ANNUAL HEALTH REPORT

FY 2080/81 (2023/24)

Government of Bagamati Province

Ministry of Health

Health Directorate

Hetauda, Nepal

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Ministry of Health

Kiran Thapa Magar
Hon'ble Minister

Hetauda, Nepal

Message

It is with great pride and immense satisfaction that I present the Health Annual Report for the fiscal year 2080/81. This report highlights the remarkable progress, achievements, and challenges faced by the health sector throughout the year. It serves as a testament to our unwavering commitment to providing quality, accessible, and equitable healthcare services to all citizens.

Over the past year, the health sector has witnessed significant improvements in service delivery, infrastructure development, and the implementation of various public health programs. The dedication of our healthcare professionals, collaborative efforts of stakeholders, and the unwavering support of the community have been instrumental in achieving these milestones. The report reaffirms the Ministry's dedication to transparency, accountability, and evidence-based policymaking. It presents an in-depth analysis of health service delivery, identifies existing challenges, and outlines key focus areas for enhancement, serving as a vital tool for strategic planning and policy formulation.

Detailed information on disease burden, service utilization patterns, and healthcare delivery performance is included, offering critical data to support informed decision-making and policy interventions. This report represents a collective effort to strengthen the healthcare system and improve the overall health outcomes of the people in Bagamati Province.

My heartfelt gratitude goes to the Health Directorate, Bagamati Province, and all individuals involved in the meticulous preparation of this report. I would also like to extend special thanks to our health development partners for their support and invaluable contributions toward enhancing healthcare services and improving the health status of the people in Bagamati Province.

Together, let us continue to work towards building a resilient and inclusive health system that leaves no one behind.

Kiran Thapa Magar
Minister

Government of Bagamati Province

Ministry of Health

Ref.No.:

Hetauda, Nepal

Message

With immense pride, we present the Annual Health Report for FY 2080/81, issued by the Health Directorate, Bagamati Province. This report consolidates the wide array of health programs and initiatives carried out during the year, highlighting significant milestones and progress achieved in enhancing public health services across local and provincial domains.

The document provides an in-depth review of key health metrics, emerging health trends, challenges faced, and future opportunities within the healthcare system of Bagamati Province. The accomplishments outlined reflect our unwavering commitment to realizing the objectives set forth in national and provincial health policies. Furthermore, the report serves as a strategic blueprint, identifying areas in need of intervention, setting priority actions, and tracking performance against health targets.

Despite these remarkable achievements, the sector continues to face challenges, including the rising burden of non-communicable diseases, gaps in health infrastructure, and the need for sustainable financing. The Ministry remains committed to addressing these issues through evidence-based policies, strengthening partnerships, and ensuring equitable access to health services for all, particularly vulnerable populations.

This report is the result of collaborative efforts from various institutions under the Ministry, whose dedication and hard work have been instrumental in advancing the health agenda. We express our sincere gratitude to all stakeholders, including development partners, health workers, and communities, for their unwavering commitment and contributions to the health sector.

Finally, I extend my heartfelt appreciation and congratulations to the Director of the Health Directorate, the Annual Report Preparation Committee, and all contributors whose dedication and hard work led to the successful publication of this comprehensive report.

Dr. Sumitra Gautam
Province Secretary
Ministry of Health, Bagamati Province

Government of Bagamati Province

Ministry of Health

Health Directorate

Hetauda, Nepal

FOREWORD

It is with great pride that I present the Annual Health Report of the Health Directorate, Bagamati Province, for the fiscal year 2080/81. This annual report is one of the outcomes of the annual performance review workshops conducted at various levels. It provides a comprehensive overview of the province's health programs and activities, offering critical insights into achievements, persistent challenges, and opportunities for advancement. The report highlights the collective efforts of government institutions, private healthcare facilities, and External Development Partners (EDPs) in delivering essential health services across the province.

The facts and figures presented in the report are based on the Health Management Information System (HMIS) and other health sector reporting platforms, supplemented by annual performance reviews across various institutions. It delivers detailed information on health service coverage, program achievements, and trends over the past three years. By leveraging evidence-based insights, the report serves as a vital resource for policymakers, health authorities, and stakeholders to identify priority health needs, optimize resource allocation, and design targeted interventions.

The commendable implementation of diverse health programs is the result of the unwavering dedication of program officers, health workers, and Female Community Health Volunteers. Their tireless contributions, especially in remote and underserved areas, have been instrumental in enhancing public health outcomes. While acknowledging significant achievements, the report emphasizes the need for sustained efforts to bridge existing gaps and address challenges in alignment with the National Health Policy 2076 and the Nepal Health Sector Strategic Plan 2079/80 – 2087/88.

In the end, I extend my profound gratitude to the Honorable Health Minister, Kiran Thapa Magar, and the Secretary of the Ministry of Health, Dr Sumitra Gautam, for their visionary leadership and steadfast guidance in advancing the health sector in Bagamati Province. My heartfelt appreciation goes to the annual report preparation committee, the Health Directorate team, and all individuals who contributed to this report's preparation. I sincerely acknowledge the invaluable technical support provided by the UNICEF in the report's production and publication.

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Dr Narendra Kumar Jha

Director

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ACRONYM

AHR	Annual Health Report
ALOS	Average Length of Hospital Stay
AMR	Antimicrobial Resistance
ASRH	Adolescent Sexual and Reproductive Health
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
DRTB	Drug-resistant Tuberculosis
EHCS	Essential health Care Services
eLMIS	Electronic Logistic Management Information System
EWARS	Early Warning and Reporting System
FCHVs	Female Community Health Volunteers
FP	Family Planning
FY	Fiscal Year
ICD	International Classification of Diseases
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
NCDs	Non-Communicable Diseases
NDHS	Nepal Demographic and Health Survey
NTDs	Neglected Tropical Diseases
OCMC	One Stop Crisis Management Centre
OPD	Outpatient
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 Diseases
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 49.8% are male and 50.1% 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 2080/81. The report has been developed based on the data compiled from DHIS2/HMIS and presentations of 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 16% in FY 2080/81 compared to FY 2079/80. The MR2 coverage in FY 2080/81 was 105.3%, which is lower than the 110.1% recorded in FY 2079/80. However, the percentage of fully immunized children in Bagamati Province increased to 95.8% in FY 2080/81 from 88% in FY 2079/80. Among the districts, Lalitpur reported the highest coverage at 125.7%, followed by Kavrepalanchok with 119.3% fully immunized children.

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

Community Based Integrated Management of Neonatal and Childhood Illness (CB IMNCI) program aims to improve newborn and child survival promoting healthy growth and development. The program targets the problems associated with under five children which includes comprehensive treatment those diseases viz. Pneumonia, Diarrhea, Malaria, Measles and Malnutrition. Likewise, it also addresses the major problem of sick newborn such as birth asphyxia, bacterial infection, jaundice, hypothermia, low birth weight, counseling of breastfeeding. CB-IMNCI program is guided by vision 90 by 2030

viz. 90% institutional delivery, 90% newborn have chlorohexidine gel applied into umbilical stump, 90% under-5 children with diarrhea are treated with ORS and Zinc and 90% of the under five children with pneumonia get the treatment with appropriate antibiotics. In FY 2080/81, the incidence of Pneumonia per thousand under 5-year children in Bagamati province was slightly increased from 32.3% (FY 2079/80) to 32.7%. The incidence of diarrhea per thousand under 5-year children in Bagamati province has increased to 79.6% in FY 2080/81 from 78.8% in FY 2079/80. In FY 2080/81, regarding the indicators of CB-IMNCI program there was 91.1% institutional delivery, 56.4% of newborn were applied CHX gel, 100.5 % of pneumonia cases were treated with antibiotics and 96.3 % of under 5 children with diarrhea were treated with zinc and ORS.

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 Bagmati 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, 99.02% children aged 0- 11 months and 19.79% children aged 12-23 months were registered for growth monitoring in FY 2080/81. The average number of visits among children aged 0-23 months registered for growth monitoring has been increased to 6.3 which was 3.7 in previous fiscal year. There is decreasing trend of underweight children (1.2%) among new growth monitoring visits of children aged 0-23 months than FY 2079/80 (1.4%). There is increasing trend of pregnant women receiving 180 tablets of Iron from 53.8% in FY 2079/80 to 54% in FY 2080/81. Regarding the trend of postpartum mothers who received vitamin A supplements, the trend seems to be increasing (54.7%) than previous FY (50.2%).

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, 60.7% of children exclusively breastfed for 6 months who were registered for growth monitoring. Also, 40.5% children aged 6-23 months received one cycle (60 sachets) Baal Vita (MNP) while 7.5% of children received 3 cycle (180 sachets) Baal vita (MNP) in FY 2080/81.

Safe Motherhood program

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 formulation of safe motherhood policy in 1998. In Bagamati province there were 485 birthing centers, 32 CEONC service sites and 70 BEONC service sites in FY 2080/81. Also, the provincial level protocol based at least one ANC visit was 136.5% in FY 2080/81 while percentage of pregnant women who had eight ANC was 119% in FY 2080/81 which decreased slightly from FY 2079/80 (125.9%). Percentage of institutional deliveries in Bagamati province was 91.1% but 40% percent of institutional deliveries in the province were conducted by caesarean section. Similarly, coverage of birth attended by a skilled birth attendant was 26.7% in Bagamati

province in FY 2080/81. The percentage of mothers who received four postnatal care visits as per protocol at HF among expected live births decreased to 28.2% in FY 2080/81 from 37.2% in FY 2079/80.

Family Planning

Family Planning program is one of the priority programs of Government of Nepal. It is also considered as a component of reproductive health package and essential health care services. The Contraceptive Prevalence Rate of Bagamati province in FY 2080/81 was 25 which has decreased than previous fiscal year.

Adolescent Friendly Health Services

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 2080/81.

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 22,231 safe abortion service were provided to women in FY 2080/81. The use of post abortion contraceptives declined from 61.1% in 2079/80 to 54.3% in 2080/81 in Bagamati Province. Similarly, the proportion of LARC among post abortion contraception has slightly declined from 13 in FY 2079/80 to 11.1 in FY 2080/81.

Epidemiology and Disease Control

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 2025. For assessing the risk areas, malaria micro-stratification process is conducted on annual basis. The total positive cases of malaria are in increasing trend in Bagamati province which was 33 cases in FY 2078/79, 46 cases in FY 2079/80 and 58 cases in FY 2080/81. Similarly, the proportion of Plasmodium Falciparum infections among total malaria positive cases has also been increasing i.e. FY 2078/79 (17), FY 2079/80 (18), and FY 2080/81 (21) in Bagamati province.

Kala-azar

To eliminate kala-azar from Nepal, strategies to improve health status of vulnerable and risk population has been made focusing on endemic areas of Nepal. In Bagamati province, the cases of Kala-azar have decreased from 24 in FY 2079/80 to 22 in FY 2080/81. However, there has been a noticeable geographical expansion of cases at the national level in recent years. Lalitpur and Makwanpur have recorded the highest number of cases, with a total of six.

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. In 2080/81, Mass Drug Administration (MDA) was carried out across 7 districts, wherein all districts implemented the triple drug therapy (IDA)

regimen. For morbidity mapping and disability prevention, among the survey conducted in 10 districts, a total of 8,830 LF cases were identified with 4,776 hydrocele cases, 3,968 lymphedema cases and 86 cases exhibiting both conditions in FY 2079/80.

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 2022. There is drastic increase in dengue cases, 11,906 cases were seen FY 2080/81 in Bagamati province where Dhading (3,545) followed by Kathmandu (3,186), Chitwan (1,779) and Lalitpur (1,459) 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 240 cases in FY 2078/79 to 1,290 cases in FY 2079/80, and to 1,839 cases in FY 2080/81 in Bagamati province.

Tuberculosis

Tuberculosis (TB) remains a major public health problem in Nepal. TB is curable with medicine (nearly 90% cure rates) and preventable. Based on the global and national commitments to reach the set END TB targets, NTCC has developed its National Strategic plan 2021/22-2025/26 for TB3 which envisions for TB Free Nepal by 2050. There are 1,121 DOTS center in Bagamati province with 4 centers and 22 sub-centers for MDR treatment. The trend in Case notification rate for all forms of TB per 1 Lakh population in FY 2080/81 is 150.8 per 1 lakh population with similar trend in treatment success rate (92.3%) in FY 2080/81. Out of 40,775 TB Case all forms registered, 23,242 (57%) were pulmonary bacteriologically confirmed (PBC) cases, 6,116 (15%) were pulmonary clinically diagnosed (PCD) cases and 11,417 (28%) were extra-pulmonary TB cases in FY 2080/81 in Bagamati province.

Leprosy

The goal of leprosy control program is to end the consequences of leprosy including disability and stigma within the country. The prevalence rate per 100,000 of leprosy in FY 2079/80 was 1.9 which slightly increased to 2.62 in FY 2080/81 in Bagamati province. Out of 13 districts, three districts i.e. Dolakha, Rasuwa and Nuwakot had Zero Prevalence rate.

HIV/AIDS and STI

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 2080/81, 15,190 risk population were tested for HIV of which HIV was found positive in 820 cases. In Bagamati Province, second target of 95-95-95 by 2026 has been achieved however first and third targets are still below 95% which needs to be focused on upcoming years. Similarly, For PMTCT, screening of all pregnant mothers for HIV was done during ANC visit and during delivery.

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, 73 Basic hospitals (5-15 beds), 83 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 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 requirement of the hospitals to provide minimum services that are expected from them. In FY 2080/81, MSS evaluation was carried out in 8 Primary Level Hospitals, 5 Secondary A Level Hospitals and 2 District Ayurveda Health Centre. In FY 2080/81, Bhaktapur Hospital achieved the highest MSS score (98%) among all assessed.

The percentage of the population utilizing the OPD services was decreased to 60.9% in FY 2080/81 from 78.6% in FY 2079/80. Bed occupancy rate in FY 2080/81 was 41%% with average length of hospital stay of 2.8 days.

SOCIAL SECURITY AND OTHER PUBLIC HEALTH PROGRAMS

One-stop Crisis Management Centers (OCMCs)

One-stop Crisis Management Centers (OCMCs), which aim to provide comprehensive and integrated services to survivors of Gender Based Violence. There are 12 OCMCs situated in Bagamati Province. In FY 2080/81, 2,086 cases were newly registered in OCMC with 571 follow up cases and 1,297 number of perpetrators. The most reported cases among the total clients served by the OCMCs were sexual assault (606) followed by injury (572) in FY 2080/81.

Social Service Units (SSU)

The concept of Social Service Unit (SSU) was started after pilot program in 8 hospitals for a period of 2 years in FY 2069/70 to FY 2070/71. Currently 13 hospitals provide SSU services in Bagmati province. In Bagamati province in FY 2080/81, 2,351 ultra-poor or poor citizens, 277 helpless people, 127 people with disability, 2,693 senior citizens, 7 survivors of GBV and 23 FCHVs utilized services from SSUs.

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.

Mental health problems are major challenges which are rapidly increasing in present context. Top five mental health conditions reported in FY 2080/81 in Bagamati province were Depression (12,676), Anxiety (12,253), psychosis (5,467), alcohol use disorder (4,180) and epilepsy (4,502).

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 2080/81 in Bagamati province were school health education program, celebration of world health day and other health related days, weeks and months, monitoring and supervision of health promotion programs, development, production and broadcasting of health messages through local mass media.

Ayurveda and Alternative Medicine

Ayurveda is the oldest documented medical system of the world. Ayurveda focuses on the promotive, preventive, curative and rehabilitative services. Ministry of Health of Bagamati Province is responsible for planning, management, supervision, monitoring and evaluation of Ayurveda and miscellaneous medicines throughout the province. The ministry works through its network facilities of 13 District Ayurveda Health Centers and 50 local level Ayurveda Aushadhalayas, 51 Citizen Ayurveda Health Centers and a Healthy Lifestyle Program (in PHC). The percentage of population utilizing outpatient services in FY 2080/81 is 60.9%, which is in decreasing trend from 99.2% in FY 2078/79 to 78.6% in FY 2079/80. Services received by patients in Ayurveda were acupuncture service (25,801), panchakarma service (3,889), shalya service (3,889), and yoga service (28,095), in FY 2080/81.

REPORTING STATUS

Health Management Information System (HMIS)

HMIS is one of the key sources for monitoring and evaluation of the health programs and health policy formulation. It is used to manage health sector information in an integrated and comprehensive manner. Reporting forms used in HMIS are 9.1, 9.2, 9.3, 9.4 and 9.5. In the fiscal year 2080/81, the completeness and timeliness of reporting by health facilities (PHCC, HP, BHSU, CHU, UHC) exhibited an increasing trend in Bagamati Province. However, while the completeness of hospital reporting declined to 56.1%, the timeliness improved to 32.9% compared to the previous fiscal year.

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 started the free blood bag program since 2078. The program mainly focuses on economically disadvantaged people who

are permanent resident of 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. In FY 2080/81, 16,800 new recipients received blood transfusion services in Bagamati province. Blood transfusion service was most used for hemodialysis (46.7%) followed by surgery (22.1%), anemia (18.3%) and hemorrhage (18.3%) patient in FY 2080/81.

Chief Minster Public 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 2076/077 and comprises various programs related to the problem of NCD. In FY 2080/81, altogether 49,795 females and 38,657 males were screened for NCD through Public Health office, 5,165 females and 2,997 males were screened for NCD through Hospital and 6,805 females and 5,389 males were screened for NCD through Ayurveda Health Centre.

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 was established in 2019 AD to coordinate and manage all health-related training through one door under MoH. ASBA and SBA Trainings, MLP, Primary Trauma care, Rural Ultrasound Trainings, Medico-legal Training, Induction Training, Dialysis related trainings, Primary Eye care, Safe abortion Training, OTTM/ICU, NICU training, COFP counselling, VIA/ Implant/ IUCD/NSV, Logistic Management/ HMIS, PEN Package / Mental Health, CTS, Training for one school one nurse trainings were provided in the FY 2080/81.

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 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.

Public Health Laboratory Center

Public Health Laboratory Center is one of the entities of Ministry of Health (MoH), Bagamati Province for quality laboratory services, disease surveillance and research. Public Health Laboratory has been functioning since 15th Shrawan, 2076. The laboratory services of all the government and private laboratories have been 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. Public Health Laboratory, Bagamati Province, have been now connected with 262 Microscopic Centers within 13 districts of Bagamati Provinc.

CHAPTER 1

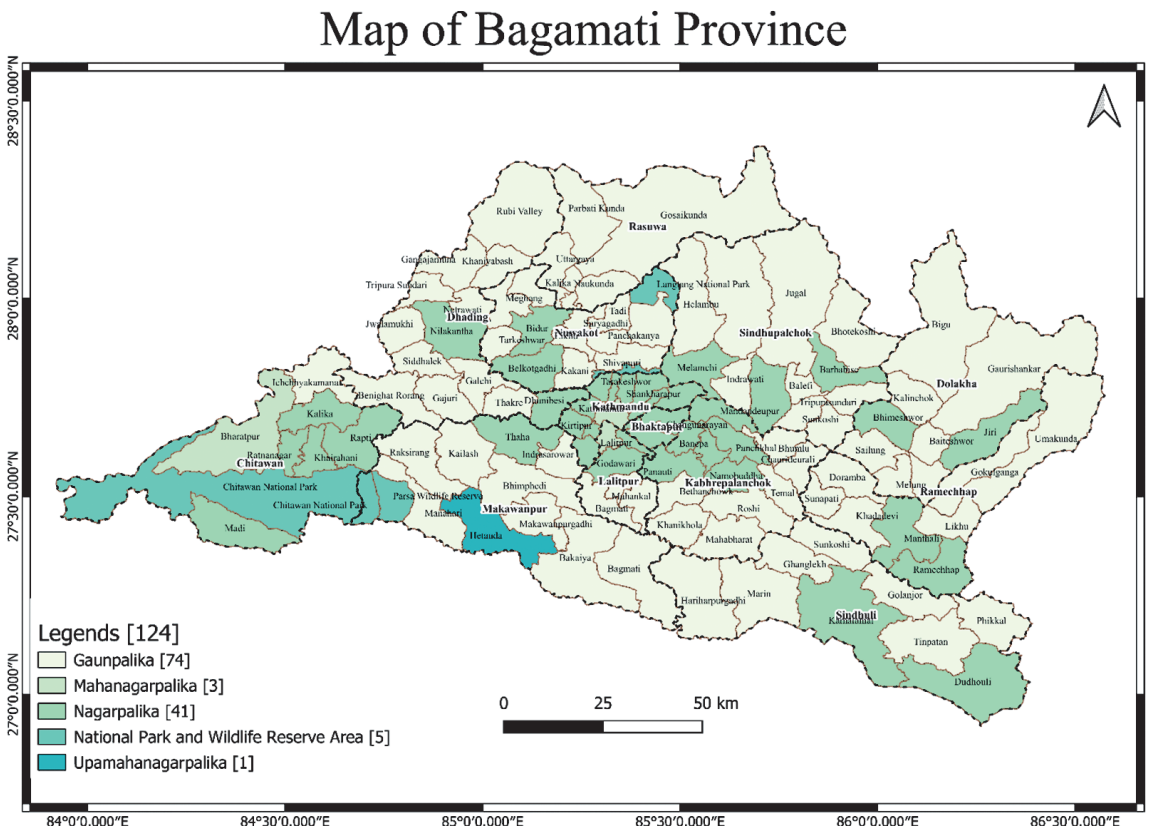
INTRODUCTION

1 Introduction of Bagmati Province

1.1.1 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 Bagmati Province, which includes 13 districts: Dolakha, Sindhupalchok, Rasuwa, Dhading, Nuwakot, Kathmandu, Bhaktapur, Lalitpur, Kavrepalanchowk, Ramechhap, Sindhuli, Makwanpur, and Chitwan.

Figure 1.1.1.1 **Diagrammatic Presentation of the Bagmati Province**



1.1.2. 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 Chitwan 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 b Indian state of Bihar. With Hetauda as its provincial headquarters, the province is also the home to the country's capital Kathmandu.

1.1.3 Demographic Features

Figure 1.1.3.1 Population Distribution

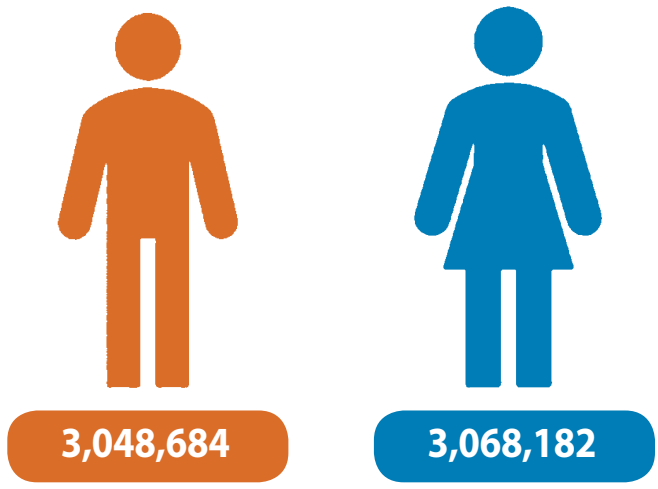


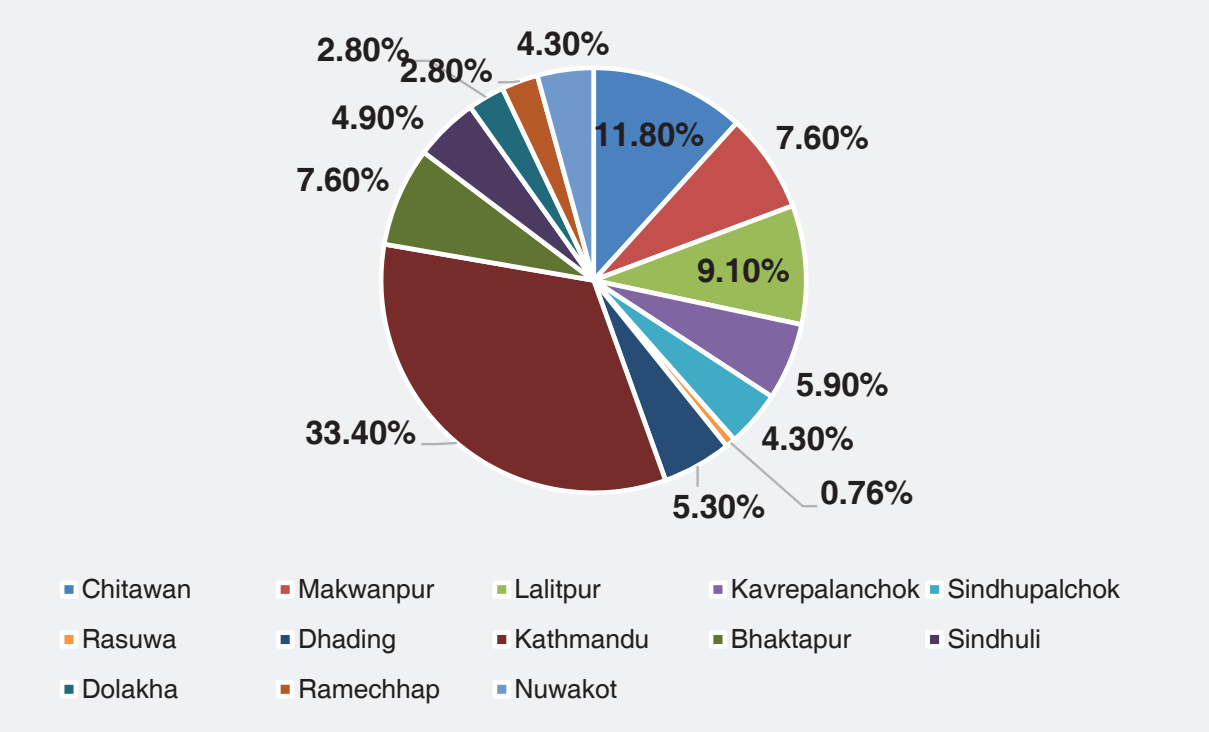
Table 1.1.3.1 Total Population of Districts of Bagmati Province

District	Metropolitian	Sub-Metropolitian	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
Chitwan	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
Makwanpur	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
Sindhupalchowk	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

Total Population =6,116,866

Source: DHIS -2

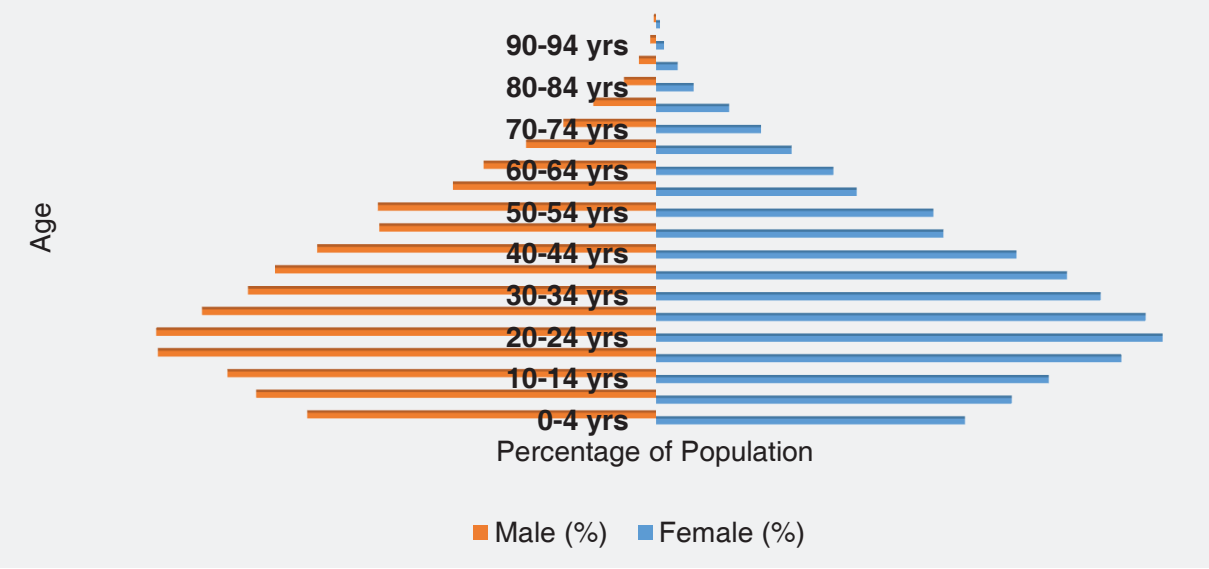
Figure 1.1.3.2 District Wise Population Distribution



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 Chitwan district.

Figure 1.1.3.3 Population Pyramid of Bagamati Province



Source: NHPC 2021

1.1.4 Population Characteristics of Bagamati Province

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.

Figure 1.1.4.1 Sex Ratio (NHPC 2021)

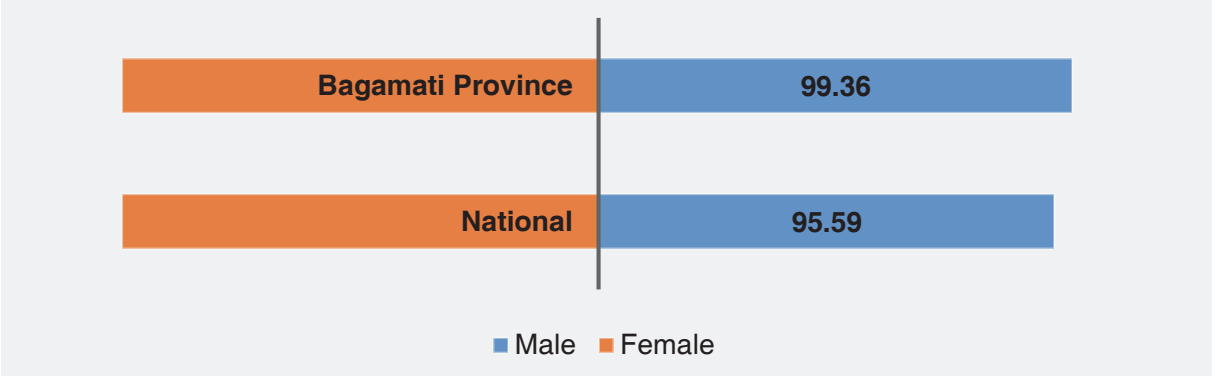
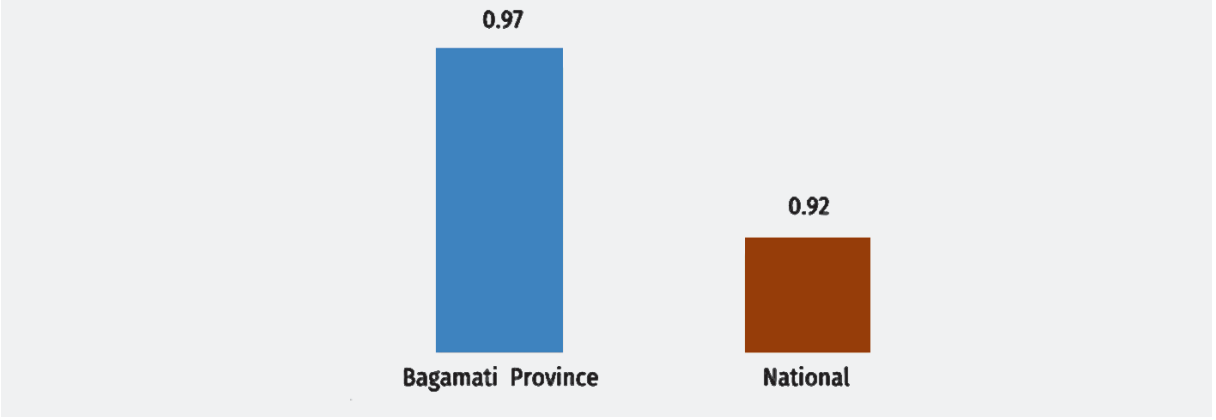


Figure 1.1.4.2 Annual Growth Rate (NHPC 2021)



1.1.5 Important Vital Statistics

Table 1.1.5.1 The most 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 lowered than the National.

1.2 Service Delivery System of Bagamati Province

1.2.1 Ministry of Health Bagmati 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 the MoH provides guidance to the 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 programs 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 the Health Directorate are as follows:

- Planning and budgeting the promotive, preventive, curative programs within the province.
- Ensure effective implementation of public health programs in the province.
- Determine the requirement of manpower for health institutions in the province.

Organogram

- 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.

Figure 1.2.1.1 Organogram of health system of Bagamati Province

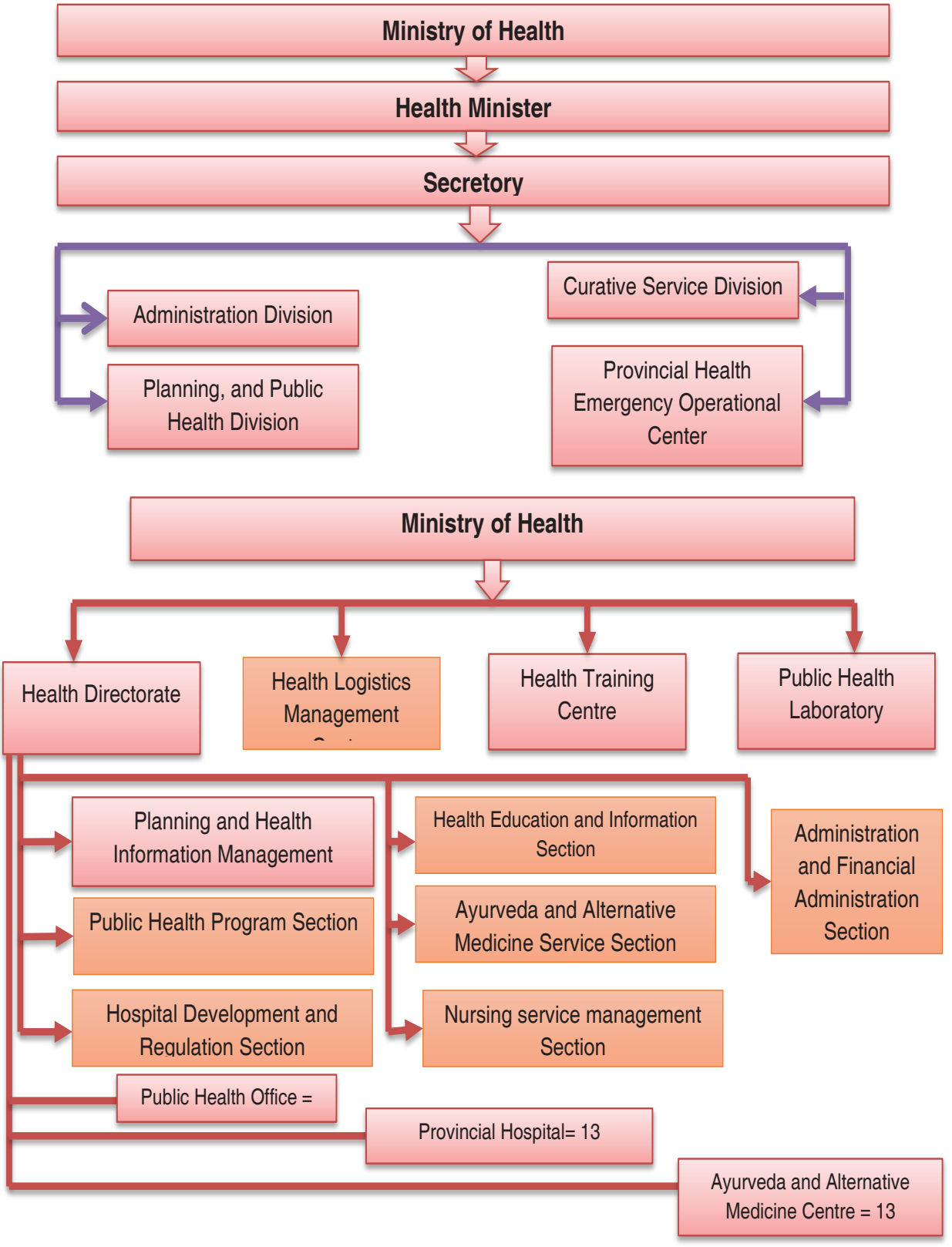


Table 1.2.1.1 Health Service Delivery Unit of Bagmati Province

Organizational Unit	Dolakha	Sindhupalchowk	Rasuwa	Dhading	Nuwakot	Kathmandu	Bhaktapur	Lalitpur	Kavrepalanchok	Ramechhap	Sindhuli	Makwanpur	Chitwan	Total
Basic Health Service Center	7	14	1	40	8	11	1	14	29	4	6	17	38	190
Health Posts	51	74	17	44	64	58	20	36	84	51	51	37	34	621
PHCC	1	3	1	2	2	2	1	3	4	2	3	3	1	28
Community Health Unit	17	27	13	22	14	0	0	2	18	12	28	19	9	206
Urban Health Unit	6	8	0	2	8	57	11	7	18	17	13	19	21	187
Basic Hospitals (5 - 15 Beds)	4	2	1	11	4	23	0	0	7	4	1	4	12	73
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	7	6	3	1	1	3	11	83
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 (300+ Beds	0	0	0	0	0	8	0	2	1	0	0	0	2	13
No. of Health Facilities (Ayurveda)	3	6	3	5	8	19	5	8	6	2	6	4	13	88
Non- Public Facilities	8	9	1	16	15	1185	52	227	40	6	16	26	109	1710
Birthing Center	53	55	17	72	44	17	4	18	47	40	42	52	24	485
CEONC Site	1	2	1	1	2	7	7	3	3	2	2	0	1	32
BEONC Site	12	4	8	7	3	6	2	6	5	2	6	7	2	70
Safe Abortion Site	16	9	2	34	18	47	5	22	27	21	12	27	25	265
ASRH Site	8	14	20	20	13	6	1	9	20	12	18	44	6	191
FCHV	1254	711	245	464	1123	1658	277	502	943	752	495	464	466	9354

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 190 BHSU,621 Health post, 28 PHCC, 73 Basic Hospitals (5-15 beds),83 General Hospital (25-50 beds),26 General Hospital (100-300 beds), 12 Specialized Hospitals (100 and above),15 Super Specialty Hospitals (50+ Beds/Organ) and 13 Academy and Teaching Hospital (300+ Beds).

The table also shows the total number of safe abortion sites, CEONC sites, BEONC sites and birthing centers. Altogether there are about 485 birthing centers, 32 CEONC site, 70 BEONC site and 265 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 period described.

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 period described. In line with the Constitution of Nepal and Good Governance Act, Bagamati Province has published this Annual Report of fiscal year 2080/81 (2022/24). The report has been developed based on the data compiled from DHIS2/HMIS and presentations made at annual review meetings by health offices, development partners, and other stakeholders.

This report mainly focuses on performance of different health Sector of Bagamati province in FY 2080/81 on following areas:

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

1.4 Sources of Information in the Report

The Health Management Information System (HMIS) provided the main source of information for this report. The data presented in the report was downloaded through the DHIS-2 system which was retrieved after the completion of the national annual review workshop and were summarized to analyze progress of various health programs and activities. Other information systems used in this report include the Logistic Management Information System (eLMIS), Disease surveillance systems, Sentinel reporting, EWARS and the Ayurveda Reporting System (ARS) etc.

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The report also included information obtained from Palika, District and Province during the annual health review meeting undertaken at various levels.

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CHAPTER 2

FAMILY WELFARE

2.1 Child Health and Immunization

Background

"Vaccinations are cost effective, vaccines are safe, and vaccines protect lives"

Vaccines are free, safe, and lifesaving. The National Immunization Program (NIP) is a priority initiative of the Nepalese government, recognized as one of the most successful and cost-effective public health programs. It plays a vital role in reducing child mortality by protecting children against various communicable diseases and reducing disease-related morbidity and infant mortality rates.

Vaccination services are delivered through health institutions, external vaccination centers, and mobile teams.

After smallpox was eradicated in 1977 AD (2034 BS), Nepal launched an expanded vaccination program in the districts of Dhanusha, Rupandehi, and Sindhupalchok. By 2005, the country had successfully eliminated maternal and neonatal tetanus, maintaining this status to date. The program initially provided BCG and DPT vaccines and gradually expanded to cover polio and tetanus by 1988 AD (2045 BS).

The expanded vaccination program includes vaccines against six diseases: tuberculosis, diphtheria, pertussis, tetanus, polio, and measles.

Additional vaccines for hepatitis B (2003/2060 BS), Japanese encephalitis (2007/2064 BS), and Haemophilus influenzae type B (2009/2066 BS) were later introduced. As of 2014 AD (2071 BS), 13 vaccines, including injectable polio (fIPV), pneumococcal, and rotavirus vaccines, have been provided, with typhoid vaccines added in 2021AD (2078 BS). These vaccines are administered via institutional, outpatient, and mobile clinic.

Target

In 2012, the National Immunization Advisory Committee recommended incorporating vaccines against diarrhea, typhoid, rotavirus, and cholera into routine immunization services. This integration also included hygiene promotion sessions, where parents are informed about hygiene before children are vaccinated.

Introduction of the Immunization Program

Currently, free immunization services are available for children under 15 months and pregnant women, covering 13 communicable diseases such as tuberculosis, hepatitis B, polio, rubella, pneumonia,

Japanese encephalitis, and typhoid. Over 16,000 vaccination centers nationwide, including 2601 in Bagmati Province, deliver these services through institutional, external, and mobile units, with support from private and non-governmental health organizations.

Major Achievement of the National Immunization Program (2080/81)

- All districts have declared full immunization status.
- Comprehensive microplanning has been developed at all levels, (district and local levels).
- Two supplementary campaigns have been successfully conducted, including Measles and Rubella and Inactivated Polio Vaccine (IPV).
- The annual review meeting of the immunization program was conducted with innovative model.
- The cold chain equipment in Bagmati 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.

Program Achievement of the Immunization Program Coverage of the BCG (In %)

Figure 2.1.1 **Trend of BCG Coverage (in %) by district at Bagamati Province**

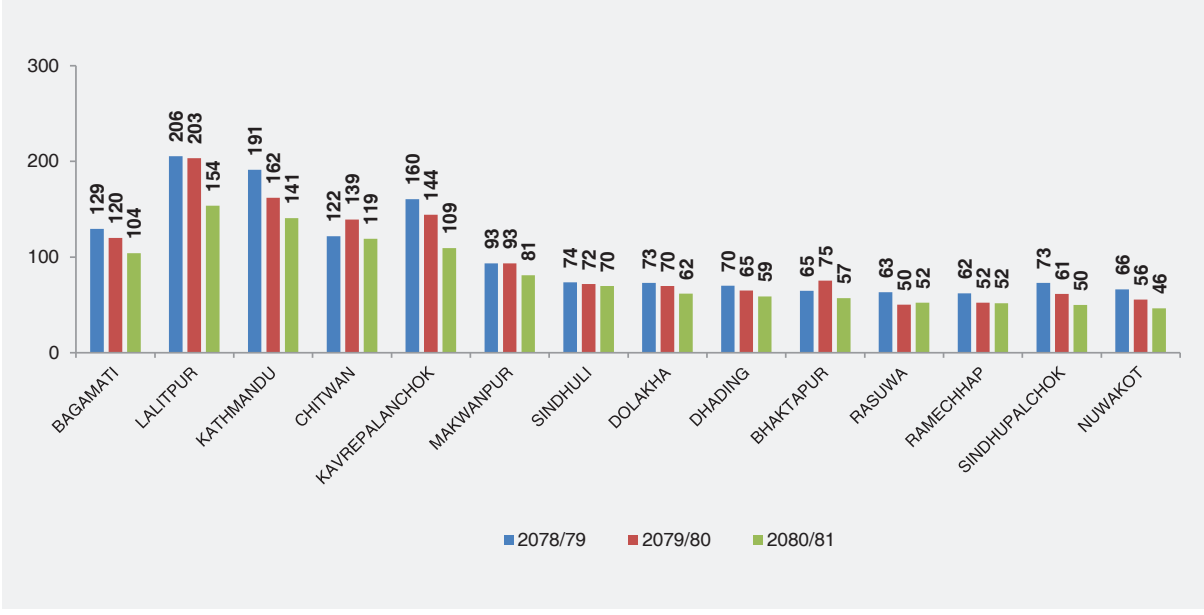


Figure 2.1.1 shows the comparative trend of BCG coverage in Bagmati Province over the past three fiscal years with more than 100% coverage. In 2080/81, BCG coverage decreased by 16% compared to 2079/80, with almost all district-level coverage also showing declining trend. Lalitpur district recorded the highest coverage (154%), followed by Kathmandu (141%), Chitwan (119%), and Kavrepalanchowk (109%). Remaining districts recorded less than 85% coverage with Nuwakot having the lowest achievement (46%). Similarly, other three lowest BCG coverage was in Ramechhap and Rasuwa (both 52%) followed by Sindhupalchowk (50%) which needs to be improved.

DPT-Hep B-Hib 1 Vs DPT-Hep B-Hib-3 Coverage (In %)

Table 2.1.1 DPT-Hep B-Hib 1 Vs DPT-Hep B-Hib-3 Coverage of Bagamati Province

Organization	Shrawan 2078 to Asar 2079		Shrawan 2079 to Asar 2080		Shrawan 2080 to Asar 2081	
	6DPT-HepB-Hib1	DPT-HepB-Hib3	6DPT-HepB-Hib1	DPT-HepB-Hib3	6DPT-HepB-Hib1	DPT-HepB-Hib3
3 Bagmati Province	102.6	102	109.4	107.8	94.6	97.4
LALITPUR	125.8	123.3	145.2	139.1	119.3	123.6
KAVREPALANCHOK	111.8	108.2	111.5	107.5	111.1	112.7
KATHMANDU	103.9	104.3	120	120.8	97.8	102.1
BHAKTAPUR	112.6	120.8	128.9	136.1	94.4	102.1
MAKWANPUR	103.8	105.2	104.9	100.7	93.1	94.6
DHADING	99.5	92.2	95.7	92.8	89.4	88.2
CHITWAN	100.2	99.6	107.9	105.6	85.4	87.9
SINDHULI	81	78.9	82	77.7	87.5	87.6
RASUWA	83.3	83.7	70.2	72.5	82.2	87
NUWAKOT	93	91.6	95.9	92.2	86.1	86.7
SINDHUPALCHOK	109.7	104	98.5	95.3	84.4	83
DOLAKHA	88.4	87.1	81	80	74.3	77
RAMECHHAP	84.5	85.7	75.6	75.8	74.2	75.9

Source: DHIS 2

Table 2.1.1 summarizes the coverage status of children who received the DPT-Hep B-Hib-1 and DPT-Hep B-Hib-3 vaccines by district at the provincial level over the past three fiscal years. The DPT-Hep B-Hib-1 coverage showed slight fluctuations, with 102.6% in 2078/79, 109.4% in 2079/80, and 94.6% in 2080/81. Similarly, the DPT-Hep B-Hib-3 coverage has been recorded as 102%, 107.8%, and 97.4% over the same years respectively.

In 2080/81, the highest DPT-Hep B-Hib-1 coverage were reported in Lalitpur (119.3%) and Kavrepalanchok (111.1%), while the lowest were recorded in Ramechhap (74.2%) and Dolakha

(74.3%). Likewise, the highest DPT-Hep B-Hib-3 coverage were also recorded in Lalitpur (123.6%) and Kavrepalanchok (112.7%), with the lowest again in Ramechhap (75.9%) and Dolakha (77%). Detailed district-wise comparisons are outlined in the table above.

Measles/Rubella I and II Coverage (in %)

Table 2.1.2 **Measles/Rubella I and II Coverage of Bagamati Province**

Organization	2078/79		2079/80		2080/81	
	MR -I	MR- II	MR -I	MR- II	MR -I	MR- II
BAGMATI	103.1	102.2	110.1	105.6	105.3	107.3
LALITPUR	129.8	111.2	144.1	129.9	135.7	129.1
KAVREPALANCHOK	109.1	115.7	106.6	106.2	116.5	119.5
BHAKTAPUR	119.3	118.9	140.7	129.5	115.8	116.6
KATHMANDU	105.4	106.4	124.9	119.1	111.9	115.3
MAKWANPUR	100.4	99.6	102.7	96.1	99	100.7
CHITWAN	101.7	102.3	108.3	104.9	97.9	100.4
RASUWA	89.2	86.4	74.6	79	90.6	100
NUWAKOT	91.3	92.9	92.6	89.6	91.8	95
DHADING	94.5	92.3	92.1	87.4	90.7	93.4
SINDHULI	80.8	78.1	77.4	75	90	92.9
SINDHUPALCHOK	107.4	111.5	96.8	102.3	88.7	91.8
RAMECHHAP	84.2	83	75.1	75.7	82	87.8
DOLAKHA	90.1	89.8	79.2	81.2	78.8	82.4

Source: DHIS 2

Table 2.1.2 shows the coverage status of MR1 and MR2 across Bagmati Province over the past three consecutive years 2078/79, 2079/80, and 2080/81. In fiscal year 2080/81 the provincial MR1 coverage has slightly decreased compared to last year (from 110.1% in 2079/80 to 105.3% in 2080/81) whereas MR-2 coverage has been in increasing trend; 102.2%, 105.6% and 107.3% in the year 2078/79, 2079/80 and 2080/81 respectively.

Regarding the district levels MR-1 achievement, in 2080/81, Lalitpur, Kavrepalanchowk, Bhaktapur, and Kathmandu have higher coverage compared to other districts, with more than 100% coverage. The lowest coverage is reported from Dolakha which is 78.8% followed by Ramechhap and Sindhuli with 82 % and 88.7 % respectively. Regarding the MR-2 coverage as well, Lalitpur, Kavrepalanchowk, Bhaktapur, and Kathmandu reported the highest achievements exceeding 100% coverage. In addition, Makawanpur, Chitwan, and Rasuwa achieved around 100%, while Dolakha and Ramechhap reported coverage below 90%, reflecting the lowest performance. The remaining districts recorded coverage between 91% and 95%. The details analysis sheet is listed in the table above.

Province and District Wise Analysis (Coverage) of the Immunization Service in FY 2080/81

Table 2.1.3 Province and District Wise Analysis (Coverage) of the Immunization Service

Orgnizations	Indicators (2080/81)											
	% of children fully immunized as per NIP schedule	% of children under one year immunized with BCG	% of children under one year immunized with DPT-HepB-Hib1	% of children months immunized against measles/rubella 1	% of children under one year immunized with DPT-HepB-Hib3	% of children under one year immunized with OPV 3	% of children under one year immunized with PCV 3	% of children aged 12-23 months immunized with measles/rubella 2	% of children immunized with TCV	% of children aged 12-23 months immunized with JE	DPT-HepB-Hib dropuout rate (DPT-HepB-Hib 1 vs 3)	DPT-HepB-Hib1 vs MR2 dropout rate
BAGAMATI	**95.8**	**104.1**	**94.6**	**105.3**	**97.4**	**97.8**	**105.2**	**107.3**	**106**	**109.8**	**-3**	**-12.9**
DOLAKHA	82.2	61.9	74.3	78.8	77	77	78.7	82.4	82.4	81.9	-3.7	-12.6
SINDHUPALCHOK	91.7	50	84.4	88.7	83	83.1	88.4	91.8	91.5	90.1	1.7	-11
RASUWA	99.3	52.3	82.2	90.6	87	87	90	100	101.4	91.3	-5.8	-23.2
DHADING	91	58.9	89.4	90.7	88.2	88.2	90.8	93.4	92.3	93	1.4	-5.5
NUWAKOT	91.8	46.4	86.1	91.8	86.7	86.7	91.7	95	92.1	94.3	-0.73	-11.7
KATHMANDU	88.4	140.7	97.8	111.9	102.1	103.6	112.1	115.3	112.6	117.5	-4.4	-15.1
BHAKTAPUR	116.4	57	94.4	115.8	102.1	102.1	115.8	116.6	116.4	115.7	-8.2	-23.5
LALITPUR	125.7	153.7	119.3	135.7	123.6	122.3	134.6	129.1	133.1	154.7	-3.6	-7.1
KAVREPALANCHOK	119.3	109.3	111.1	116.5	112.7	112.7	116.4	119.5	119.5	120.9	-1.4	-9.1
RAMECHHAP	86.3	51.6	74.2	82	75.9	75.9	81.8	87.8	88	84.3	-2.3	-20.3
SINDHULI	92.1	69.8	87.5	90	87.6	87.5	89.8	92.9	91.6	92.3	-0.05	-5.6
MAKWANPUR	94.9	81.1	93.1	99	94.6	94.7	99.1	100.7	99.5	99.7	-1.6	-7.9
CHITWAN	84.3	119	85.4	97.9	87.9	88.3	97.6	100.4	98.2	101.8	-3	-17.2

Source: DHIS 2

Table 2.1.3 presents a detailed analysis of the service coverage status of the national immunization schedule by district and province for the fiscal year 2080/81. During this period (2080/81), BCG coverage has been reported at 104.1%, Measles-II at 107.3%, and full immunization as per the National Immunization Program (NIP) at 95.8%. The overall provincial dropout rate for DPT-HepB-Hib-1 vs DPT-HepB-Hib-3 was reported at -3%, while the dropout rate for DPT-HepB-Hib-1 vs MR2 has reported -12.9%, both of which meet the national target standards and was considered satisfactory.

However, data inconsistencies have been noted among certain antigens administered during the same time, such as DPT-HepB-Hib-3 vs OPV-3, and Measles-II vs TCV.

Vaccine Wastage Rate of the Immunization Program in Bagmati (All Antigens 2078/79- 2080/81)

Figure 2.1.2 Multi Dose Vaccine Policy (MDVP)

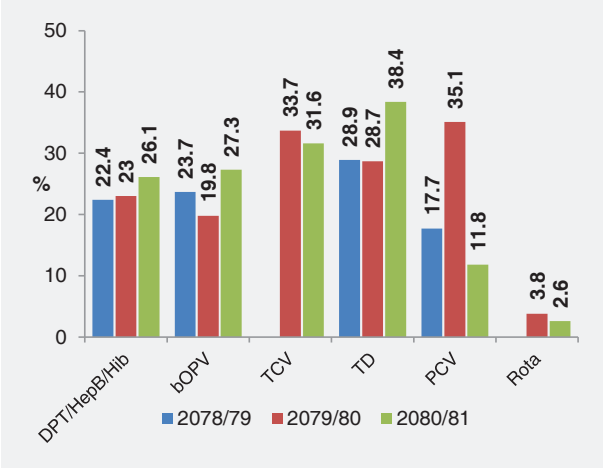


Figure 2.1.3 Per Session per Vials Policy

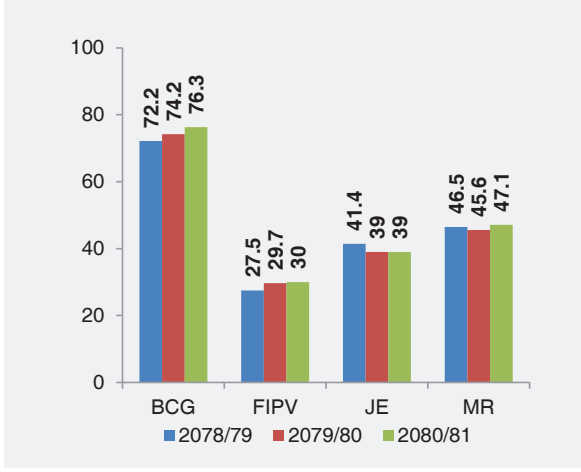


Table 2.2.4 Wastage Rate of the Immunization Program (All Antigens) 2080/81 (Bagamati Province)

Indicators	BAGAMATI	DOLAKHA	SINDHUPALCHOK	RASUWA	DHADING	NUWAKOT	KATHMANDU	BHAKTAPUR	LALITPUR	KAVREPALANCHOK	RAMECHHAP	SINDHULI	MAKWANPUR	CHITWAN
Vaccine wastage rate (BCG)	**76.3**	90.6	90.9	91.5	89.4	92	56	82.4	59.8	81.8	91.7	90.2	82.6	68.8
Vaccine wastage rate (DPT/HepB/ Hib)	**26.1**	47.3	39.1	49.2	36.5	39.4	14.9	15.9	19.3	36.6	53.3	35.9	25.5	20.4
Vaccine wastage rate (fIPV)	**30**	51.3	44	49.6	40.8	44.7	18.4	23.8	23.6	41.7	54.1	41.2	28.7	24.1
Vaccine wastage rate (JE)	**39**	63.7	53.9	59.3	54.3	60.2	21.3	31.7	27	52.6	62.5	55.3	41.6	27.8
Vaccine wastage rate (MR)	**47.1**	70.4	64.5	66.8	62.2	65.5	25.2	36.3	37.4	62.6	71.7	61.9	47.3	37.5
Vaccine wastage rate (OPV)	**27.3**	47.4	39.3	50.1	40.2	40.4	15.9	18.1	21.5	36.7	54.3	37.2	26.4	21.6
Vaccine wastage rate (Rota)	**2.6**	11.6	0.25	14	2.8	10.9	0.9	0.44	1.9	0.27	8.1	11.7	1.4	0.24
Vaccine wastage rate (TCV)	**31.6**	57.3	41.6	47	47.3	46.3	18.6	20.8	24.9	39.6	54.4	46.2	33.9	23.4
Vaccine wastage rate (TD)	**38.4**	64.4	64.3	70.7	51.8	62.9	12.6	30.2	28.7	58.8	70.7	57.1	38.5	30.7
Vaccine wastage rate (PCV)	**11.8**	25.5	16.5	26.6	18.7	22.6	4.8	6.9	7.9	15.6	29.4	19.5	11.9	13.6

Source: DHIS 2

The table 2.1.4 presents the vaccine wastage rates for all antigens across Bagmati Province. At the provincial level, the highest wastage rate was observed for BCG at 76.3% in FY 2080/81. At the district level, Nuwakot recorded the highest wastage rate at 92%, followed by Ramechhap (91.7%), Rasuwa (91.5%), Sindhupalchowk (90.9%), and Dolakha (90.6%). The BCG wastage rate has been reported as high by all districts compared to the national standard.

The standard wastage rate for DPT/HepB/Hib, OPV, and TD antigens is set at 15%. However, the wastage rates for these vaccines (DPT/HepB/Hib, OPV, and Td) at both the provincial and district levels have been recorded as significantly higher. The provincial measles vaccine wastage rate has been recorded as 47.1%, however, the national standard is set at 30 % wastage rate. Only Kathmandu has reported wastage rate of measles vaccine below 30% (i.e., at 25.2%).

The provincial JE vaccine wastage rate has reached 39%. While Kathmandu, Lalitpur, and Chitwan districts have maintained wastage rates within the national standard, the remaining districts have reported rates exceeding the national standard for JE vaccine. The Antigen wastage of the FIPV and TVC is set at 10% as standard, however both province and districts have been reporting higher wastage rate than the standard.

The standard wastage rate for Rota and PCV vaccines is set at 5%. At the provincial level, the Rota vaccine wastage rate has been maintained at 2.6%. However, four districts—Dolakha, Rasuwa, Nuwakot, and Sindhuli—have reported higher wastage rates, while the remaining districts have maintained rates within the standard. In contrast, the PCV vaccine wastage rate is high across the province, with almost all districts reporting rates above the standard, except for Kathmandu.

Table 2.1.5 Immunization Service Category by Local Levels at District (2080/81)

District	District Category	Local Levels Category				
		Total Municipality	Category I	Category II	Category III	Category IV
			High coverage (≥90%) Low drop-out (<10%)	High coverage (≥90%) High coverage (≥90%)	Low coverage (<90%) Low drop-out (<10%)	Low coverage (<90%) High drop-out (≥10%)
DOLAKHA	III	9	0	0	9	0
SINDHUPALCHOK	III	12	3	0	9	0
RASUWA	III	5	1	0	4	0
DHADING	III	13	5	1 (Khaniyabas)	7	0
NUWAKOT	III	12	5	0	7	0
KATHMANDU	I	11	7	0	4	0
BHAKTAPUR	I	4	2	0	2	0
LALITPUR	I	6	5	0	1	0
KAVREPALANCHOK	I	13	10	0	3	0
RAMECHHAP	III	8	1	0	7	0
SINDHULI	III	9	3	0	6	0
MAKWANPUR	I	10	8	0	2	0
CHITWAN	III	7	3	0	4	0
Total		**119**	**53**	**1**	**65**	**0**

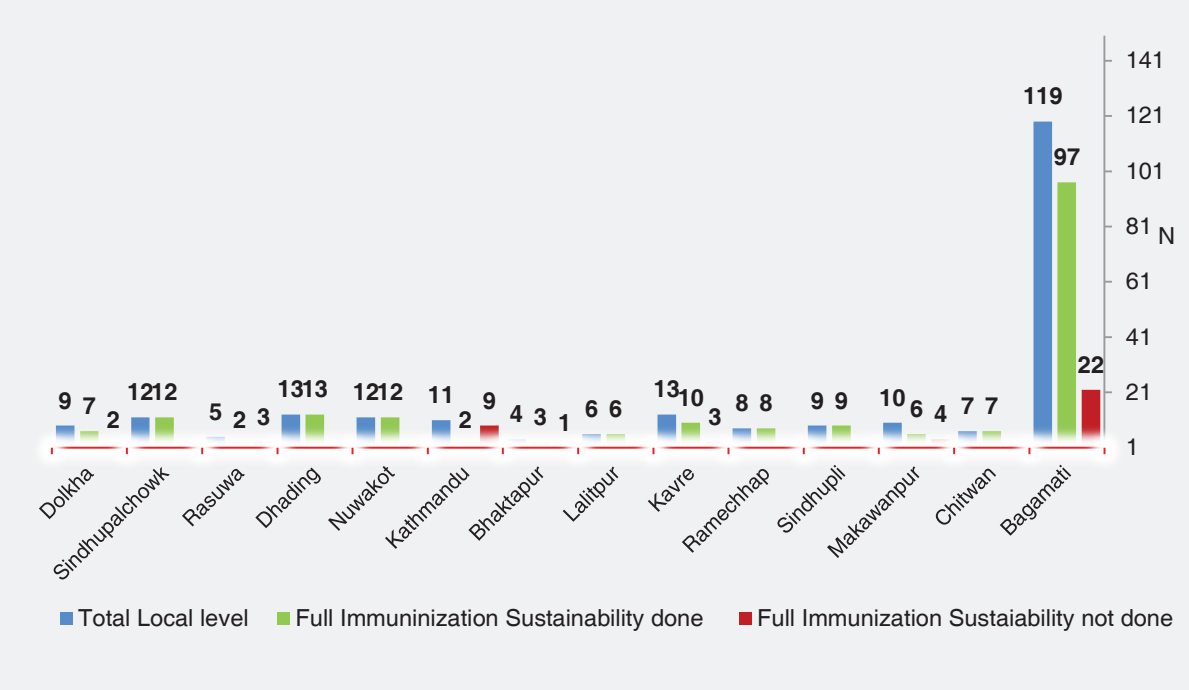
Table 2.1.5 provides a detailed classification of immunization service categories across districts at the local level, based on DPT-HepB-Hib-1 coverage and a comparison with the first dose of DPT-HepB-Hib-1 vs Measles II dropout status. Among the 13 districts, 5 are classified as Category I, while the remaining districts are classified as Category-III. Regarding the classification of local levels within Bagmati Province, there are 119 local levels in total. Oot of these, 53 are categorized as Category-I, one as Category II, and 65 as Category-III. Only one local unit, Khaniyabas rural municipality of the Dhading district has been reported as category II. Detailed information is presented on the table above.

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 2069BS.

Figure 2.1.4 **Full Immunization Declaration Status**



In Bagmati Province, all 13 districts achieved full immunization status in 2080/81. Among the 119 local levels in the province, 97 have maintained the sustainability of the full immunization. While the majority of local levels have declared full immunization and ensured its sustainability, some specific local levels have yet to make such declarations or ensure sustainability due to various issues.

Measles and Rubella (MR) Vaccination Campaign (2080/81)

The Measles and Rubella (MR) vaccination program has been an integral part of Nepal's routine immunization efforts, with the first dose administered at 9 months and the second dose at 15 months. To reinforce these efforts, the government conducts nationwide MR campaigns every four years. Aiming to eliminate measles and rubella by the end of 2026, the Government of Nepal has set ambitious goals.

However, despite these efforts, outbreaks of measles and rubella persist in certain areas of Nepal. In response, the Family Welfare Division has developed comprehensive national measles and rubella campaign guidelines. These guidelines prioritize high-risk districts—characterized by outbreaks and high dropout rates—targeting children aged 9 months to less than 5 year and 5 to less than 15 years in 24 districts. In 53 lower-risk districts, the campaign focuses on children aged 9 months to less than 5 years. This initiative aims to address gaps in immunization coverage, reduce dropout rates, and strengthen the full immunization declaration program and onboard the zero doses' children on routine immunization program. By targeting all eligible populations, the campaign ensures vaccine access and supports the timely elimination of measles and rubella within the established timeframe.

Table 2.1.6 **Measles and Rubella (MR) Campaign Coverage Status (2080/81)**

Districts	Target Population from HMIS			Target Population based on micro planning			Number of children immunized by MR				Coverage %	
	9m to < 5 years	5 to <15 years	Total	9m to < 5 years	5 to <15 years	Total	9m to < 5 years	5 to <15 years	RCM	Total	HMIS	Micro-planning
Dolakha	9,677	-	9,677	9,666	-	9,666	8,436	-	9	8,445	87	87
Sindhupalchok	15,050	-	15,050	15,670	-	15,670	15,391	-	2	15,393	102	98
Rasuwa	3,118	-	3,118	3,113	-	3,113	3,657	-	3	3,660	117	117
Dhading	19,416	-	19,416	19,790	-	19,790	19,730	-	172	19,902	102	100
Nuwakot	15,410	-	15,410	17,632	-	17,632	16,737	-	77	16,814	109	95
Kathmandu	99,742	280,741	380,483	131,834	426,930	558,764	130,004	401,703	269	531,976	130	99
Bhaktapur	24,538	64,914	89,452	31,106	86,894	118,000	30,986	82,199	223	113,408	126	100
Lalitpur	26,715	75,300	102,015	25,532	130,042	155,574	33,449	113,663	578	147,690	125	131
Kavrepalanchok	20,122	-	20,122	23,958	-	23,958	22,206	-	14	22,220	110	93
Ramechhap	8,800	-	8,800	8,792	-	8,792	8,134	-	43	8,177	92	93
Sindhuli	19,998	-	19,998	20,396	-	20,396	18,944	-	344	19,288	95	93
Makwanpur	30,370	-	30,370	32,626	-	32,626	31,116	-	297	31,413	102	95
Chitawan	41,881	117,749	159,630	58,743	130,750	189,493	45,940	146,814	982	193,736	110	78
Bagamati	**334,837**	**538,704**	**873,541**	**398,858**	**774,616**	**1,173,474**	**384,730**	**744,379**	**3,013**	**1,132,122**	**115**	**96**

Bagmati Province conducted Measles and Rubella (MR) vaccination campaign targeting children aged 9 months to under 5 years and 5 to under 15 years in four districts (Kathmandu, Lalitpur, Bhaktapur, and Chitwan). In the remaining nine districts, the campaign focused on children aged 9 months to under 5 years. A total of 5,877 immunization centers and 6,879 immunization sessions were organized. The campaign saw active participation from 5,049 health workers and 12,341 female community health volunteers. The campaign's achievements are summarized in the table below.

Table 2.1.6 presents the achievement status of the Measles/Rubella (MR) campaign in Bagmati Province for the fiscal year 2080/81. Based on the target provided by the Family Welfare Division (HMIS) and the district micro-planning, the campaign achieved 115% coverage according to HMIS data and 96% coverage based on district micro-planning.

Among the districts, Kathmandu recorded the highest coverage at 130%, followed by Bhaktapur, Lalitpur, Rasuwa, Chitwan, Kavrepalanchowk, Makawanpur, and Dhading achieving more than 100% coverage. The lowest coverage was observed in Dolakha at 87%, while the remaining districts reported coverage between 90% and 100%. The program was well-executed and highly productive, successfully conducted within the designated time frame.

Inactivated Polio Virus (IPV) Vaccination Campaign (2080/81)

This inactivated polio vaccine (IPV) is an injectable vaccine that provides protection against all three types of polioviruses. It is prepared using inactivated (killed) polioviruses, making it safe and effective. Unlike the oral polio vaccine (OPV), which contains live attenuated virus and carries a rare risk of vaccine derived poliovirus paralysis, IPV does not cause paralysis.

IPV is a crucial component of the polio eradication strategy. As a part of the routine immunization schedule, IPV is administered to children at 14 weeks and 9 months of age. If a child misses this vaccination within the first year, they should receive two doses of the vaccine, spaced four months apart, before reaching five years of age.

The introduction of the Inactivated Polio Vaccine (IPV) into Nepal's routine immunization services began in 2071 BS (2014 AD), starting in the month of Ashwin. However, within two years, a global IPV shortage disrupted the supply. As a result, from Jestha 2073 BS to Bhadra 2075 BS, many children in the target age group missed their scheduled vaccinations, putting them at increased risk of polio.

To address this gap, IPV vaccination campaigns were organized to ensure that the missed children received the necessary doses. In response, the Family Welfare Division developed guidelines and initiated campaign-related activities nationwide.

Table 2.1.7 **IPV Campaign Coverage Status (2080/81)**

Name of District	HMIS Target Population	Target District Micro-Planning	Total Immunized	Coverage %		Number of reported AEFI during Campaign		
				HMIS	Microplanning	Serious	Minor	Total AEFI
Dolakha	9,899	6,369	5,436	55	85	-	-	-
Sindhupalchok	14,974	10,903	10,100	67	93	-	11	11
Rasuwa	2,245	2,047	1,713	76	84	-	-	-
Dhading	18,263	12,867	12,168	67	95	-	-	-
Nuwakot	14,611	12,280	10,455	72	85	-	4	4
Kathmandu	98,038	110,939	100,670	103	91	-	8	8
Bhaktapur	16,769	25,231	19,393	116	77	-	-	-
Lalitpur	25,957	25,439	24,416	94	96	-	-	-
Kavrepalanchok	20,199	16,863	14,520	72	86	-	-	-

Ramechhap	10,932	5,562	4,946	45	89	-	-	-
Sindhuli	15,737	15,737	12,700	81	81	-	1	1
Makwanpur	22,497	20,371	19,323	86	95	1	-	1
Chitawan	33,652	36,316	32,159	96	89	-	4	4
Bagamati	**303,773**	**300,924**	**267,999**	**88**	**89**	**1**	**28**	**29**

Table 2.1.7 represents the IPV Campaign Coverage status of FY 2080/81. According to HMIS target, 88% coverage was achieved at provincial level, with highest coverage reported in Bhaktapur, followed by Kathmandu, both exceeding 100%, while lowest was observed in Ramechhap with 45% coverage. Similarly, according to microplanning target, 89% overall provincial coverage was achieved with highest coverage in Lalitpur (96%) and lowest in Bhaktapur (77%). Likewise, a total of 29 AEFI were reported at provincial level, with highest number recorded in Sindhupalchowk district (11). Only one of them was reported as severe from Makwanpur district.

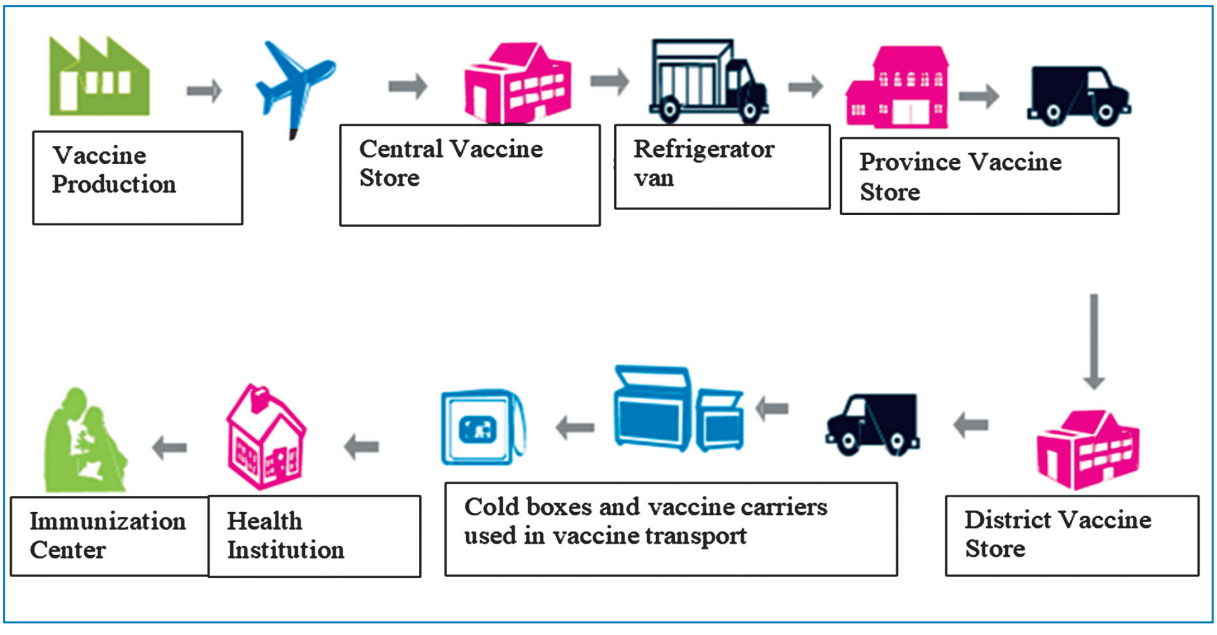
Bagmati Province conducted an IPV vaccination campaign targeting children across the province. A total of 5,719 immunization centers were set up, and 6,536 immunization sessions were organized. The campaign was carried out with the active involvement of 4,817 health workers and 11,113 female community health volunteers. The campaign's achievements are summarized in the table above.

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.2.1.5). Various types of cold chain equipment, including both electronic and non-electronic models, are utilized to store and transport vaccines under optimal temperature conditions.

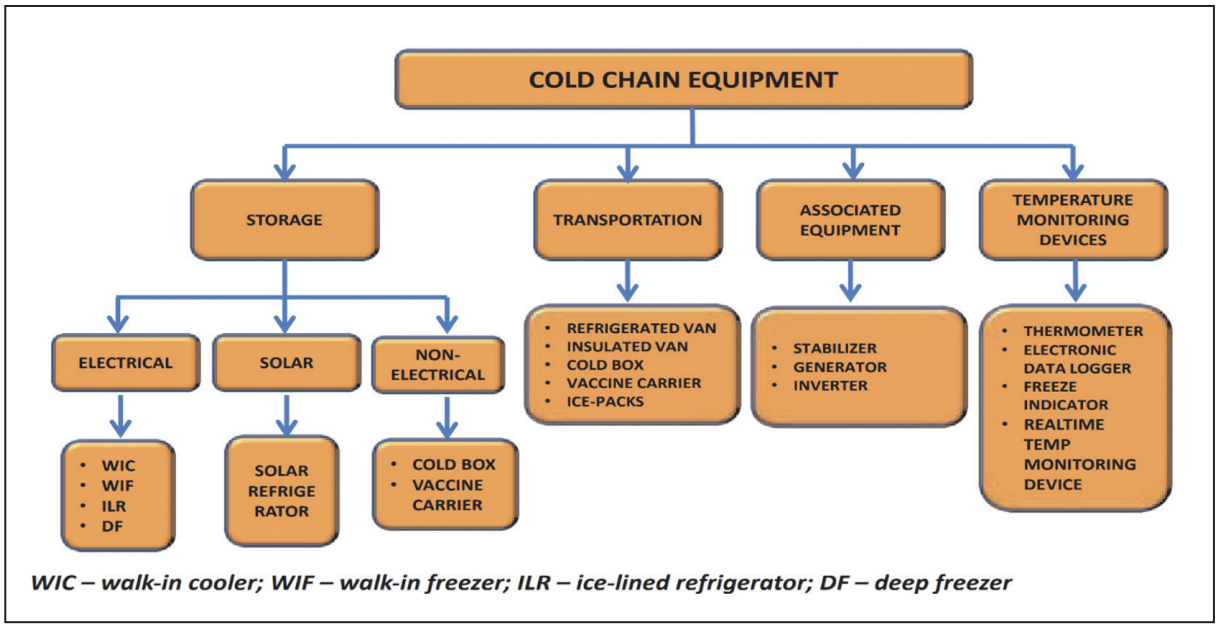
Figure 2.1.5 Overview of Cold Chain



The Figure 2.1.6 shows cold chain equipment Status, the cold chain equipment's are both electrical and non-electrical, used for storing vaccines and/or transporting them at appropriate temperatures.

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

Figure 2.1.6 **Cold chain equipment**



WIC – walk-in cooler; WIF – walk-in freezer; ILR – ice-lined refrigerator; DF – deep freezer

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 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 drink 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 the preparation of ice packs at the national, sub-national, district and distribution/ supply level cold chain points. ✓ Use DF to store OPV at a sub-national level. ✓ Keep 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.

Table 2.1.8 **Province Cold Chain Equipment Capacity and number of cold chain equipment as per districts:**

Cold Chain Equipment Capacity in Liter Before and After COVID 19						
District	Before Covid 19		After Covid 19		Grand Total	
	Total ILR	Total DF	Total ILR	Total DF	ILR	DF
Bhaktapur	689	397	11663	1348	12352	1745
Chitwan	908	997	3955	1058	4863	2055
Dhading	642	547	1342	1054	1984	1601
Dolakha	616	849	1009	761	1625	1610
Kathmandu	872	300	6863	1308	7735	1608
Kavrepalanchok	564	1183	2172	979	2735	2162
Lalitpur	591	864	1899	1158	2490	2022
Makwanpur	1036	1897	12612	1925	13648	3822

Nuwakot	717	748	1056	702	1773	1450
Ramechhap	1375	794	870	744	2245	1538
Rasuwa	207	186	812	526	1019	712
Sindhuli	525	0	1629	1338	2153	1338
Sindhupalchok	1034	697	1651	904	2684	1601
Total	**9772**	**9459**	**47530**	**13803**	**57302**	**23262**

Table 2.1.8 shows the cold chain equipment capacity status in Bagmati Province. Significant increases were observed between the periods before and after the COVID-19 pandemic, presenting an opportunity to strengthen program improvements. Prior to the pandemic, Bagmati Province had a capacity of 9,772 liters for Ice-Lined Refrigerators (ILRs) and 9,459 liters for Deep Freezers (DFs). After Pandemic, these capacities increased to 47,530 liters for ILRs and 13,803 liters for DFs. In total, Bagmati Province now has 57,302 liters of ILR capacity and 23,262 liters of DF capacity.

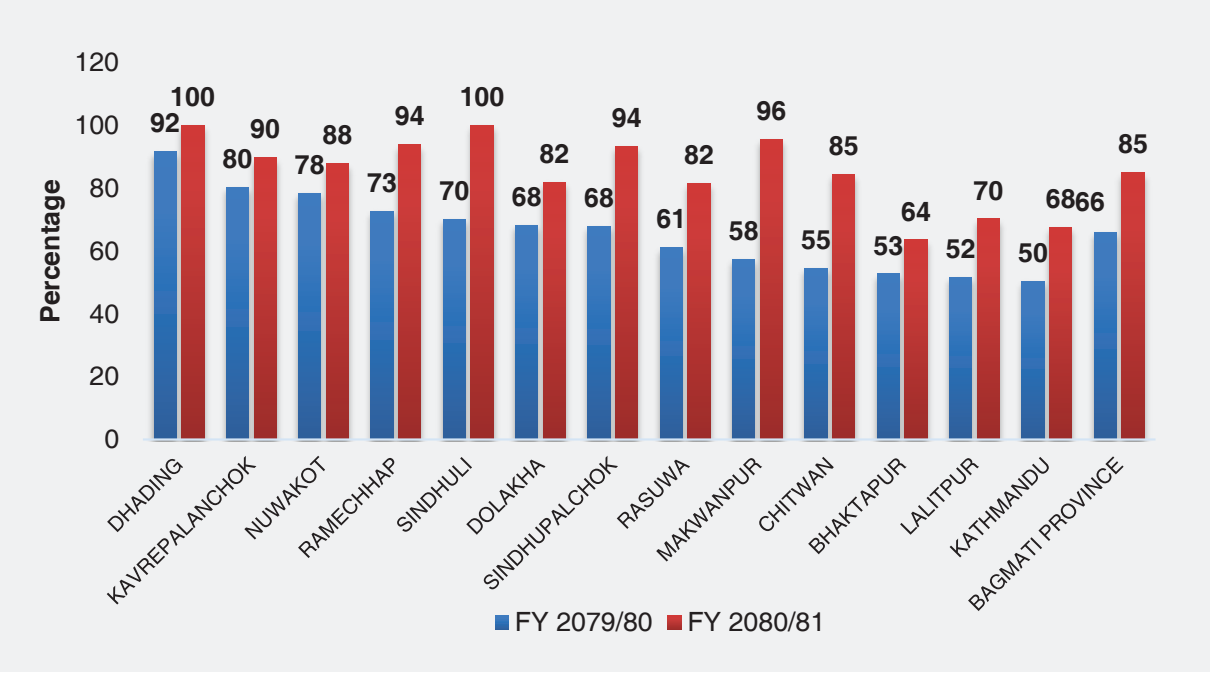
Table 2.1.9 Cold Chain Equipment Capacity in Liter of Bagamati Province as per districts

Number of cold chain equipment of Bagmati Province before and after covid 19								
Districts	Before covid 19			After covid 19				Grand Total
	DF	ILR	Total	DF	ILR	WIC	Total	
Bhaktapur	2	6	8	5	16	1	22	30
Chitwan	6	7	13	7	11	1	19	32
Dhading	3	6	9	7	12		19	28
Dolakha	5	5	10	5	9		14	24
Kathmandu	2	8	10	9	35	1	45	55
Kavrepalanchok	6	6	12	7	22		29	41
Lalitpur	4	7	11	8	17		25	36
Makwanpur	11	9	20	10	20	1	31	51
Nuwakot	4	6	10	4	8		12	22
Ramechhap	4	12	16	5	8		13	29
Rasuwa	1	3	4	3	6		9	13
Sindhuli	0	5	5	9	15		24	29
Sindhupalchok	4	7	11	6	12		18	29
Total	**52**	**87**	**139**	**85**	**191**	**4**	**280**	**419**

Table 2.1.9 shows the number of cold chain equipment obtained across Bagamati Province before and after COVID-19. Before covid 19 pandemic, the province had 139 cold chain equipment's. After the pandemic, this number increased significantly to 419, reflecting an increased rate of 201.43%.

Hygiene Promotion through Routine Immunization Program (HPTRI)

Figure 2.1.7 **District wise hygiene promotion conduction rate (FY 2079/80 to 2080/81)**



Source: DHIS 2

The **Hygiene Promotion through the Routine Immunization Program** was launched nationwide in 2020 alongside the introduction of the rotavirus vaccine into the routine immunization schedule. Immunization clinics serve as key contact points for promoting hygiene practices. Mothers and guardians, the primary beneficiaries, visit these clinics seven times during their child's 15-month vaccination cycle.

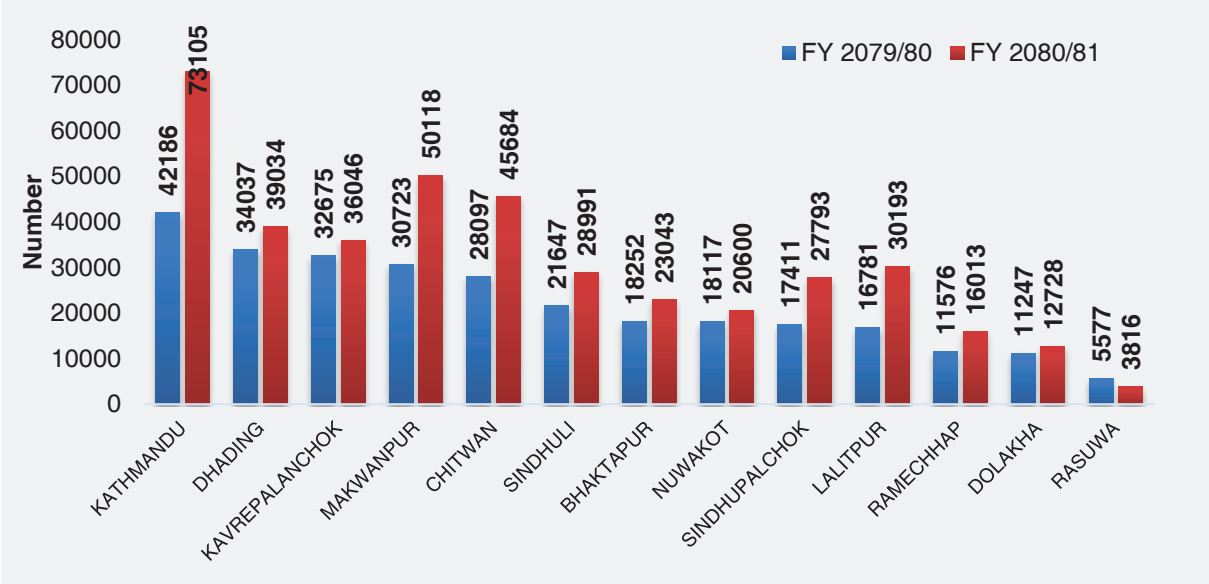
The program focuses on encouraging proper hygiene behaviors among them while they wait for their children to receive vaccines.

This program aims to bring about positive changes in the hygiene behaviors of mothers and guardians visiting 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.

The above figure shows the district-level achievement of hygiene promotion session conduction rate for the two fiscal years 2079/80 and 2080/81. 10 out of 13 districts in the province had a conduction rate of more than 80%. Notably, Sindhuli and Dhading had 100% coverage in 2080/81, which is a 30% increment from the FY 2079/80 for Sindhuli district. Bhaktapur, Lalitpur, and Kathmandu are the districts with the lowest conduction rate (<70%) in the province.

Other districts have made moderate progress over the two years. Overall, Bagmati Province demonstrated steady progress, increasing from 66% in FY 2079/80 to 85% in FY 2080/81.

Figure 2.1.8 **Number of Mothers/Guardians Participated in Hygiene Promotion Session**



Source: DHIS 2

The above figure shows the number of mothers/guardians who participated in hygiene promotion session (multiple times) across districts in the province in the fiscal years 2079/80 and 2080/81. Participation has increased in all districts. In particular, Kathmandu had the highest rise, from 42,186 participants in FY 2079/80 to 73,105 in FY 2080/81. Lalitpur, Chitwan, and Makwanpur also almost doubled the participation of mothers/guardians from 2079/80 to 2080/81, whereas Dolakha, Ramechhap, and Rasuwa had the lowest increment in the participation of mothers/guardians.

Major Achievement of the National Immunization Program (2080/81)

- All districts have declared full immunization status.
- Comprehensive microplanning has been developed at all levels (district and local levels).
- Two supplementary campaigns have been successfully conducted, including Measles and Rubella and Inactivated Polio Vaccine (IPV).
- The annual review meeting of the immunization program was conducted with an innovative model.
- The cold chain equipment in Bagmati 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 like 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 funding.

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 strengthened, with a focus on proper recording, to ensure 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 government.

Suggestion for improvement

- Revaluate 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 repair 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-round.

2.2 Community Based Integrated Management of Neonatal

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 children under five including Pneumonia, Diarrhea, Malaria, Measles and Malnutrition. CBIMNCI also covers services like management of infection, jaundice, hyperthermia, and counseling on breastfeeding for newborn & young infants at less than 2 months of age. These 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 mortalities to 25 per 1000 live births.

Goal:

Improve newborn and child survival and healthy growth and development.

Targets:

Table 2.2.1 Indicators of CB-IMNCI

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

Key interventions include:

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, Diarrhea, Malnutrition, Measles and Malaria)

Cross Cutting Interventions

- Behavior changes 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 interpersonal communication skills of HWs sand FCHVs

CB-IMNCI Program Monitoring Key Indicators

- % of institutional delivery
- % of newborns 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 children under five 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 quality assessment.

Major Achievements

CB-IMNCI Program Monitoring Indicators

Table 2.2.2 CB-IMNCI program monitoring indicators by district (FY 2080/81)

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 diarrhea treated with zinc and ORS
Dolakha	61	101.5	0	100.7	96
Sindupalchowk	39.8	101.1	5.3	100.2	100
Rasuwa	27.5	95.8	100	100	98.3
Dhading	50.8	40.3	18.8	101.3	98.5
Nuwakot	33.6	94.7	60	99.5	93.6
Kathmandu	128.3	12.6	0	96.5	97.5
Bhaktapur	46	94	0	100	77.5
Lalitpur	106.1	103.1	0	100.3	99
Kavrepalanchowk	102.1	99.1	22.2	100.4	99.7
Ramechhap	44.7	93.9	20	101.3	95.6
Sindhuli	35.2	92.7	0	104.8	98.6
Makwanpur	65.7	92.4	18.2	100.9	95
Chitwan	121.2	90.8	12.8	99.8	95.8
Bagamati	91.1	56.4	14.1	100.5	96.3

Source: DHIs 2

In fiscal year 2080/81, provincial average for institutional deliveries was 91.1% with Kathmandu having the highest rate (128.3%) and Rasuwa having the lowest rate (27.5%). Of all reported live births, chlorhexidine was applied to umbilical cords of 56.4% newborns. There was a variance in CHX use by district, with Lalitpur having the highest use (103.1%) and Kathmandu having the lowest (12.6%). Likewise, 14.1% of PSBI cases among under two-month-old infants received a complete dose of Gentamycin at provincial level where only Rasuwa has administered a complete dose of Gentamycin in cent percent PSBI cases whereas five districts i.e. Dolakha, Kathmandu, Bhaktapur, Lalitpur and Sindhuli district have not administered a complete dose of Gentamycin in PSBI cases at all. Overall, 100.5% of pneumonia cases were treated with antibiotics at a level with at least 99.5% in all 13 districts. The provincial coverage of children suffering from diarrhea treated with ORS and Zinc was 96.3%, highest observed in Sindhupalchowk (100%) and lowest in Bhaktapur (77.5%).

Key achievements for management of <2 months newborn

Table 2.2.3 **Classification of treatment of <2 months newborn cases by district from FY 2078/79 to FY 2080/81.**

Indicators	Year	Dolakha	Sindhupalchowk	Rasuwa	Dhading	Nuwakot	Kathmandu	Bhaktapur	Lalitpur	Kavrepalanchowk	Ramechhap	Sindhuli	Makwanpur	Chitwan	Bagmati Province
Possible Severe Bacterial Infections (PSBI)	2078/79	13	49	5	108	20	17	0	5	30	5	31	9	36	328
	2079/80	10	26	4	32	23	13	2	5	25	6	10	20	23	199
	2080/81	3	19	2	16	5	8	0	5	9	10	11	11	78	177
Jaundice	2078/79	11	10	1	96	9	9	1	5	19	2	12	28	34	237
	2079/80	4	14	6	58	14	39	4	19	4	1	18	24	54	259
	2080/81	5	18	2	38	8	62	3	50	6	1	31	29	204	457
Low Birth Weight/ Breast-Feeding Problem ≤ 28 days (HF only)	2078/79	15	20	9	53	10	18	0	9	27	3	25	13	27	229
	2079/80	0	1	0	20	0	1	0	4	4	2	8	5	6	51
	2080/81	5	5	1	8	1	18	1	7	5	1	4	9	7	82
Referred	2078/79	19	37	3	50	13	36	1	13	37	2	13	19	21	264
	2079/80	10	23	5	27	14	30	2	20	40	7	15	40	41	274
	2080/81	8	39	2	30	12	52	8	19	18	12	21	44	43	308
Deaths	2078/79	0	0	0	1	3	0	0	0	0	0	0	1	0	5
	2079/80	0	1	1	0	0	0	0	0	1	0	0	0	0	3
	2080/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Source: DHIS-2

A total of 177 PSBI cases were classified and registered in FY 2080/81 at provincial level which shows a slight decrease from the previous year which was 199 PSBI cases. Similarly, a total of 82 low birth weight or breastfeeding problem cases were recorded at provincial level in FY 2080/81 which is in increasing trend from the last year (51 in FY 2079/80). The PSBI cases were highest in Chitwan (78 cases) and none in Bhaktapur in FY 2080/81. There has been a remarkable increase in Jaundice cases from 259 in FY 2079/80 to 457 in FY 2080/81.

A total of 308 infants below 2 months were referred in FY 2080/81. Likewise, there were no deaths reported of under 2 months old infants in FY 2080/81 compared to 3 deaths in FY 2079/80.

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

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

Table 2.2.3 Classification of diarrheal cases by district (2-59 months children)

Indicators (service unit)	Year	Bagmati Province	Dolakha	Sindhupalchowk	Rasuwa	Dhading	Nuwakot	Kathmandu	Bhaktapur	Lalitpur	Kavrepalanchowk	Ramechhap	Sindhuli	Makwanpur	Chitwan
FCHV Program-CBIMNCI-(2-59 months)- Total Diarrhea Cases	2078/79	101009	5020	7434	2117	5387	7177	16332	4526	7536	9207	7903	7498	13044	7828
	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
CBIMNCI-(2-59 Months)-Classification-No dehydration	2078/79	27110	1599	2918	790	3011	1491	2003	776	1479	2940	1181	2397	3126	3399
	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
CBIMNCI-(2-59 Months)-Classification-Some dehydration	2078/79	2935	195	264	30	448	140	272	32	88	257	106	531	315	257
	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
CBIMNCI-(2-59 Months)-Classification-Severe dehydration	2078/79	42	5	2	0	3	10	0	0	0	0	2	1	14	5
	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

Source:DHIS-2

In FY 2080/81, among all three categories diarrheal cases, most were classified as having no dehydration, followed by some dehydration and severe dehydration. The highest number of 'no dehydration' cases were recorded from Kathmandu (3704) and Makwanpur (3702). Likewise, the highest number of 'some dehydration' cases were observed in Sindhuli (386) and Kathmandu (379), and the highest number of 'severe dehydration' cases were observed in Chitwan (22).

Table 2.2.4 Trends in classification of diarrhea cases by incidence (2077/78- 79/80)

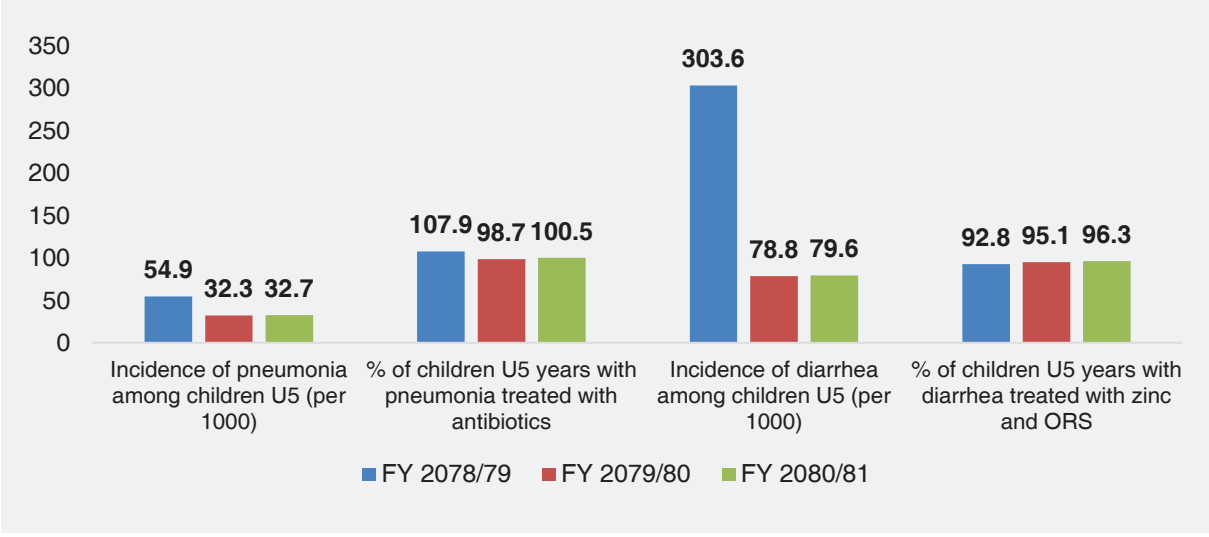
District	Estimated <5 years population that are prone to diarrhea			Incidence of diarrhea/1000 <5years population		
	FY 2078/79	FY 2079/80	FY 2079/80	FY 2078/79	FY 2079/80	FY 2079/80
Bagmati Province	430580	424621	Bagmati Province	430580	424621	Bagmati Province
Dolakha	13444	13273	Dolakha	13444	13273	Dolakha
Sindupalchowk	18920	18421	Sindupalchowk	18920	18421	Sindupalchowk
Rasuwa	4728	4800	Rasuwa	4728	4800	Rasuwa
Dhading	26797	26056	Dhading	26797	26056	Dhading
Nuwakot	21014	20723	Nuwakot	21014	20723	Nuwakot
Kathmandu	123754	122504	Kathmandu	123754	122504	Kathmandu
Bhaktapur	26007	25706	Bhaktapur	26007	25706	Bhaktapur
Lalitpur	32229	31898	Lalitpur	32229	31898	Lalitpur
Kavrepalanchowk	28186	28212	Kavrepalanchowk	28186	28212	Kavrepalanchowk
Ramechhap	14085	13734	Ramechhap	14085	13734	Ramechhap
Sindhuli	30725	30168	Sindhuli	30725	30168	Sindhuli
Makwanpur	39104	38235	Makwanpur	39104	38235	Makwanpur
Chitwan	51587	50931	Chitwan	51587	50931	Chitwan

Source: DHIS-2

Table 2.2.5 shows that the estimated population below five years ago that are prone to diarrhea has been decreasing in the past three fiscal years. The highest number of such population has bene observed in Kathmandu in all three years and lowest in Rasuwa. The incidence of diarrhea per thousand under 5 years children in Bagmati province was 79.6 (Health facility only) in fiscal year 2080/81, being highest in Rasuwa (163.8) and lowest in Kathmandu (34.7).

IMNCI Program Status

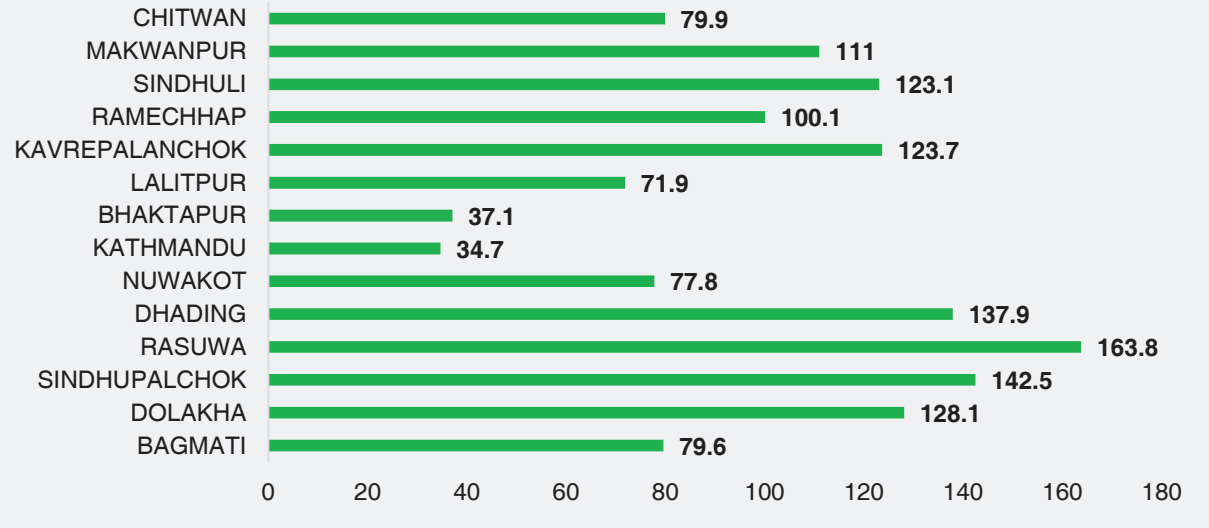
Figure 2.2.1 Program status of IMNCI



Source: DHIS-2

The figure 2.2.1 represents the provincial status of IMNCI of last three fiscal years from 2078/79 to 2080/81. In children under five years, the data shows that the incidence of Pneumonia and diarrhea has been almost steady in the last two fiscal years (pneumonia around 32 per 1000 and diarrhea around 79 per 1000). However, the percentage of children under five years with Pneumonia treated with antibiotics increased from 98.7 in FY 2079/80 to 100.5 in FY 2080/81, and that of Diarrhea treated with ORS and Zinc increased from 95.1 in FY 2079/80 to 96.3 in FY 2080/81.

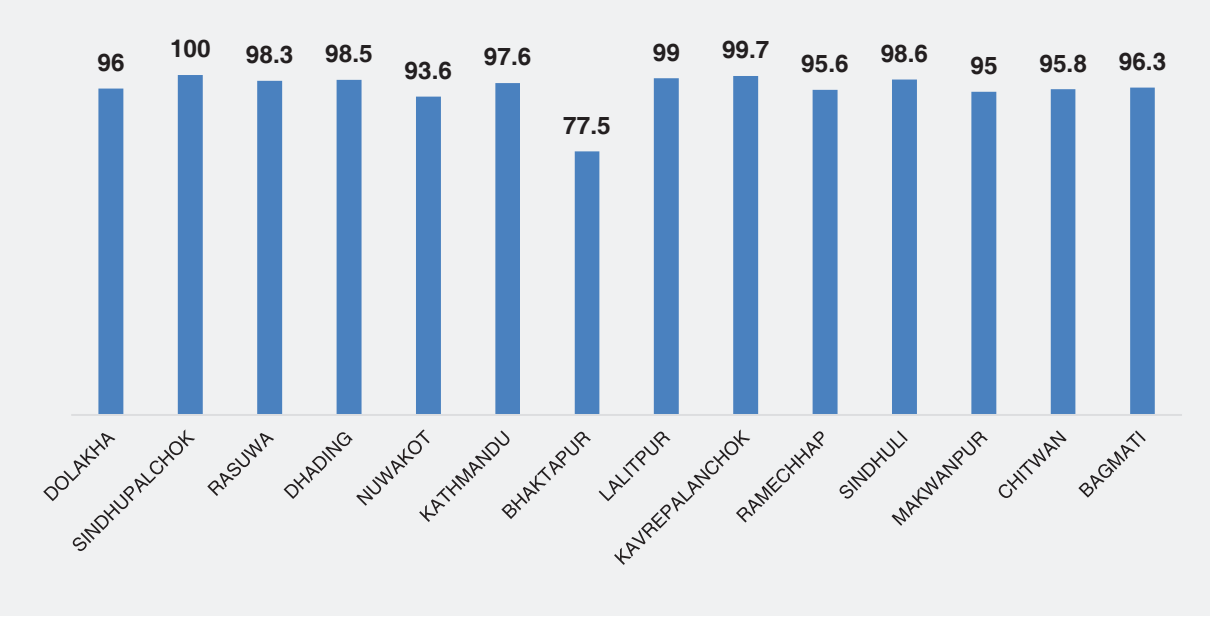
Figure 2.2.2 Incidence of diarrhea per 1000 U5 years children in FY 2080/81



Source: DHIS-2

The figure 2.2.2 shows the highest incidence of diarrhea per 1000 U5 children in FY 2080/81 in Rasuwa (163.8) followed by Sindhupalchok (142.5) and lowest in Kathmandu (34.7).

Figure 2.2.3 **Percentage of children under five years with diarrhea treated with zinc and ORS**

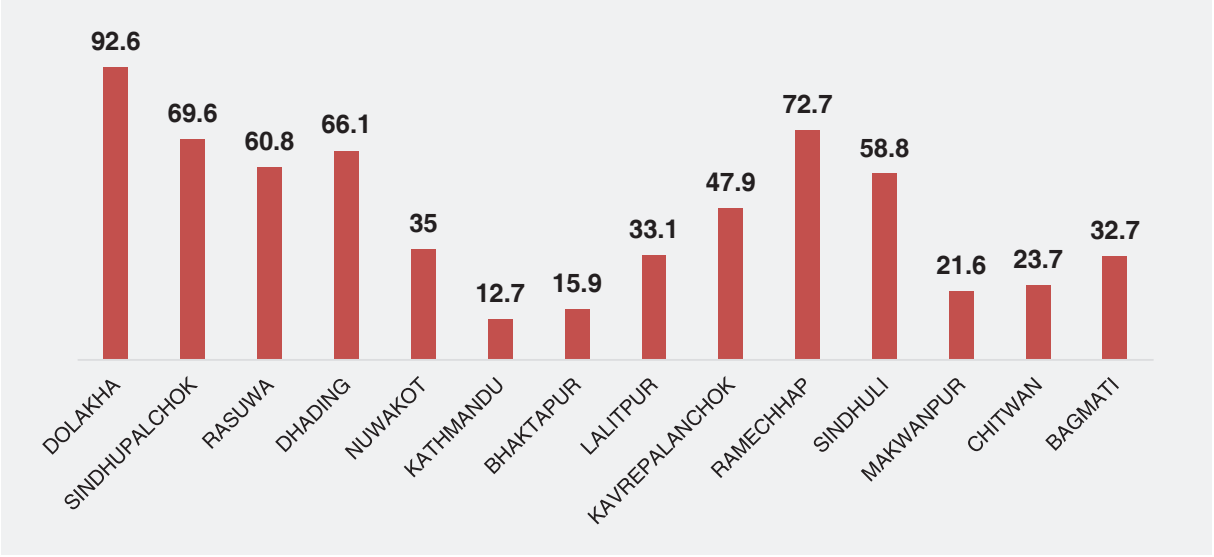


Source: DHIS-2

Figure 2.2.3 shows that 100 % of children under five years with diarrhea were treated with zinc and ORS in Sindhupalchok which is the highest whereas it was lowest in Bhaktapur (77.5%).

Incidence of pneumonia cases

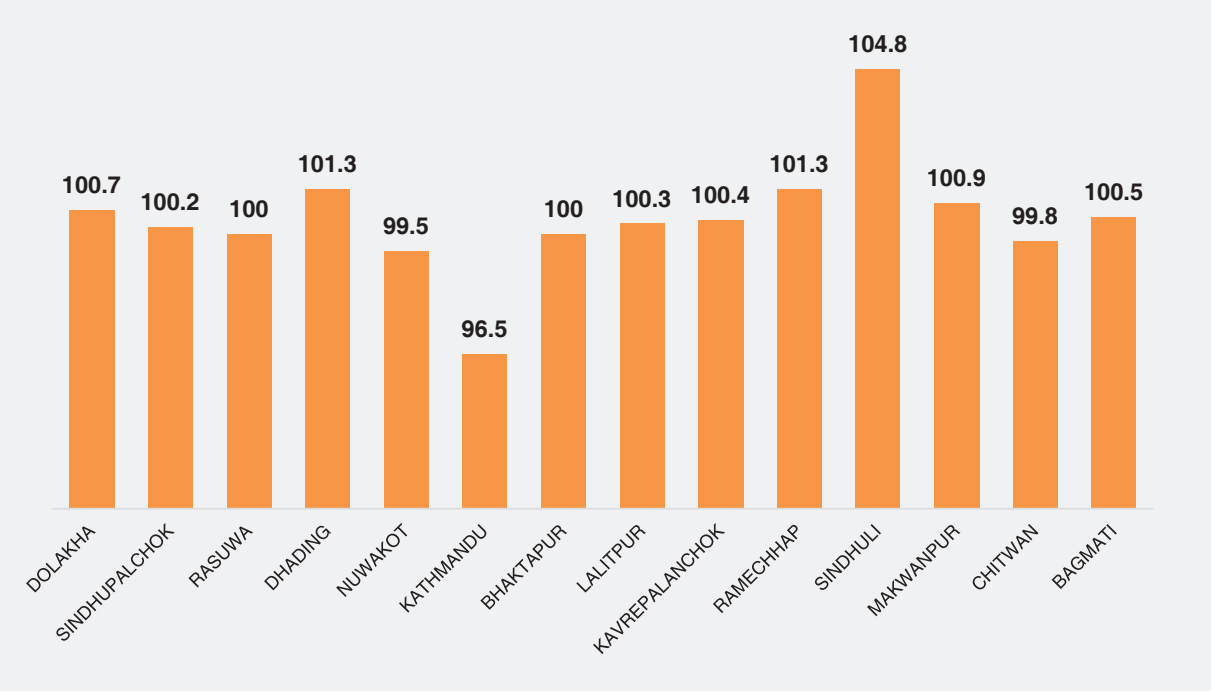
Figure 2.2.4 **Incidence of pneumonia among under five children per 1000**



Source: DHIS-2

The figure 2.2.4 shows highest incidence of Pneumonia among under five children in Dolakha district (92.6) followed by Ramechhap (72.7) and lowest in Kathmandu district (12.7).

Table 2.2.5 **Percentage of children U5 years with Pneumonia treated with antibiotics (Amoxicillin)**



Source: DHIS-2

Figure 2.2.5 shows the highest % of children U5 years with Pneumonia treated with antibiotics (Amoxicillin) was observed in Sindhuli district (104.8%) and lowest in Kathmandu district (96.5%).

Problems, constraints and action to be taken and responsibilities

Issues/Challenges	Action to be taken	Issues/Challenges
Improper recording and reporting in CBIMNCI registers	Onsite coaching, proper data monitoring and supervision	Improper recording and reporting in CBIMNCI registers
Poor data quality	- Carry out RDQA-online/offline - Strengthen regular feedback mechanisms and supervision and monitoring	Poor data quality
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	Lack of dedicated focal persons to monitor CBIMNCI program and related data
Lack of equipment to deliver newborn and child health services at service delivery points	Conduct a comprehensive need assessment and develop a detailed procurement plan	Lack of equipment to deliver newborn and child health services at service delivery points

Difficulty in implementing free newborn care guidelines	Enhance coordination and collaboration between hospitals and municipalities to ensure effective implementation of newborn care guidelines	Difficulty in implementing free newborn care guidelines
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 undernutrition 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

Major activities conducted in FY 2080/81

Implement community awareness activities for **Breastfeeding Week**, **School Health and Nutrition Week**, **Iodine Month**, and other national nutrition events.

Advocacy meeting on nutrition programs between local level chiefs, deputy chiefs and public representatives and nutrition officials.

- Monitoring and supervision of nutrition programs
- Annual Review of Provincial Level Nutrition Program
- Capacity Building and Onsite Coaching for Hospitals with Inpatient Treatment Center

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.

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 Bagmati 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.children under 5 years were 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 being overweight remained constant i.e.1 percent from 2001 to 2022 NDHS. In Bagmati 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 2.

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:

- Federally structured nutrition plans and activities
- Gender equality and social inclusion
- Program expansion to underserved groups and communities
- Transparency, responsibility, and accountability
- Good governance
- Evidence-based nutrition service
- Private sector engagement
- Mobilization of local resources
- 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:

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

Strategies

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

Multi-sector Nutrition Plan (MSNP-II 2018-2022) 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

- promotion of dietary diversification
- food fortification

- micronutrient supplementation and
- 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

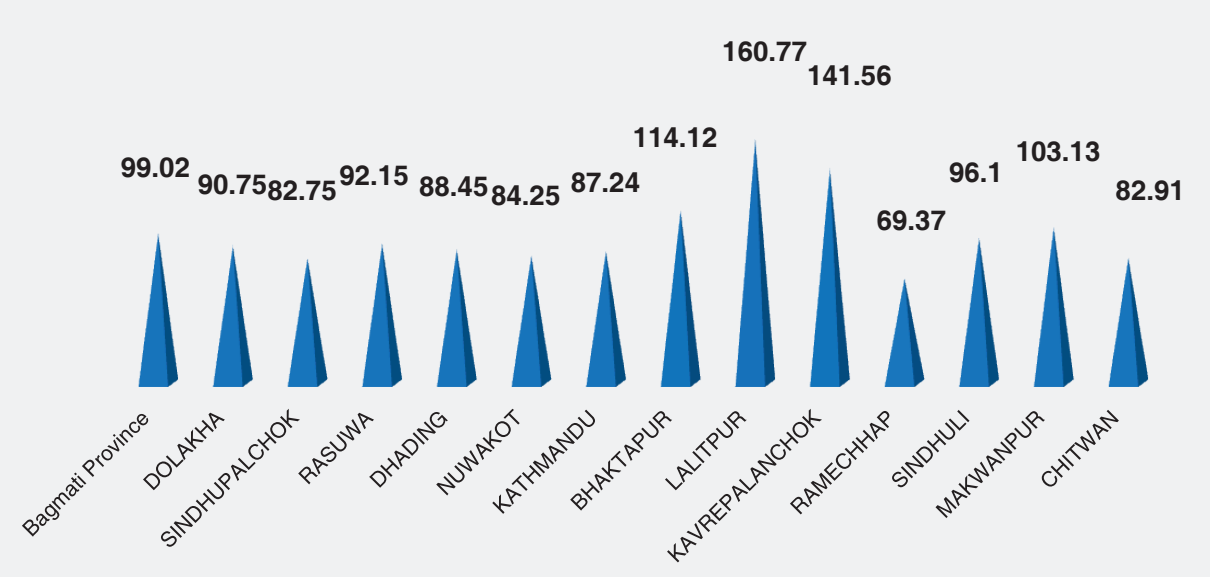
- Maternal, Infant and Young Child Nutrition (MIYCN)
- Growth Monitoring and Promotion (GMP)
- Control and Prevention of Iron Deficiency Anemia
- Control and Preventions of Vitamin A Deficiency Disorders
- Control and Prevention of Iodine Deficiency Disorders
- Control of Intestinal Helminths Infestations
- School Health and Nutrition Program (Adolescent IFA distribution)
- Nutrition in emergencies

B. Scale up programme

- Integrated Infant and Young Child Feeding and Multiple Micronutrient Powder (Balvita) Community Promotion Program
- Integrated Management of Acute Malnutrition (IMAM).

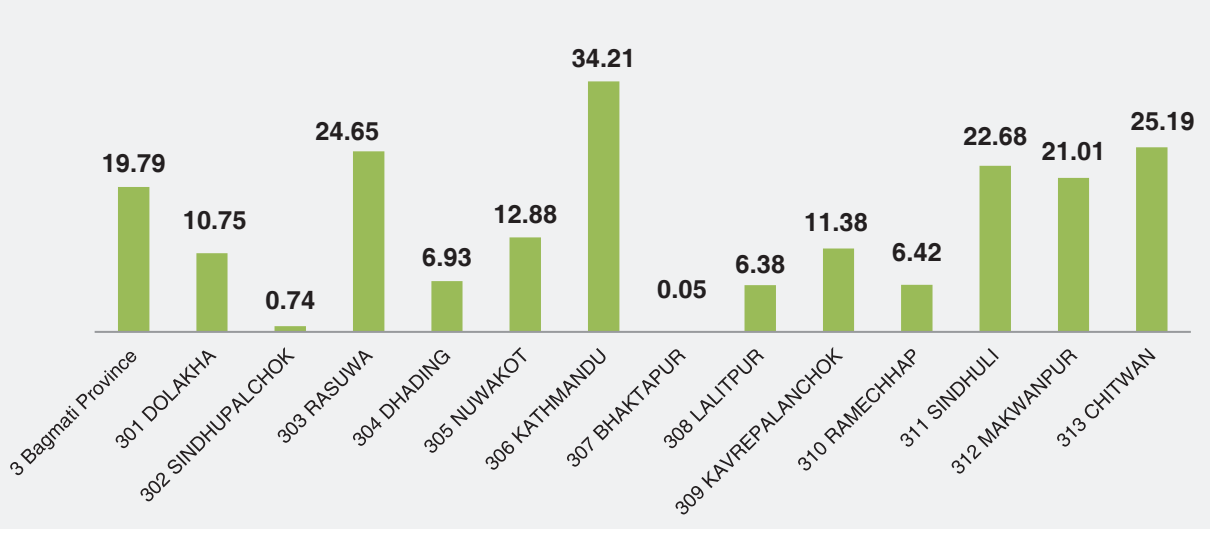
Major Achievements in Nutrition program (2080/81)

Figure 2.3.1 Percentage of children aged 0-11 months registered for growth monitoring



Source: DHIS-2

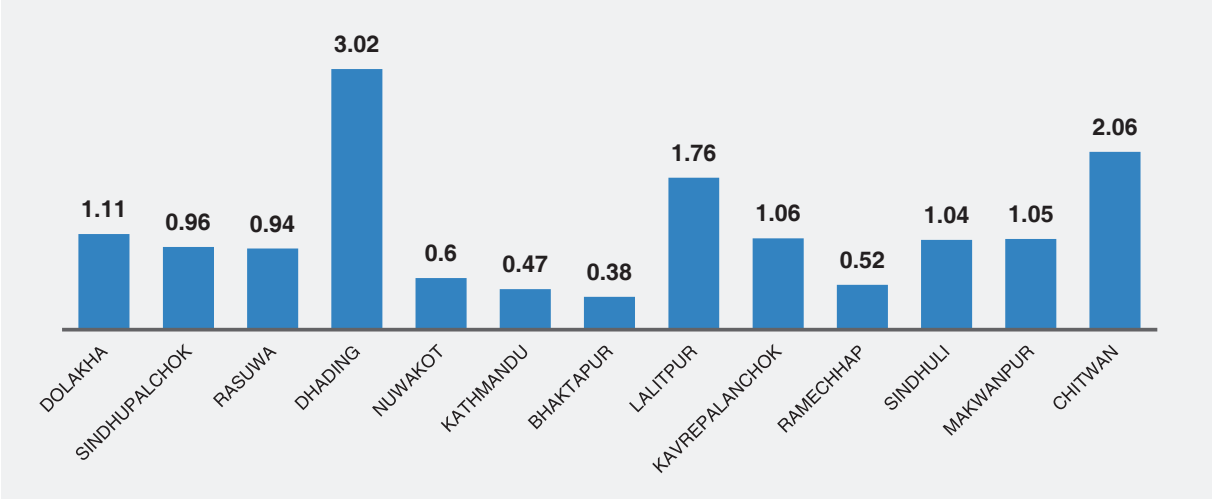
Figure 2.3.2 Percentage of children aged 12-23 months registered for growth monitoring



Source: DHIS-2

The above figures illustrate district wise nutritional status indicators of Bagmati Province in the fiscal year 2080/81. Accordingly, the highest percentage of children aged 0-11 months registered for growth monitoring was in Lalitpur district (160.7) and the least in Ramecchap district (69.3) in that fiscal year. Likewise, the proportion of children aged 12-23 months registered for growth monitoring with the highest percentage was of Kathmandu (34.2) and lowest was of Bhaktapur (0.05).

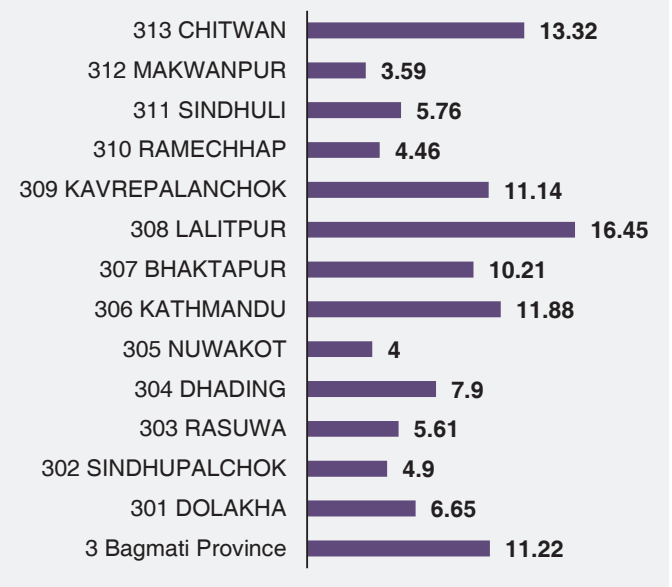
Figure 2.3.3 Percentage of 0-23 months registered for growth monitoring



Source: DHIS 2

The above figures 2.3.3 and 2.3.4 highlights that the percentage of children aged 0-23 months registered for growth monitoring was highest in Dhading district (3.02) and the least in Bhaktapur (0.38). Furthermore, the highest and the lowest percentage of low birth weight (<2.5kg) among total delivery by health workers was of Lalitpur district (16.45) and Makwanpur (3.59) respectively.

Figure 2.3.4 Percentage of newborns with low birth weight (<2.5kg) among total delivery by HWs



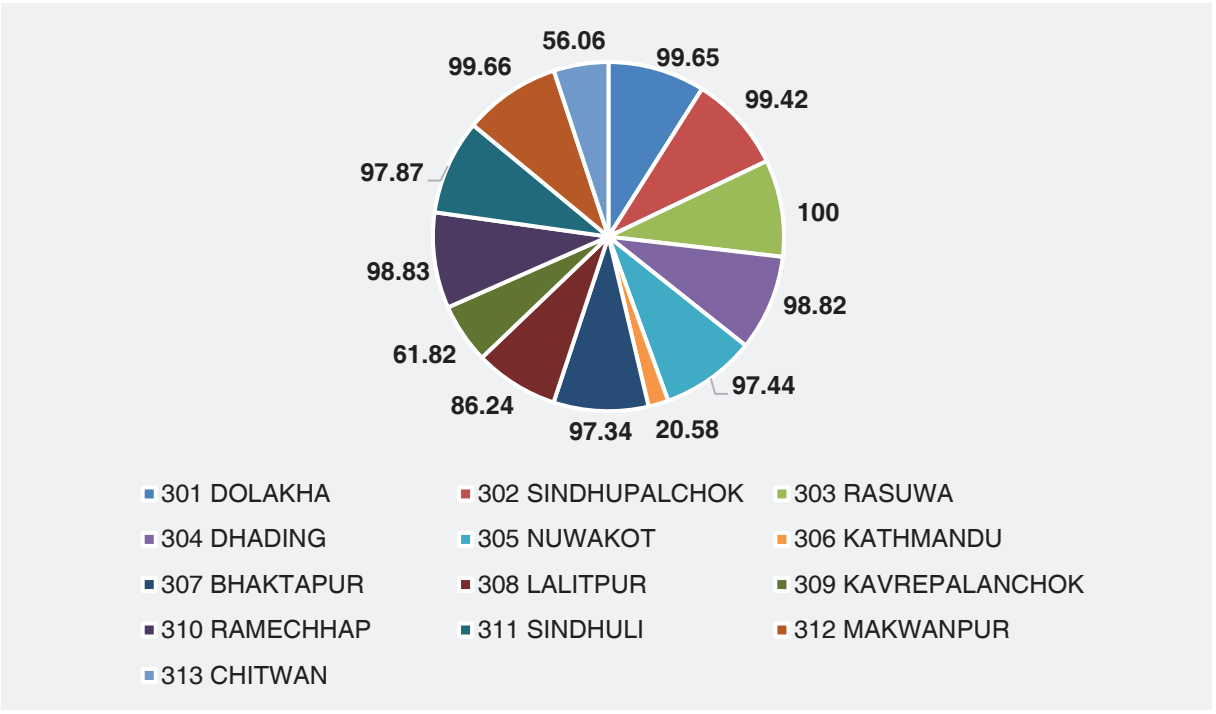
Infant and Young Child Feeding (IYCF)

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 provides data on the percentage of newborns who initiated breastfeeding within one hour of birth in different districts of Bagmati Province. The data shows the percentage of newborns

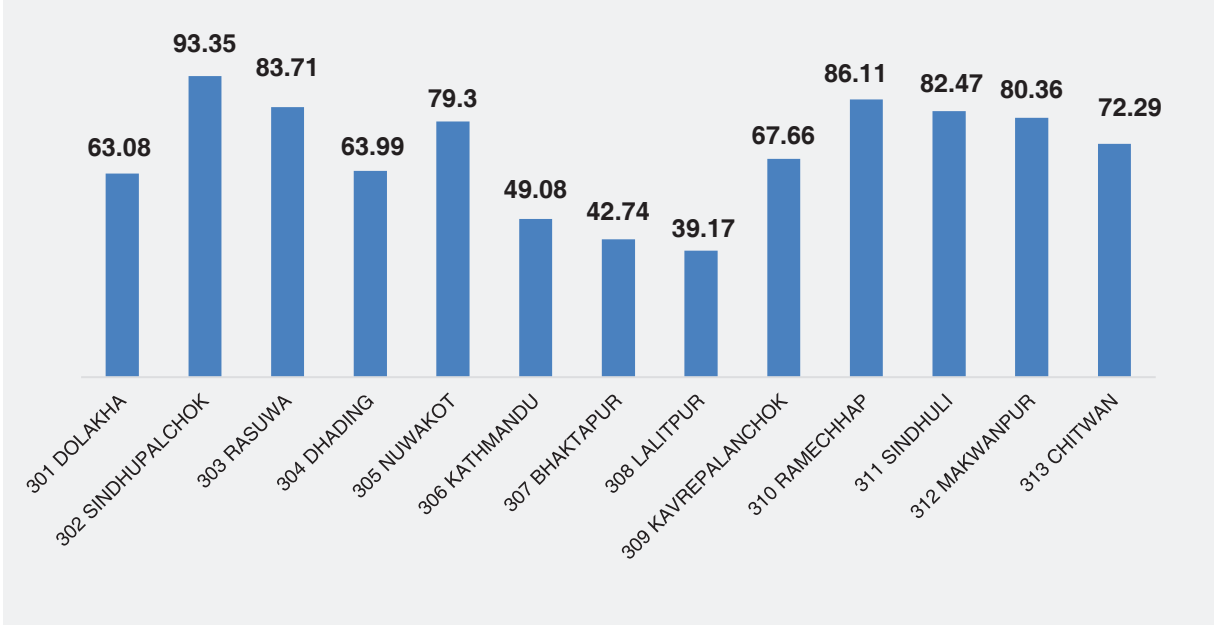
who initiated breastfeeding within one hour of birth having the highest percentage and the lowest percentage were of Rasuwa (100) and Chitwan (56.06) respectively.

Figure 2.3.5 **Percentage of newborns who initiated breastfeeding within one hour**



Source: DHIS 2

Figure 2.3.6 **Percentage of children below 6 months exclusively breastfed among registered for growth monitoring**



Source: DHIS 2

The figure 2.3.6 highlights the highest and lowest percentage of children below 6 months exclusively breastfed among registered for growth monitoring were of Sindhupalchowk (93.35) and Lalitpur (39.17).

Issues, recommendations 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, and responsibilities of Nutrition program

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, 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/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/ 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.	Health office/Local Level
Limited Iron Tablet Distribution to Adolescent Girls	• Strengthening school health and nutrition programs. • Encouraging active participation of school nurse	HD/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/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/PHLMC/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/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/Health office/Local Level
Widespread access and consumption of food that harms the body in the community	Promotion of nutrition discourages 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, I.T.C.	HD/PHLMC/Health office/Local Level
Lack of training for local health workers on time	• Conducting capacity building programs regularly to health workers • Providing CNSI training to physicians	PHTC/HD/Health Office/ Local Level
Lack of technical supervision and on-site coaching	Integrated technical supervision and on-site coaching program	FWD/HD/Health office

2.4 Safe Motherhood and Newborn Health Newborn

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 considered 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 raising awareness 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 births (NDHS, 2022). The Sustainable Development goal has been committed to one of the important targets 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.

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

Major activities of FY 2080/81

Table 2.4.1 **Major activities done in Bagmati Province FY 2080/081**

S. N	Programme	Place	No. of Participants	Remarks
1.	Orientation of Web database of RMNCAH service providers and sites	Kathmandu and Chitwan	30-40	Nursing staff and Medical Recorder
2.	MNH Programme supervision and monitoring	7hospitals (Bakulahar Ratnanagar, Dhading, Tokha Chandeshwori, Bajrabarahi Chapagau, Methinkot, Chautara, Pashupati Chaulagai Smriti)		Supervision was done on 7 hospitals of Bagmati Province
3.	MNH Mentor Development	PMWH	39	SBA trained nursing staff
4.	MPDSR committee formation	HD, Hetauda	25	Committee members
5.	SRHR\PRHCC\TWG meeting	HD, Hetauda	25	Committee members
6.	MNH clinical mentor refresher training and review	Hetauda	51	Nursing staff

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

Table 2.4.2 **Emergency obstetric and Newborn Care (EONC) Services distribution in health facilities**

District	Birthing Center	BEONC	CEONC
Chitwan	18	2	1
Makwanpur	53	7	-
Sindhuli	33	6	2
Ramechhap	34	2	2
Kavrepalanchowk	44	5	3
Lalitpur	21	6	3
Bhaktapur	4	2	7
Kathmandu	16	6	7
Nuwakot	44	3	2
Dhading	67	7	1
Rasuwa	18	8	1
Sindhupalchok	52	4	2
Dolakha	43	12	1
Bagmati	447	70	32

Source: DHIS-2

Antenatal Care

The MOHP in Nepal recommends four ANC visit at the 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 a 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.

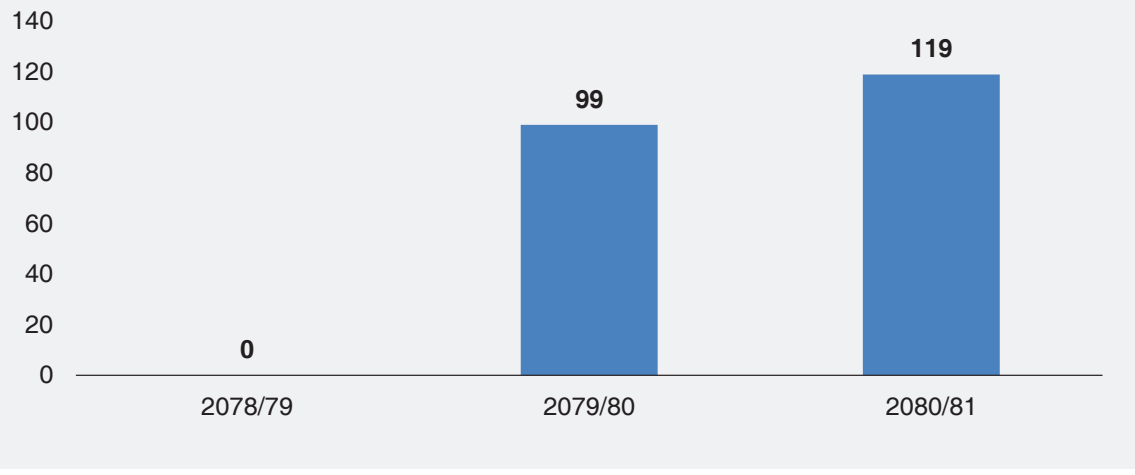
ANC visit according to national protocol	2016 WHO ANC model
First trimester	
Visit 1: 12-16 weeks (4 month)	Contact 1: up to 12weeks
Visit 2: 20-24 weeks (6 month)	Contact 2: 20 weeks
	Contact 3: 26 weeks
Third trimester	
Visit 3: 28-32 weeks (8 month)	Contact 4: 30 weeks
	Contact 5: 34 weeks
Visit 4: 36-40 weeks (9 month)	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 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 2.4.1 **Percentage of pregnant women who attended eight ANC visits**

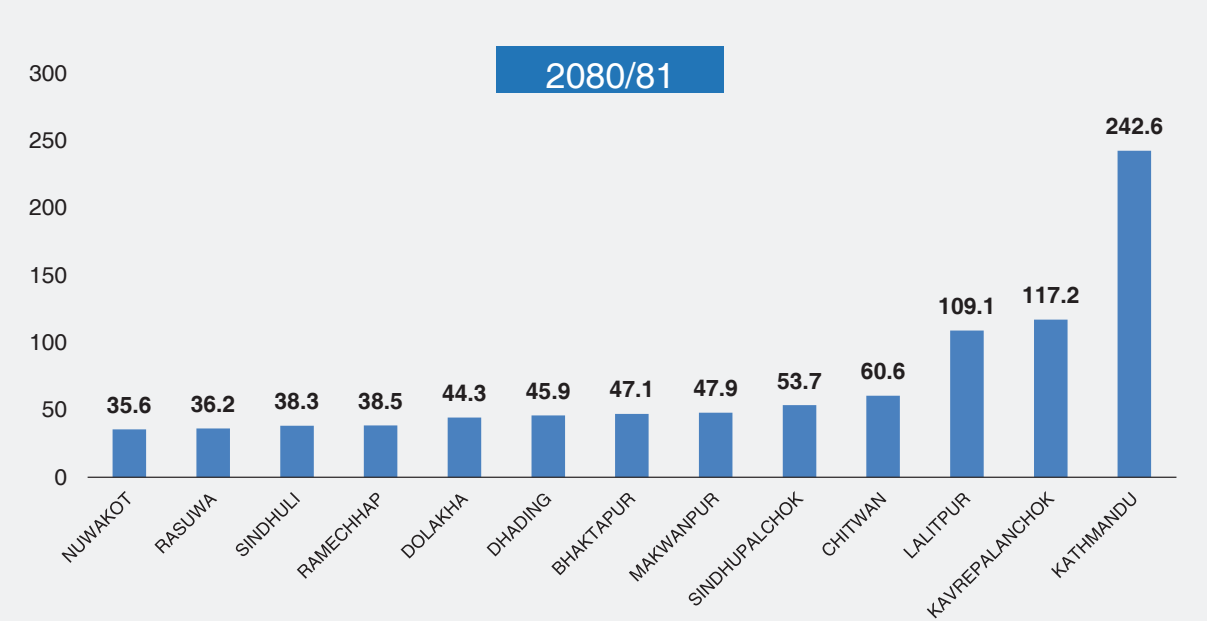


Source: DHIS-2

The above figure shows the three-year trends of pregnant women who attended eight ANC visits as per protocol. The above figure demonstrates a clear upward trend over the three years, with a substantial rise in the 2079/80 (99%), and further growth in 2080/81(119%).

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

Figure 2.4.2 **District wise trend of pregnant women who attended eight ANC visits**



Source: DHIS-2

The above figure shows the district wise trend of pregnant women who attended eight ANC visits as per protocol in FY 2080/81. Kathmandu has the highest number at 242.6%, indicating the highest adherence to the ANC visit protocol whereas Nuwakot has the lowest number at 35.6%. The above 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.

Safe Delivery

Safe delivery care includes:

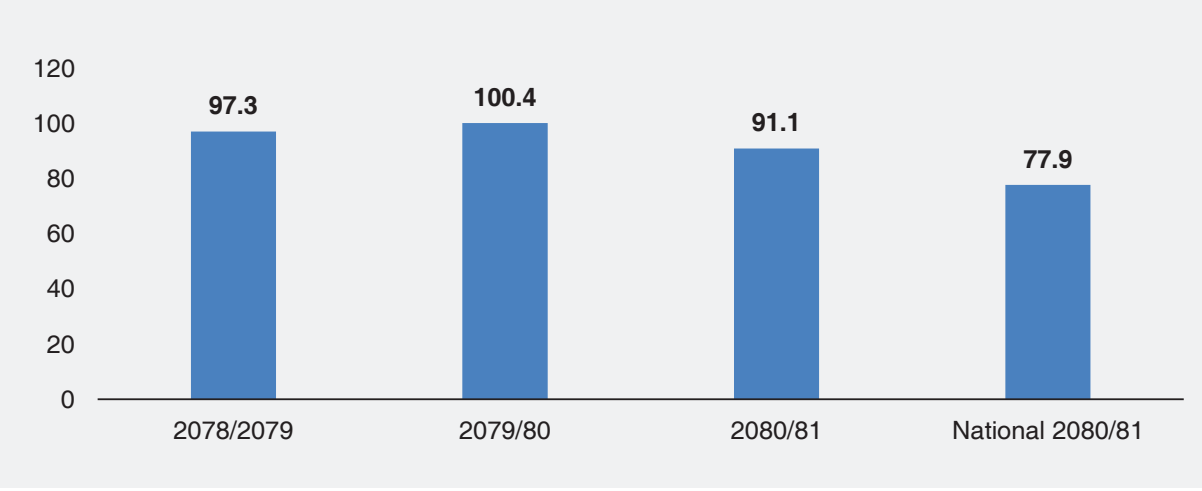
- Skilled birth attendance at home and institutional deliveries,
- Early of complicated cases and management or referral (after providing obstetric first aid) to an appropriate health facility with 24-hour emergency obstetric services, and
- Registration of births and maternal and neonatal deaths.

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

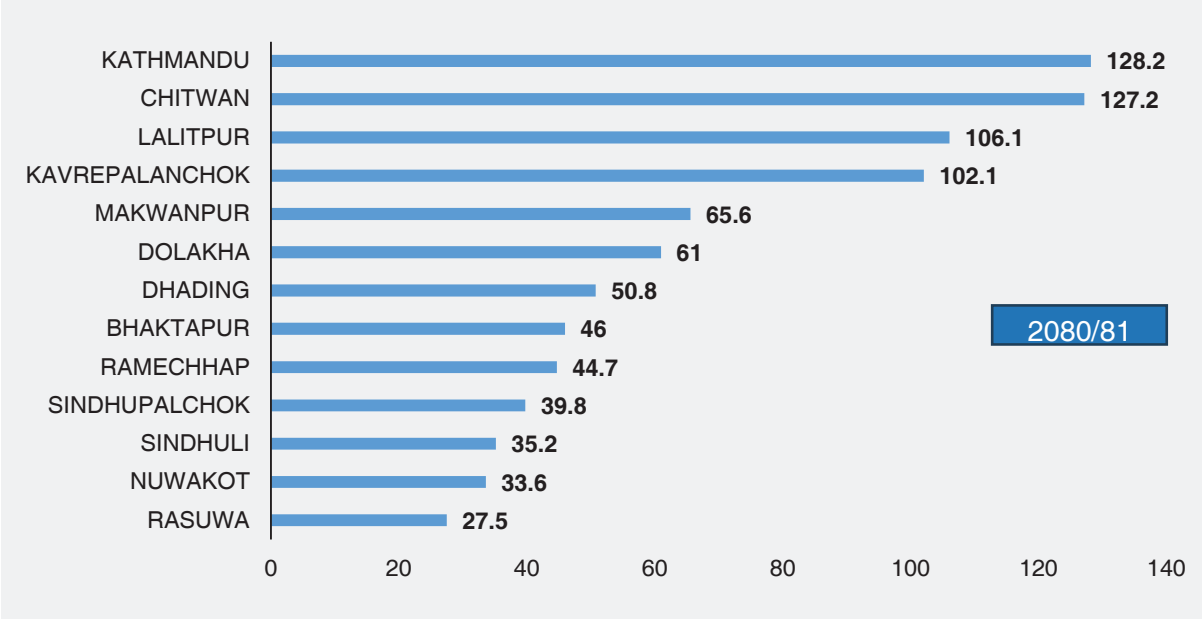
Figure 2.4.3 **Percentage of pregnant women delivering at the health facilities**



The above figure illustrates the percentage of pregnant women delivering at health facilities over three Fiscal years and the national average for 2080/81. In Fiscal year 2078/79, 97.3% of pregnant women delivered at health facilities whereas in FY 2079/80 it was increased slightly to 100.4%, indicating almost all deliveries occurred at health Facilities. But the percentage dropped to 91.1%, showing a decline compared to the previous year.

District wise trend of pregnant women delivering at the health facilities

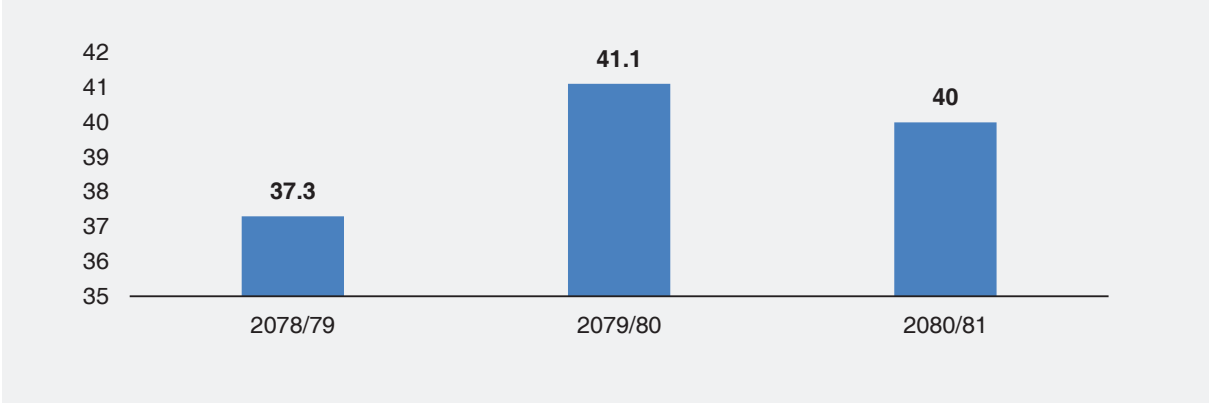
Figure 2.4.4 **District wise trend of pregnant women delivering at the health facilities**



The above figure reflects a similar trend seen in other maternal health indicators: District like Kathmandu, Chitwan, and Lalitpur have higher rates of institutional deliveries maybe due to better access to healthcare facilities, while rural districts like Rasuwa and Nuwakot show lower rates, likely due to challenges in access and availability of healthcare services.

CS rate among deliveries

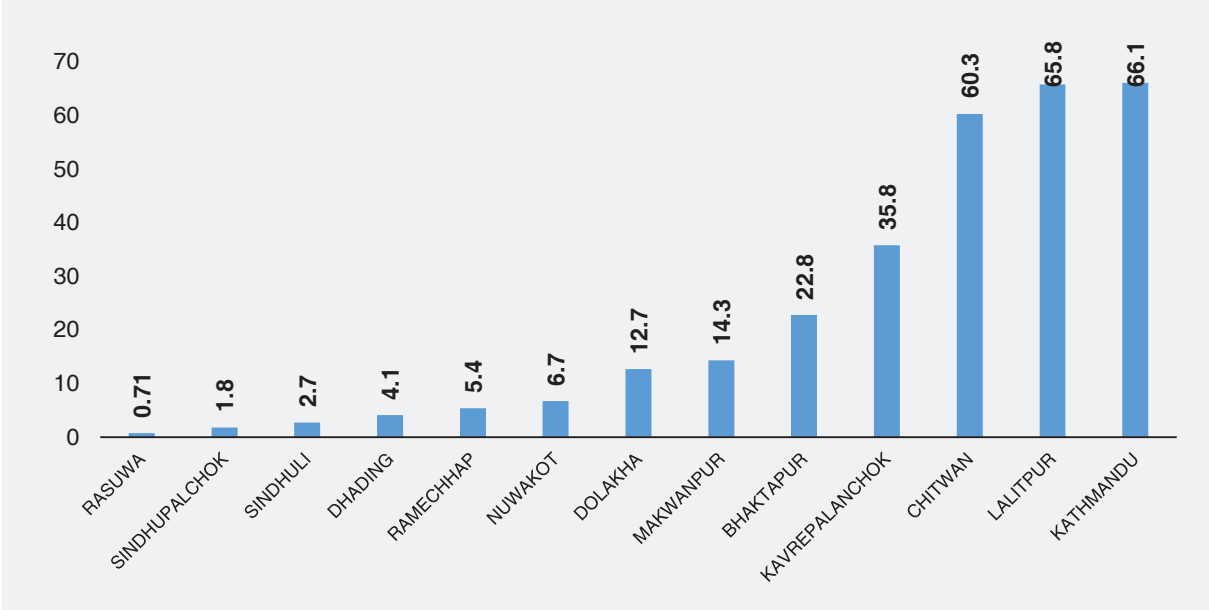
Figure 2.4.5 CS rate among deliveries



The above figure illustrates the percentage of CS rate among deliveries. This trend indicates a growing prevalence of Cesarean deliveries over time, with a peak in 2079/80 (41.1%). The slight drop in 2080/81(40%), suggests a potential stabilization, though the rate remains relatively high. High CS rates could reflect increased access to medical interventions during childbirth, changes in clinical practices, or a rise in maternal complications requiring surgical deliveries.

District wise trend of CS rate among deliveries

Figure 2.4.6 District Wise trend of CS rate among deliveries



The figure illustrates the district-wise trend of Cesarean section (CS) rates among deliveries in the fiscal year 2080/81. According to the data, **Kathmandu (66.1%)**, **Lalitpur (65.8%)**, and **Chitwan (60.3%)** have the highest CS rates. In contrast, **Rasuwa (0.71%)**, **Sindhupalchok (1.8%)**, and **Sindhuli (2.7%)** report the lowest CS rates among deliveries.

Trends in number of women with obstetric complications

Table 2.4.3 **Trends in number of women with obstetric complications**

Province/District	No. of woman with obstetric complications		
	FY 2078/79	FY 2079/80	FY 2080/81
Dolakha	116	323	93
Sindhupalchok	3700	400	154
Rasuwa	13	19	9
Dhading	517	570	168
Nuwakot	252	181	54
Kathmandu	6144	5976	6760
Bhaktapur	493	366	181
Lalitpur	508	367	582
Kavrepalanchowk	343	405	280
Ramechhap	57	88	64
Sindhuli	170	239	94
Makawanpur	402	327	207
Chitwan	3803	3344	1768
Bagmati Province	16518	12605	10414

This table presents the number of women experiencing obstetric complications across various districts in Bagmati Province over three fiscal years (2078/79, 2079/80, and 2080/81). 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 provinces the total number of cases has **declined** significantly over the years.

Iron Folic Acid Supplement

The above figure illustrates the percentage of women who received a 180-day supply of Iron Folic Acid during pregnancy. The data suggests a **gradual improvement** in IFA supplementation coverage over the years in Bagamati province, though it still falls short of the national benchmark. Addressing potential barriers—such as awareness, accessibility, and compliance—could help bridge this gap further.

Figure 2.4.7 **Percentage of women who received a 180-day supply of Iron Folic Acid during pregnancy**

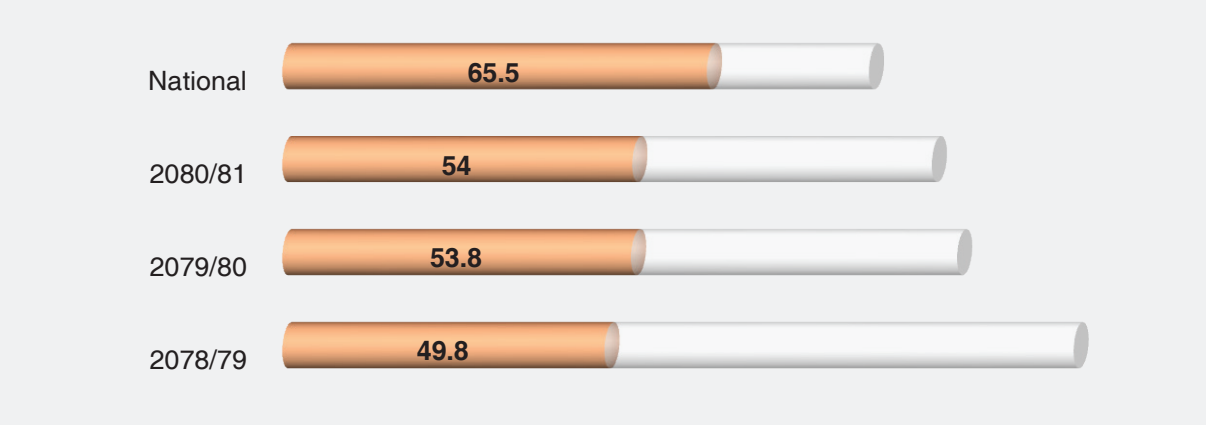
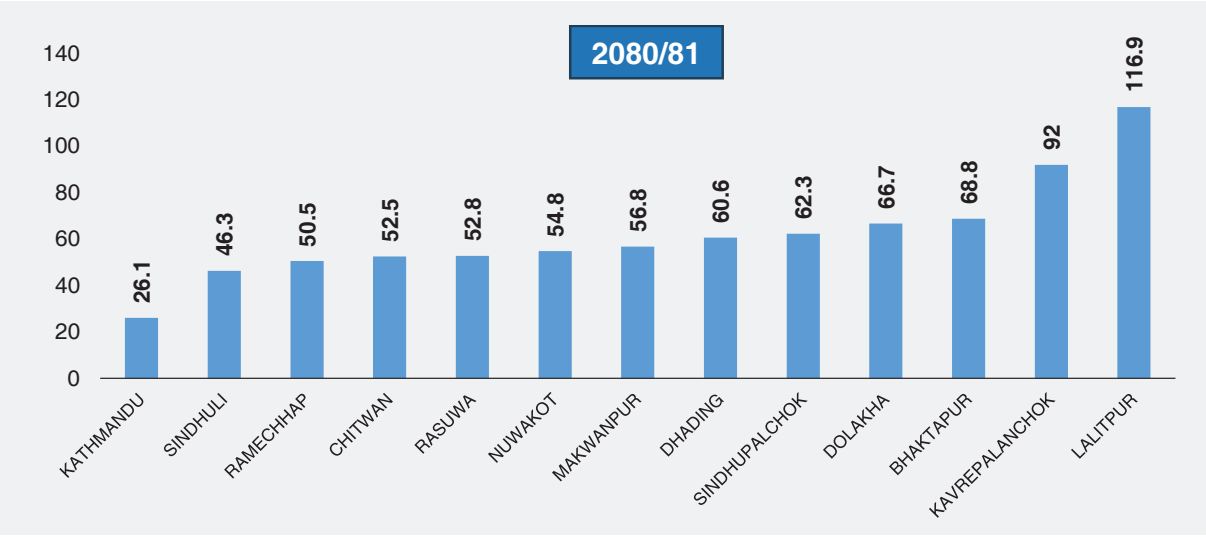


Figure 2.4.8 **District wise trend of pregnant women who received a 180-day supply of Iron Folic Acid**



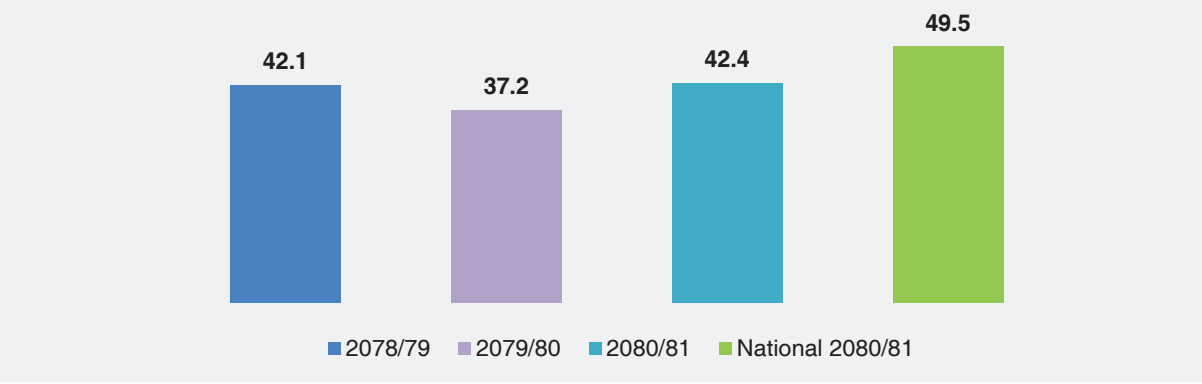
The above figure illustrates the district-wise trend of pregnant women who received a 180-day supply of Iron Folic Acid (IFA) in FY 2080/81. District like Lalitpur (116.9%) and Kavrepalanchowk (92%) has highest coverage of pregnant women who received a 180-day supply of Iron Folic Acid while Kathmandu (26.1%) district has slowest coverage. The data suggests **inconsistent distribution** of IFA across districts.

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 three postnatal checkups are recommended for all mothers and newborns: first as early as possible within 24 hours of birth, second on the third day and the third on the seventh day after delivery. The postnatal care services include the following:

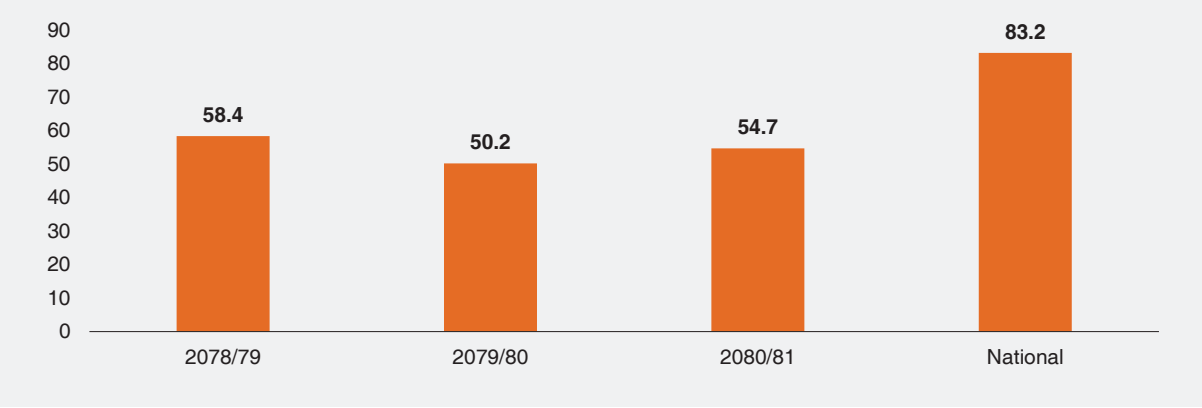
- Identifying and managing complications in mothers and newborns, as well as referring them to appropriate health facilities.
- Promotion of exclusive breastfeeding.
- Post-natal vitamin A and iron supplementation for mothers, as well as personal hygiene and nutrition education.
- Immunization of newborns.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

Figure 2.4.9 **Percentage of women who had 3 PNC checkups**



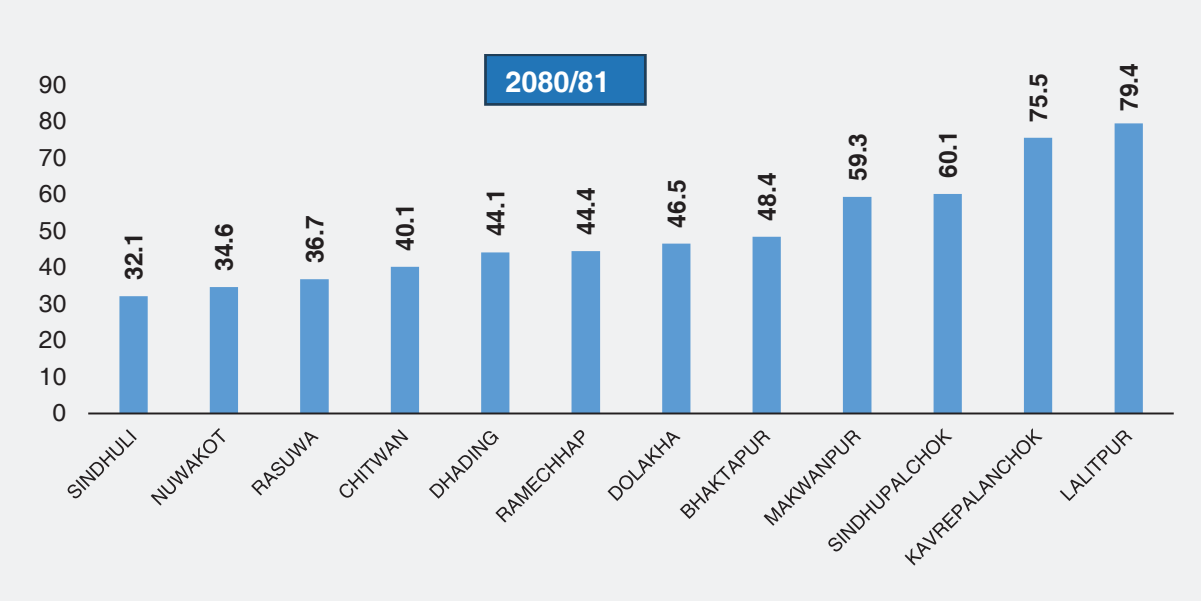
The above figure illustrates the percentage of women who had 3 PNC checkup as per protocol. In FY 2080/81, about 42.4% of women had 3 PNC checkup as per the protocol which shows the overall trend is improving, aligning closer to the national target.

Figure 2.4.10 **District wise percentage of women who had 3 PNC Checkup as per protocol**



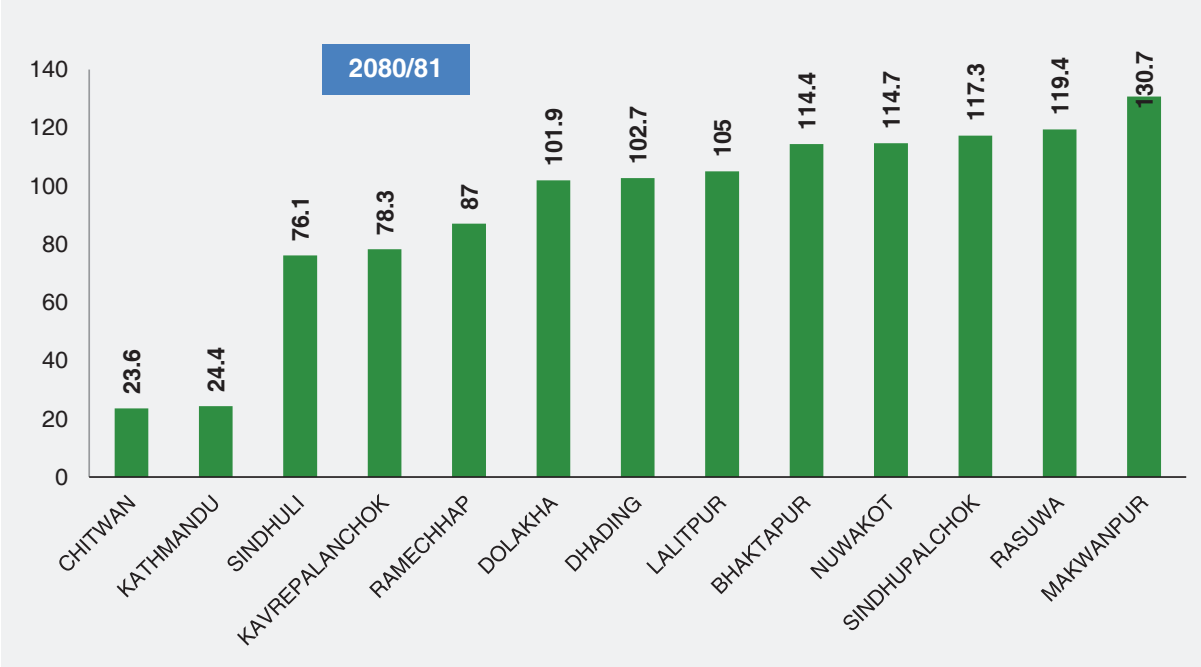
The above figure presents the district-wise percentage of women who received three postnatal care (PNC) checkups as per protocol in FY 2080/81. The data shows that Lalitpur (79.4%), Kavrepalanchok (75.5%), and Sindhupalchok (60.1%) had the highest percentages of women receiving three PNC checkups. Conversely, Sindhuli (32.1%), Nuwakot (34.6%), and Rasuwa (36.7%) recorded the lowest percentages.

Figure 2.4.11 **Percentage of postpartum women who received Vit A supplementation**



The above figure illustrates the percentage of postpartum women who received Vit A supplementation over three different fiscal years (2078/79, 2079/80, and 2080/81) along with the national average. The percentage of postpartum women receiving Vitamin A supplementation **declined from 58.4% in 2078/79 to 50.2% in 2079/80**. However, in 2080/81, there was a **slight improvement to 54.7%**, but it still did not reach the 2078/79 level and while comparing with national average is **83.2%**, which is significantly higher than the percentages recorded in the three consecutive years.

Figure 2.4.12 **District wise Percentage of postpartum women who received Vit A supplementation**



The above figure presents the district wise Percentage of postpartum women who received Vit A supplementation in FY 2080/81. District like Makwanpur (130.7%), Rasuwa (119.4%) and Sindhupalchok (117.3%) had highest while District like Chitwan (23.6%) and Kathmandu (24.4%) had the lowest coverage, significantly below the national average which may be due to Higher rates of private healthcare usage, where Vitamin A supplementation may not be systematically recorded.

Table 2.4.4 Issues, Action to be taken, and Responsibilities of Safe Motherhood program

Issues/ Challenges	Action to be taken	Responsibilities
Lack of 8 -Contact of Antenatal care	Awareness programme should be lunched.	MOH, HD, HO and all local levels
Post-natal care is still low in ratio.	Romming ANM programme should be encouraged for home visit.	MOH, HD
Drop out of medical officer and nursing staff of remote areas Birthing center/ CEONC.	Along with quality training the best reward should be provided for the staff.	MOH, HD
Lack of SBA trained staff.	SBA trained staff should mobilize in all districts and the SBA training site should be started.	MOH, PHTC, HD
Lack of Blood bank in some district hospital.	The hospital should tie up with Red Cross and provide emergency obstetric care.	MOH, HD
Poor data entry systems related to neonatal and maternal morbidity and mortality.	RMNACH web-based system should be activated by all district hospital/office.	MOH,HD,Provincial/district 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/district hospital

2.5 Family Planning and Reproductive Health

Introduction

Modern Family planning (FP) refers to a conscious effort by a couple to limit or space the number of children through the use of contraceptive methods. Modern methods include female sterilization (e.g., minilap), male sterilization (e.g., no-scalpel vasectomy), Intrauterine Contraceptive Device (IUCD), implants (e.g., Jadelle), injectables (e.g., Depo Provera), the pill (combined oral pills), condoms (male condom), Lactational Amenorrhea Method (LAM) and Standard Day's Method (SDM).

Family Planning (FP) is one of the priority programs of Government of Nepal. It is also considered as a component of reproductive health package and essential health care services of Nepal Health Sector Program II (2010-2015), National Family Planning Costed Implementation Plan 2015- 2021,

Nepal Health Sector Strategy 2015-2020 (NHSS) and the Government of Nepal's commitments to FP2020. The Right to Safe Motherhood and Reproductive Health Act of 2018 and its Regulations of 2020 have articulated quality Family Planning (FP) information and services with a broader method mix, including emergency contraception, as a women's right. The 15th national periodic plan as well as safe motherhood and newborn health roadmap 2030 also emphasizes the availability and accessibility of right-based FP services. Male condoms, oral contraceptive pills, injectables, implants, and IUCD are the five modern temporary family methods that have been an important component of the Basic Health Service.

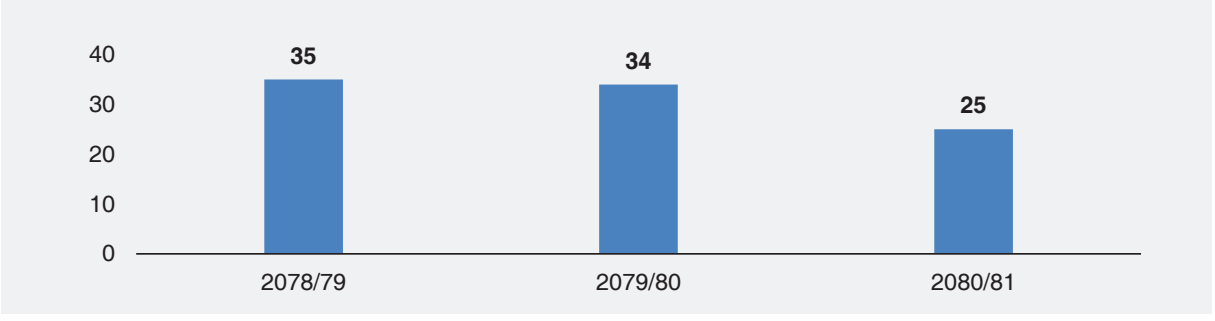
Major Achievements in the Family Planning Program

Contraceptive Prevalence Rate (unadjusted) among WRA

Contraceptive prevalence rate of Family Planning Methods among women of reproductive age (WRA) at Bagamati Province has drastically decreased from 34 to 25 percent from FY 2079/80 to 2080/81.

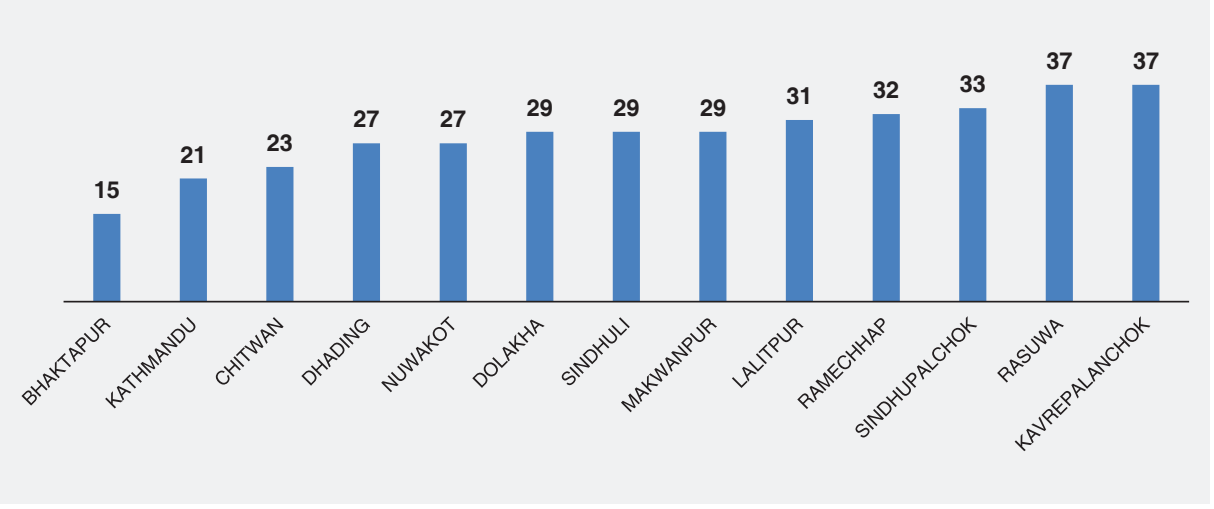
Contraceptive Prevalence Rate

Figure 2.5.1 Contraceptive Rate



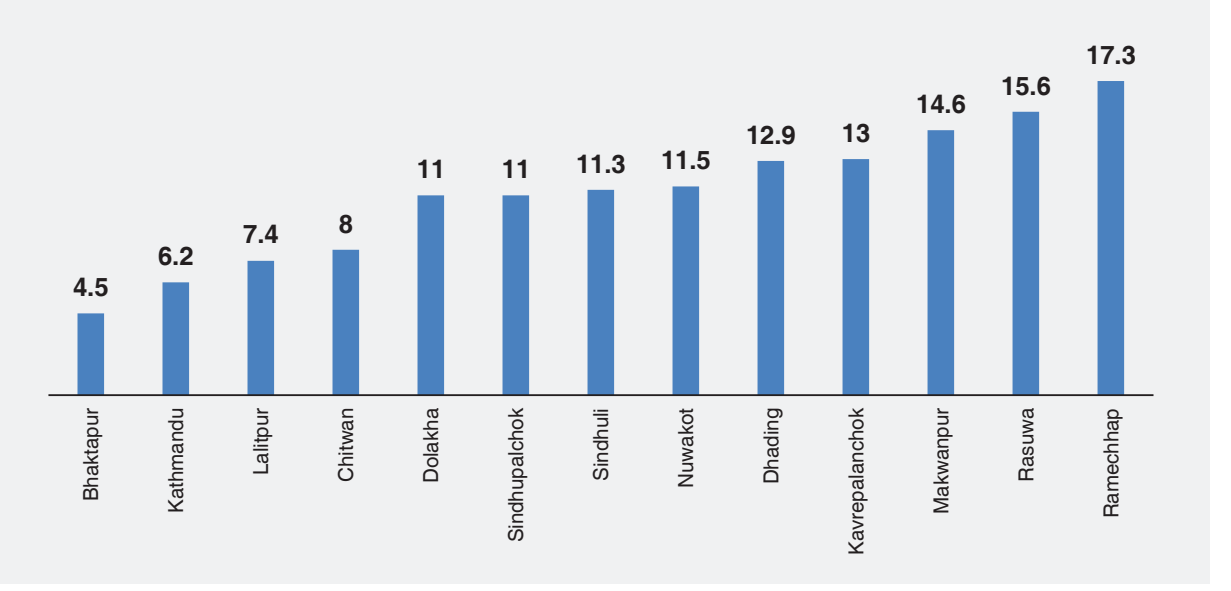
District Wise CPR in Bagmati Province (FY 2080/081)

Figure 2.5.2 District Wise CPR Rate



The figure above indicates district wise trend of CPR in Bagamati Province. The figure shows that Rasuwa and Kavreplanchok have the highest CPR (37%), while Bhaktapur has the lowest (15%). Similarly, Kathmandu has the second lowest CPR (21%). Five districts have the CPR below province average (28.46). Eight districts have CPR in the range 15-30, while the remaining five districts have CPR 30-37.

Figure 2.5.3 **New acceptor of FP methods among MWRA (FY 2080/81)**



The figure above illustrates the district wise status of new accepters of FP methods among MWRA in the fiscal year 2080/81. Among the districts of Bagamati Province, Ramechhap (17.2%) has the highest percentage of new acceptors of contraceptive methods for spacing, while Bhaktapur (4.5%) has the lowest. Four districts have new accepters below 10% remaining districts has above 10%.

2.6. Safe Abortion Services

Background

Global and national evidence shows that many women face unwanted pregnancy, one of the reasons being limited access to family planning information and services. Women facing barrier to timely safe abortion services are at a high risk of developing complications due to unsafe abortion sites, or in worst case scenario, suicide due to social pressure. Thus, there is 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 follows:

- 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. The 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 18,463 in FY 2078/79 to 19,225 in FY 2079/80 and to 22,231 in FY 2080/81. 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 Chitwan district. The table below displays the trend of safe abortion services received by women in 13 districts of Bagmati province over the three fiscal years.

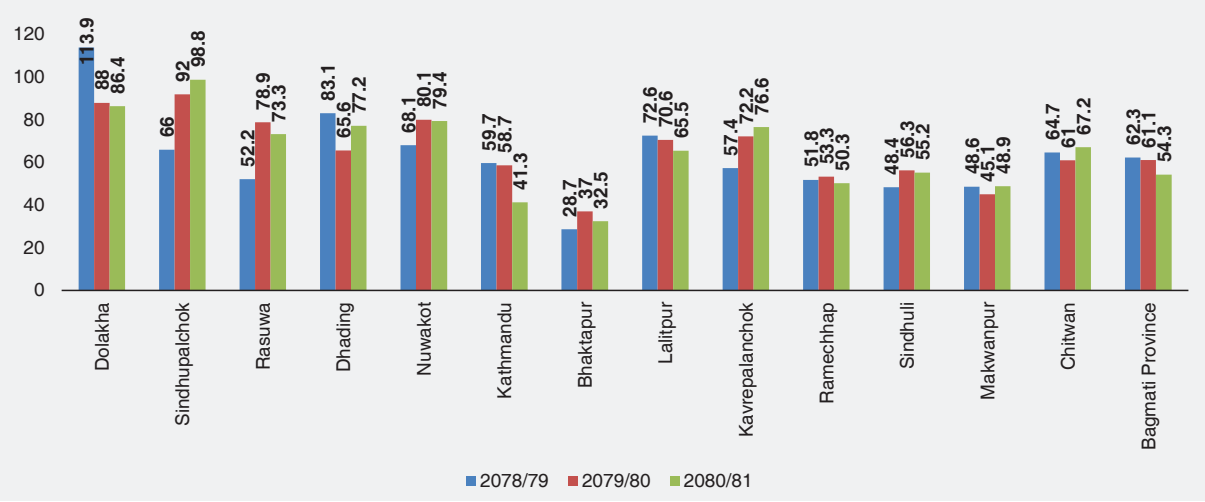
Table 2.6.1 **Safe abortion services by district in last 3 fiscal year**

District	2078/79	2079/80	2080/81
Rasuwa	23	19	15
Nuwakot	226	181	204
Dolakha	310	275	221
Sindhupalchowk	300	263	245
Ramechaap	371	336	360
Sindhuli	349	449	382
Bhaktapur	485	611	770
Dhading	726	919	971
Kavrepalanchowk	1,612	1,317	1,290
Makawanpur	1,415	1,563	1,615
Lalitpur	2,314	2,298	2,687
Chitwan	4,275	4,953	3,743
Kathmandu	6,057	6,041	9,728
Bagmati	18,463	19,225	22,231

Source: DHIS-2

Trends of post abortion contraceptive in three fiscal years

Figure 2.6.1 Trends of post abortion contraceptive in three fiscal years

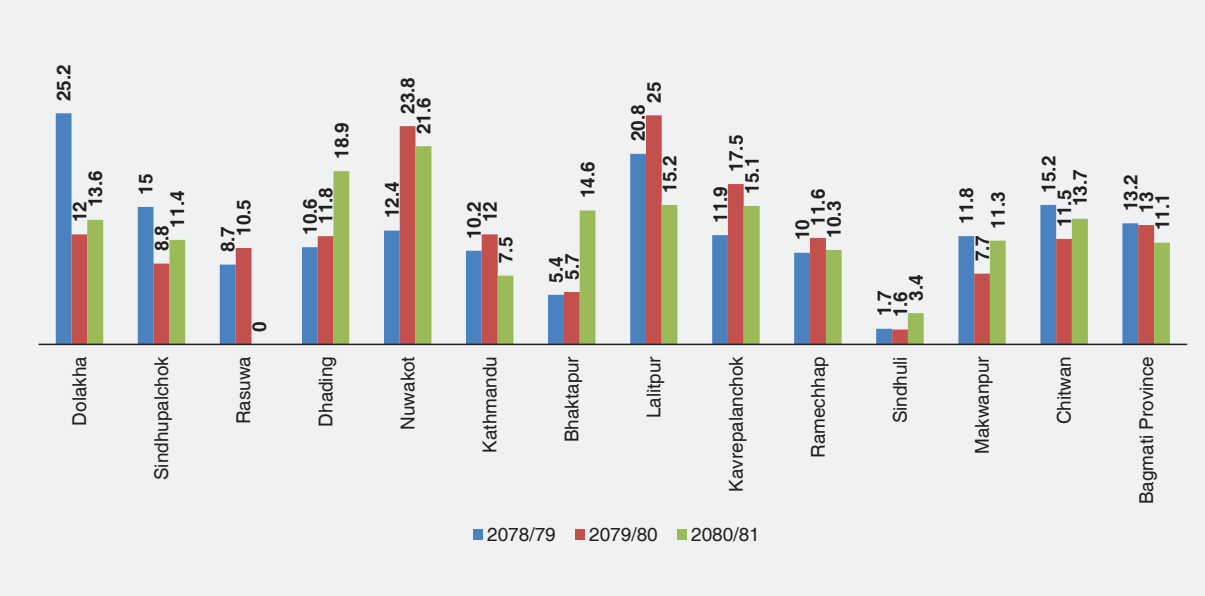


Source: DHIS2

The figure above illustrates a decline in the use of post-abortion contraceptives in Bagamati Province, from 62.3% in FY 2078/79 to 61.1% in FY 2079/80, and further to 54.3% in FY 2080/81. However, Sindhupalchok, Dhading, Kavrepalanchok, Chitwan, and Makwanpur have experienced a slight increase in the use of post-abortion contraceptives compared to the previous fiscal year, FY 2079/80. In contrast, the remaining districts have seen a decrease in the utilization of post-abortion contraceptives when compared to FY 2079/80.

Proportion of LARC among post abortion contraception in three fiscal years:

Figure 2.6.2 Proportion of LARC among post abortion contraception in three fiscal years



The figure above illustrates a decline in proportion of LARC among post abortion contraception use in Bagamati Province, from 13.2 in FY 2078/79, to 13 in FY 2079/80, and further to 11.1 in FY 2080/81. However, Dolakha, Sindhupalchok, Dhading, Bhaktapur, Sindhuli, Makwanpur, Chitwan have experienced a slight increase in the proportion of LARC among post abortion contraception use compared to the previous fiscal year, FY 2079/80. In contrast, the remaining districts have seen a decrease in the proportion of LARC among post abortion contraception used when compared to FY 2079/80.

RH related training sites in Bagamati Province

Table 2.6.2 **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, Chitwan	Implant, IUCD, CoFP Counseling, MA
9.	Marie Stops Chitwan	Implant, IUCD, Minilap, NSV, CoFP Counseling, MA

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 a safe and supportive environment for adolescents 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 for health workers
- Menstrual Hygiene management
- Comprehensive Sexuality Education (CSE) in School
- Advocacy.

ASRH sites in Bagamati Province

Table 2.7.1 AFS sites according to district

AFS sites according to district	
District	**Number**
Dolakha	8
Sindhupalchowk	14
Rasuwa	20
Dhading	20
Nuwakot	13
Kathmandu	6
Bhaktapur	1
Lalitpur	9
Kavrepalanchowk	20
Ramechhap	12
Sindhuli	18
Makawanpur	44
Chitwan	6
Bagmati Province (Total)	191

Table 2.7.2 Number of woman with obstetric complications

Province/District	No. of woman with obstetric complications		
	FY 2077/78	FY 2078/79	FY 2079/80
Dolakha	108	116	323
Sindhupalchowk	229	3700	400
Rasuwa	20	13	19
Dhading	545	517	570
Nuwakot	440	252	181
Kathmandu	4597	6144	5976
Bhaktapur	683	493	366
Lalitpur	390	508	367
Kavrepalanchowk	372	343	405
Ramechhap	45	57	88
Sindhuli	223	170	239
Makawanpur	312	402	327
Chitwan	2206	3803	3344
Bagmati Province	10170	16518	12605

Service utilization

Family Planning Services

Table 2.7.3 District-wise new users of contraceptive in FY 2080/81

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	75	0	8	21
Sindhupalchowk	151	0	28	33
Rasuwa	74	0	9	10
Dhading	249	1	34	60
Nuwakot	180	2	22	24
Kathmandu	558	298	393	1701
Bhaktapur	95	1	17	28
Lalitpur	77	2	39	40
Kavrepalanchowk	148	10	74	21
Ramechhap	58	1	19	26
Sindhuli	120	1	58	41
Makawanpur	420	4	74	113
Chitwan	255	6	83	167
Bagmati Province	2460	326	858	2285

Source:DHIS-2

Table 2.7.3 shows the mixed method of new users of the contraceptives. Depo-Provera is the most preferred contraceptive method among adolescents and pills is the second preferred method. It is to be noted that among adolescents, the number of new LARC acceptors is declining.

Safe abortion services

Table 2.7.4 Trends of safe abortion services by adolescents (2078/79-2080/81)

Trends of safe abortion services received by adolescents			
District	FY 2078/79	FY 2079/80	FY 2080/81
Dolakha	17	17	17
Sindhupalchowk	91	5	6
Rasuwa	3	0	0
Dhading	28	46	73
Nuwakot	3	6	8
Kathmandu	603	699	909
Bhaktapur	3	23	109

Lalitpur	120	84	121
Kavrepalanchowk	167	58	42
Ramechhap	18	21	14
Sindhuli	28	34	18
Makawanpur	46	61	89
Chitwan	280	307	266
Bagmati Province	1407	1361	1672

Source:DHIS-2

The decrease in trends of safe abortion services by adolescents can be observed. The greatest increase can be seen in Bhaktapur district in the last three FY. The greatest decrease can be observed in Kavrepalanchowk and Sindhupalchok districts. However, this fiscal year has seen an increase in number of service users in Kathmandu, Lalitpur, Makawanpur, Bhaktapur, Nuwakot and Dhading district.

Table 2.7.5 **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
Low CPR and high unmet need for contraception among vulnerable populations including adolescents	Intensify information and awareness programs targeted 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 sexual 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, MOHPFW, Local Level

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. The aim of these clinics is 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 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.

Table 2.7.6 **Services to be provided by PHC-ORCs according to PHC-ORC strategy**

Safe motherhood and new-born care	Family planning	Child health	First aid
• Antenatal, postnatal, and new-born care • Iron supplement distribution • Referral if danger signs identified	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.	• 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 • Health education and counselling • Family planning • Maternal and new-born care • Child health • STI, HIV/AIDS • Adolescents are sexual and reproductive health.	Minor treatment and referral of complicated cases.

Achievements of FY 2080/81

Table 2.7.7 Trends in client served by PHC ORC (2078/79-2080/81)

District	Average number of clients served per PHC ORC		
	2078/79	2079/80	2080/81
Dolakha	11.5	13	12.9
Sindhupalchowk	17.6	18.4	20.1
Rasuwa	10.8	12.7	12.6
Dhading	20.5	20.4	20.6
Nuwakot	12.7	15.2	17.1
Kathmandu	18.1	18.8	20.7
Bhaktapur	21.5	15.6	18.1
Lalitpur	14.7	17.6	16.9
Kavrepalanchowk	15.7	18.1	24.4
Ramechhap	13.3	14.1	15.7
Sindhuli	16.8	16.5	18.2
Makawanpur	18.2	21.2	22.4
Chitwan	18	17.6	19.7
Bagamati Province	16.1	17.4	19.7

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 been in an increasing trend each year in Bagamati province.

Table 2.7.8 Trends in percentage of planned PHC ORC conducted

District	Trends in percentage of planned PHC ORC conducted		
	2078/79	2079/80	2080/81
Dolakha	87.4	83.9	88.6
Sindhupalchowk	89.2	90.1	98.8
Rasuwa	79.7	78.8	89.1
Dhading	88.2	95.4	94
Nuwakot	80.5	89.9	92.2
Kathmandu	80.2	85.9	88.2
Bhaktapur	49.2	70.6	96.4
Lalitpur	87.3	92.6	95.6
Kavrepalanchowk	95.6	97	99.4
Ramechhap	98.8	97.1	98.3
Sindhuli	89	89.2	87.4
Makawanpur	91	92.5	95.9
Chitwan	81.9	85.9	96
Bagmati Province	88.2	91.3	94.8

Table 2.7.2 shows the outreach clinic conduction percentage by district for the last three fiscal years (2078/79-2080/81). The highest percentage (99.4) can be seen in Kavrepalanchok district whereas the least (88.2) in Kathmandu district out of total planned clinics in FY 2080/81.

CHAPTER 3

EPIDEMIOLOGY AND DISEASE CONTROL

3.1 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 bite of infected female Anopheles mosquito. Malaria is endemic in certain parts of Nepal, with the Terai region (southern plains) being the most affected. However, 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 BS (2010 AD). 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 Epidemiology and Disease Control Division (EDCD) and Malaria Technical Working Group (TWG). Based on this method, in 2024 micro-stratification was updated and the wards were designated as high, moderate, and low-risk wards as shown in the table below:

Distribution of Malaria Risk Ward of Bagmati Province

Table 3.1.1 **Distribution of Malaria Risk Ward**

Province	High Risk ward	Moderate Risk Ward	Low Risk Ward	No Risk Ward
Bagamati	0	0	374	747

In Bagmati Province, there are no high- risk or moderate- risk wards, with 374 wards classified as low risk, while the remaining wards were considered risk- free.

Major activities carried out in 2080/81

- Organized the annual review meeting on vector-borne diseases with participation from all districts and hospitals, sharing updated national plans, policies, and strategies.
- 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 25th.

Nepal's National Malaria Strategic Plan (NMSP, 2014–2025 updated)

National Malaria Strategic Plan (NMSP 2014 – 2025) which was developed in 2013 with pre-elimination focus was updated in 2021 based on the WHO Global Technical Strategy for malaria elimination 2016 – 2030 and framework for malaria elimination, federalization of the health system, disease epidemiology and midterm malaria program review-2017.Nepal is also part of the global E-2025 countries with aim to attain "**Malaria Elimination in Nepal by 2025".**

Vision: Malaria Elimination in Nepal by 2025.

Mission: Ensure universal access to quality assured malaria services for prevention, diagnosis, treatment, and prompt response in outbreak.

Goal:

- Reduce the indigenous malaria cases to zero by 2022 and sustain thereafter.
- Sustain zero malaria mortality.

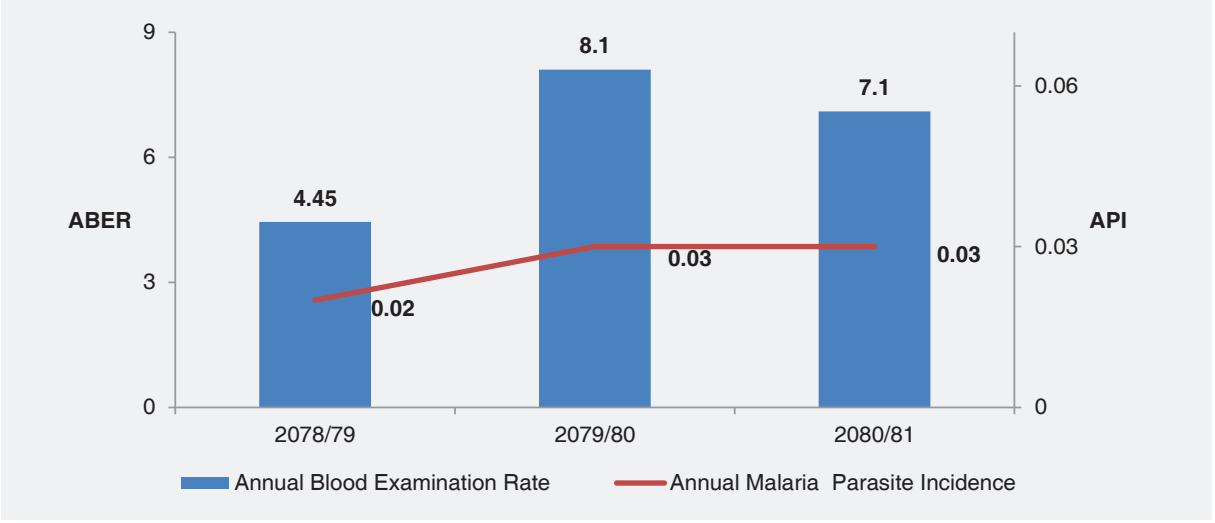
Objectives:

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.

Status of Malaria Program

Malaria epidemiological trend of Major Indicator (FY 2078/79-2080/81)

Figure 3.1.1 Blood Examination Rate and Malaria parasite incidence/1000 at Risk Population



In Fiscal year 2080/81, the ABER slightly decreased to 7.1 compared to the previous year, based on the malaria risk populations. In 2080/81, Kathmandu district reported the highest ABER at 665.65, followed by Lalitpur (60.67), Dolakha (9.02), Ramechhap (7.43), and Bhaktapur (7.30). These variations are primarily attributed to the respective malaria risk population in each district. Meanwhile, the API remained static at 0.03 for both 2079/80 and 2080/81, slightly increasing from 0.02 in 2078/79. These figures were calculated using the denominator provided by the EDCD, incorporating micro-stratification data.

Malaria Epidemiological Trend (FY 2078/79- 2080/81)

Table 3.1.2 Malaria epidemiological trend (IY 2077/78–2079/80)

Items /indicators	2078/79	2079/80	2080/81
Total population	1,813,183	1,739,994	1760525
Total slide examined	80726	140876	125808
Total positive cases	33	46	58
Total indigenous cases	0	0	0
Total imported cases	33	45	58
Total *P. falciparum* (Pf) cases	17	18	21
% of *P.f* of total cases	52	39	36
Total indigenous *Pf* cases	0	1	0
Total imported *Pf* cases	17	17	21

Total P. *vivax* (Pv)cases+Ovale	16	28	37
Total indigenous *Pv* cases+*Ovale*	0	0	0
Total imported *Pv*cases +Ovale	16	28	37
Annual blood examination rate	4.45	8.1	7.1
Annual Parasite Incidence	0.02	0.03	0.03
Annual *Pf* incidence	0.01	0.01	0.01
Slide positivity rate	0.04	0.03	0.05
Slide *Pf* positivity rate	0.02	0.01	0.02

The table above highlights an increase in the percentage of total positive malaria cases, primarily driven by a rising number of cases with significant travel history. Cases of *Plasmodium falciparum*, *Plasmodium ovale*, and *Plasmodium vivax* have shown a slight upward trend. Notably, no indigenous cases were reported in fiscal year 2080/81. Additionally, the number of probable or clinically suspected malaria cases saw a dramatic decline, dropping to zero cases in FY 2080/81 from 82 cases in FY 2079/80.

Issues/Challenges/ Action to Be Taken

Issues/ Challenges	Action to be taken	Action taken
• Insufficient reporting from private sectors	• Orientation to the private sector on testing and reporting system of malaria. • Quarterly review with private sectors.	• Established regular follow up and feedback mechanism. • Established coordination and supportive supervision mechanism.
• Malaria case reporting and case investigation	• Orient district and peripheral staff on case investigation and reporting	• District and peripheral level staff oriented on case investigation, surveillance, foci investigation and reporting
• Imported Malaria cases increasing from the private hospitals	• Programme should address to all hospitals (Private and public)	• Programme will be added for the upcoming day as per the elimination point of views so that we can target the private sector

3.2 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 enlargement of the 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 populations at the district level, with a Kala-azar-related fatality rate of less than 1%. The Government of Nepal has been 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 association with Bangladesh and India.

Kala-azar Elimination Program

Goal, objectives, and strategies

Goal: The goal of kala-azar elimination program is to 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.

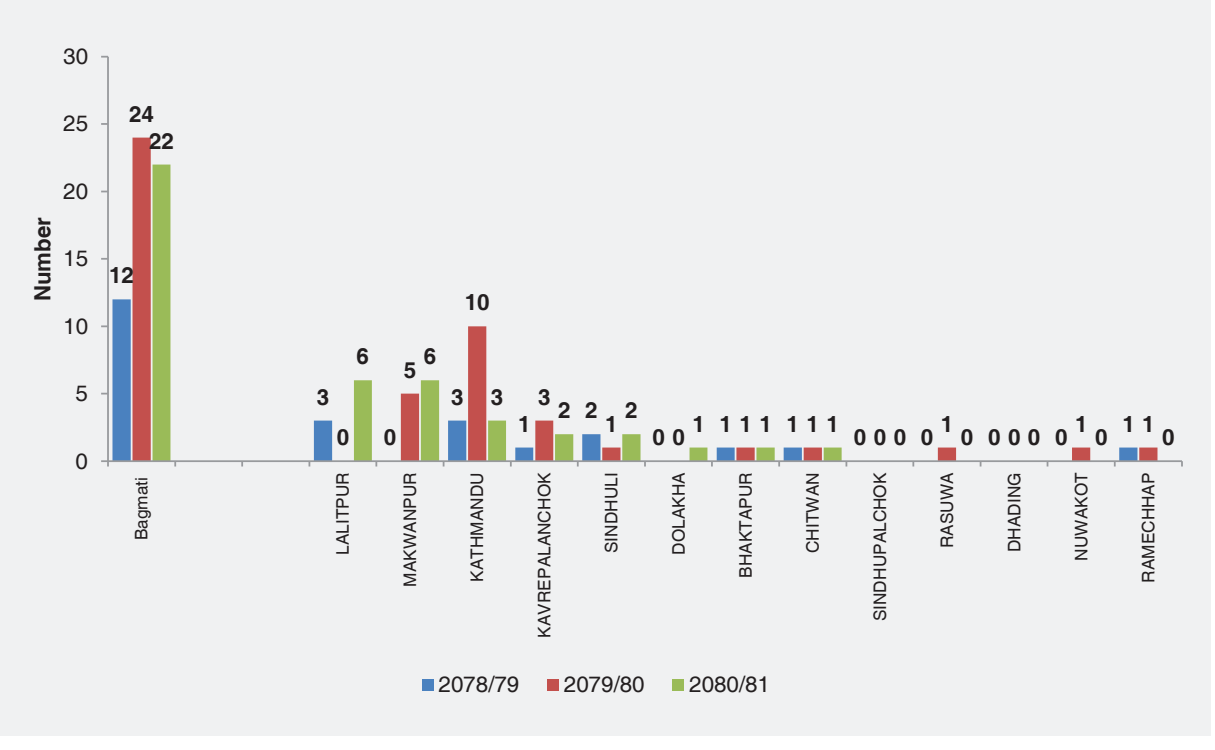
- Early diagnosis and complete treatment
- Integrated vector management
- Effective disease and vector surveillance
- Social mobilization and partnerships
- Improve program management.
- Clinical and implementation research

Major activities carried out in 2080/81

- Assistance was extended to Kavrepalanchok, Sindhuli, and Makwanpur 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.
- Coordination and support were provided to the diagnostic and treatment center.
- Supervision and monitoring of vector-borne and neglected tropical diseases and necessary support was provided to the hospitals.
- An 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 (2078/79 to 2080/81)

Figure 3.2.1 **Status and trend of Kala-Azar cases (FY 2078/79 to 2080/81)**



The number of kala-azar cases in Bagamati Province showed a slight decrease in 2080/81 compared to the previous year, 2079/80. However, there has been a noticeable geographical expansion of cases at the national level in recent years. According to the transmission assessment survey, Kavrepalanchok, Makwanpur, and Sindhuli have been identified as endemic districts. In Lalitpur, kala-azar cases have been gradually increasing, while Kathmandu reported a declining trend in 2080/81. Notably, all cases referred from non-endemic districts of Nepal for treatment were ultimately reported in Kathmandu.

Strengths, Issues/ Challenges and Recommendations

Strength

- Implementation of Health Management Information System (HMIS) and Early Warning and Reporting System (EWARS) for surveillance of Kala-azar.
- Availability of free of costs drugs and diagnostics for early case detection and timely treatment of kala-azar cases.
- Availability of recently revised standard national guidelines for kala-azar elimination program in Nepal including regular trainings to health professionals on kala-azar prevention, diagnosis, and management.
- Use of a multi-disciplinary approach to overcome the challenges in elimination of Kala-azar.
- Implementation of active case detection of kala-azar through index case-based approach.
- Effective partnerships and collaboration with academics, researchers, and other stakeholders.

Issues/Challenges

- Epidemiological shifting of the VL cases.
- Lack of effective implementation of indoor residual spraying especially in endemic districts.
- Increasing number of other forms of leishmaniasis, such as cutaneous leishmaniasis, which needs further evaluation.
- Inadequate awareness about disease among the community.

Recommendations

- Improve disease and vector surveillance.
- Verification of the endemicity status of kala-azar in endemic doubtful districts consistently reporting new cases of kala-azar.
- Dissemination of educational messages to the public, public health professionals and policymakers related to kala-azar.
- Improve active case detection and investigation and management of outbreaks.
- Increase clinical and implementation research.
- Start the entomological activities on a regular basis.

3.3 Lymphatic Filariasis

Background

Lymphatic filariasis (LF), commonly known as elephantiasis, is one of the mosquito-borne parasitic diseases. It is a painful and highly disfiguring neglected tropical disease, often associated with areas that have poor sanitation and housing quality. The infection may be acquired during childhood, while its visible manifestations may occur later in life, causing temporary or permanent disability, pain, and social stigma.

The infection, transmitted by different species of mosquitoes (Culex, Anopheles, and Aedes), is caused by thread-like filarial worms (nematodes). Globally, the majority of LF infections (90%) are caused by *Wuchereria bancrofti*, and the remainder by *Brugia* Species (*Brugia malayi* & *Brugia timori*). However, *Wuchereria bancrofti* is the only known pathogen, and *Culex quinquefasciatus* mosquito is the only recorded vector for LF infection in Nepal.

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 benefits 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 2025.
- Complete post MDA surveillance to validate LF elimination by 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 2026.
- Ensure continued essential package of care for all districts with known cases of lymphedema by 2027.
- Complete hydrocelectomy for all known hydrocele cases (100% surgery) by 2029.
- Validate LF elimination by 2030 and sustain thereafter.

Strategies

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 eliminatio

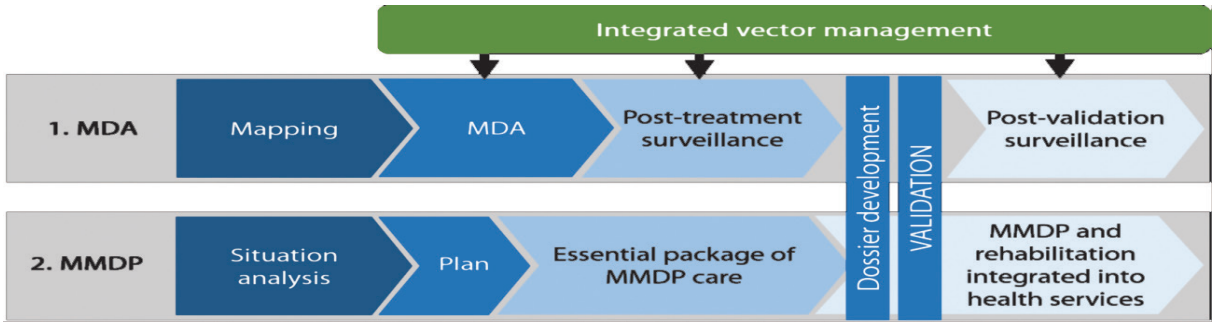
Morbidity Management and Disability Prevention (MMDP): Morbidity management involves essential package of care (EPC) or self-care services supported by intensive yet simple, effective, and locally tailored hygiene techniques. This recommended essential package of care includes:

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

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.

I**ntegrated Vector Management:** This strategy focuses on comprehensive approaches to vector control and reduction.

Figure 3.3.1 Strategies for LF Elimination



The LF elimination strategy begins with a Baseline Survey or Confirmatory Mapping, identifying LF-endemic areas. Subsequently, Mass Drug Administration (MDA) is implemented for either six rounds (DA MDA) or two rounds (IDA MDA) to treat the entire at-risk population. Following the completion of these rounds, post-treatment surveillance, such as Pre-TAS/EMS and TAS/IIS, is conducted to assess the impact of MDA on reducing LF prevalence. Failure any surveillance stage necessitates an additional round of MDA. Upon the successful completion of Mass Drug Administration (MDA) and the comprehensive coverage of MMDP interventions, the country is poised to advance towards the validation of the elimination of Lymphatic filariasis as a public health problem. This involves meticulous preparation and submission of a dossier in accordance with the guidelines provided by the World Health Organization (WHO). Following validation, a Post-Validation Surveillance mechanism is initiated to diligently monitor and guarantee the enduring absence of Lymphatic filariasis transmission. Concurrently, MMDP interventions persist, seamlessly integrated with primary healthcare services to sustain the achieved progress.

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 totaling 25 million.

Major Activities:

Interruption of transmission by Mass Drug Administration (MDA) campaign:

MDA involves administering single doses of Albendazole plus Diethylcarbamazine (DEC) to the entire at-risk population. This strategy, implemented for at least six rounds, aims to reduce microfilariae density in infected individuals, preventing mosquito-borne transmission and lowering infection prevalence in the community. Each MDA round should achieve ≥65% epidemiological coverage in a district. MDA can be stopped in a district after passing TAS I. Since 2022, Nepal has introduced the Triple drug regimen (IDA) in five districts, later expanding to 11 districts in 2023 and all remaining 7 districts in 2024. IDA MDA, which includes Ivermectin as well, is more effective in clearing microfilaria and requires only two to three rounds, making the elimination effort shorter compared to DEC MDA.

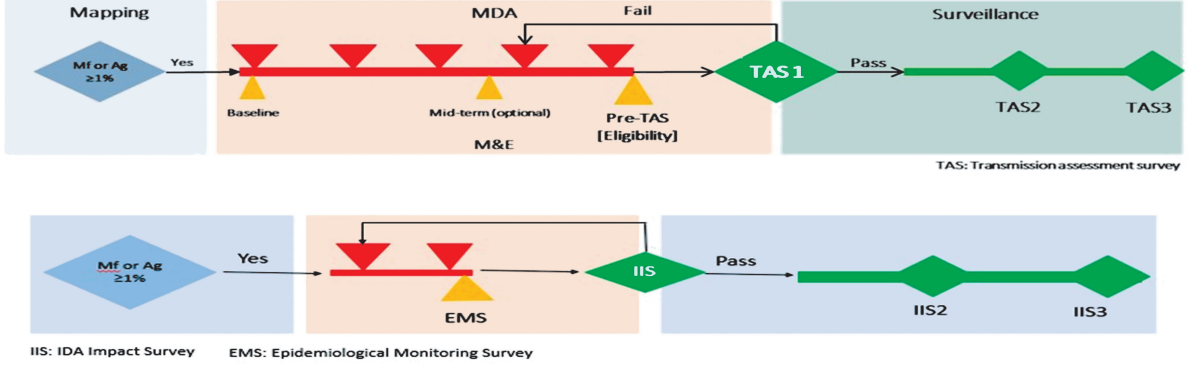
Table 3.3.1 Status of MDA Implementation

Status of MDA Implementation								
Number of endemic districts	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 district (Kapilvastu)	4 districts (Morang, Dang, Banke, Kailali)	53 districts	47 districts	28 districts

In 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 districts 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.

Figure 3.3.2 Monitoring and Evaluation of MDA program



MDA is necessary to reduce infection in the community to 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 has been met. The Epidemiology and Disease Control Division (EDCD) conducts post-MDA Coverage Surveys, Pre-Transmission Assessment Surveys, and Transmission Assessment Surveys (I, II, & III) 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.

Performance-based Recognition

Sixteen local levels were felicitated based on Performance-based Recognition from 15 MDA Districts. This comprehensive performance based felicitation is a novel approach accepted by all local level and effectively contributed to higher epidemiological MDA coverage. This recognization was based on last year's MDA performance, with scores derived from various parameters such as MDA Coverage, Spot Compliance, Daily Reporting, SCT, and other activities. These parameters ensured a comprehensive evaluation of each local level's efforts and achievements. The recognition highlights the commitment and effectiveness of these local levels in implementing MDA programs and serves as an encouragement for them in public health initiatives.

Morbidity mapping and disability prevention:

Morbidity mapping and disability prevention are pillars of the Lymphatic Filariasis Elimination program alongside MDA. During MDA, health workers and Female Community Health Volunteers (FCHVs) are oriented to identify LF cases, provide home-based treatment and care, and encourage self-care. They collect morbidity information in the community and offer support. Additionally, health workers can manage acute attacks, provide symptomatic treatments, and refer to hydrocele cases for free surgical correction at districts or nearby tertiary hospitals.

The MMDP program is further strengthened by rolling out training to health workers and FCHVs in all districts in phases for continuous mapping, management, and referral of LF morbid cases. To date, health workers and FCHVs in 57 districts have received training and actively report cases through the morbidity mapping survey. Morbidity management services are provided by MMDP care and support centers. To date, 29 MMDP centers in 28 districts have been functionalized. LF cases receive additional rehabilitative and social support from self-help groups where they practice self-care and engage in livelihood activities.

Table 3.3.2 **Coverage of MDA in Bagamati Province of FY 2080/81**

S. N	District	MDA Round	Total Population	Total Treated	Epidemiological Coverage %	Spot coverage at 95% CI	SCT coverage at 95% CI	Rapid assessment
1	Rasuwa	2 (DA)	45974	38457	83.65	94.0(88.9-97.2)	84.0(75.3-90.6)	Not done

Source: EDCD/DHIS 2

Bagamati Province consists of 13 districts, of which 12 have successfully completed the Mass Drug Administration (MDA) campaign, achieved the set targets, and passed the Transmission Assessment Survey. Furthermore, a survey conducted in Dolakha district confirmed the absence of Lymphatic Filariasis (LF) transmission in the area.

During the fiscal year 2080/81, the LF MDA campaign was implemented in five municipalities and rural municipalities of Rasuwa district. The Rasuwa Health Office facilitated coordination meetings, media orientations, and advocacy efforts. Simultaneously, municipalities organized MDA (IDA) planning meetings, health worker training sessions, Female Community Health Volunteer (FCHV) orientations, and community-level interactions. Medications were administered to eligible populations by health workers, with support from FCHVs.

Morbidity Mapping and Disability Prevention (MMDP)

The LF elimination program's second strategy focuses on morbidity mapping and disability prevention. The LF Morbidity and Disability Prevention (MMDP) survey in Bagamati province, which comprises 10 districts, was successfully completed. The survey findings indicate that Bagamati province has identified a total of 8,830 LF cases. Among these, 4,776 cases were identified as hydrocele, 3,968 (both male and female) as lymphedema, and 86 cases exhibited both conditions. Detailed information is listed in Table 3.1.3.

Table 3.3.3 **District-wise LF morbidity report as of 2080/81**

SN	Districts	Morbidity				Total
		Hydrocele	Lymphedema		Both	
			M	F		
1	Ramechhap	115	47	44	2	**208**
2	Chitwan	247	55	44	3	**349**
3	Makwanpur	247	34	85	7	**373**
4	Lalitpur	115	52	204	6	**377**
5	Kavrepalanchok	345	57	192	0	**594**
6	Bhaktapur	126	119	345	4	**594**
7	Sindhupalanchok	396	205	311	26	**938**
8	Kathmandu	281	156	497	10	**944**
9	Dhading	1342	194	630	28	**2194**
10	Nuwakot	1562	210	487	0	**2259**
	Total	**4776**	**1129**	**2839**	**86**	**8830**

3.4 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 AD, involving a foreign individual in Chitwan 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 *Aedes albopictus* vectors were presented in the cities.

Major activities carried out in 2080/81

- Vector surveillance activities were carried out in Manahari Rural Municipality and Hetauda Sub-Metropolitan City, with the findings shared with all stakeholders.
- Conducted orientation programs 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 local levels, partners, and stakeholders to enhance the recording, reporting and dengue response.
- Public messages on dengue 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.
- Joint program review of vector borne diseases, including dengue, was undertaken by a team of national experts.
- Routine surveillance of Dengue through EWARS

Dengue Control Program

Goal: To reduce the morbidity and mortality due to dengue fever, dengue haemorrhagic fever (DHF) and dengue shock syndrome (DSS).

Objectives:

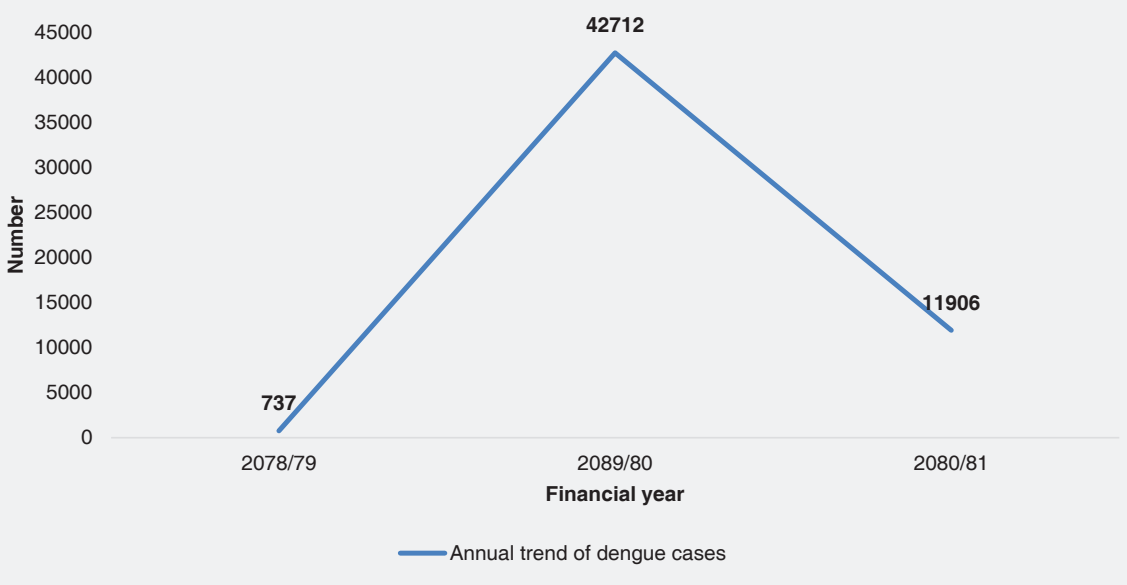
- To develop an integrated vector management (IVM) approach for prevention and control.
- To develop capacity on diagnosis and case management of dengue fever, DHF and DSS.
- To intensify health education and IEC activities.
- To strengthen the surveillance system for prediction, early detection, preparedness, 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 (2078/79- 2080/81)

Figure 3.4.1 Annual Trend of dengue Cases (N)



The above figure shows the three-year trend of dengue cases in Bagamati Province. While looking at the trend there is decreasing in FY 2080/81 compared to previous FY 2079/80.

District Wise Annual Trend of Dengue Cases (2078/79- 2080/81)

Table 3.4.1 District Wise Annual Trend of Dengue Cases

Bagamati Province	2078/79	2079/80	2080/81
Dhading	3	1,796	3,545
Kathmandu	283	14,406	3,186
Chitwan	241	3,231	1,779
Lalitpur	1	9,631	1,459
Makwanpur	195	5,844	893
Bhaktapur	4	6,180	522
Kavrepalanchok	1	567	209
Nuwakot	3	293	91
Dolakha	0	109	81
Sindhupalchok	0	221	67
Ramechhap	0	241	38
Sindhuli	0	179	33
Rasuwa	6	14	3
Total	737	42,712	11,906

Source: DHIS-2/EWARS

The number of reported dengue cases has significantly decreased from 42,712 in FY 2078/79 to 11,906 in FY 2080/81. FY 2080/81, the Dhading district reported the highest number of cases at 3,545, followed by Kathmandu with 3,186, Chitwan with 1,779, and Lalitpur with 1,459 cases.

It is important to note that the number of dengue cases reported by hospitals, 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.

Strengths, Weaknesses, Opportunities and Challenges of Dengue Control Program

Strengths	Weakness
• Availability of National Guidelines on Prevention, Management and Control of Dengue in Nepal. • Surveillance system in place to track dengue cases. Establishment of online reporting system through EWARS on DHIS2. • Availability of dengue register for better recording and reporting. ▪ National Guidelines on Integrated Vector Management (IVM).	• Low priority for the dengue control program at local levels. • Inadequate training and orientation for newly recruited health workers and refresher training for focal persons and managers. • Under/over reporting of dengue in HMIS. • Inconsistent, incomplete, and untimely reporting from the EWARS system. • Limited capacity for early detection and response to outbreaks. • Limited entomological capacity and vector surveillance due to the unavailability of resources.
Opportunities	**Threats**
• The need for Standard Operating Procedure (SOP) for Integrated Vector Surveillance and Vector Control is recognized by the national and planned for development in FY 079/80. • Collaboration with regional and international organizations for dengue control efforts. ▪ Prospects for integration of technology in surveillance and response systems, such as Epidemic Intelligence from Open Sources (EIOS).	• Climate change and its impact on mosquito populations and dengue transmission with shift of disease from low land regions to higher elevations. • Difficulty in controlling the spread of dengue in densely populated urban areas. • Limited engagement of other concerned ministries besides the Ministry of Health and Population in the prevention and control of mosquitoes. • Insufficient community and multi-stakeholder engagement in dengue control efforts at local levels.

3.5 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.

Various studies conducted in Nepal have confirmed cases of scrub typhus infection. For instance, in 1981 AD, 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 via 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) indicate given number of scrub typhus cases. In Kathmandu, Scrub typhus cases have been reported on different local levels as detailed in the table below.

District Name	2078/79	2079/80	2080/81
Bagamati	240	1290	1838
Kathmandu	54	255	706
Chitwan	23	605	552
Dhading	47	74	202
Makwanpur	15	130	164
Sindhuli	34	53	101
Kavrepalanchok	12	139	34
Ramechhap	7	5	28
Rasuwa	2	0	18
Dolakha	12	5	12
Sindhupalchok	9	3	8
Lalitpur	15	14	8
Bhaktapur	7	5	5
Nuwakot	3	2	0

According to the above table, there has been a rise in scrub typhus cases in Bagamati Province. In the fiscal year 2080/81, there was a significant increase in cases compared to previous years. Notably, Kathmandu district reported the highest number with 706 cases, followed by Chitwan district with 552, Dhading with 202, Makwanpur with 164, Sindhuli with 101, Kavrepalanchok with 34 cases and the remaining districts reported between 28 to 5 cases.

SWOT analysis for Scrub Typhus

Strengths	Weakness
• Updated national guidelines for the diagnosis, management, and prevention of Scrub Typhus in Nepal have been endorsed and are available on the EDCD website. • Efforts are being made to raise community awareness about transmission risks and prevention strategies. • Priority is being given to building the capacity of health workers to ensure timely diagnosis and effective management.	• Absence of a well-established national surveillance system for scrub typhus
Opportunities	**Challenges**
▪ Strengthening the surveillance system for accurate recording and reporting is vital for effective response and control	▪ An annual increase in reported cases has been observed across Bagamati Province.

3.6 Tuberculosis

Background

Tuberculosis (TB) is a communicable disease which is a major public health problem in Nepal. It is one of the major causes of death worldwide and in Nepal, and the leading cause of death from a single infectious agent (ranking above HIV/AIDS). TB is caused by the bacillus Mycobacterium tuberculosis, which is spread when people who are sick with TB expel bacteria into the air: coughing. The disease typically affects the lungs (pulmonary TB) but can also affect other sites (extrapulmonary TB). About a quarter of the world's population is infected with Mycobacterium tuberculosis, similar proportion of infection is seen in Nepal as well.

TB can affect anyone anywhere, but most people who develop the disease are adults, there are nearly twice as more cases among men than women, and 30 high TB burden countries account for almost 90% of those who fall sick with TB each year. TB is a disease of poverty, resulting in economic distress, vulnerability, marginalization, stigma, and discrimination. TB is curable with medicine (nearly 90% cure rates) and preventable. With access still falling short of universal health coverage (UHC) for all forms of TB, many still have also missed out (nearly 58% in Nepal) on diagnosis and care. Preventive treatment is scaling up among contact.

Status of TB epidemic

In Nepal, an estimated 70,000 fell ill with TB in FY 2080/81. National Tuberculosis Programme (NTP) registered 40,775 all forms of TB cases (35% female and 65% male). Out of 40,775 all forms of TB cases, 23,242 (57%) were pulmonary bacteriologically confirmed (PBC) cases, 6,116 (15%) were pulmonary clinically diagnosed (PCD) cases and 11,417 (28%) were extra pulmonary TB cases. Geographically, most people who reported TB were from Terai region (60%).

In Bagmati Province, during FY 2080/81 total TB Cases all forms registered 9,407 (nearly 37% missing vs the projection) all forms of TB cases (59% male and 41% female). Out of 9,407 TB Case, 4,965 (53%) were pulmonary bacteriologically confirmed (PBC) cases, 1,113 (12%) were pulmonary clinically diagnosed (PCD) cases and 3,326 (35%) were extra pulmonary 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) remained relatively stable 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 4,10,000 people fell ill with MDR/RR-TB around the globe, while people who started on treatment were 1,75,650.

In Nepal, nearly 2,900 people were estimated to develop MDR/RR-TB during FY 2080/81, but only 761 were detected (i.e. 74% were missed). Of those diagnose, the NTCC was able to put 622 on DR TB treatment. In Bagamati Province, during FY 2080/81, only 202 were detected. Of those diagnosed, two DR-TB centres in the Bagamati province were able to provide DR-TB treatment to only 180 cases. Since, Bagamati province serves as a diagnosis site for all provinces, some individuals may have enrolled for treatment in other provinces.

Preventive therapy was provided to children under the age of five who were in close contact with individuals diagnosed with tuberculosis. In Bagamati Provinces, 633 children were identified in household contract tracing, 90% were eligible for TPT. And 80% (454 children) of eligible children were enrolled in TPT during the FY 2080/81 (Source NTPMIS Tracker).

Progress Towards the End TB Strategy and SDGs

Globally, there was an 8.7% reduction in TB incidence rate and 19% reduction in TB deaths between 2015 and 2022. Although the incidence rate and deaths are declining but are not expected to meet the global END TB and SDG targets. Additionally, 49.0% of people with TB faced catastrophic costs.

According to Global TB Report 2023, in Nepal a 15.0% reduction in TB incidence rate and 1.9% reduction in TB deaths was observed between 2015 and 2022, but there is a significant gap to reach the END TB targets. Furthermore, Nepal does not have the data on the number of TB-affected people facing catastrophic cost.

Based on the National TB Prevalence Survey report, there has been a 3.0% decline in annual TB incidence rates in Nepal.

Global declarations and commitments for TB program

Based on the global and national commitments to reach the set END TB targets, NTCC has developed its National Strategic Plan 2021/22-2025/26 for TB3 which envisions a TB Free Nepal by 2050. The milestones and targets set by Tuberculosis NSP 2021-2026 aimed to achieve the SDG and END TB targets as outlined below.

Indicators, Milestones and Targets:

Table 3.6.1 **Indicators, Milestones and Targets**

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 Bagmati Province

Nepal adopted the DOTS strategy in 1996 and achieved nationwide coverage by 2001. All DOTS centres are integrated into public health services or run by NTP partner organizations in the public and private sectors. In FY 2080/81, 1,101 institutions were providing TB diagnosis and treatment services based on DOTS strategy in Bagamati Province. With aim of expanding access to service, NTP has developed partnerships with various organizations, including private nursing homes, polyclinics, I/NGO health clinics, prisons, refugee camps, police hospitals, medical colleges, and municipalities.

Institutional coverage of TB in FY 2080/81

Table 3.6.2 Institutional coverage of TB in FY 2080/81

Particulars	Number
Total Population	**6262412**
Total districts:	**Mountain: 3**
MDR Treatment Sub-Centres	**Hill: 4**
DR Homes	**Terai: 6**
Local Levels/ Palikas	**Total: 119**
Microscopy Centres	**TB Free Implemented: 24**
DOTS centers	**1121**
Urban DOTS centers and BHSC	**32 +20**
DR TB treatment centers	**4 (3 Planned in Sindhuli, Nuwakot and Makawanpur but not started)**

Institutional coverage of TB District Wise in FY 2080/81

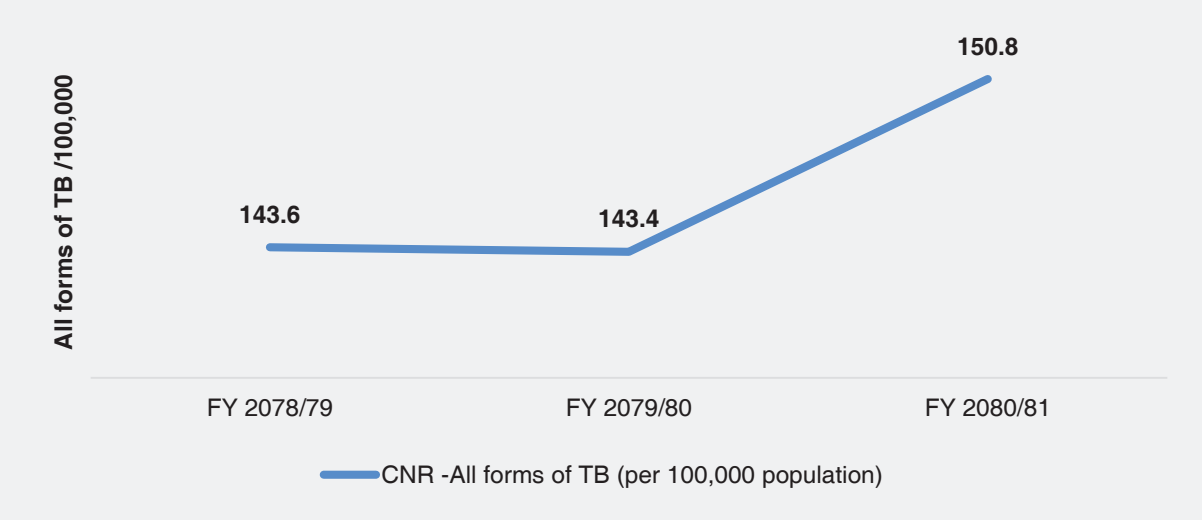
Table 3.6.3 Institutional coverage of TB District Wise in FY 2080/81

District	DOTS	DMC	Gene Xpert	DR Center	DR Sub Center	DR Hostel
Dolakha	61	6	1	0	1	0
Sindhupalchok	90	6	0	0	1	0
Rasuwa	22	5	0	0	0	0
Dhading	64	20	1	0	1	0
Nuwakot	85	27	1	1	1	0
Kathmandu	160	76	10	1	4	1
Bhaktapur	45	22	1	1	2	0
Lalitpur	77	22	2	0	1	0
Kavrepalanchok	169	35	1	0	1	0
Ramechhap	73	3	0	0	1	0
Sindhuli	79	9	1	1	3	0
Makwanpur	92	24	1	0	3	0
Chitwan	104	43	4	0	3	0
Total	**1121**	**298**	**23**	**4**	**22**	**1**

TB Indicators

Case Notification Rate

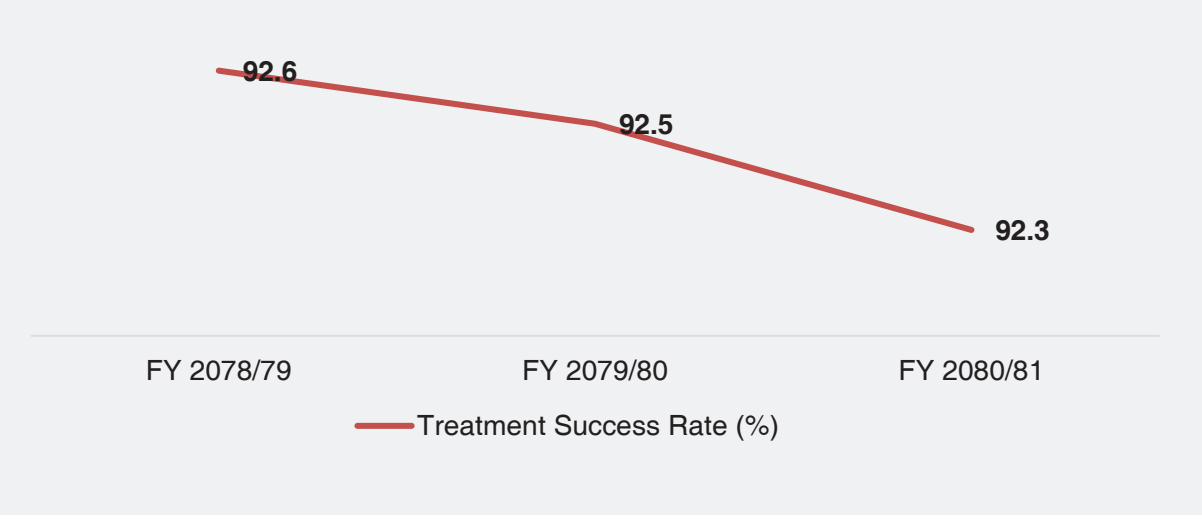
Figure 3.6.1 Trend of Case Notification Rate (all forms of TB/100,000 Population)



The line graph above represents the trend in the TB case notification rate. The figure shows that the case notification rate of all forms of TB per 100,000 populations is on an increasing trend from FY 2079/80 to FY 2080/81. i.e. 150.8 per 100,000 population.

Treatment Success Rate

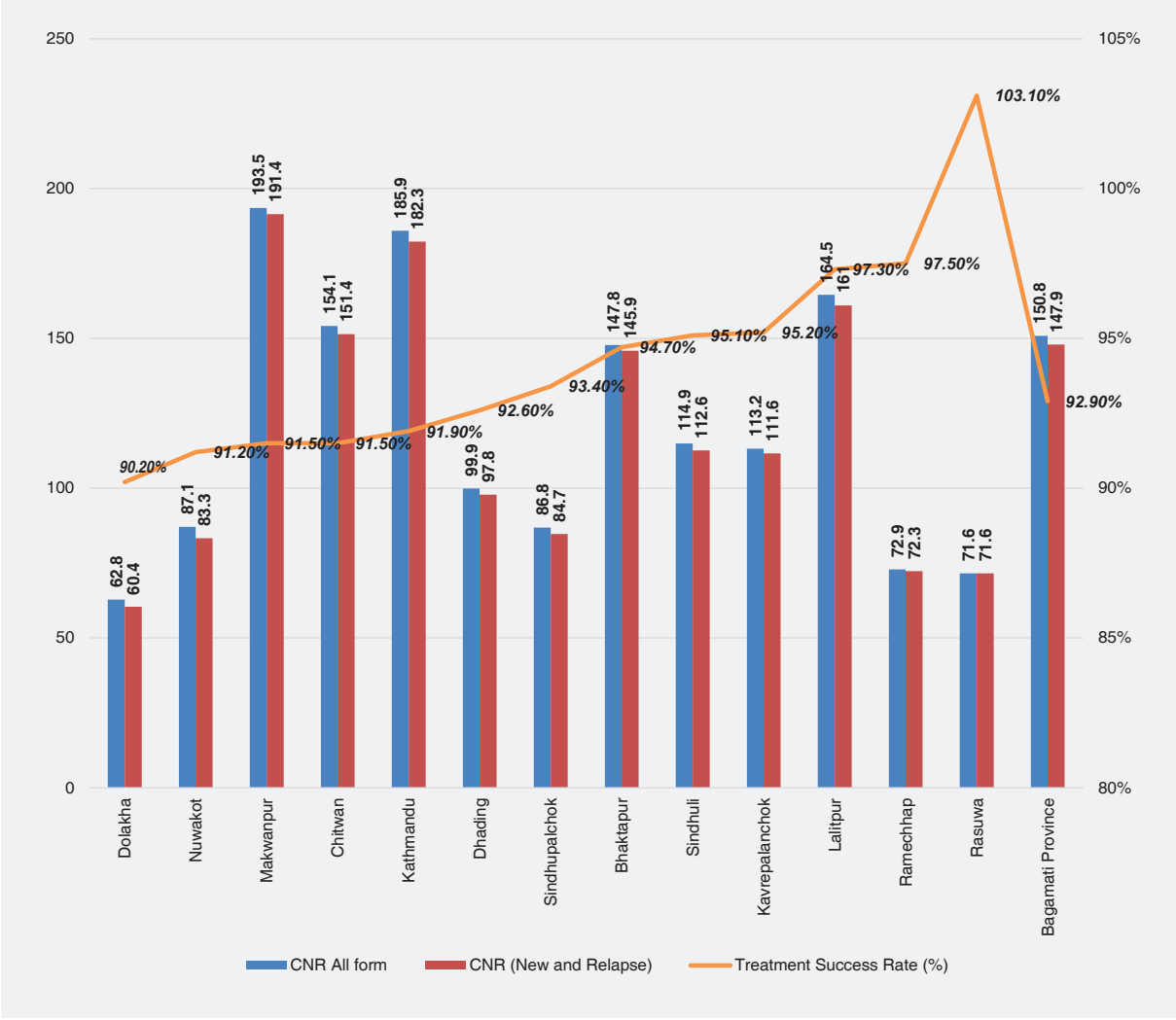
Figure 3.6.2 Trend or Treatment of Success Rate



The line graph above describes the trend of TB- treatment success rate over three consecutive fiscal years. The graph indicates a decreasing trend in the TB treatment success rate.

District Wise Status of TB Indicators

Figure 3.6.3 District wise status of case notification rate (all forms of TB)/100,000 pop

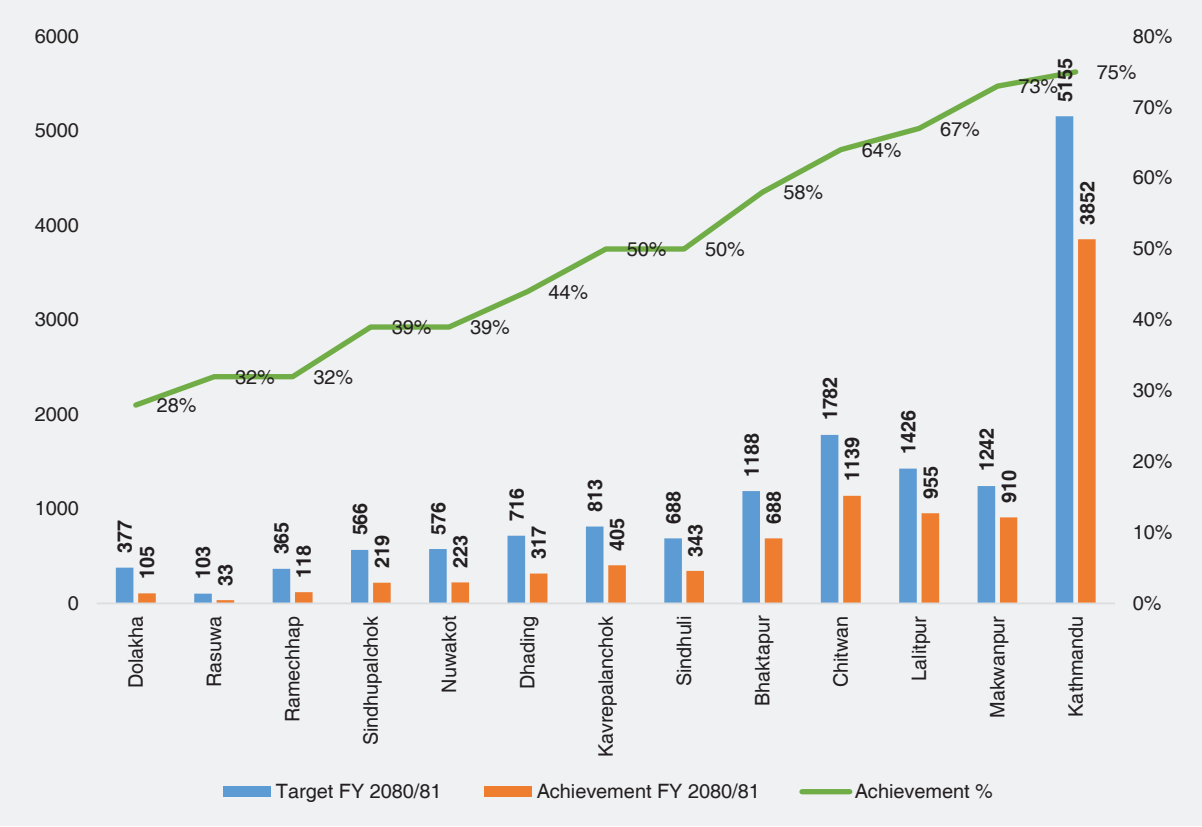


The figure above shows the district wise status of case notification rate and treatment success rate of FY 2080/81. It clearly indicates that the Makwanpur district has the highest case notification rate, while Dolaka district has the lowest. This highlights the need to focus on all districts to increase case notificiatins, as per the 2018 Prevalence Survey. The treatment success rate of all districts is above 90%, which aligns with the national target of maintaining the treatment success rate above 90%.

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

Bagamati Province has 37% case gaps that can be addressed by increasing Active case finding, OPD Presumptive, contact tracing and conducting different types of Active case finding camps. All districts show some gap, but special attention should be given to Dolakha, Dhading, Ramechhap, Kathmandu, Chitwan, Sindhuli and Makwanpur to meet target set by Bagamati Province. Bagamati Province is unable to meet estimated TB cases, creating a hug gap mainly in non-Sub Recipients districts.

Figure 3.6.4 Gap in TB Program district wise in Bagamati Province on basis of Target Vs Achievement



DR-TB Notification (Case Finding) FY 2080/81

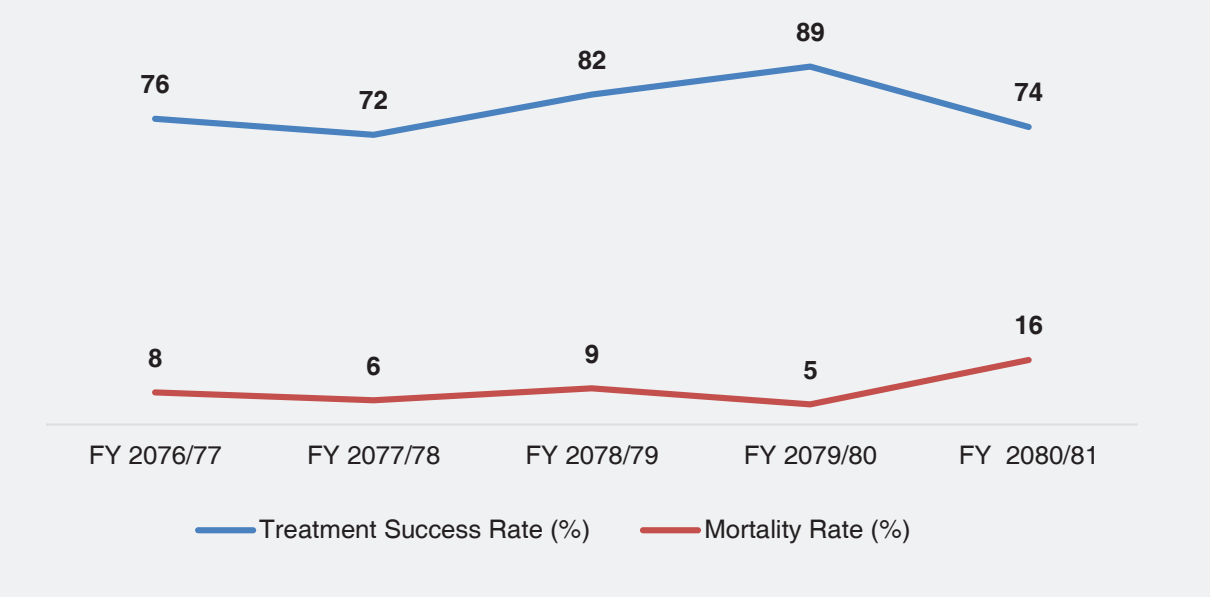
Table 3.6.4 DR-TB Notification (Case Finding) FY 2080/81

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)	3	6	1	3	1	0	1	0	0	0	0	0	0	0	0	0	0	0	15
RR/MDR (LTR)	15	30	6	14	3	9	0	1	1	0	0	0	1	0	1	1	0	0	82
Pre-XDR	2	4	0	3	1	1	0	0	0	0	0	1	0	2	2	0	0	0	16
XDR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

In FY 2080/81, a total of 113 DR patients were diagnosed in Bagamati Province, which is low compared to target, demanding focus on the issue.

DR-TB Treatment Success Rate and Mortality Rate FY 2080/81

Figure 3.6.5 DR-TB Treatment Success Rate and Mortality Rate



The figure above indicates that DR mortality rate is increasing while treatment success rate is on a decreasing trend, highlighting the need for special attention to the DR program.

Issues, Recommendation and Responsibilities

S. N	Issues	Recommendation	Responsibilities
Service delivery related			
1.	High gap between estimated case and notified cases	• Missing case entry in HMIS 89 new case then eTB. • Active case detection in target, vulnerable population and hard to reach population with access to gene x-pert testing facilities. • Initiation of screening of TB presumptive cases using x ray facilities • Increasing referral of TB presumptive from non-testing sites to testing sites	NTCC MoH PHD Local government
2.	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. • Regular review and follow up of the cases to ensure enrollment status in support of gene xpert sites, DR centers and implementing partners. • Case based quarterly review system in DR TB review	NTCC, MoH, PHD, Local Government,

3.	Decreasing trend of Pulmonary Clinically diagnosed cases.	• Conducting effective and regular CME program in private and governments institutions • Review with private sectors on trimester basis. • Discuss with NTCC and Province Health Logistic and sort out the issue and manage the channel for distribution and cartridge shortage management. • Request with Province Health Laboratory to manage lab human resources in needed place.	NTCC, MoSD PHD, Local Government NTCC, PHLM, PHD, PHL, PHD
4.	Shortage of Cartridge and not properly management of Logistic Supply		
5.	Health Laboratory Management due to shortage of Laboratory Human resources.		
Information related			
1.	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 PHD. • Follow up to Local Level for increasing the quality and internal consistency of data. • Onsite coaching and joint monitoring from PHD team • Visit Gene Xpert and DR sites.	PHD/NTCC
Governance related			
1.	Lack of monitoring and evaluation from central and NTCC team	• Improve the monitoring visit as per need	MoHP, NTCC
2.	Lack of proper coordination between local government	• Capacity development of health office as technical expert for TB program • Increasing onsite coaching and technical support from health office to local government	PHD, Health Office, Local level

Activities Conducted in FY 2080/81

- District level Tuberculosis cohort analysis and semi-annual review meeting.
- Training for Health Institutions related to E-TB Register and DHIS-2, including semi-annual Cohort Review of Tuberculosis Program and DR (Drug-Resistant) Program
- Formation and Operation of Regional Tuberculosis Committees at the Provincial Level under the Tuberculosis Free Campaign, including the formation and operation of the PPM (Private-Public Mix) Committee
- Training on Drug-Resistant Tuberculosis (DR-TB), CME (Continuing Medical Education) on Tuberculosis for Private Medical Colleges, Federal, Provincial, and other Hospitals
- Financial Support for Nutrition, Transportation, Basic Testing, and Complication Management for Drug-Resistant Tuberculosis Patients, including funds for ancillary drug purchases.
- Printing of TB-HMI (Health Management Information) Tools, World Tuberculosis Day Celebration, and Field-based Training and Monitoring related to Tuberculosis Programs (including Tuberculosis Free Campaign).

3.7 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.
- To strengthen partnerships among different stakeholders.

Targets of National Leprosy Strategy

S.N.	Targets	2019* (baseline)	2025
Target 1	Mapping of districts/municipalities including human sources	√	updated
Target 2	Number of municipalities with zero new child autochthonous 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 line)
Target 5	Rate of new leprosy cases with G2D (per million population)	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

** 2019 is ľaksn as ľhs basslins bscauss or impacľ or COVID-19 pandsmic on lsprosy casss diagnosis " ľrsaľmsnľ.*

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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 2080/81 (2023/2024), the registered prevalence remained below the elimination threshold with the national registered Prevalence Rate of 0.86/10,000 population. Out of 77 districts, 14 districts reported PR, more than 1.

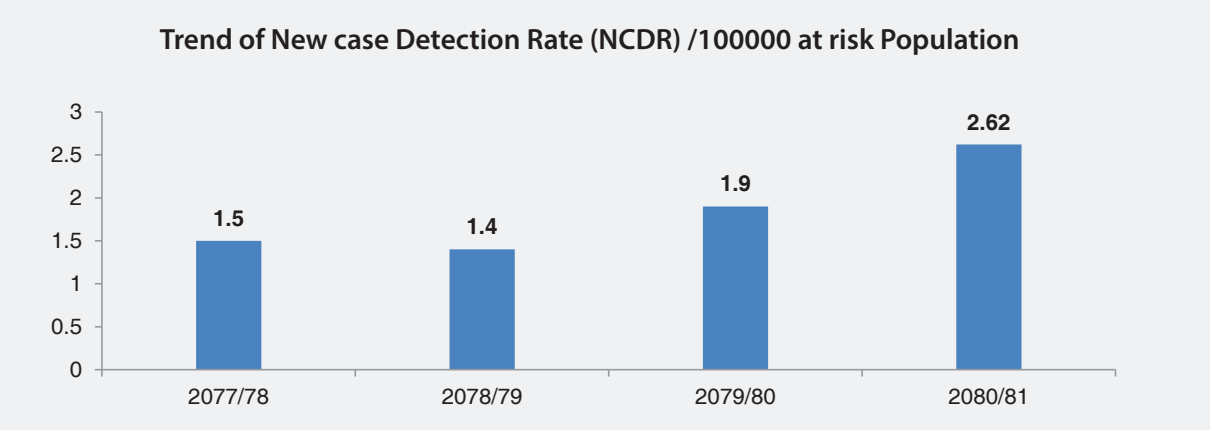
Major activities of FY 2080/81

- Conducted coordination meeting with stakeholders related to leprosy and disability.
- 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.
- Celebrated World Leprosy Day and Disability Day.

Trend of New Case Detection Rate (NCDR) per 100,000 Population

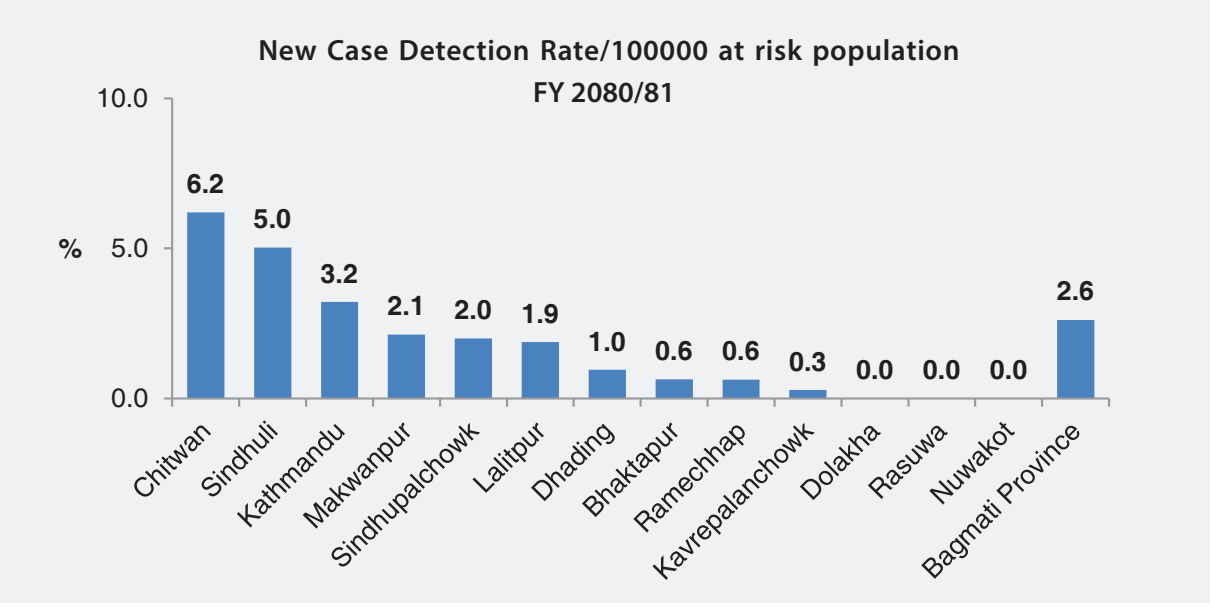
In fiscal year 2080/81, Bagamati Province experienced a slight increase in the new case detection rate (NCDR) compared to the previous year, primarily due to enhanced active case detection (ACD) efforts implemented at the field level throughout the province.

Figure 3.7.1 Trend of New case Detection Rate (NCDR)



District Wise Status of New Case Detection Rate (NCDR)

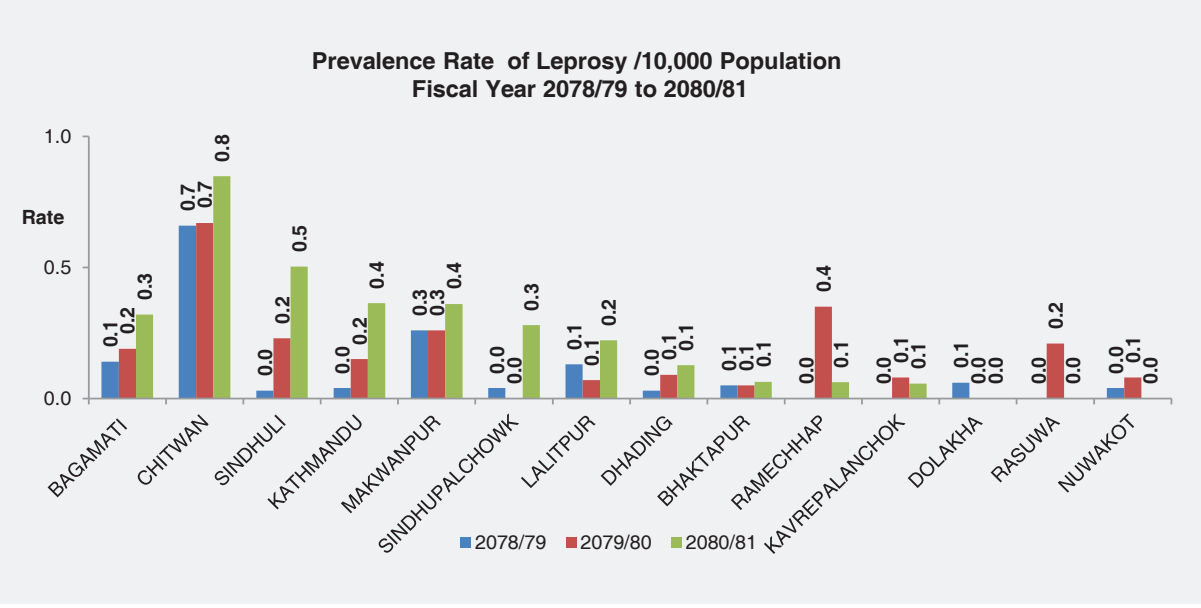
Figure 3.7.2 District wise status of new case detection rate (NCDR)



The figure above illustrates the district-wise trend of the new case detection rate (NCDR) across Bagamati Province. In fiscal year 2080/81, Chitwan recorded the highest NCDR at 6.2%, followed by Sindhuli at 5%, Kathmandu at 3.2%, Makwanpur at 2.1%, Sindhupalchok at 2%, Lalitpur at 1.9%, and Dhading at 1%. The remaining districts, including Bhaktapur and Ramechhap at 0.6% each, Kavre at 0.3%, and Dolakha, Rasuwa, and Nuwakot, reported zero NCDR.

Trend of prevalence rate (PR) of leprosy per 10,000 population

Figure 3.7.3 Trend of prevalence rate of leprosy per 10,000 population



The figure above shows the district-wise prevalence rate of leprosy per 10,000 populations across Bagamati Province. The provincial prevalence rate has shown a slight increase compared to the previous fiscal year. Chitwan reported the highest prevalence rate at 0.8, followed by Sindhuli at 0.5, Kathmandu and Makwanpur at 0.4 each, and Sindhupalchok at 0.3. Dolakha, Rasuwa, and Nuwakot reported a prevalence rate of zero. All 13 districts have been recorded at less than 1 prevalence rate.

Issues, Recommendation and Responsibilities

Issues/Challenges	Recommendation	Responsibilities
Issues related to accuracy and under reporting of leprosy cases in DHIS system	Encourage and supervise the health worker for accurate reporting of leprosy cases.	MoH, HD, HO Local Government
Insufficient training for newly recruited health workers and lack of refresher trainings	Yearly training on updated treatment protocol.	MOHP, DOHS
Challenges in reaction and complication management at the periphery	Recruited qualified health workers and arrangement of proper referral system.	MoHP, DOHS,MoH
Poor motivation of health workers	Refresher Training, Onsite Coaching	MoH, HD, Local Government

3.8 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 on 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 parallel development. National Guidelines on HTC was formulated in 2003 and updated in 2007, 2009 and 2011 and later the separate guidelines are merged as a comprehensive guideline on treating and preventing HIV in 2014. The community-based testing approach has also been initiated in key population and 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 in order to maximize HIV testing among key populations of HIV. For this approach, National Guidelines on Community Led HIV Testing in Nepal 2017' is also endorsed and currently CLT services is 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 for 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 the 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 3.8.1 HIV Program service 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	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	Makwanpur	1	1	0	0	1	95
13	Chitwan	1	1	1 (SPARSHA)	1 (Gene Xpert)	1	77
	Total	**16**	**15**	**6**	**2**	**16**	**1176**

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), Chitwan
- Aavash Samuha, Bhaktapur
- SPARSHA Nepal, Lalitpur
- Saarathi Nepal, Kathmandu

List of Dispensing sites of OST

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

Key Achievements in FY 2080/81

Majority of the activities under HIV program are designed based on the national strategy plan and budget is allocated accordingly at federal and provincial level. Certain local levels have initiated to practice allocation of budget and activities at local level specially to support children affected by AIDS. Under the federal grant key activities implemented in Bagmati province are listed here below:

- Training to health workers (ART counsellor, HIV focal person and focal person of organizations working in HIV prevention program) on HIV care and ART tracking system (DHIS2 tracker, Mobile health and biometric).
- Training to health workers (ART counsellor, medical recorders, statistical focal person and focal person of organization working in HIV prevention program) on revised HMIS recording reporting tools
- Review of PMTCT program
- Orientation to local leaders 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 AID Day 2023
- Procurement and supply of nutrition packets for PLHIVs
- Procurement and supply of medicine for STI and OIs
- HIV diagnosis and STI training to lab personnels
- Human rights and medical ethics training for health workers
- PMTCT training to service province.

Major Achievement

HIV testing and Counseling at HTC:

The table given below presents the three years' trend of HIV testing and Positive cases reported at HTC in Bagamati Province. Gradual increment in HIV testing was recorded in FY 079/80 with a drastic decline in FY 2080/81. The decline was specially associated with a change in data recording mechanism in FY 2080/81. An additional data set 16-02C HIV prevention care and support was adopted under HMIS recording system for HIV/AIDS program where all the HIV tests performed by community-based organization (CBOs) working in prevention program of HIV was recorded. In FY 2080/81, 820 new HIV infected cases were recorded which shows gradual decline in new case detection rate. This is supporting the target of the ending HIV epidemic by 2030.

Figure 3.8.2 Trend of HIV testing and counselling

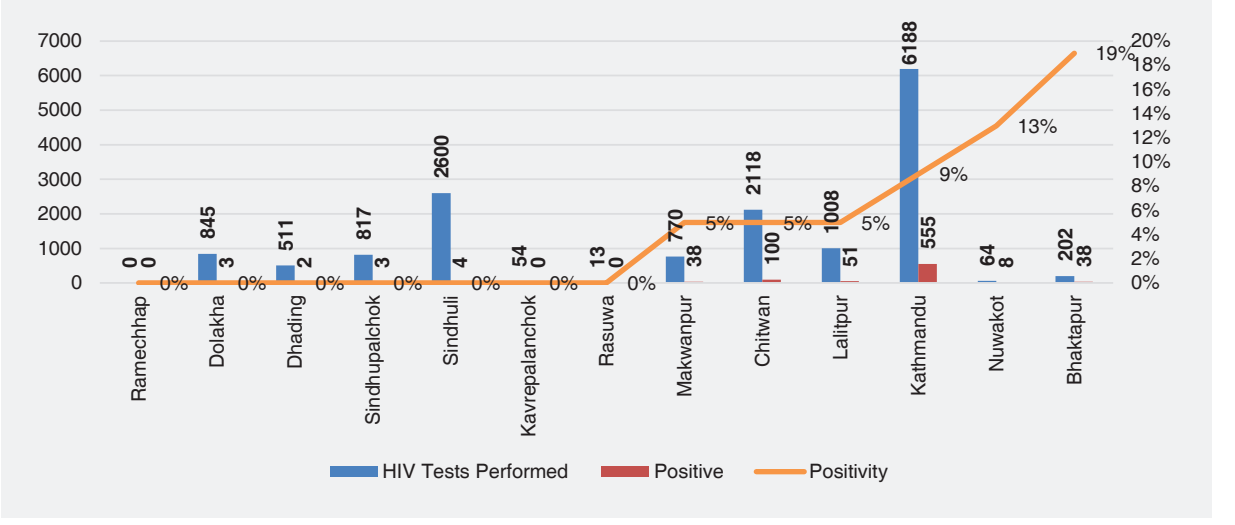
SN	Indicator	Fiscal Year		
		2078/79	2078/79	2079/80
1.	HIV testing in HTC	30155	1.	HIV testing in HTC
2	HIV found positive in HTC	951	2	HIV found positive in HTC

District wise HIV testing and counselling at HCT center:

In FY 2080/81, Kathmandu, Sindhuli, Chitwan and Lalitpur attributed more than two thirds of the total test. These districts have tested 6188, 2600, 2118 and 1008 person respectively. No test was conducted in Ramechhap district as there was no HTC sites associated with ART. Similarly, Kathmandu accounted for more than half of the positive HIV cases, which is also linked to its population density, availability of high number of ART and HTC sites, and the efforts of organizations working in Kathmandu district.

In FY 2080/81, a total of 802 new HIV infected cases were detected.

Figure 3.8.1 District wise HIV testing and counselling at HTC center



HIV Screening under Prevention, Care and Support Program

HIV prevention, care and support programs are one of the key components of reaching 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 programs. Behavior changes 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.

In FY 2080/81, 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 monthly. The table below reflects the service provided under HIV prevention, care and support program in Bagamati province in FY 2080-81. The number in the table below are based on availability of services in the district. Rasuwa, Dolakha and Ramechhap didn't have prevention services from any non-government organization.

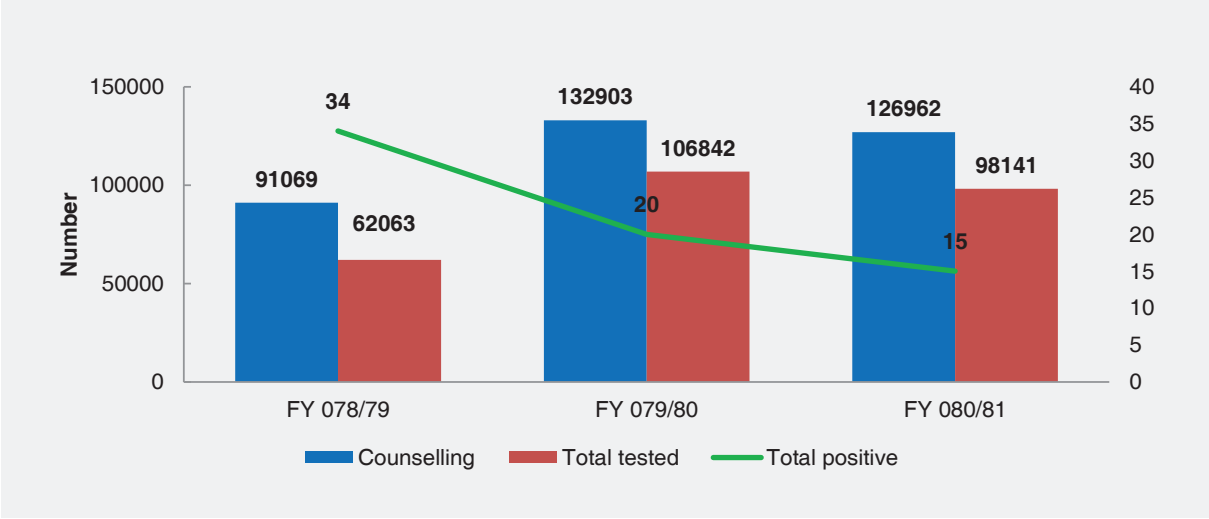
Table 3.8.3 **District wise prevention program services**

District	No. of CHBC services	No. of CCC Service	No. of BCC services	No. of HIV self-testing	No. of Index testing	No. of PrEP services	No. of CLT Services	No. of Recency Test services	No. Tested for Hep C
Dolakha	0	0	0	0	0	0	0	0	0
Sindhupalchok	336	240	0	0	1	0	38	0	0
Rasuwa	0	0	0	0	0	0	0	0	0
Dhading	446	198	208	0	14	0	147	0	0
Nuwakot	719	151	563	0	35	0	539	0	0
Kathmandu	8173	391	42007	2031	150	852	15501	5	0
Bhaktapur	1337	0	13011	538	38	100	2070	0	0
Lalitpur	2925	185	12162	588	76	193	5366	0	198
Kavrepalanchok	296	154	0	0	43	0	47	0	0
Ramechhap	0	0	0	0	0	0	0	0	0
Sindhuli	358	0	7	4	4	0	52	0	0
Makwanpur	1835	206	10622	327	210	127	1720	5	0
Chitwan	3356	154	27267	556	92	344	14864	0	0
Total	**19781**	**1679**	**105847**	**4044**	**663**	**1616**	**40344**	**10**	**198**

Prevention of Mother to child Transmission:

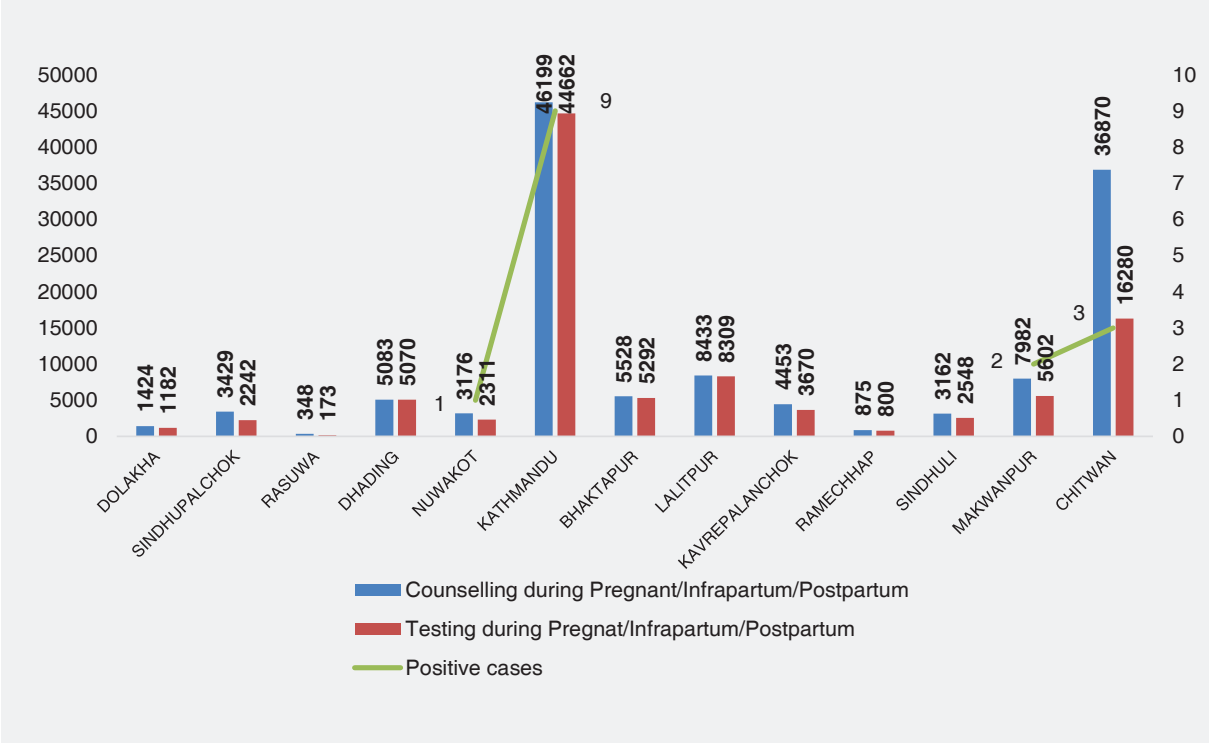
With a target to meet zero vertical transmission of HIV, the PMTCT program is being implemented at the majority of the service delivery points in Bagamati province. All pregnant women are screened with the HIV test kit during ANC visits and deliveries. Counselling and HIV testing of pregnant women visiting ANC checkup had remarkable increase in FY 2079/80, but experienced a slight decline in FY 2080/81. Similarly, the number of recorded positive cases is on a decreasing trend, supporting the target of reducing the new infection to zero by 2030. This decline is also linked to the preventive measures and approaches adopted by the program, as well as the decreased prevalence of HIV. However, 22% of the counselled pregnant women were unaware of their HIV status in FY 2080/81 which emphasizing the importance of timely supply and utilization of determine test kits.

Figure 3.8.2 Three year trend of HIV testing and number of HIV Positive in PMTCT



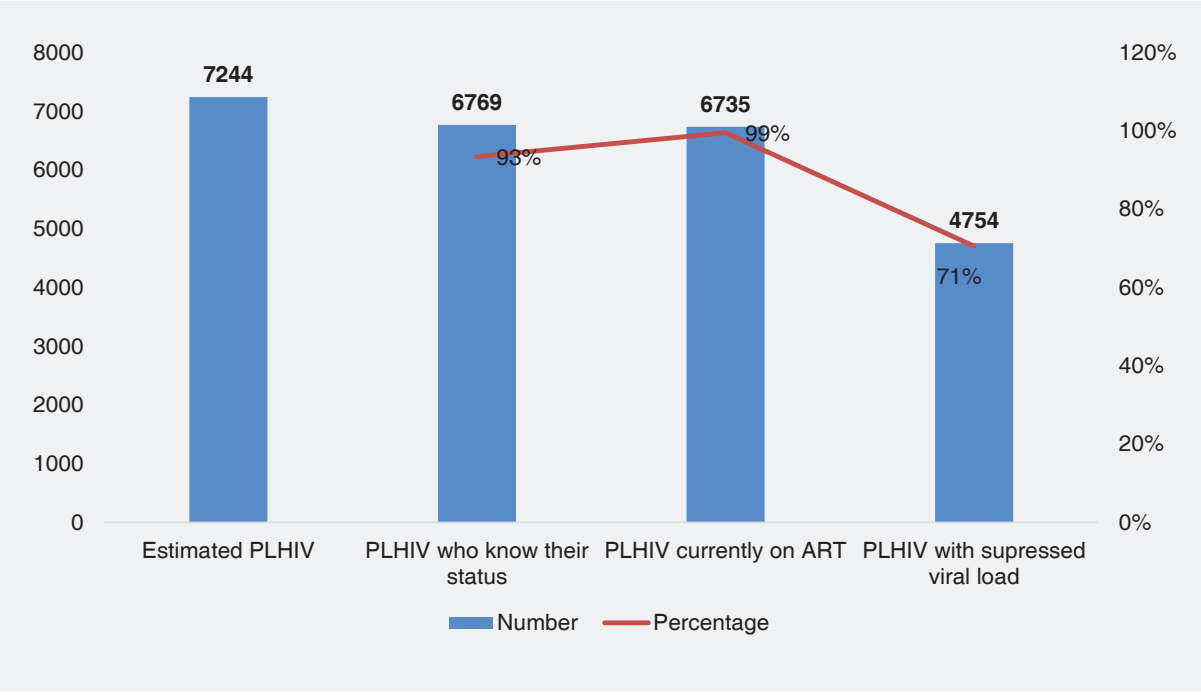
PMTCT coverage by district: District-wise coverage of HIV testing in pregnant women is shown in the figure below. The figure indicates that the highest number of tests were conducted in Kathmandu, followed by Chitwan, Lalitpur, Makwanpur, and Bhaktapur. In relation to the number of tests, the highest number of reactive cases was identified in Kathmandu, followed by Chitwan and Makwanpur districts. Despite the increased number of tests during pregnancy, antepartum, and postpartum, there is a significant gap between counseling and testing in Chitwan, which needs to be addressed.

Figure 3.8.3 District wise PMTCT coverage in FY 2079/80



Achievement against the 95-95-95 strategy: The country's HIV program is primarily based on targets set under the National HIV Strategy Plan 2026 and the Sustainable Development Goals. By 2026, it is estimated that at least 95% of the estimated PLHIV will be reached, 95% of identified PLHIV will be treated, and viral load suppression below 1,000 copies will be achieved in at least 95% of PLHIV under treatment. Reflecting the achievements of FY 2080/81, Bagamati Province has met the second 95, while achieving the first and third 95s should be the priority for the upcoming years. The figure below shows the achievement against the targets set.

Figure 3.8.4 **PLHIV currently on treatment as of Ashar 2080**



PLHIV currently on treatment

The figure below shows the number of people living with HIV (PLHIV) in the Bagamati province. At the end of FY 2080/81, 6,735 PLHIV were receiving treatment at 16 different ART sites in Bagamati Province. Kathmandu accounts for 3,976 PLHIV, followed by 1,198 in Chitwan. The smallest number of PLHIV cases under treatment is 17 in Dolakha, followed by 62 in Sindhuli. There are no ART sites in two districts, namely Ramechhap and Rasuwa, where service expansion needs to be prioritized.

Issues, Recommendation and Responsibility

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

Issues/Challenges, Recommendation and Responsibilities

S. N	Issue/ Challenges	Recommendation	Responsibilities
Service delivery related			
1.	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 especially the migrant population	PHD/MoH/NCASC
2	Inadequate intervention to deal with coinfection like hepatitis	• Develop guidelines and protocol to deal with the hepatitis cases of PLHIV (linking with better service sites, transportation support to PHLIV to reach the sites)	NCASC
3	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, PHD and PHLMC
Information related			
		1.	
2.	Data quality in different reporting portal	Timely review of data through the data management committee feedback to the district and service sites.	PHD/Health office/ Service sites
S. N	**Issue/ Challenges**	• **Recommendation**	**Responsibilities**

CHAPTER 4

CURATIVE SERVICE

4.1 Background

The provincial government of Bagamati Province is committed to raise the health status of rural and urban 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 from PHC outreach to the specialized hospitals.

4.2 Updated Categorization of Health Service of Bagamati Province

Table 4.2.1 Updated Categorization of Health Service of Bagmati Province

S.N.	Organization unit	Basic Health Service Center	Basic Hospitals (5 - 15 Beds)	General Hospitals (25 - 50 Beds)	General Hospitals (100 - 300 Beds)	Specialized Hospitals (100 and above)	Super Speciality Hospitals (50+ Beds/Organ)	Academy and Teaching Hospital (300+ Beds)	Total
1	Dolakha	87	4	2	1	0	0	0	94
2	Sindhupalchok	123	2	1	0	0	0	0	126
3	Rasuwa	33	1	1	0	0	0	0	35
4	Dhading	116	11	1	0	0	0	0	128
5	Nuwakot	96	4	1	0	0	0	0	101
6	Kathmandu	148	23	45	14	10	10	8	258
7	Bhaktapur	41	0	7	3	0	3	0	54
8	Lalitpur	68	0	6	7	0	3	2	86
9	Kavrepalanchok	159	7	3	0	0	0	1	170
10	Ramechhap	91	4	1	0	0	0	0	96
11	Sindhuli	105	1	1	0	0	0	0	107
12	Makwanpur	107	4	3	0	0	0	0	114
13	Chitwan	106	12	11	1	2	2	2	136
	Bagamati Province	**1280**	**73**	**83**	**26**	**12**	**18**	**13**	**1505**

The above figure shows the district wise data of health service delivery unit of Bagamati Province. According to the updated categorization of health facilities there are 1280 BHSU, 73 Basic hospitals (5-15 beds), 83 General Hospital (25-50 beds), 26 General Hospital (100-300 beds), 12 Specialized Hospitals (100 / above), 18 Super Specialty Hospitals (50+ Beds/Organ) and 13 Academy and Teaching Hospital (300+ Beds).

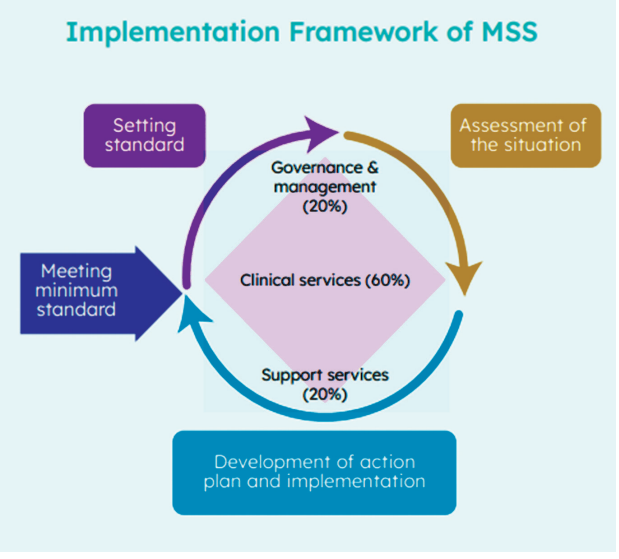
Activities Carried Out in fiscal year 2080/81

- Curative health services were provided through the existing health facilities through inpatient including emergency services and outpatient services.
- Essential drugs and other logistic materials were provided to all public health institutions.
- Strengthening capacity of hospitals by providing training, onsite coaching, follow-ups, equipment supply and logistic support.
- Conducted Hospital Management strengthening program (Minimum Service Standard).
- Supportive supervision & monitoring of public & non-public hospitals.

Major Activities Carried out in fiscal year 2080/81

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 'Minimum Service Standards' 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.

The MSS tools have been organized into three major sections: Governance and Management, Clinical Service Management and Hospital Support Service Management. The MSS will also be 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

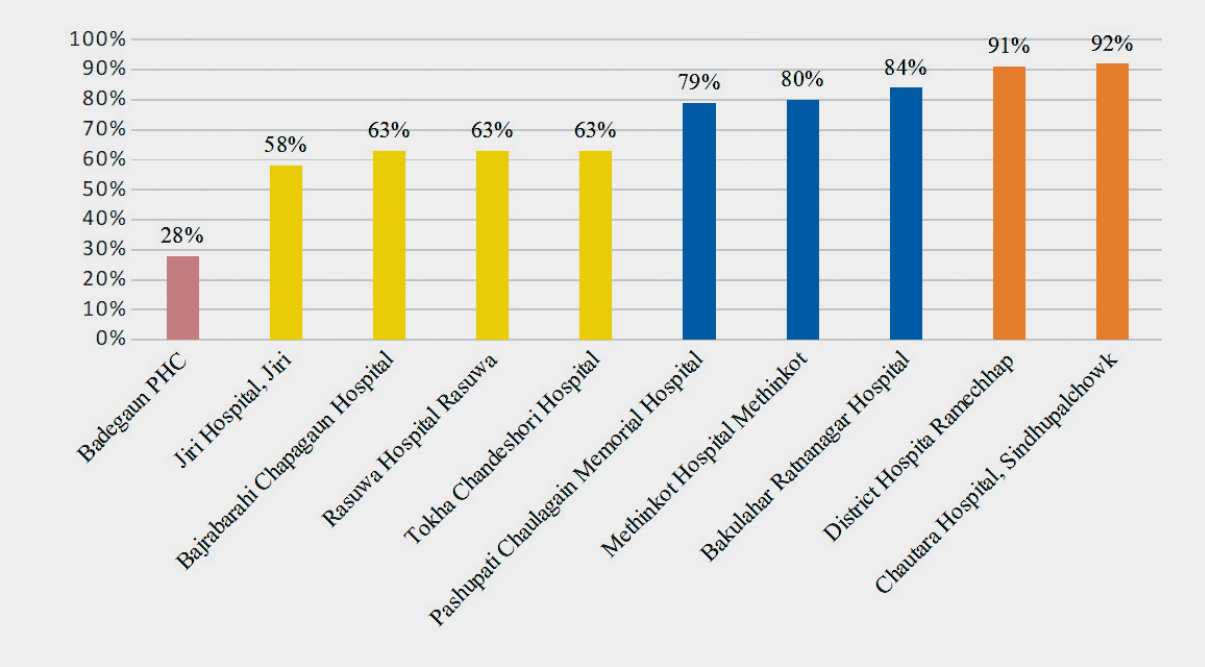
Bagamati Province has implemented MSS in the hospitals since 2076/77 which has significantly improved the readiness of the hospitals and the quality of services at the hospitals. The increasing scores of the hospitals of Bagamati Province show that the hospitals are doing well. Province level MSS Implementation, Budgeting for province level health institutions, follow-up planning, implementations, and gap analysis for strengthening, Data keeping and analysis for further rational budgeting, correspondence and support to basic Hospitals and Basic health centers MSS Implementation and follow-up via District Health office of municipality of related province.

Table 4.2.2 **MSS Implemented Hospitals of Bagamati Province, FY 2080/81**

Provincial level (13)		
1	Hetauda Hospital	Secondary A
2	District Hospital Dhading	Secondary A
3	District Hospital Sindhuli	Secondary A
4	Trishuli Hospital, Nuwakot	Secondary A
5	Bhaktapur Hospital, Bhaktapur	Secondary A
6	District Hospital Rasuwa	Primary
7	Pashupati Chaulagain Smirti Hospital, Dolakha	Primary
8	Methinkot Hospital, Kavrepalanchowk	Primary
9	Bakulahar Hospital, Chitwan	Primary
10	Bajrabarahi Chapagaun Hospital, Lalitpur	Primary
11	Tokha Chandeshori Hospital, Kathmadu	Primary
12	Chautara Hospital, Sindhupalchowk	Primary
13	Ramechhap District Hospital	Primary
14	District Ayurveda Health Center, Nuwakot	
15	District Ayurveda Health Center, Dhading	
Local level (3)		
1	Baghauda Hospital, Chitwan	Primary
2	Jiri Hospital, Dolakha	Primary
3	Badegaun Hospital, Lalitpur	Primary

Finding MSS Evaluation of FY 2080/81

Figure 4.2.1 MSS Score of Primary Level Hospitals of FY 2080/81



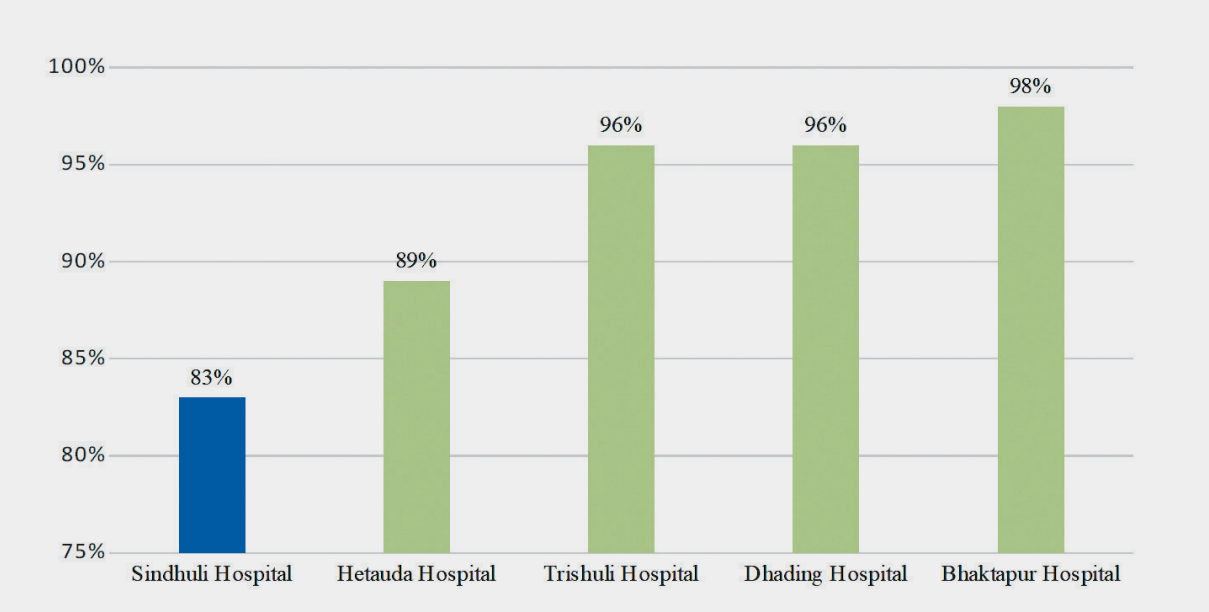
In FY 2080/81 MSS was assessed in 9 Primary level hospitals. Among the Primary level hospitals assessed in FY 2080/81, the highest score attained was of Chautara hospital, Sindhupalchok (92%) followed by District Hospital Ramechhap (91%). Additionally, 3 hospitals scored within the 70 -85% range, earning the blue color code and 4 Hospitals scored within 50-70 % range, indicating the yellow code on MSS Score Category and 1 local hospital and PHC scored below 50%. This indicated the need for improvement of health facilities in the local unit.

MSS Score of Secondary A level Hospital.

In FY 2080/81, MSS was assessed in 5 Secondary A level hospitals. Among the Secondary A level hospitals assessed in FY 2080/81, Bhaktapur district hospital achieved the highest MSS score, reaching an impressive 98%, surpassing top scorers in other provinces. Notably, among the top-performing hospitals, 3 other 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.

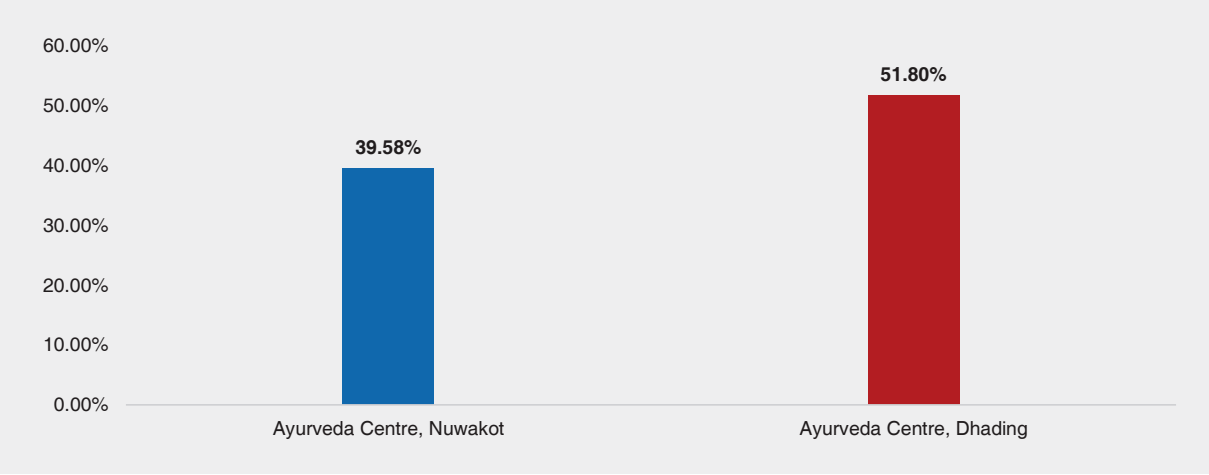
Additionally, 1 hospital scored within the 70 -85% range, earning the blue color code MSS scoring system and the subsequent rankings have ignited a positive sense of competition among hospital leaderships, motivating them to strive for excellence and distinguish themselves as the best in their respective categories.

Figure 4.2.2 Trend of MSS Score



MSS Score of District Ayurveda Health Centre

Figure 4.2.3 MSS Score of districts Ayurved Health Center



In FY 2080/81, MSS was assessed in two District Ayurveda Health Centre. Among the two Dhading Ayurveda health center scored 51.80% in FY 2080/81 followed by Nuwakot Ayurveda health center (39.58%). While comparing the MSS Score of Hospital and Ayurveda Health Centre, there is need of lot of improvement in district Ayurveda health Centre.

Major Strengths of Hospitals under Bagamati Province

- ICU service is available at all secondary A level hospitals and Bakulahar Ratnanagar Hospital.
- Dialysis service is provided by Hetauda, Trishuli, Sindhuli, Dhading, Bakulahar Ratnanagar Methinkot Hospital and Ramechhap hospitals.

- CT scan and MRI services are available at Hetauda Hospital, while CT scan services are provided at Trishuli Hospital.
- 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, with additional outpatient services launched at Sindhuli Hospital, Bhaktapur Hospital,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, DJ removal, dialysis services, and echocardiogram services at Trishuli Hospital.
- Bhaktapur Hospital provides GI-Oncosurgery, laparoscopic surgery, Endoscopy, Endocrinology Services which are additional to What MSS had proposed.
- Some hospitals (Dhading, Sindhuli Hospital) agree with Patan Academy of Health Sciences about residential specialist services.
- Implementation of a Token Display Machine, Digital Board, Emergency Pharmacy, and Online Ticketing System at Hetauda Hospital.
- Oxygen plant has been established in all secondary A level hospitals and some primary Hospital.
- Endoscopy service being provided by Bhaktapur, Trishuli, Sindhuli, Hetauda and Bakulahar hospitals.
- Provision of automated laboratory report dispensing at Bakulahar Ratnanagar Hospital.
- Some hospitals have shifted to well-equipped new buildings (Chautara, Sindhuli) and some are planning to shift soon (PCMH)
- The Ministry of Health Bagamati Province recruited human Resources and filled the vacant position in Hospitals.
- NSI Supports hospitals providing Human resources and grants.

Areas to be Improved of Hospitals under Bagamati Province

- Many hospitals lack dedicated accounting staff, administrative personnel, and record-keeping personnel.
- Some hospitals have not conducted social audits, which are essential for enhancing governance.
- A disaster preparedness plan is absent 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.
- Many hospitals are facing challenges with their oxygen boosters.
- 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 008.
- All medicines covered by social health insurance should be available at the pharmacies of all hospitals.

Major Achievement of fiscal year 2080/81

Percentage of Population Utilizing Outpatient (OPD) Services

Figure 4.2.4 **Percentage of population utilizing outpatients (OPD) services**

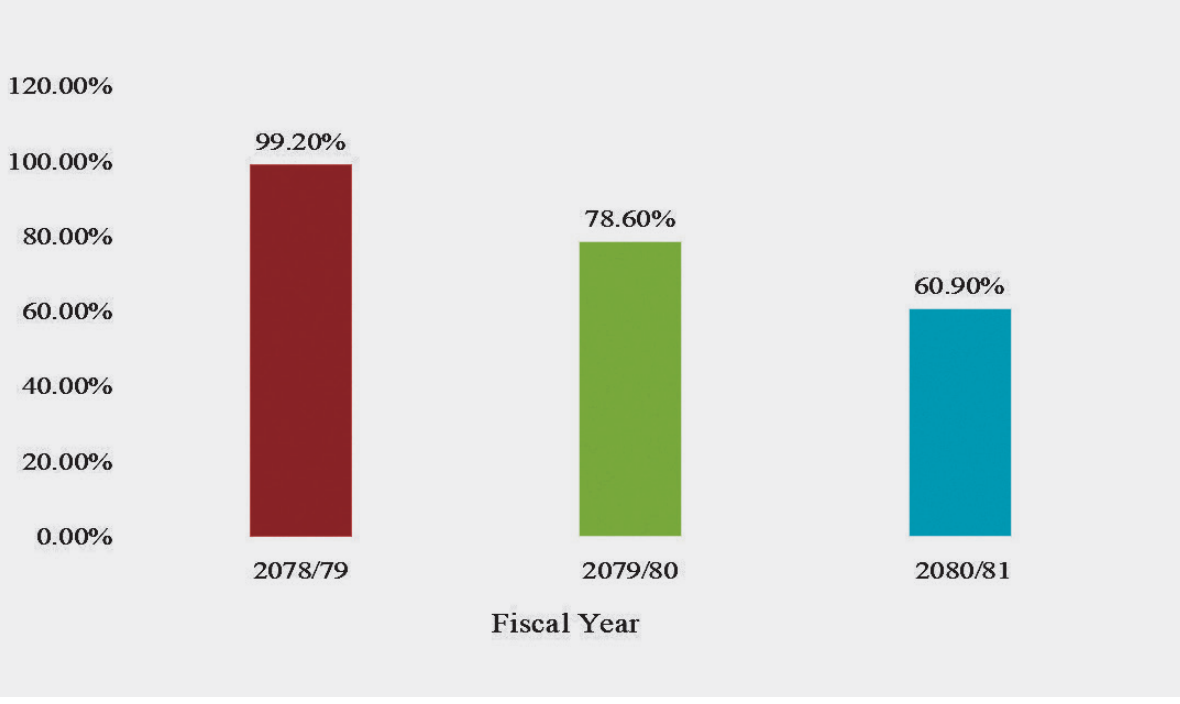
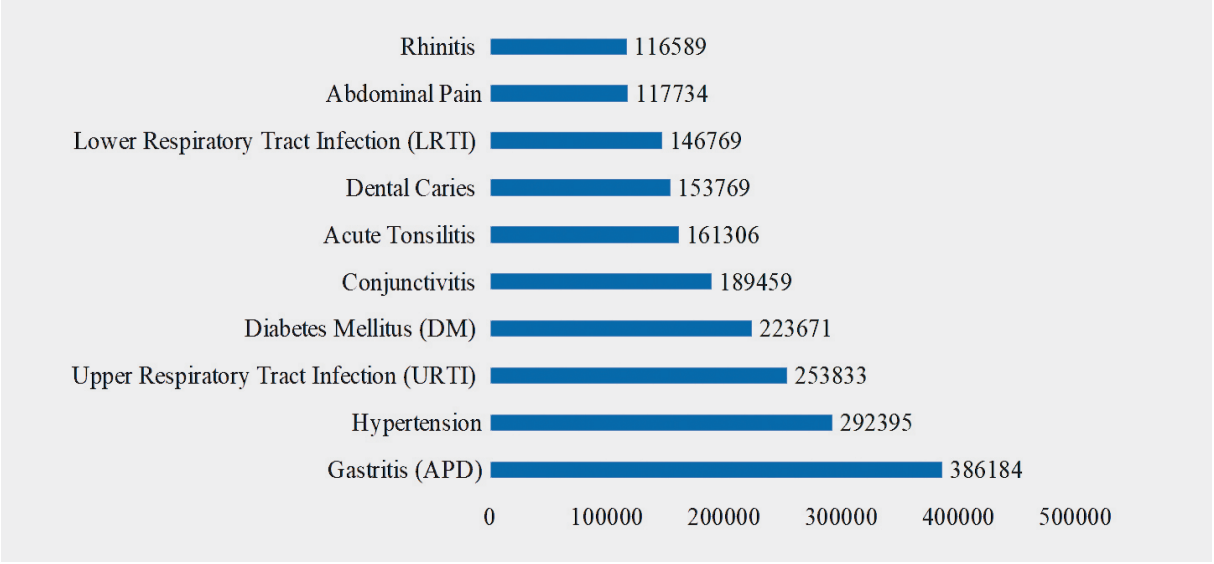


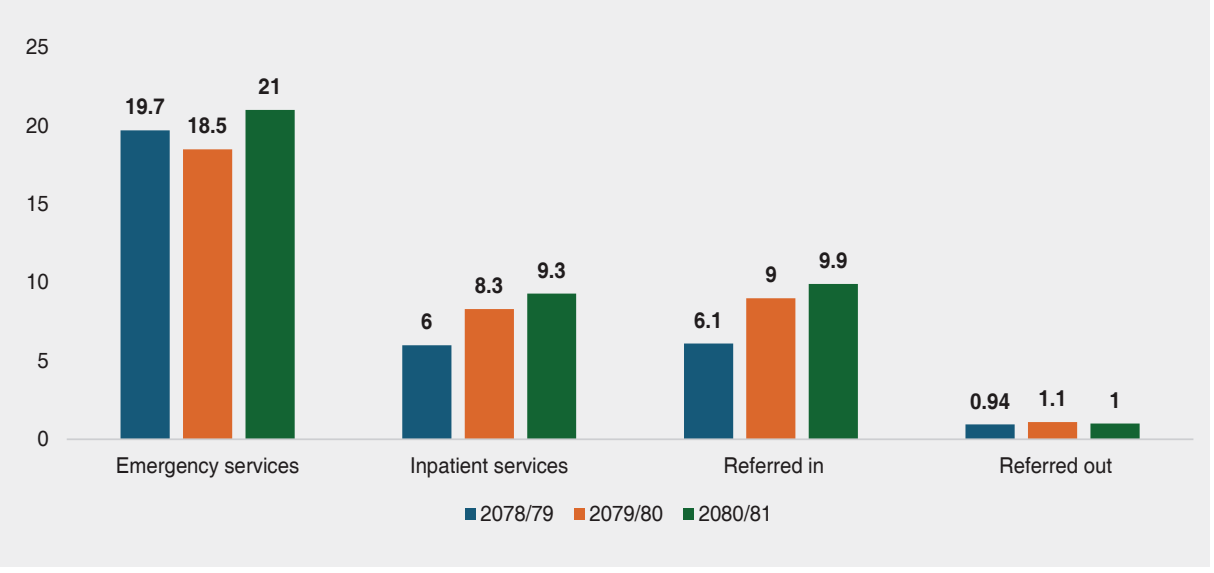
Figure 4.2.5 **Most Common Outpatients Morbidities**



The prevalent morbidities encountered at the Outpatient include Gastritis (APD), Hypertension, Upper Respiratory Tract Infection (URTI) and followed by cases presenting with Diabetes mellitus (DM). Diabetes Mellitus marks the fourth common morbidity presented at outpatient and Abdominal Pain is the ninth common morbidity.

Percentage of Population Utilizing Hospital Service

Figure 4.2.6 **Trend of Population Utilizing Hospital Service (%)**

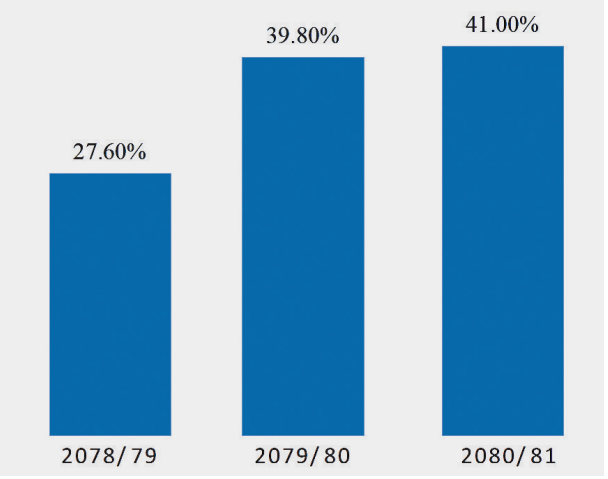


The above figure illustrates the trend of Population Utilizing Hospital Service. The trend of Population Utilizing inpatient services and referred in has increased in FY 2080/81 compared to the previous two years. While looking at the Emergency service it was in decreasing trend from FY 2078/79 to FY 2079/80 but in FY 2080/81 it was increased.

Bed Occupancy Rate (%)

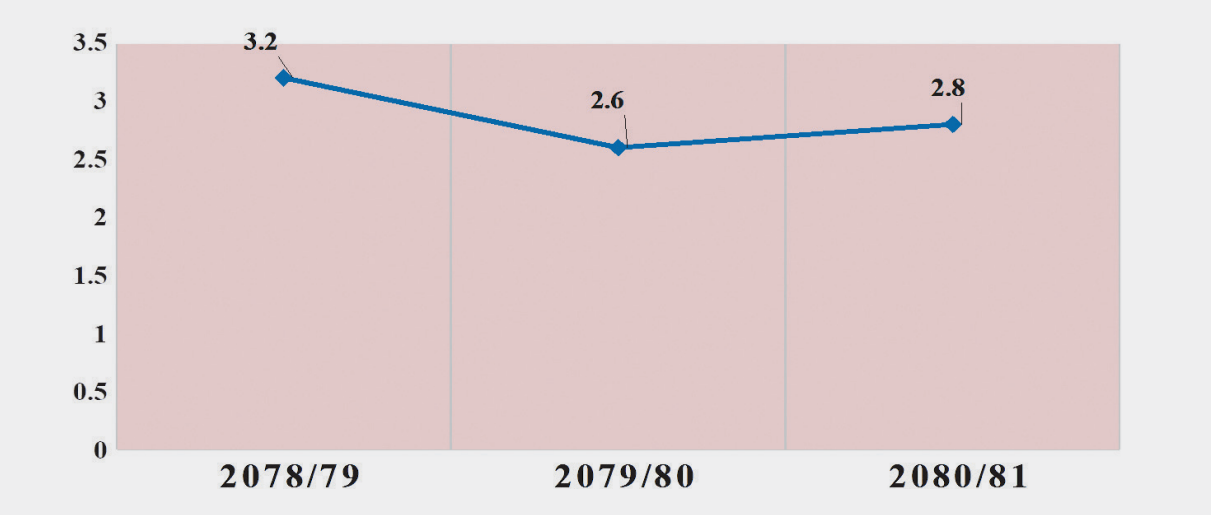
The bed occupancy rate (BOR) exhibited a consistent increase over three fiscal years. In 2078/79, the BOR was recorded at 27.6%, which rose significantly to 39.8% in 2079/80 and further increased to 41% in 2080/81. This upward trend suggests improved hospital bed utilization and potentially enhanced healthcare services. Although there is no universal standard for the optimal occupancy rate, many hospitals consider approximately 80% to be ideal.

Figure 4.2.7 Trend of Bed Occupancy Rate (%)



Average length of stay at hospital (Days)

Figure 4.2.8 Trend of Average length of stay at hospital (Days)



In hospital management Average length of stay (ALOS) is also a major indicator. For efficient bed management, a reduction in the number of inpatient days results in decreased risk of infection, and an improvement in the quality of treatment. In the Fiscal year 2079/80, the national average length of stay was found to be 2.6 days. However, the figure increases FY 2080/81 which accounted to be 2.8 days.

Issues/Challenges

- Low quality medicine procurement.
- Hospital vandalism
- Inadequate clinical and supportive staff thus poor recording of patients' health data.
- Doctors' patient ratio and nurse-patient ratios are not at WHO standard.
- Poor infrastructure for service delivery
- Frequent staff turnover at private hospitals

CHAPTER 5

SOCIAL SECURITY AND OTHER PUBLIC HEALTH PROGRAM

5.1 One Stop Crisis Management Center

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,

One stop Crisis Management Centres in Bagamati Province

1. Paropakar Maternity and Women's Hospital, Kathmandu
2. Dhulikhel Community Hospital, Kavrepalanchowk
3. Bharatpur Hospital, Chitwan
4. Hetauda Hospital, Makwanpur
5. Dhading Hospital, Dhading
6. Chautara Hospital, Sindhupalchowk
7. Charikot Primary Health Care Centre, Dolakha
8. Manthali Primary Health Care Centre, Ramechhap
9. Sindhuli Hospital, Sindhuli
10. Bhaktapur Hospital, Bhaktapur
11. Trishuli Hospital, Nuwakot
12. Patan Hospital, PAHS, Lalitpur
13. Thokarpa Health Post, Sindupalchowk
14. Sukraraj Tropical and Infectious Disease Hospital, Kathmandu
15. Bir Hospital, Kathmandu
16. National Trauma center, Kathmandu
17. Kanti children's hospital, Kathmandu

there are 93 OCMCs operating in 77 districts nationwide, with 12 OCMCs specifically situated in the Bagamati province.

OCMC Services

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

Figure 5.1.1 OCMC Services

Guiding Principles of OCMCs

- 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.

(Operational Guideline or OCMC, 2077)

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 in 2080/81

Table 5.1.1 **Number of cases served in FY 2080/81**

SN	Organisational unit	Number of new registered cases in OCMC	Number of follow-up cases registered in OCMC	Number of perpetrators reported by OCMC cases
1	Kanti children's hospital, kathmandu	80	80	131
2	Bhaktapur hospital, bhaktapur	131	133	82
3	Bharatupur hospital, chitwan	118	73	8
4	Dhading hospital, Dhading	115	69	
5	Chautara hospital, sindupalchowk	95	35	34
6	Bir Hospital, Kathmandu	19	26	7
7	National Trauma center, kathmandu	85	85	7
8	Thokarpa Health Post, Sindupalchowk	6	8	1
9	Dhulikhel Hospital, Kavre	120	20	
10	Sindhuli hospital, sindhuli	354	356	136
11	Patan Hospital, Lalitpur	267	232	3

12	Rasuwa Hospital, rasuwa	6	4	2
13	Sukraraj Tropical and Infectious Disease Hospital, kathmandu	65		36
14	Manthali hospital, ramechap	57	17	
15	Paropakar Maternity hospital, kathmandu	254	94	1
16	Hetauda hospital, Makwanpur	188	95	96
17	Trisuli hospital, nuwakot	51	64	5
18	**Bagamati Province**	**2086**	**1450**	**571**

The table presents data from various health institutions regarding One-Stop Crisis Management Centers (OCMCs) in FY 2080/81. A total of 2,086 new cases were registered in OCMCs, with Sindhuli Hospital reporting the highest number (354) and Thokarpa Health Post and Rasuwa Hospital reporting the lowest (6 each). Similarly, 1,450 follow-up cases were recorded, with Sindhuli Hospital again reporting the highest (356), while Rasuwa Hospital had the lowest (4).

Regarding perpetrators reported by OCMC cases, a total of 571 perpetrators were recorded. Sindhuli Hospital reported the highest number of perpetrators (136), followed by Kanti Children's Hospital (131), while multiple health institutions, including Dhading Hospital, Dhulikhel Hospital, and Manthali Hospital, did not report any perpetrators.

Table 5.1.2 Service Utilization at OCMC by type of GBV in FY 2080/81

S. N	Organizational unit	Forced marriage	Denial of resources	Emotional abuse	Harmful traditional practices	Physical Violence	Rape	Sexual Assault
1	Kanti children's hospital, kathmandu		9	2		9		57
2	Bhaktapur hospital, bhaktapur	1	7	1		1	37	18
3	Bharatupur hospital, chitwan			1		40	37	47
4	Dhading hospital, Dhading	3	1	4	1	18	21	29
5	Chautara hospital, sindupalchowk	2	3	11	2	45	9	24
6	Bir Hospital, Kathmandu	2	4	34		45		
7	National Trauma center, kathmandu		2	11				2
8	Thokarpa Health Post, Sindupalchowk			7				
9	Dhulikhel Hospital, Kavre			3		37	57	47

10	Sindhuli hospital, sindhuli	1	68	118	1	14	21	10
11	Patan Hospital, Lalitpur	1	30	1	1	57	127	24
12	Rasuwa Hospital, rasuwa					1	1	4
13	Sukraraj Tropical and Infectious Disease Hospital, kathmandu		2	1		32	5	61
14	Manthali hospital, ramechap			2		11	6	12
15	Paropakar Maternity hospital, kathmandu			1			1	238
16	Hetauda hospital, Makwanpur	17	12	3		27	79	20
17	Trisuli hospital, nuwakot		4	12		18	20	7
18	**Bagamati Province**	**28**	**157**	**220**	**7**	**376**	**435**	**606**

Source: HMIS

The table presents data on different forms of gender-based violence (GBV) reported across various health institutions in Bagamati Province in FY 2080/81. A total of 606 cases of sexual assault were reported, with Paropakar Maternity Hospital recording the highest number (238), while multiple health institutions, including Thokarpa Health Post and Rasuwa Hospital, reported the lowest numbers. Similarly, 435 cases of rape were recorded, with Patan Hospital having the highest number (127), whereas some institutions, such as Bir Hospital and National Trauma Center, did not report any rape.

Regarding physical violence, 376 cases were reported, with the highest number recorded at Patan Hospital (57). Emotional abuse cases were the most frequently reported category, totaling 220, with Sindhuli Hospital accounting for the highest number (118). Cases of forced marriage (28) and harmful traditional practices (7) were comparatively lower, with Hetauda Hospital reporting the highest number of forced marriages (17). Additionally, denial of resources was reported in 157 cases, with Sindhuli Hospital registering the highest number (68).

Table 5.1.3 **OCMC Services Received by GBV survivors in IY 2079/80**

SN	Organizational Unit	Services received									
		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.	Chautara Hospital, Sindhupalchowk	1	7	29	18	40	2	11	0	0	1
2.	Dhading Hospital, Dhading	0	28	34	50	55	17	38	2	0	0
3.	Trishuli Hospital, Nuwakot	2	9	6	16	26	8	18	0	0	2
4.	Paropakar Maternity and Women's Hospital, Kathmandu	3	27	53	11	84	7	60	2	0	3

5.	Bhaktapur Hospital, Bhaktapur	21	51	30	94	96	45	77	2	1	9
6.	Dhulikhel Community Hospital, Kavrepalanchowk	2	0	78	88	138	61	59	17	8	2
7.	Manthali PHCC, Ramechhap	0	0	0	8	8	3	0	0	0	0
8.	Sindhuli Hospital, Sindhuli	5	7	41	6	44	7	114	3	0	23
9.	Hetauda Hospital, Makwanpur	15	65	76	137	288	56	323	7	13	2
10.	**Bagmati Province**	**49**	**194**	**347**	**428**	**779**	**206**	**700**	**33**	**22**	**42**

The table presents data on various medical and psychosocial support services provided by One-Stop Crisis Management Centers (OCMCs) across health institutions in Bagamati Province in FY 2080/81.

A total of 1,765 physical examinations were conducted, with Sindhuli Hospital reporting the highest number (347), followed by Paropakar Maternity Hospital (252), while Rasuwa Hospital reported the lowest (4). Similarly, 784 medico-legal services were provided, with the highest cases recorded at Paropakar Maternity Hospital (152).

Psychological counseling was provided to 1,556 individuals, with Sindhuli Hospital offering the highest number of sessions (325). Emergency contraceptives were administered in 122 cases, with Paropakar Maternity Hospital reporting the highest (28). A total of 572 cases received treatment for injuries, with Sindhuli Hospital managing the highest number (113).

Additionally, pregnancy tests were conducted in 346 cases, with Dhulikhel Hospital leading (83). A total of 84 cases received STI treatment, with the highest reported at Sindhuli Hospital (12). Safe abortion services were provided in 52 cases, with Paropakar Maternity Hospital performing the highest number (29).

Regarding mental health services, 224 cases received treatment for mental illness, with Patan Hospital managing the highest number (129), while multiple health.

Issues/Challenges	Recommendation
• Limited resources in service centers • 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 centers • 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

5.2 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 Bagmati Province, 12 hospitals provide social service units.

Table 5.2.1 **Utilization of SSU services by the ultra-poor or poor citizens.**

S.N.	Hospital/SSU	FY 2078/79	FY 2079/80	FY 2080/81
1	Pashupati Chaulagain Smriti Hospital, Dolakha	5	40	86
2	District Hospital Chautara, Sindhupalchok	725	127	88
3	District Hospital Rasuwa	0	7	3
4	District Hospital Dhading	557	168	297
5	Trishuli Hospital, Nuwakot	232	61	12
6	Tokha Chandeshwori Hospital, Kathmandu	0	0	0
7	Bhaktapur Hospital	70	151	132
8	Bajrabarahi Chapagaun Hospital	0	0	0
9	Methinkot Hospital, Kavre	9	32	144
10	Sindhuli Hospital	91	195	296
11	District Hospital Ramechhap	43	0	251
12	Bakulahar Hospital, Chitwan	28	0	465
13	Hetauda Hospital	464	543	577
	Total	**2224**	**1324**	**2351**

Source:HMIS

Table 5.2.1 demonstrates that in fiscal year 2080/81, the utilization of SSU services by ultra-poor citizens significantly increased to a total of 2,351 cases, compared to 1,324 cases in fiscal year 2079/80. Pashupati Chaulagain Memorial Hospital, Dolakha reported an increase to 86 cases, indicating enhanced outreach efforts. Methinkot Hospital, Kavre experienced a significant rise to 144 cases, showcasing improved service accessibility. Bakulahar Hospital, Chitwan demonstrated a sharp increase from 0 cases in FY 2079/80 to 465 cases in FY 2080/81, reflecting targeted initiatives aimed at serving underserved populations.

Table 5.2.2 Utilization of SSU services by helpless people

S.N.	Hospital/SSU	FY 2078/79	FY 2079/80	FY 2080/81
1	Pashupati Chaulagain Memorial Hospital, Dolakha	0	1	17
2	Chautara Hospital Sindhupalchowk	106	0	1
3	Rasuwa Hospital,Rasuwa	0	1	0
4	Dhading Hospital,Dhading	11	2	0
5	Trishuli Hospital, Nuwakot	4	4	4
6	Tokha Chandeshwori Hospital, Kathmandu	0	0	0
7	Bhaktapur Hospital, Bhaktapur	21	68	108
8	Bajrabarahi Chapagaun Hospital,Lalitpur	0	0	0
9	Methinkot Hospital, Kavre	3	3	34
10	Sindhuli Hospital,Sindhuli	7	0	9
11	Ramechhap Hospital,Ramechhap	26	0	0
12	Bakulahar Ratnanagar Hospital, Chitwan	3	0	0
13	Hetauda Hospital, Makwanpur	77	127	104
	Total	**258**	**206**	**277**

Table 5.2.2 presents the trends in the utilization of SSU by individuals in vulnerable situations. Utilization increased from 206 in FY 2079/80 to 277 in FY 2080/81. Bhaktapur Hospital, which saw a rise in cases from 68 to 108, demonstrated ongoing support for vulnerable individuals. Methinkot Hospital in Kavre also experienced a significant increase, from 3 to 34 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 5.2.3 Utilization of SSU services by persons with disability

S.N.	Hospital/SSU	FY 2078/79	FY 2079/80	FY 2080/81
1	Pashupati Chaulagain Hospital, Dolakha	0	1	5
2	Chautara Hospital	167	31	32
3	Rasuwa Hospital	0	1	1
4	Dhading Hospital	64	9	5
5	Trishuli Hospital, Nuwakot	54	10	0
6	Tokha Chandeshwori Hospital, Kathmandu	0	0	0
7	Bhaktapur Hospital	16	41	11
8	Bajrabarahi Chapagaun Hospital	0	0	0
9	Methinkot Hospital, Kavre	3	3	16
10	Sindhuli Hospital	4	10	12
11	Ramechhap Hospital	11	0	4
12	Bakulahar Hospital, Chitwan	1	0	3
13	Hetauda Hospital	50	56	38
	Total	**370**	**162**	**127**

Table 5.2.3 illustrates that health service utilization by persons with disabilities via SSU increased in six hospitals and decreased in three hospitals in FY 2080/81 compared to FY 2079/80. However, the highest number of people with disabilities utilizing health care services via SSU was reported at Hetauda hospital followed by Chautara hospital, Methinkot Hospital and Sindhuli hospital. Pashupati Chaulagain Memorial Hospital, Dolakha increased cases from 1 to 5, while Trishuli Hospital, Nuwakot, recorded no cases this year.

Table 5.2.4 Utilization of SSU services by senior citizens

S.N.	Hospital/SSU	FY 2078/79	FY 2079/80	FY 2080/81
1	Pashupati Chaulagain Memorial Hospital, Dolakha	64	1146	193
2	Chautara Hospital Sindhupalchowk	1797	932	1290
3	Rasuwa Hospital,Rasuwa	313	49	61
4	Dhading Hospital,Dhading	737	326	380
5	Trishuli Hospital, Nuwakot	198	29	46
6	Tokha Chandeshwori Hospital, Kathmandu	0	0	0
7	Bhaktapur Hospital,Bhaktapur	12	48	176
8	Bajrabarahi Chapagaun Hospital, Lalitpur	0	0	0
9	Methinkot Hospital, Kavre	111	300	193
10	Sindhuli Hospital, Sindhuli	3	27	50
11	Ramechhap Hospital, Ramechhap	1902	0	72
12	Bakulahar Ratnanagar Hospital, Chitwan	11	0	17
13	Hetauda Hospital, Makwanpur	1043	702	215
	Total	**6191**	**3559**	**2693**

Table 5.2.4 illustrates that total utilization decreased to 2,693 in FY 2080/81, down from 3,559 in FY 2079/80. Chautara Hospital in Sindhupalchowk maintained its position as the leader with 1,290 cases despite experiencing a year-over-year decline. Hetauda Hospital in Makwanpur recorded 215 cases, reflecting a steady decline and significant engagement. In the fiscal year 2080/81, 2693 elderly people benefited from the social service units of Bagamati Province's 13 hospitals.

Table 5.2.5 SSU services utilized by survivors of GBV, FCHVs and others

S.N.	Hospital/SSU	Gender Based Violence			FCHVs		
		2077/78	2078/79	2079/80	2077/78	2078/79	2079/80
1	Pashupati Chaulagain memorial hospital	0	0	2	0	1	1
2	Chautara Hospital	29	6	1	62	1	10
3	Rasuwa Hospital	2	0	0	0	1	3
4	Dhading Hospital	0	0	0	7	1	1
5	Trishuli Hospital, Nuwakot	0	0	0	10	1	0
6	Tokha Chandeshwori Hospital, Kathmandu	0	0	0	0	0	0
7	Bhaktapur Hospital	0	0	0	0	2	4
8	Bajrabarahi Chapagaun Hospital	0	0	0	0	0	0
9	Methinkot Hospital, Kavre	0	0	0	0	0	1
10	Sindhuli Hospital	0	0	0	0	1	0
11	Ramechhap Hospital	0	0	0	24	0	1
12	Bakulahar Hospital, Chitwan	0	0	0	1	0	0
13	Hetauda Hospital	71	0	4	1	1	2
	Total	**102**	**6**	**7**	**105**	**9**	**23**

Source:HMIS

Table 5.2.5 indicates that in Bagamati Province, the total cases of Gender-Based Violence (GBV) decreased from 6 to 7 in FY 2079/80. Conversely, the total cases reported by Female Community Health Volunteers (FCHVs) experienced a significant increase, rising from 9 in FY 2079/80 to 23 in FY 2080/81, primarily attributed to the contributions of Chautara Hospital in Sindhupalchowk.

5.3 and Mental Health

Non-communicable diseases (NCDs) are a growing global health crisis, contributing to premature deaths, poverty, and economic strain.

The Government of Nepal (GoN) has introduced the Package of Essential Non-communicable Disease Interventions (PEN) to improve NCD services in resource-limited settings. Despite its nationwide implementation, challenges remain in effectively documenting and reporting the program's activities. NCDs, being chronic, require repeated healthcare interactions, leading to catastrophic expenses and economic hardship. The rise in NCD-related deaths, from 60% of all deaths in 2014 to 66% in 2018 to 71% in 2019 & 73% in 2022. Cardiovascular disease

(CVD) alone causes over 30% of deaths, while cancer, diabetes, and respiratory diseases account for significant proportions. This burden leads to lower quality of life, higher Disability-Adjusted Life Years (DALYs), and rising health expenditures, exacerbates poverty and undermines progress toward achieving Sustainable Development Goal 3, particularly the target to reduce premature mortality from NCDs.

Addressing NCDs requires cross-sectoral collaboration, influencing policies beyond health, including in agriculture, education, and urban planning. The PEN Implementation Plan (2016-2020) aligns with the Multi-Sectoral Action Plan (MSAP) for NCD prevention and control, with MSAP II (2021-2025) under development.

Multisectoral Action Plan for NCDs- I (2016-2020) & II (2021-2025)

The GoN has endorsed the Multi Sectoral Action Plan (MSAP) for NCDs 2021-2025 which focusses on creating actions which are potentially implementable, have high health impact, politically and culturally acceptable and financially feasible in co-ordination across multiple sectors and multistakeholder. Sustainable Development Goals have provided a renewed impetus to accelerate progress in addressing NCDs, its risk factors and determinants. If Nepal is to meet the SDG targets, investing in interventions to reduce the burden of NCDs and its risk factors will improve health and accelerate progress on many other SDGs.

Bagamati Province achieved the milestone of being the inaugural province to establish both the Provincial Level High-Level Committee and Provincial Level Coordination Committee for the implementation of MSAP-II.

Vision:

All people of Nepal enjoy the highest attainable status of health, well-being and quality of life at every age, free of preventable NCDs, avoidable disability and premature death.

Goal:

The goal of the multisectoral action plan is to reduce preventable morbidity, avoidable disability and premature mortality due to NCDs in Nepal.

Strategic objectives for MSAP

- Raise the priority accorded to the prevention and control of non-communicable diseases in the national agendas and policies
- Strengthen national capacity, leadership, governance, multispectral action and partnership to accelerate country response for the prevention and control of NCDs
- Reduce modifiable risk factors for NCDs and underlying social determinants through creation of health-promoting environment

- Strengthen and orient health systems to address the prevention and control of NCDs and underlying social determinants through people centered PHC and UHC
- Promote and support national capacity for high quality research and development for the prevention and control of NCDs and mental health
- Monitor the trends and determinants of NCDs and evaluate progress in their prevention and control
- Improving basic minimum care of mental health services at the community and improving competency for case identification and initiating referral at primary care level

Targets (At the end of 2025 AD)

- 25% relative reduction in overall mortality from CVD, cancers, diabetes, or COPD
- 10% relative reduction in the harmful use of alcohol.
- 30% relative reduction in prevalence of current tobacco use in persons aged over 15 years.
- 50% relative reduction in the proportion of households using solid fuels as the primary source of cooking
- 30% relative reduction in mean population intake of salt/sodium.
- 25% reduction in prevalence of raised blood pressure.
- Halt the rise in obesity and diabetes.
- 10% relative reduction in prevalence of insufficient physical activity
- 50% of eligible people receive drug therapy and counseling (including glycemic control) to prevent heart attacks and strokes.
- 80% availability of affordable basic technologies and essential medicines, including generics, required to treat major NCDs in both public and private facilities.

Nepal PEN program

The WHO PEN Protocol was developed on risk-based approach.

- Those people who are under high risk with high symptoms will get medicine but
- Those people who are under low risk even symptoms present will go through lifestyle modification and follow up.

This PEN program is feasible for low cost and resource setting and is public health (mass) based approach of NCD treatment and management.

The PEN Intervention has Four protocols:

- **Protocol I:** Prevention of heart attack, stroke and kidney disease through integrated management of diabetes and hypertension.
- **Protocol II:** Health education and Counseling on Healthy Behavior (For All)
- **Protocol III**: Management of chronic obstructive pulmonary disease (COPD) and Asthma
- **Protocol IV:** Assessment and referral of women with suspected cancer (Breast & Cervix)

Goals

- Achieve universal access to high quality diagnosis & patient-centered care
- Reduce suffering & socio-economic burden of major NCDs
- Protect poor & vulnerable populations from major NCDs
- Provide effective & affordable prevention & treatment through PHC approach
- Support early detection, community engagement and self-care

Objectives

- To timely diagnose, treat and management of NCDs.
- To prevent and control risk factors of NCDs.
- To bring uniformity in treatment of NCDs.
- To increase coordination between health facility and community.
- To increase accessibility for Universal Health Coverage (UHC).

Figure 5.3.1 **Relation of Social determinants, Risk factor, metabolic factor and diseases**

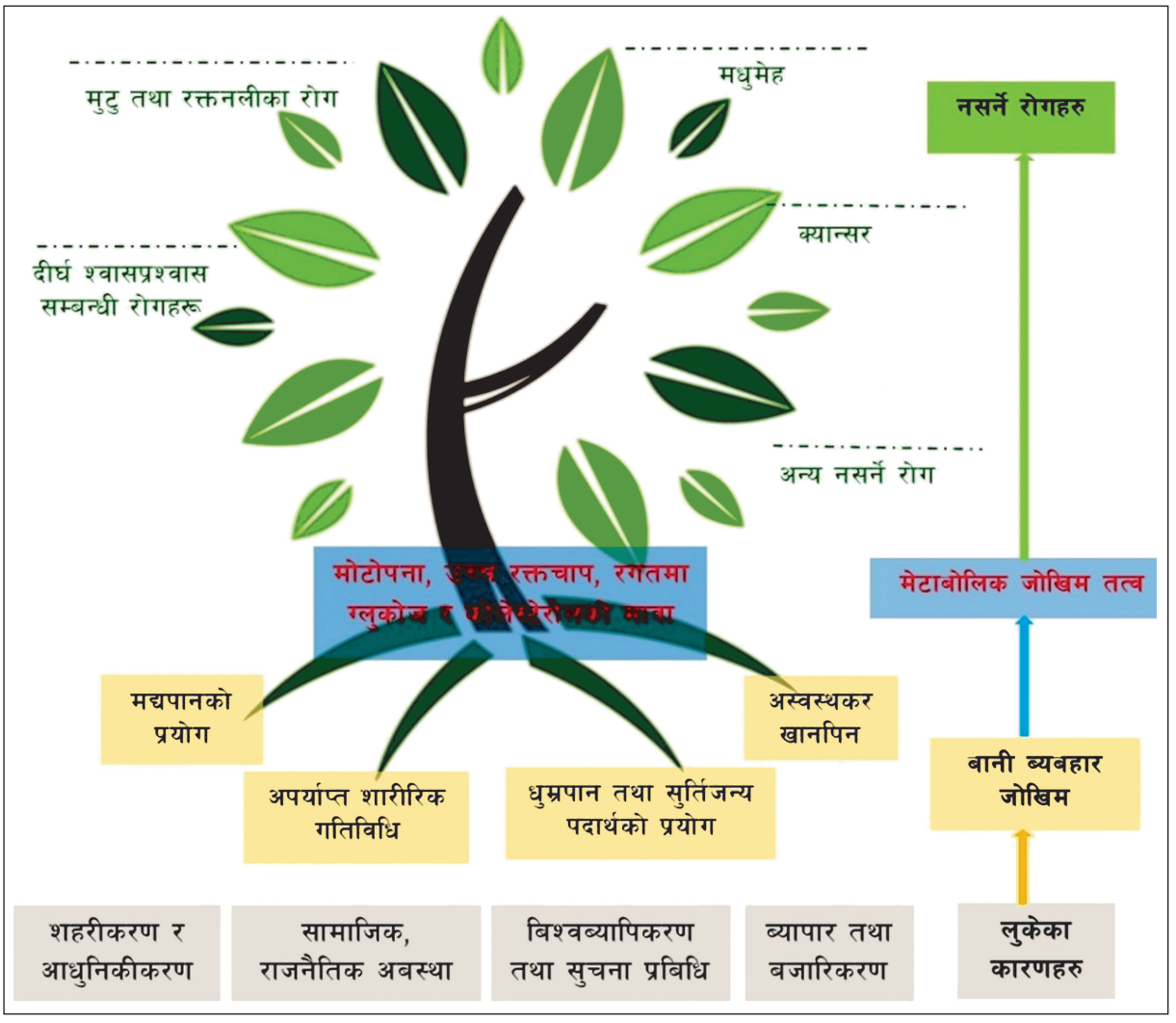


Table 5.3.1 Trends of Major NCD's

Trends of Major NCDs															
Diseases	Period	Bhaktapur	Chitwan	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
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
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
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
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
Ca Breast	2079/80	590	47	-	-	36	1	556	2	-	-	-	1	-	1233
	2080/81	614	27	-	-	31	-	675	4	2	-	-	-	-	1353
Ca Cervix	2079/80	588	11	-	-	33	1	176	1	-	-	-	1	-	811
	2080/81	453	-	-	-	39	3	383	4		-	-	-	-	882

Strength, Weakness, Challenges

Strength	Weakness	Challenges
Widespread accessibility at the community level, through Primary Health Care Centers (PHCCs) and Health Posts (HP)	• Focus primarily on the Health Facility (HF) level, with limited outreach at the community level. • The current focus mainly targets high-risk individuals who have already sought healthcare services, leaving broader at-risk populations under-addressed. • Gaps in recording, reporting, and monitoring systems, undermining effective data collection and analysis. • A significant lack of community awareness regarding NCD risks and prevention. • No dedicated budget allocated for NCD promotion, prevention, and research.	• Increasing Burden of NCDs: The growing burden of NCDs in Nepal, driven by lifestyle changes, urbanization, and an aging population, presents a major public health challenge. In Bagamati Province, particularly in Kathmandu, rapid urbanization has contributed to unhealthy behaviors, such as sedentary lifestyles and unhealthy diets, which exacerbate the risk of NCDs.
• A robust health system offering comprehensive health insurance and universal health coverage, extending to NCD prevention and treatment services.	• The approach is predominantly treatment-oriented, with insufficient emphasis on prevention and early intervention. • Gaps in recording, reporting, and monitoring systems, undermining effective data collection and analysis.	• Access to Affordable Healthcare: Even though primary healthcare services are expanding, access to affordable care remains a challenge for many people, especially in rural areas. The cost of medication for chronic conditions like diabetes and hypertension can be prohibitive, and this limits the effectiveness of prevention programs.
• A well-structured framework and a multi-sectoral approach, promoting collaboration across sectors to address NCDs.	• The current focus mainly targets high-risk individuals who have already sought healthcare services, leaving broader at-risk populations under-addressed	• Lack of Data and Monitoring: There is a lack of reliable data on the prevalence of NCDs and their risk factors, which makes it difficult to track progress and design targeted interventions. Proper surveillance and monitoring systems for NCDs are underdeveloped in Nepal.

	• Complicated referral systems and reporting tools, which hinder seamless care coordination. • Several policies aimed at modifying NCD risk factors are still in draft stages, delaying their implementation. • No dedicated budget allocated for NCD promotion, prevention, and research.	• **Inadequate Focus on Youth and Lifestyle Modifications**: NCD prevention efforts often focus on older populations, neglecting younger individuals who are at risk due to unhealthy lifestyle choices. The promotion of healthier diets, physical activity, and smoking cessation needs to be more targeted at the younger generation to prevent NCDs in the long term. • **Cultural and Behavioral Factors**: Cultural habits, such as the consumption of traditional foods high in fats, sugars, and salt, and high rates of tobacco use, pose significant challenges to NCD prevention efforts. Behavioral change is slow, and there are significant barriers to promoting healthier lifestyles. • **Limited Multi-Sectoral Approach**: NCD prevention programs tend to be concentrated within the health sector, with little involvement from other sectors such as agriculture, education, and transport. A more comprehensive, multi-sectoral approach is necessary to tackle the social determinants of health that influence NCD risks.

Recommendation for Improvement

- **Strengthen Primary Healthcare Systems**: Enhance the capacity of primary healthcare facilities to provide NCD screening, diagnosis, and management, particularly in rural areas like Bagamati Province. This could involve more training for healthcare workers and the provision of necessary diagnostic tools and medicines.
- **Expand Awareness Campaigns**: Continue and expand public health campaigns focusing on the prevention of NCDs, particularly targeting youth and marginalized communities. These campaigns should promote healthy eating, physical activity, smoking cessation, and mental health care.
- **Improve Data Collection and Monitoring**: Establish robust systems for data collection on NCDs to better understand their prevalence and risk factors across the population. This will help in designing evidence-based interventions.
- **Increase Collaboration Across Sectors**: Encourage collaboration between health, education, agriculture, and urban planning sectors to address the broader social determinants of NCDs and create environments that promote healthy lifestyles.
- **Enhance Access to Treatment**: Ensure that essential NCD medications are available and affordable at all levels of the healthcare system, including in rural areas. This could be supported by subsidies, government procurement of drugs, and public-private partnerships.
- **Focus on Youth Engagement**: Develop targeted programs for younger populations that emphasize the importance of a healthy lifestyle and provide education about the risks associated with smoking, alcohol consumption, and poor diet.

Mental Health

Nepal follows a broad-based health policy that includes mental health as part of its overall healthcare framework, rather than having a separate, standalone mental health policy. In 2020, the country introduced the National Mental Health Strategy and Action Plan, which emphasizes the integration of mental health services into primary healthcare settings. It also aims to strengthen mental health services at the secondary healthcare level, with the goal of improving access and quality of care.

This strategy seeks to enhance mental health services across all levels of the healthcare system, including secondary and tertiary care, by providing specialized training for healthcare providers and increasing financial investment in mental health services. While efforts are being made to implement the mental health Gap Action Programme (mhGAP) in primary healthcare, the availability

of psychosocial services remains limited. Currently, these services are predominantly offered in a small number of tertiary hospitals and private clinics, restricting access for the broader population, especially in rural and underserved areas. Despite these challenges, the ongoing initiatives reflect a positive shift toward incorporating mental health more fully into the country's healthcare structure

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 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%).

In recent years, the Bagamati province's Ministry of Health (MoH) has progressively heightened its dedication to mental health services. This culmination is evidenced by the allocation of dedicated resources specifically for mental health, aiming to enhance service delivery and engage in essential advocacy activities.

Building on WHO's Special Initiative for Mental Health (SIMH), the specialist clinic services at the provincial hospital has been established both regularly and monthly, which has strengthened the mental health services from the hospitals.

Table 5.3.2 Trends of Major Mental Health Problems

Diseases	Period	Bhaktapur	Chitwan	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
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
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
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
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
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
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
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
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
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

Strengths	Weakness	Challenges
1. **Government Commitment:** Nepal has made significant strides by integrating mental health into its national health policy and introducing the National Mental Health Strategy and Action Plan in 2020. This provides a policy framework for improving mental health services. 2. **Mental Health Awareness Initiatives:** There has been an increasing focus on raising awareness about mental health issues through various campaigns, educational programs, and media efforts. This helps reduce stigma and encourages people to seek care. 3. I**ntegration into Primary Care:** Efforts to incorporate mental health care into primary healthcare settings, particularly through the mhGAP program, help extend mental health services to rural and underserved areas. 4. **Specialized Training Programs:** The training of healthcare workers at the primary, secondary, and tertiary levels is being prioritized, which aims to improve the quality of mental health care by equipping providers with better skills to manage mental health conditions. 5. **Focus on Rural Areas:** In regions like Bagamati Province, local governments are beginning to recognize the importance of mental health, with efforts to decentralize services and build capacity in community-based healthcare systems.	1. **Limited Availability of Services:** Despite efforts to integrate mental health into primary healthcare, services remain limited, especially outside major urban areas. In Bagamati Province, mental health services are mostly available in tertiary hospitals and private clinics, leaving rural areas underserved. 2. **Insufficient Infrastructure:** Many healthcare facilities, particularly at the primary and secondary levels, lack the necessary infrastructure and resources to provide adequate mental health care. This includes both physical infrastructure and the absence of essential psychiatric medications or therapeutic tools. 3. **Lack of Specialized Providers:** There is a significant shortage of mental health professionals, including psychiatrists, psychologists, and trained counselors, particularly in rural and remote areas. This limits the capacity to provide specialized care. 4. **Stigma and Cultural Barriers:** Despite growing awareness, there is still significant stigma surrounding mental health issues in Nepal. Cultural beliefs often hinder people from seeking help, and traditional forms of healing can sometimes compete with or delay accessing formal mental health care. 5. **Inadequate Financing:** While there has been some investment in mental health, the funding allocated remains inadequate to meet the growing demand for mental health services. This limits the effectiveness of mental health programs in both rural and urban areas.	1. **Rural Access:** Bagamati Province, though relatively more developed than other regions, still faces challenges related to the accessibility of mental health services in rural and remote areas. Many people in these areas do not have access to even basic mental health care, let alone specialized services. 2. **Workforce Shortages:** There is a critical shortage of qualified mental health professionals throughout Nepal, including Bagamati. This makes it difficult to provide high-quality mental health care, particularly in primary and secondary healthcare settings. 3. **Funding and Resource Allocation:** The allocation of resources for mental health remains low, and there is a need for stronger financial investment to scale up programs, improve infrastructure, and make services more accessible. 4. **Mental Health in Crisis Situations:** Nepal has experienced several natural disasters (e.g., earthquakes), which have worsened mental health challenges in affected areas. Addressing mental health needs in the aftermath of such crises remains a major challenge. 5. **Integration of Mental Health in Other Sectors:** While there is increasing integration of mental health in primary healthcare, there is still limited cross-sectoral collaboration (e.g., between education, employment, and social services) to support holistic mental health programs. 6. **Data and Monitoring:** The lack of comprehensive data on the mental health needs of the population makes it difficult to effectively monitor and evaluate programs. More research and data collection are necessary to identify gaps and inform future policy. 7. **Lack of Public Awareness:** Despite improvements, there is still limited public understanding of mental health conditions and available treatment options. Many people are unaware of the services they can access, or they may not trust formal mental health care systems.

Recommendations for Improvement:

1. **Expand Mental Health Services:** Increase the number of mental health facilities and expand services into rural areas through mobile health units or telemedicine platforms.
2. **Increase Investment:** More financial resources should be allocated to mental health to improve infrastructure, enhance training, and ensure better service delivery across all healthcare levels.
3. **Address Stigma:** Conduct national and local campaigns to raise awareness and reduce the stigma associated with mental illness, encouraging more people to seek help.
4. **Improve Workforce Capacity:** Enhance training programs for healthcare professionals and encourage the development of specialized mental health professionals in both urban and rural areas.
5. **Strengthen Community-Based Care:** Encourage a more community-based approach to mental health care, providing services closer to home and involving local community health workers in mental health promotion.

By addressing these weaknesses and challenges, Nepal, including Bagamati Province, can significantly improve the accessibility and quality of mental health care for its population.

Similar to mental disorders often coexist with other non-communicable diseases (NCDs) and share numerous risk factors, the challenges and issues they present are also closely related. The strong links and interconnected causal mechanisms between mental health disorders and other NCDs underscore the need for an integrated approach to healthcare. Collaborative care has proven to be a vital evidence-based strategy for effectively incorporating mental health services into primary care settings.

5.4 Provincial Health

Emergency Operation Center

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 5.4.1 **Provincial Health Emergency Operation Centre (PHEOC), Bagmati 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

Principles of 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 2080/81

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, 41 local units across 6 districts (Kathmandu, Lalitpur, Dolakha, Kavrepalanchowk, Chitwan, and Makwanpur) 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 Kavrepalanchowk, 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 Chitwan, was conducted in multiple batches, with full implementation scheduled for 2025.
12. 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 six DPHO offices from the Bagamati province.
13. 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.

5.5 Health Education Information and Communication (HEIC)

5.5.1 Background

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.

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.

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 2080/81

- 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

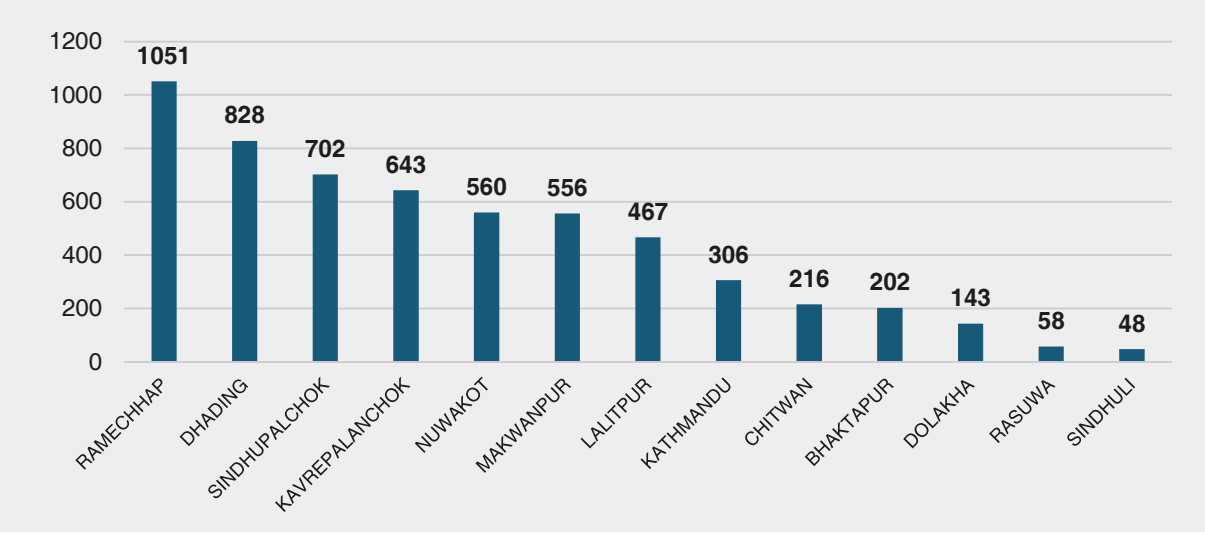
Major Activities of HIEC conducted in district level in FY 2080/81

- 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 FY 2080/81 (HMIS Data)

Number of health education sessions conducted

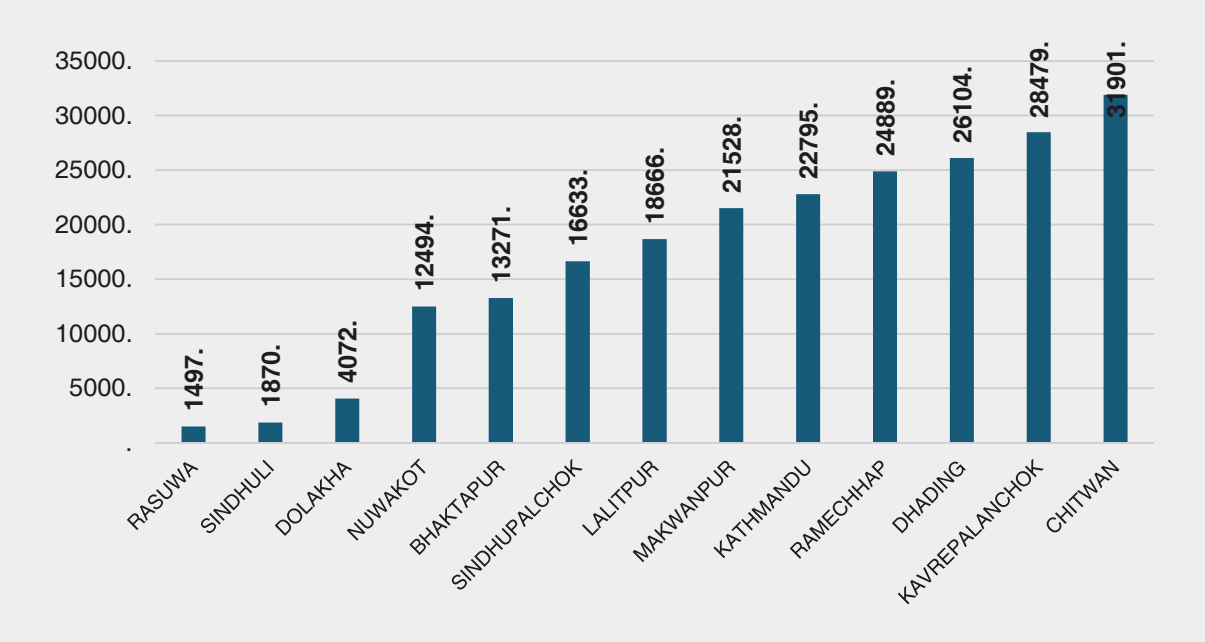
Figure 5.5.1.1 Number of health education sessions conducted



The number of health education sessions conducted by district is depicted in the above figure. The following figure shows that the districts with the most health education sessions performed are Ramechhap and Dhading, whereas the districts with the fewest health education sessions conducted are Rasuwa and Sindhuli.

Number of people attending health education sessions

Figure 5.5.1.2 Number of people attending health education sessions



The above figure illustrates the district wise number of people attending health education session. According to the above figure Chitwan and Kavrepalanchok district has highest number of people attending the health education session whereas Rasuwa and Sindhuli has Lowest number of people attending the health education session.

Strengths	Weakness
• Limited human resources to carry out health promotion activities at province and local level. • Frequently changing behavior pattern of people and resistance to change. • Implementing "One School One Nurse program at more than …. public school of Bagamati Provine to promote the health of school going children.	• Appropriate budget allocation for health communication program. • Appropriate human resource management for launching health promotion activities smoothly. • Inadequate allocation of budget for health communication programme. • 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 lifestyles to beat the triple burden of disease via health promotion and social behavior change communication intervention. • Expansion of Health education graduates' cadres at district level to manage and implement the health promotion program at district level.	• Rapid urbanization, globalization and changing human lifestyles. • Massive change in using pattern of communication mass and social media of people in current time of advanced technology and innovation.

5.6 Ayurveda and Alternative Medicine

Introduction

Ayurveda, the world's oldest recognized medicinal system, plays a crucial role in healthcare by offering promotive, preventive, curative, and rehabilitative services. In Nepal, efforts to formally integrate Ayurveda into the healthcare system began during King Tribhuvan's reign. The establishment of the Department of Ayurveda in 2010 BS marked a significant step in advancing this traditional practice.

Today, the Nepalese constitution promotes Ayurveda alongside other traditional and alternative medical systems, including Naturopathy, Homeopathy, Unani, and Amchi. Policies such as the National Health Policy 2017, the National Ayurveda Policy 1995, and the National Urban Health Policy 2015 emphasize the expansion of Ayurvedic services. Additionally, the government's Fifteenth Plan (2076/77–2080/81) outlines strategic measures for the development and growth of Ayurveda and other alternative medicines.

In Bagamati Province, the Ministry of Health oversees the planning, management, supervision, monitoring, and evaluation of Ayurveda and complementary medicine. The province operates through a network of 13 District Ayurveda Health Centers, 50 local-level Ayurveda Aushadhalayas, 51 Citizen Ayurveda Health Centers, and a Healthy Lifestyle Program implemented in Primary Health Centers (PHCs). Provincial policies recognize the significance of Ayurveda in primary healthcare, particularly in preventing and managing non-communicable diseases.

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

Major Activities

- Capacity building related to Ayurveda services program (AHMIS Training).
- 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

Major Achievements

Number of Health Facilities

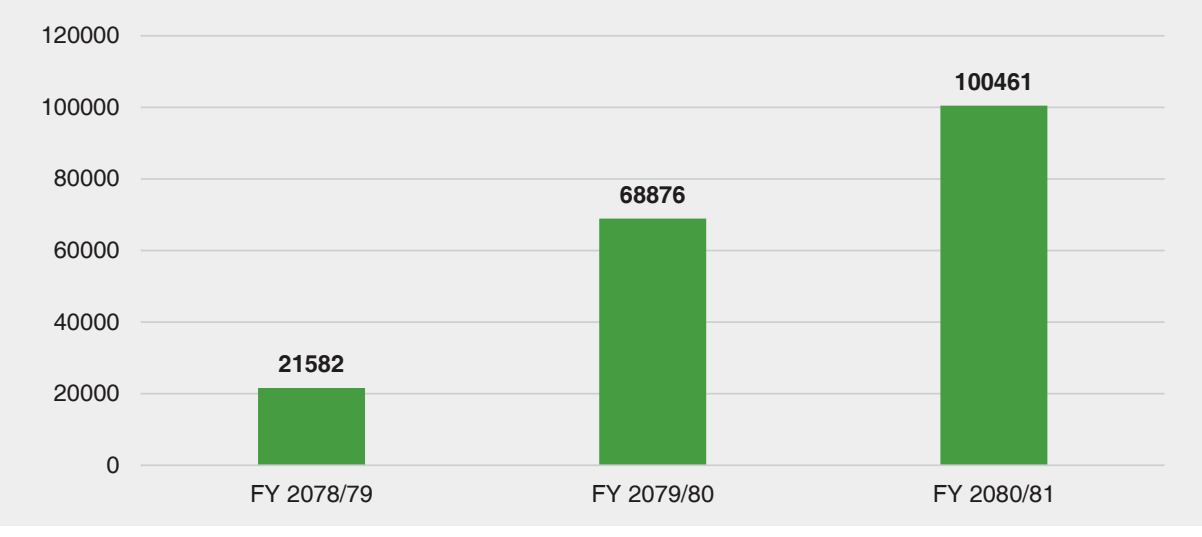
Table 5.6.1 Number of health facilities

Ayurveda and Alternative Medicine Service														
Health Facilities		FY 2080/81 by District												
	2080/81	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

Major Achievements

Status of Panchakarma (Purvakarma) service

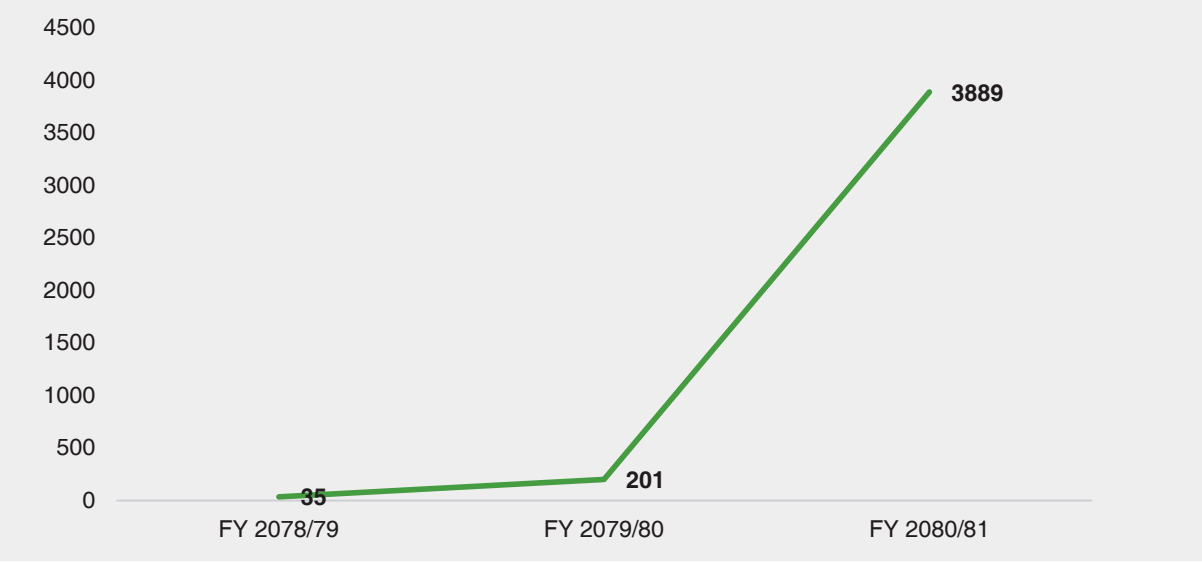
Figure 5.6.1 Status of Panchakarma



From 2078/7 to 2080/81 there was a corresponding increase in Panchakarma (Purvakarma service). Similarly, in FY 2080/81, the Bhaktapur district had the greatest number of clients (2801) receiving Panchakarma (Purvakarma) service.

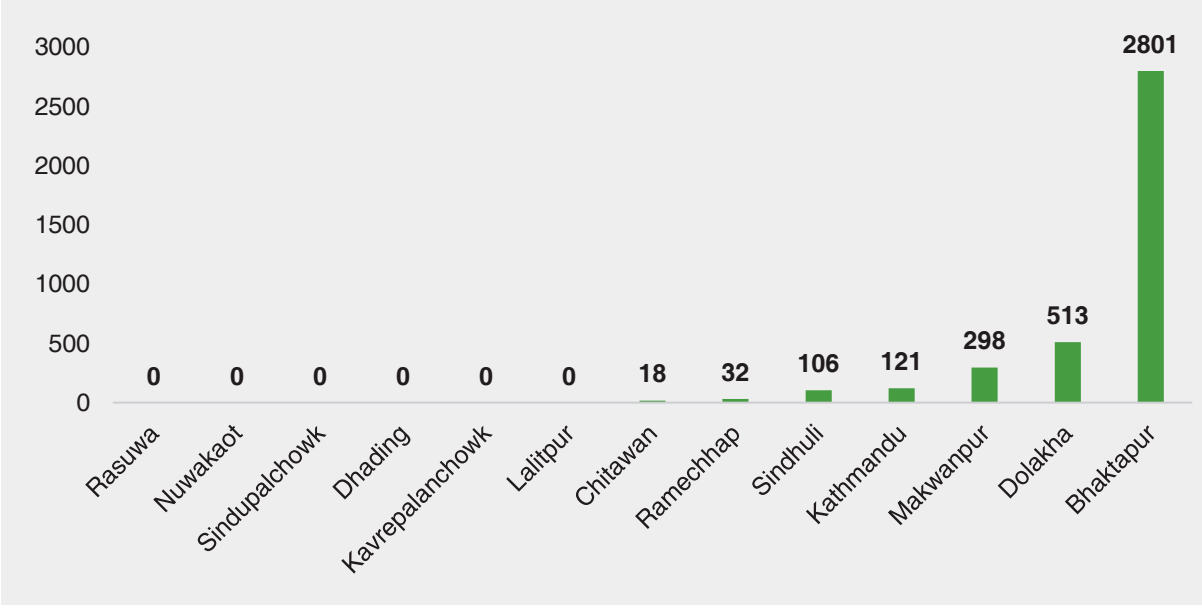
Status of Shalya Services

Figure 5.6.2 Three-year Trend of Shalya Service in Bagamati Province



Source:AHMIS

Figure 5.6.3 Shalya Service of Bagamati Province (FY 2079/80)



Source:AHMIS

Figure 5.6.2 and 5.6.3 shows shalya service since 2078/79 till 2080/81 and district wise shalya service in Bagamati Province of FY 2080/81. The significant increase in shalya service has been observed in FY 2080/81 i.e. 3889. Similarly, Bhaktapur district has provided highest no. of shalya service followed by Dolakha, Makawanpur, Kathmandu, Sindhuli, Ramechhap and Chitawan. Rest of the district had no shalya service available.

Status of Yoga Services

Figure 5.6.4 Three Years Trend of Yoga Service in Bagamati Province (FY 2080/81)

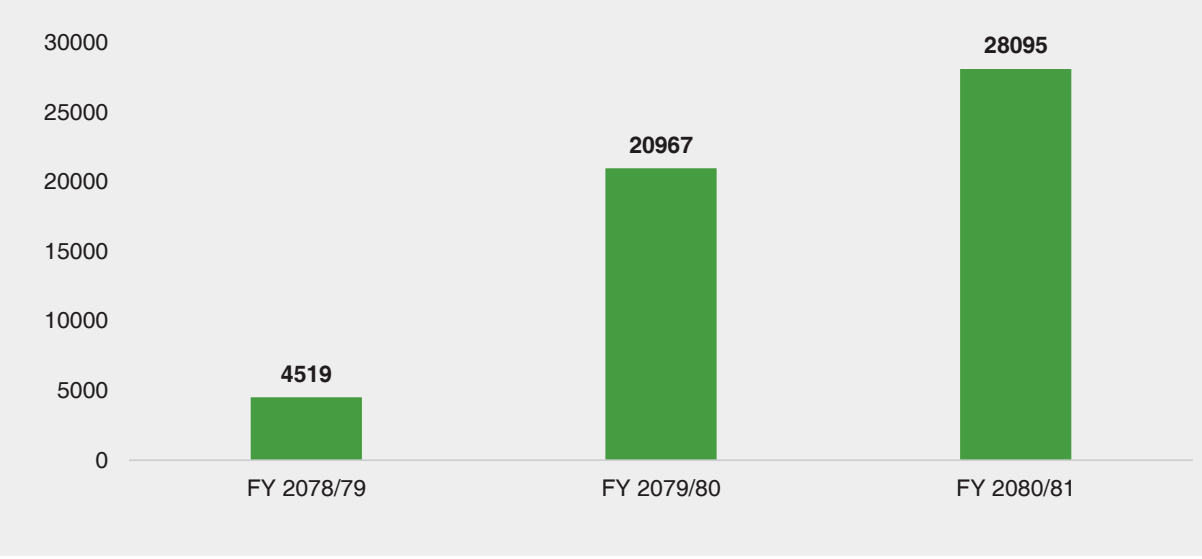
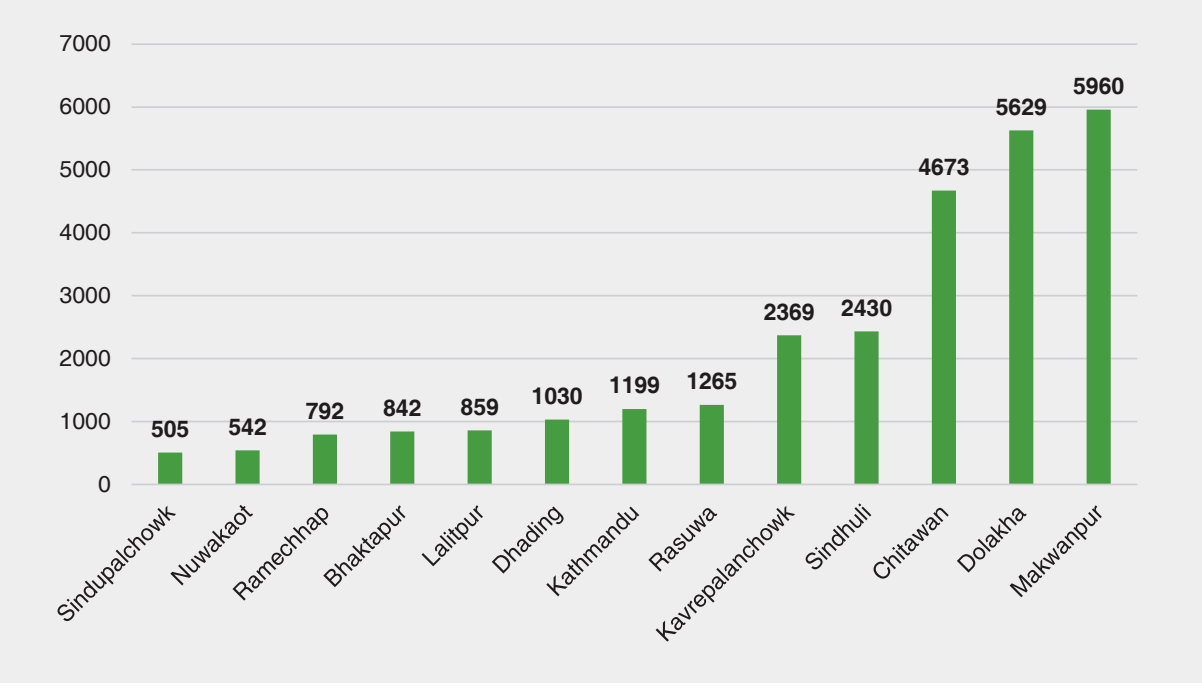


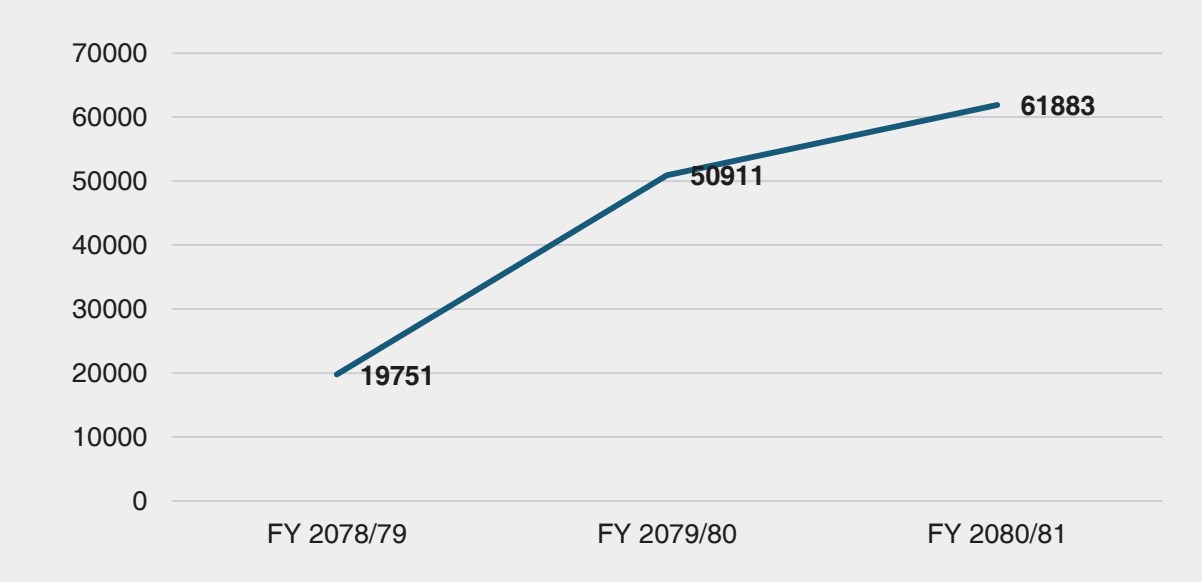
Figure 5.6.5 District wise Distribution of Yoga Service in Bagamati Province (FY 2080/81)



The three-year trend in the number of clients obtaining yoga services, as shown in figure 5.6.4, increased significantly from 2078/79 to 2080/81, i.e. 4519 to 28095 respectively. Likewise figure 5.6.5 shows that majority of clients in Bagamati province who received yoga services were from the Makawanpur district, while the minimum was from the Sindupalchowk district.

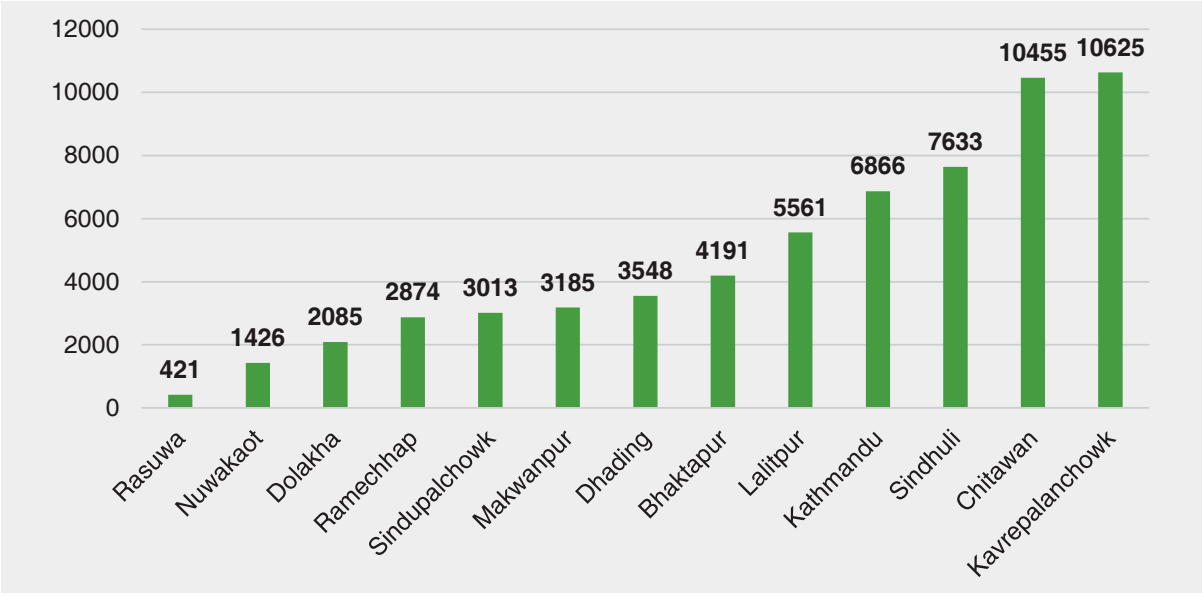
Jesthanagarik Service

Figure 5.6.6 Three Years Trend of Jesthanagarik Service in Bagamati Province (FY 2080/81)



Source:AHMIS

Figure 5.6.7 District-wise Distribution of Jesthanagarik Service in Bagamati Province (FY 2080/81)

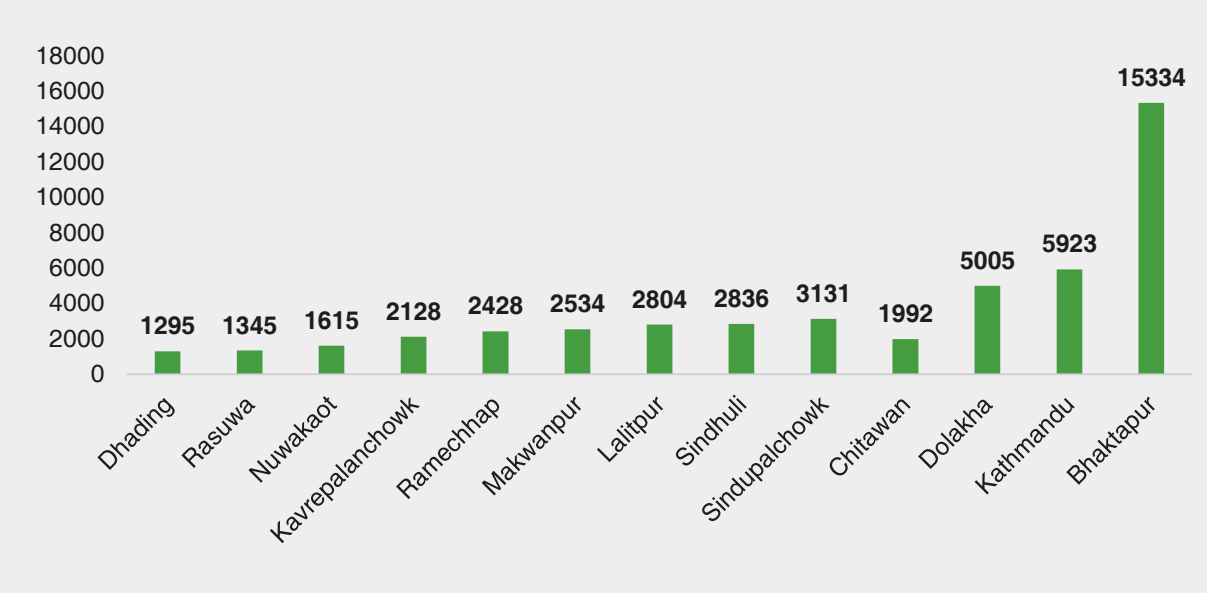


Source:AHMIS

The above figure 5.6.6 and 5.6.7 shows Jesthanagarik service provided in Bagamati Province. The yearly rise in number of clients receiving Jesthanagarik service i.e. 19751, 50871 and 61883 was observed since 2078/79 till 2080/81 respectively. During the fiscal year 2080/81, the Kaverpalanchowk district had the highest, with 10625 clients receiving Jesthanagarik service, while Rasuwa district had the fewest, with just 421 clients receiving the same service.

Laboratory Services

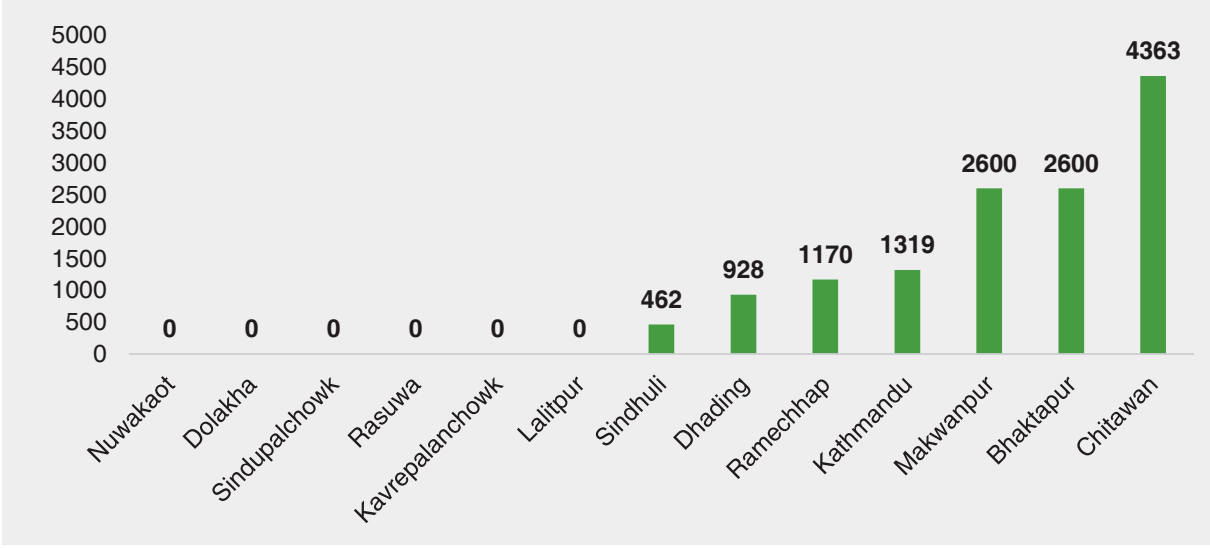
Figure 5.6.8 District wise Distribution of Laboratory Service in Bagamati Province (FY 2080/81)



The above figure 5.6.8 shows District wise Distribution of Laboratory Service in Bagamati Province (FY 2080/81). The Bhaktapur district had the highest, with 15334 clients receiving Laboratory service, while Dhading district had the fewest, with just 1295 receiving the same service.

Physiotherapy Service

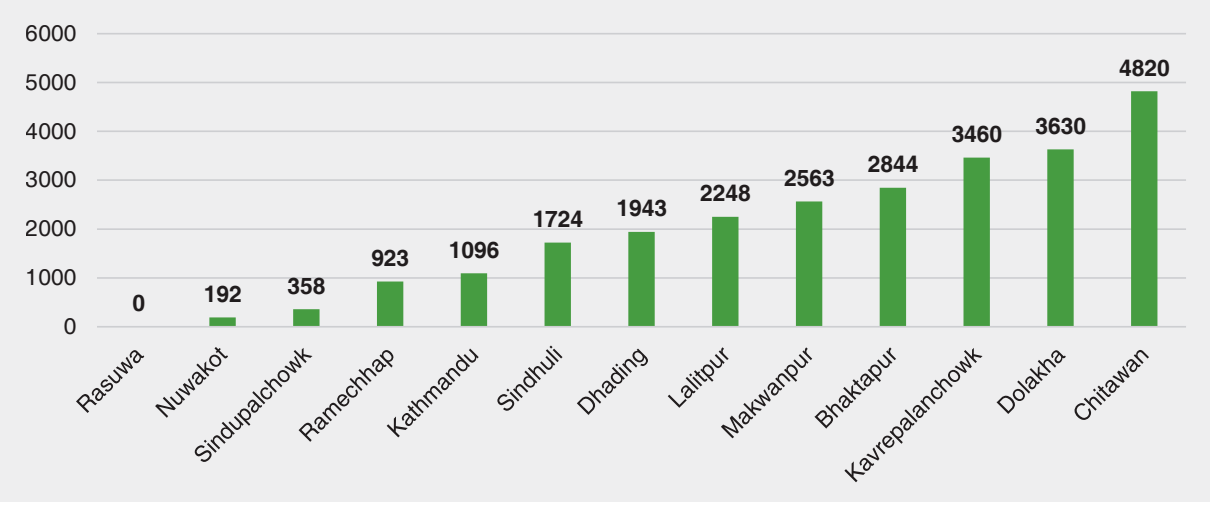
Figure 5.6.9 District wise Distribution of Physiotherapy Service in Bagamati Province (FY 2080/81)



The above figure 5.6.9 shows District wise Distribution of Physiotherapy Service in Bagamati Province (FY 2080/81). The Chitwan district had the highest, with 4363 clients receiving Physiotherapy service.

Acupuncture Service

Figure 5.6.10 District wise Distribution of Acupuncture Service in Bagamati Province (FY 2080/81)



Source:AHMIS

The above figure 5.6.10 shows District wise Distribution of Acupunture Service in Bagamati Province (FY 2080/81). The chitawan district had the highest, with 4820 clients receiving Physiotherapy service.

Table 5.6.2 Chief Ministry Public Health Program

Total no. of client screened				Total no. of client treated with Non- Communicable Disease among screened					
Total	Sex			High BP	Diabetes	CVD's	Chronic Kidney Disease	COPD	Chronic liver disease
	Male	Female	Others						
	5382	6880	0	2584	2496	418	4	78	47

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	PHTC/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	PHLMC/HD
Lack of access of ayurveda service at every local level/ward	Expanding ayurvedic service at every local level/ward	HD/Local level

CHAPTER 6

REPORTING STATUS

6.1 Health Management Information System (HMIS)

DHIS2 (District Health Information System) is a customizable, free, open-source software (FOSS) that can be tailored and upgraded according to users' specific needs. It serves as a tool for collecting, validating, analyzing, and presenting both aggregate and patient-based health data. The system features a powerful analytics engine that supports data analysis and visualization through tools such as dashboards, data visualizers, pivot tables, and GIS. DHIS2 is designed to communicate seamlessly with other information systems, enhancing its interoperability. Developed by the Health Information Systems Programme (HISP), DHIS2 is a globally distributed initiative, with developers from countries such as India, Vietnam, Tanzania, Ireland, and Norway. The development is coordinated by the University of Oslo, with support from NORAD and other partners.

6.1.1 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 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.

DHIS 2

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.

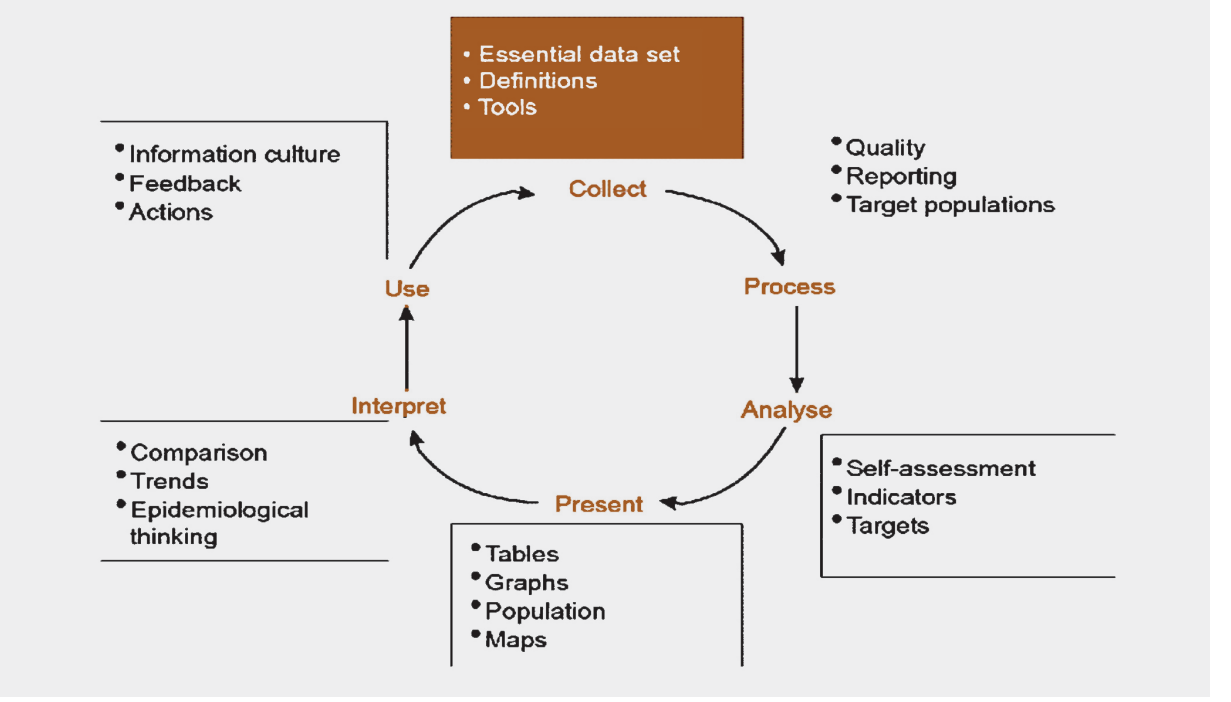
Challenges with DHIS2 v31 and v33

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 6.1.1 Information cycle



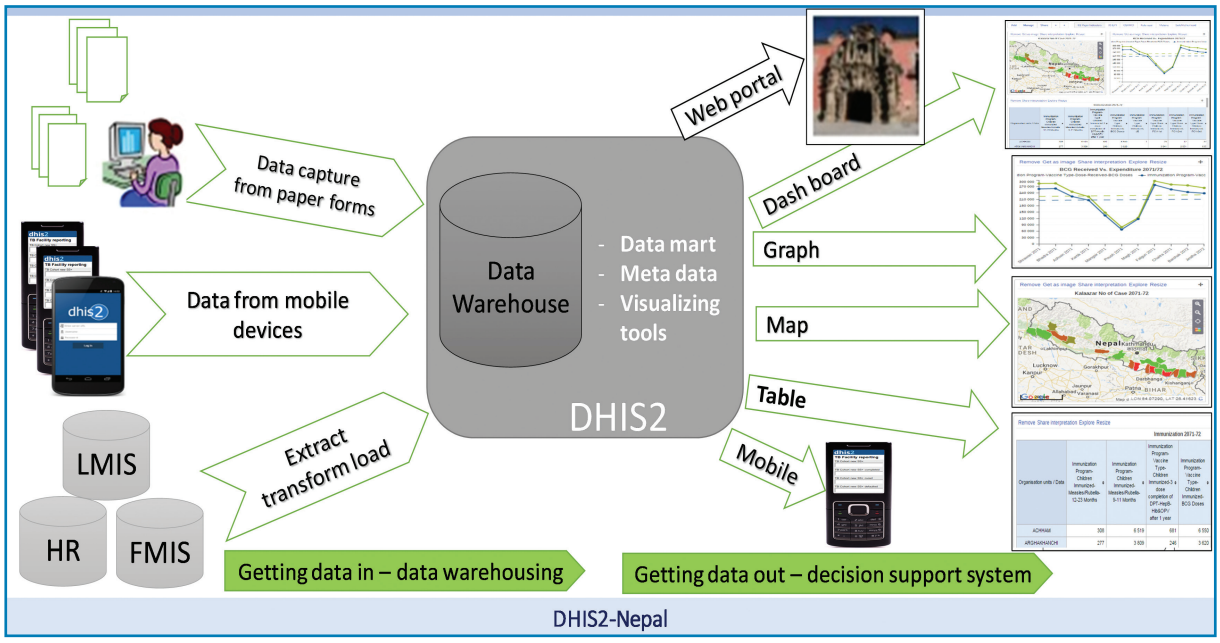
Assurance from HISP UiO

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 6.1.2 Data in & Information out



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.

REPORTING STATUS

Trend of Reporting Status of Health Facilities (PHCC, HP, BHSU, CHU, UHC)

The preceding figure illustrates the trend in the reporting status of health facilities over the last three years. In terms of completeness, there was a decline in FY 2078/79, but it increased by 2.8% in FY 2080/81. Similarly, for timeliness, the status was higher in FY 2080/81, but it saw a 10% decline in FY 2079/80.

Figure 6.1.3 Trend if reporting in health facility (%)

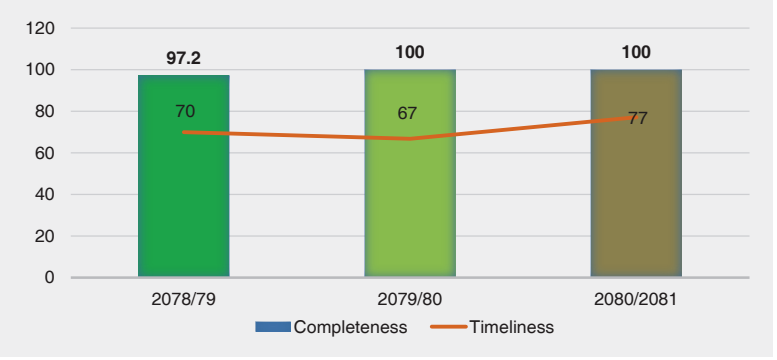
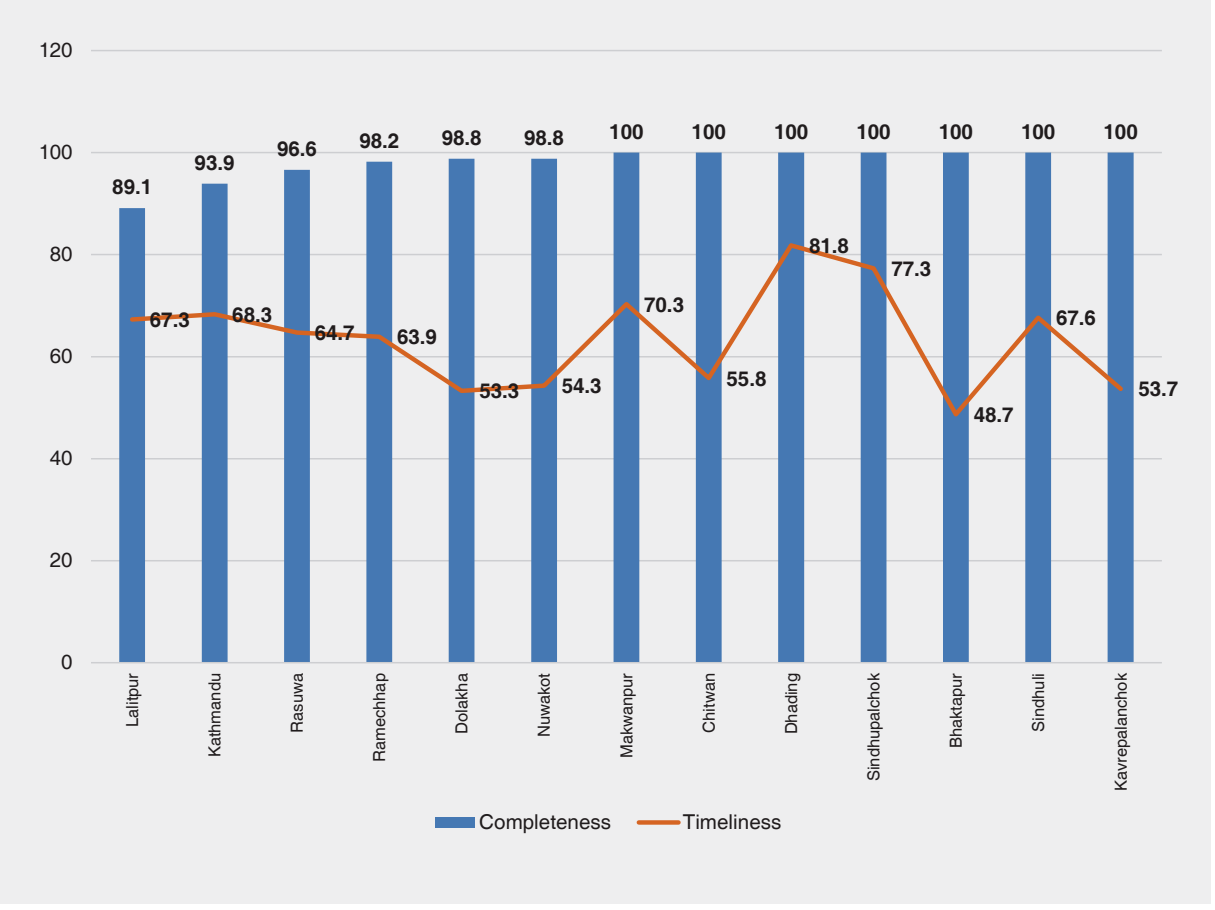


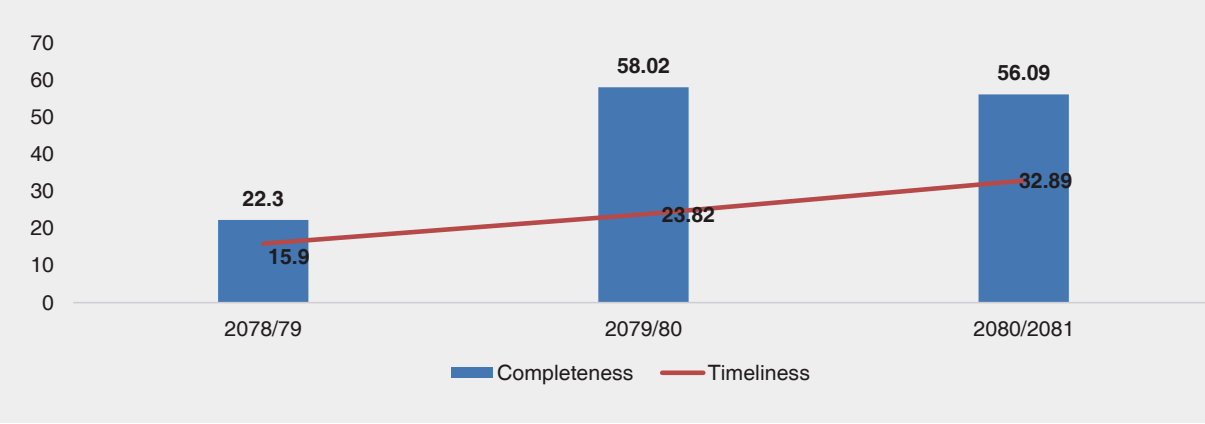
Figure 6.1.4 Trend of reporting of health facility district wise (%)



The figure above shows the district-wise reporting status of health facilities in Bagmati Province. A district-wise comparison of reporting status based on completeness and timeliness reveals that Lalitpur has the lowest completeness, followed by Sindhupalchok. Regarding timeliness, Bhaktapur holds the lowest rank, followed by Dolakha.

Trend of Reporting Status of all Hospitals (%)

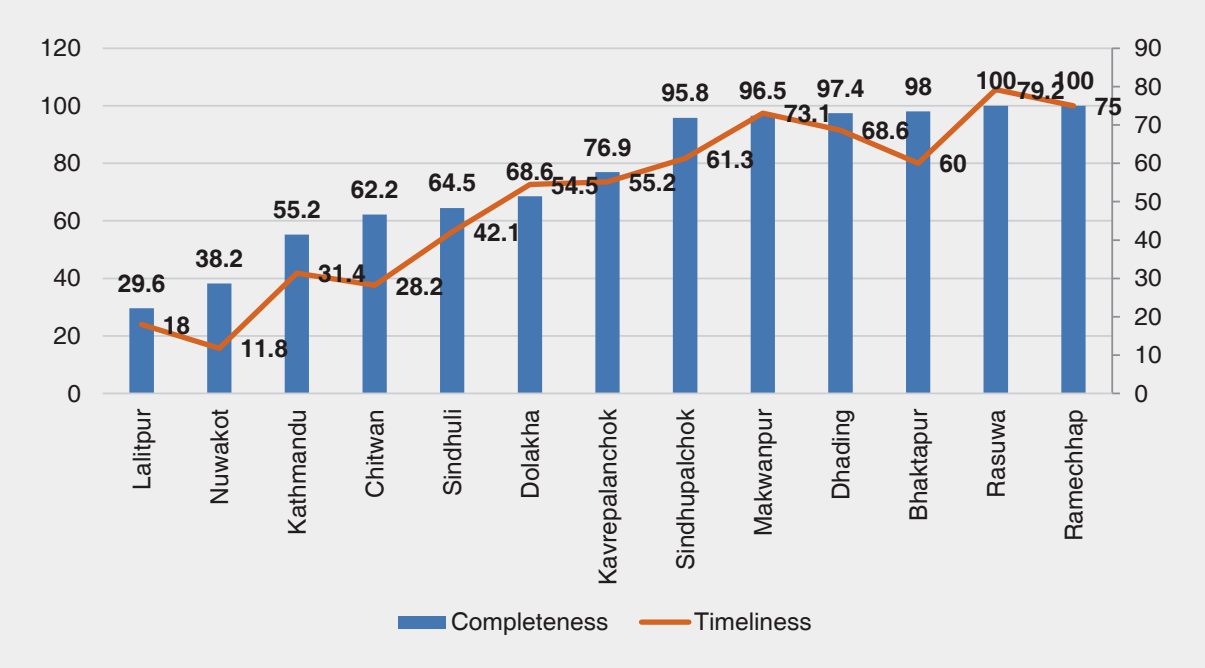
Figure 6.1.5 Trend in Hospital Reporting (%)



The figure above shows a positive trend in hospital reporting status, including completeness and timeliness, from FY 2078/79 to FY 2079/80. There was a slight decline in reporting completeness in FY 2080/81. Hospitals generally have lower reporting status compared to other health facilities.

District wise Reporting Status of all Hospitals (%)

Figure 6.1.6 Trend of hospital reporting in districts (%)



The figure above shows the district wise reporting status of all hospitals of Bagamati Province. While comparing the district wise reporting status of hospitals based on Completeness and Timeliness, Rasuwa and Ramecchap district has the highest Completeness status. Similarly, Lalitpur district has

the lowest Completeness status followed by the Nuwakot District. Regarding the timeliness, Nuwakot district is in the lowest status followed by Lalitpur District.

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 Chitwan.	Implement interventions to improve recording and reporting processes, focusing on metropolitan cities, tertiary hospitals, and private hospitals in Kathmandu, Lalitpur, and Chitwan.	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

6.2 Logistics Management Information System (LMIS)

Introduction

The (LMIS) unit was established in 1994. Later, MD started using electronic Logistic Management Information System (eLMIS) from Baishakh 2075 B.S to strengthen supply chain management and LMIS data entry and data visualization for better decision making. eLMIS has been implemented to all Local Level stores to effectively manage real time operations and based on the need of the stores gradual expansion to Service Delivery Points (SDPs). Those SDPs where eLMIS is not implemented send LMIS form to LLG to enter data. From FY 79-80, the quarterly LMIS reporting has been changed to monthly reporting.

6.2.1 Major activities of FY 2080/81

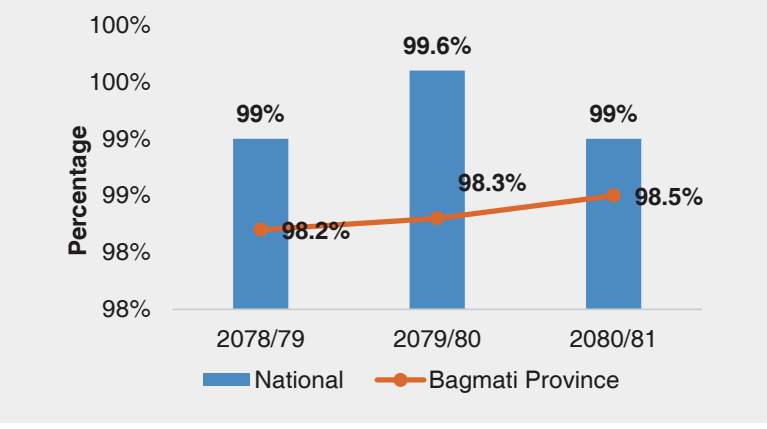
- eLMIS implementation (rollout) in five districts (Kavrepalanchok, Sindhupalchok, Dolakha, Ramechhap, Sindhuli).
- New eLMIS implementation in 382 service delivery point.
- Initiation of eLMIS reporting from Service Delivery Points (SDPs).
- Distribution of eLMIS report user ID and password to SDPs by coordinating with Management Division, Teku, Kathmandu.

- Created a social media group encompassing all the health workers from local levels, districts, provinces and central areas.
- Follow up and provide necessary feedback through emails, phone calls and other online mediums.
- Conducted monthly meetings for strengthening and improving data quality in eLMIS.
- Provided technical support via any desk and other online mediums.
- Coordination with IHIMS, PHLMC, districts health office and local levels and SDPs consistently for complete, accurate, relevant, and timely eLMIS data.

6.2.2 eLmis Reporting Status

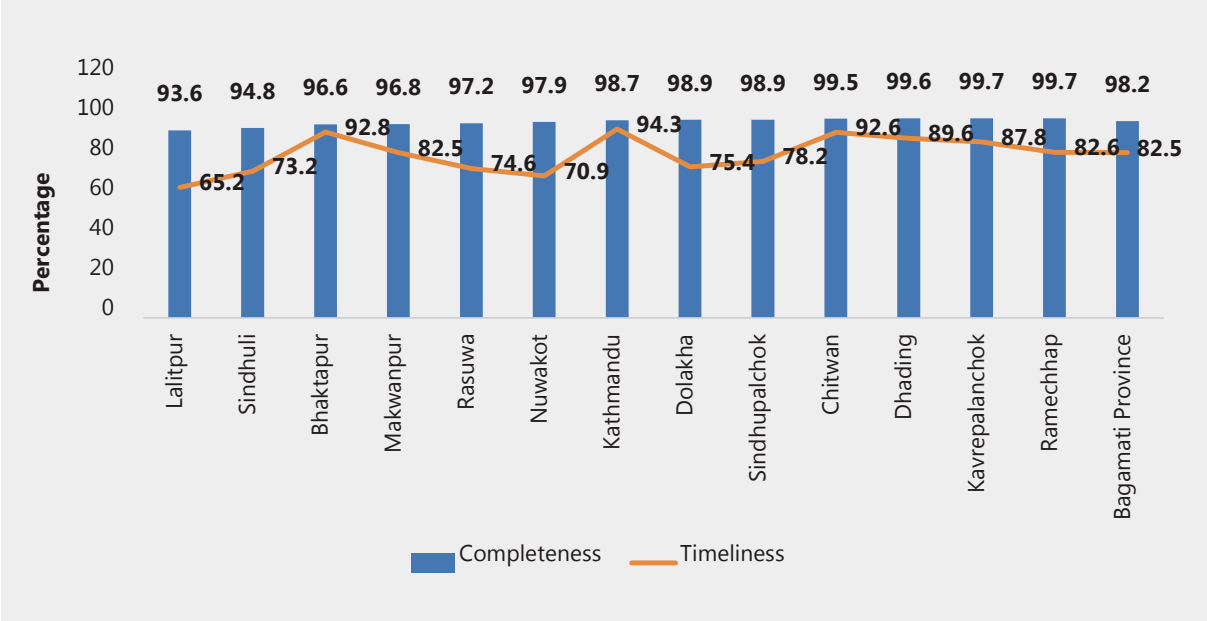
After successful implementation of eLMIS at all local level governments in FY 2077/78, LMIS reporting status has been gradually improved (99.6%) in FY 2079/80 compared to FY 2078/79 and FY 2080/81 of Bagamati Province and while comparing with National reporting status, the reporting status of Bagamati Province is slightly lowered.

Figure 6.2.2.1 Trend of eLMIS Reporting Status (%)



District wise eLMIS Reporting Status (Timeliness Vs Completeness)

Figure 6.2.2.2 District wise eLMIS Reporting Status (Timeliness Vs Completeness)



The figure above shows the district wise eLMIS reporting status of Bagamati Province. In FY 2080/81 eLMIS reporting status of Lalitpur (93.57) has been lower than average provincial reporting status (98.17%). Similarly, while looking at timeliness status Lalitpur followed by the Nuwakot district has lowered timely reporting status than other districts.

District Wise LMIS Data Entry Reporting Sites

Table 6.2.2.1 District wise LMIS Data Entry Reporting Sites

Bhaktapur	2
Kathmandu	12
Rasuwa	15
Kavrepalanchok	28
Chitwan	30
Lalitpur	32
Dhading	39
Makwanpur	47
Sindhupalchok	75
Ramechhap	76
Nuwakot	89
Dolakha	90
Sindhuli	100
Total LMIS Data Emtry Sites	635

The table above shows the total number of LMIS data entry sites (635) of Bagamati Province. According to this table Sindhuli (100) and Dolakha (90) district have the highest data entry reporting sites.

District wise eLmis Implemented Sites

Table 6.2.2.2 District Wise eLmis Implementation Sites

District Name	Count
Nuwakot	16
Sindhuli	24
Rasuwa	27
Bhaktapur	44
Lalitpur	56
Makwanpur	64
Dolakha	71
Dhading	78
Chitwan	90

Ramechhap	98
Sindhupalchok	137
Kavrepalanchok	147
Kathmandu	165
Total eLMIS Sites	**1017**

The table above shows the total number of eLMIS implemented sites (1017) of Bagamati Province. According to this table Kathmandu district has the highest eLMIS implementation sites because out of 11 LLG only SDPs of 2 LLG i.e. Shankharapur and Budhanilkantha Municipalities have been left for eLMIS implementation.

New eLMIS Implementation Site in FY 2080/81

Table 6.2.2.3 **New eLMIS Implementation Site in FY 2080/81**

District	LLG	SDP	Number
Bhaktapur	Bhaktapur Municipality	ART Sites-1	1
	Suryabinayak Municipality	PHLMC Cold Chain-1	1
Chitwan	Bharatpur Metropolitian City	ART Sites-1	1
Dhading	Nilkhantha Municipality	ART Sites-1	2
		UHC-1	
Dolakha	Bhimeshwor Municipality	ART Sites-1	7
		HP-6	
	Gaurishankar Rural Municipality	PHC-1	7
		HP-6	
	Baiteshwor Rural Municipality	HP-5	5
	Bigu Rural Municipality	HP-8	8
	Kalinchowk Rural Municipality	PHC-1	7
		HP-6	
	Melung Rural Municipality	HP-5	5
	Shailung Rural Municipality	HP-6	6
	Tamakoshi Rural Municipality	HP-7	7
Kathmandu	Kathmandu Metropolitan City	Central Store-1	7
		ART Sites-6	
	Dakshinkali Municipality	UHC-2	2
	Budhanilkhantha Municipality	MH-1	1
Kavrepalachok	Dhulikhel Municipality	ART Sites-1	1
	Bethanchowk Rural Municipality	HP-5	8
		BHC-1	
		CHU-2	
	Bhumlu Rural Municipality	HP-10	15
		CHU-4	
		BHC-1	

	Mandan Deupur Municipality	HP-7	15
		BHC-5	
		UHC-2	
		MH-1	
	Panauti Municipality	HP-8	14
		PHC-2	
		UHC-2	
		BHC-2	
	Panchkhal Municipality	HP-6	12
		PHC-1	
		UHC-5	
	Roshi Rural Municipality	HP-10	15
		BHC-1	
		CHU-3	
		Other-1	
	Banepa Municipality	BHC-13	15
		HP-1	
		MH-1	
Lalitpur	Lalitpur Metropolitian City	HP-6	20
		BHC-8	
		Other-1	
		UHC-5	
Makwanpur	Hetauda Sub-Metropolitian City	ART Sites-1	2
		BHC-1	
	Thaha Municipality	HP-5	12
		PHC-1	
		UHC-3	
		BHC-3	
Ramechhap	Doramba Rural Municipality	MH-1	4
		HP-2	
		BHC-1	
	Khadadevi Rural Municipality	BHC-1	12
		CHU-4	
		HP-7	
	Gokulganga Rural Municipality	H-1	7
		HP-6	
	Likhu Rural Municipality_ Ramechhap	PHC-1	8
		HP-5	
		CHU-2	
	Manthali Municipality	PHC-1	21
		HP-8	
		UHC-9	
		BHC-3	

	Sunapati Rural Municipality	HP-5	10
		CHU-5	
	Ramechhap Municipality	HP-7	14
		UHC-6	
		BHC-1	
Nuwakot	Bidur Municipality	ART Sites-1	1
Sindhupalchowk	Bahrabise Municipality	HP-5	13
		CHU-5	
		UHC-2	
		PHC-1	
	Balephi Rural Municipality	HP-3	8
		BHC-4	
		PHC-1	
	Bhotekoshi Rural Municipality	Hospital-1	5
		HP-4	
	Chautara Sangachokgadhi Municipality	CHU-2	7
		UHC-4	
		ART Sites-1	
	Helambu Rural Municipality	HP-5	9
		CHU-2	
		BHC-2	
	Indrawoti Rural Municipality	HP-6	12
		MH-1	
		BHC-3	
		H-1	
		CHU-1	
	Jugal Rural Municipality	HP-6	6
	Lisankhu Pakhar Rural Municipality	HP-6	7
		CHU-1	
	Melamchi Municipality	HP-2	8
		UHC-3	
		BMC-1	
		CHU-2	
	Panchpokhari Thangpal Rural Municipality	HP-7	7
	Panchpokhari Thangpal Rural Municipality	HP-6	10
		CHU-4	
	Tripurasundari Rural Municipality	HP-6	6
Sindhuli	Kamalamai Municipality	HP-7	7
		ART Sites-	1
	Marin Rural Municipality	HP-2	3
		PHC-1	
Total eLMIS Sites			**382**

The table above shows the new eLMIS Implementation Site in FY 2079/80. According to this table all together 382 new eLMIS Implementation sites were added. Similarly, most of the implementation sites were in Manthali Municipality (21).

Issues/Challenges, Action to be Taken and Responsible Person

Issues/ Challenges	Action To Be Taken	Responsibilities
On time reporting	LMIS reporting should be completed through eLMIS within 15th day of next each month.	LLG, SDPs
Real Time Transaction	Transactions like Dakhila, Ha. Fa, Kharchanikasha should be done through the system at an exact time when the commodity is taken.	HLMC, HO, LLG, SDPs

6.3 Early Warning and Reporting System (EWARS)

(The Early Warning and Reporting System (EWARS) is a hospital-based sentinel surveillance system that was 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 National level total of 118 hospitals from all provinces and districts in the country have been designated as sentinel sites. These sites are responsible for promptly reporting cases of specified diseases and syndromes, along with additional diseases and syndromes, either immediately in case of an outbreak or on a weekly basis. The system also encompasses the reporting of other outbreak-prone communicable diseases such as Influenza-like Illness (ILI), Scrub Typhus, Enteric fever, among others.

Types of Sentinel Sites that report on EWARS

In the EWARS system, the Bagamati province incorporates 36 sentinel sites actively engaged in regular reporting. Among these, 20 are government-operated facilities, and 16 are private health institutions. The particulars of these sentinel sites are outlined in Table Number 1.

Table 6.3.1 Types of sentinel sites that report on EWARS

Name of Sentinel Site	Type	Name of Sentinel Site	Type
Civil Services Hospital, Kathmandu	G	Bir Hospital, Kathmandu	G
District Trisuli Hospital, Nuwakot	G	Birendra Army Hospital, Kathmandu	G
District Hospital Rasuwa	G	Dhulikhel Hospital, Kavre	P
Sumeru Hospital Lalitpur	P	District Hospital, Dhading	G
Bharatpur Hospital Chitwan	G	District Hospital, Sindhuli	G
Grande International Hospital Pvt,Kathmandu	P	Jiri District Hospital, Dolakha	G/L

Norvic International Hospital , Kathmandu	P	Kathmandu Model Hospital, Kathmandu	P
Nepal Medical College, Kathmandu	P	Manmohan Memorial Community Hospital Thamel, Kathmandu	P
Patan Academy Of Health Science, Lalitpur	G	Menlha Nursing Home (CIWEC Hospital Pvt), Kathmandu	P
Kist Medical College, Lalitpur	P	Nepal Police Hospital, Kathmandu	G
Nepal Medicity Hospital, Lalitpur	P	Teaching Hospital (Tribhuvan University), Kathmandu	G
Pashupati Chaulagai Smriti Hospital, Dolakha	G	Vayodha Hospital, Kathmandu	P
Sukraraj Tropical And Infectious Disease Hospital, Kathmandu	G	District Hospital, Sindhupalchowk	G
Kanti Children Hospital, Kathmandu	G	Hams Hospital, Kathmandu	P
College Of Medical Science, Chitawan	P	Heatuda Hospital, Makwanpur	G
Chitwan Medical College, Chitawan	P	District Hospital, Ramechhap	G
Om Hospital & Research Center, Kathmandu	P	Armed Police Force (APF) Hospital, Kathmandu	G
Kathmandu Medical College, Kathmandu	P	Bhaktapur Hospital, Bhaktapur	G

** P= Prival's *G= Govsrnmsnl'*

In l'hs EW6PS sysl'sm, l'hs Bagamal'i provincs incorporal'ss 36 ssnl'insl sil'ss acl'ivsly sngagsd in rsgular rsporl'ing. 6mong l'hsss, 20 ars govsrnmsnl'-opsral'sd racilil'iss, and 16 ars prival's hsall'h insli'il'ul'ions.

Reported cases of the prioritized infectious disease on EWARS

Total of 19 diseases in EWARS have been reported in the period 2019- 2022. COVID-19 disease was also reported from the sentinel sites partially during the year 2019-2021. 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 disease trend is listed in the table 6.3.2.

Table 6.3.2 Reported Cases of the Prioritized Infectious Disease on EWARS for the period from 2019-2023

Bagamati Province					
Disease Name / Period	**2019**	**2020**	**2021**	**2022**	**2023**
AGE	2 209	2 091	1 297	3 470	4324
Cholera	1	0	0	42	12
COVID-19	1	7 985	10 448	4 569	361
Dengue	4 956	87	128	17015	8264
Diphtheria	0	0	0	1	0

Encephalitis	4	9	2	3	4
Enteric Fever	775	584	303	560	585
Hepatitis-Acute Jaundice	67	41	22	22	47
Influenza Like Illness	87	827	45	248	1967
Kala azar	27	24	36	38	38
Leptospirosis	3	4	2	14	5
Malaria Falciparum	7	1	4	11	3
Malaria Vivax	7	1	1	2	8
Meningococcal Meningitis	4	1	0	1	3
Other	95	901	36	40	149
Pneumonic Plague	0	1	1	0	0
SARI	1 780	1 929	2 176	2 362	3489
Scrub Typhus	671	230	298	540	1038
Suspected Measles Like Illness	1	1	0	1	18

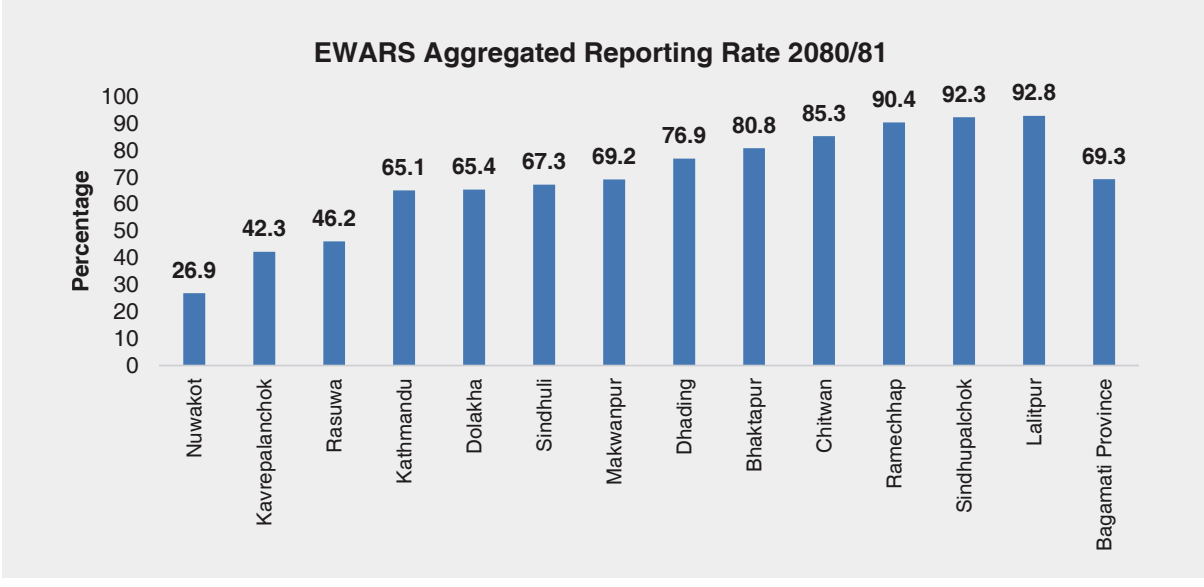
Source: EWARS/EDCD

Reporting Status of the Sentinel Site

Bagamati Province achieved an aggregate reporting rate of 69.3% across its 36 sentinel sites. Among the 13 districts, Lalitpur has been reporting highest reporting rate of 92.8%, followed by Sindhupalchowk (92.3%), Ramechhap (90.4%), Chitwan (85.3%), and Bhaktapur (80.8%). The lowest reporting rates were observed in Nuwakot (26.9%), Kavre (42.3%), and Rasuwa (46.1%). The remaining districts reported rates ranging between 76.9% and 65.1%. Details are listed in Figure 6.3.1

Reporting Status of the Sentinel Site

Figure 6.3.1 Reporting Status of the Sentinel Site



Source: EWARS/EDCD

Key Issues and Recommendations

S.N	Issues	Recommendation
1	Low Reporting Status	Providing orientation and on-site coaching to the personnel responsible of the non-governmental and government institutions
2	Limited Human Resources	Management of an epidemiologist or information technologist
3	Lack of prioritized notifiable infectious disease	Prioritization of notifiable infectious disease according to the Public Health Act, 2075 and International Health Regulation, 2005
4	Roles and responsibilities on EWARS in federal system	Revision of Guidelines of Early Warning and Reporting System.
5	A limited quantity of sentinel sites	The sentinel site needs to be upgraded up to the PHCCs level.

CHAPTER 7

PROVINCIAL PROGRAM

7.1 School Health Nurse Program

Introduction

The relationship between Nepal's constitution and school health nurses is rooted in the broader context of public health and education.

Constitution and Public Health

1. Fundamental Rights: Nepal's Constitution of 2015 emphasizes various fundamental rights, including the right to health. This right underlines the state's responsibility to ensure that citizens have access to healthcare services.
2. Nepal's Constitution article 39 state about the child right.
3. State Responsibilities: The Constitution outlines the government's obligation to promote health and provide necessary services. This includes making sure that healthcare services are accessible to all, which indirectly supports the role of school health nurses.
4. Education and Health: The Constitution also addresses the right to education, which intersects with health through the need for a healthy learning environment. Schools are expected to provide a safe and healthy environment for students, which involves healthcare services.

National Health Policy in Nepal provides a broad framework that supports the role of school health nurses by emphasizing health promotion, disease prevention, and equitable access to health services. School health nurses are crucial in translating these policy goals into practical, on-the-ground services for students, contributing to the overall health and well-being of the school-aged population.

National Health Policy 2076 and Sustainable Development Goals (SDGs)

Target 6.5 states the fulfilment of Universal Health Coverage

1. **Alignment with SDGs**: Nepal's health policies are often aligned with the United Nations Sustainable Development Goals (SDGs), particularly Goal 3: Good Health and Well-Being. Target 6.5 within the SDGs focuses on water and sanitation, but in a broader health policy context, this might include addressing the provision of clean water and sanitation, which directly impacts health.
2. **Health Sector Targets**: Within the National Health Policy, specific targets and objectives are set to address various health challenges, including maternal and child health, communicable diseases, non-communicable diseases, and health infrastructure.

3. **Water, Sanitation, and Hygiene (WASH)**: If Target 6.5 refers to aspects related to WASH (which is essential for health), the National Health Policy may include objectives to improve access to clean water and sanitation facilities. Effective school health programs often integrate WASH practices to prevent disease and promote hygiene among students.

It is important to teach and bring awareness in the student from the school level about the overall health cleanliness, nutrition, mental health, sexual and reproductive health, communicable and non-communicable diseases to lead a healthy life. So Bagamati province had started a pilot programme as an initiative model health promotion program which is one school one nurse programme in the fiscal year 2075/2076.

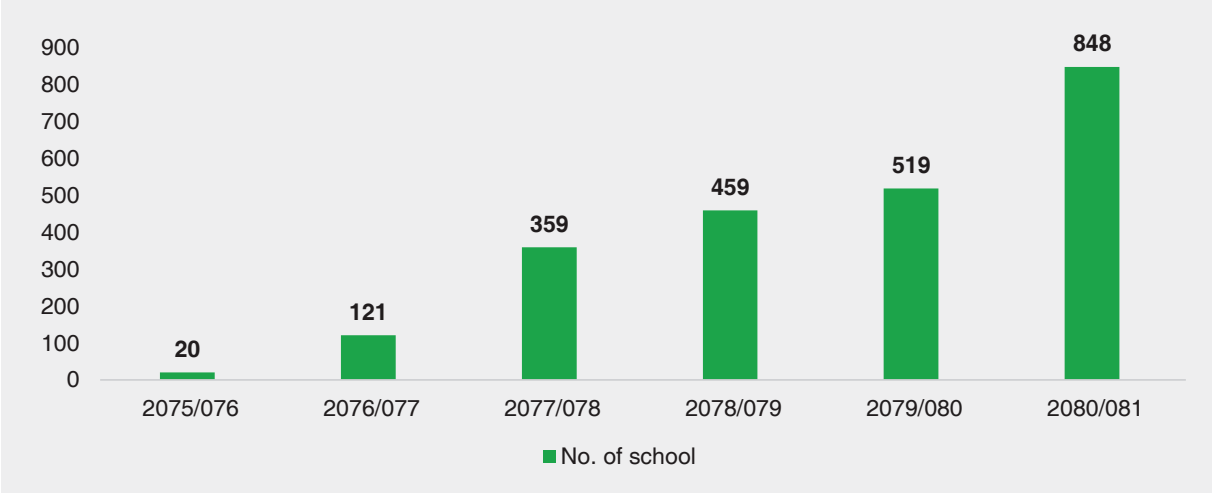
Initially this programme was conducted in 20 secondary level schools of Bagamati province. Taking consideration to the effectiveness of the program which is being expanded each year. Currently SHN program is running in all local level (119) of Bagamati province. In each local level, we have at least three secondary level schools providing school health services. Currently there are a total of 848 school health nurses working under Bagamati province.

The rationale for initiating SHN programme is:

- To prevent non-communicable diseases by promoting health from early stages of life.
- For raising awarness in the community level to practice healthy behaviour.
- To implement the national health programme through school members, i.e. students, teachers and parents.
- To monitor the developmental milestone of each student according to age group.
- To establish a healthy environment of schools.

Target population: - The 848-school nurse had provided service to 3,86,828 students in fiscal year 2080/081.

Figure 7.1.1 **Trend of school extension in respective fiscal year**



The above figure illustrates the trend of school extensions over six fiscal years, from 2075/076 to 2080/081. The number of schools has shown significant growth, starting at 20 in 2075/076 and reaching 848 in 2080/081. The data indicates a steady increase in school establishments, with the most substantial rise occurring between 2079/080 and 2080/081.

1. Nurses provide a variety of services:

- First aid Treatment
- Mental Health
- Reproductive health
- Prevention of Junk food
- Menstrual Hygiene
- Health education
- Environmental sanitation
- Holistic health care

Some activities performed by school health nurses are given below: -

1. Aldendazole and folic acid distribution program

2. Health Awareness Regarding Unhealthy Food

3. Health education regarding Menstruation Hygiene

4. Pet Distribution Program

5. Health check-up of parents and community people

6. Eye examination of students at school

7. Health Check-up for parents and community people

8. Ear Check-Up at School

Scope of School Nurses:

Policy, planning and leadership:

- Help and be ready for organizing policies, planning and procedure regarding school health and assist in planning of environmental safety and emergency services as well as in disaster management.
- Assist in making plans regarding school food policies.
- Assist in mitigation of violence related activities.

Health promotional services:

- Conduct various programs in school related to advocacy and promotion of children's physical, mental and social health.
- Take initiation on controlling of alcohol , tobacco use and other drugs.
- Conducting and organizing an exhibition, drama and counseling program related to health
- Teach useful life skills.
- Play major role in prevention of Junk food.
- Conduct program for the awareness of nutritious food and organizing drama and exhibition regarding its importance.

- Provide knowledge and awareness on adolescence friendly reproductive and sexual health, sexual abuse and child abuse.
- Provide Knowledge on Personal hygiene, environmental sanitation and assisting and coordinating in its management.
- Conduct program regarding menstrual hygiene management.
- Provide orientation to teachers and other staff of school about health related

Preventive health services:

- Provide related services and facilities to the students in terms of diseases prevention and participating in vaccination programs.
- Detection of any communicable diseases in schools should be informed by local level committee and should play a major role in its management.
- School nurses should assist in developing children's friendly and healthy environment in schools in terms of physical and psychosocial aspects.
- Conduct Vitamin A supplementation, deworming, IFA (Iron and Folic Acid) for girls and WASH activities.

Counseling Services:

- Provide counseling related to physical, mental, reproductive, sexual and menstrual health,
- Assist and encourage handicapped children in capacity building and also provide counseling to teachers, students and guardians regarding this.
- Identify children with chronic illness and provide counseling to guardians and teachers regarding his/her illness.
- Provide counseling related to healthy lifestyle, safe drinking water, personal hygiene, environmental sanitation and waste management.

Referral services:

- Coordinate with primary, secondary and tertiary health facilities to refer students, teachers and other staff if they need added treatment school nurse should take consent from parents.
- In case of emergency where she should provide first aid treatment and immediately refer them to the health center.
- After referring to school nurses should follow up and monitor the health status of students and other staff and write a report.

Health service programs related to contemporary issues:

- Prevention of adolescence pregnancy and awareness about family planning
- Regular exercise and yoga, nutrition, dental health.
- Knowledge of sexually transmitted diseases and its prevention.
- Awareness on prevention of junk food, tobacco use, alcohol and drugs use.
- Menstrual hygiene management and other life skills.

2. Some barriers of this program is:

- There is no sanction post for School health nurse by province government so, there is difficulty in retaining manpower.
- Some of the local levels and schools seem to have a passive role in facilitating this service.
- School Health Nurse is a new concept in the context of Nepal so, it is difficult to make people realize about it.

3. Achievement of this program.

- **Academics:**
  - School nurses conduct different health awareness programs which enhance the better physical and mental health of children, and it helps to increase academic performance.
- **Time Saving**
  - School nurses celebrate different national days like HIV Day and Diabetes Day by involving the students too, which helps them to familiarize themselves with all diseases.
- **Attendance**
  - They provide counselling to children who have symptoms related the mental health i.e. stress, anxiety, exam phobia and suicidal thought.
  - They guide the adolescent girl for proper use of sanitary pad its disposal which enhance 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 enhances the wellness of staff.
- **Accountability**
  - This program has released the parent teacher and children that the responsibility of own health is all.

Training conducted in Bagamati Province Fiscal Year 2080/81

S.N.	Training conducted on	Training Conducted by	Number of participants (school health nurse)
1.	Induction Training for new school nurse.	Bagmati Provincial Training Center.	**60**
2.	Psychosocial Counselling Adolescent Sexual &Reproductive Health	Bagamati Provincial Training Center.	
3.	Comprehensive Behavioral and Psychological Health Intervention Through School Nurse	Collaboration of WHO and CWIN-Nepal.	**120**
4.	Eye and ENT screening package.	Curative division.	**Around 50**
5.	Adolescent Sexual &Reproductive Health	Collaboration of Family Welfare Division. And Beyond Bejing committee.	**Around 40**
6	Orientation program for New School Nurse.	Health Directorate, Hetauda	

Some Issues and Challenges faced by school nurses are given: -

S.N.	Issue	Recommendation	Responsible Authority
1	Lack of supervision & monitoring.	All the local level should take responsibility and report to the health office.	MOH, PHD, HO, Local levels
2	Lack of proper reporting system.	A web-based reporting system should be developed for the school health nurse program.	MOH, PHD
3	Lack of proper recording tools.	The uniform recording tools should be developed.	MOH and PHD
4	The dropout rate for school nurses is very high.	The provision of school nursing posts should be permanent.	MOH
5	Lack of proper involvement of school health nurses in national program.	In national and provincial guidelines, the involvement of school nurses should be stated clearly. National program especially related to mental health, nutrition, immunization, adolescent health and so on.	MOHP and MOH
6	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.
7	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

7.2 Free blood bag program for blood transfusion

Bagamati province started the free blood bag program in 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 organizes the work of providing blood transfusion services by providing free blood bags and blood tests. This is one of the priority programs of the Bagamati province.

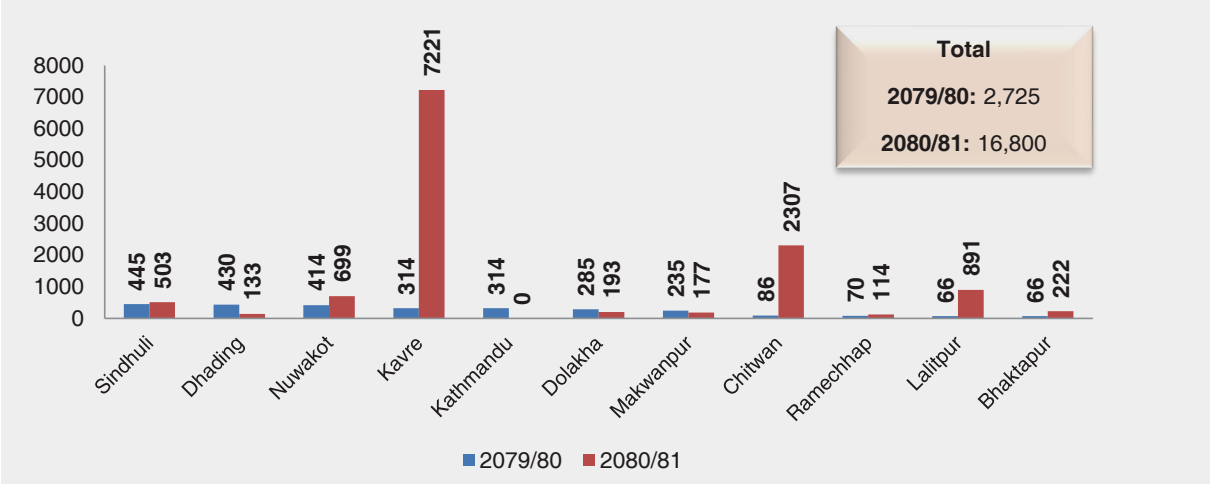
District wise list of Blood Transfusion Centre and Service Site

Table 7.2.1 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
Kavrepalanchowk	Nepal Red cross Society, Banepa Branch	• Dhulikhel Hospital • Methinkot Hospital
Ramechhap	Nepal Red cross Society, Manthali Branch	Ramechhap Hospital
Chitwan	Nepal Red cross Society, Chitwan 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

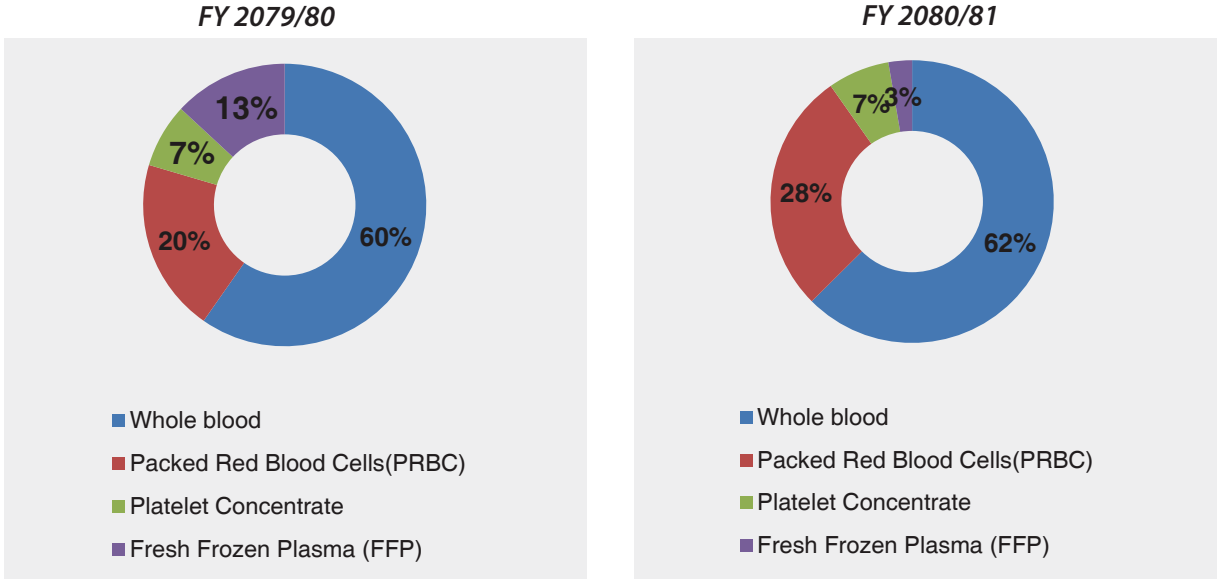
Major Achievement of Fiscal Year 2080/81

Figure 7.2.1 Number recipients receiving transfusion services (New)



The above figure illustrates the number of recipients receiving transfusion services in different districts for the fiscal years 2079/80 and 2080/81. The data shows a significant increase in transfusion recipients in 2080/81 (16,800) compared to 2079/80 (2725). While comparing the district wise data Chitwan and Kavrepalanchowk had provided the highest number of blood transfusion services in FY 2080/81 while Kathmandu and Dhading had provided with the lowest number of services this may be due to lack of proper recording and reporting.

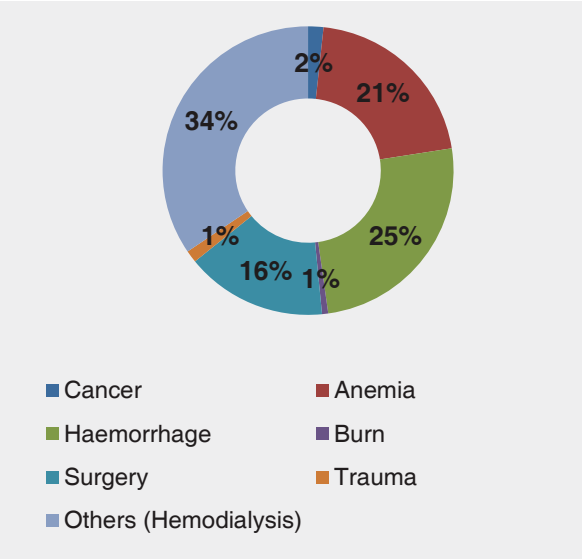
Figure 7.2.2 Types of Blood Cells Consumed



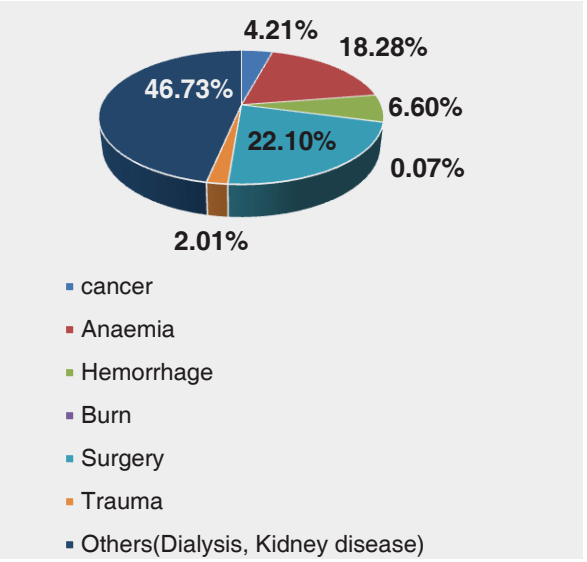
The above figure illustrates the types of blood cells consumed in Fiscal year 2079/80 and Fiscal year 2080/81. While looking at the figure in both years, whole blood has been consumed in highest number followed by the Packed Red Blood Cell. The lowest amount of blood that was consumed are Platelet Concentrate and Fresh Frozen Plasma.

Figure 7.2.3 **Purpose of using blood transfusion services**

FY 2079/80



FY 2080/81



The above figure illustrates the purpose of using blood transfusion service in FY 2079/80 and in FY 2080/81. In FY 2079/80 the blood transfusion service is more often used in Hemodialysis (34%), Hemorrhage (25%), Anemia (21%) and Surgery (16%) while in FY 2080/81 the blood transfusion service is more often used in Hemodialysis (47%), Surgery (22%), Anemia (18%) and Hemorrhage (6%).

Issues/Challenges, Action to be Taken and Responsibilities

Issues/Challenges	Action to be taken	Responsibilities
Poor coordination between hospitals and blood transfusion centers	Coordination between hospitals and blood transfusion centers	MOHP/MOH/ NRCS
Non-establishment of Province Level Blood Transfusion Bureau	Amendment of procedure and establishment of provincial level Blood Transfusion Buruea.	MOHP/MOH/ NRCS
Unable to provide service to residents of other provinces except Bagmati province	Amendment of procedures and making necessary arrangements to provide services to the residents of other provinces besides Bagmati province	MOHP/MOH/ NRCS
Unable to easily provide services to poor and emergency service customers	Amending the procedure, facilitating the provision of services to the poor and emergency service customers.	MOHP/MOH/ NRCS
The hospital requested blood transfusions and requested more than necessary	Hospitals must arrange to request blood transfusions only as per necessity.	MOHP/MOH/ NRCS
Non-uniformity in fee determination	Component wise fee should be determined to bring uniformity in fee determination.	MOHP/MOH/ NRCS

Lack of manpower required for blood transfusion centers	Since it is not possible to make the service in accordance with the quality of the existing manpower, until the management of the permanent manpower, a special subsidy should be arranged.	MOHP/MOH/ NRCS
Problems in data recording and reporting	Developing digital technology to solve problems in data records and reports	MOH/HD
There is no regular maintenance of the equipment in the blood transfusion center	Arrange for regular maintenance.	MOH/HD/ PHLMC/NRCS
There is no arrangement of necessary equipment in the blood transfusion center	Equipment should be arranged	
Inadequate allocated budget	The local government, the state government and the federal government should manage the budget according to the demand by avoiding duplication when allocating the budget.	
There is no provision for laboratory staff working in Blood Transfusion Centers with Risk Allowance/Salary as per Central Blood Transfusion/ Government of Nepal	The salary and risk allowance of the laboratory personnel working in the Blood Transfusion Center should be the same as that of the Central Blood Transfusion Center / Government of Nepal.	Local, state and federal governments, NRCS

7.3. Chief Minister People Health Program

Non-Communicable Disease accounts 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 women has hypertension = SBP >140 mmHg or DBP >90 mmHg or taking antihypertensive medication. To address the rising burden of Non-Communicable Diseases Provincial government designed and implemented the Chief Ministers Public 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.

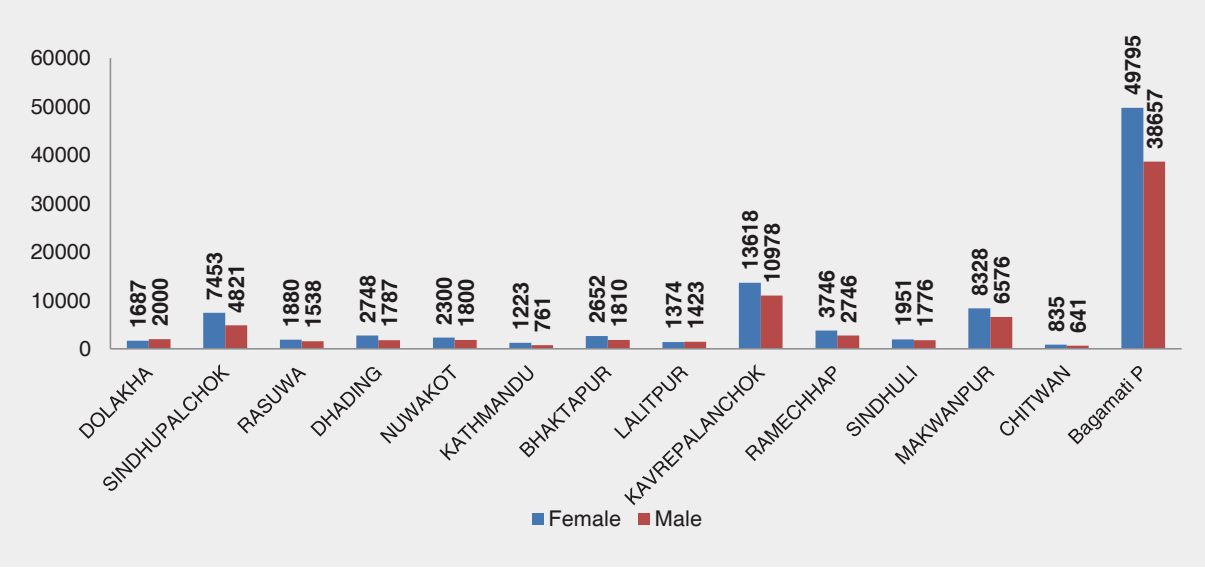
Under Chief Ministry People Health Program following programs are being implemented:

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.

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.

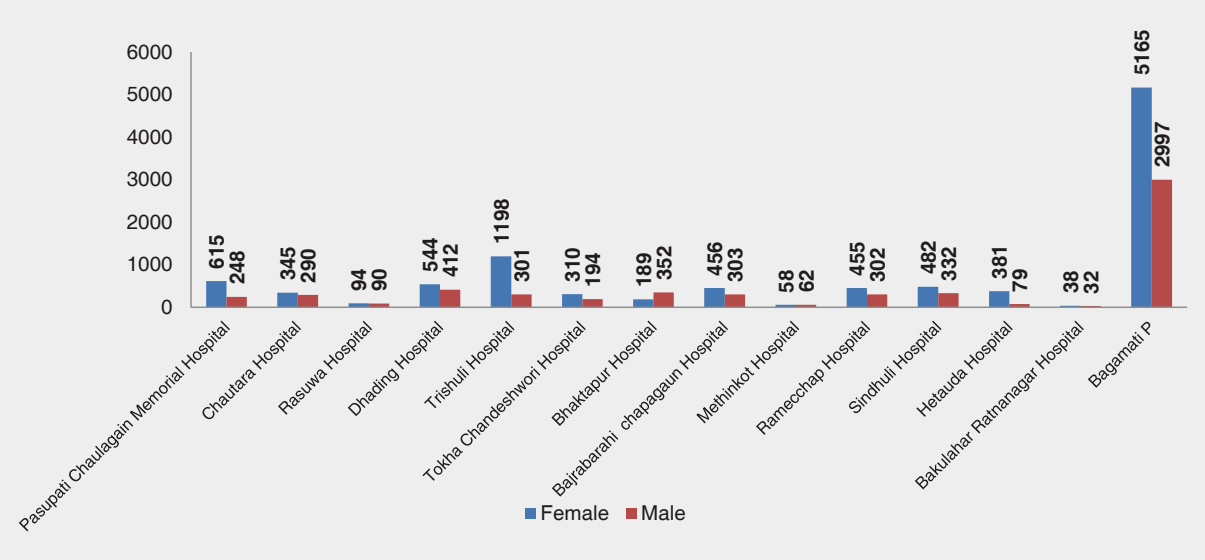
Major Achievement of Fiscal year 2080/81

Figure 7.3.1 NCD Screening Service (Public Health office)



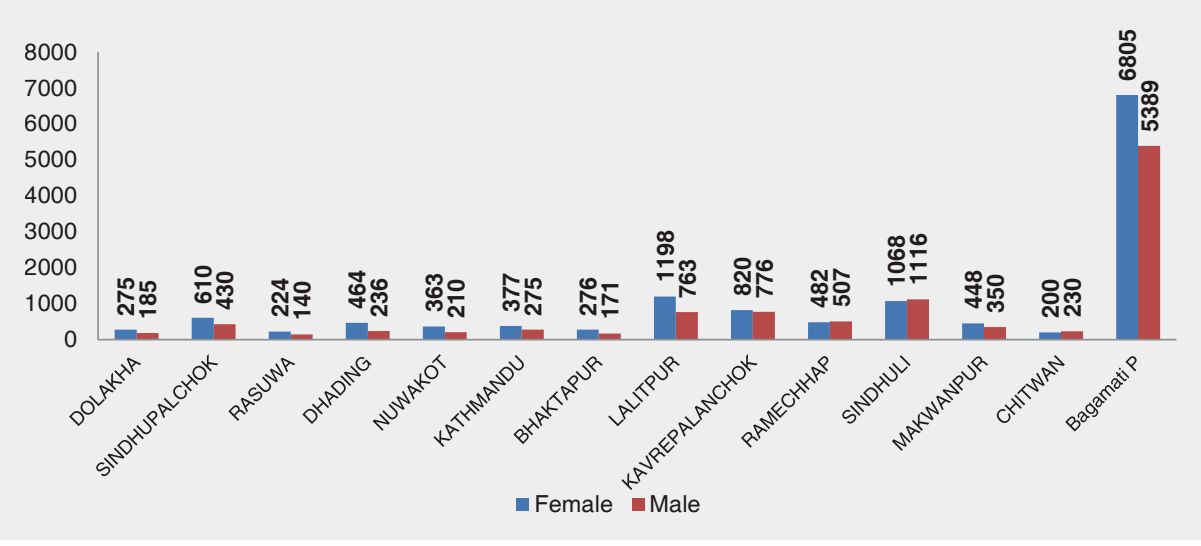
The above figure illustrates the district's wise number of clients screened for NCD. All together 49795 females were screened for NCD, and 38657 males were screened for NCD in FY 2080/81 through health office. While looking at the district wise service Kavrepalanchowk and Makwanpur has provided the highest NCD screening service whereas Kathmandu has provided the lowest NCD screening services.

Figure 7.3.2 NCD Screening Service through Hospital



The above figure illustrates the district's wise number of clients screened for NCD. All together 5165 females were screened for NCD, and 2997 males were screened for NCD in FY 2080/81 through hospital. While looking at the district wise service status Trishuli Hospital and Pasphupati chaulagain Memorial Hospital hospital has provided highest number of NCD screening service while Bakuhalar Ratnanagar and Methinkot Hospital has provided the lowest number of NCD screening service.

Figure 7.3.3 NCD Screening Service through Ayurveda Health Centre



The above figure illustrates the district's wise number of clients screened for NCD. All together 6805 females were screened for NCD, and 5389 males were screened for NCD in FY 2080/81 through Ayurveda Health Centre. While looking at the district wise service status Makwanpur and Lalitpur Ayurveda health center has provided the highest number of NCD screening service while Chitwan and Rasuwa have provided the slowest number of NCD screening Service.

7.4 Special Grants Program

Special Grants 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

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 Bagmati Province, specifically targeting higher secondary schools (grades 6-12) and their family members.

Key components of the program include:

- 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.

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 Bagmati Province, focusing on improving health facilities and services in these areas. The goal is to improve the health status of mothers and neonates, particularly in remote and underserved regions.

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 Bagmati 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 was implemented:

- Chitwan
- Makwanpur
- Kabhrepalanchowk
- Kathmandu
- Bhaktapur
- Lalitpur

Progress report of the program in fiscal year 2080/81

Table 7.4.1 **Progress report of the program in fiscal year 2080/81**

(Amounts in thousand)						
S. N	Name of the project	Total budget	Expenditure	Progress %		Remarks
				Physical	Financial	
1	Component 62: Adolescent Sexual and Reproductive Health Improvement Program	50000	32526.93	60	65	
2	Component 63: Urban Health Program	50000	37417.63	70	75	
3	Component 64: Maternal and Child Nutrition Promotion Program	100000	59431.16	55	59	
	Total	**200000**	**129376**	**60**	**65**	

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.

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 Bagmati 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.

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 was implemented:

- Makwanpur
- Chitwan
- Dhading
- Nuwakot
- Kathmandu
- Lalitpur
- Kabhrepalanchowk
- Sindhupalchowk
- Dolakha
- Ramechap
- Sindhuli

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:

- Makwanpur
- Chitwan
- Dhading
- Rasuwa
- Kathmandu
- Lalitpur
- Sindhupalchowk
- Dolakha
- Ramechap

One School, One Nurse Program

The One School, One Nurse Program places a dedicated nurse in each school to enhance students' health and well-being. It focuses on improving overall health, sanitation, mental health, prevention of communicable diseases, nutrition, sexual and reproductive health, and community health, aiming to encourage positive lifestyle changes for both students and the community. It has been implemented in 13 districts of Bagmati Province.

The program focuses on:

- **Healthcare Access**: Ensuring that students have immediate access to healthcare services for common illnesses, injuries, and emergencies.
- **Health Education**: Promoting health awareness and education on topics such as hygiene, nutrition, mental health, and preventive care.
- **Preventive Care**: Conducting regular health check-ups, immunizations, and screenings to detect health issues early.
- **Mental Health Support**: Providing counseling services to address the emotional and psychological needs of students.
- **Promoting Healthy Environments**: Creating a safer and healthier school environment through initiatives that address both physical and mental health needs.

The program aims to enhance the overall health of students, reduce absenteeism due to health issues, and create a supportive environment for academic success.

(Amounts in thousand)		
S.n	**Name of the project**	**Total budget**
1	One Provincial Constituency, One Hospital Strengthening Program	115250
2	Health Institution Strengthening and Enhancement Program	102200
3	Urban Health Centers / Community Health Units	10500
4	One School, One Nurse Program	257424
	Total	**485374**

CHAPTER 8

SUPPORTING PROGRAMS

8.1 Health Training Center, Bagmati 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 MoH in Bagamati Province. This center caters for the training needs of different health workforce of Bagamati Province working in health directorate, centers, Provincial hospitals 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 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 provincial and local health related N/IGOS for quality and uniformity of health-related training in the province.

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 accredited 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.

In the establishment year, FY 2075/76 Training Center conducted only one technical training course as approved. The training was Primary trauma care training for health workers. Health Training Center was established in Kathmandu as a Province Government decision. The office of Health Training Center, Bagamati Province is located at New Baneshwar, Kathmandu (Near Path Sala Nepal).

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 sites for their improvement and expansion in the hospital.
- To coordinate with partners, local level and other government organizations 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, and evaluate 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 training as per provincial and local level requirements
- Coordinating and collaborating with partners and local level for health training planning 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 Site

Table 8.1.1 Human Resources Status (sanctioned Vs fulfilled)

S.N.	Post	Sanction	Fulfilled	Vacant
1	Director	1	1	0
2	Senior Public Health Administrator	1	0	1
3	Health Education Administrator	1	0	1
4	Senior Health Education Officer	2	1	1
5	Senior Public Health Officer	2	2	0
6	Senior Community Nursing Officer	2	1	1
7	Health Education technician	1	1	0
8	Officer (7^{th} /8^{th})	1	1	0
9	Section officer	1	1	0
10	Account Officer	1	1	0
11	Driver	3	3	0
	Total	16	12	4

Table 8.1.2 List of clinical training sites in Bagamati Province

S.N.	Training Sites	Type of training
1	Bir Hospital, Kathmandu	AAC
2	Paropakar Maternity and Womens Hospital, Kathmandu	ASBA, SBA, Implant, IUCD, PPIUCD, ASRH, GBV, RUSG, CNBC (SNCU), VIA/CRYO, STI, SAS (CAC, MA, 2^{nd} 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, Chitwan	Implant, IUCD, COFP Counselling NSV
7	MSS, Narayanghat, Chitwan	Implant, IUCD, COFP Counseling MA
8	Bharatpur Hospital, Chitwan	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
6	Nepal Cancer Care Foundation, Mahalaxmisthan, Lalitpur	VIA/CRYO

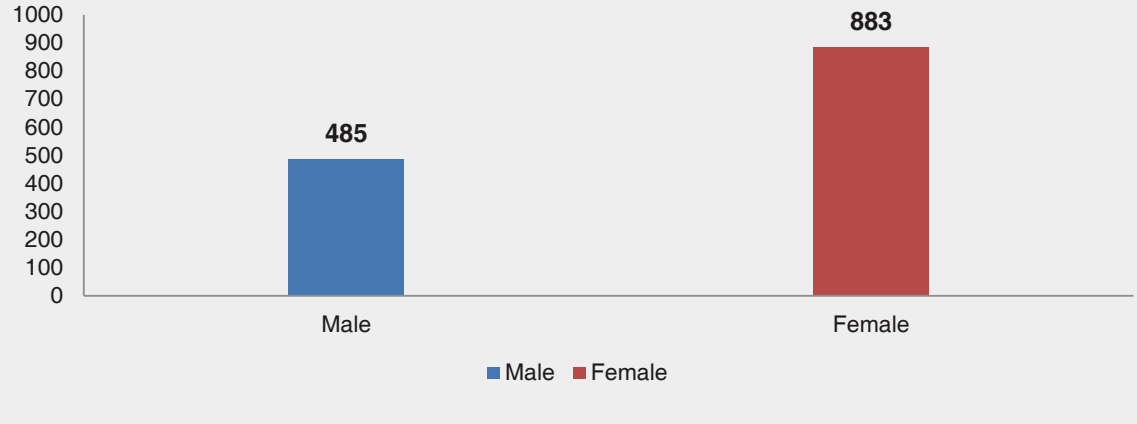
Probable Training Sites

- Hetauda Hospital (SBA, MLP)
- Trishuli hospital (SBA, MLP)

Major Achievements in FY 2080/81

Total participants attending the training in FY 2080/81

Figure 8.1.1 **Total participants attending the training**

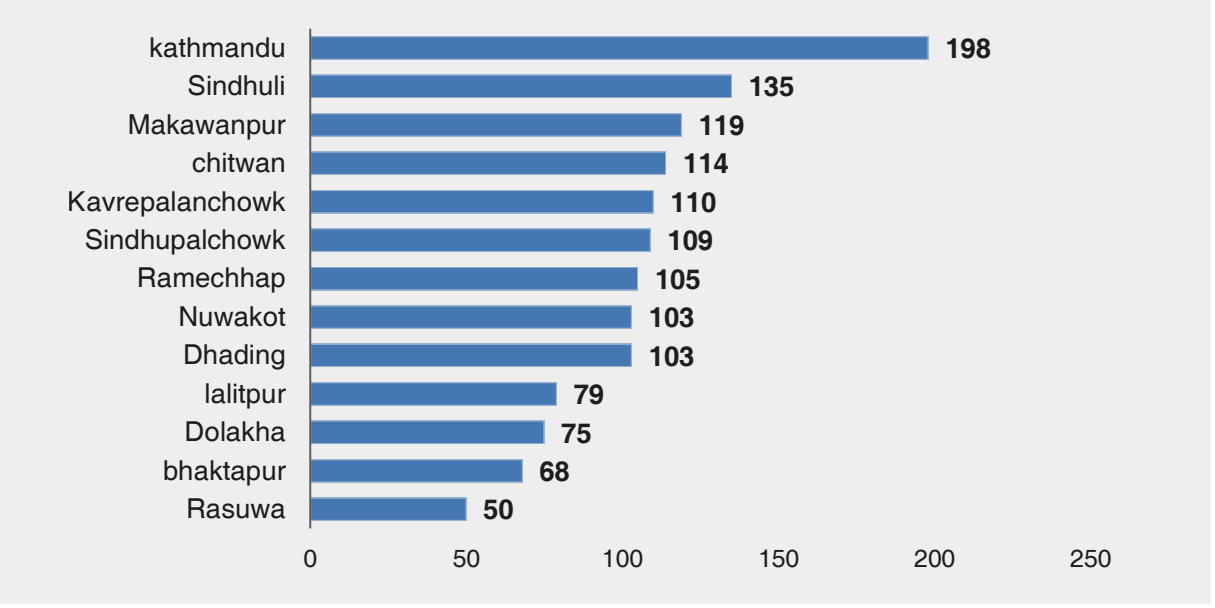


Source: DHIS-2

The figure above illustrates the total number of participants who attended various training sessions organized by HTC in FY 2080/81. According to the data, approximately 883 female participants and 485 male participants took part in the training programs.

District Wise Number of Participants attending the training program in FY 2080/81

Figure 8.1.2 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
Lack of Physical infrastructure	Physical infrastructure should be managed	MOH/HTC
Lack of manpower	Fulfilment of sanctioned post	MOH

8.2 Provincial Public Health Laboratory

Introduction

Public Health Laboratory Centre is one of the central entities of Ministry of Health (MoH), Bagamati Province for quality laboratory services, disease surveillance and research. Public Health Laboratory is situated at Dhulikhel, Kavrepalanchowk district which has been functioning since 15th Shrawan 2076. The laboratory services of all the government and private laboratories have been 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 in Bagamati Province, and it looks after the provincial hospital laboratory, Health office laboratory, District Ayurveda Health Centre laboratory and other government laboratory networks and tends to maintain quality laboratory results. 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, the following departments are functional.

A. Non-Communicable Diseases Laboratory

B. Infectious Disease Laboratory

C. Quality Control and Training

D. Administration and Finance

Major activities conducted in (FY 2080/81)

- Setting up and running a laboratory with a 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 website of the office.
- Establishment and operation of a general laboratory for routine tests.
- Emergency reagents and chemicals have been supplied to 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 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
- Establishment of service unit and laboratory operation in Chitwan

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
Inadequate human resources (vital posts i.e., Consultant Microbiologist, Consultant Pathologist, Deputy Chief MLT)	Recruitment and advertisement of employees	PSC
Limited budget for the procurement of reagents, kits and chemicals, difficulty in daily lab operation	Additional budget arrangements for the purchase of reagents, kits and chemicals	MOH/PHLMC
High demand for microscopes and other laboratory equipment from local and provincial laboratories	Procurement of laboratory instruments and equipment through Health Supply Centre	MOH/PHLMC
Need to add the post of Biomedical Engineer for routine maintenance of laboratory equipment	Through the Provincial Temporary Recruitment Agreement	MOH

8.3 Health Logistic Management Center

Introduction

Effective management of health logistics is essential for the success of health programs. Logistics management ensures quality and the right quantity of medicines and health commodities at delivery time. It includes proper procurement, storage, and transportation, and delivery of quality medicines and commodities in the right quantity to the 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.

The following are the objectives of HLMC to contribute to the health systems of the province:

- Procure essential medicines and health logistics for the health facilities
- Store and supply of medicines, vaccines and health commodities
- Availability of 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 8.3.1 **Human Resources Status (Sanctioned Vs Fulfilled)**

SN	Post	Sanctioned	Fulfilled	Vacant
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	
		19	20	2

Activities Conducted in FY 2080/81

- **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 equipment for Ayurvedic medicine production at the Ayurvedic Medicine Production Center, Chitwan**
- **Establishment of a provincial biomedical workshop for regular preventive and corrective maintenance of hospital equipment**
- **Training in procurement and distribution of health materials**
- **Installation and operation of a Liquid Waste Treatment System**

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

8.4 Ayurveda Aushadi Utpadan Kendra (FY 2080/81)

Introduction

The Ayurveda Aushadhi Utpadan Kendra established on Fiscal Year 2079/80 in Ratnanagar-01, Chitwan is -=the first center of its kind at the Provincial level and second to Singha Darbar Vaidyakhana in Nepal in the field of Ayurveda Medicine Production. The center aims to manufacture 117 types of Ayurveda Medicines with especial emphasis on the 23 types of Essential Ayurveda Medicines and 4 types of Program Ayurveda Medicines for the free distribution from 13 Ayurveda and Vaikalpika Chikitshalayas of Bagmati Province. The medicines manufactured from the center is expected to make a significant contribution to health services at the provincial levels and become self-reliant in Ayurveda Medicine.

The present production building built by the Department of Ayurveda and Alternative Medicine under the concept of Rural Pharmacy was handed over in the fiscal year 2078/79 and the building was restructured to meet the current GMP criteria in the fiscal year 2080/81. The center now has following sections

1. Quarantine Area
2. Raw Material Store Area
    a. Raw Herbs Store
    b. Primary Packaging Material Store
    c. Secondary Packaging Material Store
3. Pre-production Area

a. Dispensing Area

b. Drying Area

c. Pulverization and Sifting Area

4. Production Area

a. Mixing Area

b. Tablet Punching Area

c. Filling Area

d. Liquid Production Area

e. Secondary Packing Area

f. Finished Product Store Area

g. Quality Control Lab

h. Microbiology Lab

i. Quality Assurance Section

The Kendra has prepared its own following five volumes of Pharmacopeia, approved by the Cabinet of Ministries, Bagamati Province.

1) आयुर्वेद औषधि संहिता भाग १ (चूर्ण, कल्क तथा क्वाथ कल्पना) २०८१

2) आयुर्वेद औषधि संहिता भाग २ (वटि तथा गुग्गुलु कल्पना) २०८१

3) आयुर्वेद औषधि संहिता भाग ३ (स्नेह कल्पना) २०८१

4) आयुर्वेद औषधि संहिता भाग ४ (अवलेह तथा सन्धान कल्पना) २०८१

5) आयुर्वेद औषधि संहिता भाग ५ (अन्य कल्पना) २०८१

Figure 8.4.1 **Own Pharmacopoeias of Ayurveda Aushadhi Utpadan Kendra**

Each volume of Pharmacopeia includes three sections viz. Formulation section, Annex section and Bibliography. The formulation section contains a total of 117 Ayurveda Formulations with their classical reference slokas (wherever available), composition, brief description of preparation, usage, dosage, Anupana, packing specification and precaution/contraindication (wherever applicable). The annex section contains Analytical Specifications (as per dosage form), purification of the poisonous raw

materials and processing of the raw materials (wherever indicated), preparation of different dosage forms, list of raw materials necessary for the preparation of the formulations. The Bibliography includes the list of books and websites used to prepare the volume of Ayurveda Aushadhi Samhita. Among these 117 types of Ayurveda Medicines, the center has received the Product Registration Number from Department of Drug Administration of following 10 Churna Ayurveda Medicines.

Table 8.4.1 Product Registration

S. No.	Name of Medicines	Packing	DDA Product Registration Number	Remarks
1	Āmalaki Chūrna	100 gm	1810306155255	
2	Ashwagandhā Chūrna	50 gm	1810307134749	
3	Avipatikara Chūrna	50 gm	1810306125751	
4	Bilwādi Chūrna	50 gm	1810307225844	
5	Hingwāshtaka Chūrna	50 gm	1810308134213	
6	Mahāsudarshana Chūrna	50 gm	1810308143736	
7	Nimbādi Chūrna	50 gm	1810307135516	
8	Pushyānuga Chūrna	50 gm	1810308140033	
9	Sitopalādi Chūrna	50 gm	1810307144135	
10	Triphalā Chūrna	50 gm	1810306162507	

Kendra has started the manufacture of trial batch for the purpose of Research and Development of these medicines after product registration at around the end of the fiscal year.

Figure 8.4.2 Medicines under Research and Development

Human Resources:

The Kendra was allocated 15 temporary posts during its establishment. Now, the center has 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 8.4.2 **Situation of Human Resources in the Fiscal Year 2080/81**

क्र. सं.	पद	तह	दरबन्दि संख्या	पदपूर्ति संख्या	कैफियत
१	प्रमुख आयुर्वेद अधिकृत	९/१०	१	१	स्थाई
२	ब./औषधि व्यवस्थापक	९/१०	१	१	करार
३	ब./कन्सल्टेन्ट भेषज विज्ञ	९/१०	१	०	
४	आयुर्वेद चिकित्सक	८	२	१	करार
५	फार्मेसी अधिकृत	७/८	१	१	करार
६	उत्पादन सहायक	५/६	१	१	करार
७	फार्मेसी सहायक	५/६	१	०	
८	मेकानिकल सुपरभाईजर	५/६	१	०	
९	सहायक/अधिकृत प्रशासन	५/६	१	०	
१०	सहायक/अधिकृत लेखा	५/६	१	१	थप जिम्मेवारी
११	औषधि कुटुवा	----	३	३	करार
१२	स्वीपर	----	१	१	करार
१३	हलुका सवारी चालक	----	१	१	करार
१४	जम्मा		१६	१२	

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 financial benefit.

Major Activities

Table 8.4.3 Major activities of Fiscal Year 2080/81

S.N.	Major activities	Planned (target)	Accomplished (achievement)
1	Orientation on medicinal herbs for farmers and herb collectors	4	4
2	Structural improvement of the Ayurveda Medicine Production Center building as per GMP standards for quality Ayurveda medicine production	1	1
3	Design and printing of medicine labels	1	1
4	Consultancy services related to GMP	1	1
5	Capacity-building programs on GMP, GLP, and storage for employees	1	1
6	Observation and experience-sharing programs	1	1

Table 8.4.4 Activities accomplished during fiscal year 2080/81

S.N.	Activities Accomplished
1	Three-phase meter and wiring
2	Purchase and installation of AC
3	Licensing and other tasks related to the Department of Drug Administration
4	Installation of machinery and equipment handed over by the Health Supply Center at designated locations
5	Preparation of Ayurveda Pharmacopoeia (Volumes 1-5) and approval from the Cabinet
6	Trial batch production of Ayurvedic medicines
7	License from DDA for the production of 10 essential powdered medicines
8	Installation of a 100 KVA stabilizer

Issues, action to be taken and responsible authority

Table 8.4.5 Issues, action to be taken and responsible authority

S.N.	Issues/Challenges	Actions to be taken	Responsible Authority
1	Lack of sufficient land for production	Arrange/provide land	Municipality/Central Government/Ministry of Health
2	Lack of controlled environment in the production area	Install AHU (Air Handling Unit)	Central Government/ Ministry of Health
3	Lack of required RO (Reverse Osmosis) Water for production	Install RO Plant	Central Government/ Ministry of Health

4	Insufficient storage rooms in the current building	Allocate additional budget for storage room construction	Ministry of Health
5	No administrative offices in the current building	Transfer the currently used district building to the center	Hospital/Ministry of Health
6	Unable to produce all essential Ayurvedic medicines in the current setup.	Add additional floors to the existing building	Ministry of Health
7	No tools or spare parts for maintenance of machinery	Allocate budget and procure required tools	Ministry of Health
8	Unable to test the quality of produced medicines	Establish a Quality Control Laboratory	Ministry of Health
9	Lack of skilled staff to operate machinery	Create temporary positions	Ministry of Health
10	Possible accidents during production	Provide risk allowance, accident insurance, and social security fund	Ministry of Health
11	Employee mental health management	Arrange incentive allowances, travel, and other benefits	Ministry of Health

8.5 Health Finance Management

To ensure UHC and the accomplishment of the SDGs, health financing is a crucial component and strategic element. Research indicates that nations should aim to allocate 5% of their GDP, and low- and middle-income nations should allocate USD 86 per person to facilitate access to primary care services.

Although the return on investment in health care is several times greater than the initial outlay, political will and commitment have been found to be essential for allocating the necessary funding for health finance. Federal funding for health comes from a variety of sources, including internal borrowing, international aid, and domestic earnings. Partners in health development provide direct help via designated funds or indirect support through non-governmental organizations.

Health financial management objectives

- To support the planning section in preparing the annual program and budget
- To manage a book of accounts, and collect financial progress reports from the underlying institutions
- To support institutions to carry out program activities
- To monitor and provide technical support to underlying institutions
- To assure financial accountability, transparency, and Implementation and regulation of policy, and rules related to public expenditures
- To prepare and submit financial reports
- To provide financial consultation to the underlying institutions

Achievements in the fiscal year 2080/81

Financial Achievement of Health Directorate based on different types of grants.

Table 8.5.1 Financial Achievement of Health Directorate based on different types of grants FY 2080/81(%)

S. N	Program	Types of Grants	Financial Achievement (%)
1	Provincial Program	Provincial Grant	69.57
2	Special Grant Program	Federal Grant	33.50
3	Tuberculosis Control Program	Federal Conditional Grant	64.4
4	Health Management Program	Federal Conditional Grant	92.76
5	Family Welfare Program	Federal Conditional Grant	42.83
6	Disability Prevention and Leprosy Control Program	Federal Conditional Grant	58
7	Epidemic Disease Control Program	Federal Conditional Grant	27.15
8	Nursing and Social Security Service Program	Federal Conditional Grant	41
9	Remedial Services Program	Federal Conditional Grant	46.66
10	National Health Education, Information and Communication Center	Federal Conditional Grant	45.9
11	AIDS and Sexually Transmitted Disease	Federal Conditional Grant	39
	Total		57.16

The above table illustrates the overall financial Achievement of the Health Directorate based on different types of grants and activities of FY2 080/81. According to this table, the total financial achievement of health directorate is 57.16%. Among the different programs, Health Management Program has the highest financial achievement with 92.76% under Federal Conditional Grants while Epidemic Disease Control Program shows the lowest financial achievement at 27.15% under Federal Conditional Grants. There is notable variability in achievements among different programs, highlighting areas where improvements in financial management or resource allocation may be needed.

District wise Financial Achievement of Public Health office based on different types of grants (%)

Table 8.5.2 **District wise Financial Achievement of Public Health office based on different types of grants FY 2080/81 (%)**

Public Health Office	Provincial Grant	Federal Conditional Grant	Special Grant
Dolakha	76.75	50.64	25.77
Ramechhap	85.47	71.47	80.76
Sindhuli	80.22	63.47	58.35
Kavrepalanchowk	75.59	54.3	43.8
Sindhupalchok	88.00	59.51	88.23
Rasuwa	69.43	55.38	44.51
Nuwakot	79.3	50.66	52.94
Dhading	85.57	57.66	67.47
Chitwan	77.32	54.4	59.66
Makwanpur	89.03	53.18	64.45
Bhaktapur	86.87	62.77	78.39
Lalitpur	82.95	61.26	87.64
Kathmandu	75.42	48.76	84.40

The above table shows the financial Achievement of Public health office based on different types of grants. According to this table, Ramechhap health office stands out across all types of grants, demonstrating strong financial achievement while Makwanpur Public health office also shows significant achievement, particularly in Provincial Conditional Grants.

District wise Financial Achievement of Hospital based on different types of grants (%)

Table 8.5.3 **District wise Financial Achievement of Hospital based on different types of grants FY 2080/81 (%).**

Hospital	Provincial Grant	Federal Conditional Grant
Dolakha	78.85	85.58
Ramechhap	83.83	82.67
Sindhuli	86.54	67.15
Kavrepalanchowk	85.75	71.48
Sindhupalchok	82.69	72.60
Rasuwa	64.27	51.27
Nuwakot	86.74	94.74
Dhading	75.95	82.55
Chitwan	87.43	99.96
Makwanpur	83.61	88.45
Bhaktapur	90.02	84.50

Lalitpur	73.07	72.93
Kathmandu	72.74	65.23

The above table shows the financial Achievement of hospitals based on different types of grants. According to this table, Bakulahar Ratnagar Hospital achieved highest financial success in Federal Conditional Grants while Bhaktapur Hospital achieved 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.

District wise Financial Achievement of Ayurveda and Alternative Medicine based on different types of grants (%)

Table 8.5.4 **District wise Financial Achievement of Ayurveda and Alternative Medicine based on different types of grants FY 2080/81 (%)**

Hospital	Provincial Grant	Federal Conditional Grant
Dolakha	96.09	84.15
Ramechhap	78.29	99.02
Sindhuli	95.58	99.86
Kavrepalanchowk	90.10	97.26
Sindhupalchok	87.40	98.34
Rasuwa	73.71	95.44
Nuwakot	94.26	99.33
Dhading	86.87	98.91
Chitwan	89.57	99.49
Makwanpur	87.73	99.70
Bhaktapur	92.86	91.91
Lalitpur	96.15	99.83
Kathmandu	93.16	89.69

The above table shows the financial Achievement of Ayurveda and Alternative Medicine based on different types of grants. According to this table, Lalitpur Ayurveda and Alternative Medicine achieved the highest financial success in Federal Conditional Grants while Dolakha Ayurveda and Alternative Medicine achieved the lowest financial success in Federal conditional grant. While looking at the Provincial grant Lalitpur Ayurveda and Alternative Medicine achieved highest financial success and Nuwakot Ayurveda Health Center achieved Lowest Financial success.

Challenges of Financial Management

- Allocation of health budget to the provinces and level programs and availability of human resources is not rationale.
- Mismatch in the allocation of health budget to the LGs in the certain levels.
- Lack of proper planning of financial resources.
- Lack of timely and accurate financial reporting

CHAPTER 9

DEVELOPMENT PARTNERS

HEALTH DEVELOPMENT PARTNERS' ACTIVITIES AND RESPONSIBLITIES

Organization	Major Thematic Area	Geographic Coverage	Major activities in FY 080-81	Contact Details
World Health Organization (WHO)	Health systems strengthening	Province and 13 districts	• Supported to finalize and publish 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 (1).pdfhttp://moh.bagamati.gov.np/uploads/documents/wx6x0c2e-298-1711344173.pdf • Provincial Health Policy endorsed and implemented. WHO provided technical facilitation to organize different level consultation workshop, compile the inputs, desk review and finalize the policy. प्रदेश स्वास्थ्य नीति २०८१. http://moh.bagamati.gov.np/uploads/documents/pg2m05lu-676-1727179023.pdf • 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 draft the health section of the second periodic plan (FY 2081/82-2086/87) of the province. Provided technical support to analyze the current situation, set the target, design the major indicators and finalize the draft. It has been endorsed and implemented. 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, district-level public health coordination committee meeting supported. • Provincial Annual Health Report of the FY 2079/80 published. Supported to draft of the report and publication of the report. District and provincial annual health review supported. Annual Health Report, FY 2079-80.pdf • Supported as a technical expert to develop provincial annual health program implementation guidelines. This was approved, implemented, and monitored. • The MoH has initiated developing job description (JD) as per the approved O&M survey. 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 near to being endorsed. • Supported organizing QGIS TOT for the 20 public health officers/statistical officers. Thirty-five health officers/statistic officers from different districts as well as LLGs trained on QGIS after the TOT.	Hari Bhusal Provincial Health Officer bhusalh@who.int 9841497586

	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 872/ participants from 13 districts focusing to strengthen the VPD surveillance activities, Early VPDs case notification, detection, investigation including sample collection and transportation, • Sub -district Vaccine Preventable Disease Surveillance training provided to 2452 participants 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 Chitwan. 160 doctors were sensitized on VPDs, case identification and notification. • Support provided during the VDPV event related activities. • Supported districts during suspected Measles outbreak and JE outbreak. • Intensified Polio Surveillance and VDPV3 event response was conducted in Kathmandu	Dr Sasmirta Bastola astolas@who.int 9818981832 Dr Sagar Ratna Shakya 9851031261 sakyas@who.int Dr. Rupesh Timilsina 9851100675 timilsinar@who.int
	Health Emergency	Province and 13 districts	• Rapid Response Committee (RRC) and Rapid Response Team (RRT) advocacy programs started in Bagmati Province with the technical support of WHO and financial support of USAID. The WHE team Bagmati facilitated the advocacy program at 41 local units of 6 districts (Kathmandu Lalitpur, Dolakha, Kavrepalanchowck, Chitwan and Makwanpur) where a total of 1148 participants participated. The RRC and RRT committee members and FCHVs were the key participants for the advocacy program. • Provided technical support to finalize and endorse the "Provincial health emergency and disaster preparedness and response plan "Also, provided technical support in drafting districts and local level "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. • Provided technical support for outbreak investigations. • 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.	Dr Sabita Poudel FMO spoudel@who.int 9851118788

	NCD and Mental Health	Province and 13 districts	• Provided technical support in capacity building of 1 batch comprising of 25 HWs on PEN Service Provider training in Sindhuli, Ramechhap, Makawanpur, Chitwan, Dhading, Kathmandu, Lalitpur & Bhaktapur for strengthening NCD service delivery. • Provided technical support as well as Psychiatrist (as a trainer) in capacity building of 1 batch comprising of 25 HWs on mhGAP Module 2b training in Sindhuli, Ramechhap, Makawanpur & Dhading for strengthening MH service delivery. • Monthly regular Specialist Mental Health Clinic in Sindhupalchok & Rasuwa • Bagamati Kavrepalanchok Hypertension Care Cascade Initiative (BKHCCI) is under implementation. • Provided overall support in BKHCCI STOCKTAKE Workshop. • Provided logistics as well as technical support in Orientation on Responsible Media Reporting on Suicide Prevention to the journalists. • Supervision, Monitoring & Mentoring of NCD, MH & Chief Minister Citizen Program (NCD Screening) at districts as well as LLGs. • Facilitation in installation of Digital BP and BMI machine in MoH premises. • SAFER Program & Brief Tobacco Intervention is being piloted in few settings of the province.	Dr. Anup Bikram B.C. NCD and Mental Health – Field Officer 9848026000 bca@who.int
UNICEF Nepal	Health Data Immunization and Cold Chain	All districts of Bagmati Province	• Technical Support to the PHD and local government in the use, storage and sharing of immunization information/data related to subnational NIP activities with attention to data consistency, alignment of targets and indicators. • 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. • 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 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 UNV National Specialist - Cold Chain Specialist 9849423684 hejoshi@unicef.org

Save The Children	HIV, TB and Malaria	**HIV Program** **(10 districts)** Kathmandu, Lalitpur, Bhaktapur, Makwanpur, Chitwan, Dhading, Nuwakot, Sindhuli, Kavre and Sindhupalchok **TB Program** **(7 districts)** Kathmandu, Lalitpur, Bhaktapur, Makwanpur, Chitwan, Dhading and Kavre, **Malaria Program** All districts of Bagmati Province	**Key Activities of HIV Program:** • Behavior Change Communication (BCC) service provided to 6607 PWID/WWID, 18943 Migrant and 2541 prison inmates • Community led testing to 4750 PWID/WWID, 16961 Migrant, 2296 prison inmates and 747 index testing • Distributed 7,95,004 Needle Syringes, 15,11,496 alcohol swab, Condom and IEC materials • Opioid Substitution Therapy (Methadone & Buprenorphine) • 58 HIV clients linked to treatment, care and support • Residential support to 775 PLHIV in Community Care Centre (CCC) and home visit to 1724 PLHIV clients by CHBC team • Cash Support for Income Generation *(priority to widow and ultra poor)* • Cash Transfer Program of NRs. 1,000/- per month to 468 CLHIV • Technical support in implementing red book activities of HIV program • Support in data quality of DHIS 2 **Key Activities of TB Program:** • Sputum Courier Services and Contract Tracing of Index TB Cases • DR TB Management and Childhood TB Management • FAST Service in major Hospital • Active Case Finding (ACF) in vulnerable population • Public Private Mix (PPM) in private hospitals, pharmacies and private clinic • Technical support in implementing red book activities of TB program • Support in data quality of DHIS 2 **Activities for Malaria Program:** • Case based Investigation (CBI) of all reported malaria cases • Technical support for implementation of red book activities and support data quality of DHIS 2 • Malaria Reorientation program in Kavre, Sindhuli, Dhading and Chitwan **Support under C19RM** • Construction and handover of Medical Warehouse in Hetauda for HLMC • Roll out of eLMIS training in 692 participants of Bagmati province	Mr. Haribol Bajagain Haribol.bajagain@savethechildren.org 9840016075

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 CTVT 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 • Initiate to develop MSS tools for two specialized hospitals (Orthopedics and Trauma services). • MMS 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 12th 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, Bagmati janardan@nsi.edu.np 9843712846

FHI 360 Nepal Office/ USAID EpiC Nepal HIV	Thematic Area: HIV/AIDS Beneficiary groups: • Female sex workers (FSWs) • Men who have sex with men (MSM), male sex workers (MSWs) and transgender people • Clients of FSWs and other high-risk individuals • People living with HIV (PLHIV) and their families	Seven districts • Kathmandu • Lalitpur • Bhaktapur • Makwanpur • Chitwan • Dhading • Kavrepalanchok	▪ 8,874 individuals reached for HIV prevention. ▪ 1,594 individuals received pre-exposure prophylaxis (PrEP) services. ▪ 5,043 Number of HIV self-test kits distributed. ▪ 1,222 individuals diagnosed and treated for Sexually Transmitted Infections. ▪ 5,599 individuals were supported to be tested for HIV. ▪ 360 of people tested HIV-positive. ▪ 711 PLHIV were supported to be enrolled on antiretroviral therapy (ART). ▪ 3,480 PLHIV received a suppressed viral load (VL) result (<1000 copies/ml) within the past 12 months) ▪ 3,090 Number of HIV-positive who are receiving care and support services outside of the health facility ▪ 716,660 condoms distributed ▪ 246,511 lubricants distributed ▪ 818 individuals were provided with training on stigma and discrimination reduction **Innovative Intervention** ▪ Online outreach and online to offline linkage. ▪ Online service booking using www.merosathi.net. ▪ HIV self-testing for screening. ▪ PrEP services. Antiretroviral (ARV) dispensing from 5 dispensing sites for MSM, MSWs and TG people.	Sanjiv Kumar, Provincial Coordinator, M: 9848475033 skumar@fhi.org www.fhi360.org, FHI 360 Facebook
FHI 360 Nepal Office/USAID EpiC Nepal-Procurement and Supply Chain Management (PSM)	Technical Assistance for Strengthening PSM (Strengthening Supply Chain Management Working Group (SCMWG)	All 13 districts of Bagmati province.	▪ eLMIS rollout at health facilities level and ART sites ▪ eLMIS data for decision making to focus district meeting at Makawanpur, Kathmandu, Bhaktapur and Lalitpur. (8 events) ▪ SCMWG meeting (4 events at province level and 4 at federal level). ▪ Supportive supervision to stores at all levels - 32 sites ▪ Forecasting and quantification workshop- One event at provincial level and one at federal level. ▪ Medical waste management orientation- One event. ▪ Technical support to Province Health Logistic Management Center (PHLMC) on regular basis • Strengthen eLMIS system and provide regular support to sites.	Madan Kumar Prajapati, Provincial Supply Chain Coordinator (PSCC) M: 9857024571 mkohar@fhi360.org Base: PHLMC, Hetauda, Makawanpur

FHI 360 Nepal Office/UK aid Fleming Fund Country Grant for Nepal	Antimicrobial resistance (AMR) surveillance system strengthening	Working districts • Kathmandu • Lalitpur • Chitwan	▪ Technical support in multisectoral AMR steering committee, national technical committee and sectoral technical working groups (TWG) meetings. ▪ Support to prepare, update, revise antimicrobial use (AMU) point prevalence survey (PPS) protocol, Antimicrobial treatment guidelines, Standard Operating Procedure (SOP) for Bacteriology, and AMR surveillance protocol ▪ Support to prepare and finalize the fourth volume of the AMR newsletter for National Public Health Laboratory (NPHL) and Global Antimicrobial Resistance and Use Surveillance System (GLASS) reporting to the World Health Organization (WHO). ▪ Workshop for clinicians on quality laboratory-clinic interface (LCI) and antimicrobial stewardship, ▪ Orientation, conduction, and dissemination of the AMU PPS survey. ▪ Supported and facilitated AMR training organized by the National Health Training Center (NHTC). ▪ 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), MoHP, and hospitals. ▪ Technical support to DDA in Antimicrobial Consumption (AMC) data collection, cleaning, review, and validation for GLASS-AMC reporting. ▪ Support to DDA in AMC data collection, compilation, cleaning, and review. ▪ Procurement and supply of equipment and consumables to AMR surveillance sites. ▪ Support to conduct AMR, AMU, and multi-sectoral collaboration surveillance in human, animal, food and environment sectors. • Support and participation in World AMR Awareness Week (WAAW).	Dr Ritu Amatya, Project Director FFCGN ramatya@fhi360.org

FHI 360 Nepal Office/USAID Clean Air	Health, education, governance, civil society and private sectors engagement for improving national ambient air quality	18 municipalities of Kathmandu Valley (Kathmandu, Bhaktapur, Lalitpur)	▪ Collaborated with municipal health offices providing technical assistance in planning, budgeting, generating evidence, evidence-based decision-making, and implementing interventions for addressing air pollution issues and its health impacts in Kathmandu Valley: ▪ Engaged with civil society actors and government entities for various awareness raising initiatives, such as community orientations, health camps, and using diverse communication channels to educate citizens about the effects of air pollution, and for advocating for accountability, proper policy instruments and targeted activities. ▪ Engaged with health professionals, municipal health departments and federal level health agencies: – Sensitized 1,589 individuals (1,182 females) on air pollution at the community level across 30 wards of five municipalities through the engagement of health workers including Female Community Health Volunteers (FCHVs). – 49 health workers from two municipalities oriented on healthcare waste management practices. – 143 nursing staff, including school health nurses from five municipalities, trained to include clean air messages in Maternal, Newborn, and Child Health (MNCH) services. – Three municipalities – Chandragiri, Changunarayan and Shankharapur issued directives to include clean air messages in all health services provided by the municipalities. – Eight health interaction programs were conducted with 171 participants to sensitize health workers and policymakers. – Ten health camps were conducted, benefiting around 1,554 people, targeting women, sanitation workers, and residents near brick kilns. – National Health Education Information and Communication Center (NHEICC) approved Information, Education and Communication (IEC) materials including flip chart to be used by FCHVs related to air pollution and its impact on health. – Used mass media, including TV, radio, and public LED boards, to raise awareness about air pollution and its solutions reaching over a million daily viewers/listeners. • Mobilized 30+ Clean Air champions to raise awareness, sensitize citizens, encourage behavior change, and assess the changes in understanding and action of the people.	Reshma Dixit Deputy Chief of Party USAID Clean Air E: rdixit@fhi360.org

FHI 360 Nepal Office/USAID Momentum Private Health Care Delivery (MPHD Nepal)	Family Planning	Kathmandu, Chitwan & Makwanpur	▪ Project supported to 112 service delivery points (SDPs) (70 pharmacies, 40 Polyclinics/Clinics and 2 Hospitals). ▪ Five-days Adolescent Sexual and Reproductive health (ASRH) training to private sector service provider- 137 family planning (FP) service provider trained. ▪ Three days basic Sangini training provided to 146 FP service providers. ▪ Implant insertion and removal training- provided to four SDPs. ▪ Business skill training provided to 116 private sector owner/providers ▪ Provincial level data review and reflection meeting with government authorities and FP/Reproductive Health (RH) stakeholders. ▪ Reached 3,321 adolescents and young people through 121 community engagement events *(Chalfal Chautari)*: FP services delivered by project-supported private sector SDPs. – 253,379 client visits for FP service – 13 percent adolescent client visits – 465,763 condom sale ▪ 84,968 emergency contraceptive pills sale	Basanta Thapa, Project Director MPHD Nepal bathapa@fhi360.org
USAID Integrated Nutrition/ Helen Keller International	Integrated Nutrition Program	**5 districts:** Makwanpur Dhading Sindhupalchok Ramechhap, Sindhuli	• Orientations on USAID Integrated Nutrition for health workers, FCHVs, schoolteachers, and community volunteers across all municipalities in five districts. • Capacity building of health workers, FCHVs, and ECDC facilities to conduct MUAC screenings for children aged 6 to 59 months three district • SHN review meetings in all municipalities across five districts to enhance adolescent IFA supplementation. • Conduct community events and interpersonal communication targeting women in their first 1,000 days and key decision-makers in vulnerable communities • Engage local influencers to address harmful gender and social norms and promote health and nutritional behavior • On-site coaching at health facilities to enhance knowledge and skills on the continuum of nutrition and health services • Provide support for the formation, revitalization, and functioning of NFSSC mechanisms at various levels, in close coordination with MSNP III • Interaction on creating a healthy food environment among food value chain actors • Capacitate women on production of nutritious & healthy foods as well as other livelihood opportunities and demonstrate on climate-smart agriculture practice	Shubhakamana Mandal, Prorgam Manager , Bagmati province Email: smandal@hki.org Contact # 9709080362

Plan International Nepal	ECD and SRHR	6 LGs of Sindhuli (Dudhauli and Kamalamai municipality, Marin, Golanjor, Sunkoshi and Tinpatan Rural Municipality	**Early Childhood Development (ECD)** • Trainings to FCHVs & facilitators on gender responsive Parenting Education referring Nurturing Care Framework • Training to health workers & frontline facilitators on gender responsive Parenting Education (Referring Nurturing Care Framework) including male engagement in childcare • Deliver Parenting Education Session by FCHVs & facilitators on nurturing care and early stimulation to pregnant women & parents/caregivers of <5-year children including separate male sessions for promotion of their engagement on childcare • Health facility review meeting of FCHVs on key community behavior change on childcare and strengthening of Health Mother Group's (HMGs) to promote nurturing care from prenatal period. • Support to establish child play centers in community • Nutrition promotion through food demonstration and SBCC sessions and strengthening of nutritional services and promote improved nutrition status • Support to strengthening of provincial and local government for preparation ECD strategy and Plan **Sexual and Reproductive Health and Rights (SRHR)** • Provided ToT on Comprehensive sexuality education to teachers and community facilitators • Conducted Peer to Peer education sessions on SRHR to 15 adolescent girls club and support these AGC to raise awareness on SGBV • Oriented Positive sexuality education to Children Adolescent and Yong people, their family, and Father's Group on SHRH • Mapping of health facilities for support to AFS and support to establish Adolescent Friendly Information Corner (AFICs) in schools and health facilities • Collaborate with palika government to deliver Mental Health and Psychosocial Support interventions	Mihir Kumar Jha, Program Specialist, 9801241148, MihirKumar.Jha@plan-international.org

Médecins du Monde (MdM) France	Environment and Health Occupational Health and Safety- Waste Workers and Farmers Primary Health Care Strengthening	Selected Municipalities of Bagmati Province of following districts: » Kavre (Dhulikhel Municipality and Mandandeupur Municipality) » Ramechhap (Likhu Tamakoshi RM) » Sindhupalchowk (Panchpokhari Thangpal RM) » Nuwakot (Kakani RM) » Kathmandu (Kathmandu Metropolitan City)	• Technical support in operation and integrated OHS services from Urban Health Promotion Center (UHPC) in ward no 19 of Kathmandu Metropolitan City. • Technical support to strengthen 3 CSOs for informal waste workers for better recognition for their rights. • Promotion of sustainable Public Private Peoples Platform (4P) developed to increase coordination between local actors and recognition of waste workers/ farmers for better solutions. • Promotion of Reduce, Reuse, Recycle (3R) campaigns at 3 local schools of KMC (Ward 8, 19, 30) • Support for establishment of entrepreneurs to promote circular economy and alternate livelihood option i.e. Safai Yodda (a non-profit enterprise of waste workers). • Advocacy and promotion of social health protection scheme (NHI), NHI orientation to NHI Navigators (ward chairperson, ward members, of selected wards of KMC to increase the coverage. • Household composting, and waste segregation training and compost bins distribution at Ward 8, 19 and 30 completed in collaboration with KMC.	Program Focal Person Mahesh Prasad Joshi Program Manager pm.nepal@medecinsdumonde.net Nepal Mission Focal Point Abdul Saboor Khan General Coordinator genco.nepal@medecinsdumonde.net

USAID MOMENTUM Private Healthcare Delivery- MPHD (Nepal CRS Company)	Sexual and reproductive health (Adolescent Health & Family Planning)	**Districts:** Three (Kathmandu, Chitwan & Makwanpur) **Municipalities:**Eight (Kathmandu Metro, Tokha, Kageswori Manohora, Bharatpur Metro, Ratnanagar, Khairahani, Kalika and Hetauda Sub-Metropolitan)	***Capacity Building of Private Sector's Providers to provide adolescent responsive contraceptive services.*** • ASRH Training • Whole site orientation ***Increase technical capacity of private sector SDPs to provide high-quality person centric FP services.*** • QA/QI mentoring and coaching & Routine Assessment • Onsite coaching • Establish and Strengthen Referral Mechanism for LARC or Permanent Methods • FP Commodity Supply chain linkage ***Increase managerial capacity of private health facilities to sustain the high-quality person-centric FP service:*** • Provide Business skill training to private health facility • Guide and support private health facility to increase the awareness on RH from HFs itself through Health facility-initiated demand generation activities. ***Recording, Reporting and Data Integration.*** • DHIS/HMIS Training for Hospitals & Polyclinics • Support to private health facilities reporting in national reporting system (HMIS/DHIS) to municipal level and or online reporting on DHIS2. ***Partnership & Collaborations.*** • Monthly cluster meeting with private service providers & municipal health team. • Quarterly Review meeting with municipality • Joint Monitoring ***Community Awareness*** • Community Youth Meetings	Sudarsan Dahal Program Coordinator 9841769535, sudarshan.dahal@crs.org.np
WaterAid Nepal	Hygiene Promotion Through Routine Immunization	All district of Bagmati Province	• Integrated hygiene promotion in the immunization program at the Health Directorate and technical support to HD, district and local level for conducting the routine immunization and hygiene promotion program. • In total 2908 hygiene promotion materials, 63049 mirrors, and 63049 danglers were distributed to districts of Bagmati province. • 85% of hygiene promotion sessions were conducted and 70118 mothers and guardians participated in hygiene promotion session • Monitoring/onsite coaching of hygiene promotion session is conducted by Quality Monitoring Officer.	Jonyta Baral Quality Monitoring Officer 9843586731

Marie Stopes International	Health	• All Palikas: Nuwakot, Dhading and Sindhuli district. • Lalitpur: Lalitpur Metropolitan City • Kathmandu: Kathmandu Metropolitan City • Chitwan: Chitwan Metropolitan City	MSI is a SHRH service providing organization. So, the service number is as follows: • Uterine Prolapse Management: 3,742 • Cervical Cancer Screening: 4,207 • Family Planning (Long term): 2,408 • Family Planning (Short term): 9,071 • Sterilization (Female and male): 274 • Safe Abortion Services: 6,239 • STI Consultation: 1399	1. KP Upadhyay 9851070208 kp.upadhyay@mariestopes.org.np 2. Kumar Acharya 9851195598 kumar.acharya@mariestopes.org.np
AIDS Healthcare Foundation	Health, AHF Nepal mainly focuses on HIV/AIDS	• Kathmandu • Chitwan • Makwanpur & • Lalitpur	• Total # of condom distribution (LOVE Condom): **148,418** • Total # of HIV testing and Counselling, Positive diagnosed, Positivity from static clinic: **3,459 Tests/371 Positive/10.73% Positivity** • Total # of HIV testing and Counselling and Reactive cases from CLT: **3,342 Tests/99 (2.96% positivity)** • Percentage of HIV Diagnosed clients Linked to ART service: 95.75% • # 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): **5,091** • Total # of Active PLHIV on ART: **5,074 (99.7%),** # of Totally New Enrollment at ART Clinics: **737 &** Total # of PLHIV get Viral Load test result: **3,975** • Percentage of PLHIV Virally Suppressed: **98.7%** • % of PLHIV On ART enrolled on Free Health Insurance: **85** • %of clients with confirmed TB diagnosis among total active PLHIV: **0.9%** • Conducted CMT, CLT Training, CME, CES, QI-TWG • Reached & Supported for Transportation: 1,156, Lab investigation: 886, Food: 939, Medicine: 403 & Complicated case management 45 to poor clients • Conducted Stakeholder meetings, D/LPAC and CPAC Meetings as relevant • Shared the monthly, HY & annual program progress report to MoHP, SWC, NCASC, PHD and other partners & government line agencies • Conducted Physical Data Audit & Testing Data Review • Makwanpur- Goat Farming support: 1 & Beauty Parlor Training: 1 • Bharatpur- Beauty Parlor Training: 1, • Kathmandu (Through NAP+N)- Goat Farming: 1 & Car Driving Training:	AIDS Healthcare Foundation Nepal Country Office Damodar Marga, Thasikhel, Lalitpur-14, Nepal GPO Box: 10377 Telephone: +977-1-5193493 3. Email: info.ahfnepal@aidshealth.org Website: www.aidshealt

Japan-Nepal Health and Tuberculosis Research Association (JANTRA) Japan-Anti Tuberculosis Association (JATA)	Neglected Tropical diseases (NTD) Tuberculosis	• Bhaktapur, Chitwan, Dhading, Kathmandu, Kavre, Lalitpur and Makwanpur	**Support Under Save the children/Global Fund** • Early TB case notification through sputum collection and transportation in the hard-to-reach population • TB screening of children, malnourished children, DR suspects, 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 **JANTRA as an implementing partner** • Active TB case finding using the ultra- portable digital chest x-ray in marginalized, vulnerable population • Orientation on active case finding to all the staff members working in Urban Health Clinics, Mobilize local volunteers, Conduct active case detection by mobile team (Chest X-Ray and TB Lamp), Advocate NCDA members by providing TB information, Conduct TB awareness campaign, Advocate clinic management committee and elected members on National Tuberculosis Control Programme, orientation on patient charter and patient friendly care and support, strengthen urban health clinics, 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	Ram Sharan Gopali 9841896531 Subidhnagar, Koteshwor, Kathmandu jantra@ntc.net.np 01-5104601
Nepal Public Health Foundation	Occupational Health and environment Farming, Health and Environment Nepal Project (FHEN) Pesticide Minimization	Bagmati Province / Chitwan – all Municipalities	• Investigated the link between pesticide exposure during pregnancy and low birth weight at Bharatpur Hospital; conducted an endline survey on Knowledge, Attitude, and Practices (KAP) on pesticide use. • Trained farmers on IPM through FFS; educated stakeholders (health workers, FCHVs, pesticide spray workers, retailers, schoolteachers) on pesticide health risks and minimization. Advocacy: Engaged governments via panels, webinars, and policy workshops. • Organized panel discussions, webinars, policy level workshops. • Community sensitization (Hiking for a Cause, No Pesticide Week). Supported cooperatives in IPM-FFS and follow-ups.	Ms. Srijana Bhattarai, Project Manager, FHEN 9802326098
	Reducing MMR and NMR through Community Engaged Digitalized Comprehensive Continuum of Care	Eco-Ethnographically diverse Rautahat district Nepal	• Pilot study at Dapcha ward-9 at Namobuddha municipality to uncover the root causes of maternal deaths in the region.	Aavash Regmi. Project Coordinator 9801185418
	The Global Health Network-Strengthening Research and Capacity	Bagmati Province	• Built Research capacity via regular meetings. • Organized seminar on SDG priorities and research club on maternal and neonatal health. • Conducted consultative meetings and follow-ups.	Deepesha Silpakar Project coordinator 9802302477

THE LEPROSY MISSION NEPAL	HEALTH SERVICE DELIVERY, RESEARCH AND TRAINING	7 provinces, 12 districts	• Leprosy diagnosis, treatment, reaction /relapse, management, contact tracing • Disability prevention, management, rehabilitation • Stigma reduction, advocacy awareness • Leprosy trainings, Cutting edge high quality clinical, mycobacterial, social research • Community engagement, livelihood support, empowerment activities	Website: https://tlmnepal.org/contact/ Phone:01-5151931/01-5151371 Dr Jemish Acharya, Head of Programmes & Learning (jemisha@tlmnepal.org) Mr Shovakhar Kandel, Country Director (shovakhark@tlmnepal.org)
Beyond Beijing Committee (BBC) Nepal	SRHR – MHM, FP, Safe Abortion, Comprehensive Sexuality Education (CSE)	Kathmandu Makawanpur Kavrepalanchowk Lalitpur	Empowered young people make decision about their sexuality, voice their needs and claim their rights (Information & Education) • Capacity Building Training on the components of CSE and regional and International Advocacy Platforms linking with CSE among young people • CSE sessions for out of School adolescent and Young People at district • Developed an online e-course to address gender-justice and GESI. A critical mass reinforces positive norms and values (Public Support) • Media Sensitization and Mobilization • Social media campaign on CSE, Gender, SRHR and disability • Day Celebrations: Women's day, MHM Day, she decides Day and 16 Days of Activism against Gender Based Violence • Sensitization of local non-traditional allies to foster positive attitude around SRHR • Orientation to School Management Committee/Social Development Committee • Teachers Training on CSE Governments adopt, implement and account for human rights-based policies and laws (Advocacy) • Orientation on Right to SMRHR Act to enhance youth friendly SRHR services to provincial and local elected bodies • Advocacy meeting with local government for prioritization of adolescent and young people's SRHR • National level consultation on Commission on Status of Women with government and CSOs • Joint Consultation Meeting with different government bodies to address SRHR, gender justice and CSE at federal level (beureaucrats). • Policy Dialogue with parliamentarian on CRC and CEDAW Recommendation. • Provincial and national youth consultations to development youth call for action/recommendations focusing CSW, ICPD+30 and B+30 Strengthening civil society • Joint and collaboration meeting with various CSOs and CSO network working on CSE, youth SRHR and Safe abortion at local and National level.	Ms. Krishna Kumari Waiba, Chairperson,BBC chairperson@beyondbeijing.org info@beyondbeijing.org 01 4794615

KOSHISH	Mental Health and Psychosocial Support and its Promotion through advocacy	Bagmati 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. Opd registration process. 7. Coordination and collaboration meeting with stakeholder. 8. Meetings and seminars with bureaucrats of different Ministries of Bagmati Province. 9. Delegations. 10. Advocacy Campaigns 11. Advocacy skills training for the self-advocate 12. Suicide prevention workshop with parliament members 13. Federal-level workshop with policy and decision-makers.	Sunira Lama Advocacy Officer Bagmati Province Sunira.lama@koshish.org.np 9768445204
		Bagmati Province MI Project (Nuwakot –Bidhur Municipality Panchakanya RM & Likhu RM Rasuwa-Kalika	1. Community Engagement 2. Support Services and Follow-ups 3. Advocacy and Awareness 4. Training and Capacity Building	Sapana Subedi Advocacy Officer Bagmati Province Sapan.subedi@koshis.0rg.np 9846825466

Annex -1 Contributors of the health

Advisory Committee

S.N.	Name of officials	Post	Designated Office
1	Dr Sumitra Gautam	Secretary	Ministry of Health
2	Dr Narendra Kumar Jha	Director	Health Directorate
3	Mr. Sagar Prasad Ghimire	Division Chief	Ministry of Health
4	Dr Khageshwor Gelal	Division Chief	Ministry of Health
5	Mr. Kiran Shrestha	Division Chief	Ministry of Health
6	Dr Nabin Darnal	Section Chief	Health Directorate
7	Ms. Sanju Roy	Section Chief	Health Directorate
8	Ms. Sajana Sakha	Section Chief	Health Directorate
9	Mr. Arjun Poudel	Section Chief	Health Directorate
10	Mr. Nirmal Ghimire	Section Chief	Health Directorate

Technical Working Group

S.N.	Name of officials	Post	Designated Office
1	Mr. Dl Shah	Statistics Officer	Health Directorate
2	Ms Pratibha RL Shahi	Data Specialist	UNICEF
3	Ms Rita Badu	Entomologist	Health Directorate
4	Ms Bipsana Shrestha	Public Health Officer	Health Directorate
5	Ms Laxmi Pradhan	Public Health Officer	Health Directorate
6	Ms Tripti Dhakal	Public Health Officer	Health Directorate
7	Mr Muskan Pudaisaini	Public Health Officer	Health Directorate

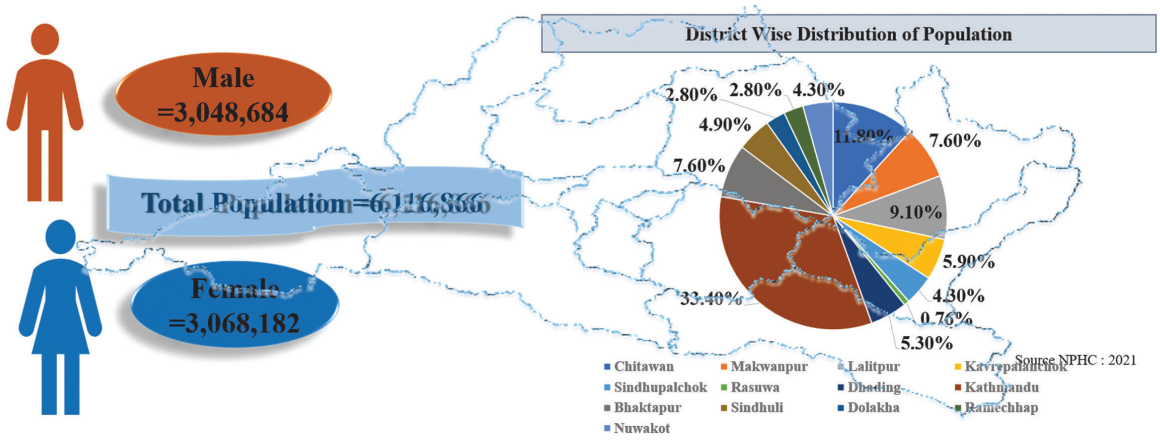
List of the Contributors

S.N.	Name of officials	Post
1	Gyan Bahadur Khadka	Finance Officer
2	Ms Srijana Panta	Nursing Officer
3	Mr Uttam Raj Pyakhurel	VCI
4	Mr Jitendra Karn	TB Leprosy Officer
5	Mr Shiva Badal	Health Education Officer
6	Mr Sushil Acharya	Medical Lab Inspector
7	Mr Mohan Kumar Raut	Health Education Technician Inspector
8	Ms Rita Mahato	Nursing Officer
9	Ms Aakriti Chuke	Nursing Officer
10	Dr Anup Bikram BC	NCD and Mental Health Officer
11	Mr Sambhu Sah	Provincial Coordinator
12	Mr Rajesh Sah	Program Coordinator
13	Ms Babita Regmi	MSS Officer
14	Ms Jonyta Baral	QM Officer
15	Mr Hari Bhusal	Provincial Coordinator

Annex -2 Fact Sheet of Bagmati Province

BAGAMATI PROVINCE HEALTH IN FACTS AND FIGURES (2080/81)
Ministry of Health
Health Directorate
Hetauda, Nepal

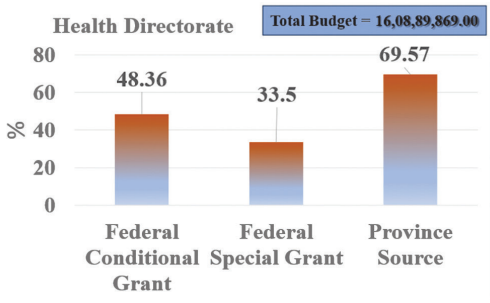
General Information



Service Delivery of Bagamati Province

Service Delivery	Total	Service Delivery	Total
Health Posts	630	Academy and Teaching Hospital (300+ Beds	13
Basic Health Service Center	190	Ayurveda and Alternative Hospital	13
Community Health Unit	181	Non- Public Facilities	1710
Urban Health Unit	187	Birthing Center	491
PHCC	29	CEONC Site	26
Basic Hospitals (5 - 15 Beds)	73	BEONC Site	27
General Hospitals (100 - 300 Beds)	26	Safe Abortion Site	250
General Hospitals (25 - 50 Beds)	83	ASRH Site	200
Specialized Hospitals (100 and above)	12	FCHV	9354
Super Specialty Hospitals	18	DR Center	2

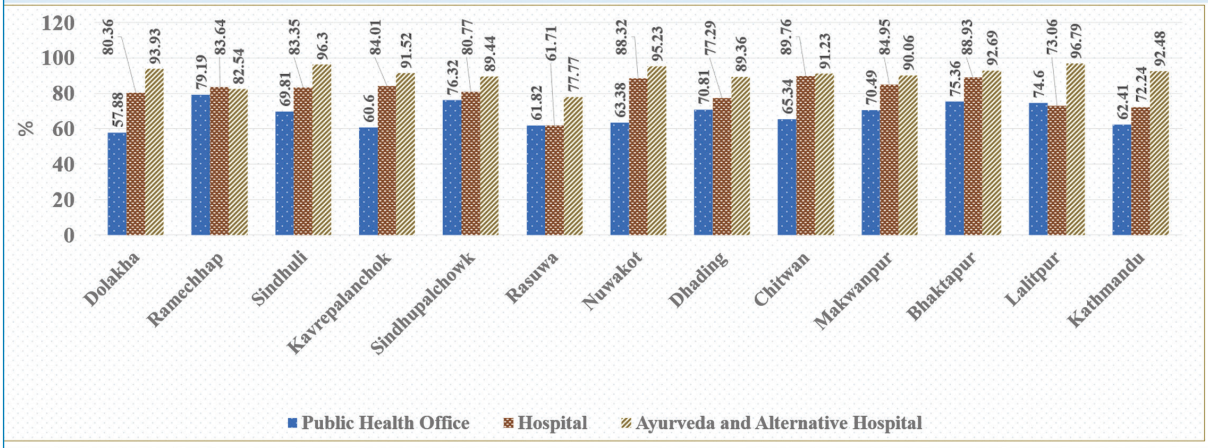
Financial Achievement 2080/81



	Total Budget (Rs)	Expenditure (Rs)	Expenditure (%)
Public Health Office	1,11,02,67,841	75,34,83,348.6	67.87
Hospital	1,72,75,09,500	1,43,91,91,073	83.31
Ayurveda and Alternative Hospital	25,48,38,000	23,17,50,066.3	90.94

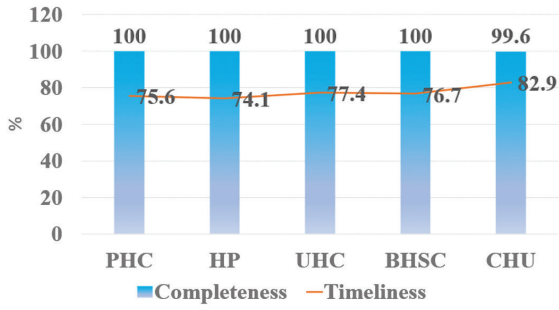
Source : NDHS 2022

Financial Achievement 2080/81 (%)

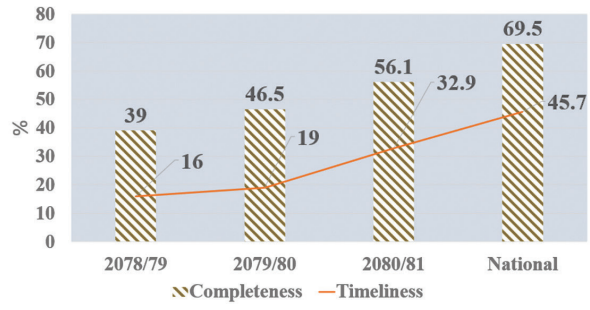


Health Facilities Reporting Status 2080/81 (%)

Reporting Status of Health Facilities 2080/81 (%)

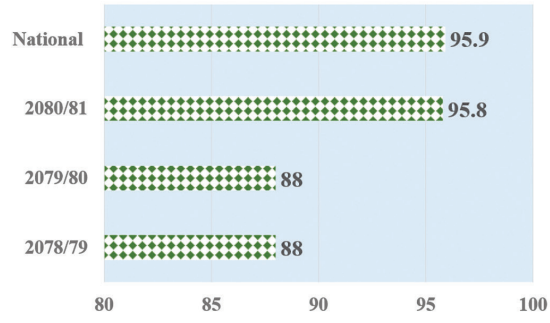


Reporting Status of Hospital 2080/81 (%)

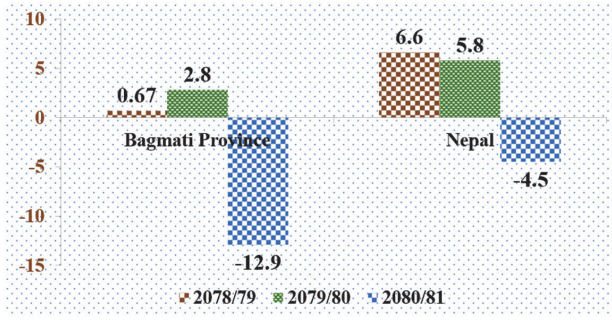


Immunization Coverage

Trend of Fully Immunized Children (%)

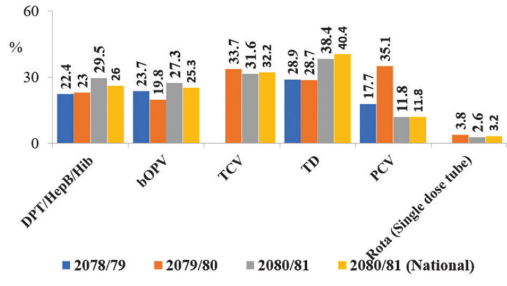


(DPT-HepB-Hib1 vs MR2 dropout rate)



Trend of Vaccine Wastage Rate (%)

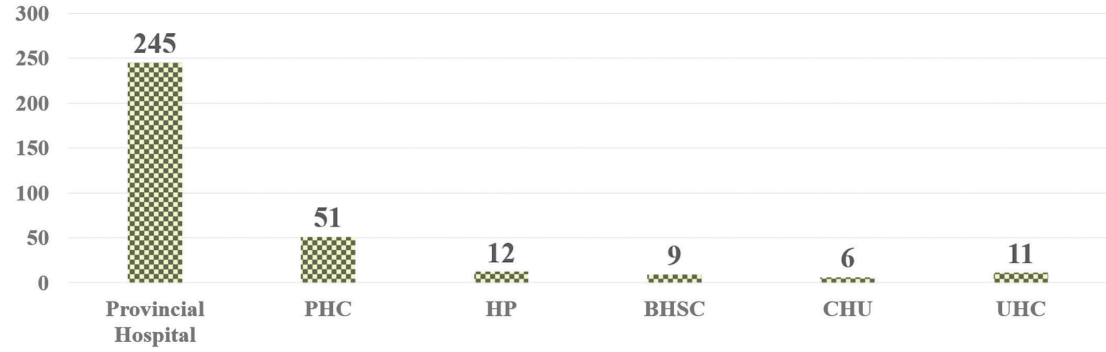
Multi Dose Vaccine Policy (MDVP)



Access and Utilization of Immunization Services

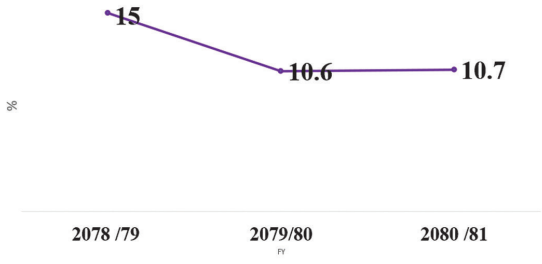
Category 1 (Less Problem) High Coverage(>90%) Low Dropout(<10%)	Category 2 (Problem) High Coverage(>90%) High Dropout(>10%)	Category 3 (Problem) Low Coverage(<90%) Low Dropout(<10%)	Category 4 (Problem) Low Coverage(<90%) High Dropout(>10%)
Makwanpur Kathmandu Lalitpur Bhaktapur Kavrepalanchok		Dolakha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

Average Number of People Served by Health Facilities /Day (2080/81)

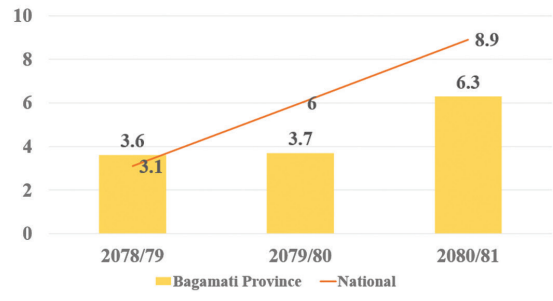


Nutrition Programme

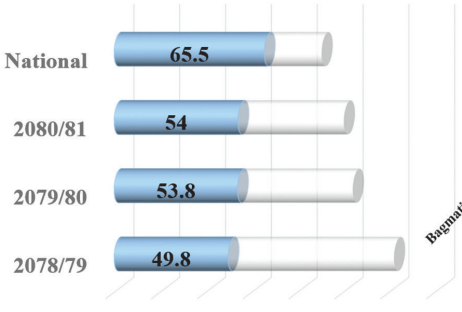
% of newborns with low birth weight (<2.5kg) among total delivery by HWs



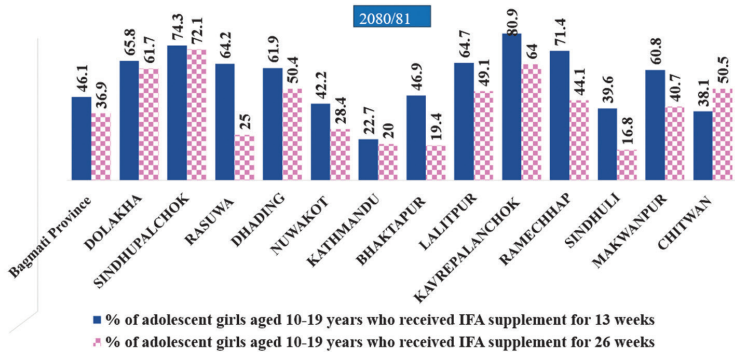
Average number of visits among children aged 0-23 months registered for growth monitoring



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

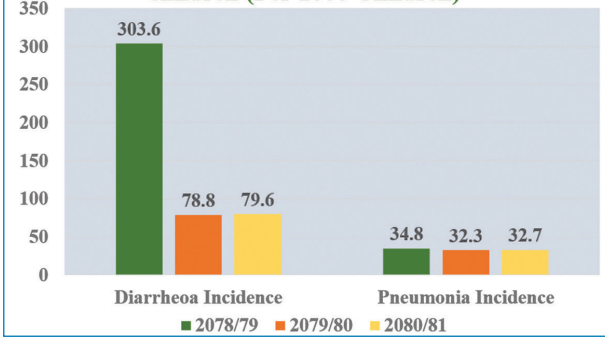


Adolescent girls who Received IFA Tablet (%)

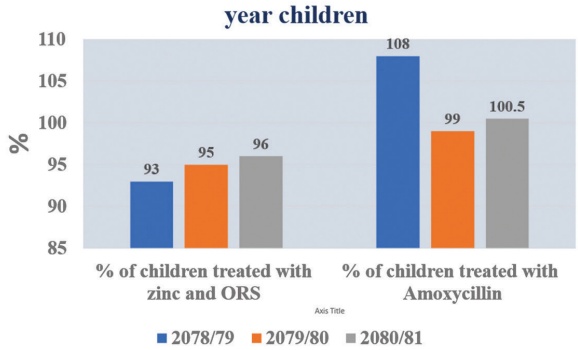


Integrated Management of Neonatal and Childhood Illness (IMNCI) Programme

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

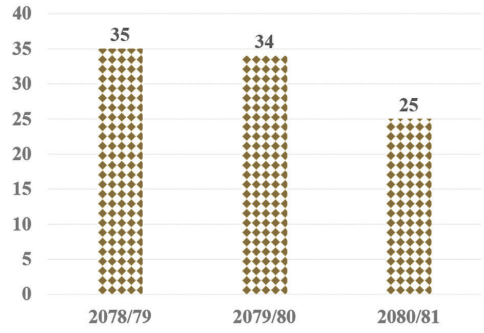


Treatment of Pneumonia and Diarrhea under five-year children

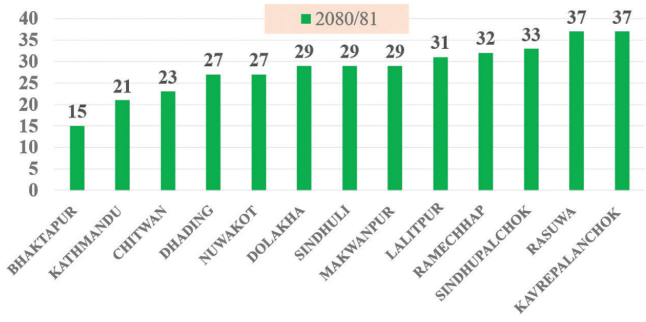


Status of Family Planning Service (%)

Trend of Contraceptive Prevalence Rate (%)

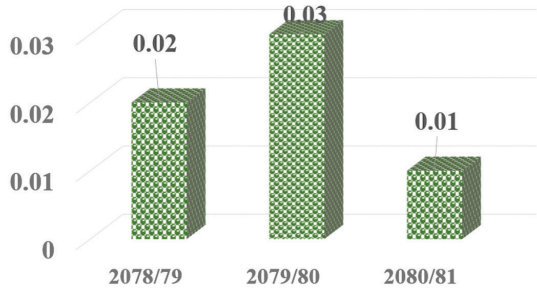


District Wise Status of Contraceptive Prevalence Rate (%)

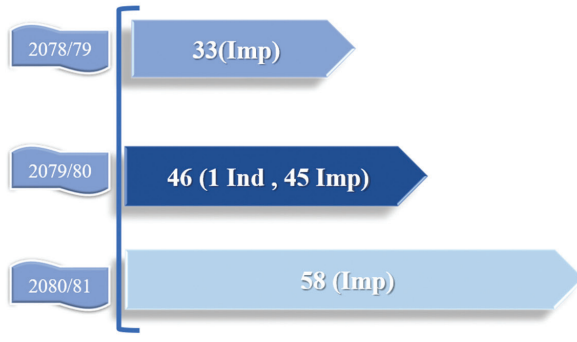


Malaria, Kala-azar and Dengue Programme

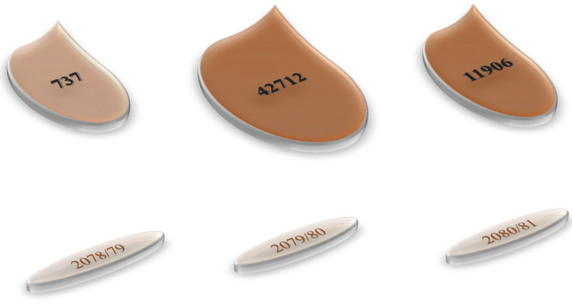
Annual parasite incidence (API) per 1000 population risk



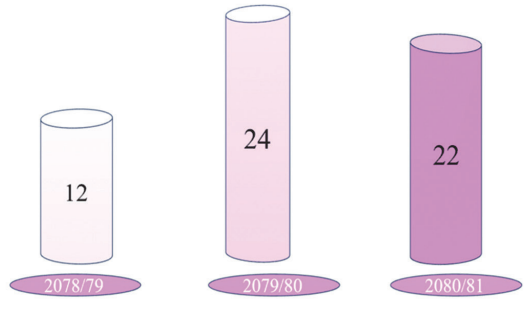
Trend of Malaria Cases (N)



Trend of Dengue Cases (N)

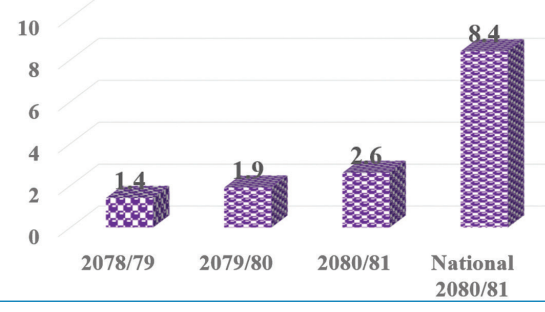


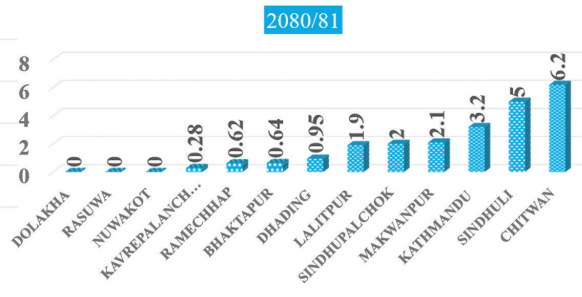
Trend of Kala-azar Cases (N)



Leprosy Programme

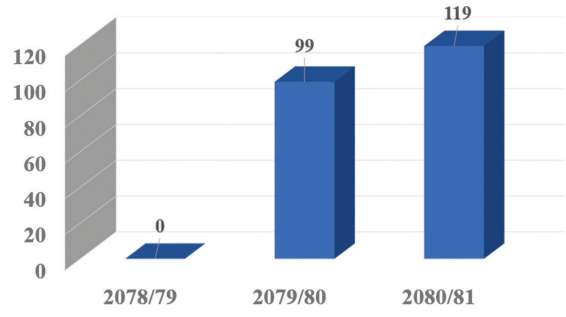
New Case Detection Rate of Leprosy



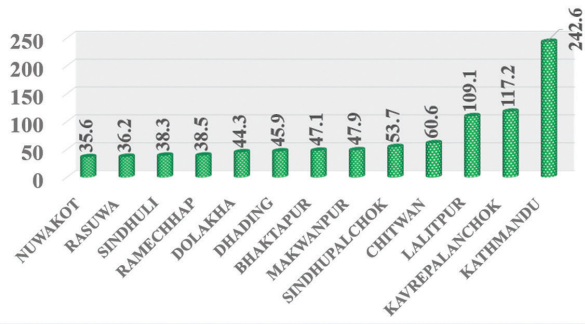


Safe Motherhood Programme

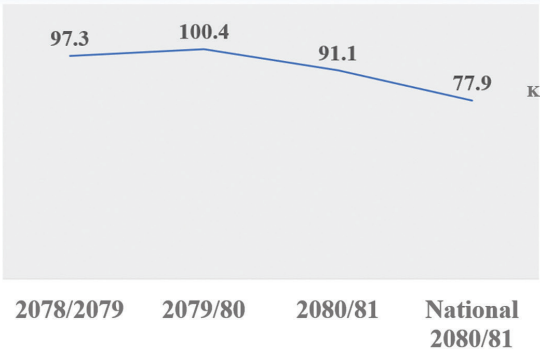
Trend of Pregnant Women Who Attended Eight ANC Visits as Per Protocol (%)

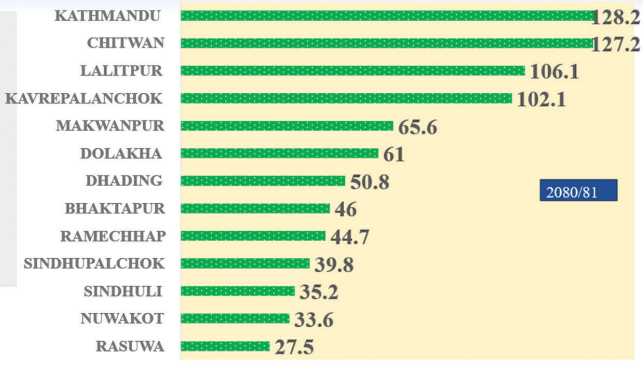


District wise Pregnant Women Who Attended Eight ANC Visits as Per Protocol FY 2080/81(%)

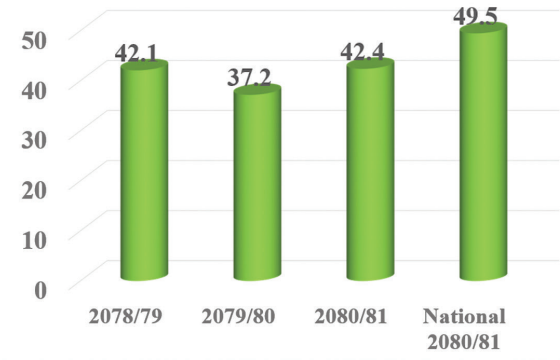


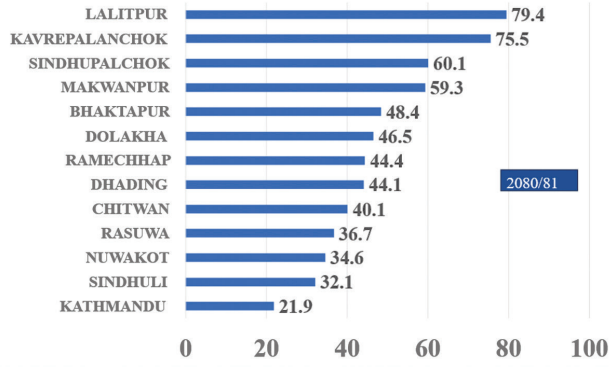
% of Institutional Deliveries



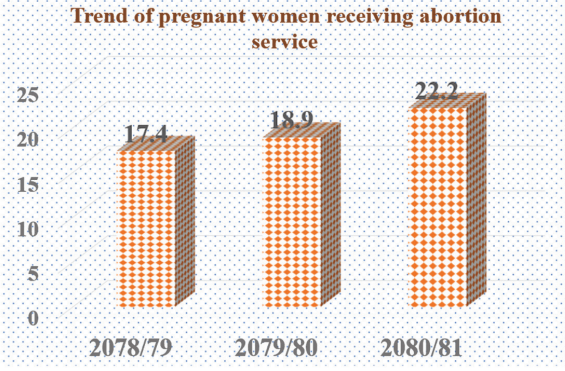


Mothers who had Three PNC Check-up as Per Protocol (%)

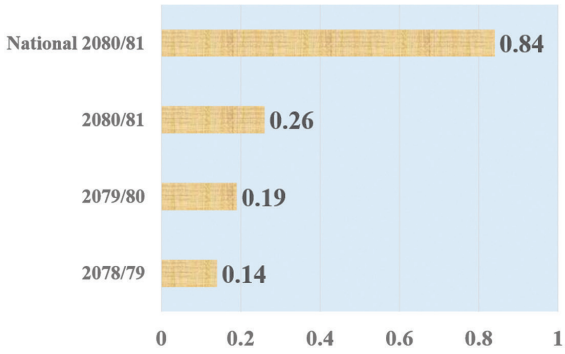


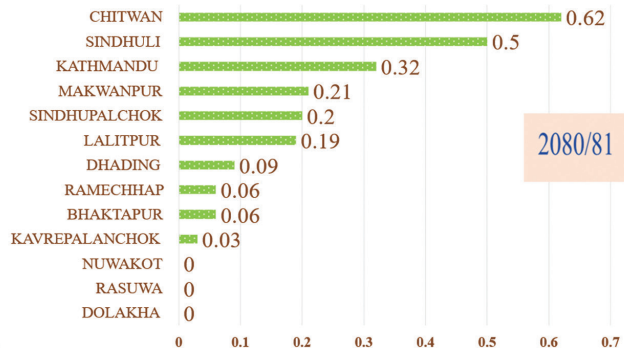


Status of Safe Abortion Service (%)



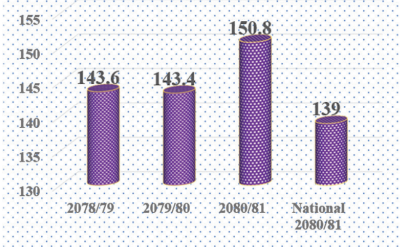
Prevalence of leprosy per 10000 Population



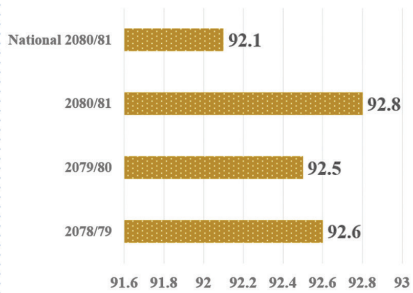


Tuberculosis Programme

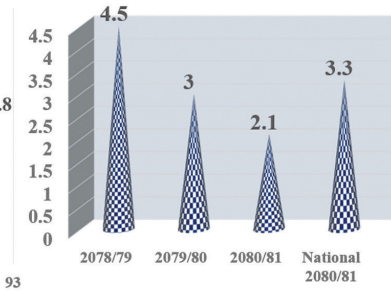
Case Notification Rate (all forms of TB cases)



Treatment Success Rate

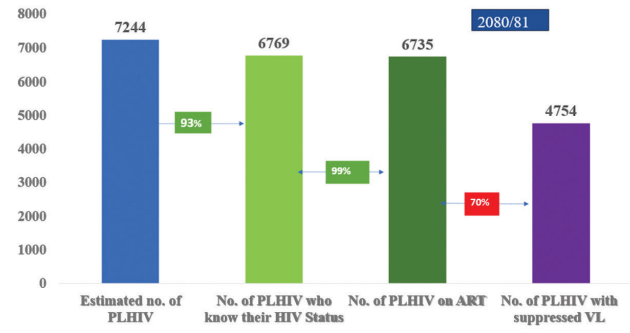


Slide positivity rate

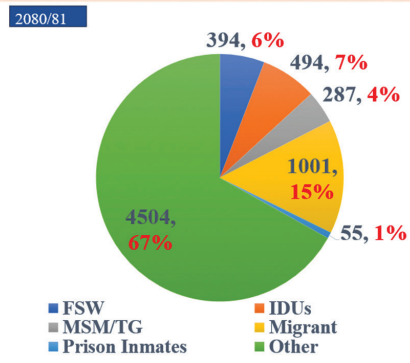


HIV/AIDS and STD Programme

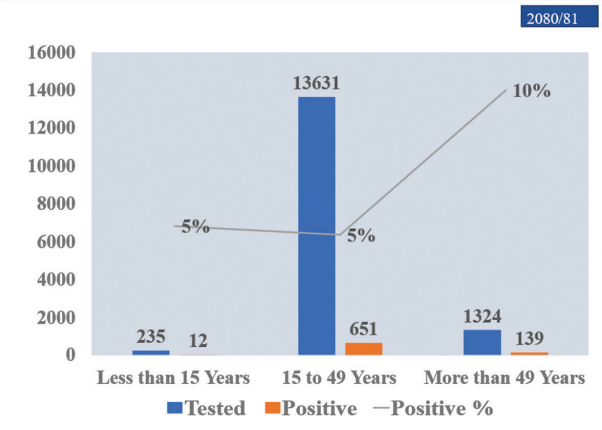
HIV Program – PROGRESS TOWARD 95-95-95 TARGET



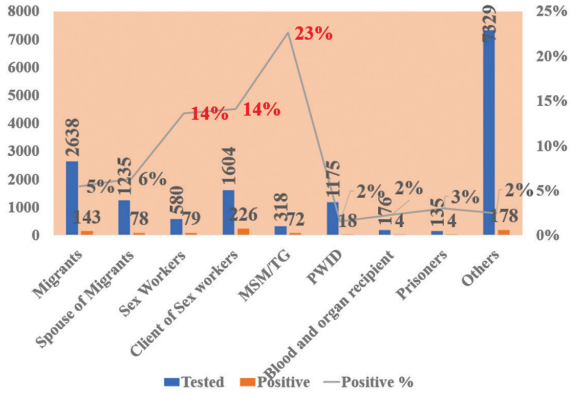
PLHIV currently on HIV by Risk Group



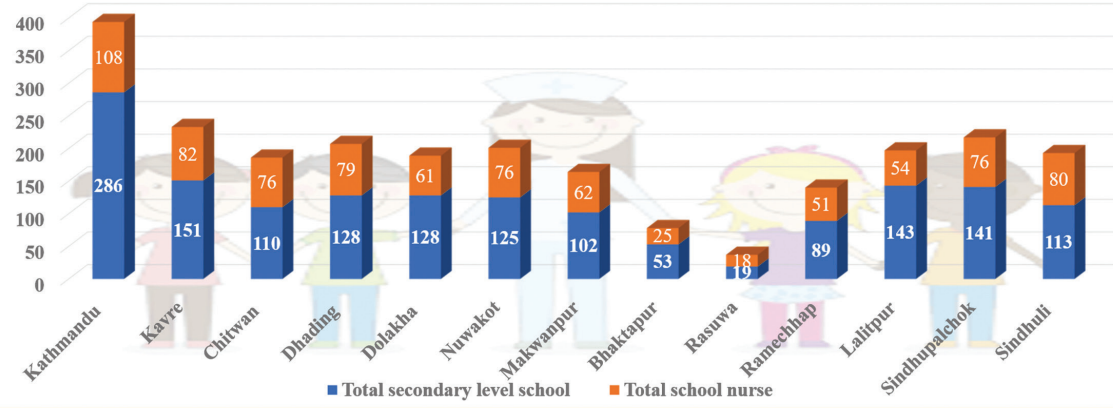
HIV TESTING AND COUNSELLING (by age group)



HIV TESTING AND COUNSELLING (by Risk group)

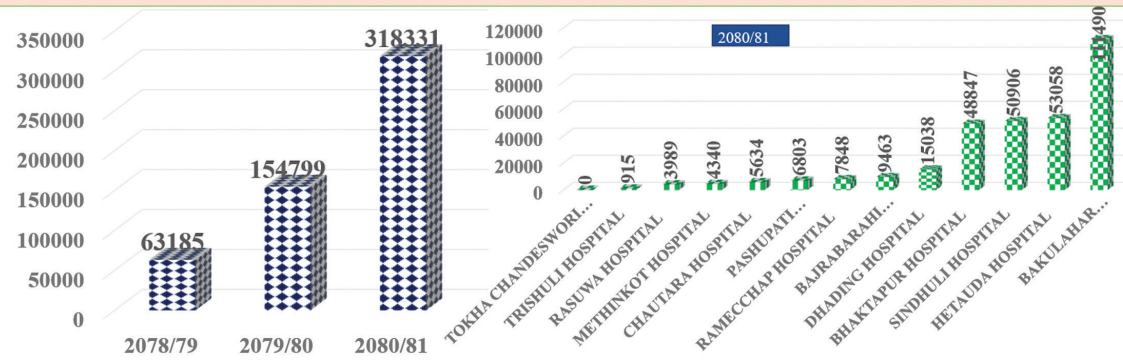


School Health Nurse Programme Implemented School

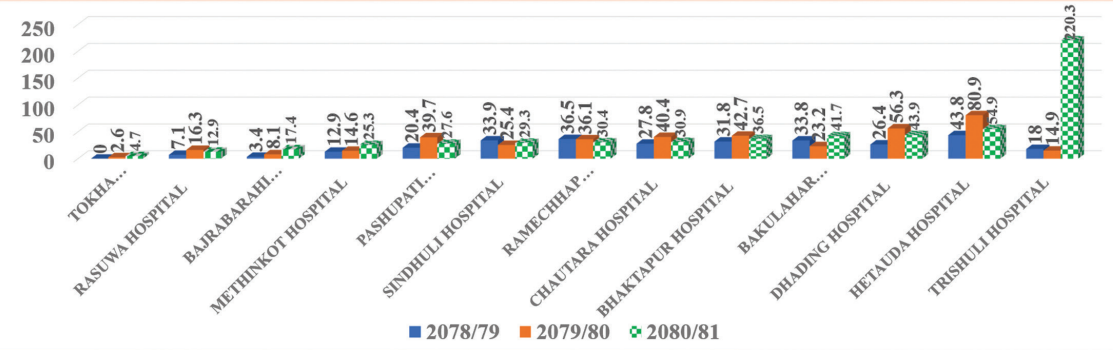


Provincial Hospital Service

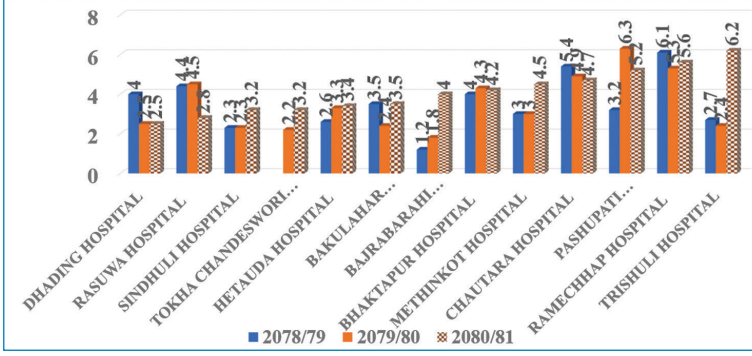
Total number of New OPD Visit (N)



Trend of Bed Occupancy Rate (%)



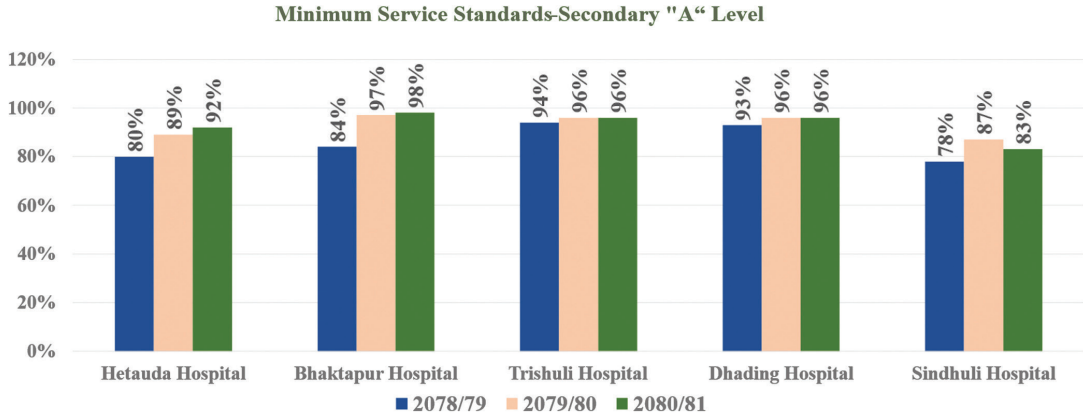
Trend of Average Length of Stay at Hospital (Days)

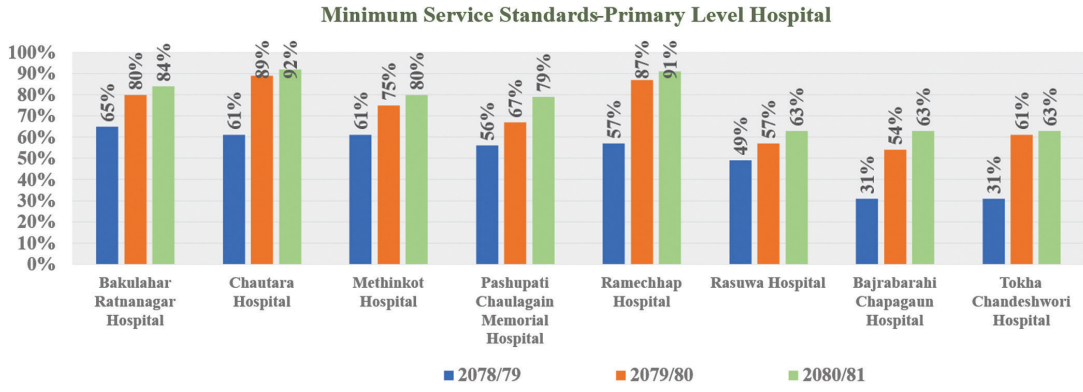


Top Five Morbidity

Disease	Number
Hypertension	36411
Dermatitis	24886
Diabetes Mellitus	23795
Dental Caries	19206
Abdominal Pain	15194

Minimum Service Standard (MSS)





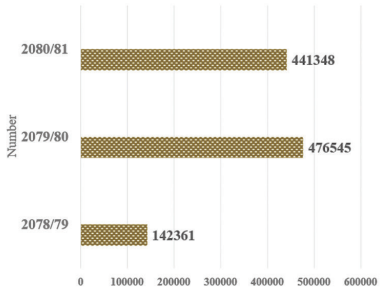
Health Development Partners in Bagamati Province (2080/81)

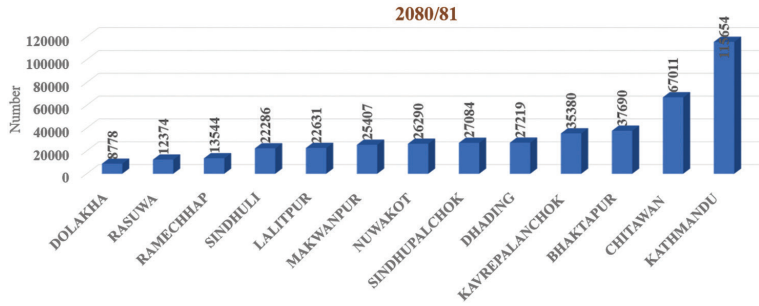
World Health Organization Nepal
unicef
NSI Nick Simons Institute
Save the Children
fhi360
EpiC Meeting Targets and Maintaining Epidemic Control
psi Healthy lives. Measurable results.
FAIR MED Health for the Poorest
PLAN INTERNATIONAL
WaterAid
USAID FROM THE AMERICAN PEOPLE
MOMENTUM A Global Partnership for Health and Resilience
नेपाल जनस्वास्थ्य प्रतिष्ठान Nepal Public Health Foundation
Ensuring Health as Right and Responsibility of Nepali People.
Tilganga INSTITUTE OF OPHTHALMOLOGY
RTI INTERNATIONAL
Let there be sight नेपाल नेत्रज्योति संघ
BEYOND BEIJING COMMITTEE NEPAL
National Mental Health Self-Help Organization 2008 KOSHISH
नेपाल परिवार नियोजन संघ FAMILY PLANNING ASSOCIATION OF NEPAL
Good Neighbors
AHF AIDS HEALTHCARE FOUNDATION
WELT HUNGER HILFE WHH
SaMi Safer Migration Program
World Vision
Visible Impact
National Development Foundation NDF
MOCHEN 2014 Mother Child Health Nepal
MARIE STOPES NEPAL
Shanti Med Nepal
LI-BIRD
The Leprosy Mission Nepal
JAPAN-NEPAL HEALTH & TB RESEARCH ASSOCIATION
SOCIAL WELFARE COUNCIL NATIONAL DISABLED FUND
medic
handicap international humanity &inclusion
HELEN KELLER INTL

Ayurveda and Alternative Medicine Service

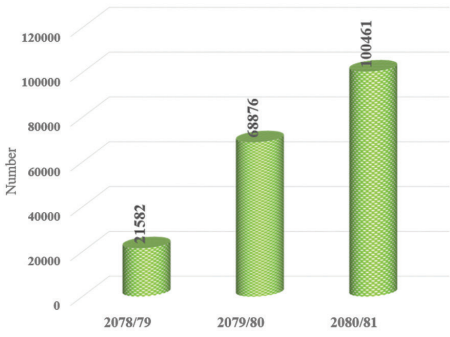
Health Facilities	2080/81	FY 2080/81 by District												
		Dolakha	Sindhupalchok	Rasuwa	Dhading	Nuwakot	Kathmandu	Bhaktapur	Lalitpur	Kavrepalanchowk	Ramechhap	Sindhuli	Makawanpur	Chitwan
Ayurveda and Alternative Medicine Hospital	13	1	1	1	1	1	1	1	1	1	1	1	1	1
Ayurveda Aushadhalaya	50	2	5	2	4	7	5	2	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**

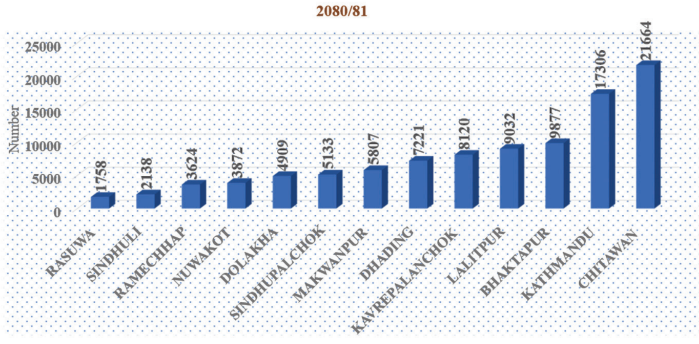
Total Number of Client Served



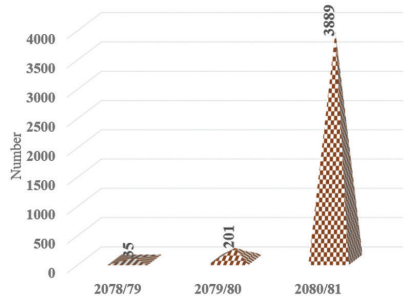


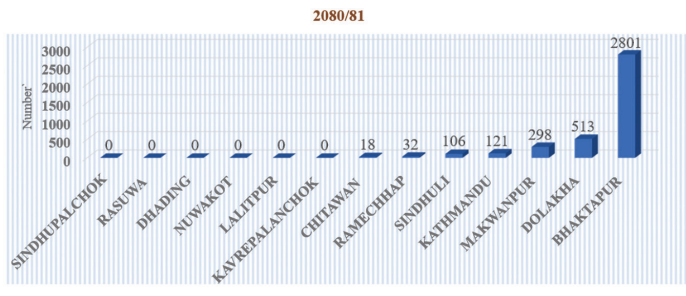
Panchakarma Service





Salya Service





Government of Bagamati Province

Ministry of Health

Health Directorate

Hetauda, Nepal