Bagamati Province for FY 2081/82. Kavrepalanchok recorded the highest number of service recipients, followed by Chitawan, Kathmandu, and Sindhuli. In contrast, Rasuwa and Nuwakot reported comparatively lower utilization. Overall, the figure highlights notable variation in the coverage of senior citizen services across districts within the province.

Laboratory Services

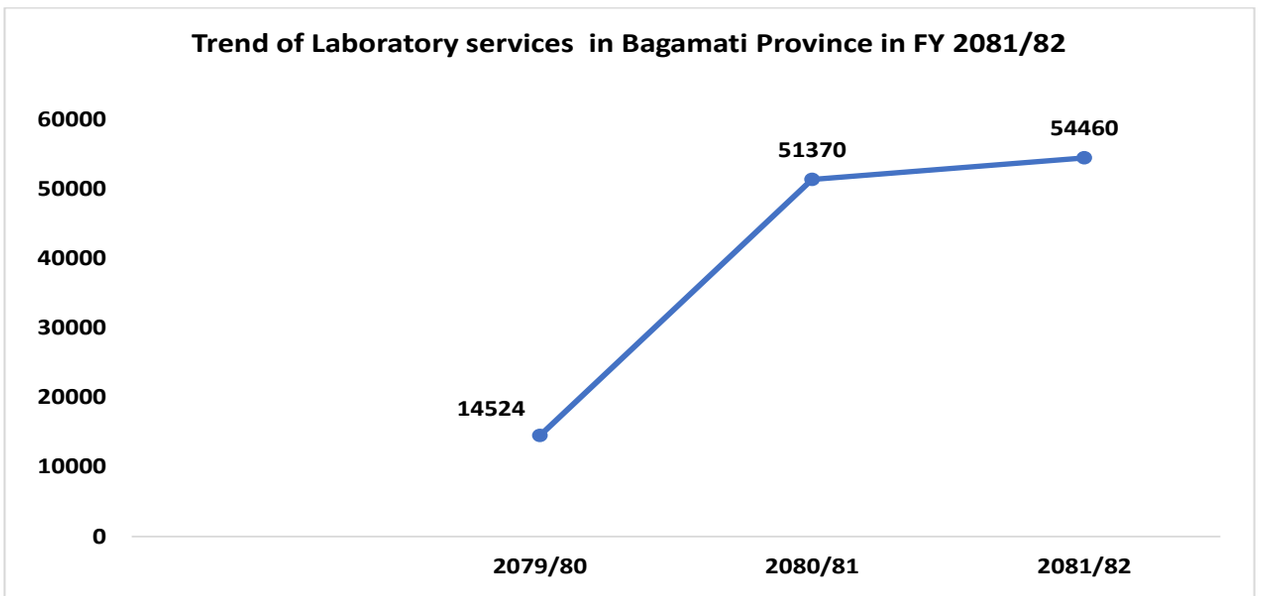


Figure 7.9 Trend of Laboratory Service in Bagamati Province (FY 2081/82)

Source: AHMIS

The utilization of Laboratory services through Ayurvedic health facility in Bagamati Province showed a steady increase over the three consecutive fiscal years. Service numbers rose from 14524 in fiscal year 2079/80 to 51370 in 2080/81, and further increased to 54460 in 2081/82.

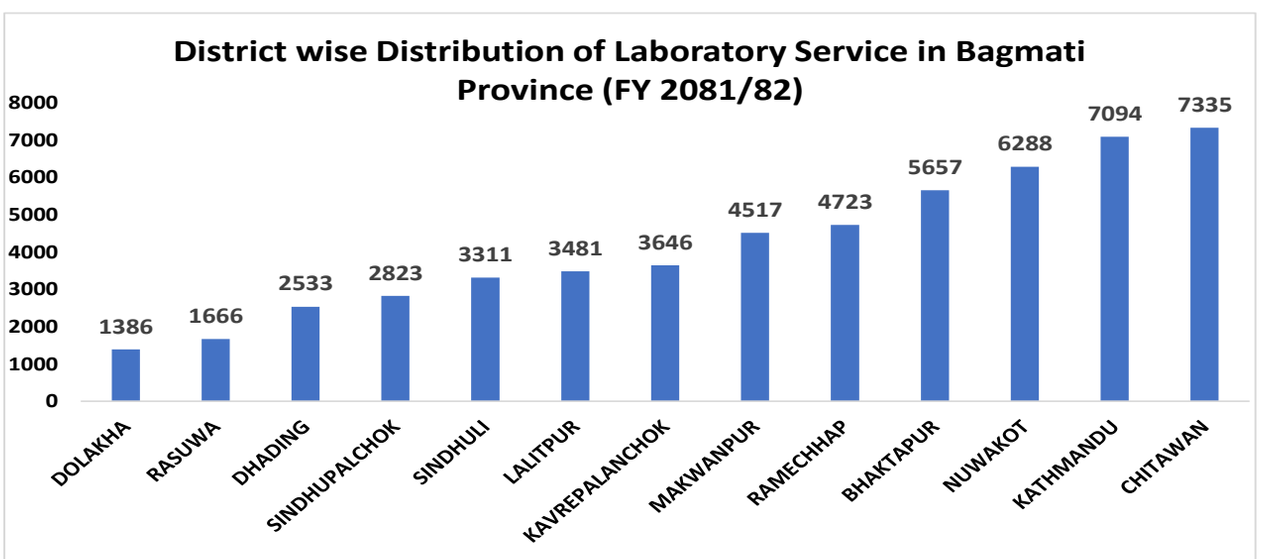


Figure 7.10 District wise Distribution of Laboratory Service in Bagamati Province (FY 2081/82

Source: AHMIS

The figure presents the district-wise distribution of laboratory services in Bagamati Province for FY 2081/82. Chitawan recorded the highest number of service recipients, followed by Kathmandu, and Nuwakot. In contrast, Dolakha and Rasuwa reported comparatively lower utilization of laboratory services.

Physiotherapy Service

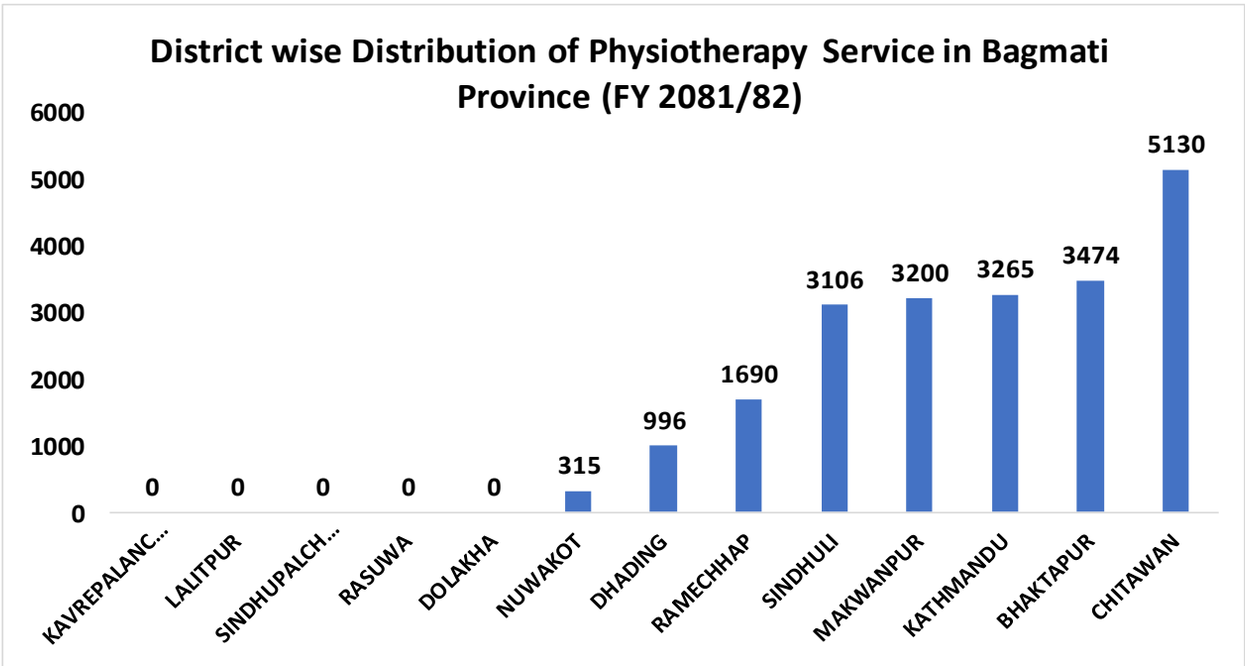


Figure 7.11 District wise Distribution of Physiotherapy Service in Bagamati Province (FY 2081/82)

Source: AHMIS

In fiscal year 2081/82, the distribution of Physiotherapy services across districts in Bagamati Province was highly uneven. Chitawan accounted for the highest service utilization, followed by Bhaktapur, Kathmandu, and Makawanpur. Whereas, other districts such as Dhading, Ramechhap, recorded minimal utilization. In contrast, some districts, such as Kavrepalanchok, Dolakha, Sindupalchowk, Lalitpur, and Rasuwa, have not yet begun providing Physiotherapy services. This pronounced disparity indicates a concentration of Physiotherapy services in selected districts, likely reflecting differences in service availability, infrastructure, and human resource capacity to provide physiotherapy services within the province.

Acupuncture Service

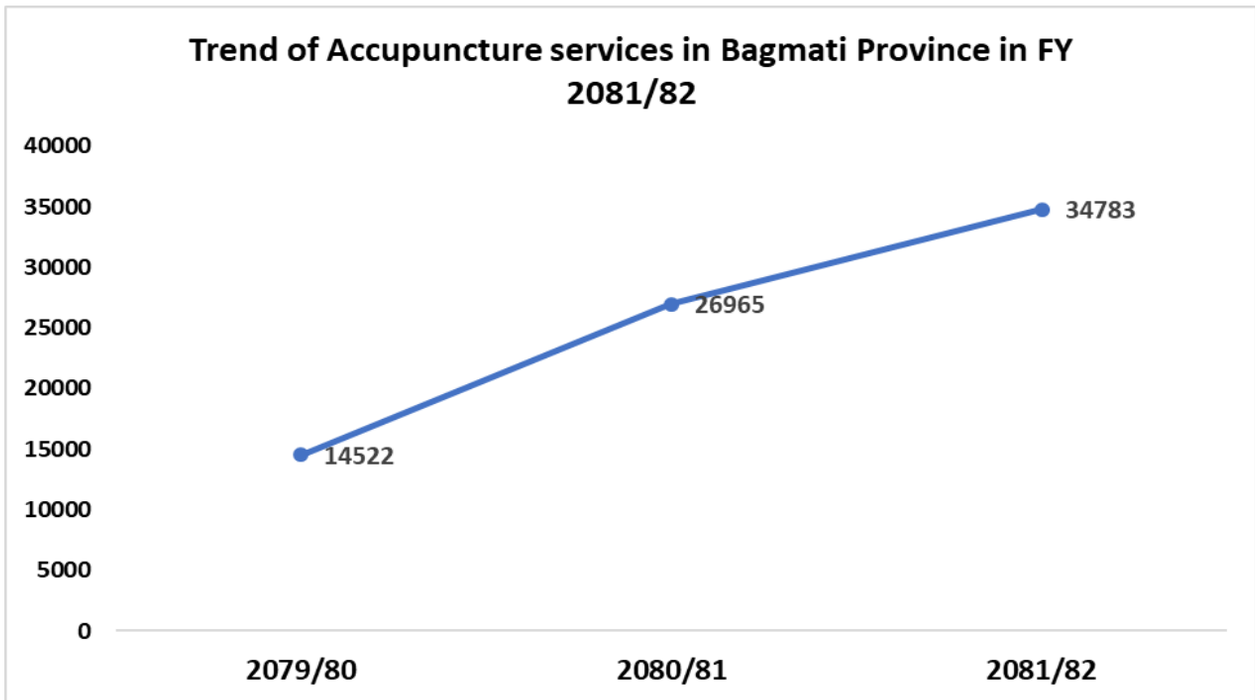


Figure 7.12 Trend of Acupuncture services in Bagamati Province in FY 2081/82

Source: AHMIS

The figure shows the three-year trend of Acupuncture in Bagamati Province. Service utilization increased steadily over the period, rising from 14522 in FY 2079/80 to 26965 in FY 2080/81, and further to 34783 in FY 2081/82. This upward trend indicates a consistent growth in the coverage and utilization of Acupuncture services in the province.

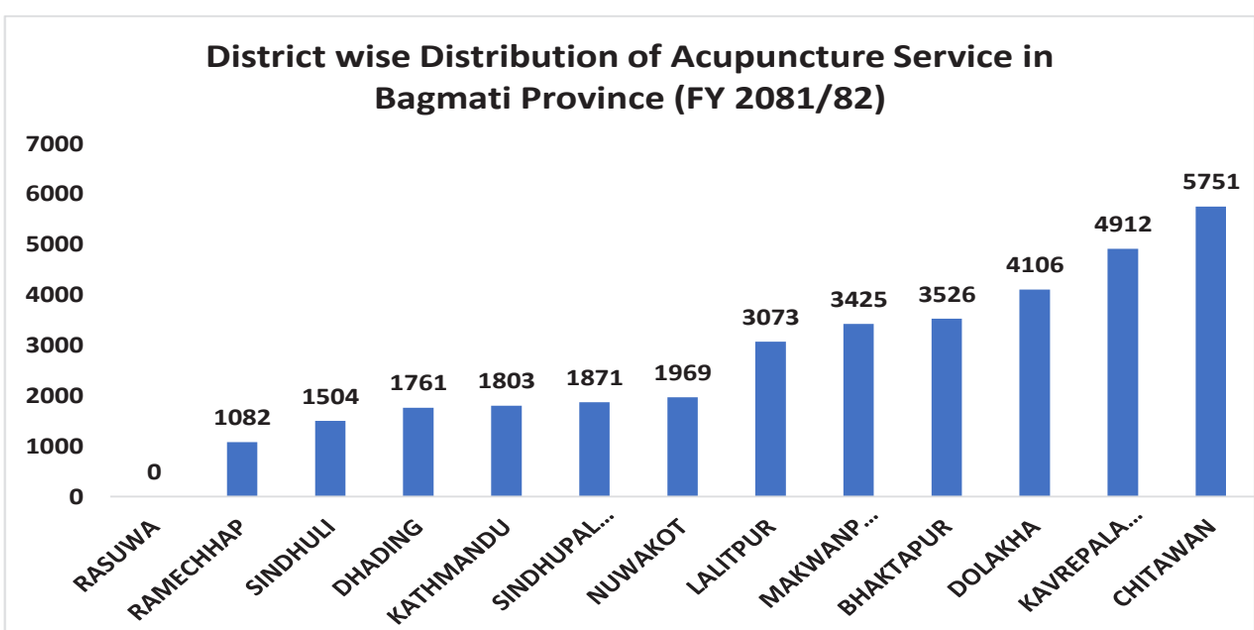


Figure 7.13 District wise Distribution of Acupuncture Service in Bagamati Province (FY 2081/82)

Source: AHMIS

In fiscal year 2081/82, the distribution of Acupuncture services across districts in Bagamati Province was highly uneven. Chitawan accounted for the highest service utilization, followed by Kavrepalanchok and Dolakha. Whereas, other districts such as Rasuwa and Ramechhap, recorded minimal utilization. Furthermore, Rasuwa, have not yet begun providing Physiotherapy services.

Issues, Action to be taken and Responsibilities

Issues/Challenges	Action to be taken	Responsibilities
Non-availability of infrastructure/ Inadequate building space	Prioritizing the plan for construction of building	MOH/HD/Local level
Lack of manpower	Fulfilling the sanctioned seat	MOH/HD
Lack of orientation and training	Provide necessary training to ayurveda health workers	HTC/HD
Registration and renewal problem of Private Health Organization	Preparation of Guidelines	MOHP/MOH/HD
Lack of essential medicine than required	Provision of sufficient quantities of medicines	HLMC/HD
Lack of access of ayurveda service at every local level/ward	Expanding ayurvedic service at every local level/ward	HD/Local level

CHAPTER
08

REPORTING STATUS

8.1. Health Management Information System (HMIS)

The Health Information System is recognized as one of the six essential building blocks of a health system, as it provides the evidence base required to strengthen health services and inform policy decisions. To ensure systematic and effective functioning of Health Information System, the MoHP is committed to strengthening IHIMS as an integrated framework responsible for the collection, validation, analysis, and dissemination of health data, ensuring that accurate and timely information is available for decision-making at all levels of the health system.

To realize this vision, IHIMS uses the District Health Information Software 2 (DHIS2) as its primary digital platform. DHIS 2 (District Health Information Software 2) is a free, open-source platform for collecting, validating, analyzing, and presenting aggregate and individual-level statistical data. It is used in over 70 countries, including Nepal, as a national-level Health Management Information System (HMIS). Through DHIS2, multiple reporting of vertical health programmes are integrated into a unified system, significantly reducing reporting fragmentation and ensuring data consistency across federal, provincial, and local levels.

DHIS2 is designed to be interoperable, allowing seamless data exchange with other electronic information systems. Additionally, the platform includes a robust analytics engine that supports real-time data through HMIS Report, Data Visualiser, Dashboards and Geographic Information System (GIS) mapping etc.

The overall digital health information infrastructure is governed by national standards outlined in the IHIMS Roadmap (2022–2030), which guides the transition toward a digitized and integrated health data environment, and the IHIMS Standard Operating Procedures (SOPs) issued by the Department of Health Services (DoHS), which ensure uniform data standards across the country.

The roadmap has envisioned to ensure the availability of quality health information that enables appropriate decision-making and ultimately improves public health outcomes by achieving the Sustainable development goals (SDGs) targets. Thus, the proper reporting of health related information through DHIS2 platform is very crucial to track the overall achievement of local level, provincial level, national level and international health commitments and ensure the availability of quality health services across the country.

8.1.1 Evolution of Health Management Information System in Nepal

The evolution of the Health Management Information System (HMIS) in Nepal has been a progressive journey toward improving health data management and reporting.

1993: The HMIS section was established under the Department of Health Services, laying the foundation for national health data management in Nepal.

2007-2011: The Health Sector Information System (HSIS) was piloted in three districts: Lalitpur, Parsa, and Rupandehi, testing the viability of digital health data management.

2012: The online data entry system for District Integrated Monthly Reporting (DIMR) was introduced, significantly improving the efficiency of health data collection.

2013: The system advanced to web-based online data entry, enhancing the capabilities for data input and management across the country.

2014: A major revision integrated the HSIS and HMIS systems, streamlining the data management processes for better efficiency.

2016: HMIS reporting transitioned to the DHIS2 platform, enabling centralized online reporting across all District and Provincial Public Health Offices.

2016-2018: E-Reporting was expanded to health facilities nationwide, enhancing the accessibility and accuracy of health data across Nepal.

2022: The development of the Integrated Health Information Management System (IHIMS) roadmap and a revision of HMIS tools optimized the system's functionality.

2024: The migration of HMIS to the DHIS2 v40 platform marked a significant milestone, offering an advanced and more user-friendly health data management system.

8.2 DHIS

Migration of HMIS to DHIS2 v40 and Support for Nepali Calendar

Introduction

The transition of Nepal's Health Management Information System (HMIS) to the DHIS2 platform has been a significant journey to enhance health data management. One of the key challenges encountered during this migration process was the support for the Nepali Calendar, which had been integral to local data reporting. This report outlines the steps taken to address this challenge, including the collaboration with HISP UiO and other stakeholders, and the migration of HMIS to DHIS2 v40 in August 2024.

Challenges with DHIS2 v31 and v33

The release of DHIS2 v31 marked a significant shift in the platform's front-end technology, which unfortunately did not support the Nepali Calendar. This change posed a challenge for Nepal's HMIS, as the Nepali Calendar is crucial for accurate health data reporting in the country. Additionally, HISP UiO (University of Oslo) ended support for DHIS2 versions v33 and below, exacerbating the issue for the Nepal team, who were still relying on older versions of the platform.

Collaboration with WHO and GIZ

To resolve this issue, the Nepal team, with support from WHO and GIZ, engaged with HISP UiO to incorporate Nepali Calendar support into newer versions of DHIS2. This collaboration aimed to ensure that the platform could be adapted to the specific needs of Nepal's health data systems.

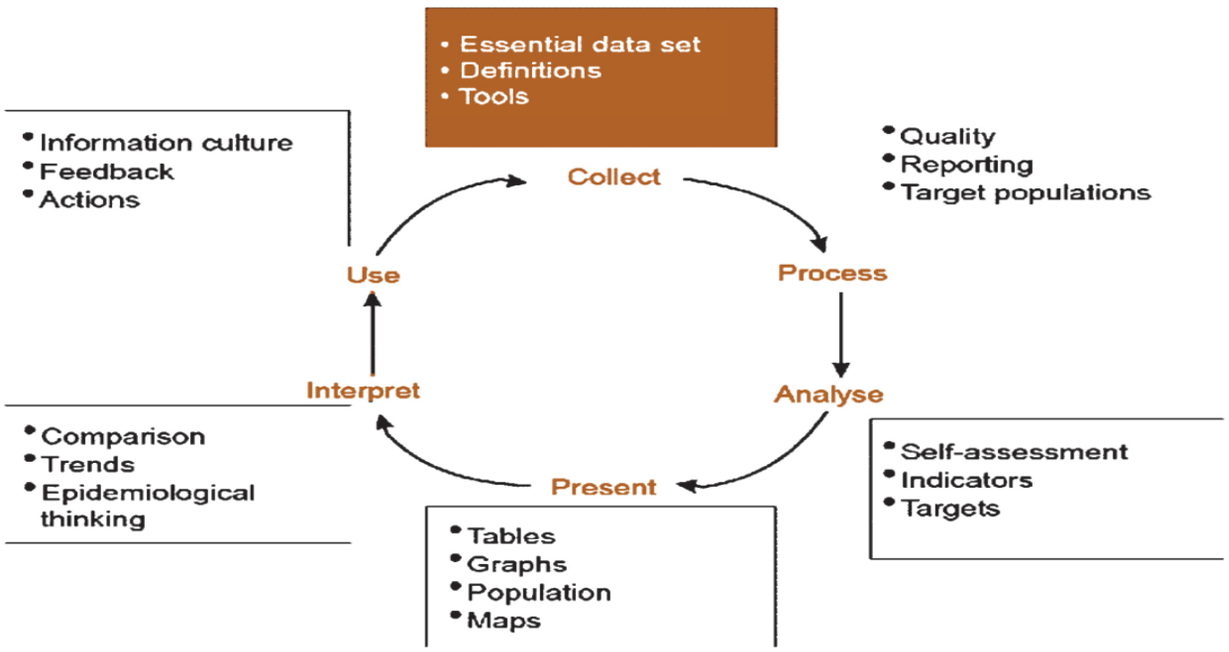


Figure 8.1 Information cycle

Assurance from HISP UiO

HISP UiO assured the Nepal team that Nepali Calendar support would be available starting from DHIS2 v38. This was a crucial development, as it offered a viable pathway for Nepal to continue utilizing DHIS2 while maintaining compatibility with the Nepali Calendar.

Support for Upgrade to DHIS2 v40

To ensure a smooth transition to the latest version, both HISP India and HISP UiO approached the Nepal team, offering necessary support for the upgrade to DHIS2 v40. This collaborative effort aimed to facilitate the migration process, improve the functionality of the system, and ensure that the platform continued to meet the unique needs of Nepal's health data reporting.

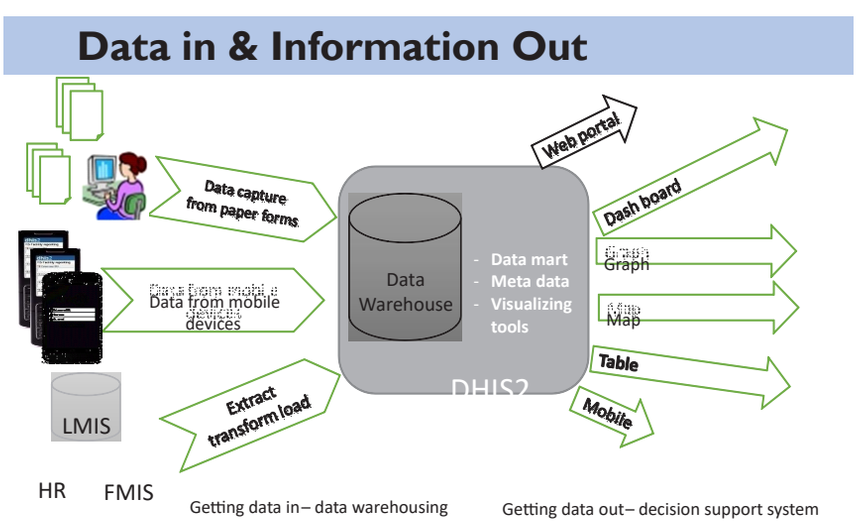


Figure 8.2 Flow of data in DHIS-2

Testing of DHIS2 v38 and v40

During the migration process, the Nepal team conducted comprehensive testing of DHIS2 v38 and v40. These tests were essential to ensure that all features, especially the Nepali Calendar functionality, worked as expected. The testing phase also involved validating the overall system performance, usability, and integration with existing health data infrastructure.

Migration to DHIS2 v40

In August 2024, the migration of HMIS to DHIS2 v40 was successfully completed. This migration marks a significant milestone in the evolution of Nepal's health data management system. The transition to DHIS2 v40, with full support for the Nepali Calendar, ensures that the system remains user-friendly, efficient, and aligned with the country's health data reporting requirements.

Key Features and Improvements in HMIS after Migration to DHIS2 v40

In August 2024, Nepal's Health Management Information System (HMIS) migrated to DHIS2 v40, introducing several significant enhancements that have improved the system's performance, user experience, and functionality. These updates are designed to better support health data management across the country, with key improvements including the integration of the Nepali Calendar, new custom applications, and advanced data analysis capabilities

Improved Performance: DHIS2 v40 has enhanced system performance, providing faster data processing and smoother user experience, which is critical for timely and accurate health data reporting.

Support for Nepali Calendar: A major feature is the integration of the Nepali Calendar into key modules such as data entry and data visualizer, addressing a crucial need for localized support in Nepal's health system.

Minor UI Changes: The platform also saw several minor UI changes, aimed at improving usability, making it more intuitive and easier for health professionals to navigate.

Data Visualization Enhancements: The Pivot Table and Data Visualizer tools have been combined into the new Data Visualizer App, streamlining data analysis and providing a more efficient way to create and view visualizations.

Lite Dashboard: A simplified Lite Dashboard offers an accessible view of essential health metrics, enabling users to quickly access key data insights without unnecessary complexity.

Continuous Analytics Feature: The addition of Continuous Analytics allows real-time tracking and monitoring of health programs, improving decision-making through ongoing analysis of emerging trends.

Compatibility with Existing Custom Apps: DHIS2 v40 ensures full compatibility with previously used custom applications, such as the Reporting Status Dashboard, Vaccination Reporting, and Inpatient Morbidity Import, allowing a seamless transition to the new system.

New Custom Apps: The update also introduced new custom apps, including HMIS Reports and HMIS Data Quality, which provide specialized tools to improve health data management and ensure data accuracy.

In conclusion, the migration to DHIS2 v40 has significantly upgraded Nepal's HMIS, making it a more robust, flexible, and user-friendly platform. These improvements position the system to better meet the demands of health data reporting and analysis in the country.

Trend of Reporting Status of Health Facilities (BHSC)

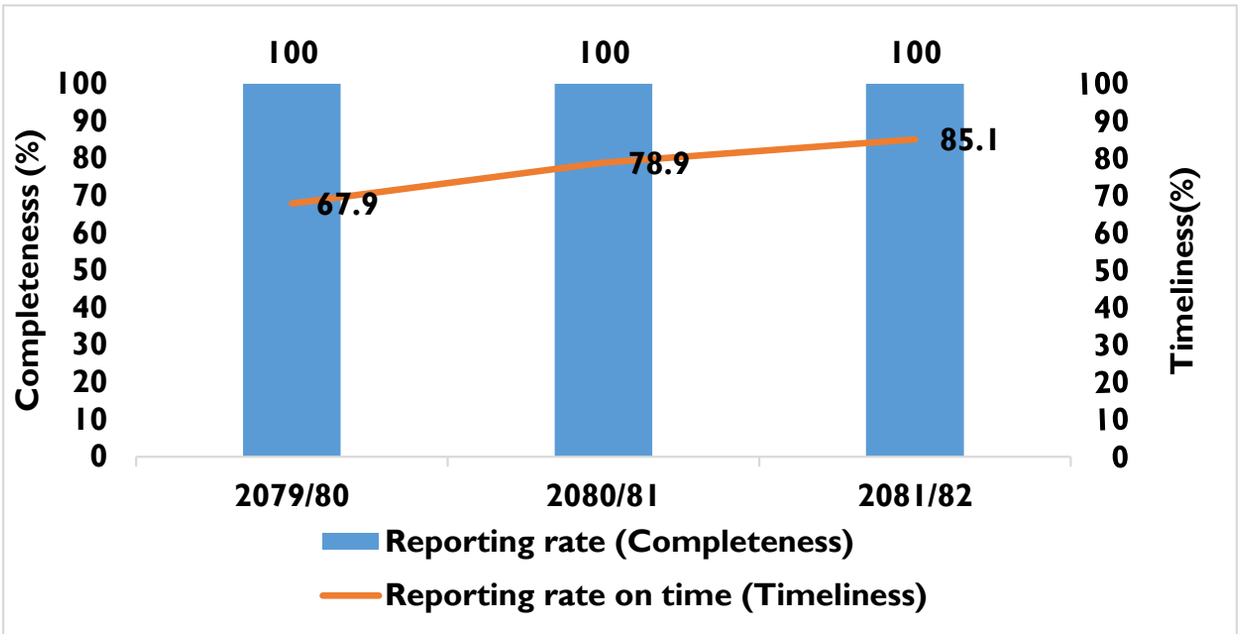


Figure 8.3 Trend of reporting in health facility (%)

Source: HMIS/DHIS2

The Figure elucidates the trend of completeness and timeliness of health facilities (BHSC) of Bagamati province from FY2079/80 TO 2081/82. The health facilities have achieved and maintained 100% completeness for three consecutive years. The timeliness of reporting has improved from 78.9% in FY 2080/81 to 85.1% in 2081/82.

District wise Reporting Status of Health Facilities (%)

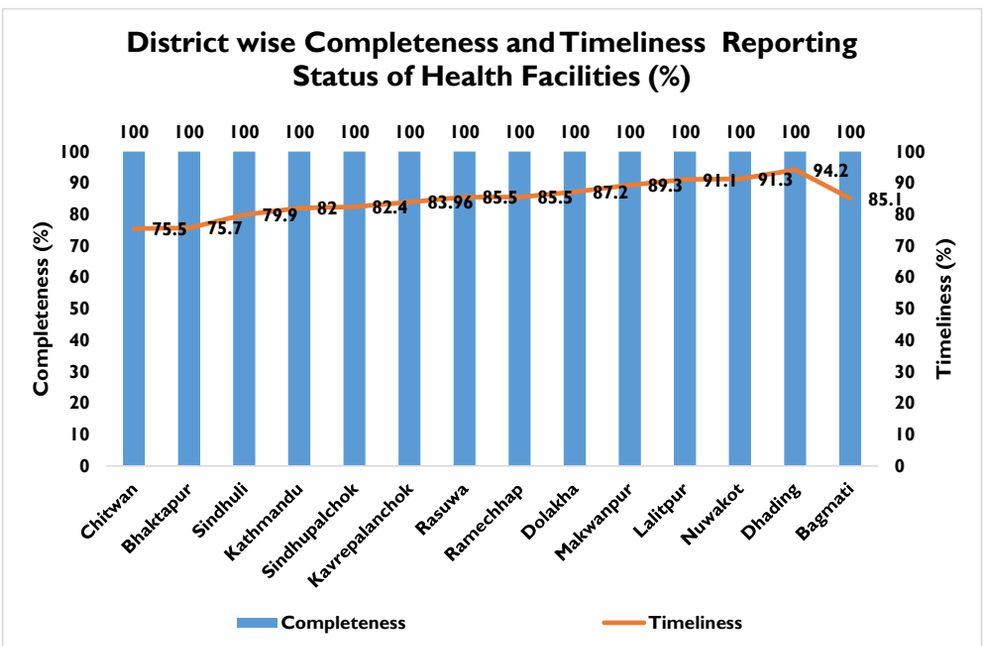


Figure 8.4 Trend of reporting of health facility district wise (%)

Source: HMIS/DHIS2

The figure above shows the district-wise reporting status of health facilities in Bagamati Province. A district-wise comparison of reporting status based on completeness and timeliness reveals that all districts have achieved 100% completeness. Regarding timeliness, Dhading holds highest position while Chitawan holds the lowest rank in FY 2081/82.

Trend of Reporting Status of all Hospitals (including Polyclinics) (%)

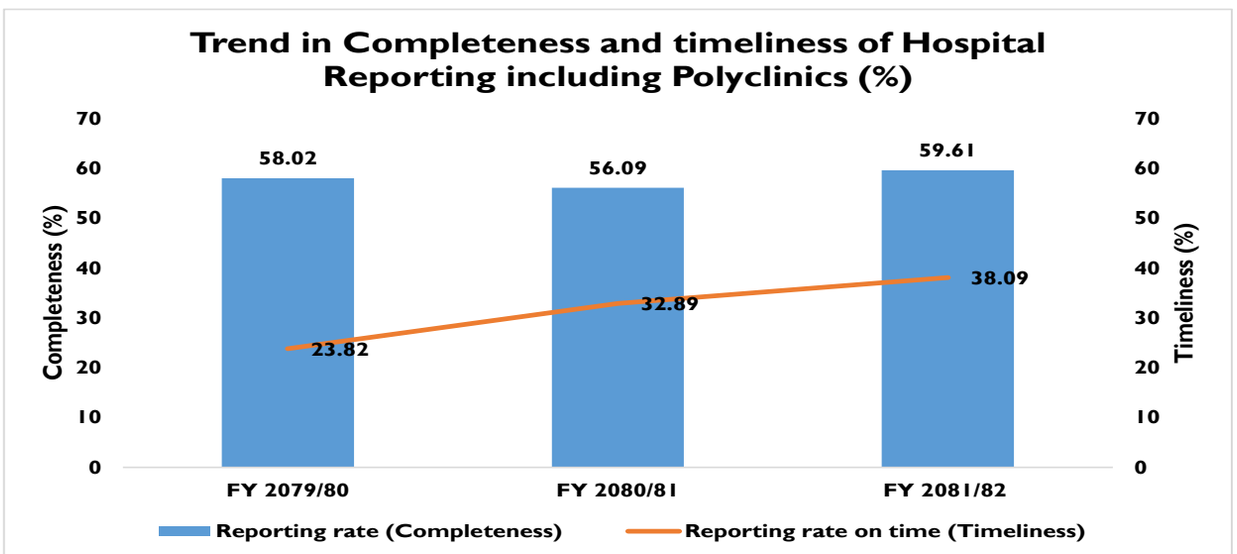


Figure 8.5 Trend of Reporting Status of all Hospitals (including Polyclinics) (%)

Source: HMIS/DHIS2

The figure above shows a positive trend in hospital reporting status, including completeness and timeliness, from FY 2079/80 to FY 2081/82. There was a slight decline in reporting completeness in FY 2080/81. Hospitals generally has lower reporting status compared to other health facilities.

District wise Reporting Status of all Hospitals including Polyclinics (%)

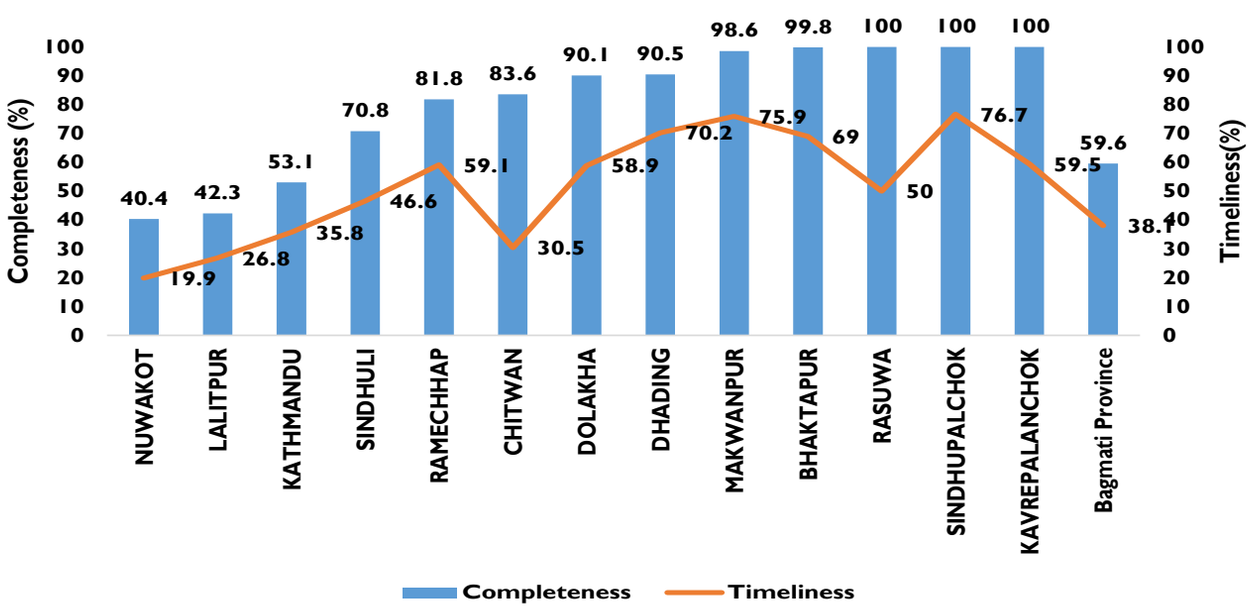


Figure 8.6 Trend of hospital reporting in districts (%)

Source: HMIS/DHIS2

The figure above shows the district wise reporting status of all hospitals and polyclinics of Bagamati Province. While comparing the district wise reporting status of hospitals based on Completeness and Timeliness, Rasuwa , Sindupalchok and Kavrepalanchok district has the highest Completeness status. Similarly, Nuwakot district has the lowest Completeness status followed by the Lalitpur District Regarding timeliness, Sindupalchowk holds highest position while Nuwakot holds the lowest rank in FY 2081/82.

Trend of Reporting Status of Provincial Hospitals (%)

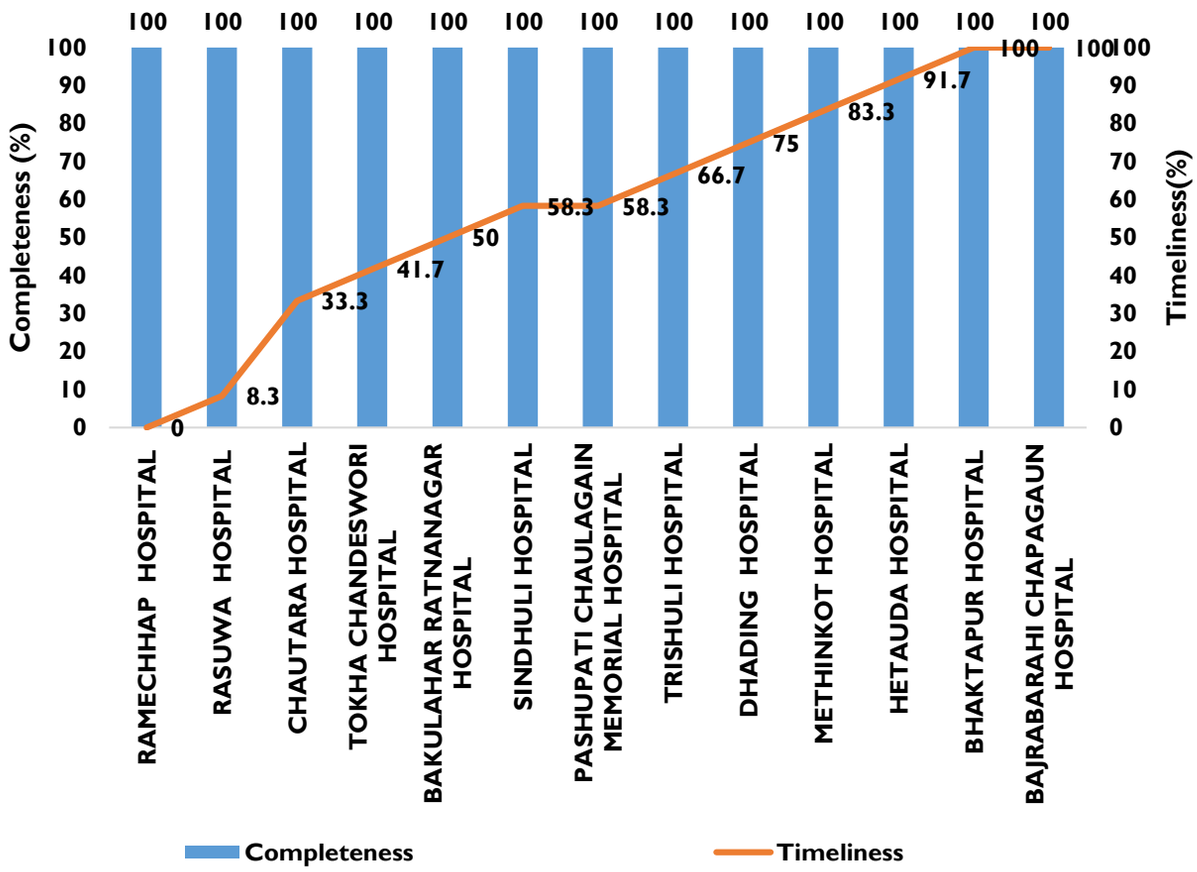


Figure 8.7 Trend of reporting of Provincial Hospitals

Source: HMIS/DHIS2

The figure above shows the reporting status of provincial hospitals of Bagamati Province. All thirteen provincial hospitals have achieved 100% completeness .Regarding timeliness, Bhaktapur Hospital and Bajrabarahi Chapagaun Hospital holds the highest position while Ramechhap Hospital holds the lowest rank in FY 2081/82.

8.3 Ayurvedic Health Management Information System (AHMIS)

AHMIS stands for Ayurvedic Health Management Information System in Nepal. It is one of the national health management information systems used to document, collect, and report data specifically from Ayurveda and traditional/alternative medicine services across the health sector. It functions as part of the broader health information infrastructure alongside other systems such as HMIS (Health Management Information System). Data from AHMIS contribute to annual health reporting and help inform evidence-based planning and monitoring of Ayurvedic/alternative health services in Nepal's public health system.

District wise Reporting Status of Ayurveda and Alternate Medicine Health Facilities (%)

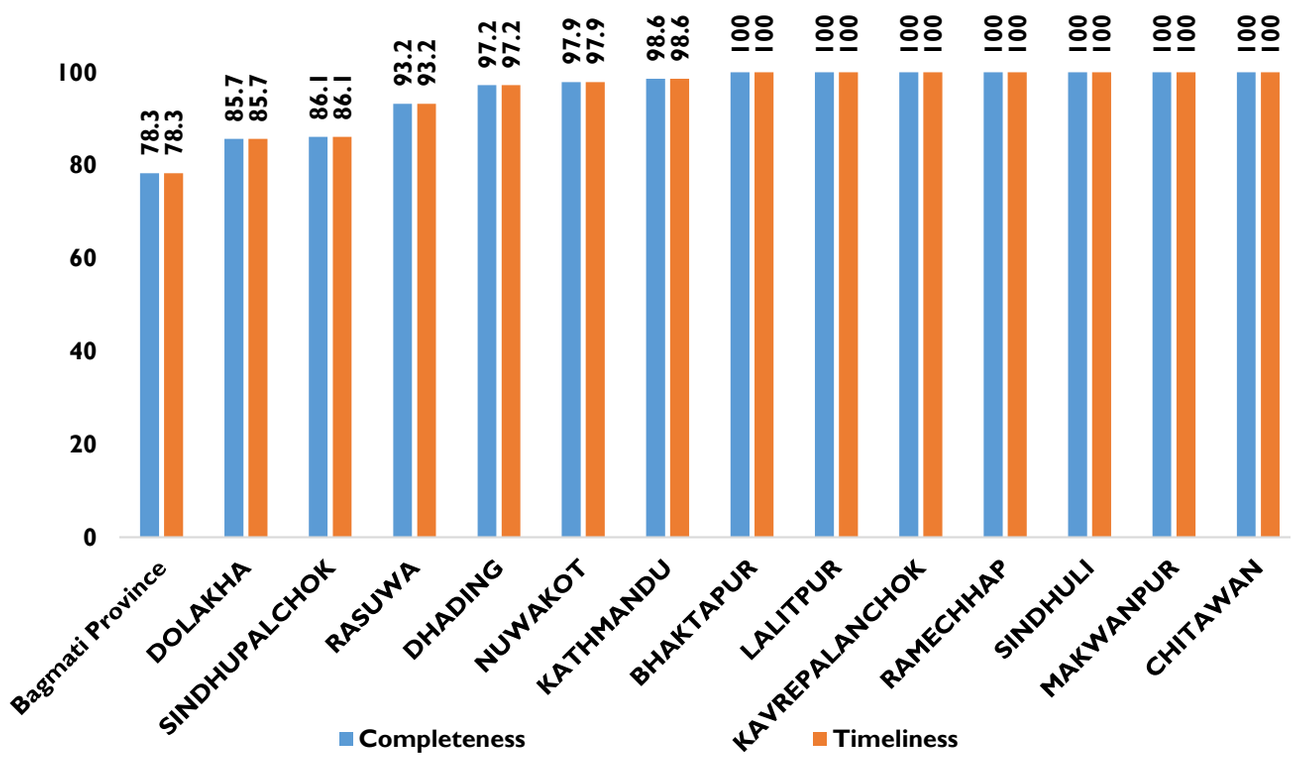


Figure 8.8 Trend of reporting of health facility district wise in AHMIS (%)

Source: AHMIS

The figure above shows the district-wise reporting status of Ayurveda and Alternate Medicine health facilities of Bagamati Province. While comparing the district-wise reporting status based on Completeness and Timeliness, Bhaktapur, Lalitpur, Kavrepalanchok, Ramechhap, Sindhuli, Makawanpur, and Chitawan districts show the highest reporting performance, with both Completeness and Timeliness recorded at 100 percent. Districts such as Kathmandu and Nuwakot also demonstrate very high reporting levels, exceeding 97 percent in both indicators. In contrast, the overall Bagamati Province average reflects the lowest reporting status, with Completeness and Timeliness recorded at 78.3 percent. Overall, the figure indicates strong reporting performance across most districts, with only a few districts lagging behind in both Completeness and Timeliness during the reporting period.

Trend of Reporting Status of Provincial Ayurveda and Alternate Medicine Hospitals (%)

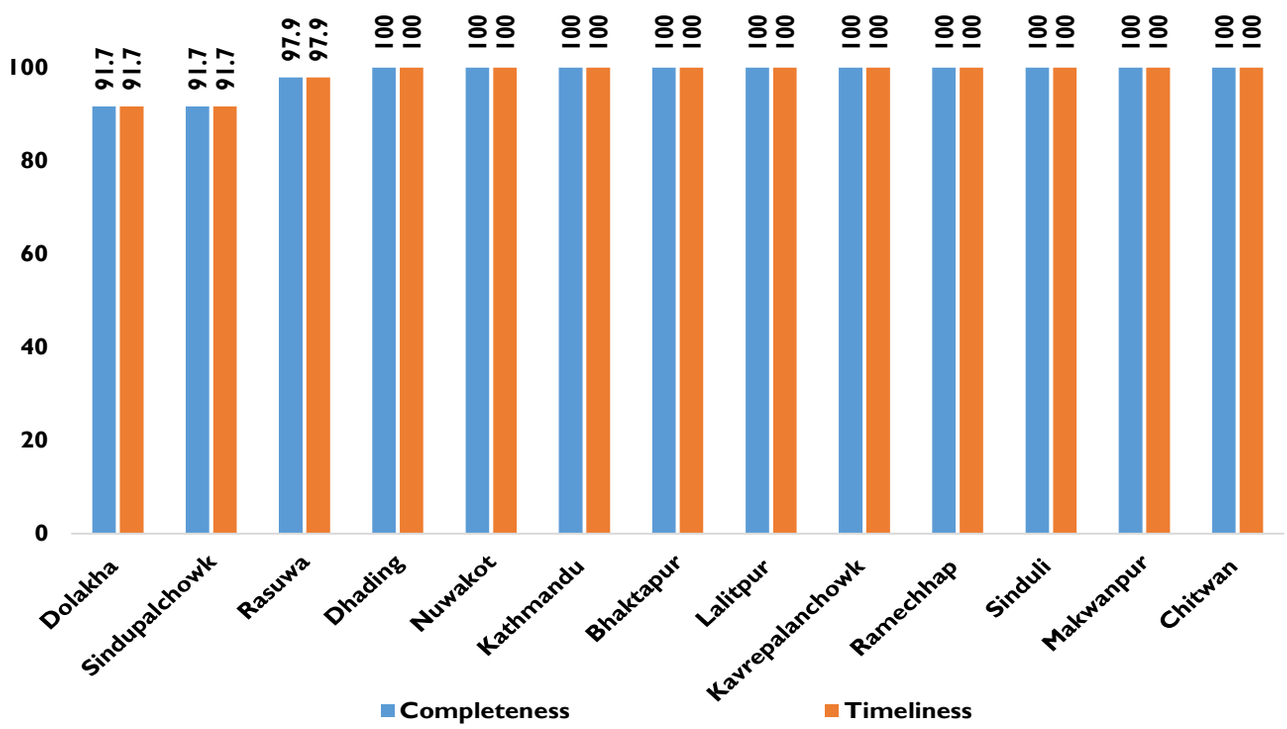


Figure 8.9 Trend of reporting of Provincial Ayurvedic and Alternative Medicine Hospitals

Source: AHMIS

The figure above shows the reporting status of Ayurveda and Alternate Medicine Hospitals of Bagamati Province. While comparing data based on Completeness and Timeliness, Dhading, Nuwakot, Kathmandu, Bhaktapur, Lalitpur, Kavrepalanchok, Ramechhap, Sinduli, Makawanpur and Chitawan Ayurveda and Alternate Medicine Hospital show the highest reporting performance, with both Completeness and Timeliness recorded at 100 percent. Whereas, Dolakha and Sindupalchowk Ayurveda and Alternate Medicine Hospital is in the lowest status followed by Rasuwa Ayurveda in FY 2081/82.

Issue/Challenges, Action to be Taken and Responsible Person

Issues/ Challenges	Action Planned	Responsibilities
Inadequate skilled human resources for recording and reporting at various levels, particularly at LLGs and hospitals.	Conduct O&M surveys to update and assess the existing human resources involved in recording and reporting, with a focus on LLGs and hospitals.	MoH, HD, HO, LLG
Low reporting rate and delays in on-time reporting, particularly in metropolitan cities, tertiary public hospitals, and private hospitals in Kathmandu, Lalitpur, and Chitawan.	Implement interventions to improve recording and reporting processes, focusing on metropolitan cities, tertiary hospitals, and private hospitals in Kathmandu, Lalitpur, and Chitawan.	MoH, HD, HO, LLG
Limited capacity for data analysis, especially at the LLG and health facility levels, and insufficient use of data for decision-making.	Prioritize knowledge and skill transfer on data analysis and its application in planning at the LLG and health facility levels.	MoH, HD, HO, LLG

CHAPTER
09

PUBLIC HEALTH SURVEILLANCE AND OUTBREAK MANAGEMENT

9.1 Introduction

Public health surveillance and outbreak management form the backbone of disease prevention and control. Surveillance involves the systematic collection, analysis, and use of health-related data to detect trends, monitor disease burden and guide public health interventions. Outbreak management focuses on timely detection, investigation and response to unusual increase in disease incidence. Together, they enable health authorities to identify public health events early, implement control measures promptly and protect the communities from epidemics.

Public Health Programs Section at Health Directorate (provincial level) is the provincial hub for conducting surveillance activities within the province. It facilitates coordination among provincial health authorities, Public Health Offices and local governments to ensure the timely detection, reporting and response to public health events.

9.2 Public Health Surveillance

Public health surveillance refers to the continuous and systematic process of collecting, analyzing, interpreting, and disseminating health related data to support evidence-based decision-making for disease prevention, control, and outbreak response.

Early Warning and Reporting System (EWARS)

The Early Warning and Reporting System (EWARS) is a hospital-based sentinel surveillance system established in 1997. Its primary purpose is the early detection of six priority outbreak potential diseases and syndromes related to vectors, water, and food. These include acute gastroenteritis (AGE), cholera, severe acute respiratory illness (SARI), dengue, kala-azar, and malaria. In Bagamati province, there are 37 sentinel sites (federal, provincial and local hospitals) that report routinely through EWARS, enabling timely detection and response to potential outbreaks.

Drinking Water Quality Surveillance

According to updated National Drinking Water Quality Surveillance, 2076, a provincial level Drinking Water Quality Surveillance Committee has been established in Bagamati Province under the chairmanship of the director of the health directorate. The committee is responsible for overseeing drinking water quality surveillance within the province and coordinating activities between federal and local levels.

Surveillance and Outbreak Response Management and Analysis System (SORMAS)

SORMAS is an open source digital tool that supports disease control and outbreak management, by providing real time surveillance data for priority diseases at all administrative levels. SORMAS was piloted in Bagamati province in FY 2081/82. Full scale implementation is planned to strengthen timely reporting and outbreak response.

Integrated Vector Surveillance (IVS)

Integrated vector surveillance is a systematic approach to monitor and assess the populations of disease-carrying vectors such as mosquitoes and sandflies and evaluate associated risks for multiple vector-borne diseases in a coordinated manner. In Bagamati province, integrated vector surveillance has been implemented since FY 2079/80. Dissemination of the IVS findings is done to raise awareness about the vector borne diseases risks and promote prevention and control practices.

Activities conducted in FY 2081/82

Early Warning and Reporting System (EWARS)

- Conducted Provincial Review from sentinel sites for quality, accuracy, timeliness, and completeness and feedbacks shared through Viber group.
- Activated and mobilized district and local RRT during suspected outbreaks.
- Oriented laboratory personnel on EWARS procedures within the province.
- Orientated medical recorders and officers of sentinel and reporting sites within the province.

Drinking Water Quality Surveillance

- Monitored water quality test kits and other consumables and feedback provided to the districts.
- Organized interaction program on drinking water quality surveillance.
- Oriented provincial, district and local level stakeholders on drinking water quality surveillance.

Surveillance and Outbreak Response Management and Analysis System (SORMAS)

- Participated in a one day inception meeting on SORMAS conducted by EDCD for piloting in Bagamati province.
- Provincial and district focal persons within the province participated in a 3 days Training of Trainers (ToT) organized by EDCD.
- Health Coordinators of local governments participated in 3 days training on SORMAS organized by EDCD.
- User id and password of SORMAS were shared to all the districts and local levels, facilitating provincial implementation.

Integrated Vector Surveillance (IVS)

- Conducted integrated vector surveillance at two sentinel sites: Khanikhola Rural Municipality and Banepa municipality, Kavre, with technical and financial support from EDCD, WHO and VBDRTC.
- The Hon'ble Minister of Health, Bagamati province, visited our field entomology laboratory to observe the lab set up and vector surveillance activities.
- Conducted dissemination of the survey findings to local level authorities, including municipal chairs and health section coordinators, to help them formulate local policies on vector borne disease prevention and control.

- Delivered a media interview on the survey findings to raise awareness on vector borne disease prevention and control, emphasize the importance of IVS for policy making nad advocacy for adequate funding.

Types of sentinel sites that report on EWARS

In the EWARS system, the Bagamati province incorporates 37 sentinel sites actively engaged in regular reporting. Among these, 21 are government-operated health facilities, and 16 are private health institutions. The particulars of these sentinel sites are outlined in Table below;

Table 9.1 List of sentinel sites that report on EWARS FY 2081/82

S.N	Name of Sentinel Site	Type	S.N	Name of Sentinel Site	Type
1.	Civil Services Hospital, Kathmandu	G	20	Methinkot Hospital, Kavre	G
2.	Trishuli Hospital, Nuwakot	G	21	Birendra Army Hospital, Kathmandu	G
3.	Rasuwa Hospital, Dhunche	G	22	Dhulikhel Hospital, Kavre	P
4.	Sumeru Hospital, Lalitpur	P	23	Dhading Hospital, Dhading	G
5.	Bharatpur Hospital, Chitawan	G	24	Sindhuli Hospital, Sindhuli	G
6.	Grande International Hospital Private Limited, Kathmandu	P	25	Jiri Hospital, Dolakha	G/L
7.	Norvic International Hospital, Kathmandu	P	26	Kathmandu Model Hospital, Kathmandu	P
8.	Nepal Medical College, Kathmandu	P	27	Manmohan Memorial Community Hospital, Thamel, Kathmandu	P
9.	Patan Academy of Health Sciences, Lalitpur	G	28	Menlha Nursing Home (CIWEC Hospital Pvt Ltd), Kathmandu	P
10.	KIST Medical College, Lalitpur	P	29	Nepal Police Hospital, Kathmandu	G
11.	Nepal Mediciti Hospital, Lalitpur	P	30	Tribhuwan University teaching Hospital, Kathmandu	G
12.	Pashupati Chaulagain Memorial Hospital, Dolakha	G	31	Vayodha Hospital, Kathmandu	P
13.	Shukraraj Tropical and Infectious Diseases Hospital, Kathmandu	G	32	Chautara Hospital, Sindhupalchok	G
14.	Kanti Children Hospital, Kathmandu	G	33	HAMS Hospital, Kathmandu	P
15.	College of Medical Sciences, Chitawan	P	34	Hetauda Hospital, Makawanpur	G
16.	Chitawan Medical College, Chitawan	P	35	Ramechhap Hospital, Ramechhap	G
17.	Om Hospital and Research Centre, Kathmandu	P	36	Armed Police Hospital, Kathmandu	G
18.	Kathmandu Medical College, Kathmandu	P	37	Bhaktapur Hospital, Bhaktapur	G
19	Bir Hospital, Kathmandu	G			

* P= Private *G= Government

Reported cases of the prioritized infectious diseases on EWARS

Table 9.2 Reported cases of prioritized infectious diseases on EWARS (2020 – 2024)

Bagamati Province					
Disease Name / Period	**2020**	**2021**	**2022**	**2023**	**2024**
AGE	2091	1297	3470	4324	6557
Cholera	0	0	42	12	251
COVID-19	7985	10448	4569	361	481
Dengue	87	128	17015	8264	14061
Diphtheria	0	0	1	0	0
Encephalitis	9	2	3	4	16
Enteric Fever	584	303	560	585	575
Hepatitis-Acute Jaundice	41	22	22	47	92
Influenza Like Illness	827	45	248	1967	2291
Kala azar	24	36	38	38	30
Leptospirosis	4	2	14	5	11
Malaria Falciparum	1	4	11	3	9
Malaria Vivax	1	1	2	8	13
Meningococcal Meningitis	1	0	1	3	12
Other	901	36	40	149	162
Pneumonic Plague	1	1	0	0	0
SARI	1929	2176	2362	3489	5808
Scrub Typhus	230	298	540	1038	2092
Suspected Measles Like Illness	1	0	1	18	29

Source: EWARS/EDCD

A total of 19 diseases in EWARS have been reported in the period 2020- 2024. COVID-19 was also reported from the sentinel sites partially during the year 2020-2024. Apart from 6 priority diseases, scrub typhus and enteric fever were the most reported diseases while cases of leptospirosis and meningitis were also reported through the EWARS platform. The details of the disease trend is listed in the above table.

Reporting Status of the Sentinel Site

Bagamati Province recorded an overall reporting rate of 93% from its 37 sentinel sites. Among the 13 districts, Dolakha, Nuwakot, Bhaktapur, Ramechhap, and Makawanpur achieved the highest reporting rate at 100%. These were followed by Lalitpur (99%), Chitawan (98%), and Rasuwa (94%). In contrast, the lowest reporting rates were noted in Kavrepalanchok (77%), Sindhupalchok (88%), and Sindhuli (90%). Reporting rates in the remaining districts ranged from 92% to 94%. Further details are presented in Figure below:

EWARS Aggregated Reporting Rate 2081/82

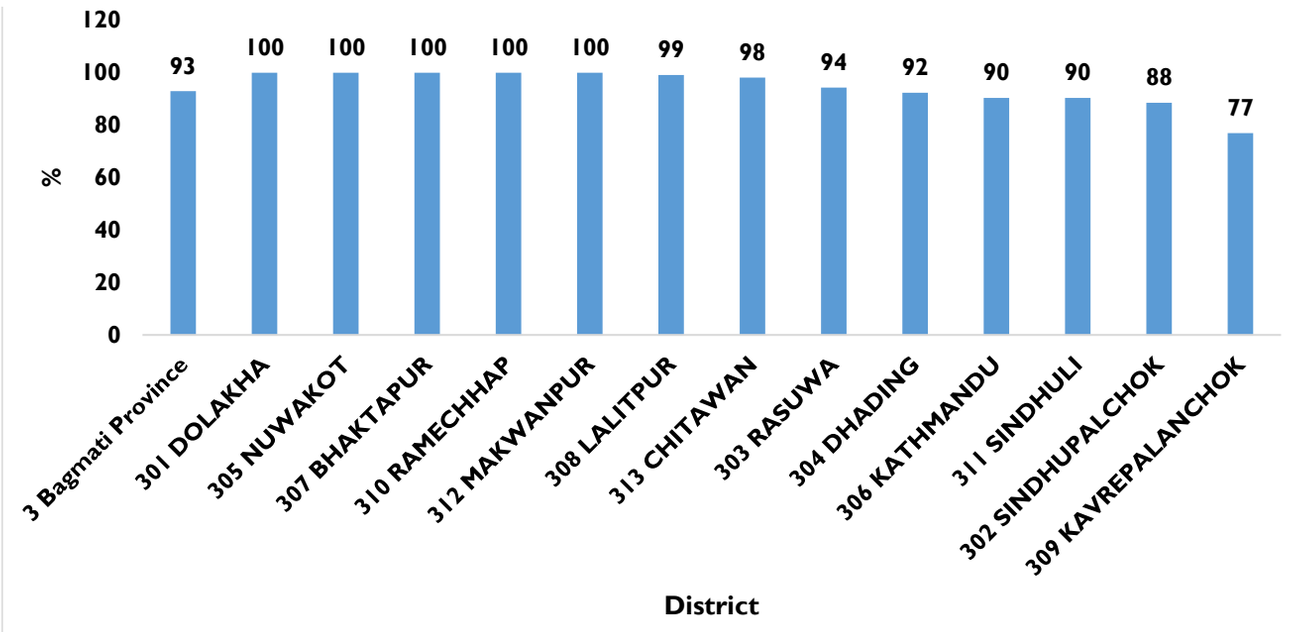


Figure 9.1 Reporting status in EWARS FY 2081/82

Source: EWARS/HD

SWOT Analysis of Public Health Surveillance Program

Strengths	Weakness
Comprehensive surveillance covering multiple diseases through EWARS, SORMAS, etc	SORMAS not yet fully functional at all local levels
Trained health personnel, lab staff, and local health coordinators for surveillance and outbreak response	Limited coverage of IVS
Rapid response capacity through RRT	Limited water quality testing kits at district level
High overall EWARS reporting rate	
Strong coordination between federal, provincial, and local levels	
Opportunities	**Threats**
Full SORMAS implementation for real time reporting and analysis	Geographical and logistic challenges delay reporting
Use data for policy advocacy and resource mobilization	Resource constraints may delay corrective actions and expansion of coverage
Strengthen lab capacity for water quality testing at local level	Reliance on partner support

9.3 Outbreak Management

Outbreak management is the systematic process of detecting, investigating, controlling, and preventing the spread of a disease when cases exceed the expected levels in a specific area or population.

Key Components:

1. Early detection and reporting of unusual increases in cases.
2. Rapid investigation to confirm the outbreak, identify the source, and understand transmission patterns.
3. Implementation of control measures, such as treatment, vector control, isolation, or vaccination.
4. Risk communication to inform the public and stakeholders.
5. Monitoring and evaluation to ensure interventions are effective and to prevent recurrence.

The goal of outbreak management is to limit morbidity and mortality, contain the spread of disease, and prevent future outbreaks.

Roles and responsibilities:

- At federal level, 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 impacts of communicable disease outbreaks and various health emergencies nationwide.
- At provincial level, Public Health Programs Section within the health directorate is responsible for coordinating the preparedness and response to disease outbreaks, epidemics, and public health emergencies. The dedicated unit contributes to the organization's mandate by reducing the impact of communicable diseases and unexpected health threats. A Provincial Rapid Response Committee (PRRC) and Provincial Rapid Response Team (PRRT) is established which coordinates with these activities.
- At district level, there is District Rapid Response Team (DRRT) that promptly responds to outbreaks with the district. Also, border health desks at Tatopani (Sindhupalchok) and Rasuwagadhi (Rasuwa), monitor travelers entering the province, conduct health screening, and report any suspected cases of communicable diseases. They play a key role in early detection and prevention of disease importation.
- At local level, there is Local Level rapid response Committee (LRRC) and Local level Rapid Response Team (LRRT) which stays active during response to outbreaks.

Prioritized infectious diseases

According to the Article 4, Section 1 of Public health Act, 2075, Government of Nepal has published the list of prioritized infectious diseases (52) of Nepal in the Nepal Gazette. These diseases form the basis for surveillance and outbreak management planning.

Major Activities carried out of FY 2081/82:

- Circulated letters to districts to ensure preparedness for outbreaks and health emergencies
- Conducted the two batches of health contingency planning/orientation meetings with concerned

provincial and local level stakeholders

- Disseminated updated guidelines, policies, and strategies to all districts and local levels
- Responded to the Cholera outbreak in Lalitpur and Kathmandu Valley
- Managed dengue outbreaks in multiple districts within the province
- Supported districts and local levels in handling foodborne and Vaccine-Preventable Disease (VPD) outbreaks
- Regularly updated and shared outbreak information with the Ministry of Health (MOH) and other concerned stakeholders
- Ensured timely supply of logistics to health facilities based on need
- Hosted zoom meetings with hospitals, Public Health Offices, medical colleges, and relevant stakeholders before/during outbreak seasons.

Outbreaks and Disasters in Bagamati province in FY 2081/82

Table 9.3 Outbreaks and disasters in Bagamati province (FY2081/82)

S.N.	Districts	Event	No. of people affected	Recovered	Death
1	Kathmandu	Cholera	9	9	
2	Lalitpur		2	2	
	Lalitpur	Measles	4	4	
3	Dolakha	Food Poisoning	10	10	
	Sindhupalchok		16	16	
4	Chitawan	Mushroom poisoning	5	5	
	Kavre		5	5	
	Makawanpur		30	26	4
	Sindhupalchok		2	2	
5	Ramechhap	Mass convulsive disorder	30	30	
	Lalitpur		30	30	
6	Lalitpur	Conjunctivitis	113	113	
Total	256	252	4		

Source: Data from Public Health Offices, FY 2081/82

During FY 2081/82, Bagamati Province effectively managed multiple disease outbreaks through close coordination among federal, provincial, and local governments. The province successfully controlled cholera outbreaks in Kathmandu and Lalitpur and mounted a rapid response to a measles outbreak in Lalitpur. Coordinated and timely interventions also helped contain mushroom poisoning incidents reported from Chitawan, Kavrepalanchok, Makawanpur, and Sindhupalchok, with four

related deaths recorded in Makawanpur district. In addition, 30 cases of mass convulsive disorder were reported from Ramechhap and Lalitpur. Detailed information on these outbreaks is presented in the table above.

SWOT Analysis of Outbreak Management Program

Strengths	Weakness
Coordinated outbreak management system linking provincial health desk, border health desks, district RRTs, and local health facilities.	Some district-level RRTs are non-functional or inactive, limiting response efficiency.
Rapid response capability with trained district-level and local Rapid Response Teams (RRTs).	Inadequate laboratory capacity for certain emergencies (e.g., mushroom poisoning).
High level of federal-provincial-local coordination during outbreaks.	Insufficient prepositioned testing kits and outbreak logistics at local levels.
Availability of guidelines, policies, and contingency plans for prioritized infectious diseases.	Multi-sectoral coordination not consistently sustained during outbreaks.
Strong coordination between federal, provincial, and local levels	Reporting delays from certain districts reduce early detection efficiency.
Opportunities	**Threats**
Strengthen and expand border health desks for early detection of imported cases.	Emerging and re-emerging infectious diseases may overwhelm current response capacity.
Implement fully functional district-level RRTs in all districts for faster outbreak response.	Dependence on external support for logistics and technical expertise
Use outbreak data for policy advocacy, resource allocation, and planning.	Seasonal disease surges may strain human resources and coordination
Enhance lab and diagnostic capacity for rapid confirmation of outbreak causes	Remote and hilly areas can delay outbreak detection and response.
Integrate digital tools (like SORMAS) with outbreak management for real-time monitoring.	

CHAPTER
10

PROVINCIAL PROGRAM AND FEDERAL SPECIAL GRANT PROGRAM

10.1 Provincial Program

10.1.1 "One School, One Nurse Program"

Introduction

One School, One Nurse Program is the program implemented by Bagamati Province as its prestigious program since FY 2075/76. It began as a pilot program in 20 secondary level schools of Bagamati Province and later it was expanded to all local level pallikas (119) covering 848 secondary schools. The genesis of the school health nurse program can be traced to the Constitution of Nepal, 2075 that guarantees right to protection and care of every child that states every child has the right to proper care, protection, upbringing and overall development from family to state, to strategic directives delineated in the National Health Policy 2076, that specifically under Strategy 6.5.2 that states school health program will be gradually expanded in co-ordination with the education sector, and health services and health awareness programs will be implemented in schools in such a way that at least one health personnel is available in each school up to the higher secondary level.Similarly, Public Health Act 2075 also advocates for school health services. This policy advocates for the deployment of at least one health personnel in each school, operating in collaboration with the health and educational sector under the purview of the Ministry of Education, Science, and Technology (MoEST).

Objective of School Health Programme (SHP)

- Promotion of the health of school children
- Prevention and control of health hazards
- Early detection of disabling conditions and referral
- Cultivating habits of healthy living with the creation of a healthy environment
- Rehabilitation of the handicapped

Component of School Health Services

- Health education
- Physical education
- Health services
- Nutrition services
- Counselling, psychological and social services
- Healthful school environment
- Health promotion for staff

- Family/ community involvement

Activities/ Aspects of School Health Program

1. Health appraisal of school children and school personnel
2. Remedial measures and follow-up
3. Prevention of communicable diseases
4. Healthful school environment
5. Nutrition of the children
6. First-aid and emergency care
7. Mental health
8. Dental health
9. Eye health services
10. Health education
11. Care of handicapped children
12. School health records

The rationale for initiating SHN program is:

- To prevent non-communicable diseases by promoting health from early stage of life.
- For the purpose of raising awarness in the community level to practice healthy behaviour.
- To implement the national health programme through school member i.e. student, teacher and parent.
- To monitor the developmental milestone of each student according to age group.
- To establish the healthy environment of school.

Target population

The 848 school nurse had provided service to 2,12,060 students in fiscal year 2080/081.

Activities performed by the school health nurse in FY 2081/82

III. Health education regarding Menstrual Hygiene





II. Health awareness regarding unhealthy food



III. Health education regarding Menstrual Hygiene





IV. Pad distribution program





V. Health check-up of parents and community people.



VI. Eye examination of students at school





VII. Nutrition Exhibition





VIII. Environment Sanitation





Scope of School Health Nurse

School nurses play an important role in policy planning, leadership, and emergency preparedness in schools. They promote physical, mental, and social health through health education, life skills training, nutrition awareness, substance abuse prevention, adolescent reproductive health education, and menstrual hygiene management. They provide preventive services, including immunization support, disease surveillance, vitamin A supplementation, deworming, IFA distribution, and WASH activities. School nurses conduct regular health checkups, nutritional assessments, first aid services, and management of minor illnesses and emergencies. They offer counseling on physical, mental, sexual, and lifestyle health issues and support children with disabilities and chronic illnesses. They also coordinate referral services with health facilities and follow up on students' health status. Additionally, they address contemporary health issues such as adolescent pregnancy prevention, family planning awareness, exercise, yoga, dental health, and prevention of tobacco, alcohol, and drug use.

Achievements of FY 2081/82

Academics:

- School nurses conduct different health awarness programme which enchance the better physical and mental health of children and it helps to increase the academic performance.

Time Saving

- School nurse celebrate the different national days like HIV day, Diabetes day by involving the student too which helps them to be familiar with all diseases.

Attendance

- They provide counselling to child who have symptoms related to mental health i.e. stress, anxiety, exam phobia and sucidal thought.
- They guide the adolescence girls for proper use of sanitory pad and its disposal which enchance the increase of attendance rate of all.

Staff Wellness

- The screening activities like blood pressure monitoring and glucose test can be done from school as it enchance the wellness of staff.

Accountability

- This programme has realized the parent teacher and children that the responsible of own health is all .

Training conducted in Bagamati Province FY 2081/82

Table 10.1 Training conducted in Bagamati Province FY 2081/82

S.N.	Trainings	Training Conducted by	Number of participants (school health nurse)
1.	Induction Training for new school nurse.	Bagamati Provincial Training Center.	556
2.	Psychosocial Counselling on Adolescent Sexual &Reproductive Health	Bagamati Provincial Training Center.	275
3.	Mental Health	Bagamati Provincial Training Center.	11
4.	Adolescent Sexual &Reproductive Health	Health Directorate, Hetauda	40
5.	Adolescent Sexual and Menstrual Hygiene	Collaboration of Hear Nepal and HTC.	
6.	Orientation programme for New School Nurse.	Health Directorate, Hetauda	

Issues, Recommendations and Responsible Authority

Issue	Recommendation	Responsible Authority
Lack of supervision & monitoring.	All the local level should take responsibilities and report to the Public Health Office.	MOH, HD, HO, Local levels
Lack proper reporting system.	Web-based reporting system should be developed for school health nurse programme.	MOH, HD
Lack of proper recording tools.	The uniform recording tools should be developed.	MOH and HD
School nurse droop out rate is very high.	School health nurse sanctioned post should be permanent.	MOH
Lack of proper of involvement of school health nurse in national program.	In national and provincial guidelines, the involvement of school nurse should be stated clearly. National program especially related to mental health, nutrition, immunization, adolescent health and so on.	MOHP and MOH
Lack of proper delegation of authority.	Proper coordination and collaboration between two bodies. i.e. MOSD and MOH.	Ministry of Social Development and Ministry of Health.
Lack of research related to effectiveness of the program and turnover of school health nurses.	The research should be conducted related to job satisfaction and so on.	MOHP and MOH
Lack of recognition and inclusion of school health nurse within school staff	School administrations should promote the inclusion of school health nurse should in regular staff.	Respective schools

10.1.2 Free Blood Bag Program for Blood Transfusion

Background

Bagamati province started the free blood bag program since 2078. The program mainly focuses on economically disadvantaged people who are permanently residing in Bagamati province and the people who need urgent treatment. Free blood bag program for blood transfusion facilitates and organize the work of providing blood transfusion services by providing free blood bags and blood tests. This is one of the priority program of the Bagamati province.

District-wise list of Blood Transfusion Centre and Service Site

Table 10.2 District wise list of Blood Transfusion Centre and Service Site

District	Blood Transfusion Centre	Service Site
Makawanpur	Nepal Red cross Society, Makawanpur Branch	Hetauda Hospital Bakulahar Hospital
Nuwakot	Nepal Red cross Society, Nuwakot Branch	Trishuli hospital, Nuwakot (An agreement was made but not implemented)
Dhading	Nepal Red cross Society, Dhading Branch	Dhading Hospital
Dolakha	Nepal Red cross Society, Dolakha Branch	Pashupati Chaulagain Memorial Hospital Tso-rolpa Hospital Dolakha Community Hospital Dhulikhel Hospital Jiri Hospital
Bhaktapur	Nepal Red cross Society, Bhaktapur Branch	Bhaktapur Hospital
Lalitpur	Nepal Red cross Society, Lalitpur Branch	Patan Hospital Bajrabarahi Chapagaun Hospital
Kavrepalanchok	Nepal Red cross Society, Banepa Branch	Dhulikhel Hospital Methinkot Hospital
Ramechhap	Nepal Red cross Society, Manthali Branch	Ramechhap Hospital
Chitawan	Nepal Red cross Society, Chitawan Branch	Bharatpur Hospital B.P. Koirala Memorial Cancer Hospital Bakulahar Ratnanagar Hospital
Sindhuli	Nepal Red cross Society, Sindhuli Branch	Chautara Hospital

Kathmandu	Nepal Red cross Society, Kathmandu Branch	Tribhuwan University Teaching Hospital, Maharajgunj Manmohan Cardio-thoracic centre, Maharajgunj Kanti Children Hospital, Maharajgunj Tokha Chandeshwori Hospital, Tokha Bir Hospital, Mahabouddha Trauma centre, Mahabouddha Paropakar Maternity hospital, Thapathali Civil Service Hospital, Minbhawan Sukraraj Tropical and Infectious Disease Hospital Shahid Gangalal National Heart Centre

Major Achievement of Fiscal Year 2081/82

No. of recipients receiving transfusion services (New) in FY 2081/82

The figure illustrates the number of recipients receiving transfusion services in different districts for the fiscal years 2079/80 , 2080/81 and 2081/82 . The data shows a significant decrease in transfusion recipients in 2080/81 (12460) compared to 2081/82 (11221). While comparing the district wise data Chitawan and Kathmandu had provided the highest number of blood transfusion services in FY 2081/82 while Rasuwa and Dhading had provided with the lowest number of services this may be due to lack of proper recording and reporting.

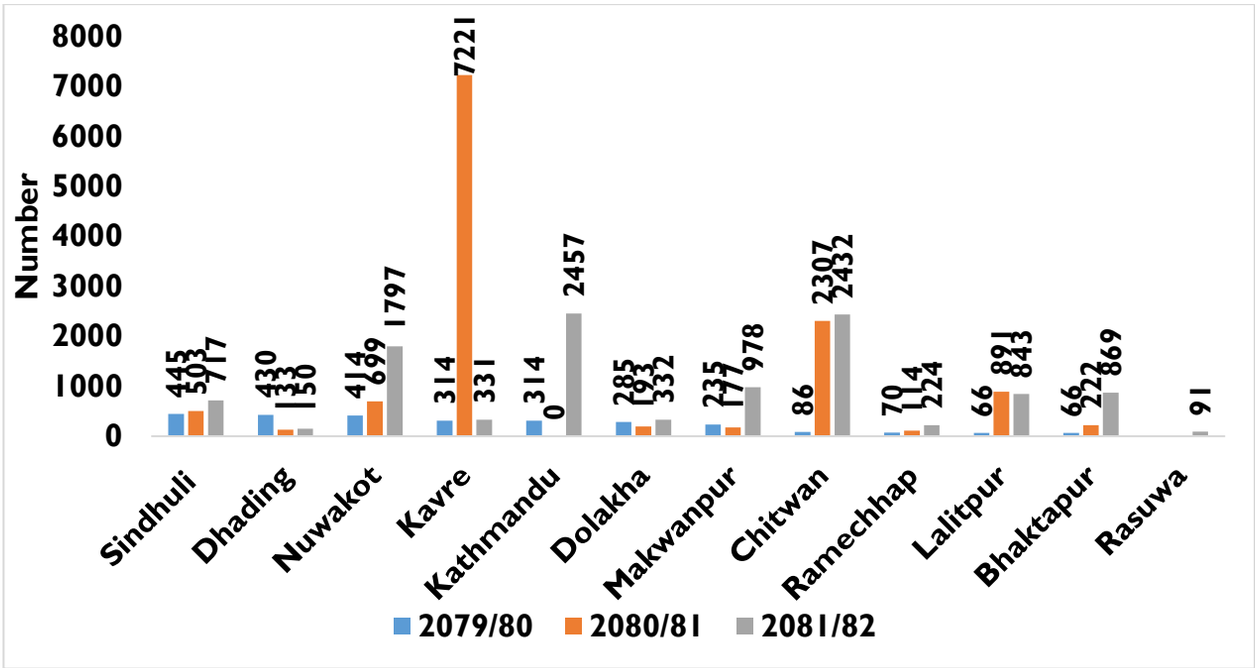


Figure 10.1 No. of recipients receiving transfusion services (New) in FY 2081/82

10.1.3 Chief Minister People Health Program

Non-communicable diseases account for more than half of mortality in the Bagamati province. While looking at the prevalence of hypertension, the data shows 20 % of women and 25 % of men have hypertension = SBP >140 mmHg or DBP >90 mmHg or taking antihypertensive medication. To address the rising burden of Non-Communicable Diseases, the Provincial government designed and implemented the Chief Minister's People Health Program- an exemplary program of the Ministry of Health, Bagamati Province. This program aims to reduce mortality associated with NCDs, particularly CHD, asthma, Diabetes, and Cancer; Timely detection of the risk of NCD among the healthy population of Bagamati province through the provision of screening, early diagnosis, and treatment facilities to reduce complications; To manage Obstructive Fistula, Heart Attack, Stroke, and other NCD by providing treatment subsidies.

This program has been implemented since FY 2076/077 and comprises various programs related to the problem of NCD. "Chief Minister People Health Program (screening, diagnosis, counseling, and treatment) management guideline 2079" was developed and implemented in FY 2078/079.

Under Chief Ministry People Health Program, following programs are being implemented:

1. Subsidy to a destitute patient with a cancer program.
2. Diagnosis, Prevention, Control, and Treatment of a patient with a heart attack.
3. Diagnosis, Prevention, Control, and Treatment of a patient with a stroke.
4. Diagnosis, and treatment subsidy to patients with Obstructive Fistula.
5. NCD testing, screening, counselling, and Treatment service program.

Major Achievement of FY 2081/82

NCD Screening Service (Public Health Office)

The figure illustrates the district's wise number of clients screened for NCD. All together 51773 females were screened for NCD, and 77838s males were screened for NCD in FY 2081/82 through Public Health Office. While looking at the district wise service Kavrepalanchok and Makawanpur has provided the highest NCD screening service whereas Dolakha has provided the lowest NCD screening services.

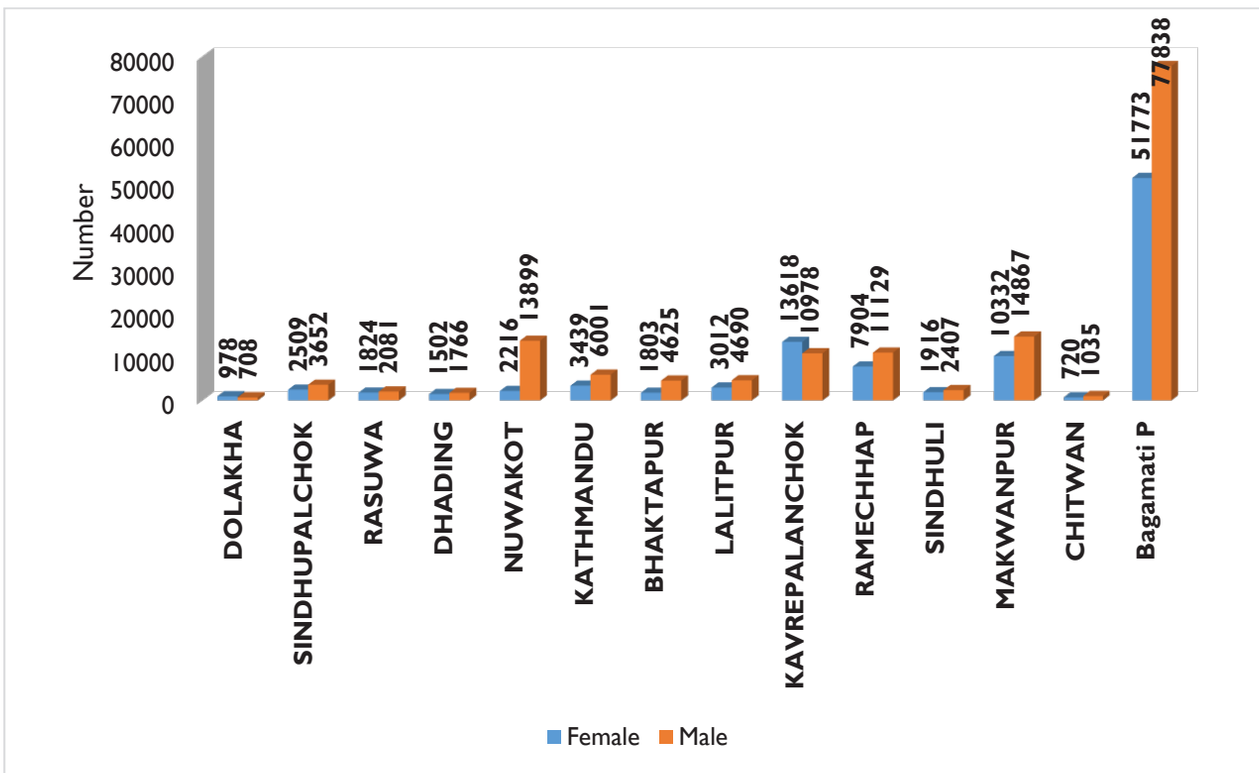


Figure 10.2 NCD Screening Service (Public Health Office)

NCD Screening Service through Provincial Hospital

The figure illustrates the district's wise number of clients screened for NCD in provincial hospitals. While looking at the provincial hospitalwise service status, Trishuli Hospital and Dhading Hospital have provided highest number of NCD screening service while Bakuhalar Ratnanagar and Hetauda Hospital has provided the lowest number of NCD screening service.

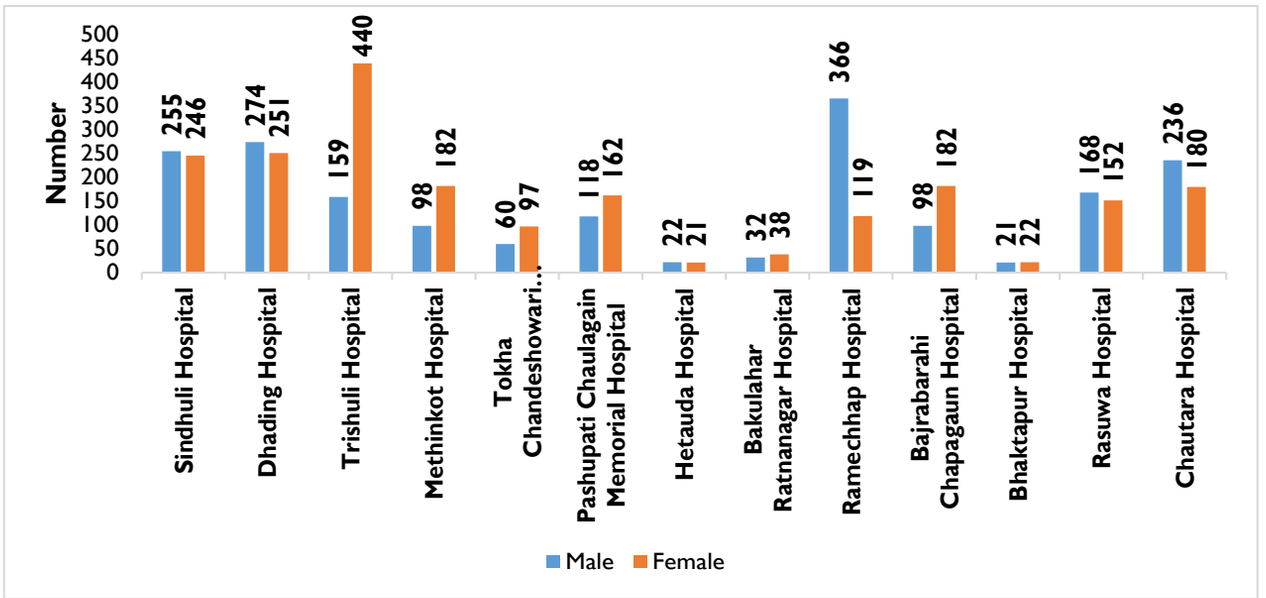


Figure 10.3 NCD Screening Service through Provincial Hospital

NCD Screening Service through Ayurveda and Alternative Medicine Centre

The figure below illustrates the district's wise number of clients screened for NCD. Altogether 10110 were screened for NCD in FY 2081/82 through Ayurveda Health Centre. While looking at the district wise service status Makawanpur and Nuwakot Ayurveda health center has provided the highest number of NCD screening service while Bhaktapur and Rasuwa have provided the slowest number of NCD screening Service.

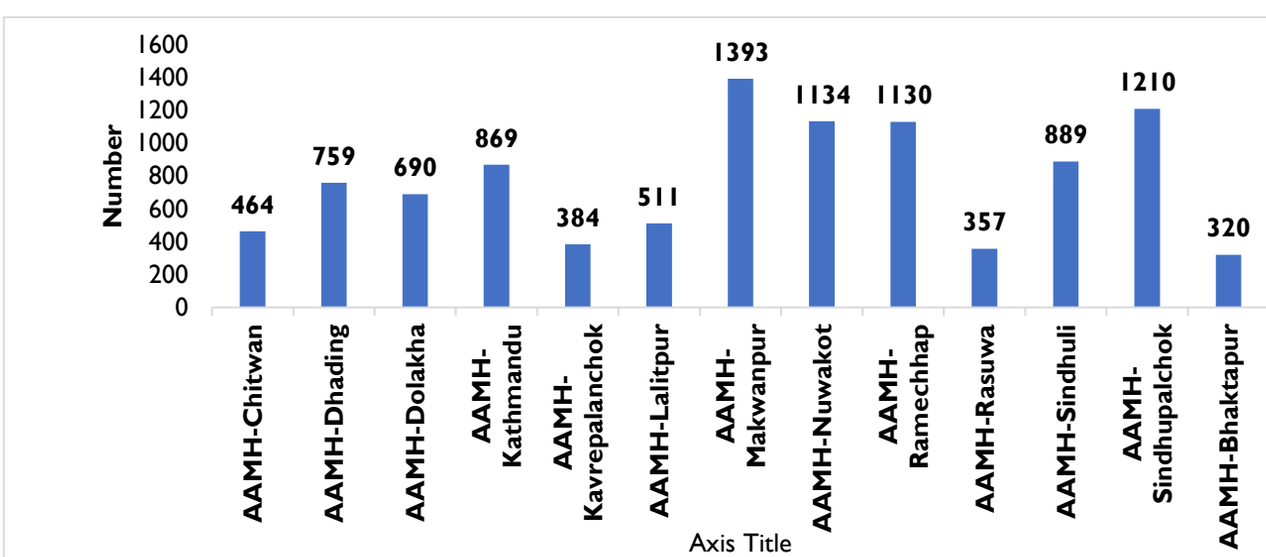


Figure 10.4 NCD Screening Service through Ayurveda and Alternative Medicine Centre

10.2 Federal Special Grant Program

Health is a fundamental asset for everyone. Each year, government, non-government, and private organizations allocate significant budgets to improve the health status of Nepalese citizens. Among these initiatives is the Special Grants Program, introduced in the fiscal year 2076/77. The Adolescent

Sexual and Reproductive Health Improvement Program and the Maternal and Child Nutrition Promotion Program were both introduced in the fiscal year 2076/77. These programs aimed to improve the health and well-being of adolescents, as well as maternal and child nutrition in Nepal. Similarly, the Urban Health Program was introduced in the fiscal year 2079/80, with the objective of addressing the growing health challenges faced by urban populations, including issues related to sanitation, pollution, healthcare access, and lifestyle diseases.

Components of Special Grants Program

- Adolescent Sexual and Reproductive Health Improvement Program
- Maternal and Child Nutrition Promotion Program
- Urban Health Program

10.2.1 Adolescent Sexual and Reproductive Health Improvement Program

Nepal's Constitution has recognized reproductive rights as fundamental rights for every individual, ensuring that citizens have access to quality services provided by the government. Despite these efforts, the prevalence of maternal and child mortality has not decreased as expected. Approximately 22% of Nepal's population falls within the adolescent age group. Alarmingly, 17% of adolescent girls aged 15-19 years are pregnant, which can lead to health complications or even death.

While adolescents receive health education on reproductive rights through school curricula, school dropouts may lack awareness about reproductive health. To address this gap, the Adolescent Sexual and Reproductive Health Improvement Program has been launched, targeting marginalized adolescents, especially those who may not have access to proper health education.

This program is carried out in collaboration with the School Health Nurse Program and focuses on improving the sexual and reproductive health of adolescents, thereby contributing to better maternal and child health outcomes. It is being implemented in 74 marginalized rural municipalities in Bagamati Province, specifically targeting higher secondary schools (grades 6-12) and their family members.

Key components of the program

- Capacity building and development among students, teachers, and health educators.
- Creating a conducive environment in schools for better learning and health awareness.
- Utilizing methods and media such as LCD screens and laptops to reach adolescents effectively.

This initiative aims to empower young individuals with the necessary knowledge and skills to make informed decisions regarding their reproductive health.

10.2.2 Maternal and Child Nutrition Promotion Program

The Maternity Center Improvement Program in Nepal was introduced to address ongoing concerns related to maternal and child health, despite improvements in recent decades. Although maternal and child health conditions have improved, maternal and child mortality rates remain a significant issue, influenced by factors such as geography, caste, education, lifestyle, and behavior.

The primary objective of the program is to improve maternal and neonatal health in the mountain and hilly regions by providing quality services. The program focuses on several key areas:

- Provision of well-equipped instruments and delivery beds to improve maternity care.

- Enhancement of Maternal and Child Health (MCH) clinics to offer better services.
- Establishment of neonate care corners in maternity centers to ensure proper care for newborns.
- Training human resources to improve the quality of services provided in maternity centers.
- This program is being implemented in 22 maternity centers in the mountain and hilly districts of Bagamati Province, focusing on improving health facilities and services in these areas. The goal is to uplift the health status of mothers and neonates, particularly in remote and underserved regions.

10.2.3 Urban Health Program

The Constitution of Nepal 2072 recognizes health services as a fundamental right for all citizens. Nepal faces challenges from communicable diseases, non-communicable diseases (NCDs), and casualties from natural disasters, road accidents, and injuries. According to the STEPS survey, 66% of deaths are attributed to NCDs, with 39 lakh deaths from respiratory illnesses and 16 lakhs from diabetes. In Bagamati province, 72.57% of the population resides in urban areas, while 27.43% live in rural settings. Factors like junk food consumption, air pollution, and urban lifestyles have significantly increased the risk of NCDs. Additionally, 9% of total deaths in Nepal are due to various cancers. To combat this, programs and awareness campaigns are essential to reduce the prevalence of NCDs and improve the health status of urban citizens.

Goal:

To promote the health of urban communities by reducing the risks of non-communicable diseases (NCDs) and fostering health-conscious citizens.

Objectives:

- To reduce physical, mental, and social problems caused by NCDs and build a healthier population.
- To encourage timely testing for NCDs and take measures to mitigate risks.
- To enhance public awareness about NCDs and encourage behavioral changes.
- To create an environment where open discussions on mental health are normalized.

Districts where the program were implemented:

- Chitawan
- Makawanpur
- Kavrepalanchok
- Kathmandu
- Bhaktapur
- Lalitpur

Progress Report of the program in fiscal year 2081/82

Table 10.3 Progress report of the program in fiscal year 2081/82

Financial Progress							
S.N	District	Complete Institutional Delivery Program			Urban Health Program		
		Allocated Budget	Expenditure	Financial progress %	Allocated Budget	Expenditure	Financial progress %
1	PHO, Bhaktapur	-	-	0	15,575,000	13,177,000	85
2	PHO, Dhading	4,025,000	3,263,340	81.08	-	-	
3	PHO, Kathmandu	-	-	0	17,275,000	13,880,734	80.00
4	PHO, Kavrepalanchok	6,490,000	6,094,113	93.90	16,775,000	12,196,665	72.71
5	PHO, Chitawan	3,525,000	2,458,699	70.00	17,300,000	12,350,047	71.00
6	PHO, Dolakha	9,055,000	1,753,052	19.36	-	-	0
7	PHO, Lalitpur	8,655,000	7,109,112	82.10	15,275,000	13,770,787	90.10
8	PHO, Ramechhap	6,490,000	5,903,981	90.97	-	-	0
9	PHO, Rasuwa	6,510,000	5,495,594	84.42	-	-	0
10	PHO, Sindhuli	8,830,000	1,129,897	12.79	-	-	0
11	PHO, Sindhupalchok	4,025,000	3,753,000	93.24	-	-	0
12	PHO, Nuwakot	8,230,000	6,181,264	84.83	-	-	0
13	PHO, Makawanpur	4,373,000	2,596,977	59.39	16,800,000	3,155,548	22.90
14	Provincial Health Training Center, Kathmandu	5,600,000	4,418,435	78.90	5,000,000	4,873,545	97.53
15	Health Directorate, Makawanpur	-	-	0	700,000	699,150	99.50
16	Ministry of Health, Bagamati Province	160,000	-	0	-	-	0.00
	Total	75,968,000	50,157,464	66.02	10,700,00	74,103,476	70.78

10.3 Programs under Conditional Grants Operated by Health Directorate

Under the Federal Special Grant, the Health Directorate of Bagamati Province implemented priority, evidence-based programs aimed at addressing emerging public health needs and strengthening policy-relevant knowledge.

10.3.1 Research on Mental Health and Non-Communicable Diseases

Under the Federal Special Grant Program for Fiscal Year 2081/82, the Ministry of Health, Bagamati Province implemented a research initiative titled "Study and Research on Mental Health and Non-Communicable Diseases", with a total allocated budget of NRs. 700,000. This program was designed to support evidence generation for informed planning and strengthening of health service delivery related to mental health and non-communicable diseases (NCDs) in the province.

The primary objective of the grant-supported research was to assess the status of mental health and NCD-related services in Bagamati Province through systematic study, with particular emphasis on identifying gaps, challenges, and opportunities within the existing health system.

As part of this initiative, a mixed-methods study entitled "Availability and Accessibility of Essential Drugs for Non-Communicable Diseases and Mental Disorders in Different Tiers of Civic Health Facilities in Bagamati Province" was conducted.

Objectives

The study aimed to:

- Assess the availability and accessibility of essential medicines for NCDs and mental health disorders across different levels of the provincial health system.
- Examine the extent to which essential medicines are available in accordance with the national essential drug list.
- Identify barriers affecting the supply, distribution, and utilization of NCD and mental health medicines.
- Explore opportunities and system-level strengths to improve equitable access to essential medicines across the province.

Methodology

A cross-sectional mixed-methods approach was adopted to ensure comprehensive analysis. For qualitative component, Face-to-face interviews were taken with health facility in-charges using structured questionnaires administered by trained enumerators. For, qualitative component, 15 Key Informant Interviews (KIIs) were taken with health facility in-charges, Palika health coordinators, and representatives from Public Health Offices and PH LMCs. 3 Focus Group Discussions (FGDs) with service beneficiaries, particularly individuals living with NCDs. These qualitative activities were facilitated by the core research team to capture provider- and user-level perspectives.

Key Findings

The study findings indicate that:

- The supply system for NCD medicines is generally functional, though increasingly strained due to rising service demand.
- Mental health medicines and services remain inadequate, highlighting critical gaps in availability,

trained human resources, and system prioritization.

- Variations exist across health facility tiers in terms of medicine availability, storage capacity, and demand forecasting mechanisms.

Recommendations

Based on the findings, the study recommends:

- Decentralization of procurement and budgeting mechanisms to improve responsiveness and reduce delays.
- Capacity building and training of mental health personnel at provincial and local levels.
- Integration and prioritization of mental health medicines within essential drug lists and procurement plans.
- Strengthening of infrastructure, including proper storage facilities and cold-chain systems.
- Enhancement of data-driven forecasting and logistics management systems to ensure uninterrupted medicine supply.

The Federal Special Grant–supported research has generated critical evidence to guide provincial planning for mental health and NCD services. While the existing system for NCD medicines demonstrates foundational strength, the study underscores the urgent need to strengthen mental health service delivery through improved governance, infrastructure, and coordinated planning. The findings will inform future policies and programs aimed at ensuring equitable, responsive, and sustainable access to essential medicines in Bagamati Province.

10.3.2 SaMi Program

Brief Introduction

The Safer Migration (SaMi) Programme is a bilateral initiative of the Governments of Nepal and Switzerland, led by the Ministry of Labour, Employment, and Social Security (MoLESS), in collaboration with provincial and local governments, with technical assistance from HELVETAS Nepal. Currently in its fourth phase (2024–2028), the program aims to promote safe, dignified, and well-managed labour migration through improved access to information and counselling, justice services, skills development, financial literacy, and psychosocial support. In Bagamati Province, SaMi currently operates in 50 local governments, with plans to expand to 86 in FY 2082/083 and achieve full coverage of all 119 local governments by the end of 2028.

During this phase, the Health Directorate of Bagamati Province will continue its program to strengthen the psychosocial component of the SaMi Program. To enhance the capacity of psychosocial counsellors at the local level, the Directorate has mobilized two dedicated psychologists to provide continuous technical support. Their support includes facilitating modular training, conducting regular monitoring and supervision, and offering mentorship. These efforts aim to improve counsellors' professional competencies in managing psychosocial cases and to ensure the overall quality of psychosocial service delivery, particularly within SaMi working areas.

The social costs of labour migration are increasing. Key challenges faced by migrants' families include family separation, strained relationships, estrangement between spouses, and disputes over the control of resources. Families also experience social stigma and prejudices directed toward women left behind, women migrants, returnee migrant women, and children growing up without adequate parental care. These difficulties are often compounded when a migrant goes missing or faces severe

hardship in the destination country. Families frequently struggle with a lack of information about the migrant's whereabouts, and in the event of a migrant's death, left-behind family members must cope with grief while also planning their social and financial future. Similarly, migrants who return after difficult experiences abroad often require support to address trauma. Accordingly, the target groups for psychosocial support include migrants' spouses, children, migrant families, and returnee migrants, both men and women.

The program addresses the social costs of migration by tackling the negative social and psychological consequences for migrants and their families, including spouses, children, and parents. The purpose of psychosocial intervention in the SaMi Program is to:

- Support migrants' families to better cope with the psychosocial impacts of family separation.
- Support migrants and their families who are experiencing psychological stress and difficulties linked to negative migration experiences.
- Link and refer psychosocial clients to existing support systems at the local, provincial, and federal levels.
- Coordinate and support the institutionalization and integration of the psychosocial component at local, provincial, and federal levels.

Key Achievements in Psychosocial Component in the FY of 2081/082

Table 10.4 Key Achievements in Psychosocial Component in the FY of 2081/082

S.N.	Activities	Place	Participants	Remarks
1	Recruitment of Psychologist	Health Directorate, Hetauda	Psychologist	2 each
2	Refresher training on psychosocial counselling	Kathmandu-NHTC & Hetauda	Psychosocial counsellor	2 events
3	Mass conversion management	Makawanpur	Students, teachers, parents, school health nurse	2 events
4	Psychosocial awareness	Hetauda, Tinpatan-Sindhuli	Health workers, FCHV, Police, returnee migrant workers, LG's elected representatives and staff	4 events
5	Mh-Gap Training	Madhyapur Thimi, Bhaktapur	FCHVs	2 events
6	Technical support on recruitment	Bhimphedi rural municipality, Makawanpur	Psychosocial counsellor	1 PS Counsellor
7	Annual review meeting	Hetauda	PS Counsellor, Health service providers, beneficiaries	1 events

10.4 Programs under Conditional Grants Operated by Local Levels

The programs under the Conditional Grants Operated by Local Levels refer to initiatives funded by the government and implemented by local governments (such as municipalities or rural municipalities) with specific conditions attached. These grants are aimed at supporting local development projects and services, ensuring that certain criteria are met before funds are disbursed.

10.4.1 One Provincial Constituency, One Hospital Strengthening Program

The One Provincial Constituency, One Hospital Strengthening Program is a government initiative aimed at improving healthcare infrastructure and services in provincial areas. The program's main objective is to strengthen one hospital in each provincial constituency to ensure that people in all regions have access to better healthcare facilities. Additionally, it also helps in strengthening health institutions and ensuring the provision of quality basic and medical health services to increase access to and consumption of health services. It has been implemented in 13 districts of Bagamati Province.

Key elements of the program typically include:

- Upgrading or modernizing existing hospitals in terms of medical equipment, infrastructure, and staffing.
- Ensuring that healthcare services are more accessible to remote or underserved areas.
- Promoting better health outcomes through improved facilities and services.
- Strengthening the healthcare system by making sure each hospital is equipped to handle a range of medical needs.

The initiative may be part of a broader effort to decentralize healthcare services and reduce the disparity in healthcare access between urban and rural regions. By focusing on a hospital in each provincial constituency, the program aims to address local healthcare challenges and provide equitable care for all citizens.

10.4.2 Health Institution Strengthening and Enhancement Program

The "Health Institution Strengthening and Enhancement Program" refers to an initiative aimed at improving the infrastructure, capacity, and quality of healthcare institutions. This program typically focuses on:

1. Upgrading Facilities: Improving physical infrastructure, equipment, and medical technologies.
2. Capacity Building: Training healthcare professionals to enhance their skills and knowledge.
3. Quality Assurance: Ensuring that healthcare services meet certain standards and are accessible to all.
4. Improved Service Delivery: Enhancing the efficiency and effectiveness of healthcare services.
5. Community Engagement: Promoting public awareness and encouraging the use of available healthcare services.

The goal is to improve the accessibility, efficiency, and quality of healthcare services, leading to better health outcomes for the population.

Districts where the program were implemented:

- Makawanpur

- Chitawan
- Dhading
- Nuwakot
- Kathmandu
- Lalitpur
- Kabhrepalanchowk
- Sindhupalchok
- Dolakha
- Ramechap
- Sindhuli

10.4.3 Urban Health Centers / Community Health Units

Urban Health Centers (UHCs) and Community Health Units (CHUs) are healthcare facilities aimed at providing accessible, comprehensive medical services to urban and local populations. They focus on increasing access to quality basic health services, particularly for women, children, the poor, marginalized groups, temporary residents, and the elderly.

- Urban Health Centers (UHCs): These centers are located in urban areas and aim to address the health needs of city dwellers. They provide primary healthcare services, preventive care, maternal and child health services, and treatment for common diseases. UHCs focus on improving access to healthcare for urban populations, particularly underserved communities.
- Community Health Units (CHUs): These units are typically found in rural or semi-urban areas and serve as the first point of contact for healthcare. They are responsible for providing basic healthcare services, including immunization, maternal and child health care, disease prevention, and health education. CHUs work to strengthen the healthcare system at the grassroots level, ensuring that even remote communities have access to essential health services.

Both UHCs and CHUs play critical roles in expanding healthcare access and improving overall health outcomes by providing services closer to the population they serve.

Districts where the program was implemented:

- Makawanpur
- Chitawan
- Dhading
- Rasuwa
- Kathmandu
- Lalitpur
- Sindhupalchok
- Dolakha
- Ramechap

CHAPTER 11

HUMAN RESOURCE AND HEALTH FINANCE MANAGEMENT

11.1 Health Finance Management

Health financing management is a critical component of a well-functioning health system, as it determines how financial resources are mobilized, allocated, and utilized to ensure equitable access to quality health services. In Nepal, the transition to a federal governance structure has significantly reshaped the health system, devolving authority and responsibility for health financing to provincial and local governments. Within this context, effective health financing management has become essential to achieving universal health coverage and improving health outcomes across all regions.

Bagamati Province, one of Nepal's most populous and socio-economically diverse provinces, plays a pivotal role in the national health system. Managing health financing in Bagamati Province requires balancing disparities in service demand, infrastructure, and human resources while ensuring efficient use of public funds. The main sources of provincial health financing have been federal and provincial government allocations. Along with this, out-of-pocket expenditure, social health insurance program, and donor support have contributed significantly in health financing of Bagamati Province.

Financial Achievements in the FY 2081/82

Health Directorate

The Table illustrates the overall financial achievement of the Health Directorate based on different types of grants and activities of FY 2081/82. The total financial achievement of Health Directorate was 59.2%. Among the different programs, Special Grant Program has the highest financial achievement with 99.9% under Federal Conditional Grants while National Employment Promotion Program showed the lowest financial achievement at 27.41% under Federal Conditional Grants. There was notable variability in achievements among different programs, highlighting areas where improvements in financial management or resource allocation may be needed.

Table 11.1 Financial Achievement of Health Directorate based on different types of grants FY 2081/82

S. N	Program	Types of Grants	Financial Achievement (%)
1	Provincial Program	Provincial Grant	77.8
2	Special Grant Program	Federal Grant	99.9
3	Tuberculosis Control Program	Federal Conditional Grant	85.51
4	Health Management Program	Federal Conditional Grant	76.83
5	Family Welfare Program	Federal Conditional Grant	36.43
6	Disability Prevention and Leprosy Control Program	Federal Conditional Grant	83.22

7	Epidemic Disease Control Program	Federal Conditional Grant	22.99
8	Nursing and Social Security Service Program	Federal Conditional Grant	81.18
9	Health System Strengthening Program	Federal Conditional Grant	97.45
10	National Health Education, Information and Communication Center	Federal Conditional Grant	73.15
11	AIDS and Sexually Transmitted Disease	Federal Conditional Grant	79.18
12	National Employment Promotion Program	Federal Conditional Grant	27.41
	Total		59.2

Public Health Offices

The Table shows the financial achievements of the Public Health Offices based on different types of grants. According to this table, Bhaktapur Public Health Office stands out across all types of grants, demonstrating strong financial achievement, followed by Dhading. Rasuwa and Sindhupalchok. The highest financial achievement was achieved by Bhaktapur Public Health Office in terms of Federal Conditional Grant and Provincial Conditional Grant, while in terms of Special Grant, the highest financial achievement was done by Public Health Offices of Bhaktapur, Dhading and Rasuwa

Table 11.2 District-wise Financial Achievement of Public Health Offices based on different types of grants FY 2081/82

Public Health Office	Federal Conditional Grant (%)	Provincial Conditional Grant (%)	Special Grant (Federal/ Province) (%)
Dolakha	59.2	92.79	62.11
Ramechhap	55	80	85
Sindhuli	73	95	32
Kavrepalanchok	49.20	95.68	78.66
Sindhupalchok	95	97	95
Rasuwa	95	96	100
Nuwakot	97.82	82.91	87.52
Dhading	97.17	96.62	100
Chitawan	45	83	71
Makawanpur	80.3	97.18	79.5
Bhaktapur	99.70	98.20	100
Lalitpur	93	99	98
Kathmandu	90.96	88.10	93.50

Financial Achievement of Provincial Hospitals

The Table shows the financial achievements of provincial hospitals based on different types of grants. According to this table, Bakulahar Ratnagar Hospital achieved the highest financial success in Federal Conditional Grants, while Bhaktapur Hospital achieved the highest financial success in

Provincial Grants. This shows the disparities in financial achievements among hospitals, reflecting varying levels of grant utilization, management effectiveness, and possibly different priorities or challenges faced by each hospital

Table 11.3 : District-wise Financial Achievement of Hospital based on different types of grants FY 2081/82

Hospital	Federal Conditional Grant	Provincial Grant	Management Committee/Others
Pashupati Chaulagain Memorial Hospital	93	80.6	90
Ramechhap Hospital	87	82	79
Sindhuli Hospital	95.13	91.43	97.58
Methinkot Hospital	21.17	79.39	44%
Chautara Hospital	86.78	87.44	93.13
Rasuwa Hospital	81.57	91.67	99.18
Trishuli Hospital	99	99	98.92
Dhading Hospital	85.96	86.22	99.04
Bakulahar Ratnanagar Hospital	81.97	87.43	88.8
Hetauda Hospital	77.53	91.35	67.42
Bhaktapur Hospital	93.17	93.37	95.15
Bajrabarahi Hospital	73.33	96	97
Tokha Chandeswori Hospital	11	80.5	68

Financial Achievement of Ayurveda and Alternative Medicines Hospitals

The table below shows the financial achievement of Ayurveda and Alternative Medicine Hospitals based on different types of grants. Sindhuli Ayurveda and Alternative Medicine Hospital achieved highest financial success in Federal Conditional Grants while Rasuwa Ayurveda and Alternative Medicine achieved lowest financial success in Federal conditional grant. While looking at the Provincial grant Kathmandu Ayurveda and Alternative Medicine Hospital achieved highest financial success and Makawanpur Ayurveda and Alternative Medicine Hospital achieved lowest financial success.

Table 11.4 District wise Financial Achievement of Ayurveda and Alternative Medicine based on different types of grants FY 2081/82 (%)

Ayurveda and Alternative Hospitals	Federal Conditional Grant	Provincial Grant
Dolakha	86.95	88
Ramechhap	95.7	89.7
Sindhuli	99.75	89.25
Kavrepalanchok	95.2	85.76
Sindhupalchok	99.7	84

Rasuwa	87	81.65
Nuwakot	99.9	84.81
Dhading	99.85	81.19
Chitawan	99	86
Makawanpur	98.26	80.07
Bhaktapur	93.74	89.92
Lalitpur	97.34	90.6
Kathmandu	92.59	90.11

Challenges of Financial Management

- Delayed budget release from federal and provincial levels, affecting timely program implementation, service delivery and under utilization
- Low budget absorption and execution rates due to procurement delays and complex financial procedures
- Inadequate budget allocation compared to increasing service demand, especially in urban and high-population districts
- Unclear roles and coordination gaps among federal, provincial, and local governments under the federal system

11.2 Human Resource Management

Human Resource Management (HRM) plays a pivotal role in strengthening the health system by ensuring the availability, competency, and optimal utilization of the health workforce. In the context of Bagamati Province, effective HRM is essential for delivering quality, equitable, and people-centered health services across diverse geographical and demographic settings. It encompasses strategic workforce planning, recruitment, capacity development, performance management, and retention of skilled health professionals. Strengthening human resources contributes significantly to improving service delivery, enhancing system resilience, and achieving provincial and national health goals. Continuous efforts to build a motivated, well-trained, and adequately distributed workforce remain a key priority for ensuring sustainable and high-quality healthcare services in the province.

The human resource situation in the health sector of Bagamati Province shows a mixed picture of progress and persistent gaps. At the provincial level, a total of 1,571 sanctioned posts have been approved; however, 2,422 personnel are currently working, indicating over-engagement of staff in some categories through mechanisms such as contract, deputation, or adjustment. Among the fulfilled positions at the provincial level, the largest share of human resources is deployed in hospitals (approximately 66%), reflecting the high service demand and concentration of specialized care at secondary and tertiary facilities. This is followed by Provincial Public Health Offices (PHOs), accounting for about 9%, and Provincial Offices, also around 9%. Ayurveda and alternative hospitals comprise about 8% of the workforce, while the remaining share is distributed across other health institutions. At the local level, the estimated number of health human resources is around 7,500, indicating that the majority of frontline service providers are stationed closer to communities. Despite this numerical strength, challenges remain related to equitable distribution, skill mix, and optimal utilization, particularly between urban and rural local levels.

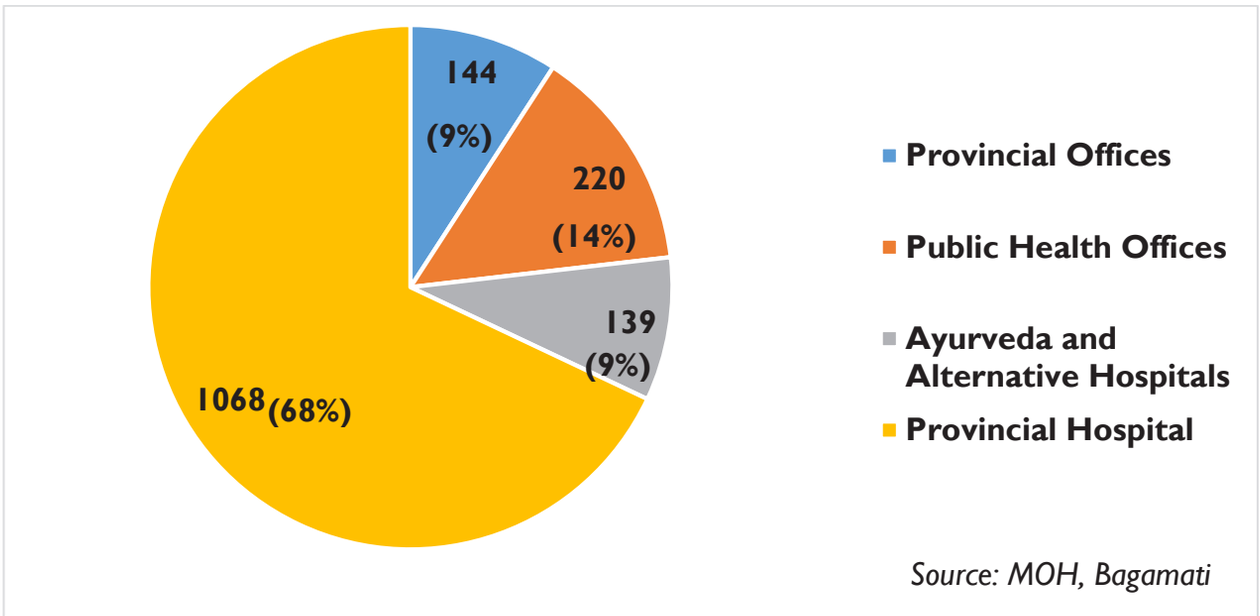


Figure 11.1 Human Resource Status of Bagamati Province

Bagamati Province has a relatively strong human resource base compared to other provinces, the imbalance between sanctioned posts and actual deployment, along with urban concentration of staff, highlights the need for strategic human resource planning, rational redistribution, capacity building, and long-term workforce sustainability to ensure equitable and quality health service delivery across the province.

CHAPTER 12

SUPPORTING PROGRAMS

12.1 Health Training Centre, Bagamati Province

Introduction

Health Training Center, Bagamati Province is the major administrative and technical unit of health training in Bagamati Province. It oversees all health training activities in the province. It was established in 2019 AD to coordinate and manage all health-related training through one door under the MoH in Bagamati Province. This center caters the training needs of different health workforce of Bagamati Province working in Health Directorate, centers, Provincial hospitals, Public Health Office (PHO), District Ayurveda and Alternative health service and local level health institutions. This training center focuses on training and skill development of health workforce and aims to meet the targets envisioned in the National Health Policy 2019 and Sustainable Development Goals (2030) AD. It plans and conducts health related training activities for provincial and local level health workers. Similarly, it coordinates with the federal, provincial and local health related I/NGOS for quality and uniformity of health-related training in the province.

In the establishment year, FY 2075/76 Training Center conducted only one technical training as approved. The training was Primary trauma care training for health worker. Health Training Center was established in Kathmandu as Province Government decision. The office of Health Training Center, Bagamati Province is located at New Baneshwor, Kathmandu (Near Pathsala Nepal).

Vision

To develop skilled, motivated and responsible health human resources in province.

Goal

To develop the technical and managerial capacity of health service providers at provincial and local levels for delivering quality health care services and attain the optimum level of health status.

Objectives

- To develop and strengthen health training system and coordination mechanism in province level.
- To ensure the quality of health training activities by enhancing the capacity of different clinical training sites and skilled trainer.
- To standardize the training Learning Resource Packages (LRP) i.e. Curriculum, Trainer's Guide, Participant's Handbook and Reference Manual.
- To accredidate health training and its clinical sites for quality health training.
- To certify health related trainer and trainees for providing training and services.
- To adopt and promote innovative training approaches and training.

- To strengthen mechanism and capacity for post training follow up and support.

Functions

- To help formulate provincial health related training policy, legislation, strategies, plan, program, guideline, standard, working procedure and implement it at province and local level.
- To conduct need assessment for health related training for local and province level.
- To develop, approve, produce and distribute training curriculum, trainer's guideline, participant's handbook and reference materials for health training.
- To conduct and manage all health related training to address the training needs of the province and local level.
- To support the quality of care by enhancing the service provider's competency through health training.
- To help support clinical training site for their improvement and expansion in the hospital.
- To coordinate with partners, local level and other government organization for effectiveness of health related training.
- To provide technical support to local level for health related training planning and conduction.
- To develop training information management system for province and local level.
- To collect training information, document it, prepare and submit report to higher authority.
- To monitor, follow up, coaching and evaluating health related training of province and local level.

Strategies

- Assessing, standardizing and accrediting training activities and training sites at province and local level
- Standardizing training packages for health workers for province and local level
- Strengthening institutional capacity of clinical training sites of province and local level
- Integrating and institutionalizing health training activities at province and local level
- Strengthening Training Information Management System (TIMS) for documentation of training
- Establishing and developing trainer's pool at provincial level
- Conducting health trainings as per provincial and local level requirements
- Coordinating and collaborating with partners and local level for health training planing and conduction

Major Activities

- Assisting in formulating health related training policies, strategies, plans, programs, guidelines, procedures, standards and implementing them
- Coordinating and collaborating with the National Health Training Center regarding health training programs

- Health training instructor certification and training site development, consolidation and licensing
- Conducting/coordinating health related training at the provincial level
- Monitoring, follow-up and evaluation of health related training
- Health training trainers, certification of trainees and site strengthening
- Accreditation of Training Sites

Table 12.1 Human Resources Status (sanctioned Vs fulfilled)

S.N.	Post	Sanction	Fulfilled	Vacant
1	Director	1	1	0
2	Senior/Public Health Administrator	1	1	0
3	Senior/Health Education Administrator	1	0	1
4	Senior/Health Education Officer	2	1	1
5	Senior/Public Health Officer	2	1	1
6	Senior/Community Nursing Officer	2	2	0
7	Health Education technician	1	1	0
8	Administrative Officer (7th /8th)	1	1	0
9	Account Assistant/Officer	1	1	0
10	Driver	1	1	0
11	Office Assistant	2	2	0
	Total	15	12	3

Table 12.2 List of clinical training sites in Bagamati Province

S.N.	Training Sites	Type of training
1.	Bir Hospital, Kathmandu	AAC, ECCT
2.	Paropakar Maternity and Womens Hospital, Kathmandu	ASBA, SBA, Implant, IUCD, PPIUCD, ASRH, GBV, RUSG, CNBC (SNCU), VIA/ CRYO, STI, SAS (CAC, MA, 2nd Trimester Abortion Care), Minilap
3.	CFWC, Chetrapati, Kathmandu	Implant, IUCD, Minilap, NSV, CoFP Counseling
4.	FPAN, Pulchowk, Lalitpur	Implant, IUCD, NSV, CoFP, Counseling, CAC
5.	MSS, Satdobato	Implant, IUCD, Minilap, NSV,COFP Counselling, MA
6.	FPAN, Chitawan	Implant, IUCD, COFP Counselling NSV
7.	MSS, Narayanghat, Chitawan	Implant, IUCD, COFP Counseling MA
8.	Bharatpur Hospital, Chitawan	ASBA, SBA, MLP, MA, OTTM, GBV, 2nd Trimester Abortion Care, VIA

9.	Kritipur Hospital, Kathmandu	SBA, VIA
10.	Model Hospital, Kathmandu	VIA, 2nd Trimester, CAC
11.	Kathmandu Medical College, Sinamangal, Kathmandu	2nd Trimester Abortion Care, CAC
12.	Army Hospital, Chauni, Kathmandu	IP
13.	TUTH, Maharajgunj, Kathmandu	SBA, ICU, OTTM, Pediatric Nursing Care, Medico legal
14.	Kanti Children Hospital, Kathmandu	Pediatric Nursing Care
15.	Nepal Cancer Care Foundation, Mahalaxmisthan, Lalitpur	VIA/CRYO
16.	Hetauda Hospital	SBA, MLP
17.	Trishuli hospital	(SBA, MLP)

Major Achievements in FY 2081/82

Total participants attending the training in FY 2081/82

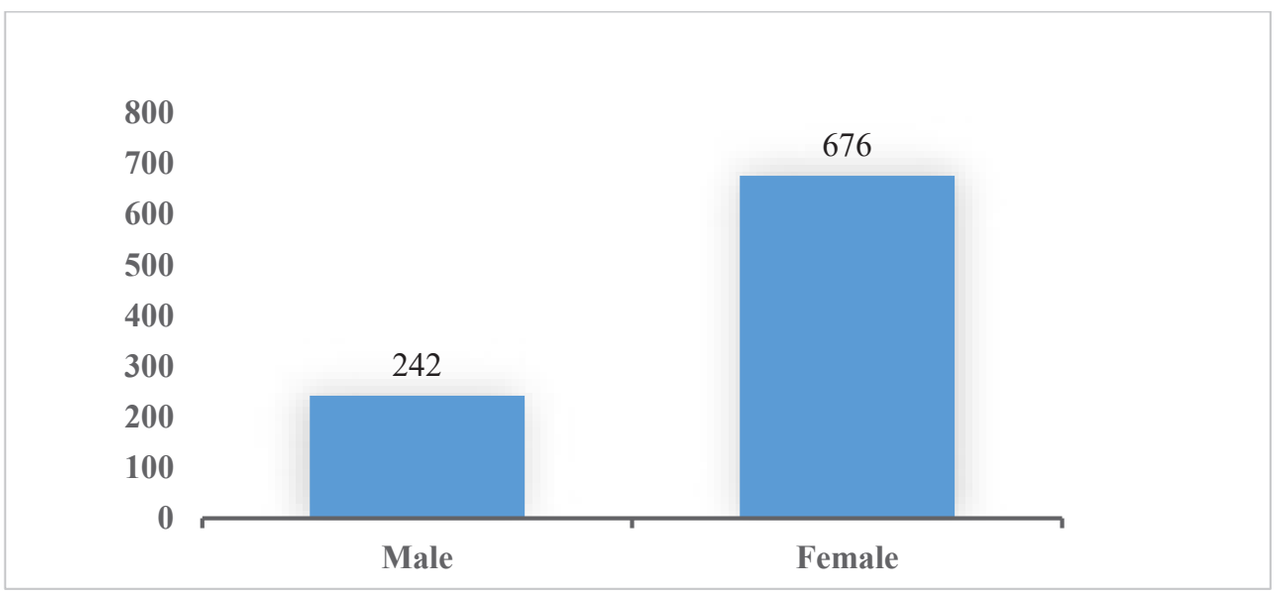


Figure 12.1 Total Participants attending the training in FY 2081/82

The figure above illustrates the total number of participants who attended various training sessions organized by HTC in FY 2081/82. According to the data, approximately 676 female participants and 242 male participants took part in the training programs.

District wise number of participants attending the training program

The figure below illustrates the district-wise distribution of participants attending the training program in FY 2081/82. According to the data, the highest number of participants were from Kathmandu and Sindhuli districts, while the lowest number of participants were from Rasuwa and Bhaktapur.

District wise distribution of Training participants

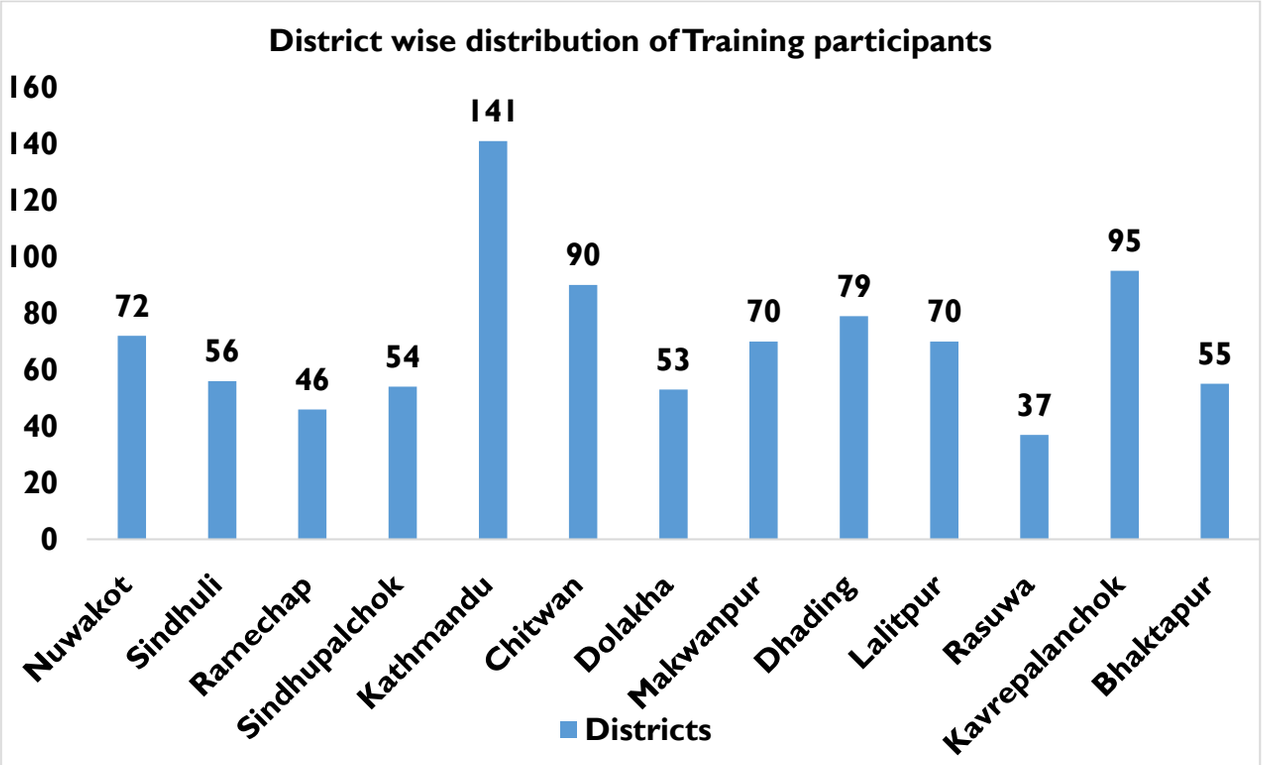


Figure 12.2 District wise number of participants attending the training program

Issues/Challenges, action to be taken and responsibilities

Issues/Challenges	Action to be taken	Responsibilities
Lack of training operational guidelines	Approval of training management guidelines and expenditure standards	MOH
Low presence of partner organizations	Management of partner organizations	MOH/HTC
Verification of training programs conducted from outside the training center like district/ local level	Provision to extend the use of TIMS to districts Approval of training guidelines and expenditure standards	MOH
Poor performing Training management information system	Training management information should be made interoperable and upgraded	NHTC/MOH
Poor Physical infrastructure	Physical infrastructure should be managed	MOH/HTC

12.2 Provincial Public Health Laboratory

Introduction

Provincial Public Health Laboratory is one of the central entities of Ministry of Health (MoH), Bagamati Province for quality laboratory services, disease surveillance and research. Public Health Laboratory situated at Dhulikhel, Kavrepalanchok district that has been functioning since 15th Shrawan 2076. The laboratory services of all the government and private laboratories have established to ensure the quality of the public laboratory services by making them reliable. By providing training related to non-communicable diseases, infectious diseases, quality control as a part of skill development of laboratory manpower to provide quality service in complete diagnostic services and disease surveillance, this center has been able to diagnose the disease using modern laboratory technology over time.

Scope of work/job description

It is a referral laboratory of Bagamati Province and it look after the provincial hospital laboratory, Public Health Office laboratory, District Ayurveda Health Centre laboratory and other government laboratory network and tends to maintain quality laboratory result. Public Health Laboratory, Bagamati Province, have been now connected with 262 Microscopic Centers within 13 districts of Bagamati Province. For the fulfillment of its objectives, following departments are being functional.

A. Non-Communicable Diseases Laboratory

B. Infectious Disease Laboratory

C. Quality Control and Training

D. Administration and Finance

Major activities conducted in (FY 2081/82)

- Running a laboratory with fully automatic system in the lab for diagnosis
- To manage the reporting system of the laboratory, the creation of cloud-based software and the start of services, as well as the creation of the web-site of the office.
- Operation of general laboratory for routine tests in service unit Chitawan.
- Emergency reagents and chemicals have been supplied to Public Health Offices, district hospitals and municipalities in all 13 districts.
- Monitoring and inspection of laboratories in government and private health institutions.
- Providing all necessary materials for TB testing in various microscopy centers in 13 districts
- Quality assurance for quality control of TB in different microscopy centers
- Mobilization of technical and human resources in the diagnosis of various epidemic diseases
- Worked on influenza & HPV surveillance
- Technical supervision of laboratory network within the province
- Technical supervision at Gene Xpert sites
- Monitoring, registration and maintenance of “C” category laboratories within the province

- Participated in various health related seminars of this province
- Performed role in HIV QA/QC by sending the DTS sample to HIV testing site related to HIV QA/QC
- Conducted various training to laboratory staffs of Bagamati province
- Conducted a study on hemoglobinopathy in Chitawan district
- Performing malaria QC of all microscopic center and provided necessary reagents and RDTs
- Performing TB microscopy and gene xpert at service unit Chitawan

Issues/Challenges, action to be taken and responsibilities

Issues/Challenges	Action to be taken	Responsibilities
Lack of own building	Political and administrative coordination for land acquisition	MOH
Limited budget for the procurement of reagents, kits and chemicals, difficulty in daily lab operation	Additional budget arrangements for purchase of reagents, kits and chemicals	MOH/HLMC
High demand for microscopes and other laboratory equipment from local and provincial laboratories	Procurement of laboratory instruments and equipment through Health Supply Centre	MOH/HLMC
Lack of infrastructures to run molecular laboratory services	Political and administrative coordination for land acquisition	MOH/HLMC

12.3 Health Logistic Management Center

Introduction

Effective management of health logistics is essential for the success of health program. Logistics management ensures quality and right quantity of medicines and health commodities at the time-of-service delivery. It includes proper procurement, storage, and transportation, delivery of quality medicines and commodities in right quantity to the service delivery points.

Health Logistics Management Center (HLMC) is established in FY 2075/76 as a key wing of Ministry of Health for the management of essential medicines, vaccines, health commodities and biomedical equipment in the province. It has big warehouse to store medicines, vaccines and health commodities and equipped with transportation vehicles and capable human resources to achieve the objectives of the HLMC.

Objectives

Health Logistics Management Center is responsible for all round availability of quality medicines, vaccines at the health facilities and equipped hospitals with required biomedical equipment in the province.

Following are the objectives of HLMC to contribute on health systems of the province:

- Procure essential medicines and health logistics for the health facilities
- Store and supply of medicines, vaccines and health commodities

- Avail quality medicines and commodities at health facilities round the year
- Supply of required biomedical equipment to hospitals and health facilities
- Coordinate federal units of health logistics and local levels for maintenance of biomedical equipment
- Build capacity of local levels on procurement and supply of essential medicines.

Table 12.3 Human Resources Status (Sanctioned Vs Fulfilled)

SN	Post	Sanctioned	Fulfilled	Vacant	Remarks
1	Director	1	1	0	
2	Sr. Public Health administrator	1	1		
3	Account Officer	1	1		
4	Section Officer	1	1		
5	Bio Medical Engineer	2	1	1	
6	Pharmacy Officer	1	1		
7	Pharmacy Assistant	1	1		
8	Cold Chain Assistant	2	2		
9	Health Assistant	1	1		
10	Refrigerator Technician	1	1		
11	Computer Operator	1	1		
12	Heavy Vehicle Driver	1	1		
13	Light Vehicle Driver	1	1		
14	Office Assistant	2	1	1	
15	Loader Packer	2	2		
16	Electric Technician	0	0		
17	Security guard	0	1		
	Total	19	18	2	

Table 12.4 Provincial Biomedical Equipment Maintenance Report

Districts	Total no. of equipment as per inventory	Preventive Maintenance (PM)	Breakdown	Repaired	Not repaired	BMET/BME Status	Remarks
Instrument Repaired at Workshop			43	39	4		
Kathmandu Tokha Chandeshwori Hospital	81	4	4	4	0	1 BMET	
Bhaktapur Hospital	355	42	7	7	0	1BME, 1BMET	
lalitpur,Bajrabarahi Hospital Chapagaun	147	15	5	4	1	1BMET	
Kavrepalanchok,Methinkot Hospital	113	24	10	8	2	1BMET	
Nuwakot,Trishuli Hospital	254	30	15	12	3	1 BMET	
Dhading,Dhading Hospital	267	53	22	20	2	NO BMET	
Rasuwa,Rasuwa Hospital	116	0	0	0	0	1 BMET	
Sindupalchok,Chautara Hospital	188	22	15	9	6	NO BMET	
Dolakha,Pasupati Chaulagain Hospital	289	22	10	9	1	2 BMET	
Ramechhap,Ramechhap Hospital	172	61	46	40	6	NO BMET	
Sinduli,Sinduli Hospital	141	30	19	17	2	NO BMET	
Hetauda, Hetauda Hospital	556	0	10	10	0	2BME, 1BMET	Repaired at workshop
Chitwan,Ratnagar Bakular Hospital	183	10	2	2	0	1 BMET	
Total	2862	313	208	181	27		

Activities conducted in (FY 2081/82)

- Procurement of Digital Mammography Machine
- Strengthening of hospital OT (Operating Theaters) from local levels
- Procurement of tools and equipment for strengthening hospitals and health institutions at the provincial and local levels
- Regular preventive and corrective maintenance programs for hospital equipment and operation of a provincial biomedical workshop
- Free repackaging and transportation of medicines and health materials
- Procurement of Anti-Hemophilic Factor for hemophilia patients within the province
- Expansion of PCR services and procurement of test kits and reagents for pandemic management
- Procurement of medicines for non-communicable diseases and mental health disorders
- Supply management of medicines, health materials, and vaccines received from central programs

- Installation and operation of an MRI Machine at Hetauda Hospital
- Installation and operation of a Liquid Waste Treatment System
- Installation and operation of equipment for Ayurvedic medicine production at the Ayurvedic Medicine Production Center, Chitawan
- Establishment of a provincial biomedical workshop for regular preventive and corrective maintenance of hospital equipment
- Training on procurement and distribution of health materials
- Coordination and review of health supply management

Issues, action to be taken and responsibilities

Issues/Challenges	Action to be taken	Responsibilities
Office Building	Necessary initiatives should be taken to acquire land.	MoH/HLMC
Digital Inventory	Software should be used to obtain information about the availability of health tools and equipment.	MoH/HLMC
e-LMIS Reporting	Since irregular e-LMIS reporting causes problems in forecasting and quantification of medicines, the use of e-LMIS should be regularized.	MoH/HLMC
High demand for equipment and medicines from local levels	Additional budget allocation should be managed for the distribution of medicines and equipment at the local level.	MoH/HLMC
Provincial Medicine Quality Testing Lab	Arrangements should be made for a provincial medicine lab to conduct quality testing of medicines	MoH/HLMC/ Hospital

12.4 Ayurveda Aushadhi Utpadan Kendra

Introduction:

The Ayurveda Aushadhi Utpadan Kendra established by the Government of Bagamati Province on Fiscal Year 2079/80 in Ratnanagar-01, Chitawan is the first Manufacturing Center established after the institutionalization of Federalism in Nepal. The center had prepared its own five volumes of Ayurvedic formulary and sanctioned them from the Cabinet of Ministries of Bagamati Province in the last fiscal year. The formularies contain 117 Ayurveda Drugs to cover the treatment of all the listed diseases in Ayurveda Health Management Information System (AHMIS). In the first stage, the center focus on the manufacturing of Essential Ayurveda Drugs for the free distribution from thirteen Ayurveda and Vaikalpika Chikitshalayas of Bagamati Province. The medicines manufactured from the center is expected to make a significant contribution to health services at the provincial level and become self-reliant in Ayurveda Drugs. The center has 4 units:

1. Main Manufacturing Unit
2. Administration Unit
3. Quality Control-Micro laboratory
4. Liquid Production Unit

The main building of the center built under the concept of Rular Pharmacy was handed by Department of Ayurveda and Alternative Medicine in the fiscal year 2078/79. The building was restructured to meet the GMP criteria in the fiscal year 2080/81, with the following dedicated areas.

1. Raw Material Store Area
    a. Raw Herbs Store
    b. Primary Packaging Material Store
    c. Secondary Packaging Material Store
2. Pre-production Area
    a. Dispensing Area
    b. Drying Area
    c. Size reduction and Sifting Area
3. Production Area
    a. Mixing Area
    b. Tablet Punching Area
    c. Filling and Sealing Area
4. Secondary Packing Area
5. Finished Product Store Area
6. Quality Control-Analytical Lab
7. Spare parts Store Area

Objectives

1. Production of Quality Ayurveda Medicines
2. Qualitative Analysis/check of Ayurveda Medicines.
3. Systemic distribution of Ayurveda Medicines to Ayurveda and Alternative Hospitals of Bagamati Province
4. Self-reliance in Quality Ayurveda Medicines
5. Research related to Herbs and Ayurveda Medicine
6. Promotion of Ayurveda System of Medicine
7. Use and promotion of local herbs for the financial benefit

Human Resources:

The Kendra was allocated 15 temporary posts during its establishment. Now, the center has the 16 permanent posts and a temporary post of sweeper as per the latest O&M survey. The human resource fulfillment during the fiscal year is given below:

Table 12.5 Situation of Human Resources in the Fiscal Year 2081/82

क्र. सं.	पद	तह	स्विकृत दरबन्दि	दरबन्दि संख्या	पदपूर्ति संख्या	कैफियत
१	प्रमुख आयुर्वेद अधिकृत	९/१०	स्थाई	१	१	
२	बार औषधि व्यवस्थापक	९/१०	स्थाई	१	१	
३	बार कन्सल्टेन्ट भेषज विज्ञ	९/१०	स्थाई	१	१	काजमा अन्य कार्यालय
४	आयुर्वेद चिकित्सक	८	स्थाई	२	२	
५	फार्मेसि अधिकृत	७/८	स्थाई	१	१	सुत्केरी बिदा
६	उत्पादन सहायक	५/६	स्थाई	१	१	
७	फार्मेसी सहायक	५/६	स्थाई	१	१	
८	मेकानिकल सुपरभाईजर	५/६	स्थाई	१	०	
९	सहायक /अधिकृत प्रशासन	५/६	स्थाई	१	१	
१०	सहायक / अधिकृत लेखा	५/६	स्थाई	१	१	
११	औषधि कुटुवा	-	स्थाई	३	२	
१२	स्वीपर	-	स्थाई	१	०	
१३	हलुका सवारी चालक	-	स्थाई	१	१	
१४	स्वीपर	-	अस्थाई	१	१	
	जम्मा			१७	१४	

Financial and Physical Progress

Table 12.6 Financial achievement of Current Budget of Fiscal Year 2081/82

क्र. सं.	नाम	बजेट (लाख)	खर्च रकम (लाख)	आर्थिक प्रगती (%)	भौतिक प्रगती (%)
१.	पारिश्रमिक कर्मचारी	२२.९३	१७.६६	७७.००	१००
२.	पोशाक	१.६	१.६	१००.०	१००
३.	महंगी भत्ता	३.८४	३.२१	८३.५४	१००
४.	कर्मचारीको बैठक भत्ता	०.९	०.८९	९९.६४	१००
५.	अन्य भत्ता	०.६९	०.६	८६.९६	१००
६.	योगदानमा आधारित निवृतभरण तथा उपदान कोष खर्च	१.२	०.०७	६.३१	१००
७.	योगदानमा आधारित बीमा कोष खर्च	०.६३	०.११	१७.७८	१००
८.	पानी तथा बिजुली	५.९७	५.९३	९९.३६	१००
९.	संचार महसुल	०.९	०.८६	९६.१३	१००
१०.	इन्धन (कार्यालय प्रयोजन)	२.०५	२.०४	९९.९४	१००

११.	सवारी साधन मर्मत खर्च	३.०	३.०	१००.०	१००
१२.	बिमा तथा नवीकरण खर्च	०.८	०.००	०.००	०.०
१३.	मेशिनरी तथा औजार मर्मत सम्भार तथा सञ्चालन खर्च	२.१	१.८८	८९.९९	१००
१४.	निर्मित सार्वजनिक सम्पत्तिको मर्मत सम्भार खर्च	२.०	१.८३	९१.५७	१००
१५.	अन्य सम्पत्तिहरूको संचालन तथा सम्भार खर्च	०.५	०.५	१००.०	१००
१६.	मसलन्द तथा कार्यालय सामाग्री	३.२८	३.२०	९७.६०	१००
१७.	इन्धन - अन्य प्रयोजन	०.९	०.२९	३३.१७	१००
१८.	पत्रपत्रिका, छपाई तथा सूचना प्रकाशन खर्च	१.९	१.५८	८३.५४	१००
१९.	करार सेवा शुल्क	५९.८४	५९.२०	९८.९४	१००
२०.	कार्यक्रम खर्च	१२.३	७.६३	६२.१०	१००
२१.	अनुगमन, मूल्यांकन खर्च	२.८८	२.८७	९९.९८	१००
२२.	भ्रमण खर्च	०.५	०.१५	३१.७०	१००
२३.	विविध खर्च	१.८८	१.८७	९९.९३	१००
२४.	औषधी खरिद खर्च	५६.०	५३.६९	९५.८९	१००
२५.	घर भाडा	९.०	९.०	१००.०	१००
	जम्मा	१९७.५९	१७९.७५	९०.९७	९६.०

Table 12.7 Financial achievement of Capital Budget of Fiscal Year 2081/82

क्र. सं.	कार्यक्रम/क्रियाकलाप	बजेट (लाख)	खर्च रकम (लाख)	आर्थिक प्रगती (%)	भौतिक प्रगती (%)
१	AIR HANDLING UNIT खरिद	७५	७१.४८	९५.३१	१००.०
२	RO PLANT खरिद	५	०.००	०.००	०.०
३	ट्याब्लेट पन्चिंग मेशिन खरिद	५०	४६.८०	९३.६०	१००.०
४	अस्पताल र चिकित्सालयको आवश्यकता र मागको आधारमा चिकित्सकीय औजार, उपकरण र मेशिन खरिद सपोर्ट	११	११.००	९९.९९	१००.०
५	फर्निचर तथा फिक्चर्स	०.५	०.५	९९.९९	१००.०
	जम्मा	१४१.५०	१२९.७८	९१.७२	८०.००

Table 12.8 Financial achievement of Federal Current Budget of Fiscal Year 2081/82

क्र. सं.	नाम	बजेट (लाख)	खर्च रकम (लाख)	आर्थिक प्रगती (%)	भौतिक प्रगती (%)
१.	कार्यक्रम खर्च	५.२५	३.०६	५८.४०	१००
	जम्मा	५.२५	३.०६	५८.४०	१००

Table 12.9 Summary of financial achievement of Fiscal Year 2081/82

क्र. सं.	बजेट उपशिर्षक	बजेट	खर्च रकम	आर्थिक प्रगती
१.	३७०००० १२३	१९७.५९	१७९.७५	९०.९७
२.	३७०००० १२४	१४१.५०	१२९.७८	९१.७२
३.	३७०९११३४३	५.२५	३.०६	५८.४०
	कुल जम्मा	३४४.३४	३१३.४६	९०.७८

Major Activities accomplished during the Fiscal Year 2081/82

Table 12.10 Major activities accomplished during Fiscal Year 2081/82

क्र. सं.	मुख्य कृयाकलाप
१	Tablet Punching Machine Set Installation
२	GMP को अवधारणा अनुरुप AHU को Installation
३	Quality Control – Analytical Laboratory Installation
४	१० प्रकारका अत्यावश्यक आयुर्वेद चूर्ण औषधिको उत्पादन तथा वितरण
५	औषधि उत्पादनका लागि आवश्यक जडीबुटीहरुको स्पेसिफिकेसन निर्माण
६	अत्यावश्यक आयुर्वेद औषधि मध्येका वटी कल्पना (Tablet Dosage form) को अनुज्ञापत्र आवेदन प्रकृया अन्तिम चरणमा
७	GMP परामर्श सेवा

Production of Ayurveda Drugs

The center has started its manufacturing activities from the Fiscal Year 2081/82 after we received the production license of the following 10 Ayurveda Drugs from the Department of Drug Administration

Table 12.11 Ayurveda Drugs Manufactured during Fiscal Year 2081/82

S. No.	Name of Drugs and packing size	Product Registration Number (DDA)	No of Batches	Quantity (kg)	Unit of Productions	Remarks
1.	Āmalaki Chūrna 100 gm	1810306155255	1	7	68	
2.	Ashwagandhā Chūrna 50 gm	1810307134749	4	350	2729	
3.	Avipatikara Chūrna 50 gm	1810306125751	9	950	18465	
4.	Bilwādi Chūrna 50 gm	1810307225844	1	50	911	
5.	Hingwāshtaka Chūrna 50 gm	1810308134213	2	150	886	
6.	Mahāsudarshana Chūrna 50 gm	1810308143736	1	50	906	

7.	Nimbādi Chūrna 50 gm	1810307135516	1	75	1419	
8.	Pushyānuga Chūrna 50 gm	1810308140033	1	50	957	
9.	Sitopalādi Chūrna 50 gm	1810307144135	4	350	6800	
10.	Triphalā Chūrna 50 gm	1810306162507	4	327	6096	



Ayurveda Drugs Manufactured by Ayurveda Aushadhi Utpadan Kendra, Chitawan

Issues, Action to be taken and Responsible authority

S. No.	Major issues	Solutions	Remarks
1.	Activities of the center being conducted from three different locations.	Arrange to conduct all tasks from one place	
2.	There is no administrative office in the current building.	The building within the complex currently being used by the Ayurveda and Alternative Hospital, Chitawan is to be handed over to the center.	
3.	The current manufacturing unit cannot produce all Essential Ayurvedic Drugs.	Allocate budget for the construction of extra floor to an existing building	
4.	There are insufficient storage rooms in the current building.	Allocate budget for storage room construction	
5.	There are no tools & spare parts for the maintenance of machinery.	Allocate budget for the purchase of Tools and Spare parts	

6.	Lack of unskilled workers to operate machinery and equipment	Create the post through ONM Survey or arrange for daily wages employees	
7.	No power backup	Budget allocation for the purchase of generator	
8.	Manufacturing period of Drugs extended due to Third Party Laboratory Test.	Establish and operate own Microbiological Laboratory	
9.	Chances of accidents during the operation of heavy machinery.	Make the necessary arrangements for Accident Insurance or Social Security Fund	
10.	Difficult to achieve goals only from regular office hours (10-5)	Shift wise duty arrangement	
11.	The formularies prepared by the center is not being printed	Allocate necessary budget for the printing	
12.	Lack of quality water for the production of quality drugs	Allocate sufficient budget for the installation of RO plant	

Future Plan

- To upgrade the Ayurveda Aushadhi Utpadan Kendra, Chitawan to meet the demand of Ayurveda Medicine of Ayurveda and Alternative Hospital of Bagamati Province.
- To manufacture all the different dosage of Ayurveda Essential Ayurveda Drug, add a floor or relocate to another location and purchase necessary machinery and equipment.
- To produce additional 18 Essential Ayurveda Drugs (Tablet, Bhasma and Churna).
- To build an In-House Lab; develop and expand it as the provincial reference lab for the quality analysis of Drugs.
- To train human resources of the center for the production of quality Ayurveda Drugs.
- To acquire land to expand the processing, production, storage, and distribution capacity of the center.

CHAPTER

13

EXTERNAL DEVELOPMENT PARTNERS

Organization	Major Thematic Area	Geographic Coverage	Major activities in FY 2081/82 (2024/25)	Contact Details
World Health Organization (WHO)	Health systems strengthening	Province and 13 districts	Supported the dissemination and implementation of the Health in All Policies implementation guidelines. The steering committee, chaired by the principal secretary and the coordination committee chaired by the secretary of the MoH organized and decided to incorporate major activities of the guideline in the annual program. It was circulated to all 119 LLGs. सबै-नीतिमा-स्वास्थ्य-कार्यान्वयन-निर्देशिका,-२०८० Supported to draft provincial population policy. Provided technical support to organize various consultation meetings, desk review, draft the policy, compile the inputs and documentation. It will be finalized and endorsed in the coming FY. Supported to finalize the health section of the second periodic plan (FY 2081/82-2086/87) of the province. Provided technical support to review the first periodic plan and supported to draft the logical framework of the second periodic plan. https://pppc.bagamati.gov.np/sites/ppc/files/2024-08/Second%20Periodic%20Plan_Bagamati_Final_CompleteSet.pdf Provincial EDPs meeting regularized, SRHR technical committee meeting regularized, and district-level public health coordination committee meeting supported and supported for strengthening the coordination and collaboration among the LLGs Provincial Annual Health Report of the FY 2080/81 published. Supported to draft of the report and publication of the report. District and provincial annual health review supported. Supported as a technical expert to develop provincial annual health policy and program, AWPB and annual health implementation guidelines. This was approved, implemented, and monitored. Provided technical support to develop the TOR/JD as per the approved O&M survey of the MoH. WHO provided technical support to draft the JD, facilitated the JD development workshops, and supported reviewing and revising it. It has almost been finalized and is nearing endorsement.	Hari Bhusal Provincial Public Health Officer bhusalh@who.int 9841497586

World Health Organization (WHO)	Health systems strengthening	Province and 13 districts	Provided technical support to draft the provincial health sector strategic plan 2082/83-2087/88 (2026-20230. Supported to develop a proposal for the special grant program, draft the program implementation guideline and provided technical support to implement the program. Supported to initiate Healthy City Initiative and provincial health facilitator model in the province Supported to review and revise SOPs, guidelines, etc	
	Vaccine Preventable diseases/ Immunization,	Province and 13 districts	Achieved cardinal surveillance indicators of AFP and Measles. District orientation on vaccine preventable disease was provided to / participants from 13 districts focusing to strengthen the VPD surveillance activities, Early VPDs case notification, detection, investigation including sample collection and transportation, where 648 health workers including medical doctors, lab officials and medical recorders were oriented. Sub -district Vaccine Preventable Disease Surveillance training provided to 3880participants including medical doctors' healthcare workers, lab personals and medical recorders Organized advocacy and interaction meeting with members of NEPAS on vaccine preventable disease surveillance in Kathmandu, Hetauda and Chitawan. 160 doctors were sensitized on VPDs, case identification and notification. Urban immunization strengthening workshop on capacity building of health workers of private sectors and medical colleges Mobilization of IFM for RI Monitoring and orienting FCHV on vaccine preventable diseases surveillance on cash definition and notification Provided technical support for VPD surveillance including outbreak investigation and response Provided tehncial support in various immunization and surveillance related activities Provided technical support during each AEFI cases reported. Periodically assess and monitor cold chain, vaccine and logistics at health facilities and vaccine stores Provided technical support for planning, implementation and monitoring of various immunization campaigns. Provided technical support to HD for update on NIP policies in PICC meetings, identify province-specific challenges, and mobilize local resources. Strengthened Polio Transition Plan Through Layered Advocacy	Dr Tara Baniya baniya@who.int 9855022765 Dr Sagar Ratna Shakya 9851031261 sakyas@who.int

	Health Emergency	Province and 13 districts	Rapid Response Committee (RRC) and Rapid Response Team (RRT) advocacy program started in Bagamati Province with the technical support of WHO and financial support of USAID. Provided technical support to updated the "Provincial health emergency and disaster preparedness and response plan" Strengthened command, coordination, and communication for health emergency and disaster preparedness and response at provincial level. Developed an improved surveillance system targeting diseases and outbreaks, particularly COVID-19 and Dengue and Cholera. Regularly tracked media coverage of significant disasters, public health emergencies, and other health-related events, producing daily media monitoring reports. Ensured accurate reporting and documentation of outbreaks and disasters. Improved hospital readiness and response for disasters and health emergencies. Enhanced coordination between hub and satellite Hospitals. Improved the data repository by gathering detailed information about the Rapid Response Teams (RRT) and Rapid response committees (RRC) established at the local and district levels.	
	NCD and Mental Health	Province and 13 districts	Strengthening of NCD & Mental Health Service Delivery Capacity-building of health workers on PEN, mhGAP, counselling, and NCD clinical protocols. Bagamati Kavrepalanchok Hypertension Care Cascade Initiative (BKHCCI) – Under Implementation with WHO Support Improving detection, diagnosis, the initiation of treatment, and follow-up of hypertension cases in communities and health facilities. Supporting data-driven decision-making through dashboard use, monitoring, and facility mentoring. Enhancing supply chain, reporting, and continuity of care across the cascade.	

			Province and 13 districts	Orientation to Responsible Media Reporting on Suicide Prevention Conducting media sensitization sessions to encourage ethical and responsible reporting practices. Reducing stigma, harmful narratives in regard to mental health and suicide. Ongoing mentoring, monitoring, and supervision of NCD, MH & Chief Minister Citizen Program (NCD Screening) Providing technical support to the districts and local levels for the effective implementation of NCD and MH activities. Ensuring quality in service provision, documentation, and following up on screened cases as per protocols. Identifying gaps, challenges, and providing on-site coaching to health workers. NCD- MSAP Pilot - SAFER Program & Brief Tobacco Intervention Evidence-based interventions to reduce harmful alcohol use and consumption of tobacco. Training of providers in brief intervention and counselling techniques. Documentation of learnings from pilot sites for scale-up in the province. Ongoing FCHV-Led Community-Based Hypertension Intervention in Sindhupalchok Empower FCHVs to conduct BP screening, follow-up, and community awareness activities. Strengthening early detection and linkage to care for high-risk individuals. Supporting behaviour change communication on diet, physical activity, and risk factors. Ongoing SIMH Program in Sindhupalchok & Rasuwa: Strengthening Integrated Mental Health Integration of mental health screening, counselling, and referral services in PHC settings Training of health workers in mhGAP, psychosocial support, and case management. Setting up functional referral pathways between community and higher-level facilities.	NCD and Mental Health	Dr. Anup Bikram B.C. NCD and Mental Health – Field Officer 9848026000 bca@who.int

United Nations Development Program (UNDP)	HIV and TB	HIV Program (10 districts) Kathmandu, Lalitpur, Bhaktapur, Makawanpur, Chitawan, Dhading, Nuwakot, Sindhuli, Kavrepalanchok and Sindhupalchok TB Program (7 districts) Kathmandu, Lalitpur, Bhaktapur, Makawanpur, Chitawan, Dhading and Kavre,	Implementation of Migrant program through Chitawan Sakriya Women Foundation (CSWF) in Chitawan Behavior Change Communication (BCC) service provided 50211 Migrant Community led HIV testing to 6347 Migrant Implementation of harm reduction program in people who use drugs through SPARSHA and RN women Behavior Change Communication (BCC) service provided to 4403 PWID/WWID Community led HIV testing to 1985 PWID/WWID Implementation of care and support program through National Federation of Women living with HIV and AIDS Implementation of Opioid Substitution Therapy (Methadone & Buprenorphine) through SPARSHA Key Activities of TB Program: Implementation of the below activities through Sub Recipients Sputum Courier Services and Contract Tracing of Index TB Cases (Drug Resistant and Drug Sensitive TB) DR TB Management and Childhood TB Management FAST approach implementation for TB case finding and infection prevention in major Hospital Active Case Finding (ACF) in vulnerable population using AI based X ray Public Private Mix (PPM) in private hospitals, pharmacy and private clinic Technical support in implementing red book activities of TB program Support to increase data quality of TB program	Rajesh Sah 9845034837 rajesh.sah@undp.org

Nick Simons Institute, Sanepa Lalitpur	Rural Hospital Strengthening through Training, Curative Service Support, Hospital Strengthening and Research, Advocacy and Monitoring	All Seven Provinces	Training Short and long Training to Health Care workers Biomedical Maintenance Engineering Training Clinical Orientation Diploma in Biomedical Equipment Engineering CTEVT affiliated course Scholarship opportunities for healthcare workers in MDGP, Bachelor's in Midwifery Sciences, and Anesthesia Assistant Strengthening and support to accredited training sites Curative Services Support Services (CSSP) Human Resources Support Essential Equipment Support Capacity development of clinical staffs Continue medical education for health care workers Living support for staff Hospital Strengthening Program Resource person development for conducting MSS Endorsed MSS tools for two specialized hospitals (Cardiothoracic & Vascular Service Hospital and Orthopedic & Trauma Service Hospital). MSS implementation Research, Advocacy and Monitoring Research and studies are being conducted Published research articles in different national and international journals along with policy briefs Conducts yearly Rural Health Workers Conference, completed the 13th Rural Health Workers Conference	Dr Archana Amatya Executive Director Nick Simons Institute Sanepa, Lalitpur Box 8975, EPC 1813 Ph: 01-545 1978 www.nsi.edu.np Janardan Pathak HSP Officer: Bagamati Province 9843712846 janardan@nsi.edu.np

UNICEF	Immunization and Cold Chain	Bagamati Province	Support the provincial government in the sustainability of the Full Immunization Declaration of all the districts of Bagamati Province. Support the provincial government and local government in routine data analysis, presentation, and quality assurance. Strengthening capacity of provincial and local governments on immunization information management, analysis, and reporting. Analyze data entered in HMIS system and make reports for the required error in the data and provide recommendation. Strengthening capacity of provincial and local governments on immunization information management, analysis, and reporting. Support the establishment of health performance dashboard in local government. Monitoring and assessing the functionality of the dashboard regularly. Provide technical support to federal, provincial/district vaccine, LLG stores to strengthen effective vaccine management. Technical support to ensure CCEOP deployment plan is timely and accurate and monitor functionality after installation and commissioned. Technical support to strengthen capacities of health workers at provincial and local level on effective vaccine management and skills transfer support in vaccine forecasting, on- time and accurate recording and quality reporting. Establish and strengthen coordination between central and provincial medical stores.	Pratibha Shahi UNV National Specialist – Health Data and Information Tech 9841144125 pshahi@unicef.org Hem Raj Joshi Cold Chain Specialist 9849423684 hejoshi@unicef.org
FHI 360 Nepal Office/ EpiC Nepal – HIV (Supported by the U.S. Department of State (DOS) and the U.S. President's Emergency Plan for AIDS Relief (PEPFAR).	Thematic Area: HIV and AIDS Beneficiary groups: People living with HIV (PLHIV) and at-risk adults.	Seven districts Kathmandu Lalitpur Bhaktapur Makawanpur Chitawan Dhading Kavrepalanchok	2,244 HIV self-test kits were distributed. 3,957 individuals were screened for HIV. 192 people were supported for HIV positive confirmation at antiretroviral therapy (ART) sites. 603 people living with HIV (PLHIV) were supported for enrollment in ART. 5,391 PLHIV were supported for viral load (VL) testing and had a suppressed VL result (<1000 copies/ml) within the past 12 months. 3,372 PLHIV received care and support services in the community. 616 individuals received HIV pre-exposure prophylaxis (PrEP) service.	Bhagawan Shrestha Country Representative, FHI 360 Nepal Office E: bhshrestha@fhi360.org Salina Joshi Provincial Coordinator, E: sjoshi@fhi.org

FHI 360 Nepal Office/ EpiC Nepal- Procurement and Supply Chain Management (PSM) (Supported by the U.S. Department of State (DOS)	Support for strengthening PSM: Supply Chain Management Working Group (SCMWG), forecasting and quantification, warehousing and inventory management, electronic Logistics Management Information System (eLMIS) including migration to Public Assets Management System (PAMS V2)	All health facilities within the province which previously operated eLMIS and currently uses PAMS V2 system. PAMS– PAMS is a digital platform developed and managed by the Financial Comptroller General Office (FCGO) to streamline and standardize public financial and asset management across government entities.	Supported end users of the eLMIS platform, addressing orientation needs, master data management, technical issues and supply chain concerns raised through the support desk, Provided technical support to roll out and conduct refresher training for the Service Delivery Points (SDPs) rollout of eLMIS. Supported Provincial Health Logistics Management Center (HLMC), Hetauda in organizing Supply Chain Management Working Group meetings and Provincial Level Quarterly Review Meeting. Technical assistance and support to the HLMC, Public Health Offices, Local Level Governments and Service Delivery Points (SDPs) on the procurement and supply chain management. Material handling equipment support to the Local Level Government (LLGs) for good storage of health commodities (3 LLGs). Supported in organization of technical working group meetings including preparation of a Scope of Work (SoW), outlining the necessary new feature enhancements and the plan for data migration to bolster supply chain management within PAMS V2.	Bhagawan Shrestha Country Representative, FHI 360 Nepal Office E: bhshrestha@fhi360.org Ram Dev Adhikari LMIS/ PAMS Support Coordinator E: radhikari@fhi360.org

FHI 360 Nepal Office/Fleming Fund Country Grant for Nepal (Supported by UK Department of Health and Social Care)	Antimicrobial resistance (AMR) surveillance system strengthening	Working districts Kathmandu Lalitpur Chitawan	Technical support in multisectoral AMR steering committee, national technical committee and sectoral technical working groups (TWG) meetings. Support Department of Livestock Services (DLS) in forming antimicrobial stewardship committee and antimicrobial stewardship (AMS) action plan Support to prepare, update, revise AMR surveillance protocol, bacteriology standard operating procedures (SOP), protocol for AMR and antimicrobial use (AMU) surveillance in poultry, dairy and aquaculture, joint AMR surveillance. Initiation of Joint AMR surveillance Farm based AMU survey in poultry Support to prepare and finalize the yearly AMR newsletter for National Public Health Laboratory (NPHL) Global Antimicrobial Resistance and Use Surveillance System (GLASS) reporting of AMR. Workshop for clinicians on quality laboratory-clinic interface (LCI) and antimicrobial stewardship, Orientation, conduction, and dissemination of the AMU Point Prevalence Surveillance (PPS)survey. Orientation on AMU software for manufacturers/importers (human and veterinary). Support to develop and update various Laboratory Information Management Systems (LIMS) Department of Drug Administration (DDA), Ministry of Health and Population (MoHP), hospitals, Central Veterinary Laboratory (CVL), Department of Food Technology and Quality Control (DFTQC) and Department of Environment (DoE). Technical support to DDA in Antimicrobial Consumption (AMC) data collection, compilation, cleaning, review, and validation for GLASS-AMC reporting. Procurement and supply of equipment and consumables to AMR surveillance sites. Support and participation in World AMR Awareness Week (WAAW). Supported two hospitals in prescription audit. Supported DFTQC for active AMR surveillance in yogurt Establishment of bacteriology laboratory at the DoE Supported DoE in AMR surveillance river water and influents from hospitals and slaughterhouses	Bhagawan Shrestha Country Representative, FHI 360 Nepal Office E: bhshrestha@fhi360.org Dr Ritu Amatya, Project Director FFCGN E: ramatya@fhi360.org

Plan International Nepal (Partners: Human and National Development Society (HANDS Nepal) and Janjati Society Development Program (JSDP), Sindhuli)	ECD-Including Care of Children	Kamalamai-2, Marin RM, Sunkoshi RM 6 and 7, Golanjor RM ward no. 5 and 7	Knowledge and skills on nurturing caring of children has been increased to 1,276 people (Female: 949 & Male: 327) of 5 wards of Sunkoshi (total: 341, female: 297 & male: 62) and Golanjor (total: 490, female: 309 & male: 181), and Kamalamai (total: 445, female: 361 and male: 84) through delivering Parenting education (PE) sessions in 43 groups and nurturing care and early stimulation to 18 male groups. As result, there is improving condition good health of children, adequate and appropriate food and nutrition to children and pregnant/lactating women, responsive caregiving and opportunities for early learning. To deliver these sessions and health mother group meeting, at least 290 FCHV and health workers were capacitated on nurturing caring framework. Enhanced nutrition services of health institution/LG consisting assessment of nutrition, and MAM/SAM care management though response actions for child nutrition in Marin and Tinpatan RM, Dudhauli,and Kamalamai municipalities. Nutrition assessments covered to 3,237 children from Marin, Dudhauli, and Kamalamai, in which 8 SAM and at least 69 MAM cases were identified and supported for SAM/MAM management including a 1 critical SAM was referred to the Janakpur Rehabilitation Center. Strengthened for functionality of Health Mothers' Groups. PE and health mothers group support has significant improvement of health services especially in ANC, PNC and immunization. Supported to establish stimulation corner in Sirthauli Health Post of Dudhuali, which improved a child friendly services at health facilities Golanjor RM finalized Local ECD strategies, whereas draft of the ECD strategy was prepared in Dudhauli municipality and Marin rural municipality	Bed Prasad Bhurtel, Program Specialist, Plan International Nepal, 9801241248 bedprasad.bhurtel@plan-international.org Ramanand Baitha, Senior Project Coordinator, HANDS Nepal, 9845166365 ramanand.baitha@handsnepal.org Krishna Kumar Rai, Project Coordinator JSDP, Sindhuli 9842906125 krishna_rai@jsdpsindhuli.org.np

	SRHR	Kamalamai Municipality, Dudhauli Municipality, Marin RM, Sunkoshi RM, Golanjor RM and Tinpatan RM	Supported schools and health facilities for SRHR related service through establishing MHH room in four school, 10 Adolescent friendly information corners (AFIC) in the Schools and two Adolescents friendly Service (AFS) in health institutions. Similarly, 20 teachers (Female: 12 and Male: 8) and 16 health workers (Female: 10 and Male: 6) were capacitated on comprehensive sexuality education and government's SRHR training package including inclusive and SRHRiE respectively. These supports strengthened school and health facility capacities to deliver adolescent-friendly services. Hence, adolescents' girls and boys are receiving improved SRHR services with confidentiality as well as right information on SRHR in schools. Total 1,301 people from five LGs received outreach services of SRHR, in which at 38 VIA-positive and 55 uterine prolapse cases were identified in 10 SRHR camps in rural communities. Outreach of SRHR service improved early detection and referral of reproductive health issues in rural area including VIA-positive and uterine prolapse cases. Increased proper understanding on SRHR information among 1,993 adolescents' and parents (Female: 1,413 and Male: 580) through 68 peer to peer sessions SRHR to adolescent including development of 68 trained local resource person on SRHR.	

FAIRMED Foundation Nepal (Swiss Development Agency) Implementing Partner: Mahila Atma Nirbharta Kendra (MANK) Sindhupalchok	Maternal and Neonatal Health (MNH) Neglected Tropical Diseases (NTDs) Disability Inclusiveness Development (DID) Health Emergency Cross cutting themes: Health System Strengthening (HSS) GESI	All 12 Rural/ municipalities of Sindhupalchok: Melamchi Municipality Barhabise Municipality Chautara Sangachokgadhi Municipality Helambu Rural Municipality Paanchpokhari Rural Municipality Indrawati Rural Municipality Balephi Rural Municipality Sunkoshi Rural Municipality Lisankhupakhar Rural Municipality Tripurasundari Rural municipality Bhotekoshi Rural Municipality Jugal Rural Municipality	Support infrastructure and equipment in health facilities - 6 PHC_ORCs, 2 birthing centers Organize skin camp for active case detection of leprosy cases in collaboration of municipalities – 2 camps (120 screened cases) Contact tracing of leprosy cases – 14 suspected, 84 contacts 2 Days' Basic NTD training to FCHVs – 30 FCHVs Implementation of MSS at health post – 16 Health Facilities Skilled Birth Attendant (SBA) Training to 12 nursing staff 3 Days Basic Training to Rapid Response Team – 38 Health Workers Rural Ultrasound Training (21 Days) – 1 nursing staff 3 Days' MNH Update Training – 18 nursing staff Comprehensive Leprosy Training (CLT) – 10 HWs Engagement of Deputy Mayor for sensitization on Health City Concept – 5 Deputies Community awareness program on MNH and social security – 324 program reaching more than 600 mothers and other community people Support NTDs affected and Persons with disability with vocational training and seed fund – 42 Support needy PWDs with assistive devices and cost of travel for medical rehabilitation – 129 (Assistive Devices – 39, Travel cost – 90) Construction of Temporarry shelter with toilet for disaster affected – 30 temporasty shelters Distribution of relief materials to disaster affected families – 179 families, 942 family members Renovation of disaster affected Health Facility – 2 HFs Activities completed in FY 2082/83 till the month of Kartik 2082 SBA Mentor Training – 8 SBA nurses Rural Ultrasound Training Refresher (5 Days) – 2 nursing staff Basic Training to Female Community Health Volunteers (FCHVs) – 61 FCHVs Health Facility Operation and Management Training of Trainers – 8 HWs of Sindhupalchok Health Post - Minimum Service Standards (HP-MSS) ToT – 10 HWs Support infrastructure and equipment in health facilities – 18 birthing centers, PHC_ORC – 4 3 Days' NTDs Training to health workers – 112 HWs	FAIRMED: Dambar Singh Gurung Team Leader -FAIRMED dambar.gurung@fairmed.ch MANK: Krishna Bahadur Gurung Programme Manager - MANK mank.gurung@gmail.com

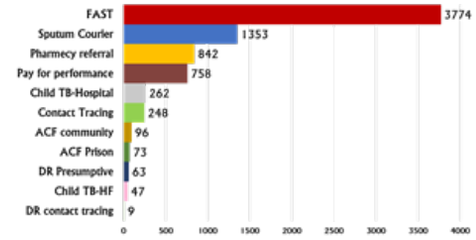
UNICEF/EU	Nutrition	Whole province (119 Palika) Intensive Program-38 Palika, Regular-119	Nutrition Friendly Local Government (NFLG) Promotion Program Income Generation Grant to Golden Thousand Days Woman from Poor and Marginalized community. Social Behavior Change (SBC) activity to improve nutrition status Nutrition sensitive and Specific Activity (WASH, Woman and Child, Agriculture and livestock, Education, and Governance) Nutrition Friendly Model village program MSNP Facilitator Mobilization	Sitaram Rimal MSNP Province Coordinator Phone: 9851183426 Email: msnpbagamati@gmail.com
Médecins du Monde (MdM) France	Environment and Health Occupational Health and Safety	Selected Municipalities/ districts of Bagamati Province: Kavre (Dhulikhel Municipality and Mandandeupur Municipality) Ramechhap (Likhu Tamakoshi RM) Sindhupalchok (Panchpokhari Thangpal RM)	104 farmer leaders (Female: 60, Male: 44) trained on OHS-integrated Behavior Change Communication (BCC) TOT to promote health and safety in agriculture, including pesticide risk mitigation. 15 OHS-related health topics developed and published as posters and flipcharts to support farmer leaders, FCHVs and health workers to led community-level BCC sessions to promote farmers OHS. (Till October 2025: 192 BCC sessions conducted, reaching 3,047 farmers (Female: 2424, Male:623) cumulatively. 200 PPE sets (gloves, boots, hats, chemical-resistant clothing, safety glasses, and hygiene items) distributed to farmers based on local needs. 87 community members/farmers (Female: 55, Male: 32) trained in Basic Emergency Response and First Aid, with three emergency response kits distributed to three wards. 30 health workers attended a three-day OHS training in partnership with the Health Training Center–Bagamati Province. One-day workshop on “Pesticides and its Consequences on Public Health” held on 29 December 2024 in Dhulikhel. 46 Female Community Health Volunteers (FCHVs) mobilized after the capacity building sessions on OHS and pesticide risks mitigation. Comprehensive assessments carried out in eight health facilities to identify gaps and strengthen OHS-integrated primary health service delivery.	Program Focal Person Mahesh Prasad Joshi Program Manager pm.nepal@medecinsdumonde.net Nepal Mission Focal Point Nirmal Dhakal General Coordinator genco.nepal@medecinsdumonde.net

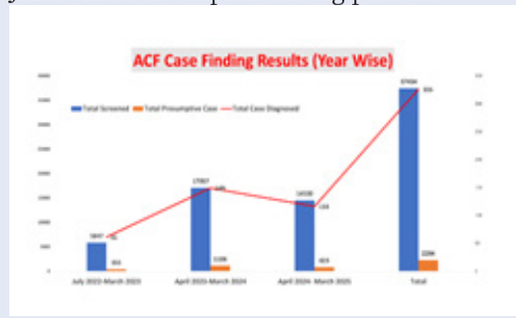
AIDS HEALTHCARE FOUNDATION NEPAL	Thematic Area: Health , HIV and AIDS – "Sustaining the Gain", strengthen HIV prevention, testing, treatment and care services at ART clinics of Nepal (The main objective of the project is to support Government of Nepal (GoN) in meeting sustainable development goal (SDG) through scaling up and delivering quality HIV treatment and care services)	National Center for AIDS and STD Control (NCASC) is one of the main implementing partners of AHF Nepal from government side. Bagamati Province/4 districts (Teku and Bir Hospital – Kathmandu, Bharatpur Hospital – Chitawan, Hetauda Hospital – Makawanpur and Sparsha Nepal Lalitpur)	Total # of condom distribution (LOVE Condom): 98,945 Total # of HIV testing and Counselling, Positive diagnosed, Positivity from static clinic: 4,980 Tests/459 Positive/9.22% Positivity Total # of HIV testing and Counselling and Reactive cases from CLT: 2,950 Tests/87 Positive/2.95% Positivity Percentage of HIV Diagnosed clients Linked to ART service: 97.1% # of events to celebrate special Days to promote prevention & utilization of services: 7 (WAD, ICD, WTB IMHD, IWD, IND, IDGC) Total # of active PLHIV at ART clinics (Not On ART and On ART): 5,297 Total # of Active PLHIV on ART: 5,282 (99.72%), # of Totally New Enrollment at ART Clinics: 504 Total # of PLHIV eligible for Viral Load test: 5,090 Total # of PLHIV get Viral Load test result: 4,597 (90.31% among eligible) Percentage of PLHIV Virally Suppressed: 97.43% (among tested) % of PLHIV On ART enrolled on Free Health Insurance: 91.41% % of clients with confirmed TB diagnosis among total active PLHIV: 1.15% Conducted CMT, CLT Training, CME, CES, QI-TWG Reached & Supported for Transportation: 1,526, Lab investigation: 1,199, Food: 1,635, Medicine: 922 & Complicated case management 81 to poor clients	DIVYA RAJ JOSHI (CPM) & KRISHNA HARI SAPKOTA (Sr. PC) Damodar Marga, Thasikhel, Lalitpur-14, Bagamati, Nepal GPO Box: 10377, Kathmandu. Nepal TEL +977-01-5193493/ 9855082254

AIDS HEALTHCARE FOUNDATION NEPAL	Thematic Area: Health , HIV and AIDS – "Sustaining the Gain", strengthen HIV prevention, testing, treatment and care services at ART clinics of Nepal (The main objective of the project is to support Government of Nepal (GoN) in meeting sustainable development goal (SDG) through scaling up and delivering quality HIV treatment and care services)	National Center for AIDS and STD Control (NCASC) is one of the main implementing partners of AHF Nepal from government side. Bagamati Province/4 districts (Teku and Bir Hospital – Kathmandu, Bharatpur Hospital – Chitawan, Hetauda Hospital – Makawanpur and Sparsha Nepal Lalitpur)	Total # of condom distribution (LOVE Condom): 98,945 Total # of HIV testing and Counselling, Positive diagnosed, Positivity from static clinic: 4,980 Tests/459 Positive/9.22% Positivity Total # of HIV testing and Counselling and Reactive cases from CLT: 2,950 Tests/87 Positive/2.95% Positivity Percentage of HIV Diagnosed clients Linked to ART service: 97.1% # of events to celebrate special Days to promote prevention & utilization of services: 7 (WAD, ICD, WTB IMHD, IWD, IND, IDGC) Total # of active PLHIV at ART clinics (Not On ART and On ART): 5,297 Total # of Active PLHIV on ART: 5,282 (99.72%), # of Totally New Enrollment at ART Clinics: 504 Total # of PLHIV eligible for Viral Load test: 5,090 Total # of PLHIV get Viral Load test result: 4,597 (90.31% among eligible) Percentage of PLHIV Virally Suppressed: 97.43% (among tested) % of PLHIV On ART enrolled on Free Health Insurance: 91.41% % of clients with confirmed TB diagnosis among total active PLHIV: 1.15% Conducted CMT, CLT Training, CME, CES, QI-TWG Reached & Supported for Transportation: 1,526, Lab investigation: 1,199, Food: 1,635, Medicine: 922 & Complicated case management 81 to poor clients	DIVYA RAJ JOSHI (CPM) & KRISHNA HARI SAPKOTA (Sr. PC) Damodar Marga, Thasikhel, Lalitpur-14, Bagamati, Nepal GPO Box: 10377, Kathmandu. Nepal TEL +977-01-5193493/ 9855082254
			Conducted Stakeholder meetings, D/LPAC and CPAC Meetings as relevant Shared the monthly, Semi-Annual & annual Program Progress reports to MoHP, SWC, NCASC, HD and other partners & government line agencies Conducted Physical Data Audit & Testing Data Review Conducted Health Facility Assessment Conducted Data Quality Assessment in ART sites Completed Mid-Term Evaluation of current project Goat Farming support: 2, Advance level Beauty Parlor Training: 1, Mural painting program-6, and IDGC-2	www.ahf.org| www.aidshealth.org/ divya.joshi@aidshealth.org/ krishna.sapkota@aidshealth.org

Marie Stopes International (MSI)	Sexual and Reproductive Health (Service Delivery) Social marketing Public Service Strengthening	Kathmandu,Lalitpur, Chitawan, Nuwakot, Sindhuli	Projects and Program: Regular Program- Kathmandu, Lalitpur, Chitawan MS Ladies Project- Sindhuli and Nuwakot (till 2026 AD) Marie Stopes International is supporting for SRHR service delivery at the different parts of Nepal. The Outcomes of the regular program from regular program and Projects of the fiscal year 081/082: Safe Abortion Services (MA and MVA): 5,699 Minilap Service: 111 Vasectomy Service: 194 IUCD Insertion: 892 IMPLANT Insertion: 2,665 Depo Service: 513 OCP: 4,393 VIA Test: 3,025 STI Management: 1,472 Fertility consultation: 16 Also, Sayana Press Review, Monitoring Review and Monitoring the activities of implementation of Sayana Press at Sindhuli and Lalitpur. Tentatively: 50 Government staffs are involved in the program, supported by UNFPA project. Marie Stopes is operating the toll free hotline number 1143, provided by NHEICC. In the fiscal year 081/082, 6617 individuals were provided sexual and reproductive health counseling through hotline number.	KP Upadhyay Sr. Advisor kp.upadhyay@mariestopes.org.np 9851070208 Kumar Acharya Governance and Compliance Manager kumar.acharya@mariestopes.org.np 9851195598

Birat Nepal Medical Trust (BNMT) Nepal	Tuberculosis (TB Preventive Therapy)	Chitawan	Prevent TB to END TB (3HP)- Rotary/BNMT,UK: Duration of the project: March 2025 to February 2027 (2 years) Target Beneficiaries: Household contacts and high-risk individuals for latent TB infection, health care providers. Partners: NTCC, HD, PPHL, Hospitals, Rotary mid-town Kathmandu, Public Health Offices, Local Palika and TB Partners. Human Resources: 3 (PPC-1 and Fied Superviors-2) Goal: Providing 3HP therapy to 1500 eligible high risk individuals in Chitawan (1000) and Pyuthan (500) Districts integrated with National TB program Key Interventions: Capacity building with health workers on TB preventive therapy (TPT) Household screening of PBC cases TST (Mantoux) Test, X-ray, Pregnancy test and Doctor Assessment TPT (3HP) initiation Result/Outcome: A total of 33 people with latent TB have been enrolled in TB preventive therapy. 93 people took the Mantoux test to check if they had Latent TB infection. Out of them 46 were found to have Latent TB infection. Among them, 33 had normal chest X-rays and were healthy enough to start the 3HP medicine to stop TB from becoming active.	Gyanendra Shrestha National Program Coordinator 9852023919 Lazimpat, Kathmandu gynanendra@bnmt.org.np Ram Narayan Pandit Provincial Program Coordinator 9844054354 PHO-Chitawan ram.pandit@bnmt.org.np

Japan-Nepal Health and Tuberculosis Research Association (JANTRA)	Tuberculosis	Bhaktapur, Chitawan, Dhading, Kathmandu, Kavre, Lalitpur and Makawanpur	Global Fund-TB program  Early TB case notification through sputum collection and transportation in the hard-to-reach population, Contact tracing of Drug resistance and Drug sensitive TB patient TB screening of children at major hospital and referral of malnourished children, ARI children in the hospital Identification, referral and diagnosis of DR presumptive and contact tracing Screening and Diagnosis of TB in major hospitals with FAST Strategy, pay for performance for private doctors, TB case finding from a referral of pharmacy Active case finding in risk and vulnerable populations including Prison Tuberculosis preventive therapy	Ram Sharan Gopali 9841896531 Subidhnagar, Koteshwor, Kathmandu jantra@ntc.net.np 01-5104601

Japan-Anti Tuberculosis Association (JATA)	Tuberculosis	Kathmandu and Lalitpur	JANTRA as an implementing partner  Active TB case finding using the ultra- portable digital chest x-ray in marginalized, vulnerable population Training to medical doctors on chest X-ray reading Orientation on active case finding to all the staff members working in Urban Health Clinics, mobilize local volunteers, Conduct TB awareness campaign, Advocate clinic management committee and elected members on National Tuberculosis Control Programme, Develop/print IEC materials to increase TB awareness and minimize TB related stigma and discrimination Develop SOP to maintain the quality of the project interventions and standards	
KOSHISH	Promoting mental health, psychosocial support, and social inclusion for people with mental health and psychosocial disabilities	Bagamati Province HP-Advocacy Project (Hetauda Sub-Metropolitan & Bhimphedi RM)	1 Workshop 2. issued based advocacy and follow up 3. Peer support group meeting. 4. Day celebration. 5.Livelihood support for right holder 6. Coordination and collaboration meeting with stakeholder. 8. Meetings and seminars with bureaucrats of different Ministries of Bagamati Province. 9. Delegations. 10.Advocacy Campaigns 11. Advocacy skills training for the self-advocate 13. Federal-level workshop with policy and decision-makers.	Sunira Lama Advocacy Officer Bagamati Province Sunira.lama@koshish.org.np 9768445204

	Improving mental health and psychosocial well-being among vulnerable communities in Nuwakot and Rasuwa (Rupantaran)	Bagamati Province (Nuwakot –Bidur Municipality- 3,5,7,13,,Panchakanya RM: 1,2,3,4,5, & Likhu RM 1,3,5 and Rasuwa- Kalika RM: 1,3	1.Formation of Peer Support Group and Self Help group and their monthly meeting 2. Capacity Building of SHG Member on Leadership and group management, 3. Individual support for persons with mental health issues to government entitlement 4. Joint orientation to right holders and duty bearers on the provision of rights and entitlements 5. Follow-up lobby and advocacy meetings of SHG with duty bearers on rights and entitlements 6. Counselling services from local health facilities. 7. Day Celebration (world Suicide Prevention Day, World mental Health Day and World Disability day) 8. Orientation to social leaders and traditional healers & Refresher 9. Orientation to adolescent girls and boys at school on psychosocial wellbeing and suicide prevention 10. Orientation to teachers on MHPSS 11. Training to the teachers (mental health focal person) (30 teachers from 16 school) 12. Extracurricular activities at 16 schools. (4 school in each pallika) 13. Orientation to local government on provision of Mental Health and psychosocial disability. 14. Rapid assessment of National Mental Health Strategy and Action plan 2077 (Ongoing and final report to be drafted). 15. Capacity building of FCHVs on identification and referral of MH issues.	Prabin Shrestha Project Coordinator Nuwakot Office prabin.shrestha@koshis.org.np 9763682682





Bagamati Province Government
Ministry of Health

Health Directorate

Hetauda, Nepal