National HIV/AIDS, Viral Hepatitis and STIs Strategic Plan - IV

(2023 - 2028)

National HIV/AIDS, Viral Hepatitis and STIs Strategic Plan - IV (2023 - 2028)

National HIV, AIDS and STI Control Programme
Department of Public Health
Ministry of Health
Kawangjangsa, Thimphu

www.moh.gov.bt

Acknowledgements

The National HIV, AIDS and STI Control Programme (NACP) acknowledges the contributions of each person who, in diverse ways, contributed to the successful development of the National HIV/AIDS and STI Strategic Plan IV. The inputs and contents of this strategic plan were derived from several participatory consultations held with key stakeholders and beneficiaries. We wish to express our gratitude to the various organizations that contributed towards the development of the Strategic Plan. We also wish to extend our sincere appreciation to the members of the Task Team for their guidance and technical support. Finally we extend our appreciation to all our developmental partners, especially the WHO, UNAIDS, UNICEF and the Global Fund.

Acronyms and Abbreviations

ADR	Antiretroviral drug resistance	MoH	Ministry of Health
AHP	Adolescent Health Programme	MoIC	Ministry of Information and Communication
AIDS	Acquired Immunodeficiency Syndrome	MoLHR	Ministry of Labour and Human Resources
AMR	Antimicrobial resistance	MSM	Men who have Sex with Men
ANC	Antenatal Clinic	MSTF	Multi Sectoral Task Force
ART	Antiretroviral Therapy	NACP	National HIV/AIDS and STI Control Programme
ARV	Antiretroviral (drugs)	NCWC	National Commission for Women and Children
BCC	Behavioural Change Communication	NEQAS	National External Quality Assessment System
PHC	Primary Health Centre	NGO	Non-Government Organization
BNCA	Bhutan Narcotic Control Agency	OI	Opportunistic Infection
BSS	Behavioural Surveillance Survey	OPD	Out-patient Department
CBO	Community-Based Organization	ORC	Outreach Clinic
CCM	Country Coordination Mechanism	OST	Opioid Substitution Therapy
DANIDA	Danish International Development Agency	PCR	Polymerase Chain Reaction
DIC	Drop-in Centre	PEP	Post-Exposure Prophylaxis
DoPH	Department of Public Health	PMTCT	Prevention of Mother-To-Child Transmission
DOTS	Directly Observed Treatment Short Course	PrEP	Pre-Exposure Prophylaxis

DYS	Department of Youth and Sports	RBA	Royal Bhutan Army
DVED	Drug, Vaccine and Equipment Division	RBG	Royal Body Guard
ELISA	Enzyme linked immunosorbent assay	RBP	Royal Bhutan Police
EPI	Expanded Programme on Immunization	RDS	Respondent Driven Sampling
EQAS	External Quality Assurance System	RENEW	Respect Educate Nurture and Empower Women
FDG	Focus Discussion Group	RHU	Reproductive Health Unit
GNHC	Gross National Happiness Commission	SRH	Sexual and Reproductive Health
HBsAg	Hepatitis B Surface Antigen	STI	Sexually Transmitted Infection
HBV	Hepatitis B Virus	TB	Tuberculosis
HCV	Hepatitis C Virus	TOT	Training-of-Trainers
HISC	Health Information Service Centre	TPHA	Treponema Pallidum Haemagglutination Assay
HIV	Human Immunodeficiency Virus	UN	United Nations
HMIS	Health Management Information System	UNAIDS	Joint United Nations Programme on HIV/AIDS
HPV	Human Papilloma Virus	UNFPA	United Nations Population Fund
HRW	High risk women	UNICEF	United Nations Children's Fund
IBBS	Integrated Biological Behavioural Surveillance	UNODC	United Nations Office on Drugs and Crime
IEC	Information, Education and Communication	VCT	Voluntary Counselling and Testing
JDWNRH	Jigme Dorji Wangchuck National Referral Hospital	VHW	Village Health Worker
MCH	Maternal and Child Health	WB	World Bank

MDG	Millennium Development Goal	WHO	World Health Organization
M&E	Monitoring and Evaluation	YDF	Youth Development Fund
MNCH	Maternal Neonatal Child Health	YFHS	Youth Friendly Health Services
MoE	Ministry of Education		

Contents

Introduction

The National HIV/AIDS and STIs Control Programme (NACP), Ministry of Health, initiated the development of the new National Strategic Plan (NSP) IV 2023 – 2028 to build upon the successes of NSP III 2017 – 2023, and the NSP IV includes viral hepatitis in addition to HIV and STIs.

The NSP IV 2023 - 2028 was developed through a comprehensive consultation process, an external review of the Bhutan national HIV and STI response over the previous five years, which included viral hepatitis B and C. It seeks to provide a continued framework, including civil society, to end AIDS and eliminate viral hepatitis and STIs in Bhutan by 2030. It builds on the successes of the previous strategies and addresses the challenges identified in the NSP III end of term review in May 2023. The provision of HIV, viral hepatitis B and C, STI, as well as TB services is well integrated within the overall health system and is a part of the comprehensive services package delivered through a network of facilities in the healthcare delivery system. NSP IV seeks to further integrate the national response across these disease categories. It draws on the lessons learnt from the current Global Fund grants' implementation review, and places strong emphasis on strengthening the multi-sector and civil society collaboration and engagement.

The Strategic Directions of NSP IV are aligned with Regional and Global Strategic Directions in the respective Integrated Regional Action Plan and Global Strategies, building on the framework of NSP III, and key interventions identified through the consultation process.

The National Health Policy of Bhutan has established the governance structures and responsibilities for the governance of the HIV, viral hepatitis and STI response. The Policy has been in place, with revisions, for more than 10 years. With the evolving epidemic, scientific breakthroughs, and lessons learned, the governance structures have evolved to a fast-tracking mode towards ending the HIV epidemic in particular, but also that of viral hepatitis and STIs.

1. Situational/Response Analysis: Bhutan's STI, HIV and Hepatitis Programme

1.1. Country Profile

Bhutan is a small (38,394 km^2) landlocked kingdom between India and China in the Himalayas. It has an estimated population of around 787 000 in 2023, living in approximately 164,300 households (average household size 4), with a median population age of 29. The male-to-female ratio is 1.08. The population growth rate is 1.3%, and the population density is 19.9 persons per sq. km. More than 60% of the population lives in rural areas. The median age is 29.4 years. People aged 15-64 constitute around 70% of the population and about 23% of the population is under the age of 14. About one-seventh of the population (14.2%) consider themselves 'poor' or 'very poor' *(1)*. More than 32,000 Bhutanese (nearly 5% of the population) are living abroad, most in Australia (up to 15,000) and India*(2)* —a trend that seems to be accelerating *(3)*.

The country is divided into 20 districts (*dzongkhag*), which are subdivided into thromdes (urban municipalities) and 205 rural gewog (village blocks). The main religion is Buddhism. Bhutan has been a constitutional monarchy since it transitioned from absolute rule in 2008. In 1999 the government of Bhutan lifted a ban on television and the Internet. A new constitution was adopted in 2005.

1.2. Bhutan's National Vision

Bhutan's response to the HIV epidemic started long before the first HIV case was detected in 1993. The government developed a Short-Term Plan to address HIV (AIDS at the time) and implemented this in 1989. It progressed to a three year Medium-Term Plan I (1990-1993). Following the Medium Term Plan, a five year Mid-Term Plan II (1995- 1999) was developed and implemented under the Health Sector Programme Support (HSPS) I and HSPS II/ NSP II covered the years 2012-2016, while NSP III (the most recent which included both HIV and STIs) covered the period 2019 – 2023 *(4)*. The first NSP for viral hepatitis prevention and control, aligned with global elimination goals, was published in 2019 and extended in 2022 to cover the period to 2026 *(5)*.

The Royal Decree on HIV and AIDS issued by His Majesty the Fourth King on the 24th of May 2004 serves as the guiding principle in the fight against HIV and AIDS. It called for all members of the society to help prevent HIV and AIDS and provide care and compassion to those infected. The national response to HIV and STI has been guided by the National Vision 2020 document (*"Bhutan 2020: Vision for Peace, Prosperity and Happiness"*) *(6)*, based on principles of universal access, human rights, and engaging the key sectors to combat the epidemic. Under the vision of the Kings and the Five-Year Plans developed by the Gross National Happiness

commission, Bhutan is pursuing the developmental philosophy of Gross National Happiness (GNH), which also upholds strong principles of equality and rights for all human beings.

Standing as a testament to the Government's commitment to the provision of free and quality universal health care**,** the constitution of the Kingdom of Bhutan declares "the state shall provide free access to basic public health services in both modern and traditional medicines" and "the state shall endeavour to provide security in the event of sickness and disability or lack of adequate means of livelihood for reasons beyond one's control". The National Health Policy provides the general direction to guide the government in achieving the national and international health goals within the spirit of social justice and equity.

The National HIV, Hepatitis and STIs Control Programme (NACP) of the Ministry of Health is responsible for the implementation of the National HIV, viral hepatitis and STI Prevention and Control Strategic Plan *(4)*through the public health service infrastructure at national, regional and local levels. Its implementation takes place in coordination with other public entities, and includes services provided by civil society and non-governmental organizations. It is advised by a Technical Advisory Group (TAG) for HIV/AIDs.

The national health system provides services through health facilities, which include a national referral hospital and two other regional referral hospitals, 49 district hospitals and 179 Primary Health Centres (PHC) and 53 sub-posts. PHCs have outreach clinics, which are visited by PHC staff according to established schedule. PHCs also link with the voluntary village health workers (VHW) in the communities.

The National Strategic Plan IV guides the HIV, viral hepatitis and STI response in the country. The period of the NSP IV is 2023 - 2028, to synchronize with the implementation of the 13th Five Year National Development Plan. NSP IV implementation will be reviewed during the mid-year of its implementation (2026) for relevance and effectiveness in achieving the targets and will be adjusted as necessary. The NSP IV aims to inform national, district, community-level stakeholders and implementing partners of the strategic directions, which are to be taken into consideration when developing their respective strategies and implementation plans for the HIV, viral hepatitis and STI response.

1.3. Global and Regional Commitments

Bhutan's HIV, hepatitis and STIs responses has been in line with and guided by Global and Regional strategies, Action Plans and recommendations, to which Bhutan has committed.

These include the impact, program and policy goals and targets of the following:

- UN General Assembly Political Declarations and Resolutions
- *Global AIDS Strategy 2021-2026 - End Inequalities. End AIDS.(7)*
- WHO Strategies and guidelines, which includes a recent move towards integration across these infectious diseases
- Global Health Sector Strategies on, respectively, HIV, viral hepatitis and sexually transmitted infections for the period 2022-2030 (GHSS)*(8)*
- Integrated regional action plan for viral hepatitis, HIV and sexually transmitted infections in South-East Asia; 2022–2026 *(9)*

1.4. Economic profile and health financing

Bhutan is a lower-middle-income country; its GDP per capita was USD 3,359 as of 2021.(8) Bhutan's currency is the ngultrum, the value of which is pegged to that of the Indian rupee. Bhutan's economy has grown rapidly in recent decades. The economy is based on agriculture, forestry, tourism, and the sale of hydroelectric power to India. Over half of the population works in agriculture, mainly subsistence farming and animal husbandry. Due to its mountainous landscape, building and maintaining roads and other infrastructure is difficult and expensive *(10)*. Economic development is largely limited to the public sector as Bhutan's private sector is relatively underdeveloped. However, with a rapidly growing educated workforce, the private sector is increasingly prominent in development. Hydropower contributes about a fifth of the gross domestic product. Bhutan has achieved high economic growth over the past 3 decades. Significant achievements in social development have also been made in recent years, with the number of poor approximately halved between 2007 and 2013. Despite notable socio-economic progress, the challenge remains for Bhutan to expand its economic base and make its growth more inclusive, especially for unemployed youth and women.

Bhutan's health budget in FY 2019-2020 was around 4.5% of GDP, an increase from 4% in FY 2018-2019. The government uses pooled tax-based government funding to support free comprehensive health care services for all citizens and all foreigners residing in the country*(11)(12)*.In 2019-2020, the government financed around 73.4% of all health expenditures; out-of-pocket expenditures accounted for around 15.4% of total health spending in the same period. The government currently funds

approximately 50% of the current resource requirements of the National HIV/STI Strategic Plan III, and government co-financing has increased over time *(3)*. For the current national GF grant entitled "Tailored for the focused portfolio" for the implementation period July 2021-June 2024, the co-financing by the RGoB was USD 2.858 million for the period (2021-2024) which is more than the 15% requirement by the GF *(11)*.

The Royal Government of Bhutan strives to provide equal access to essential health services, including diagnosis and treatment of HIV, TB/HIV co-infection, and other STIs. The allocation of domestic resources is based on the sectoral contributions towards Gross National Happiness (GNH). Of the nine domains, health has directly contributed towards two domains, health and psychological wellbeing and indirectly toward all other domains. Hence, the RGoB has invested in health progressively and incrementally. The National Health Accounts (NHA) 2021 showed that there is an increasing trend in health expenditure from the last two financial years.
For instance, current health expenditures (CHE) have increased from 17% in FY 2018-19 to 22% in subsequent financial years which is the equivalent total expenditure of 4% and 4.5% of GDP in 2018-2019 and 2019-2020, respectively. On average, this is consistent with the global average of 5.99% in 2014 and the regional average of 3.88 - 5.41% respectively *(11)*.
Although the health services are provided free of cost by the Government, there are still some out-of-pocket payments (OOPs) incurred while accessing the health services by the population at large. This is similarly the case for the key population including the people living with HIV (PLHIV) when accessing the care and treatment services. The National AIDS Spending Accounts (NASA), for example, in 2020 it was estimated that OOP costs were US$264,321 (8%) of total AIDS spending between 2016 - 2018*(13)*. The OOP trend may affect key populations in accessing the testing, care and treatment services on a timely basis thus increasing the risk of further transmission.

1.5. National Health System and Health Care Services

Health care services in Bhutan are provided free of cost throughout the country ensuring district-specific and regional balance in coverage in line with universal access principle.
The Government is committed to implementation of pro-poor policies, which is supported by data on Primary Health Care coverage for more than 90% of the population, through PHC in distant areas and regular outreach clinics. The health services are provided through a four-tiered network. The network constitutes the National Referral Hospital (also Regional for Western region), 2 Regional Referral

Hospitals in Mongar and Gelephu, 27 district hospitals, 23 Ten Bedded Hospitals, 184 PHCs, 28 sub-post, 1 Indigenous hospital, 54 indigenous units and 562 Outreach Clinics supported by PHC staffs and Village Health Workers at the community level.

Service provision varies by health facility level. The national and regional referral hospital provides specialized tertiary care services. The next level consists of district level hospitals manned by medical officers with X-ray, laboratory facilities and significant emergency and inpatient services. The district hospitals are the main health care service management units in the district. The next level consists of 207 PHCs. All district level hospitals and 10 Bedded Hospitals provide secondary level health care services. The PHCs are the primary level of health care facilities providing primary health care services and are manned by three or two health workers depending on the workload of the patients. At the community level, Village Health workers (VHWs) take care of around 20 households and they provide services entirely on a voluntary basis. The PHC staff provide monthly Out Reach Clinics (ORCs) to the most remote areas providing preventive and minor curative services to the community at regular intervals. TB diagnostic and treatment services are provided through 27 hospitals including district and referral hospitals and 5 Ten Bedded Hospitals. All PHCs are also involved in screening and referral of presumptive TB cases, follow up, default and contact tracing and provision of DOT. The private sector is limited to only few laboratory and diagnostic facilities in Thimphu, Phuentsholing and Samdrup Jongkhar.

Bhutan has been able to achieve high coverage of more than 90% of primary health care. The under-five years mortality has been reduced significantly from 134 in 1990 to 34 per 1000 live births in 2021. The infant mortality and neonatal mortality in 2021 were 15 and 21 per 1000 live births, respectively *(5, 14)*. Although stunting in children has reduced from 33% in 2010 to 21.2% in 2015, severe malnourishment is still a concern mainly in rural areas and in the eastern region. More than 95% of the population has access to safe drinking water and safe sanitation facilities. The life expectancy is 70.2 years. Inadequate nutrition, perinatal and maternal conditions, poor sanitation, and parasitic infections still top the causes of major illnesses *(15)*.

The maternal mortality ratio was estimated at 89 per 100,000 live births in 2017, a substantial reduction from the rate of 380 per 100,000 live births in 1994. Delivery in health facilities is reported to be over 93% in 2017. Like many other countries in the region, non-communicable diseases are on the rise and account for nearly 70% of mortality in the country posing a significant and growing public health challenge *(15)*.

The Chief Medical Officer (CMO) looks after the administrative functions of the health facilities and curative health services as part of the recent health transformation and is remapped under the National Medical Services (NMS). The **District Public Health Officer (DPHO)** looks after the public health activities and reports to the Dzongdag (the district governor), and provides secretariat services for MSTF.

Multi-Sector Task Force (MSTF) has been established at district level for coordination of the HIV and STI activities. These Committees are not equipped to implement HIV programmes, which is the function of the hospitals and other health service units under the leadership of the MoH. The mandate of the MSTFs is to address health issues, particularly STI and HIV preventive and promotion activities and reproductive health, coordinating STI and HIV activities at district and gewog levels, supporting local communities and NGOs implementing STI and HIV activities and facilitating participation of people living with HIV.

MSTFs have an important role to play in planning, implementation, monitoring and evaluation of STI and HIV prevention, care and treatment services. The Dzongdag (Governor) is the Chairperson of the MSTF. Members of the MSTF include Dzongkhag officials of the health sector and other government sectors, gups/mangmis (elected representatives), NGOs, CBOs including religious leaders, private sector, people living with HIV and community leaders. They are a driving force for expanding the response and conducting effective STI and HIV activities*(5)*.

At the sub-district level, the administrative unit is the gewog (block). Each gewog has about 2,000 to 4,000 people and is headed by the gup (elected community leader). Each of the 205 gewogs has a council known as Gewog Tshokdu (GT), which is chaired by the Gup who is also the Chairperson of the gewog MSTF. Gewog MSTFs are responsible for coordinating and monitoring the response at the gewog level. The PHC staff provides the necessary technical support and are responsible for the health sector response and ensure good coverage of HHS activities in the Gewog, in particular knowledge, awareness and access to services and commodities.

Prisons: There is one assigned health worker in each prison/facility who looks after the health of the prisoners, numbering around 1780. Annual routine screening of communicable and non-communicable diseases of prisoners is practiced in the country. In a previous GF grant (2015-2018) targeted interventions were carried out for prisoners (HIV/STIs testing and other prevention activities) but these interventions were dropped during the 2018-2021 grant *(3)*. HIV service provision,

including testing and treatment does occur inside Bhutan prisons, however the known case burden is low, in the single digits.

1.6. Key Findings from the 2023 review of the 2017-2023 National Strategic Plan

The 2023 end of term review of the NSP III had a focus on HIV and STI response and concluded that Bhutan's HIV epidemic remains small, with an estimated 1118 PLHIV as of 2022, and, like other countries in the region, is moving towards a more concentrated epidemic. To follow this trend the review suggested Bhutan's response should shift to focus more on key populations, including women engaged in direct or indirect sex work, men who have sex with men, people who use drugs and alcohol, and transgender people. The effective response to HIV epidemic that is concentrated among key populations will necessitate a specific focus on these populations, including through investment in community-led interventions, tailored to the need of these specific populations.

The key findings of the end of term review can be found in annex 1.

The 2023 review of NSP III recommends a focus in the following specific areas for NSP IV *(3)*:

- Enhance the overall strategic focus on key populations at higher risk for HIV/STI: FSW, HRW, MSM and TGP
- Further differentiate HIV/STI prevention and testing services for KP, giving them options for according to their need and circumstance
- Focus on reaching the first '95' among KP, i.e. further differentiate and improve HIV/STI testing among FSW, HRW, MSM, TGP, and their intimate partners
- Ensure adherence and linkages to comprehensive treatment and care for people living with HIV including TB/HIV and mental health;
- Improve services for the prevention of mother-to-child-transmission of HIV, Syphilis and Hepatitis B/C
- Advocacy and capacity building to reduce contextual and facility-related barriers to accessing HIV and STI services
- Invest in building the capacity of CBOs and in community led initiatives to reach and recruit more people within key populations at higher risk so that they can receive HIV services, in line with the Political Declaration on HIV and AIDS: Ending Inequalities and Getting on Track to End AIDS by 2030, which urges countries to ensure that community-led organizations are strengthened so that they can deliver 30% of HIV testing and treatment services, 80% of HIV prevention services for KPs, and 60% of programs to support the achievement of societal enablers by 2025
- Improve the collection and use of strategic information

1.7. Epidemiology, Prevention, Testing and Treatment

1.7.1.HIV

The evolution of the HIV epidemic in Bhutan has differed from that of other countries in the region. The HIV epidemic started in 1993, later than other countries in the region (HIV program review report). Bhutan's sustained low HIV prevalence can at least partly be attributed to its political commitment, which has historically operated to maintain isolation from foreign contact and cultural influence. Furthermore the extensive mountain ranges of this Himalayan nation have abetted the state's efforts to uphold relative seclusion. However, the start and gradual growth of international tourism (since 1974) has changed this *(3)*.

Typically, in most countries, key populations at elevated risk acquire infection early in an epidemic, when the conditions for rapid spread are present (e.g., high sexual partner turn-over, multiple concurrent partnerships, sex work, low condom use, injecting drug use). These key populations include men who have sex with men, transgender women, and high-risk women who work in or frequent entertainment venues. HIV incidence rises fast in these populations, often accelerating after a threshold of 5% prevalence is surpassed16. HIV transmission to their sexual partners also becomes significant, increasing the overall prevalence of HIV. There is a risk of further transmission if people living with HIV are not diagnosed or are diagnosed late.

There has been limited evidence on the modes of HIV transmission in Bhutan. The 2021 study on risk attribution found the most dominating risk behaviours contributing towards the mode of HIV transmission in Bhutan are through multiple heterosexual partnerships with sex workers, clients of sex workers and their spouses *(16)* At the same time, HIV sentinel surveillance and HIV testing through outreach have identified few HIV infections among female sex workers, leading to considerable uncertainty. Other key populations at elevated risk include men who have sex with men, transgender women, and people who use drugs or people who inject drugs *(16, 17)*.

Recent reviews suggest that there are high rates of unprotected sex in Bhutan among young men and women, men who have sex with men, and transgender women and men. This prompted the NACP to carry out an extensive review of the existing HIV service package for key populations and gender-related barriers and to develop a revised service package with three priority areas linked to the 95-100-95 national target. These priority areas are 1) General HIV and STI prevention; 2) Differentiated HIV Testing Services to reach 95% of estimated people living with HIV; and 3)

Linkage to care and support to provide treatment for 100% of people diagnosed with HIV and viral suppression in 95% of those receiving treatment.

1.7.1.1. Epidemiology

Bhutan is characterized as a low-level HIV epidemic. Its HIV epidemic started only in 1993, much later than in other countries in the region *(18)*. Bhutan's sustained low HIV prevalence can at least partly be attributed to its political commitment, which has historically operated to maintain isolation from foreign contact and cultural influence. Furthermore, the extensive mountain ranges of this Himalayan nation have abetted the state's efforts to uphold relative seclusion. However, the initiation and gradual growth of international tourism (since 1974) has changed this *(19)*.

Sporadic new HIV cases were discovered between 1993 and 2000; from 2000 to 2013, the number of annual newly diagnosed HIV cases rose from 9 to 51, and since then, the number of new diagnosed HIV cases has fluctuated between 49 and 58 annually *(18)* Of the HIV cases detected, more than 80% of the cases were between the ages of 20-49 years.

The most recent HIV data obtained from the National AIDS/STI Control Program indicated that there have been 661 people diagnosed with HIV, of whom 648 were enrolled in ART as of April 2023. In 2022, 79 new HIV cases were diagnosed, higher than in recent years, when the number of cases fluctuated around 50, though possibly related to a rebound in social activities and testing following the COVID-19 pandemic. Out of the 648 PLHIV now on ART, 462 have received viral load testing, and 438 were virally suppressed *(20)*. In terms of mortality, cumulative AIDS deaths was estimated at 930 [649-1275] at the end of 2022*(21)*. In 2022 there were 32 AIDS related deaths (Spectrum estimates). Most often, deaths are caused by AIDS with sepsis and related complications (25%), alcoholic liver disease (21%), and tuberculosis (8%) (Derived from cumulative AIDS deaths)*(22).*

Spectrum estimates suggest that there are an estimated 1118 PLHIV in Bhutan as of 2022, resulting in Bhutan's HIV treatment cascade being presently 59-97-94 *(21)*.

Consistent with Spectrum projections, new HIV infections were estimated to have peaked between 2003 and 2005 and have steadily declined (Figure 2). The number of people estimated to be living with HIV has been continuing to climb, to an estimated 1,333 in 2022 (Figure 1), while HIV-related deaths (Figure 3) have been reducing more rapidly since 2015 in line with the rapid scaling up of effective HIV treatment in Bhutan (Figure 4). HIV incidence is projected to further decline over the forward period.

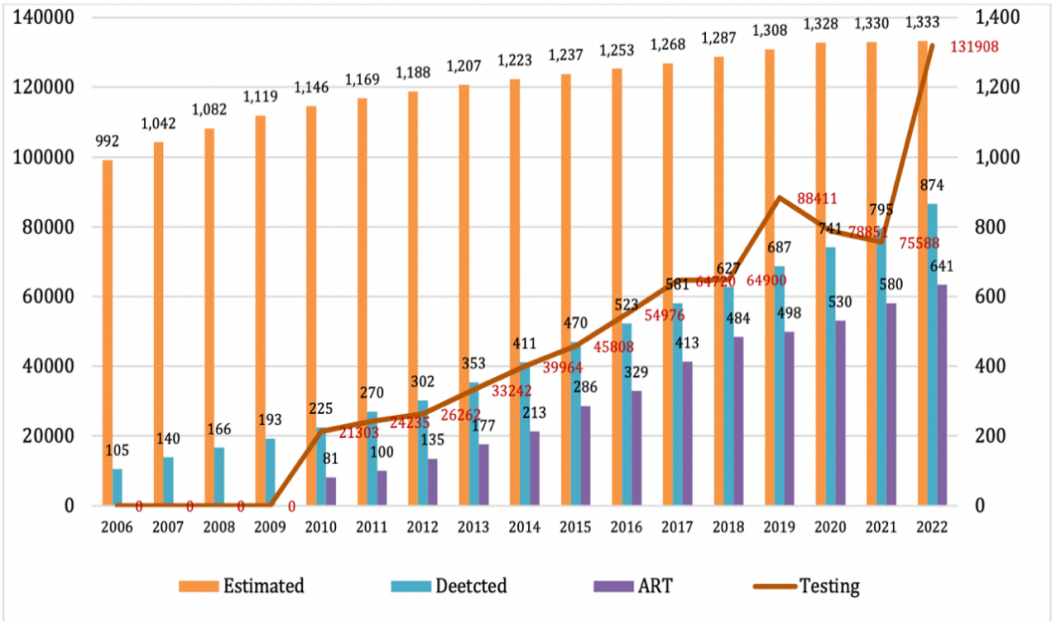


Figure 1 - Overview of the HIV epidemic (cumulative totals) in Bhutan 2006-2022 (Source: Bhutan HIV program review report)

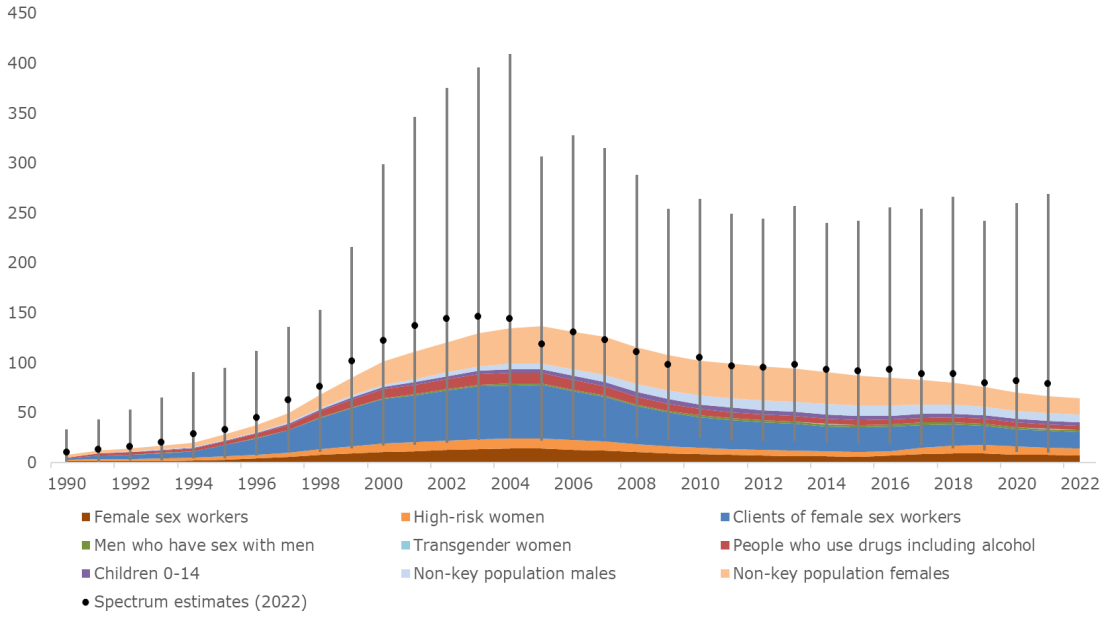


Figure 2 - Number of new HIV infections calibrated to Bhutan Spectrum estimates, 1990 to 2022. (Source: Bhutan HIV program review report)

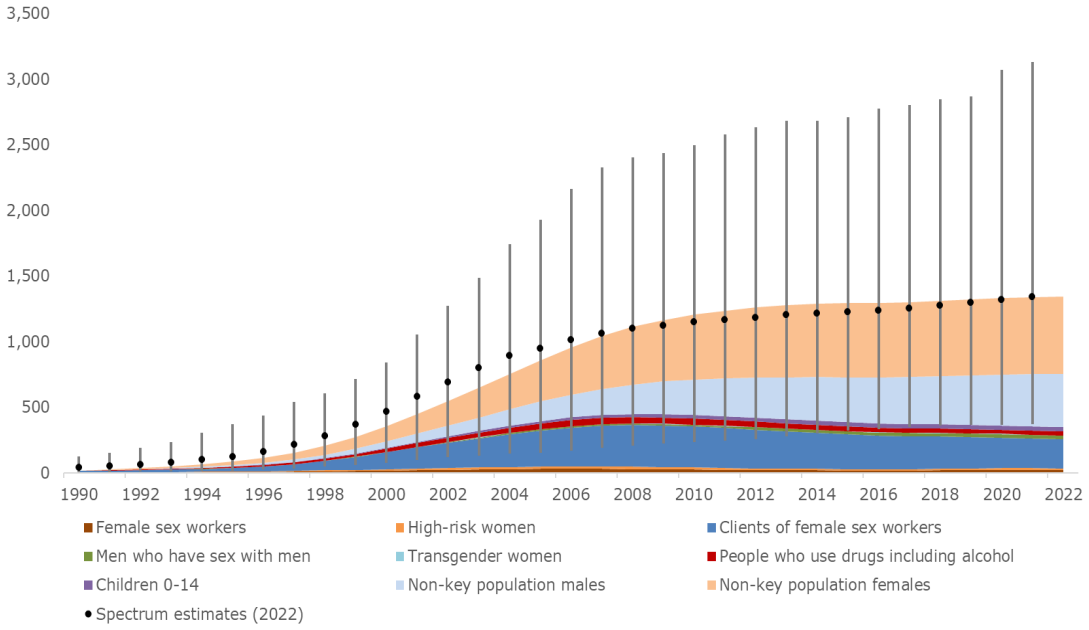


Figure 3 Number of people living with HIV calibrated to Bhutan Spectrum estimates, 1990 to 2022. (Source: Bhutan HIV program review report)

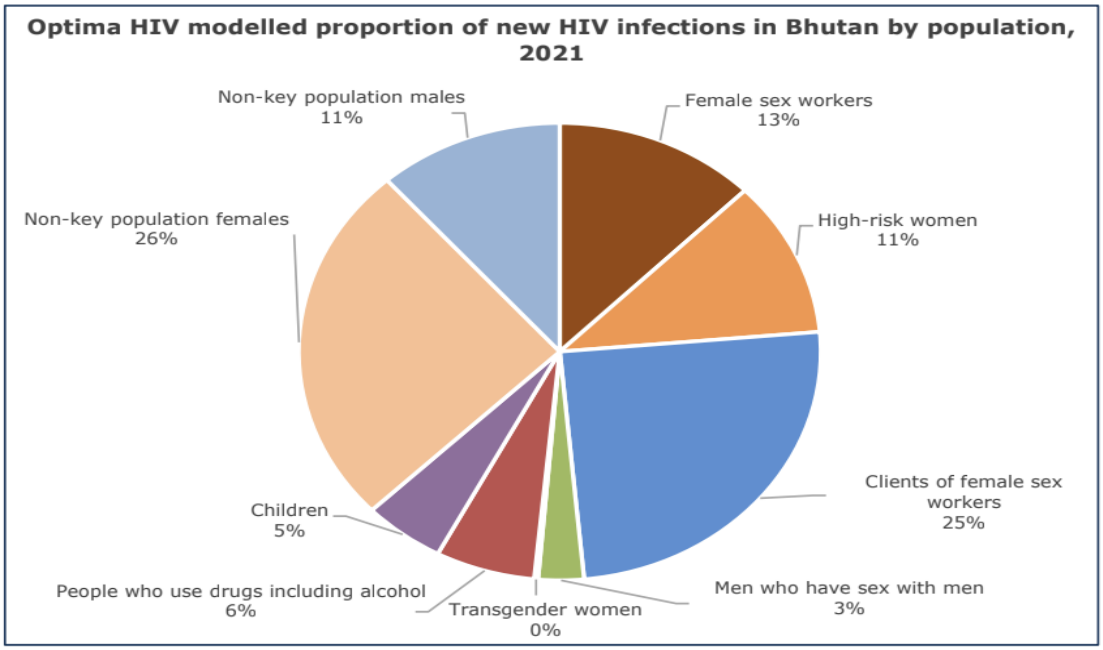


Figure 4 - Optima HIV modelled proportion of new HIV infections in Bhutan by population 2021 (Source: Bhutan HIV program review report)

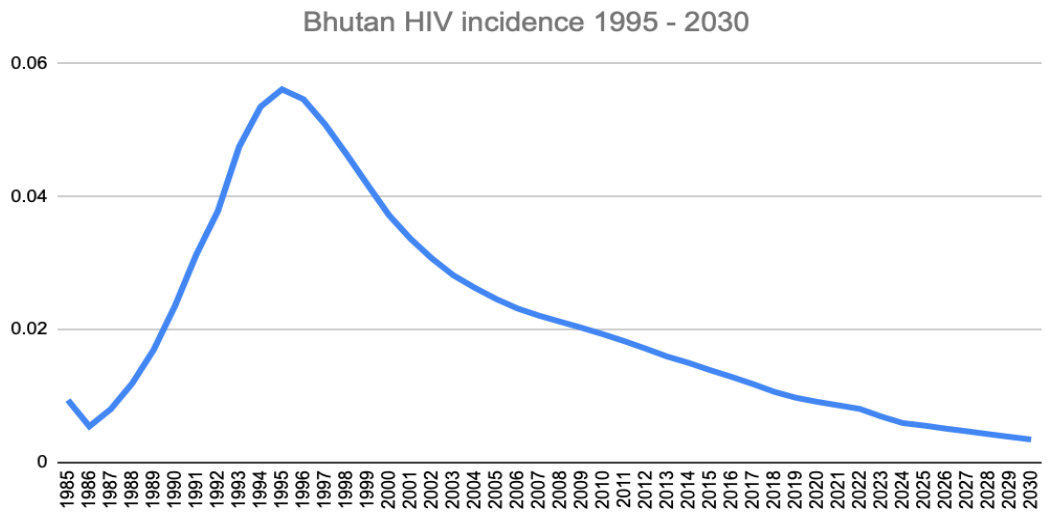


Figure 5 - HIV incidence of Bhutan 1985 - 2030, according to empiric data and Spectrum modelled projections 2023 (Source: NACP Bhutan,(21)

1.7.1.2. Prevention

Community based organizations engaging with key populations for HIV in Bhutan offer a service package which includes outreach and awareness-raising activities, distribution of condoms and lubricants, counselling and referral for VCT/facilitation of self-testing. Where possible they also try to offer financial support and livelihoods promotion, accommodation, and various skills development training opportunities; this is highly dependent on CBO funding availability.

While HISCs provide preventive and VCT services, these have limited coverage, with some KPs uncomfortable accessing these services due to internalized or social stigma. In addition, PrEP and PEP is not yet available. Nevertheless, KPs consistently reported that HISCs were preferred over other VCT locations such as hospitals, flu clinics, and others due to perceived risks of discrimination by health staff and/or disclosure of their HIV and/or KP status. Some KPs mentioned that HISC hours were a barrier to accessibility. Several KPs also mentioned that HISCs would be more attractive if they offered more services including treatment and additional screening options.

FSWs also mentioned that access to certain FP/protective tools (female condoms, oral contraceptives, injectable contraceptives) was limited due to unavailability or exclusive provision as part of FP services to married women. Nevertheless, most reported being given condoms and lubricant in the previous 3 months.

In 2022, 49.4% of sex workers were reached with HIV prevention interventions designed for sex workers, 26.3% of MSM were reached with HIV preventions designed for MSM and 55.3% of TF people were reached with HIV prevention interventions designed for TG people *(23)*. In 2022, 26.1% of MSM 49.4% of SW and 52% of TG people received counselling on condom use and safe sex (for example, through an outreach service, drop-in centre of sexual health clinic) *(23)*.

1.7.1.3. Testing, treatment and care

Bhutan currently follows a three-test algorithm for HIV testing, whereby rapid tests are used for the first test, and a second confirmation test is undertaken through both a Gelatin particle agglutination test and a 4th generation ELISA test. Bhutan Medical and Health Council regulations require any medical procedure (including testing) to be carried out by licensed and approved personnel. A few private diagnostic centres provide HIV testing as part of their diagnostic service. To December 2022, all reactive samples were referred to Royal Centre for Disease Control (RCDC) for confirmatory testing—however, since 1 January 2023 there has been decentralization and there are four major hospitals where confirmation testing can

be done, in an attempt to speed up the time from screen-test reactive result to confirmation and enrolment into ART*(3)*

The treatment, care, and support component of Bhutan's HIV response is strong with 98% (n=648) of those diagnosed with HIV on ART treatment as of April 2023 and of the 71.4% (n=462) of people diagnosed with HIV who have received viral load testing, 94.8% (n=438) virally suppressed. There have been stock-outs of VL testing reagents during the COVID-19 period though supply has recovered. Despite this, there remains a VL backlog, residual from COVID *(20)*.

Early initiation of treatment following HIV diagnosis is critical. In Bhutan, there remains a lag between diagnosis and ART initiation, a function of the need (until December 2022) for confirmation at the National Referral Laboratory. To address this, since January 2023, confirmation testing has been decentralized to four sites, one in each region of Bhutan. Laboratory staff in these sites have received training and are supervised by the NRL. The management of all PLHIV is still conducted centrally by the national counselling coordinator, who personally informs the counsellor in decentralized sites if a result is confirmed *(20)*.

Although the government provides health services free of cost, clients/patients incur some costs in accessing care and treatment. In a 2022 community-based monitoring study, 19% of key population members reported that some HIV services, especially viral load testing and CD4 counts, out-of-pocket expenses including travel which are unaffordable. Particularly for key populations living in rural areas, travel and accommodation are significant barriers to hospital-based HIV services. In addition, community dispensing and adherence support to KP are required in the package of service that the MOH engages CBOs to deliver to KPs.

Key populations are an increasing priority for HIV services in Bhutan. These populations include FSW, HRW, PWUD, MSM, TGW and people with historical and current risks for HIV. A recent analyses prioritized these key populations as follows in order of comprehensive HIV service provision needs*(24)*:

1. Programs for female sex workers including women working in entertainment venues
2. Programs for high-risk women
3. PrEP for female sex workers (subject to demand)
4. Inclusion of people who use drugs including alcohol through provision of HIV self-testing as part of the HIV budget to people already reached by existing programs not funded as part of the HIV budget (low marginal cost for surveillance, improved data, and potentially cost-effective test yield)
5. Programs for men who have sex with men and transgender women

6. Expanded availability of HIV self-testing accessed by people with historic risks as well as people with current risks

1.7.1.4. TB/HIV

The TB and HIV programs work collaboratively to prevent, diagnose, and treat TB and HIV co-infection *(25)*. The estimated overall 2021 TB incidence is 164 per 100,000 population (95% CI: 123-207). It is very low for the HIV co-infected individuals (reported at 0.50 per 100,000, 4 cases only). The National TB NSP was updated in 2023 as the NSP III 2024-2028. The national TB program provides routine screening for TB to all people living with HIV (PLHIV) who visit health facilities *(26)*. Additionally, the program offers TB preventive treatment (TPT) to all eligible PLHIV to reduce the risk of developing active TB disease. According to the Bhutan Health Management Information System, 95% of PLHIV who visited health facilities in 2021 were screened for TB. Among those screened, 87% received TPT, which is a significant improvement compared to previous years *(25)*. The TB program also provides HIV screening to all TB patients and clients who test positive for HIV are referred to the HIV program for further management. In May 2023 there were 3 HIV TB co-infection patients shared by the programs. This is out of 809 TB patients in total within the TB program at end 2022 *(26)*.

To strengthen the collaboration between the TB and HIV programs, the Bhutan National AIDS Control Program has integrated TB and HIV services in all health facilities. Integrating services ensures that all PLHIV receive comprehensive care that includes TB screening and prevention, HIV treatment, and support services. The joint efforts of the TB and HIV programs have contributed to the reduction of TB and HIV-related morbidity and mortality in Bhutan. Nevertheless, 8% of mortality among PLHIV is attributed to TB since the beginning of the HIV epidemic[1]. As of 2023, there are 3 patients with TB/HIV, all of which are on antiretroviral therapy *(25)* HIV-positive TB incidence has continued to stay low since 2015 (Figure 6) *(27)*.

[1] AIDS-related Deaths (as of June 2022). Informal report from NACP, obtained from Mr Dolley Tshering, 25 April 2023.

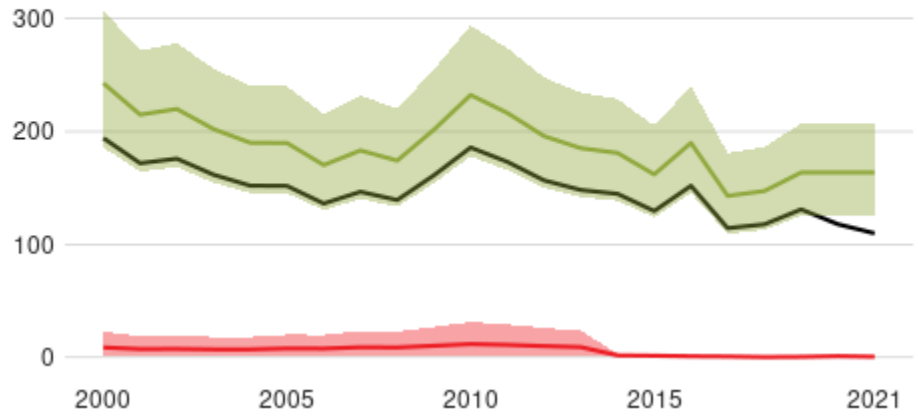


Figure 6 - Incidence, New and relapse TB cases notified (green) HIV-positive TB incidence (red) as rate per 100 000/yr

1.7.2. Viral Hepatitis

1.7.2.1. Epidemiology

In Bhutan, an average of 936 Hepatitis B cases were reported each year from 2013-2015, according to the Extended Program on Immunization (EPI). The annual average detection of Hepatitis A and C was 267 and 248 cases, respectively *(5)*.

In 2017, a nationwide serosurvey conducted for Hepatitis B and C in 2017 demonstrated a declining trend in Hepatitis B among the adult population, decreasing from 5.9% in 1996 to 2% in 2017 *(28)*. The prevalence of Hepatitis C also declined, from 1.3% in 1996 to 0.3% in 2017. Among children aged 5-17 years, a prevalence of just 0.7% was reported, suggesting that Bhutan has achieved the regional HBsAg prevalence goal of less than 1% among children five years old. Nevertheless, HBsAg prevalence appears higher in rural areas (1.8% [0.8-4.1]) compared to urban areas (0.7% [0.2-2.3%]). The same study found all four individuals with anti-HCV resided in rural areas, though all were negative for HCV RNA (previous exposure with spontaneous clearance). Among the 18 individuals who tested positive for HBsAg, only one (~5%) was aware of their infection, indicating underdiagnosis of chronic viral hepatitis is likely high in Bhutan.

It does remain the case that the pre vaccination cohort (HBV vaccine was introduced in 1997) poses a risk of transmission and HBV related disease if prevention and control measures (e.g. catch up vaccination) are not implemented.

The number of reported cases and the reported case rate of acute HBV cases are slightly higher in males than females over the past five years. In both males and females case notification sharply rose in 2017 and 2018 and then declined in 2019 before rising again. Reported cases are aligned with vaccine exposure and so concentrated among individuals aged 15-49 years old followed by those >49 years of age (Figure 5). No clear differences exist for reported hepatitis cases by age and sex (Figure 5). Around 16 children were diagnosed with acute HBV during the period 2016-2020 *(29)*.

It should be noted that the prevalence of hepatitis among MSM with HIV is higher than the general population at 3.4% of PLHIV having HBV or HCV coinfection.

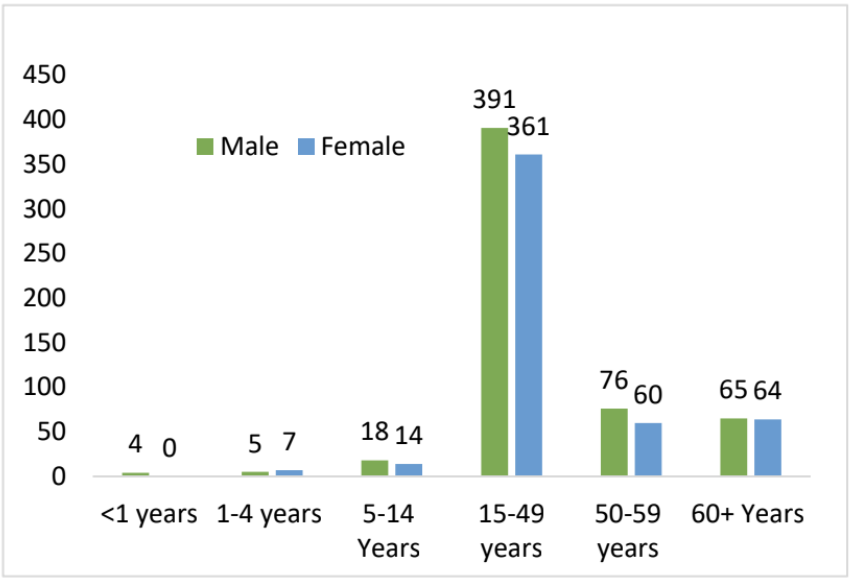


Figure 6 - Distribution of reported hepatitis B cases among the general population of Bhutan by age and sex. Source: NACP, Bhutan

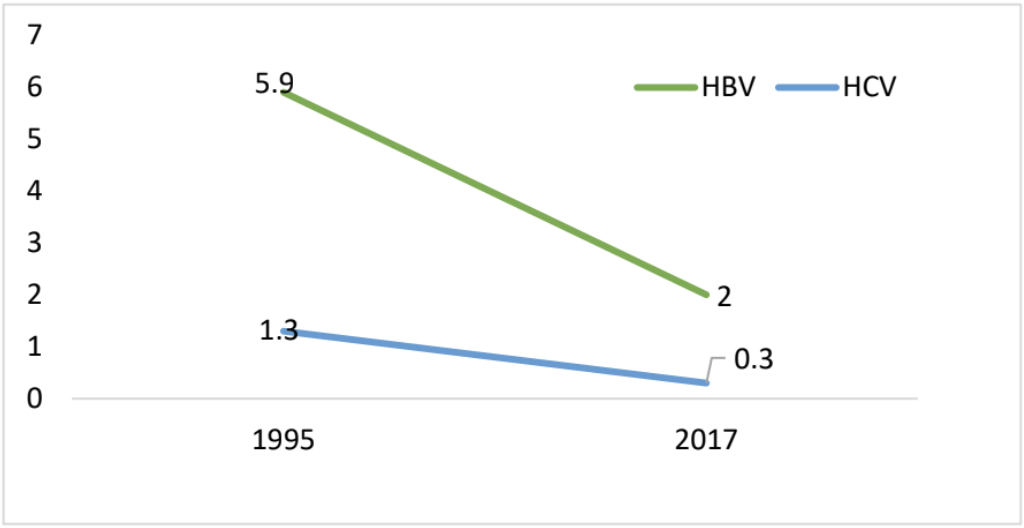


Figure 7 - trends in reported population s HBV and HCV seroprevalence in Bhutan 1995 – 2017. Source: NACP. Bhutan

1.7.2.2. Prevention

The hepatitis immunization program is strong. The birth dose (HEP-BD) provided among the institutional delivery (~90% of deliveries are conducted in healthcare institutions) and coverage is 94%. The three-dose infant vaccine (HEP-B3) coverage is high at 98% *(30)*. The HEP-B3 dose is included in the pentavalent vaccine including DPT and Hemophilus influenza antigens while the birth dose is monovalent.

As a policy, all pregnant women are screened for HBsAg. Those who test HBsAg positive, it is emphasized that they should deliver in healthcare facilities rather than at home so that timely birth dose of hepatitis B vaccine and hepatitis B immunoglobulin can be administered. Hence, the 'real' coverage of timely birth dose (i.e. coverage among the target group – babies born to HBsAg-positive mothers) is higher than captured by the birth dose coverage rate. Nevertheless, both are high *(5)*.

As a policy, all new-borns of HBsAg-positive mothers receive hepatitis B immunoglobulin (HBIG). However, in the national and regional referral hospitals, HBsAg-positive pregnant women are encouraged to undertake HBV DNA testing, with those with a viral load >200,000 IU/mL receiving tenofovir from week 28 and continued till four weeks after the date of delivery, in-line with WHO

recommendations *(31)*. Such an approach is not uniformly practiced across Bhutan due to absence of national guidelines.

Approximately 10,000 units of blood are collected annually in the 20 blood-centres across the country. The blood bank of JDWNRH in Thimphu alone collects around 4000 units. Of this, about 75% is collected from voluntary donors and the rest from replacement donors; there are no professional blood donors. All blood and blood products (100%) are tested for HBsAg and anti-HCV antibodies (in addition to anti-HIV and syphilis serology).Blood testing positive is discarded, and the donors are notified of the outcome of blood screening and testing and referral for treatment and counselling. However, the rate of linkage to further testing, treatment and care is low for hepatitis. For example at the JDWNRH, all donors reactive to HBsAg are informed about permanent deferral from blood donation, counselled and offered further confirmatory testing for both HBV and HCV. Donors are included in the donor pool and allowed to donate only if the screen results to anti-HCV turns out to be non-reactive, being retested over three months interval *(31)*. Those ultimately negative for HBsAg and unvaccinated are advised to obtain the three- dose hepatitis vaccine course.

All Blood centres participate in National External Quality Assessment (NEQA) schemes conducted by the Royal Centre for Disease Control and in addition National and 2-Regional Blood centres also participate in International External Quality Assessment Schemes periodically for Infectious diseases tests, including HIV, HBV and HCV. The Drug Regulatory Authority (DRA) has initiated the process of registration of InVitro Diagnostic Kits for HIV, HBV and HCV screening and kits from qualified registered manufacturers/suppliers for domestic procurement *(31)*.

All health care centres in the country are provided with disposable syringes. Reuse prevention syringes (auto disable) have not yet been introduced. There are no manufacturing units for syringes and needles in the country, and syringes are imported from India. Bhutan has guidelines for infection control in hospital and healthcare facilities which is implemented and adhered to.

The national health policy mandates to vaccinate all the healthcare workers against hepatitis B. However, a periodic assessment of the immune status of anti-HBs status among health professionals has never been carried out *(31)*.

1.7.2.3. Testing, treatment and care

All hospitals and PHCs have rapid diagnostic testing facilities for HBV while HCV is available only in the hospitals and 10 Bedded Hospitals. In addition, HBV testing is also available in Health Information and Service Centers (HISC). Serological

RDTs and ELISA tests are widely available and used for HBV (HBsAg) and HCV (HCV Ab)*(3)*.

Besides blood donors, the other large groups that are tested for HBV and HCV are (1) individuals undergoing surgery or invasive procedures such as endoscopy and (2) All pregnant women are screened for HBsAg. However, there is no policy document that links the positives to treatment and care. These three groups (blood donors, surgical or endoscopy patients and pregnant women) represent a large proportion of the population and could provide a dataset for a national (one test per person per lifetime) screening program.

Molecular testing for hepatitis with HBV DNA and HCV RNA are offered at the JD hospital through an arrangement with a commercial service provider in India. GeneXpert machines are widely available for HIV and TB across Bhutan, though hepatitis cartridges are not available at almost all facilities. More complex serological tests such as HBeAg, anti-HBe, anti-HBcIgM, IgM anti-hepatitis A and IgM anti-hepatitis E are not available in the country, and specimens are sent to India. An ultrasound device is available in all district hospitals, though Fibroscan is not. Diagnostic and therapeutic (for esophageal varices) endoscopy facilities are available in the two regional hospitals and the national hospital *(3)*.

For treatment of advanced disease, including liver cancer (hepatocellular carcinoma), a gastroenterologist at the national hospital and specialists at regional hospitals can refer patients to other countries (largely India). The government covers the costs for such treatment. Liver transplantation is not available in the country and patients can be referred elsewhere though costs are not covered.

Treatment for hepatitis B and C is offered at Jigme Dorji Wangchuck National Referral Hospital (JDWNRH) in Thimphu only. There is no patent protection for antivirals used for the treatment of HBV and HCV infection in the country. The available drugs include tenofovir, entecavir and lamivudine (lamivudine is not recommended by WHO) for HBV infection, and sofosbuvir + daclatasvir, sofosbuvir-ledipasvir, sofosbuvir-velpatasvir for HCV infection. These generic antivirals are imported mostly from India.

For treatment of chronic HBV infection, tenofovir is routinely available in the National Referral Hospital and is also made available at district hospital on request on a named-patient basis for patients who are receiving this treatment. Specialists can opt for entecavir, in special cases, which is then specifically procured (usually from India) through a procedure which operates on a weekly cycle.

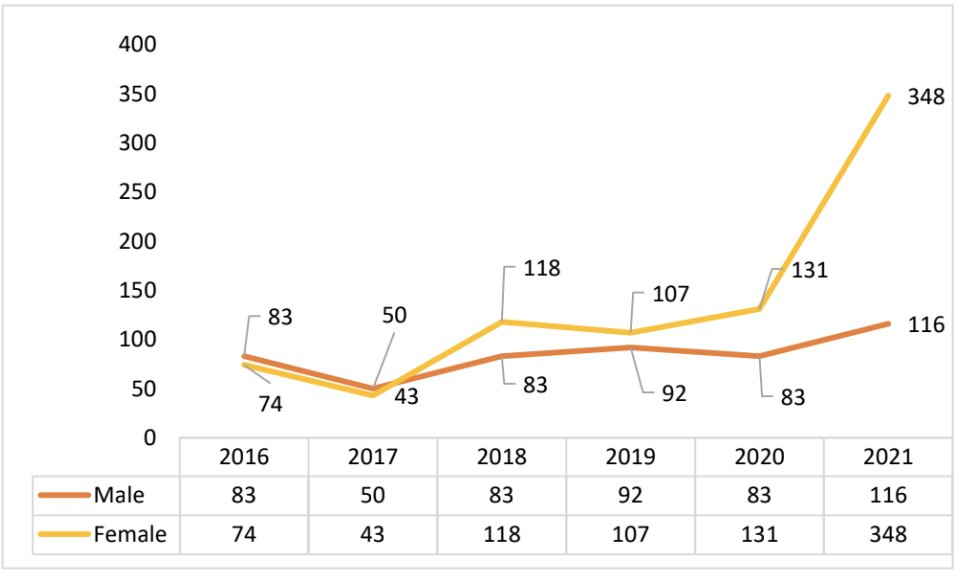
Very few patients with HCV infection have been diagnosed (prevalence in Bhutan is low) and treated. As a part of HIV policy, all people living with HIV infection have been tested for HBV and HCV infection. Very few patients with HBV/HCV + HIV co-infection have been identified. Those with HBV-HIV co-infection are on an appropriate treatment. One person with HIV-HCV co-infection was treated and cured in 2018.

1.7.3. STI

1.7.3.1. Epidemiology

The epidemiology and case burden of sexually transmitted infections in Bhutan is not well understood outside syphilis and, most recently, HPV.

The number of reported cases of syphilis in the general population dropped from 157 in 2016 to 93 in 2017. However, cases started to increase sharply from 2018 onwards in both males and females *(32)*. Around 55% of the total cases (in the last six years) were among females, and the case notification rate was also greater among females (perhaps a result of higher testing rates). IBBS (2016) identified MSM (3.3%) and TGP (25%) as having a higher prevalence than other key populations, though absolute numbers were low, particularly for TGP *(33)*.



	2016	2017	2018	2019	2020	2021
Male	83	50	83	92	83	116
Female	74	43	118	107	131	348

Figure 8 - Trends in reported syphilis cases among the general population in Bhutan by sex 2016 - 2021

The age-standardized prevalence of Human Papillomavirus (HPV) infection among the general female population is 26%, varying from 33% in women under 25 years old to 19% in women aged 45 years and older *(34)*. These estimates represent the highest HPV prevalence among countries in Asia.

Persistent infections with one or more high-risk types of HPV (a known carcinogen) can cause cervical neoplasia. In Bhutan, this has led to cervical cancer becoming the most common cancer diagnosed among women *(35)*. The age-adjusted incidence rate stands at 20.5 with a mortality rate of 5.3 per 100,000 women.

In 2018, cervical cancer represented 17.8% of all new cancer cases in women and 14.8% of all female cancer deaths. The estimated age-standardized incidence and mortality rates were 14.4 and 10.2 per 100,000 women respectively. With a female population of 358 000 in 2019, the age-standardized incidence of cervical cancer was 14.2 per 100 000*(36)*. Cervical cancer ranks as the third most common cancer, the most common among women, and the fifth leading cause of mortality.

In response to the burden of HPV the HPV vaccine was added to the routine immunization schedule for girls aged 12 years in 2011 and was initially administered at health centres *(34, 36)*. However, due to challenges in calculating the coverage of the vaccine and ensuring full vaccination, the delivery method changed in 2014 to a school-based program, which offered the vaccine to girls in Class VI, irrespective of age. By 2019, the crude HPV vaccination coverage had reached 90.5% among the primary target population, which is adolescent girls, before sexual debut. By 2022, the vaccination coverage rate had remained high at 88% among the eligible cohort of boys and girls *(37)*. Moreover, from 2015 to 2019, 40% of eligible females were covered by cervical cancer screening programs. Despite these initiatives, the mortality-to-incidence ratio remains at 0.57 given infection to disease latency.

1.7.3.2. Prevention

STI prevention interventions are limited to those for HIV, including the provision of condoms and access to education on STIs. Education regarding STIs is part of service delivery for key populations, however STI literacy remains inadequate in this and the general population currently, particularly beyond syphilis.

1.7.3.3. Testing, treatment and care

Asymptomatic screening for STIs is currently not part of service deliver, beyond that for syphilis. Testing is limited to syphilis, as well as microscopy for symptomatic individuals for gonorrhoea and trichomoniasis, where available. Chlamydia testing is not available. Nevertheless, as part of the GAM reporting tool,

In the previous three months 26.1% of MSM had been tested for at least one sexually transmitted infection.

The treatment of STI in the time is limited to syndromic management, which presents limitations in terms of the effectiveness of treatment, the appropriate use of antibiotics, and is not useful for asymptomatic screening. Is likely that STI diagnosis and treatment in Bhutan is well below necessary coverage. While there are some facilities that are able to diagnose STI beyond syphilis, including gonorrhoea end trichomoniasis through microscopy, delays in diagnosis are also problematic to effective management. There is virtually no capability for diagnosis of chlamydia infection in Bhutan, despite prevalence likely being high, particularly among key populations *(3)*.

Present STI guidelines (published in 2006) stipulate that patients should be given information on prevention and treatment for STIs during consultations and voluntary counselling and HIV testing services should be offered to all STI patients *(38)*. If services are not available on-site, referral information should be given. HIV tests will be conducted on a voluntary basis with full confidentiality and pre- and post-test counselling according to the VCT guidelines. In addition, sexual partners of STI patients should be treated whenever possible and condoms should be directly provided to the patient at the time of treatment, along with condom instruction and demonstration using a model.

STI treatment is available across Bhutan (penicillin for syphilis, azithromycin for chlamydia, doxycycline and ceftriaxone (250mg IMI) for gonorrhoea, and metronidazole for trichomoniasis).

Little data was available regarding HSV prevalence and the national response is again limited to syndromic management. Acyclovir is available.

Regarding HPV, the primary objective of cervical cancer prevention efforts is to prevent HPV infection through HPV vaccination, detect precancers and early cancers through screening of apparently healthy women and ensure timely treatment of the diagnosed cases (Figure 9). As mentioned, vaccination of boys and girls for HPV is high (88% currently) and as this cohort ages, cervical cancer rates will reduce *(34)*. Nevertheless, regular screening for cervical cancer, is yet to be universal.

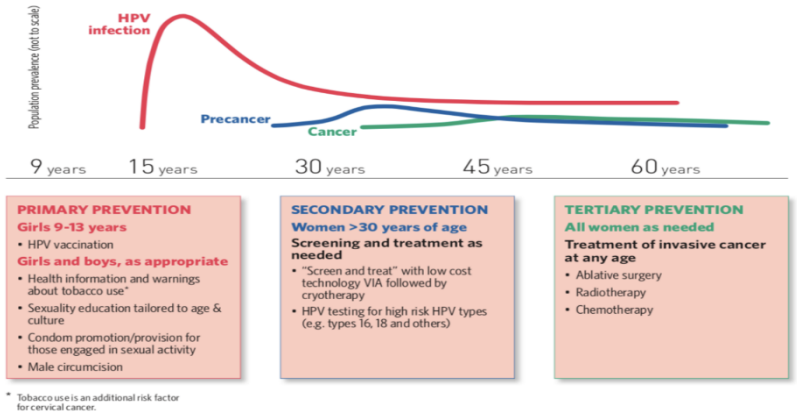


Figure 9 - Programmatic interventions over the life course to prevent HPV infection and cervical cancer.

1.8. Key Populations

Population size estimates from 2019 indicate that there are an estimated 1,221 high risk women (HRW) in Bhutan, of whom 597 are commercial sex workers (CSW). There are an estimated 1,726 MSM, 76 TGW, and 302 TGM, with Thimphu having the highest number, followed by Chukka and Sarpang *(39)*. These KPs can be reached over 101 venues which were mapped in the same process mapped within nine dzongkhag of Bhutan.

The Integrated Biological and Behavioural Surveillance (IBBS) Surveys conducted among vulnerable and key populations at higher risk in Bhutan in 2016 did not identify any new cases of HIV. However, the survey revealed a high prevalence of sexually transmitted infections (STIs) among the key populations included in the study*(33)*. The nature of HIV and STI risk was elucidated by findings of low comprehensive HIV knowledge, infrequent condom use, and engagement in risky sexual behaviour within the surveyed population.

Most key populations (KPs) possess a basic understanding of HIV, including its prevention and transmission, and primarily receive information from Lhak-Sam, followed by the Health Information and Services Center (HISC) and the Ministry of Health (MoH). However, many individuals claim *(40)* there is a lack of media coverage on key populations and HIV-related issues. Consequently, there is a need to expand the community membership of key populations and well as expand access

to KPs not wishing to identify as KPs, as those who remain unreached are less likely to access health services, including HIV testing*(3)*.

Internalised stigma (self-stigma as well as that imposed by others) is prevalent among all key populations and acts as a significant barrier to accessing health services, as they fear facing gossip, teasing, and harassment from healthcare workers. This fear stems from misconceptions, misinformation, and a lack of knowledge and understanding of HIV and Sexual Orientation, Gender Identity, and Expression and Sexual Characteristics (SOGIESC) among health workers. Consequently, most individuals feel more comfortable visiting HISCs, although these centres only provide HIV testing and lack comprehensive healthcare packages. The CLM report indicates that among key populations, people who use drugs and are dependent on alcohol face the highest levels of stigmatization at 10.7%, followed by HIV-positive individuals at 2.3%, and LGBT/sex workers at 3.8%. Notably, the report emphasizes that 93.1% of discrimination occurs at the health facility or hospital level. As such improving access to health, social services, and justice plays a pivotal role in promoting self-empowerment and reducing stigma, in the process improving service access.

1.8.1. Sex workers and high-risk women

Buying and selling sex is not legal in Bhutan. Regardless, transactional sex occurs in all major town areas. There are two major models of transactional sex, one based around "entertainment venues" and the other who works informally from home. Key population size estimates place HRW – women aged over 18 years old who work of visit hotspot environments where high risk sexual behaviours are frequently initiated as 1.45% of urban women aged 15 to 49 years old in Bhutan, while CSW – women over 18 years old who have received cash payment for sex, represent 0.71% (n=597) *(39)*. The average age of the commercial sex workers across the six districts was reported to be 27 for FSWs and TSWs while 23 for MSWs respectively.

The IBBS 2016 found that 78% of women working in entertainment venues, Drayang girls, had sex in exchange for money in the week prior to being interviewed; 8% had had sex with five or more clients in the past week *(33, 41)*. An anthropological study on Drayang girls in Thimphu was conducted in 2010. The authors noted links between the modernization of Bhutan as it engages with convergence of cultural, economic, and political influences which are impacting on traditional values and gender power dynamics, in addition to economic necessity.

Some FGD respondents said that they do not have free access to condoms, and they are reluctant to purchase condoms from pharmacy shops or from condom vending machines (Bhutan Gender Review Report). Consequently, use often depends on the

client. Similar reluctance is not the case for the use of emergency contraceptive pills from the pharmacy retail shop. Most of the "drayang" and entertainment employees work nights and rest during the day. Health facilities are open from 0900 – 1500 meaning the timing does not suit FSW to access services unless they are very ill. There are no private clinics in Bhutan *(42)*.

Sex workers are not comfortable to access health services due to the criminalisation of sex work. Like TGs and MSM, due to perceived stigma from the society, they use drugs and alcohol as coping mechanisms *(43)*. They also lack condom negotiation skills and agree to have sex without condoms when clients pay more. In addition, SWs also face policy barriers as abortion is illegal and they cannot send their child for adoption since they are unable to trace the father of their child *(43)*.

Finally, most CSWs lack basic knowledge of HIV prevention and transmission, let alone that of hepatitis and STI, also contributing to risk behaviour including lack of condom use *(41)*.

1.8.2. Men who have sex with men

Many MSM in Bhutan remain unreached by health services. The non-acceptance of their sexuality by society, families and friends impacts MSM, resulting in mental health conditions including depression, anxiety, problematic alcohol use and in some case leading to suicide. Many MSM have difficulty accessing treatment for STIs owing to fear of disclosing their sexual orientation and possible rejection by healthcare workers, as well as traditional views of male-to-male sex in Buddhism*(42)*.

Nevertheless, there has been recent progress in addressing prejudice towards LBTQI+ communities including MSM, most powerfully demonstrated by the decriminalization of homosexuality by the national parliament. While sections 213 and 214 of the penal code have not been completely removed, the amendments to those sections have in effect, decriminalize same sex behaviours *(42)*. The age of consent remains 18 years.

The country's first attempt at a population size estimate of MSM reported 9,105 individuals in Bhutan. The study found that less than 10 percent of MSM were younger than 20 years old and 56 percent had completed 10 years of schooling *(42)*. The study also revealed that the MSM are having their sexual debut at less than 16 years of age (consent is 18 years) and 16 % percent of MSM surveyed reported having sex with non-commercial sexual partners in the last six months prior to the survey. The study had numerous challenges and limitations. Hence, a comprehensive size estimation and mapping study is currently being carried out by

the MoH with the assistance from the Global Fund, but it is estimated that MSM comprise 1.53% of urban men aged 15 and above in Bhutan *(39)*.

There is increasing evidence that younger MSM, who are engaging in transactional sex, often initiate through online platforms. Alcohol and drug use are also common amongst the MSM community and driven by some of the same reasons as transgendered communities; i.e. as a coping mechanism tool and to gain self-confidence *(43)*. To compound the issue, existing treatment and rehabilitation centres do not accept MSM or TG patients. Such centres do not have facilities nor current capacity to manage MSM and TG patients.

Most MSM are reluctant to attend healthcare services for sexual health services for fear health workers may spread rumours about their sexual identity. In addition, there is a general feeling of lack of trust towards the health system and healthcare workers. Consequently, health issues go unmanaged or MSM travel to the Indian border or even in occasional cases Bangkok for those who can afford it, to access health services*(42)*.

Regarding risk behaviour, as part of the GAM reporting tool, in the previous three months 26% of MSM had been given condoms and lubricant and the same proportion received counselling on condom use and safe sex through an outreach service, drop-in centre or sexual health clinic.

1.8.3. People in prisons and other closed settings

There are currently 1780 people in prison in Bhutan with two known HIV cases. In principle, in line with Bhutan's constitution, people in prison and detention have equal rights to TB and HIV care services in the country, and programs exist within these facilities *(3)*. The prevalence of viral hepatitis and STIs is unknown in prisoners in Bhutan.

1.8.4. People who use drugs

Drug and alcohol use occurs across Bhutan. Alcohol is widely available and relatively common. Fortunately, injecting drug use has not established itself to date. In 2009, a baseline assessment on drug- and substance abuse was conducted, consisting of a community-based and school-based survey conducted in 16 out of 20 provinces. Cannabis, glue sniffing, and alcohol use were common, but injecting drug use (heroin) was reported in only two out of 16 participating provinces. 11% of male respondents had ever injected drugs *(44)*. Three to six percent of people who use drugs reported having injected drugs. Heroin, buprenorphine, pethidine, and

benzodiazepine were mentioned as drugs of choice and 93% in the assessment were male[2]. Bhutan's National Health Survey 2012 indicated that the prevalence of ever-drug use among teenagers and young adults was 3.2% (n = 672). Being young, single, or having mental health issues or alcohol use was associated with ever having used drugs *(45)*.

People who abuse drugs and alcohol face considerable stigma and discrimination in health settings. Most incidences occur at referral and hospital-level facilities. Differential treatment by health workers is the main reason for having to wait too long for health services. HIV risk behaviours such as sex without a condom (62.5%) and sex under the influence of substance use (47.7%) are high among PWUD *(46)*. Access to health services is also poor with surveys indicating that 50% have accessed HIV testing services, and less than 7% having been tested for STIs.

Finally, drug use in Bhutan is illegal and not culturally condoned, resulting in discrimination and exclusion among families and society in general.

1.8.5. Transgender people

The transgender population is becoming more visible in Bhutan. However, the strict cultural definitions of gender, combined with the lack of services providing TGP specific services of HIV, hepatitis and STI prevention, testing and treatment is limited for TGP in Bhutan.

TGW represent 0.08% of urban women aged 15 and above (total of 94,397); TGM are 0.28% (n=302) of urban men aged 15 and above *(39)*.

The current schooling systems are not gender sensitive both in terms of environment and operations Hence most transgender students drop out of schools at a young age and experience early termination of schooling resulting in limited employment opportunities.

Prejudice, stigma and discrimination remain the norm among TGP. Sexual violence and harassment is also common, but not frequently reported for fear of rejection and the previous sodomy law.

Alcohol use is commonly reported among TGP, as well as other drug use given many work at entertainment venues.

[2] UNODC and Bhutan Narcotics Control Agency, National Baseline Assessment of Drugs and Controlled Substance Use in Bhutan – 2009.

Access to health facility is difficult given health workers remain insensitive about the needs of TGP. In addition, hormonal therapy is not available in Bhutan. As a replacement many take the OCP as a substitute.

The most recent GAM reporting tool reports that in the previous three months 55% of transgender people had been given condoms and lubricant and 52% received counselling on condom use and safe sex through outreach services, drop-in centres or sexual health clinics. In the previous three months 52% had been tested for a sexually transmitted infection.

2. Integrated NATIONAL STRATEGIC PLAN IV for HIV, viral hepatitis and STIs (2023-2028)

The National Strategic Plan (IV) on HIV, viral hepatitis and STIs (2023 – 2028) is the integrated strategic guide for the national response to HIV, AIDS and STIs over the following six years. NSP IV is built on the achievements of the previous Strategic Plans and programme implementation experiences, and addresses remaining gaps, new opportunities and implementation challenges of the national response, the end of term review and other strategic plans including that of NSP II for viral hepatitis. NSP IV is consistent with the principles and goals of the UNAIDS Global AIDS Strategy 2021-2026: End Inequalities, End AIDS and the WHO Global Health Sector Strategies on, HIV, viral hepatitis and STIs for the period 2022-2030, as well as the Integrated Regional Action Plan for Viral Hepatitis, HIV and STIs for South East Asia. The NSP focuses on those key prevention testing and treatment interventions must be critical to achieving the elimination of HIV, viral hepatitis and STI's by 2030 consistent with global goals as well as the elimination of all forms of HIV hepatitis and STI related stigma and discrimination including internalized stigma. The NSP IV shifts emphasis in HIV action with a focus on key populations, though maintaining all interventions that have worked well. These are further scaled up – in particular an expansion of CBO service provision and support and the quality of service delivery is improved, while at the same time proven new interventions are to be implemented.

The NSP IV implementation will be reviewed during the midyear of its implementation (2026) for the relevance and effectiveness in achieving its targets, and will be adjusted as necessary. The NSP IV aims to inform national, district and community-level stakeholders and implementing partners on strategic directions to be taken into consideration when developing their respective strategies and implementation plans for HIV, viral hepatitis and STI response. The strategic directions are aligned with the overall framework for the national response:

Vision: The elimination of HIV, viral hepatitis and STIs as public health problems in Bhutan by 2030

Goal: To End AIDS by 2030, and achieve hepatitis B and C incidence and mortality elimination targets by 2030 and strengthen STIs response towards diagnosis informed treatment for elimination of STIs as a public health problem by 2030

2.1. Objectives:

1. To reduce new HIV infections leading to 90% reduction by 2030 through achieving the NSP IV coverage targets of comprehensive package of HIV prevention services, with a focus on key populations

2. To eliminate new HIV, syphilis and hepatitis B infections among children by 2030
3. To achieve 95% Test and Treat targets by 2030 and retain 90% PLHIV on treatment, resulting in viral load suppression
4. To screen 80% of the estimated population living with hepatitis B and C and treat 70% of those eligible by 2028
5. To eliminate STIs as a public health problem by 2030 through integration with HIV prevention and immunization programs, understanding the epidemic and moving towards diagnosis informed treatment
6. To enhance strategic information to be support the validation of the end of AIDS and the elimination of hepatitis B and C by 2030
7. To achieve zero stigma and discrimination of key- and vulnerable populations accessing HIV, viral hepatitis and STIs services by 2030
8. To build sustainable and cost-effective systems for across the health sector with full HIV, viral hepatitis and STI service integration

2.2. Guiding principles

NSP IV will be implemented within Bhutan's 13th five-year framework. The leadership in responding to the epidemic continues to be provided by the Ministry of Health. The engagement from non-health sectors, NGOs, civil society organizations, informal networks, private sector, bilateral and international agencies will be further strengthened and aligned with overall goals. Adequate resources and technical support across the disease categories are required to strengthen the management and human capacities of the health services and of civil society organizations, the critical partners in the NSP IV implementation.

Sustained domestic funding of the national response to HIV, viral hepatitis and STIs is required for success. Resources will be allocated aligned to the priority areas and programmes identified in NSP IV, including strengthening of the critical enablers, health and community systems' capacity and quality of services, and addressing the prevailing stigma and discrimination.

Implementation of the NSP will be monitored and evaluated through the national HIV/STI monitoring and evaluation framework *(47)*, coordinated by the NACP and the Policy and Planning Division, MOH. Information from monitoring and evaluation will be used to ensure that the HIV, viral hepatitis and STI response achieves high levels of accountability and efficiency, and to help determine whether adjustments are required and to facilitate corrective action. Monitoring and evaluation will provide quality information and evidence for future programming and facilitate reporting to global platforms, such as Global AIDS Progress Report, the Global Hepatitis Reporting System, Universal Access and the SDGs.

The following guiding principles are essential during the provision of the comprehensive service package to the key and other populations; non-discrimination to access to services for all, respect for human rights, gender equity and equality, informed consent and confidentiality, the right to privacy, honesty and integrity, appropriateness, responsibility and accountability, meaningful involvement of infected and affected population and multi-sectoral partnership. Where there are gaps in these implementing principles, appropriate training will be provided to health care workers on human rights and medical ethics related to HIV, hepatitis and STIs.

2.3. Strategic directions

The national strategic plan IV was developed to build on the existing national response in the knowledge of the present epidemics in Bhutan. The strategic directions reflect recent updates at the global and regional levels in WHO/UNAIDS strategic guidance across the three disease categories. These have been modified to the Bhutan context. The Strategic Directions are:

1. Key interventions for prevention, testing and treatment, including innovations
2. Health system and partnerships
3. Strategic information and data
4. Communities and civil society

In addition, there is a financing and sustainability of response.

2.4. Shared interventions across HIV, viral hepatitis and STIs

NSP IV integrates action across HIV, viral hepatitis and STIs at birth and the health system level as well as at the individual people level. To provide integrated action across HIV, viral hepatitis and STIs, NSP IV brings together shared actions and interventions across the disease categories for implementation during the intervening period of the plan.

NSP IV is a tailored plan based on the most recent epidemiology and response review in Bhutan. For HIV this shifts the national response to enhance the overall strategic focus towards key populations at higher risk for HIV/STI. Primarily these are FSW, HRW, MSM and TGP. Regarding viral hepatitis the focus is on expanding screening linkage to care and treatment, particularly with hepatitis B given its endemicity – the general population prevalence is 2%. For STIs beyond syphilis the focus is on understanding STI epidemiology in Bhutan by 2025 and moving towards a diagnosis informed treatment approach to addressing STIs, complementing

existing prevention interventions and reproductive health needs of the vulnerable and at-risk populations.

2.4.1. SD1: Key interventions and innovations - prevention, diagnosis and treatment

2.4.1.1. Prevention and testing

Interventions across HIV, viral hepatitis and STIs include primary prevention and interventions for sexual and reproductive health, harm reduction, and integrated testing and treatment as prevention, all with a focus of reducing stigma and discrimination. Primary prevention includes comprehensive education and information about sexual and reproductive health and HIV prevention. The delivery of these interventions should be accompanied by efforts to eliminate stigma and discrimination in health-care settings and strengthen accountability for discrimination-free health care, with particular focus on the stigma and discrimination experienced by affected people including key populations, or based on sex, gender, age, sexual orientation, drug use, sex work or other factors. This includes addressing the acceptability of HIV, hepatitis and STIs as self-stigma free health conditions as any other medical condition (e.g. similar to hypertension or diabetes)

Shared primary prevention interventions for HIV, hepatitis and STIs include:

1. Provide primary prevention and comprehensive interventions for sexual and reproductive health especially in PHC
2. Provide male and female condoms and lubricants, and ensure correct and consistent use through innovative programming, delivered by peers, community-led or based organizations or other appropriate services
3. Vaccination for vaccine preventable diseases (VPDs), HPV and hepatitis B with a focus on key and affected population catch up where necessary, noting existing good progress
4. Harm reduction services for people who use alcohol and drugs, where applicable
5. Antiretrovirals for PrEP and PEP available and offered to all individuals at risk or those who request.

These interventions should be in the context of the promote sexual and reproductive health and well-being, human rights, gender equality and mental health with a focused approach for specific high-risk populations including MSM, FSW, transgender persons and PWUD and their partners but also to a range of higher risk populations including, prisoners, PLHIV, uniform personnel, religious personnel, adolescents, migrants, transport workers and farmers.

Key shared interventions to support testing and treatment for HIV, hepatitis and STIs include:

1. Continue universal testing for viral hepatitis and TB among people living with HIV with referral to care and treatment;
2. Initiate screening programmes in key populations for STI, especially those affected or living with viral hepatitis or HIV or at highest risk of STIs;
3. Operationalizing integrated treatments with shared prescriptions and dosing;
4. Promoting and implementing treatment as prevention for all diseases.
5. Expanding the availability of testing provided by CBOs in line with targets.

The promotion – including through virtual modes - of screening for HIV, viral hepatitis and STIs should be delivered including through the use of multiplex text kits, point of care testing and community-based and self-administered integrated testing services.

Triple elimination

The triple elimination of HIV, syphilis and hepatitis B virus and the prevention of new infections among children and adolescents is national policy and implemented in NSP III. In NSP IV, triple elimination will be supported by triple elimination targets can be achieved only when access to quality services for sexual and reproductive health care and maternal and child health are assured and all women, children and their families use these services. The national programmes for HIV, syphilis and hepatitis B promote concrete linkages towards integration with maternal and child health programmes at all levels of the health system. NSP IV supports that these services should be offered to all women of reproductive age, founded on continued universal testing of pregnant women, before or between pregnancies to reduce transmission of HIV, syphilis and hepatitis B during pregnancy.

Key shared interventions to support triple elimination of HIV, syphilis and hepatitis B are:

1. Universal screening of pregnant women for HIV (twice), syphilis (twice) and hepatitis B (once) during pregnancy
2. Universal treatment for those positive for HIV (ART), HBV (neonatal HBIg), HBV with high viral load (tenofovir) or syphilis (benzathine penicillin) in accordance with WHO recommendations.

2.4.1.2. Key population specific actions

NSP IV has a specific focus on key populations in keeping with shifting epidemiology. It is a critical component of NSP IV to reach all KPs for prevention, screening and ultimately treatment across HHS. KP-specific outreach strategies are necessary for the differentiated needs and segmentation of KPs, including those engaged in sex work and/or drug use.

KP specific strategies for prevention and testing across HHS include:

1. Expanded efforts to reach all KPs, including outside major centres to meet national prevention and testing coverage targets
2. Introduction and scale up of PrEP and easily accessible PEP for key populations
3. Promoting a range of condoms to meet the needs of KPs, and assuring access to female condoms for HRW and FSW
4. Ensuring easy access to water-based lubricants
5. To support reaching KPs, increasing points of contact to reach KPs with HHS information and services, including innovations such as:
    a. In areas with many FSW, innovate with a safe-space for FSW and HRW, for example, by hiring the HISC space during weekday evenings or weekends;
    b. Evaluate HISC effectiveness, boost client numbers by providing STI treatment services and providing ART and PrEP refills
    c. Male sexual health clinics for MSM who do not identify as LGBTIQ+
    d. Entertainment venue-based events, mobile testing and social marketing of high(er) quality condoms to reach KP (especially FSW, HRW and their clients)
6. Explore and expand the use of online platforms to reach hidden populations such as younger MSM and home-based FSW following the above-mentioned KP-specific outreach strategies
7. A focus on expansion of KP specific prevention interventions to centres outside of Thimphu

2.4.1.3. Effective treatment delivery

Retention in the prevention and care cascade is critical for the national HHS response. Of specific note are the treat all strategies – with adherence support - across HIV and HBV for viral suppression and undetectability, hepatitis C for cure, and the 4 curable STIs. Apart from primary prevention, effective treatment is the most effective intervention to impact well-being, mortality and continued transmission. This includes to ensure that all individuals with HBV–HIV, HCV-HIV coinfection are receiving appropriate regimens to treat both infections.

2.4.2. SD2: Health systems and partnership

The Gross National Happiness Commission (National Planning Commission) acts as the overall coordinator for all national plans and strategies. The Commission establishes the National Five -year development plans (FYP) in consultation with government ministries and entities, and establishes the overall national budget and

allocation of budgetary resources for all sectors and entities based on their plans and negotiated priorities. The districts will be provided budgets for implementation of their activities, including the health sector expenditure under the district plans.

The next 5-year plan, the 13th, covering the fiscal years 2023 - 2028 provides the framework for health sector plans and strategies for the 5-year period. Until now, these sector plans have covered periods differing from the national development plans. NSP IV synchronizes HIV, viral hepatitis and STI planning with the 5- year periods of the national development plans.

2.4.2.1. Universal health, linkages and primary healthcare

Implementation of this NSP will require an UHC approach, as well as decentralization through primary health care service provision.

Essential viral hepatitis, HIV and STI services are included as part of UHC. These essential services are included in national priority health benefit packages, supported by adequate financing, resulting in access for clients without financial hardship. This is particularly important for key populations, who have the highest burden of HIV, STIs and risk, but may lack the economic means to meet out-of-pocket costs.

Primary health care (PHC) service delivery is supported through:

1. the development of simplified testing and treatment protocols to support task shifting/sharing between health-care professions,
2. Hub-and-spoke models from tertiary and specialized services to support shared care and supported models at lower levels of the Bhutan health system
3. Partnerships with community based organizations, where appropriate and available.

2.4.2.2. Partnerships

NSP IV calls for further integrating and consolidating HIV testing and treatment, and expanding prevention testing and treatment across HHS. While the government remains the major player, NGOs and CBOs are now providing prevention, testing and treatment delivery (dispensing) to affected populations, including key populations.

NSP IV will be implemented based on broad partnership and coalition between government, NGOs and CBOs. NHAC and NACP coordinate the partnership between government at all levels, civil society, international organizations and active inclusion of private sector in the national HHS response. NSP IV does have a shift (regarding HIV specifically) to focusing heavily on key populations.

An integrated approach to HHS includes partnership with other disease programs across health. These inter-programmatic linkages to other disease-specific programmes to promote a people-centred approach to prevention, diagnosis, care and treatment of HHS to enhance integrated management and early diagnosis and treatment of coinfections. This includes supporting national health workforce literacy in prevention, diagnosis and treatment of viral hepatitis, HIV and STI across the health sector to optimize coordination and management.

Key health program linkages for integrated prevention, testing and treatment are:

1. Communicable and non-communicable diseases including viral hepatitis, HIV, HPV and cancer services
2. VPD programmes including HBV, HPV and COVID-19;
3. TB
4. HCV and substance use programmes
5. Sexual and reproductive health services
6. Mental health services
7. Substance use treatment and rehabilitation services

2.4.2.3. Zero healthcare related infections

Infection prevention and control initiatives seek to prevent or eliminate disease transmission, especially HIV and viral hepatitis in formal and informal health-care settings and other service settings.

Key interventions to support there are:

1. Eliminating unnecessary injections
2. Providing safety-engineered syringes for all medical injections;
3. Using established WHO-aligned protocols for the decontamination of medical devices
4. Continuing universal and comprehensive 100% screening of blood products, including for HIV, hepatitis B and C and syphilis, so that any sources of potentially unsafe blood products are eliminated
5. The inclusion of initiatives to prevent unsafe injections and transmission through contact with bodily fluids in the informal health sector and in services such as tattooing, piercing or beauty care.

Equity in service delivery includes access to HIV, viral hepatitis and STI services should be ensured for mobile and displaced populations, or for those dislocated from regular services such as those in closed settings. Continuity HHS services should be ensured when people move within and between these settings and the broader community. Where there are gaps in access to regulatory or legal policies, the NSP

recommends to undertake review and reform of the specific restrictive legal and policy frameworks to enable equitable access to health services for viral hepatitis, HIV and STI, especially to the most affected and at-risk populations in Bhutan.

2.4.2.4. Governance.

Bhutan Country Coordinating Mechanism (for GFATM supported projects)

The Country Coordinating Mechanism (CCM) has been a cornerstone of the Global Fund architecture since the organization was created in 2001. CCMs embody the Global Fund's key principles of country ownership and partnership through multi-stakeholder collaboration. CCMs are responsible for mobilizing resources at the country level by organizing and submitting proposals to the Global Fund that reflect a gap analysis of national strategic plans. They also provide oversight to grant implementation to ensure successful outcomes. The CCM of Bhutan comprises members from a broad range of expertise and capacities including development partners, MoH, and people affected with the three diseases. Under the leadership of the CCM, technical working groups have been formed for each disease component to review health system strengthening issues with expertise from procurement and supply, laboratory surveillance and Human Resource Development.

2.4.2.5. Programme Management: Ministry of Health

The Ministry of Health will continue to lead the health sector response to HHS prevention, testing, treatment, care and support. MoH will provide technical guidance to other stakeholders in the implementation of NSP IV, including the implementation plan and is responsible for implementing many of the activities through NACP and other units, which include Research and Epidemiology Section, Health Information Unit and Information Technology Unit under the Policy and Planning Division, Department of Public Health, and Medical Services Department.

The National HIV, AIDS and STI Control Programme of the Ministry of Health The Programme was established for the execution, coordination and monitoring of the National HIV, AIDS and STI Policy, Strategy and Action Plan, to implement the endorsed policy and programmes at central and district levels, through health infrastructures, including community health volunteers. The Programme is coordinating with the other MoH entities, particularly with the TB and SRHR Programmes, to ensure integrated service provision at health facilities, and to develop guidance, including review and revision of guidelines, standards and protocols.

The Programme maintains and, where necessary establishes, functional technical and thematic working groups comprised of multiple sectors of government and non-government members.
The programme is also responsible for leading and managing implementation of specific health components: (i) surveillance of HHS, (ii) establishment of counselling and VCT services, (iii) developing testing, care and treatment standards and coordinating clinical management of HHS, (iv) carrying out operational research, and (v) monitoring and evaluation.

2.4.2.6. HIV

From the perspective of the national health system, a key component of NSP IV is promotion of a decentralized response to HIV testing and treatment through the delivery of services at lower levels of the health system, including primary healthcare and community based organizations, where appropriate.

Primary care level package of HIV services should be delivered as part of primary care, including in areas of low HIV prevalence. The goal is to make available – over time - key interventions as part of general health service delivery. This will require an expansion of sexual health and HIV education and training of all health-care workers to ensure that all individuals who seek sexual health services can do so in an environment free from stigma and discrimination and receive high quality, acceptable care.

Core interventions that can be made available at the primary care level include:

1. EMTCT for HIV including universal testing, with universal treatment for HIV-infected pregnant women and their neonates, aligned with triple elimination
2. Harm reduction interventions, as required
3. HIV self-testing, peer-led partner and contact tracing and rapid HIV testing including at non-HIV services
4. Screening and treatment for viral hepatitis and STI at HIV services
5. Universal male and female condom access
6. Antiretrovirals for both prevention and treatment of HIV
7. Comprehensive single-window services for transgender persons including gender-affirming care, hormone replacement and mental health.

To continue to address TB/HIV in Bhutan, the NSP IV commits to:

- Undertake, with national TB programmes, HIV testing of all people diagnosed or presumed to be having TB.

- Implement timely initiation of ART and WHO-recommended chemoprophylaxis for people with TB coinfection.

To continue to address HPV among women living with HIV in Bhutan, the NSP IV commits to:

1. Universal HPV screening of women living with HIV from age 25 years in accordance with WHO recommendations, followed by a triage test if results are positive for HPV, to evaluate the results for risk of cervical cancer and need for treatment.

2.4.2.7. Viral hepatitis

From a health system perspective at the national level – and similarly to HIV - hepatitis elimination requires widespread decentralization of hepatitis prevention, testing and treatment services to reach the whole population. This can only be achieved with decentralization to the primary health care level, which includes building capacity in non-specialists through capacity-building and task sharing in hepatitis testing and treatment. Decentralization of hepatitis services with maintenance of quality and outcome requires a hepatitis-literate workforce. National programmes should implement various actions to this end, including actively built health-worker literacy in viral hepatitis risk factors, prevention and management and in essential hepatitis interventions with a focus on primary health care level services.

The NSP IV is consistent with the NSP for Viral Hepatitis 2022 - 2026, including supporting the following key actions to strengthen the coordination and collaboration between key stakeholders

1. Organize stakeholder coordination meetings to review the implementation of the viral hepatitis strategic plan
2. Strengthen an enabling environment for healthcare workers to prevent hepatitis transmission
3. Technical Assistance from the regional WHO offices to establish a viral hepatitis treatment cascade by integrating WHO viral hepatitis DHIS-2 into the overall DHIS-2 of the MoH.

Hepatitis elimination requires services with key interventions to be available, but also that demand for these services is generated. Demand generation efforts should focus on the engagement of individuals with hepatitis, their families and key risk groups, with promotion of positive experience of diagnosis and treatment or cure of viral hepatitis specifically focused on these populations.

Equitable and reliable access to viral hepatitis commodities is essential to support consistent and effective action to address hepatitis. The following are the key elements to promote equity of access:

1. Make available low-cost quality-assured rapid diagnostic tests (RDTs) for hepatitis;
2. Consider innovative financing mechanisms to reduce the cost of molecular tests for HBV and HCV;
3. Support access to generic hepatitis medicines, greater market transparency and pooled purchase mechanisms to reduce costs for medical products;

2.4.2.8. STIs

Consistent with the health systems strengthening approach of HIV and viral hepatitis, NSP IV includes a people-centred, decentralized and integrated STI services to support improved coverage of services. Integrating STI services into PHC is essential for widespread availability.

1. Develop a package of services which can be delivered in primary care, including in areas of low STI prevalence. This could include dual HIV and syphilis point-of-care testing, hepatitis B vaccination and a syndromic approach to STI treatment.
2. Develop clear pathways and indications for primary-care referral to secondary or tertiary facilities where further services such as chlamydia and gonorrhoea testing may be available.
3. Expand sexual health education and training of all health-care workers to ensure that all individuals who seek sexual health services can do so in an environment free from stigma and discrimination and receive high quality, acceptable care.
4. Providing non-stigmatizing, rights-based, high quality STI services in a range of settings including primary care will improve coverage.

To build capacity in STI testing and treatment, NSP IV supports the integration of service delivery for key populations with representatives of affected communities being affiliated with such services.

2.4.3. SD 3: Strategic information and data

Strategic information systems to support HHS within NSP IV includes regular national reporting on prevention, including vaccination, testing, treatment, financing and performance across the three diseases, including – and most importantly - in

decentralized systems using the national electronic DHIS 2 platform. Reported data should be disaggregated with HIV, viral hepatitis and STI surveillance data by sex, disability, age and other relevant population characteristics, supplemented by information from community-led monitoring.

The eMTCT data will be integrated into the DHIS2 system, and the information system will link data of mothers and their infants, and record retention and follow-up of cases. This will strengthen the health information system to ensure that data needed to generate and monitor eMTCT indicators including for some HIV, Hepatitis B and Syphilis indicators are captured routinely. The quality of these data will be regularly monitored.

The 2023 end of term review recommended improvements to the collection and use of strategic information. NSP IV endorses these and other recommendations, specifically:

- Qualitative research should be conducted as a baseline for KP-specific outreach strategies and the development of standards/manuals for CBO-led service delivery, including developing an improved understanding of transactional and male to anal sex in risk environments;
- HIV cascade indicator data be disaggregated by key population group as well as age and gender;
- Introduction of a 'unique identifier code' system to improve confidentiality and ability to track clients across the spectrum of prevention, care and treatment services;
- To obtain baseline prisoner HHS prevalence data;
- Undertake a prevalence survey of NG/CT among key populations as a baseline estimate of STI burden beyond syphilis;
- Consider inclusion of monastic schools in National School Health survey to improve understanding of HHS burden and knowledge within this population;
- CBOs should be supported with the tools to conduct 'local hotspot mapping', which could be part of the development of KP-specific outreach strategies mentioned above. This will help make outreach efforts better targeted and more effective.

Community-Led Monitoring is a monitoring mechanism that key populations can use to gather quantitative and qualitative data and use the information to improve access, availability, acceptability and quality of services. The Community-Led Monitoring system will be further enhanced and improved, making data collection routine and ensuring there are automatic feedback loops to participating facilities,

so that they can use this data to improve their service friendliness, quality and effectiveness vis a vis key/vulnerable population clients.

Key principles guiding the expansion of the community-led monitoring system include:

1. Headed by someone from the community and community led, including and ensuring diversity within the community groups;
2. Focused on action and accountability;
3. Independent, empowering and sustainable;
4. Collaborative – promoting good partnerships;
5. Technically supported in terms of data collection, analysis and sharing;
6. Routine, systematic and standardized;
7. Integrated with mainstream national responses;
8. Show results;
9. Be systematically reviewed.

2.4.3.1. HIV

HIV strategic information and data within NSP IV will be managed and implemented in accordance with the *National Guideline on Monitoring and Evaluation of National HIV and AIDS Response in Bhutan 2022*. This guideline describes all of the major components of data collection, methodology reporting and feedback, data management analysis and interpretation as well as data quality assurance mechanisms within the national HIV program in Bhutan.

This approach utilizes the existing infrastructure for HIV monitoring to optimize outcomes, including use of unique identifiers to allow individualized outcome analysis and management and to avoid duplicate entries for individuals. Within this system, data will be disaggregated by sex, age, socioeconomic status, geography and other relevant population characteristics to monitor equity in access and outcomes.

Specific to the NSP IV is that strategic information systems for HIV will also integrate those of hepatitis and STI with reference to the DHIS 2 data system.

2.4.3.2. Viral hepatitis

In addition to efforts to increase the quality of reported hepatitis data through the DHIS2 and other systems, a national baseline estimate for prevalence, incidence, prevention and treatment cascades is required during the NSP IV (by 2025).

To improve the integration of hepatitis data during the NSP IV, viral hepatitis information systems should be integrated with HIV/STI/TB systems and enable data triangulation for analysis, including with vital statistics, cancer registries (for liver cancer) and immunization registries.

Consistent with the NSP for viral hepatitis 2022 - 2026, NSP IV will support understanding viral hepatitis epidemiology and the response, data systems to monitor the quality of individual care and coverage and innovation (Surveillance and Research) through the following actions:

1. Understanding the epidemics and the response
    - Investigation of outbreaks of hepatitis through a regular review of field data
2. Surveillance for acute viral hepatitis at sentinel sites
    - Sentinel sites will store samples from acute hepatitis cases for serology and investigate risk factors for transmission
    - Develop a registry of persons with chronic HBV or HCV infection
3. Surveillance and research will include:
    - Determining the proportion of liver cirrhosis and hepatocellular carcinoma that are due to HBV or HCV infection (the attributable fraction)
    - The follow-up HBsAg/anti-HBs testing in babies born to HBsAg-positive mothers
    - The planning of a national serosurvey prior to the mid-term review of 2025

Finally, the monitoring and evaluation framework for NSP IV will include VH indicators, consistent with the 10 core indicators of the Global Health Sector Strategy (GHSS) for viral hepatitis, with a special focus on:

1. The coverage of the hepatitis B timely birth dose and incidence of HBV infection in children born to HBsAg-positive mothers (core indicator: C.3.1 and C.8.1)
2. The cascade of care and treatment, including diagnosis, treatment initiation and treatment effectiveness (Core indicator: C.5, C.6., and C7)
3. The proportion of patients with cirrhosis and hepatocellular carcinoma that have HBV or HCV infection as per the WHO protocol for sequelae surveillance (Core activities indicator: C.5, C.6., and C7).

2.4.3.3. STIs

Currently only syphilis data is included as part of HIV surveillance under DHIS 2. Data for other STIs is hosted through a separate department. There is an opportunity

to strengthen STI surveillance through integrating such data into the common DHIS2 platform.

Beyond syphilis, little population data is available regarding STIs. NSP IV supports enhancing laboratory capacity to improve case management and surveillance of STI and improved screening for asymptomatic infections is needed to monitor and control disease, as STI are often asymptomatic.

Available data systems should move to use these data obtained through antimicrobial surveillance to regularly update national treatment guidelines and policies. Reporting systems should build upon existing HIV surveillance systems, expanding on and integrating with HIV reporting systems including integrated behavioural and biological surveys (IBBS). Data should be disaggregated by sex, age, socioeconomic status, geography and other relevant population characteristics.

2.4.4. SD4: Communities and civil society

The meaningful participation of people with HIV, viral hepatitis or STI and their families and communities is of critical importance in determining, developing and implementing national and subnational policies for affected communities and should be actively promoted.

Full engagement with communities and civil society is necessary for elimination goals to be realized across HHS. NSP IV includes affected community representation in the national HIV, viral hepatitis and STI task forces. Implementation of the supports peer-led or peer navigation interventions for key populations who are not reached effectively through traditional approaches, including rural and marginalized populations. These initiatives are supported by domestic or other financing resources available to support, build capacity and ensure sustainability of CBOs.

Civil society and CBOs have played a leading role in HIV-related advocacy, service delivery and accountability since the early stages of the HIV response. More recently, they have also successfully advocated for stronger responses to viral hepatitis and STI. The COVID-19 pandemic spurred CBOs worldwide to step up their innovative efforts to bring services closer to people in need within an environment of trust and innovative approaches were introduced as part of care during the COVID-19 pandemic. These innovations simplify service delivery, meet the needs of communities and should be utilized in HHS service provision.

NSP IV has the goal to achieve prevention and testing coverage goals consistent with the Global AIDS Strategy 2021-2026 through the following:

1. Building technical capacity in CBOs in the provision of prevention, testing and (where appropriate) treatment services beyond HIV to including hepatitis B, C and STIs, with a particular (but not exclusive) focus on key populations,
2. Support CBOs to recruit, train and retain a stable workforce both in Thimphu, but also in other major centres across Bhutan.
3. Supporting community-led monitoring and research to be integrated into improvements of service delivery.

Noting the viral hepatitis literacy deficit in Bhutan, including among KPs, building awareness among the community and affected populations is critical for achieving elimination. NSP IV supports key actions of the NACP for Viral Hepatitis to achieve this, including:

1. Develop an effective communication strategy for viral hepatitis prevention and control embedded within the overall national health promotion strategy or campaign plan of the National HIV, AIDS and STIs Control Program.
2. Sensitize the general population and the key population on the basics of viral hepatitis to enable them to recognize the risk for viral hepatitis transmission and prevention,
3. Observe World Hepatitis Day (WHD) to create national and local level advocacy and awareness on the prevention of viral hepatitis,
4. Also, integrate the national testing week for World Hepatitis Day similar to that of HIV testing week observed during World AIDS Day,
5. Build capacity in viral hepatitis among CBOs and affected communities, including key populations.

Community-led or based organizations are well placed to deliver services to key populations, but require capacity building during NSP IV. Accreditation of CBO HIV services will facilitate this process. This will include the development of CBO standards (Manual of Procedures and Reference Manual).

Innovative strategies to boost CBO engagement with KPs may include:

1. Direct hire outreach workers recruited from key populations to work at HISC/VCT centers or district hospitals or health centers in order to reach KPs. In the medium term, this may require government support directly to CBOs for recruitment, training, supervision and reporting of these outreach workers.

2. Funding availability for CBOs to conduct HIV outreach and screen testing based on a 'per person' budget, either directly with each CBO.
3. "Enhancing sustainability of HIV control by formalising the role of KPOs in the national response'. Considering that the HIV epidemic is going to be concentrated among the key populations and till now KPOs have the experience of providing HIV related services among the KPs, it is important to continue to engage the KPOs for providing HIV related services to the KPs. Efforts will be initiated to allocate funds for the active participation of Key Population Organizations (KPOs), or the program will advocate with the government to secure budgetary provisions specifically aimed at involving KPOs. This will ensure predictable and sustainable funding for KPOs to service as part of the national HIV response. This subsequently contributes significantly towards achievement of the national target set for combating the HIV epidemic and ensuring that it is no more a public health problem.

2.4.5. SD5: Innovations for elimination

Given the shift in this NSP IV towards key populations, particularly for HIV, innovative strategies for engaging KPs and promoting screening and testing are to be considered for implementation during the timespan of the plan.

Innovations that span HIV, viral hepatitis and STIs include:

1. Evaluate the HIV, VH and STI self-testing demonstration project and adapt findings for routine implementation, including monitoring and evaluation tools.
2. Expand coverage of community-based HIV testing using both Oral Quick and finger-prick testing (dual tests) for KPs through three models; either self-testing, assisted self-testing, or peer-delivered testing.
3. Implement ethical partner notification/index testing/social network-based HIV, VH and STIs testing.
4. Increase access to HIV, VH and STI self-testing via different channels, including online promotion and distribution.
5. Expand mobile HIV/VH/STI testing services.
6. Implementation of PrEP and PEP availability to at-risk populations, with scale up to achieve the elimination of HIV transmission in combination with existing prevention interventions.

The NSP IV seeks to support innovations to improve **HIV elimination goals**. This includes developing international collaborations to make available new technologies in Bhutan across the following interventions:

1. Support research into improved HIV therapeutics including vaccine and cure through international collaboration.
2. Support research on implementation technologies to facilitate adherence including long acting ARV preparations, remote testing and adherence reminders and offer the same in programmes.
3. Make available polyvalent or integrated diagnostic platforms for the combined diagnosis of HIV and comorbidities such as TB, viral hepatitis and syphilis.
4. Offer HIV self-testing and rapid point-of-care tests in a range of settings to improve access.

The NSP IV stress the importance of innovative solutions to increase **hepatitis B and C** diagnosis, treatment and cure. While commodities are critical, the operational effectiveness of services should be tailored to meet the needs of the affected population, with a focus on those interventions necessary to boost hepatitis diagnosis and treatment. These include initiatives such as self-testing, simplified care pathways and the widespread use of rapid diagnostic tests.

Innovations to support the availability of **STI prevention, testing and treatment** include to identify, evaluate and scale up best practices in preventing STIs. In addition, to monitor development of adopt innovations in STI diagnostics and treatment to address local challenges. These may include self-collection, the use of rapid, low cost diagnostics, multiplex platforms and home-based testing kits.

2.5. HIV specific actions

This section details key actions to address HIV over and above the shared actions in section 2.3. It builds on the successes and lessons learnt from NSP III including the 2023 review of the national HIV health sector response to HIV in Bhutan. These actions fully align with the Global Health Strategies for HIV, viral hepatitis and STIs 2022 - 2030 and as the UNAIDS Global AIDS Strategy 2021–2026.

In addition to building on the NSP III 2017 – 2023, the shift towards a national response focused on KPs to address HIV is aligned with the *Operational plan for comprehensive HIV prevention services for the key population in Bhutan (48).*

2.5.1. Key areas for urgent attention

1. The key area for urgent attention with HIV is to enhance the overall strategic focus on key populations at higher risk for HIV: FSW, HRW, MSM and TGP. During the previous period, less than 10% of funding was used for prevention and HIV screen testing among these key populations.
2. Urgent implementation and rapid scale up of PrEP to stop ongoing transmission, beginning with key populations.

3. Expand the capacity of CBOs to provide prevention testing and treatment (where appropriate) with retention in the cascade across the nation.

2.5.2. SD1: Key interventions

The continuum of HIV services provides an organizing framework for implementation of essential interventions that comprehensively address people's needs relating to HIV prevention, testing, treatment and chronic care. Health services must be client-centred rather than service-centred and organized such that individuals can be continuously engaged in care, including through community access points where appropriate to optimize outcomes across the life course. Stigma – including self-stigma - must be actively addressed in all HIV services, including through training, community engagement and provision of peer-led services for key populations. The retention cascade should be monitored to identify areas in which programmatic improvements are needed through the monitoring and evaluation framework.

2.5.2.1. Prevention

Comprehensive HIV prevention includes the combination of key biomedical, behavioural and structural interventions as follows:

1. Make available and promote a range of male and female condoms and lubricants
2. PrEP as an additional prevention choice for all individuals with a self-assessed risk of acquiring HIV;
3. PEP to all people who have had a significant exposure to HIV and support transition to PrEP;
4. Continued promotion of treatment as prevention and the concept of U=U;
5. Targeted prevention programmes for key populations, including MSM, transgender people, FSWs and PWID/PWUD;
6. Engaging other populations in HIV prevention programs, including transportation and uniformed services, and, in rural areas, farmers;
7. Evidence-based psychosocial interventions and drug dependence treatments and build capacity;
8. Prevention, diagnosis and treatment of STI, hepatitis and TB.

Specific to key populations, and integrated into NSP IV, are board health sector interventions which include components such as behaviour change communication, condom and lubricants, peer outreach, facility and community based self-testing, as effective interventions for the prevention and control of HIV/AIDS and STIs. These

interventions detailed in the *Operational plan for comprehensive HIV prevention services for the key populations in Bhutan (48)* as follows:

1. General HIV/AIDS and STIs advocacy, awareness and education for key and vulnerable populations, which includes that:
    a. HIV/AIDS prevention information is disseminated using both physical and electronic materials, through various community-focused channels, emphasizing testing and treatment.
    b. The approach engages diverse audiences, with a focus on reducing stigma and discrimination against high-risk populations.
    c. The intervention will scale up through high-level advocacy, mass media campaigns, community-led education.
    d. Targeted demand generation initiatives for youth using online platforms, including skills-based risk reduction activities for young key populations.
2. Promotion of a range of male condoms and water-based lubricants:
    a. Distribution of these protective items is facilitated through various platforms like health centers, NGOs, vending machines, and entertainment venues, driven by health workers and community outreach workers.
    b. The focus is on promoting correct and consistent condom use, STI prevention and treatment, improving partner communication skills, and fostering positive norms around condom use.
    c. The intervention will scale up through a comprehensive strategy involving client understanding, distribution expansion, community promotion, and program monitoring and evaluation.
3. Pre and post exposure prophylaxis of HIV (PrEP and PEP)
    a. Oral pre-exposure prophylaxis (PrEP) containing tenofovir disoproxil fumarate should be offered as an additional prevention choice for key populations who are at substantial risk of HIV infection as part of combination HIV prevention approaches
    b. Post-exposure prophylaxis (PEP) should be available to all eligible people from key populations voluntarily after possible exposure to HIV

    c. Demand generation initiatives for both PrEP and PEP, with a particular focus on the highest risk key populations.

2.5.2.2. Testing

At present, in Bhutan, HIV testing and counselling are provided through 49 hospitals, 186 PHCs, six HISCs and 13 private diagnostic clinics. In addition, targeted HIV, hepatitis and STI (hepatitis B and syphilis) testing is carried out,

through the outreach and in-reach activities from the six standalone HISCs for key populations including vulnerable populations like migrant and transport workers.

HIVST is an acceptable method of testing among men who have sex with men, transgender men and women, sex workers, and vulnerable populations in Bhutan and will be expanded and scaled up as one of the methods to increase uptake of testing, particularly among the key population. However, NSP IV advocates for increased demand generation, advocacy on the proper use of the test, and increase the accessibility of the test kit.

An optimal combination of HIV testing approaches, including through clinical settings, community-based approaches or self-testing is required to boost efforts to increase the number of HIV diagnoses, particularly in key populations.

Key steps to achieve these goal include:

1. Expand HIV testing to meet national coverage targets
2. Expand use of point-of-care testing for HIV in all health-care contexts
3. Focus on reaching the first '95' among KP, i.e. *further differentiate and improve HIV/STI testing* among FSW, HRW, MSM, TGP, and their intimate partners
    a. Evaluate the HIV self-testing demonstration project and adapt findings for routine implementation, including monitoring and evaluation tools.
    b. Expand coverage of community-based HIV testing using both oral quick and finger-prick testing (dual tests) for KPs through three models; either self-testing, assisted self-testing, or peer-delivered testing.
    c. Implement ethical partner notification/index testing/social network-based HIV testing.
    d. Increase access to HIV self-testing via different channels, including online promotion and distribution.
    e. Expand mobile HIV/STI testing services.

The uptake of HIV testing among key populations is low and the current testing gap is about 39% of the estimated 1118 PLHIV in Bhutan *(21)*. To address this, the NACP and its partners are implementing interventions including different approaches to delivering HIV testing and expanding the target population for testing. For example, community-based testing (CBT) has been implemented through seven community-based testing centres like Health Information Service Centres (HISCs), which provides services specifically for key populations, in close collaboration with Lhak-Sam, Pride Bhutan and a self-help group of female sex workers in Thimphu,

Phuentsholing, Paro, Wangdue, Trongsa-Bumthang, Gelephu and S/Jongkhar. CBT has been implemented with support from the Global Fund national grant and the Global Fund SKPA programme. NSP IV supports this continued approach to address this testing gap.

HIV Self-Testing (HIVST) has been piloted in six priority districts and was implemented through HISCs and in collaboration with key population CBOs. This demonstration project has shown the feasibility of scaling up this approach to delivering HIV testing. This can now be expanded to a core testing intervention. HIV testing services are also provided through facility-based and community-based HISCs.

The NACP plans to introduce HIV testing services in Drop-In Centers (DIC) for people who inject or use drugs. In addition, the MoH encourages provider-initiated HIV testing in hospitals and private diagnostic testing centres and is expanding index testing to mobile and community-based events. All these initiatives are to be sustained in NSP IV and will require external funding support until the government can provide adequate support to both MoH and CBOs. The funding gaps for testing activities apart from facility-based testing which is fully funded by the government there will be a gap in targeted interventions.

Specific to key populations, and integrated into NSP IV, are the interventions detailed in the *Operational plan for comprehensive HIV prevention services for the key populations in Bhutan (48)* which details differentiated HIV testing services to achieve 95% diagnosis of the estimated PLHIV. These operationalize core area 2 of the Comprehensive HIV/STIs Service Package Guidance Manual, 2021 *(49)* comprises the interventions to improve the case detection which are to be scale up in NSP IV:

1. Facility-based HIV-Counselling and Testing (HCT).
2. Stand-alone HCT services
3. Community based mobile HCT Services
4. HIV Self-Testing
5. Index Testing

2.5.2.3. Treatment

To be optimal, HIV treatment should include rapid and effective ART with support to boost adherence, optimize clinical outcomes and minimize resistance. The 2023 review identified HIV treatment coverage as a strength of the national program *(3)*. Nevertheless, the NSP IV seeks to further strengthen the quality of HIV treatment in Bhutan.

The key goal is to ensure rapid initiation (same day initiation – SD ART) of HIV treatment with WHO-recommended treatment regimens for all PLHIV using agents with a high barrier to resistance such as integrase inhibitors.

To ensure adherence and linkages to comprehensive treatment and care for people living with HIV the following are included as key components supporting HIV treatment:

1. Initiate and implement same day ART initiation (SD ART) and multi-month dispensing of ART (MMD)
2. Strengthen community-led organizations' support in linkage between testing and treatment, including ensuring that PLHIV have access to social support and mental health care support services, both by health professionals or by trained 'HIV case managers' (building on the current volunteers employed by Lhak Sam).
3. Enhance the understanding of PLHIV that 'treatment is prevention' because people with undetectable viral loads cannot transmit HIV to others (U=U).
4. Provide point-of-care early infant diagnosis.
5. Increase availability of viral load testing through platform-based tests, while also including point-of-care viral load testing monitoring to promote optimal treatment outcomes.
6. Make available interventions to trace people who have disengaged from care and support their re-engagement.

The NACP under the Ministry of Health has implemented differentiated ART service delivery, providing nutritional supplements to HIV patients, viral load count, treatment monitoring and providing professional psychological and counselling services.

Note that specific to key populations, and integrated into NSP IV, are the interventions detailed in the *Operational plan for comprehensive HIV prevention services for the key populations in Bhutan (48)*which details linkage to care, support and 100% treatment for 95% viral suppression. These operationalize the core area 3 of the Comprehensive HIV/STIs Service Package Guidance Manual, 2021 *(49)* comprises the following interventions to improve the case detection:

1. Referral, linkages and follow up for differentiated ART service delivery and HIV care
2. Viral Load Testing for effective treatment monitoring to rule out ARV toxicity, drug resistance and viral suppression rate.
3. CD4 testing to set the immunological baseline information

2.6. Viral hepatitis specific actions

In 2019, Bhutan developed the first National Strategic Plan I (2019-2023) to eliminate viral hepatitis as the major public health by 2030 *(50)*. The five-year strategic plan reflected the progress and challenges of the past and the road map for the future in the prevention and control of viral hepatitis in Bhutan. This was extended in 2022 as the National Strategic Plan 2022-2026 for Prevention and Control of Viral Hepatitis *(5)*.

The NSP for viral hepatitis 2022 – 2026 is aligned with the nation's 12 Five-year Plan, WHO's regional targets and the sustainable development goal to end hepatitis as one of the public health threats. The National Strategic Plan II will be implemented by all key stakeholders (Government sectors, civil society organizations and community members) under the technical guidance of the Ministry of Health.

The NSP IV is aligned with the National Guidelines for Management of Viral Hepatitis National HIV/AIDS & STIs Control Program Department of Public Health Ministry of Health, Bhutan 2020 *(31)*, and service providers and policy makers should refer to these guidelines for detailed action items.

2.6.1. Key areas for urgent attention

There is an urgent need to promote greater public and political literacy and awareness about viral hepatitis B and C prevention, testing and treatment and to allocate increased financial resources to viral hepatitis B and C, including funding of testing and treatment through essential national health benefit packages. Continued high coverage of timely HepB-BD and linkage to mother-to-child triple elimination initiatives with HIV and syphilis are essential to reach triple elimination universality over time

NSP IV places a specific focus regarding viral hepatitis on:

1. Engagement of key populations through addressing structural barriers;
2. Urgent scale-up of harm reduction measures to reach coverage targets;
3. Implementation of decentralized and simplified service delivery; and
4. Active participation of the community and civil society at all levels of policy and service delivery.

2.6.2. SD1: Key interventions

The core viral hepatitis intervention package is detailed in the 2020 National Guidelines for Viral hepatitis *(31)*.

Core interventions of the viral hepatitis package for NSP IV include:

1. Timely newborn and childhood hepatitis B vaccination to achieve national targets, including subnational coverage;
2. EMTCT for HBV including universal testing of pregnant women, with universal timely birth-dose for their neonates;
3. Harm reduction (where appropriate needle and syringe programme including LDSSs and OAT for opioid dependant PWUD);
4. Screening for HBV and HCV followed by confirmation of current infection (viraemia) and linkage to care where HCV RNA positive;
5. Screening for HIV and other STI as part of viral hepatitis care;
6. Antivirals for HBV and HCV;
7. Targeted prevention, including HBV vaccine and programmes for key populations – MSM, transgenders, SWs and PWUD and other at risk populations;
8. Efforts to build prevention, diagnosis and treatment literacy for hepatitis A, B, C, D and E across the general population, key and other vulnerable populations and health-care workers.

2.6.2.1. Prevention

The prevention interventions for impact on viral hepatitis are based on the current epidemiological context and review of current interventions and will be implemented by the National AIDS Control Program in collaboration with its key stakeholders including the National Immunization Program. These interventions aim to increase the knowledge on the prevention and control of viral hepatitis including the importance of timely diagnosis and treatment.

Vaccination is at the core of action to eliminate hepatitis B transmission in Bhutan-both HepB-BD and B3 schedules, which are critical for stopping HBV.

Full implementation of HBV vaccine programming includes the following:

- Universal timely (< 24h) birth dose to >90% and HBIg to all exposed neonates;
- Boosting institutional facility rate to ~100%
- Testing and treatment of pregnant women with high HBV DNA with antivirals (tenofovir) and HBIg to all exposed neonates; consideration where HBV DNA is not immediately available of the treatment of HBsAg positive pregnant women with tenofovir to augment PMTCT of HBV;
- Implementation of universal third dose of hepatitis B vaccine (HepB3) infant vaccine schedule (a total of three/four doses, including the birth dose);

- Targeted HBV catch-up vaccination of key populations, health-care workers, those having frequent medical procedures (blood products, dialysis) and other non-infant populations, where cost effective;
- Rapid (0, 7, 21 days and 1 year) and accelerated (0, 1, 2 months) hepatitis B vaccine schedules for specific populations where necessary to boost HBV vaccine coverage, including for catch-up programmes for FSW, MSM and PWUD.

In addition, and to also support reducing HCV transmission:

- Advocacy, education, and communication for public awareness
  - Continued recognition of World Hepatitis Day (July 28) and associated national testing week similar to that of HIV testing week around World AIDS Day
  - Development and dissemination of an effective communication strategy for viral hepatitis to sensitize the general and key populations on the basics of hepatitis prevention diagnosis and effective treatment
- Blood and Injection safety as detailed above in section 2.3
- Harm reduction, which includes effective prevention vaccination diagnosis and treatment of viral hepatitis in key and vulnerable populations working closely with CBO's through strengthened outreach activities.

2.6.2.2. Diagnosis

The global hepatitis elimination goal is to diagnose 90% of the estimated population with hepatitis B and C by 2030. The NSP IV is aligned with this goal with the national programme to include optimal the combination of HBV and HCV testing approaches – with a focus on HBV, including through clinical settings, community-based approaches or self-testing appropriate to the local context and available evidence.

Achieving this hepatitis diagnosis goal will require identification of the around 15,000 individuals living with chronic hepatitis B in Bhutan (~2% of the adult population). With improvements in efficiency, for example not retesting individuals at low risk, it may be feasible over the period to 2030 to test the general population with a one lifetime hepatitis B test (all adults) and a one lifetime hepatitis C test for those individuals > 45 years. Such a policy will require a data system with a unique identifier. Resources could be sourced by reducing testing in low risk populations (e.g. pregnant women are subject to repeat hepatitis B and C testing in pregnancy regardless of risk profile).

Key interventions, consistent with the National Strategic Plan 2022-2026*(5)*, to upscale diagnosis of viral hepatitis include the following:

1. Implement public awareness campaigns educating endemic and at-risk populations and health-care workers, especially among primary health care providers on testing for HBV and HCV.
2. Implement simple, standardized and evidence-based viral hepatitis testing algorithms across all levels of the health system including non-specialists to support task sharing and shifting, including at the primary healthcare level
3. Train the health workers on the simplified viral hepatitis treatment guidelines and testing algorithm;
4. Improve the overall efficiency of viral hepatitis testing, where repeat testing only occurs in those at risk of transmission – not in low risk groups;
5. Prioritize the population for testing as indicated in the treatment guidelines and link them to appropriate care and treatment, including to offer hepatitis screening for family members of people living with chronic hepatitis;
6. Implement targeted HBV and HCV testing in key populations, including provider-initiated and self-testing with linkages to care and treatment and retesting for PWUD (and other high-incidence populations);
7. Initiate, where available, laboratory- and clinic-based reflex testing for viral hepatitis, e.g. to establish rapid diagnosis of HCV, including with GeneXpert cartridges;
8. Capacity building of the community members for increasing demand for testing services from the following key and vulnerable population groups listed in this action plan;
9. Include viral hepatitis testing in integrated testing platforms for multi-disease approaches;
10. Implement timely, centralized reporting of testing results;
11. Central procurement of WHO prequalified serological tests (laboratory-based or rapid tests, HBsAg or anti-HCV) will be continued and ensured.

2.6.2.3. Treatment

To support attainment of viral hepatitis mortality goals, NSP IV moves towards the inclusion of treatment for all those with HCV and all those eligible for HBV treatment, especially persons with advanced liver disease (cirrhosis) and pregnant mothers with high viral load.

Key initiatives to upscale effective hepatitis B and C treatment in Bhutan, consistent with national guidelines*(31)* include:

1. Programmatic focus on the elimination of HCV among PLHIV through a HCV–HIV coinfection micro-elimination initiative to support universal testing for hepatitis in HIV infected individuals;
2. Strengthen linkages across the health sector to drive diagnosed individuals to early timely initiation of HBV and HCV treatment;
3. Implementation of the National Guidelines for Viral Hepatitis promote a simplified public-health approach;
4. Actively monitor the cascade of treatment and care to identify and address barriers to early linkage and retention in care;
5. Hepatitis liver related disease requires special measures to optimize outcomes, including the management of comorbidities;
    a. Screen for common comorbidities in people with chronic hepatitis B or C infection, including for cirrhosis and hepatocellular carcinoma (primary liver cancer)
    b. Screen for and offer treatment for medical conditions that exacerbate liver disease such as problematic alcohol use and metabolic syndrome, including obesity and hypertension
    c. Improve hepatitis diagnosis and treatment literacy among cancer services.

2.7. STI specific actions

Sexually transmitted infections were included as a focus in NSP III, parallel to initiatives to HIV. NSP IV seeks to expand focus on STIs as an entity on their own, given the prevalence of common STIs is substantially higher than that of HIV and poorly understood.

The four key curable STIs are syphilis (Treponema pallidum), gonorrhoea (Neisseria gonorrhoeae), chlamydia (Chlamydia trachomatis) and trichomoniasis (Trichomonas vaginalis). Little data is available in Bhutan regarding the prevalence of gonorrhoea, chlamydia and trichomoniasis. The prevalence of syphilis appears high in transgenders and MSM, although absolute numbers are small. HPV prevalence is high, though a comprehensive immunization program among youth means this is a time limited issue.

2.7.1. Key areas for urgent attention

Of the three disease categories covered by this NSP IV, STIs is by far the area with the largest gap requiring the most development. As a baseline there is an urgent need to understand the extent of STI prevalence and transmission across Bhutan, particularly in higher risk populations. In addition, this NSP promotes a shift from syndromic management towards that of diagnosis informed treatment. These actions will require system strengthening across the health sector in STIs, including investment in STI literacy among the health workforce, capacity building for laboratory support, the availability of diagnostics, as well as greater awareness in the general community and key populations.

2.7.2. SD 1: Key interventions and innovations

2.7.2.1. Prevention

Primary prevention of STIs includes the use of condoms and early detection and treatment for the 4 curable STIs, and vaccine for HPV. In addition, NSP IV calls for scale up of:

1. Developing primary prevention initiatives for key populations and implement and evaluate these in collaboration with affected populations, community groups and NGOs.
2. Free access to condoms in a variety of settings to which key populations have access is a key intervention.
3. Prevention initiatives for STI integrated with HIV, PrEP and hepatitis prevention through HBV vaccination for key populations.

4. Building STI literacy across populations to seek care for symptoms of STI and prevent reinfection through a range of health promotion initiatives for key populations and the general population should be used, including:
    a. mass media campaigns
    b. education in schools
    c. Targeted health promotion activities conducted by community groups.

Bhutan's HPV vaccination program commenced in 2010, for adolescent females as a one-time catch-up and was then incorporated into routine immunisation in 2011. Initially commenced using the quadrivalent vaccine, the regime was switched to a two-dose regime in 2016. In September 2020, Bhutan initiated vaccination for boys, and was introduced into the routine vaccination schedule in 2021 *(34)*. Bhutan has been able to achieve 88% coverage in females and 89% coverage in males*(37)*.

The National Cervical Screening program with cytology was launched in 1999 and has been available nationwide since 2006. Although free of charge, in 2011-2012, uptake was 59.2% in women aged 18-69 and 66% in 2017 in Thimphu. The Cervical Cancer Elimination Flagship Program started with a mass screening of women with cervical smears with a target to cover all districts. Disrupted by the COVID-19 pandemic, the program has resumed beginning 2021 and has completed mass screening of women with cervical smears in eight of the 20 districts: Gasa, Punakha, Bumthang, Monggar, Paro, Lhuentse, Trashi Yangtse, and Trongsa.

Key interventions in the HPV space are consistent with the National Strategy to address cervical cancer in Bhutan, and include:

1. Increase in access to updated and timely information on HPV through advocacy and information mass campaigns,
2. HPV vaccination service delivery strategies improvised to maximise coverage and reduce vaccine wastage.

2.7.2.2. Diagnosis

STI control is only possible through the widespread availability of testing services at the primary health care level, at HIV services and those services working with key populations.

The following are key components for STI testing within NSP IV:

1. All individuals tested for HIV should also be tested for syphilis;
2. Consider asymptomatic STI screening for at-risk populations.

3. As technology becomes available, expand screening opportunities for Chlamydia trachomatis and Neisseria gonorrhoea with next generation lower cost point-of-care diagnostic tests;
4. Build laboratory capacity to improve diagnosis of symptomatic and asymptomatic STI.

Strategic outputs for HPV screening and early detection are consistent with the National Strategy to address cervical cancer and include:

1. Guidelines and protocols established based on up-to-date scientific evidence and ethical standards,
2. competency of service providers improved to address psychological and clinical needs of women, and ensure high-quality of health care
3. health system capacity improved for equitable access to cervical screening and treatment,
4. Strengthened the quality of cytology services through development of service standards and NEQAS Centre,
5. Established integrated service delivery approaches for overall improvement of women's sexual and reproductive health.

2.7.2.3. Treatment

Early diagnosis and treatment can reduce STI transmission and prevalence. NSP IV commits to upscaling syndromic and diagnosis informed treatment through the following key interventions:

1. STI treatment to be made available, in line with recommended treatment schedules in the 2023 National STI guidelines,
2. Same-day treatment for curable STI to be made available for the 4 curable STIs at all levels of the health system, using and expanding diagnosis informed treatment where available,
3. Retention and referral mechanisms for those needing ongoing care to be established and the STI care cascade should be monitored to determine where loss to follow up is occurring.

Several STIs, including HIV, syphilis, gonorrhoea, chlamydia, herpes simplex virus, and HTLV-1 can be transmitted vertically. Bhutan national policy is already consistent with triple elimination efforts, including the integrated testing and treatment of pregnant women for HIV syphilis and hepatitis B. NSP IV commits to provide timely identification and treatment of pregnant women, their sexual partners and their exposed infants and young children for these infectious diseases. This includes the provision of HBV birth dose within 24hrs.

Strategic outputs for cervical cancer, treatment, palliation and rehabilitation consistent with the National Strategy to address cervical cancer include:

1. Increased in access to recent scientific and evidence-based treatment facilities for cervical cancer and palliative care,
2. Adequately trained human resources available for increased access to equitable cervical cancer treatment and palliative care,
3. Rehabilitation services for improving the quality of life of women treated for cervical cancer established.

3. Financing

National financing for viral hepatitis, HIV and STI requires consolidated, not fragmented funding, to maximize the efficient use of resources and minimize overall catastrophic health expenditures for households.

The following actions can optimize financing:

1. Health budget should include optimized domestic funding, complemented, where necessary, by external sources;
2. Aligning of domestic funding for viral hepatitis, HIV and STIs packages with essential interventions for each disease area;
3. Budgeting for viral hepatitis, HIV and STIs should be reflected in the costing planning and budgeting of essential health services including in the health insurance benefit packages;
4. Financing efficiencies be integrated into health service financing, including pooling funds from multiple financing sources;
5. Price reduction strategies should be implemented with a focus on diagnostics and medicines, including use of pooled purchasing mechanisms and partnership with the private sector.

Financing of NSP IV is detailed in the operational costing of the implementation of this plan (separate document)

3.1. Sustainability

The sustainability of the national response across the three disease categories is critical. The 2022 final report to ensuring long term programmatic and financial sustainability of HIV and AIDs response for the key populations in Bhutan was carried out and outlined a conceptual framework for getting to zero (for HIV) *(11)*. These principles also apply to viral hepatitis and STIs:

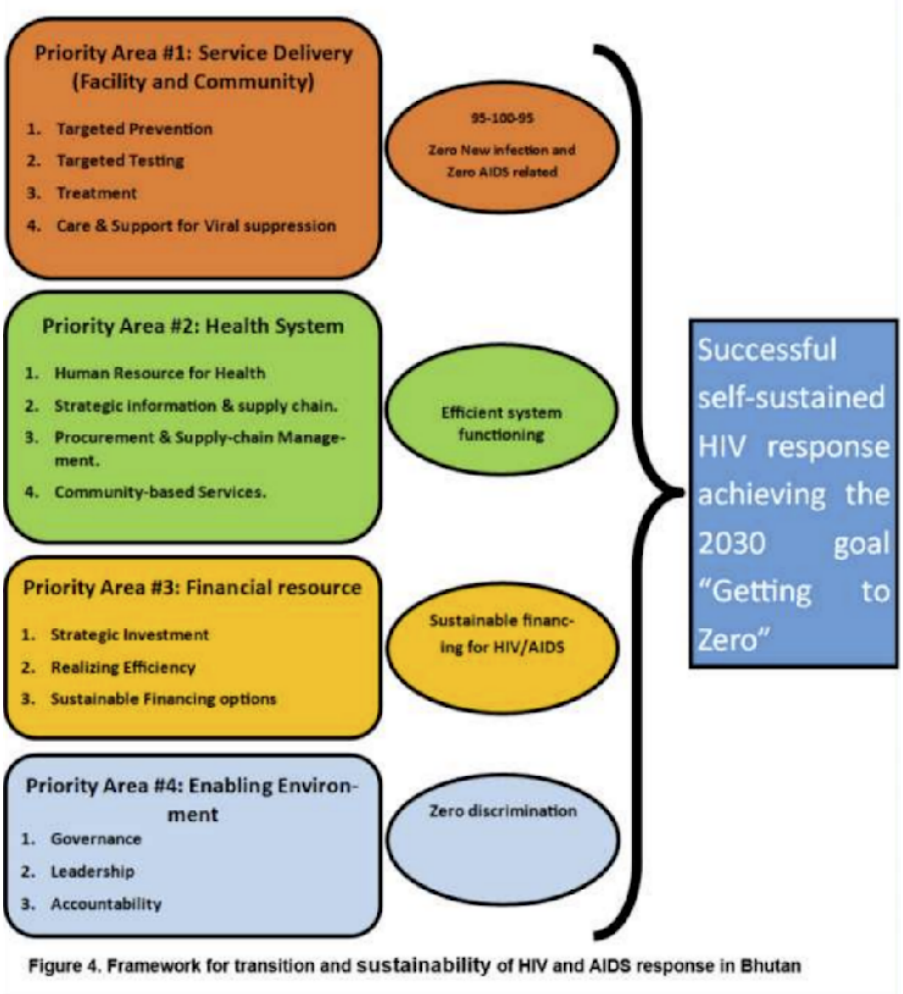


Figure 2 - Framework for the transition and sustainability of HIV and AIDS in Bhutan (11)

The framework not only focuses on financial sustainability but also goes beyond by analysing the health systems and services delivery, and identifies the sustainability goals and objectives including the key recommendations to achieve the challenges against the goal set. Adequate financing, an enabling environment, and appropriate governance, leadership and accountability are the underlying prerequisites for a sustainable HIV response, and similarly for hepatitis and STIs.

4. Monitoring and evaluation

Please refer to Annex 2 for detailed information regarding targets and indicators for the goals of NSP IV.

The NSP IV recognizes that establishing effective systems for monitoring and evaluation (M&E) is a vital component for successful implementation of the strategic directions. Consequently, NSP IV endorses, as the M and E framework, the *National Guideline on Monitoring and Evaluation of National HIV and AIDS Response in Bhutan, 2021 (47).*

The objectives of this National Guideline on Monitoring and Evaluation are:

1. To have standard indicators, tools and reporting systems at all levels and have accurate and timely data.
2. To monitor the progress and performance of the national program and implementing partners.
3. To evaluate the HIV/AIDS achievements and progress made by NACP and other implementing partners.
4. To provide guidance to all relevant stakeholders on M&E roles and functions and reporting tools and systems.
5. To provide periodic progress update to the government, donors and other stakeholders on program implementation and achievement

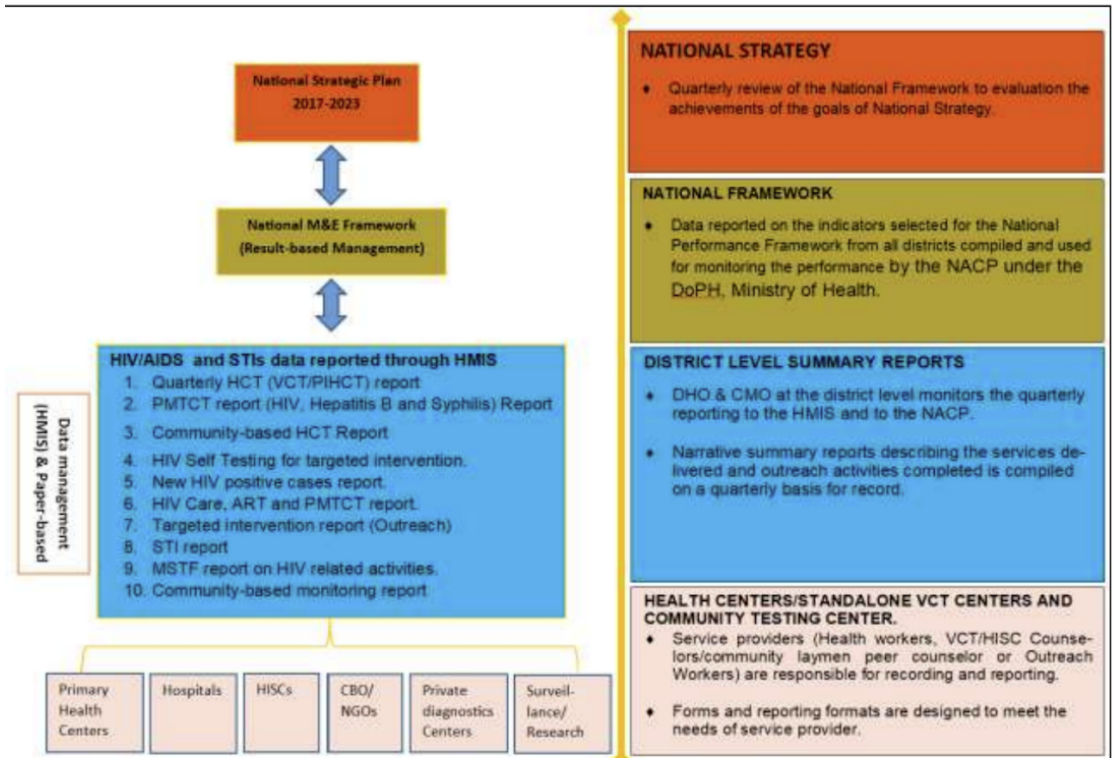


Figure 3 - Key components of the National monitoring and evaluation system for HIV/AIDS in Bhutan 2021 (47)

The objective of the National Monitoring and Evaluation Plan is to provide timely and accurate strategic information to guide the planning of the national response to HIV, viral hepatitis and STI, and to coordinate stakeholders towards one agreed country-level monitoring and evaluation system.

NSP IV advocates for an expansion of community based monitoring. Community-led monitoring is an ongoing process in which service users or local communities gather, analyse and use information to support quality improvement of HIV services and advocacy efforts to increase uptake of and retention in HIV and related health services and, ultimately, to improve health outcomes for key populations. Improvements in HIV services for key populations are expected to increase uptake of and retention in HIV services, leading to improvements in health and life expectancy. By improving uptake of and retention in HIV services, CLM will assist Bhutan to achieve the 95-95-95 targets.

Specific to hepatitis, NSP IV endorses the monitoring and evaluation framework as detailed in the *National Strategic Plan (NSP) 2022 - 2026 for Prevention and Control of Viral Hepatitis.* Commonality in laboratory systems and DHIS2 are two

critical linkages between the disease categories.

The mid-term review of the National Strategic Plan IV implementation will be conducted during 2026. The review will focus on the progress towards achieving the global and national targets and how the available inputs have been used and what outputs and short term outcomes have been reached. The review will also focus on challenges, interactions between various key implementing partners, and produce evidence for programme adjustment as necessary.

5. References

1. National Bureau of Statistics. Bhutan Living Standards Survey Report 2022.
2. Ministry of Foreign Affairs and External Trade. 2023
3. de Lind van Wijngaarden W. Kingdom of Bhutan HIV/STI Program Review. Thimphu; 2023
4. Ministry of Health. National HIV, AIDS and STI Strategic Plan 2017-2023 "On Fast-Track to Ending AIDS". Thimphu: National HIV, AIDS and STIs Control Program, Department of Public Health, Royal Government of Bhutan; 2017
5. NACP. National Strategic Plan (NSP) 2022-2026 for Prevention and Control Viral Hepatitis Thimphu: National HIV, AIDS and STIs Control Program, Department of Public Health, Royal Government of Bhutan; 2022
6. Planning Commission. Bhutan 2020: A Vision for Peace, Prosperity and Happiness. Thimphu: Royal Government of Bhutan; 1999
7. UNAIDS. UNAIDS. Global AIDS Strategy 2021-2026 — End Inequalities, End AIDS. . Geneva: Joint United Nations Programme on HIV/AIDS; 2021
8. WHO. WHO global health sector strategies on, respectively, HIV, viral hepatitis and sexually transmitted infections, 2022–2030. Geneva: World Health Organization; 2022 (https://apps.who.int/iris/rest/bitstreams/1451670/retrieve, accessed 20 May 2023)
9. WHO. Integrated regional action plan for viral hepatitis, HIV and sexually transmitted infections in South-East Asia 2022–2026 New Delhi: World Health Organization Regional Office for South East Asia 2022 (https://apps.who.int/iris/rest/bitstreams/1451670/retrieve, accessed 20 May 2023)
10. World Bank. The World Bank in Bhutan. Washington DC: The World Bank; 2023 (https://www.worldbank.org/en/country/bhutan/overview, accessed

11. NACP. Ensuring long-term programmatic and financial sustainability of HIV and AIDS response for the key population in Bhutan. Thimphu: Ministry of Health, Royal Government of Bhutan; 2022
12. AFAO. SKPA-2 Baseline Assessment Report. Sydney: Australian Federation of AIDS Organisations; 2023
13. Ministry of Health. National AIDS spending report, Thimphu: National HIV, AIDS and STIs Control Program, Department of Public Health, Royal Government of Bhutan; 2020
14. Ministry of Health. Annual Health Bulletin, Thimphu: Royal Government of Bhutan; 2022
15. NACP. Pre-validation assessment report: triple elimination of mother-to-child transmission of HIV, syphilis, & hepatitis B. Thimphu: Ministry of Health, Royal Government of Bhutan; 2022
16. NACP. Retrospective risk assessment of current living HIV cases diagnosed from 1993-2020. Thimphu: Ministry of Health, Royal Government of Bhutan; 2021
17. NACP, Save the Children, Burnet Institute, AFAO, UNAIDS. Analyses for impact, efficiency, and sustainability of priority key population HIV services in Asia: Bhutan. Thimphu; 2023
18. NACP. HIV sentinel surveillance among Key Populations in Bhutan, 2021. Thimphu: National HIV, AIDS and STIs Control Program, Department of Public Health, Royal Government of Bhutan; 2021
19. Lorway R, Dorji G, Bradley J, Ramesh BM, Isaac S, Blanchard J. The Drayang Girls of Thimphu: sexual network formation, transactional sex and emerging modernities in Bhutan. Cult Health Sex. 2011;13 Suppl 2:S293-308.–doi: 10.1080/13691058.2011.607243.
20. NACP. HIV program data May 2023. Thimphu: National HIV, AIDS and STIs Control Program, Department of Public Health, Royal Government of Bhutan; 2023
21. UNAIDS. HIV estimates (Spectrum software estimates). Geneva: Joint United Nations Programme on HIV/AIDS; 2023 (https://www.unaids.org/sites/default/files/media_asset/2016_methods-for-deriving-UNAIDS-estimates_en.pdf, accessed 20 May 2023).
22. NACP. Bi-annual HIV and AIDS Epidemic Report (July-December 2022), submitted to the Gyalpoi Zimpoen, His Majesty's Secretariat, . Tashi Choe Dzong, Thimphu, Bhutan; 2022
23. UNAIDS. Global AIDS monitoring tool, Bhutan data. Geneva: Joint United Nations Programme on HIV/AIDS; 2022 (https://www.unaids.org/sites/default/files/media_asset/2016_methods-for-deriving-UNAIDS-estimates_en.pdf, accessed 20 May 2023).

24. SKPA-2, Burnet Institute, NACP. Analyses for impact, efficiency and sustainability of priority key population HIV services in Bhutan. Thimphu: SKPA-2; 2023
25. NTBCP. Annual TB report 2022. Epidemiological Update, Current Interventions & Way Forward. Thimphu: National TB Control Program, Communicable Disease Division, Department of Public Health, Royal Government of Bhutan; 2022
26. NTBCP. National Strategic Plan (NSP III) for Tuberculosis in Bhutan, 2024 –2028. Thimphu: National TB Control Program, Communicable Disease Division, Department of Public Health, Royal Government of Bhutan; 2023
27. WHO. Tuberculosis profile: Bhutan. Geneva: World Health Organization; 2022
28. Tshering N, Dhakal GP, Wangchuk U, Wangdi S, Khandu L, Pelden S et al. Prevalence of HBV and HCV infections, Bhutan, 2017: Progress and next steps. BMC Infect Dis. 2020;20:485.–doi: 10.1186/s12879-020-05176-3.
29. NACP. Viral hepatitis program data. Thimphu: National HIV, Hepatitis and STIs Control Program, Department of Public Health, Royal Government of Bhutan; 2023
30. WHO UNICEF estimates of national immunization coverage 2022 [online database]. Geneva: World Health Organization and United Nations Childrens Fund; 2022 (https://www.who.int/docs/default-source/immunization/immunization-coverage/wuenic_notes.pdf?sfvrsn=88ff590d_6, accessed 20 July 2023).
31. NACP. National Guidelines for management of Viral Hepatitis. Thimphu; 2020
32. NACP. STI program data. Thimphu: National HIV, AIDS and STIs Control Program, Department of Public Health, Royal Government of Bhutan; 2023
33. SPMER. Integrated Biological and Behavioral Surveillance (IBBS) Surveys among vulnerable and Key Populations at Higher Risk in Bhutan, 2016. Thimphu: School of Planning Monitoring Evaluation and Research (SPMER),Kathmandu, Nepal; 2016
34. Ministry of Health. Strategic plan for cervical cancer program in Bhutan 2019-2023. Thimphu: Department of Public Health, Royal Government of Bhutan; 2019
35. Dorji T, Tshomo U, Gyamtsho S, Tamang ST, Wangmo S, Pongpirul K. Gender-neutral HPV elimination, cervical cancer screening, and treatment: Experience from Bhutan. Int J Gynaecol Obstet. 2022;156:425-9.–doi: 10.1002/ijgo.13728.
36. Hingmire S, Tshomo U, Dendrup T, Patel A, Parikh P. Cervical Cancer HPV Vaccination and Bhutan. South Asian J Cancer. 2023;12:41-3.–doi: 10.1055/s-0043-1764220.

37. RHP. HPV immunization program data. Thimphu: Reproductive Health Program, Department of Public Health, Royal Government of Bhutan; 2023
38. NACP. National guidelines for the management of sexually transmitted infections in Bhutan. Thimphu: Department of Public Health, Ministry of Health, Royal Government of Bhutan; 2006
39. NACP. Mapping and population size estimation of men who have sex with men, transgender persons, and high-risk women in Bhutan. Thimphu: Department of Public Health, Ministry of Health, Royal Government of Bhutan; 2020
40. AFAO, CPA, Rainbow Bhutan, Save the Children, Lhak-sam. Stigma and Discrimination among key populations in Bhutan. Thimphu: Australian Federation of AIDS Organizations, Save the Children, Chithuen Phendhey Association, Lhak-sam, Sustainability of HIV Services for Key Populations in Asia (SPKA),; 2020
41. NACP. Formative Assessment on Situation for Sex Work in Bhutan. Thimphu: National HIV, AIDS and STIs Control Program, Department of Public Health, Royal Government of Bhutan; 2020
42. Institute of Health Partners. Report on gender review for countries participating in the global fund sustainability of hiv services for key populations in asia (SKPA) program within the context of HIV: Bhutan. Sydney: AFAO SKPA Regional Programme; 2020
43. SKPA-2, AFAO. Advocacy strategy to reduce stigma & discrimination among key populations in Bhutan. Thimphu: SKPA-2, AFAO, CPA Bhutan, Rainbow Bhutan, Save the Children, Lhak-sam; 2020
44. UNODC, NCA. National Baseline Assessment of Drugs and Controlled Substance Use in Bhutan – 2009. . Thimphu: UNODC and Bhutan Narcotics Control Agency; 2009
45. Wangdi K, Jamtsho T. Drug use among Teenagers and Young Adults in Bhutan. Indian J Psychol Med. 2019;41:535-40.–doi: 10.4103/IJPSYM.IJPSYM_348_19.
46. NACP. Community-Led monitoring key population groups. Thimphu: National HIV, AIDS and STIs Control Program, Department of Public Health, Royal Government of Bhutan; 2022
47. NACP. National guideline on monitoring and evaluation of national HIV and AIDS response in bhutan, 2021 Thimphu: National HIV, AIDS and STIs Control Program, Department of Public Health, Royal Government of Bhutan; 2021
48. NACP. Operational plan for comprehensive HIV prevention services for the key population in Bhutan. Thimphu: National HIV, AIDS and STIs Control Program, Department of Public Health, Royal Government of Bhutan; 2022

49. NACP. Comprehensive service package for HIV/AIDS and STIs: A guidance manual. Thimphu: National HIV, AIDS and STIs Control Program, Department of Public Health, Royal Government of Bhutan; 2021
50. NACP. National Strategic Plan (NSP) 2019-2023 for Prevention and Control Viral Hepatitis Thimphu: National HIV, AIDS and STIs Control Program, Department of Public Health, Royal Government of Bhutan; 2019

Annex 1

1.1. Achievements against NSP III 2017-2023 targets

The end of term review of NSP III reviewed national progress against targets of the NSP. The following are the key findings.

Target	Achieved?
Reducing new HIV infections by 75%	No (49% decline, 2010-2022)
Identifying and testing 95% of all key populations	No (54%)
Enrolling 100% of diagnosed PLHIV (updated from 90% in 2017) on ART	Yes (97%)
Retaining 100% of PLHIV on ART	Yes (97%)
Achieving 95% viral suppression among PLHIV on ART	Yes (94% of those VL tested)
Achieving 0% vertical transmission of HIV from mother to child	Almost (3 children born in '21)
Improve M&E/reporting/tracking system	In progress
Improve availability of strategic information to inform the response	Yes (IBBS, PSE, assessments)
Conduct operations research to improve interventions	No

Table 2: Overview of main goals of the 2017-2023 and whether they have been achieved.

Regarding the targets set in the 2017-2023 NSP (see Table 2), the target of reducing the number of new HIV infections by 90% by 2030 has not been met. From 2010-2021, the number of new HIV infections decreased by 25%, although 2022 saw an unexpected spike due to increased HIV case finding[17]. The Optima model suggests that if HIV funding for prevention and stigma reduction, focusing on KP, was expanded - requiring an additional investment of $586,000 USD per year - an additional 32% fewer cumulative infections could be achieved by 2030 (though still short of the 90% target)[27].

The second target, diagnosing 95% of all estimated PLHIV in Bhutan, has also not been met. According to the 2022 Spectrum estimates, under 50% of PLHIV have been diagnosed. The most recent HIV estimates indicated 655/1118=59% as of end 2022. It notes that only 10% of the currently diagnosed PLHIV belong to a KP that KP HIV programs could have reached; at the same time, they recommend against the testing of the general population. It is important to also look at the history of membership of a key population; for example, women may have been involved in sex work for a relatively short period of time in the past but still be living with HIV as a result.

The target of enrolling 100% of diagnosed PLHIV on ART treatment is on track: 648 out of 661 people diagnosed were on ART as of April 2023, equalling 98%. Although there was a long period in 2021-2022 when viral load test reagents were unavailable due to limited cross-border trade caused by the COVID-19 pandemic, 92% of PLHIV who did access viral load testing were virally suppressed, bringing the 95% target in reach. The final target—elimination of mother-to-child transmission of HIV—is also within target; according to Optima estimates, 3 children were born with HIV in 2021. During the program review, in both Tsirang and Gelephu there were 4 (out of 14) and 3 (out of 54) young children living with HIV. In both instances, the health counselors said that the families in which these children lived had moved in from another district, indicative of the fact that the PMTCT program still has gaps.

Other targets in the NSP were improvement of the M&E and reporting system; this is still a work in process, and many problems were reported in terms of tracking clients across the HIV prevention service, testing and care and treatment cascade (and across districts), partly due to a lack of a UIC and the need to use the government-issued ID to register for (free) health care services, leading clients to mislabel themselves as 'general population'.

Another important target of the 2017-2023 NSP was to improve the availability of strategic information for the HIV response. This target has definitely been met: there has been a flood of research studies, modeling exercises, and assessments in the field of epidemiology, leading to a clearer picture of where Bhutan's HIV epidemic is at and where it is heading. However, important qualitative information (about drug use, male-to-male sexual cultures/networks, the variety of sex work/transactional sex) necessary to inform effective HIV outreach strategies and improved programming is still lacking. The goal of conducting operations research to inform better/more effective interventions has not been met so far.

Annex 2

Indicators and metrics for the National Strategic Plan IV for HIV, viral hepatitis and STIs for Bhutan 2023 – 2028

For TB/HIV indicators, please refer to NSP for TB 2023

Table A1. Impact and coverage indicators, targets and milestones for HIV for Bhutan, by 2025 and 2030

	Indicator	Baseline – 2022[a]	Targets - 2025	Targets - 2030	Disaggregation	Source(s)
Impact indicators	Number of people newly infected with HIV per year	62	50	42	Age, sex, priority population, province/state	WHO/UNAIDS reporting
	Number of people newly infected with HIV per 1000 uninfected population per year (SDG 3.3.1) (incidence per 1000 population)	0.08	0.06	0.05	Age, sex, priority population, province/state	WHO/UNAIDS reporting
	Number of children 0–14 years of age newly infected with HIV per year	4/67 (5.9%) 4 MTCT cases in 2022	0	0	Age, sex, priority population, province/state	WHO/UNAIDS reporting

	Indicator	Baseline – 2022[a]	Targets - 2025	Targets - 2030	Disaggregation	Source(s)
	Validation for the triple elimination of vertical (mother-to-child) transmission of HIV, hepatitis B, or syphilis	NA	Prepare metrics for the case for validation	Validated	Age, sex, priority population	WHO
	AIDS mortality	AIDS Mortality per 100,000 people: baseline 2022 (4.0)- 2025 (2.7)- 2030 (1.4), using HIV estimates/ spectrum	2.7	1.4	Age, sex, priority population, province/state	WHO/UNAIDS reporting
Coverage indicators	Percentage of PLHIV who know their HIV status[c]	59.6% (655/1118)	95%	95%	Age, sex, priority population, province/state, identified by partner testing	National programmes, community-led monitoring
	Percentage of people who know their HIV-	97.1% (636/655)	98.1%	99.1%	Age, sex, priority population,	WHO/UNAIDS reporting

	Indicator	Baseline – 2022[a]	Targets - 2025	Targets - 2030	Disaggregation	Source(s)
	positive status and are accessing ART[c]				province/state, attrition rate by period	
	Percentage of children LHIV receiving treatment, who have suppressed viral loads[c]	64.3% (13/20)	88.7%	95%	Age, sex, priority population, province/state	WHO/UNAIDS reporting
	Percentage of PLHIV receiving treatment, who have suppressed viral loads[c]	93.1% (594/636)	95%	97 %	Age, sex, priority population, province/state	WHO/UNAIDS reporting
	Percentage of PLHIV receiving treatment, who have VL > 1000 and received FU VL in < 3 months	100%	TBD	TBD	Age, sex, priority population, province/state	WHO/UNAIDS reporting
	Percentage of Pregnant women living with HIV who received antiretroviral medicine to reduce the risk of	53.2% (11/21)	90%	95%	Age, sex, priority population, province/state,	WHO/UNAIDS reporting

	Indicator	Baseline – 2022[a]	Targets - 2025	Targets - 2030	Disaggregation	Source(s)
	vertical transmission of HIV				% undetectable at delivery	
	Infant ARV prophylaxis coverage	100%	100%	100%	Sex, priority population (mother), final outcome status of infant	WHO/UNAIDS reporting
	Proportion of those at risk receiving PrEP at least once (coverage)	Nil	50%	90%	Age, sex, priority population, number of people, volume of PrEP	WHO/UNAIDS reporting
	Proportion of those at risk receiving PEP during reporting period	Not known	50%	90%	Age, sex, priority population, number of people, completed courses (%),	WHO/UNAIDS reporting

	Indicator	Baseline – 2022[a]	Targets - 2025	Targets - 2030	Disaggregation	Source(s)
					HIV in PEP recipients	
	Percentage of people at risk of HIV who use combination prevention with a defined service package[d]	MSM 25% (454/1788) TG 52% (209/401) SW 46% (285/618)	49% 66% 63%	95%	Age, sex, priority population	WHO/ UNAIDS reporting
	Condom/lubricant use at last sex with a client or non-regular partner	Varies by key population	90%	90%	Age, sex, priority population, number of condom	WHO/ UNAIDS reporting, community-led monitoring
	Percentage of KPs receiving annual HIV test	MSM 25% (450/1788) TG 49% (197/401) SW 46% (285/618)	49% 64% 62%	95% 95% 95%	Age/sex, identified by partner testing, retesting rate for those negative	WHO/UNAIDS reporting

	Indicator	Baseline – 2022[a]	Targets - 2025	Targets - 2030	Disaggregation	Source(s)
	Percentage of PLHIV and people at risk who are linked to integrated health services, including STI and viral hepatitis	Unreported	95%	95%	Priority population	National programmes
	Tuberculosis Preventive Treatment (TPT) coverage (initiation/completion)	100%	100%	100%	Age, sex, priority population, province/state	WHO/ UNAIDS reporting
Milestones	**Stigma and discrimination –** percentage of people living with viral hepatitis, HIV and STI and priority populations who experience stigma and discrimination	Mixed analysis 37% based on recent QOL study from FnPH	Establish baseline	Less than 10%	Priority group, by HIV/VH/STI	MoH, community led monitoring
	Stigma and discrimination – percentage of people	Representative data not available	Establish baseline	Less than 10%	Priority group	MoH, community

	Indicator	Baseline – 2022[a]	Targets - 2025	Targets - 2030	Disaggregation	Source(s)
	living with viral hepatitis, HIV and STI and priority populations who internalize stigma and discrimination					led monitoring
	Gender – prevalence of recent (past 12 months) cases of intimate partner violence among people aged 15–49 years	Unreported	<20%	Less than 10%	Age, priority population	Survey
	Integration – Percentage of people living with viral hepatitis, HIV and STI linked to other integrated health services	Unreported	95%	95%	Age, sex, priority population	National programmes
	Advanced HIV disease – percentage of people	20.8% Of 67 new cases in 2022, 14 had their	20%	10%	Age, sex, priority population	National programmes

	Indicator	Baseline – 2022[a]	Targets - 2025	Targets - 2030	Disaggregation	Source(s)
	starting ART with a CD4 count of less than 200 cells/mm^3 (or stage III or IV)[f]	CD4 count less than 200				
	Differentiated service delivery – implemented a 6-monthly refill of drugs	Not implemented	Implemented	Implemented		National programmes
	Service delivery by CBOs (prevention in KPs/testing and treatment in general pop)	Not available	50%KPs/ 20% general pop	80%KPs/ 30% general pop		
	Implementation of routine community led monitoring among key populations	Single study in May 2022 in 18 district (not routine)	Routine	Routine	Age, sex, priority population	CBOs, National programme

[a] Latest data for end 2020. Some targets use data from 2019 because of COVID-19 related service disruptions in the data reported for 2020.

[b] Disaggregated by disease coinfection.

[c] Achieved in all ages, sexes and focus populations

[e]As part of a comprehensive harm reduction strategy and in line with national priorities.

[f]So all PLHIV should receive a CD4 test result

Table A2. Impact and coverage indicators, targets and milestones for viral hepatitis in Bhutan 2025 & 2030

	Indicator	Baseline – 2022[a]	Targets – 2025	Targets – 2030	Disaggregation	Source(s)
Impact	HBsAg prevalence among children younger than 5 years of age[b] (proxy for incidence) –	0.14% (2020)	< 0.1%	< 0.1%	Age, sex, geography	See source details and methodology in WHO Country Guidelines for the validation of the elimination of viral hepatitis *(25)*
	Number of new hepatitis B infections per year (incidence)	N/A	Baseline estimate	TBA	Age, sex, geography	
	Number of new hepatitis C infections per year (incidence)	N/A	Baseline estimate	TBA	Age, sex, geography, priority population	
	Number of people dying from hepatitis B per year	N/A	Baseline estimate	(3 per 100 000)	Age, sex, cirrhosis or cancer status	
	Number of people dying from hepatitis C per year	N/A	Baseline estimate	(0.5 per 100 000)	Age, sex, cirrhosis or cancer status	

	Indicator	Baseline – 2022[a]	Targets – 2025	Targets – 2030	Disaggregation	Source(s)
Coverage	Hepatitis B – percentage of people living with hepatitis B diagnosed[c]/and treated (initiated vs viral load suppression)	pending	Baseline estimate	90%/80%	Age, sex, priority population	National programme
	Hepatitis C – percentage of people living with hepatitis C diagnosed/cured	pending	Baseline estimate	90%/80%	Age, sex, priority population	National programme
	Percentage of neonates who have benefitted from a timely hepB-BD vaccine and from other interventions to prevent the vertical (mother-to-child) transmission of hepatitis B virus[d]	94%	95%	95%	Age, sex, priority population	WUENIC
	Hepatitis B vaccine coverage among children (third dose) in those <1 year of age	98%	99%	99%	Age, sex, priority population	WUENIC

	Indicator	Baseline – 2022[a]	Targets – 2025	Targets – 2030	Disaggregation	Source(s)
	Blood safety – proportion of blood units screened for bloodborne diseases	100%	100%	100%	Geography	National programme
	Safe injections – proportion of safe health-care injections	Not reported	100%	100% and autodisable	Geography	National programme
	Surveillance – Reporting of hepatitis cascade	NA	Baseline	Yes	N/A	MoH
	Integration – proportion of PLHIV tested for/and cured from hepatitis C	Unreported	90%/80%	90%/80%	N/A	MoH

WUENIC – WHO/UNICEF estimates of national immunization coverage

[b] Please note that the targets in this table are based on global targets but are adapted to the Bhutan context

[c] Denominator is the estimated number of people living with hepatitis B virus (standardized population estimate).

[d] In addition, the proportion of infants younger than 12 months of age who received the third dose of hepatitis B vaccine should also be measured as well as other indicators for preventing vertical transmission, such as maternal testing and prophylaxis.

[e] As part of a comprehensive harm reduction strategy and in line with national priorities.

Table A3. Impact and coverage indicators, targets and milestones for STI in Bhutan by 2025 and 2030

Indicator	Baseline – 2022[a]	Targets – 2025	Targets – 2030	Disaggregation	Source(s)
Number of new cases of four curable STI in adults (15–49 years) per year ('000)	Not reported	Baseline estimate		Age, sex, priority population, geography	National programmes
Number of new cases of syphilis in adults (15–49 years) per year ('000)	145 (AHS 2023)	100	35	Age, sex, priority population, geography	National programmes
Number of new cases of gonorrhoea in adults (15–49 years) per year ('000)	Not reported	Baseline estimate		Age, sex, priority population, geography	National programmes
Congenital syphilis cases per 100 000 live births per year	75	<200	<50	Age, male partners, priority population, geography	National programmes

Indicator	Baseline – 2022[a]	Targets – 2025	Targets – 2030	Disaggregation	Source(s)
Percentage of boys and girls fully vaccinated with HPV vaccine by 15 years of age	88%	95%	95%	Priority population, geography	WUENIC
Percentage of pregnant women attending ANC who were screened for syphilis/percentage treated if positive	100% 9009/9009	>95%/>95%	>95%/>95%	Age, sex, priority population, geography (district)	National programmes
Percentage of priority populations[b] screened for syphilis/percentage treated if positive	0.5% (49/9009) (2022 ANC)	>80%/>90%	>90%/>95%	Age, sex, priority population, geography	National programmes, community-led monitoring
Percentage of priority populations[b] screened for gonorrhoea/percentage treated if positive	N/A	Baseline estimate	>90%/>95%	Age, sex, priority population, geography	National programmes, community-led monitoring
Percentage of women screened for cervical cancer using a high-performance test, by the age of 35 and again by 45	No data	Baseline estimate	>70%/	Age, sex, priority population, geography	National programmes
Reporting AMR in *Neisseria gonorrhoeae* to GASP	N/A	Baseline data	Reporting	Country	MoH AMR programme

GASP – Gonococcal Antimicrobial Surveillance Programme

[b] Priority populations are defined as MSM, TGP, PWUD, SW and people living with HIV.

Table A4. Syphilis EMTCT targets (25)

Indicator	Baseline 2022	Target 2025	Disaggregation	Source(s)
EMTCT impact target	250	A case rate of CS of ≤50 per 100 000 live births	NA	National programmes
EMCT process targets		1. ANC coverage (at least one visit) of ≥95% 2. Coverage of syphilis testing of pregnant women of ≥95% among those who attended at least one ANC visit 3. Adequate syphilis treatment of syphilis-seropositive pregnant women of ≥95%	NA	National programmes

CS – congenital syphilis

National HIV, AIDS and STI Control Programme
Department of Public Health
Ministry of Health
Kawangjangsa, Thimphu

www.moh.gov.bt

World Health Organization
Bhutan