National Consolidated Guidelines on Strategic Information of HIV response in Nepal

2022-2026

Government of Nepal
Ministry of Health and Population
National Center for AIDS and STD Control

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Foreword

For an effective response to HIV, the country requires strategic information that is systematically collected, collated, analyzed, disseminated, and used; across the HIV services cascade; and from sub-national to national to global HIV program monitoring. Strategic information is also critical for evidence-based planning and informed policy and programmatic decisions.

Globally, a 95-95-95 ambitious target has been adopted to end the AIDS epidemic by 2030. Nepal's National HIV Strategic Plan 2021-2026 prioritized to achieve 95-95-95 by 2026 in line with global recommendations. This "National Consolidated Guidelines on Strategic Information of HIV response in Nepal 2022- 2026" has been updated to monitor the program M&E, Surveillance and Research related priorities set by NHSP 2021- 2026.

This guideline consolidates all four components of strategic information – monitoring, evaluation, surveillance, and research. It has updated the M&E framework of national priority indicators; monitoring and supervision tools; and evaluation, surveillance, and research plan for the next 5 years. It will serve as a guiding document for data sources, data collection, analysis, and use, to guide all the relevant stakeholders for strengthening SI system.

Contribution from AHF, EpiC Nepal/FHI360, Save the Children, UNAIDS, UNICEF and WHO was key to update this guideline and I would like to thank everyone involved in updating the guidelines.

Lastly, I strongly recommend all partners and stakeholders working for HIV response to use this guideline for data collection, management, and generation of HIV-related strategic information for evidence-based policy and program decisions.

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Dr. Sudha Devkota
Director

SUMMARY

This guidelines is an updated version of the pervious “National Consolidated Guidelines on Strategic Information of HIV Response in Nepal 2016-2021”. This guidelines has been updated to serve for monitoring the priorities set by NHSP 2021-2026 and is inline with international and national strategies and plans. With restructuring of the country, the SI system should also address all three tiers of health governanace. This guidelines has aimed to become a hands-on document, with organizational/project system and other emerging issues incorporated.

Strategic information is the information and knowledge that guides health policy, planning, resource allocation, program management, service delivery and accountability. It consists of 4 elements – Monitoring, Evaluation, Surveillance and Research.

National SI for HIV program is led by the NCASC for overall planning, providing implementation guidance, implementation (prevention and continuum of care) and monitoring of HIV response. At the sub national level, Provincial Health Directorates and health offices are responsible for implementing M&E framework and surveillance plan. AHF, EpiC Nepal/FHI 360 and Save the Children/Global Fund are the key partners for executing HIV response programs and strengthening the national HIV SI system. The United Nations partners, including WHO and UNAIDS are extending their support for strategic guidance, advocacy, coordination, and technical support as needed to deliver life-saving HIV services as well as robust national HIV M&E System.

Routine program **data are collected** through IHMIS/DHIS2 (such as at HTS sites, ART sites, PMTCT, OST sites and targeted intervention programs) from SDPs or local level. They are reported monthly to IHIMS using DHIS2 platform. IHIMS reports monthly aggregated data from SDP or local level to national system. Population based surveys such as NDHS, MICS, IBBS and NASA collect additional data. Partners collect data through their independent information management system. The data from partners and private sectors are integrated within HIV Care and ART Tracking System with an aim to ensure recording of HIV related data through ONHIS. Proper **data management** is ensured through **data security**, confidentiality, use of unique identifiers, data repository and proper data disposal. Data quality is the core of SI system. So, NCASC and partners are using data quality assessments and other measures to ensure data quality.

HIV data are **reported** through mid-term and end term evaluation of NHSP, Annual Health Report of DoHS, GAM reporting, etc. Data are disseminated through data sharing/ dissemination meetings, presentations at respective sites, partners, line agencies and stakeholders during coordination meetings; presentation at the national and international conferences and seminars, contribution to global, national and provincial HIV database; web updates; data use advocacy sessions; national and provincial review; joint annual review; and publication of key findings in national and international peer review journals.

The **monitoring framework** of HIV response in Nepal (2021-2026) consists of 51 priority indicators defined by their level, baseline and year wise targets, source, frequency, and responsible entity. It contains indicators reported by NCASC and partners as well. The **Evaluation, Surveillance and Research Plan** has identified nine priority agendas and six suggestive agendas for the next five years.

Federal to provincial, federal to local, provincial-local, federal/provincial/local to SDP **supervision** are conducted as required. Partners conduct their own monitoring and supervisory visits to support implementing partners on the ground for troubleshooting. Joint monitoring and supervision visits of Government, partners and UN agencies is recommended to ensure holistic and supportive supervision.

SI-TWG is the key **coordination mechanism** for stakeholders for discussing the overall SI issues, identify challenges, trouble shoot them and take remedial actions, and discuss on strengthening SI system. Regular meetings of SI-TWG would support to strengthen SI of national HIV program.

Regarding **resource mobilization**, the NHSP has anticipated that 5.07 million USD is required to meet the SI related objectives in the next 5 years, which amounts to 2.5% of the total budget in HIV response. This is much lower than the global practice to allocate at least 5-10% towards SI system and illustrates the need to increase the share of SI component within the HIV response budget.

The **recommendations** for strengthening SI system are: Formulate or activate guiding documents, conduct surveys and assessments, strengthen data quality, strengthen data use and dissemination, and strengthen capacity of stakeholders.

LIST OF ACRONYMS AND ABBREVIATIONS

AEM	AIDS Epidemic Modeling
AHF	AIDS Healthcare Foundation
AIDS	Acquired Immunodeficiency Syndrome
ART	Antiretroviral Therapy
CD4	Cluster of Differentiation 4
COVID-19	Corona Virus Disease
CSO	Civil Society Organization
DHIS2	District Health Information Software2
DoHS	Department of Health Services
DQA	Data Quality Assessment
EID	Early Infant Diagnosis
EpiC	Epidemic Control
FSW	Female Sex Worker
GAM	Global AIDS Monitoring
GF	Global Fund
HCT	HIV Counseling and Testing
HIV	Human Immunodeficiency Virus
HSCB	HIV/AIDS and STI Control Board
HTC	HIV Testing and Counselling
HTS	HIV Testing Services
IBBS	Integrated Biological and Behavioral Surveillance
IHIMS	Integrated Health Information Management Section
IHMIS	Integrated Health Management Information System
KP	Key Population
M&E	Monitoring and Evaluation
MESST	Monitoring and Evaluation System Strengthening Tool
mHealth	mobile Health
MICS	Multi Indicator Cluster Survey
MLM	Male Labor Migrant

MoHP	Ministry of Health and Population
MSM	Men having Sex with Men
NAC	National AIDS Council
NASA	National AIDS Spending Assessment
NCASC	National Center for AIDS and STD Control
NHFS	Nepal Health Facility Survey
NHSP	National HIV Strategic Plan
ONHIS	One National HIV Information System
OPMIS	Online Program Management Information System
OSDV	Onsite Data Verification
OST	Opioid Substitution Therapy
PHD	Provincial Health Directorate
PLHIV	People Living with HIV
PMTCT	Prevention of Mother to Child Transmission
PrEP	Pre-Exposure Prophylaxis
PWID	People Who Inject Drug
RDQA	Routine Data Quality Assessment
SDG	Sustainable Development Goals
SDP	Service Delivery Point
SI	Strategic Information
SI-TWG	Strategic Information Technical Working Group
STI	Sexually Transmitted Infection
TG	Transgender people
ToR	Terms of Reference
UIC	Unique Identification Code
UNAIDS	The Joint United Nations Programme on HIV/AIDS
VL	Viral Load
WHO	World Health Organization

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Chapter 1

CONTEXT OF THIS GUIDELINES

1.1 NEED FOR UPDATING THE GUIDELINES

The previous "National Consolidated Guidelines on Strategic Information of HIV Response in Nepal 2016-2021" was valid till 2021. It was the first national guidelines that consolidated the four components of Strategic Information (SI) in line with global guidelines, hence setting a foundation for strengthening the SI system for national Human Immunodeficiency Virus (HIV) and acquired immunodeficiency syndrome (AIDS) response (NCASC, 2017).

Besides the obvious reason of updating the guidelines after completion of the timeline, the update of this guidelines was needed due to the following gaps:

- National HIV Strategic Plan (NHSP) 2021- 2026 has been formulated recently (NCASC, 2021). Since the national consolidated guidelines for SI should serve for monitoring the priorities set by NHSP, this guidelines has been updated in line with it.
- Since the last endorsement of SI guidelines, till date many new strategies have been formulated and some new indicators are added (such as Consolidated HIV Strategic Information Guidelines, World Health Organization (WHO), 2020; Consolidated guidelines on HIV prevention, testing, treatment, service delivery and monitoring, WHO, 2021; Changes on global commitments reporting (Global AIDS Monitoring (GAM) 2022 guidelines). This updated version has addressed the requirements of the new guidelines.
- Since the transformation from unitary to federal governance structure, there has been increased need for provincial and local level monitoring, evaluation, and supervision.
- This guidelines discusses prevention and testing related indicators, emerging issues such as Pre-Exposure Prophylaxis (PrEP), self-testing, community-led monitoring, index testing, HIV among prison inmates, female migrants, spouse of migrants, etc. that were addressed only to limited extent in the previous version.
- The updated guidelines intends to serve as a hands-on document, that are frequently used by HIV response programmers, and so the emphasis has been on its practical use. This document is intended to guide the Monitoring and Evaluation (M&E) system strengthening at its core.
- The previous guidelines addressed the national indicators only, while this guidelines has addressed the indicators beyond that to include organizational/program level indicators too.

1.2 OBJECTIVE OF THIS GUIDELINES

This guidelines aims to:

- design an appropriate framework for measuring the progress of NHSP targets and indicators at different levels, i.e. input, output, outcome and impact level, including baseline, targets, data sources, frequency of data collection and its institutional responsibilities;
- consolidate the indicators at project/organizational level as well;
- guide all relevant stakeholders on M&E roles/ functions.

1.3 INTENDED USER OF THE GUIDELINES

This guidelines is intended for all stakeholders engaged in HIV and co-infection interventions in the federal, provincial, and at the local level, such as:

- Government
- External development partners and donors
- Program managers and implementers
- Civil society networks
- Key populations
- Service providers
- Academicians involved in teaching, research, and evaluation

1.4 ALIGNMENT OF THE GUIDELINES WITH OTHER DOCUMENTS

This guidelines has been updated to be aligned with major policy, strategies, and national/ international commitments, as follows:

1.4.1 NATIONAL HIV STRATEGIC PLAN (2021-2026)

The NHSP 2021 – 2026 specifically discussed the SI component and strategies. It comprises a set of evidence-informed strategies that aims to serve as a road map to ensure country-led coordinated response to end AIDS as a public health threat by 2030. In the context of federal governance, the NHSP 2021 – 2026 aims to ensure a consolidated, unified, rights-based, and decentralized HIV program with services that are integrated into the health systems at all levels. It has a separate objective focused on strengthening national consolidated strategic information system for tracking and measuring the progress in HIV response.

STRATEGIC ACTIONS

- Strengthen a comprehensive SI system to provide real-time quality and timely data.
- Strengthen national SI as well as monitoring and evaluation guidelines to harmonize existing reporting systems including Integrated Health Management Information System (IHMIS) for alignment and coherence.
- Strengthen HIV Care and ART Tracking System with an aim to ensure recording of HIV-related data for all components from HIV prevention to treatment, care and support through One National HIV Information System (ONHIS).
- Increase the “granularity” of data, appropriately disaggregated to the district, community and facility levels by age, sex, population and location to better understand sub-national epidemics and assess performance along the continuum of HIV services.

- Promote use of research and strengthen surveillance systems.
- Enhance the use of digital technologies to increase access to HIV and health services.
- Build the capacity of Civil Society Organizations (CSOs) for monitoring, documentation and reporting.
- Strengthen data analysis to identify gaps in cascade.

1.4.2 SUSTAINABLE DEVELOPMENT GOALS

Goal 3.3 of Sustainable Development Goals (SDG) specifically addresses HIV and AIDS by stating "By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases". Under this target 3.3.1 is to reduce number of new HIV infections among adults 15–49 years old (per 1000 uninfected population) to 0.014 in 2030 from 0.03 in 2015 (NPC, 2015).

1.4.3 THREE ONES PRINCIPLE

It is important to use one M&E framework to collect, analyze and apply the M&E data, rather than using multiple parallel systems so that the reporting burden can be reduced .The "Three Ones Principle" and its practicality in Nepal's response to HIV epidemic include:

- One national AIDS coordinating authority, with a broad-based multisectoral mandate – National Center for AIDS and STD Control (NCASC).
- One agreed on AIDS action framework that provides the basis for coordinating the work of all partners – NHSP 2021-2026.
- One agreed country-level monitoring and evaluation system – National Consolidated Guidelines on Strategic Information for HIV in Nepal, 2022-2026

1.4.4 GLOBAL AIDS STRATEGY, 2021- 2026

The Global AIDS Strategy 2021-2026 has prioritized using strategic information to identify the inequalities driving epidemic (UNAIDS, 2021). Knowing who we need to reach next to achieve impact, with a focus on those most in need, will require enhanced data systems and analysis that shifts from averages to specifics, and from aggregates to gaps. The Joint United Nations Programme on HIV/AIDS (UNAIDS) will support countries and communities to develop robust and sustainable information and surveillance systems that provide the required information and data in a timely and meaningful manner. The strategies it has prioritized are : publish authoritative and up-to-date strategic information and analyses to monitor progress and track gaps; and provide expertise and enhance capacity to generate, interrogate and utilize strategic information.

1.4.5 CONSOLIDATED HIV STRATEGIC INFORMATION GUIDELINES, 2020

This guidelines developed by WHO presents a set of essential aggregate indicators and guidance on choosing, collecting and systematically analysing strategic information to manage and monitor the national health sector response to HIV. For programme monitoring, these guidelines seek to optimize and align national reporting used to assess countries' progress toward the 2030 95–95–95 HIV Fast Track goals – 95% of HIV-positive people knowing their status; 95% of people who know their HIV-positive status on treatment; and 95% of those on treatment virally suppressed – and towards Sustainable Development Goal 3.3, which calls for ending the HIV epidemic, as indicated by reduced incidence (WHO, 2020).

Chapter 2

INTRODUCTION

2.1 UNDERSTANDING THE HIV EPIDEMIC IN NEPAL

Since the first case of HIV was detected in 1988, an epidemic of HIV rose sharply in the 1990s and was in peak during mid-2000s in Nepal. Initially, during the early nineties, Nepal was classified as experiencing low-level HIV epidemics (NCASC, 2017). However, Nepal has transitioned from 'low-level epidemic' to 'concentrated epidemic' over time with rapid spread among Key Population (KP), i.e. sex workers (Male and Female), Men having Sex with Men (MSM) and Transgender people (TG), People Who Inject Drugs (PWID) (Male and Female), Male Labor Migrants (MLM) and their spouses, clients of sex workers, and prison inmates (Figure 1)

The new cases of HIV is declining sharply, with 0.02% incidence reported in December 2021 from 1.17% in December 2016 (NCASCb, 2021). The estimated number of People Living with HIV (PLHIV) was 30,000 in 2021. There are two new HIV infections per day in average. However, HIV in Nepal is extremely heterogeneous in regards to key population, geographic distribution, and risk factors. More than half (53%) of PLHIV are female, with the male to female ratio of new infections being 1.17:1 (Table1). Heterosexual transmission is dominant (80%). The age group 25-49 years share 62% of the HIV prevalence (NCASCc, 2021).

FIGURE 1: TREND OF MODE OF TRANSMISSION OF NEW HIV INFECTIONS (1990-2021)

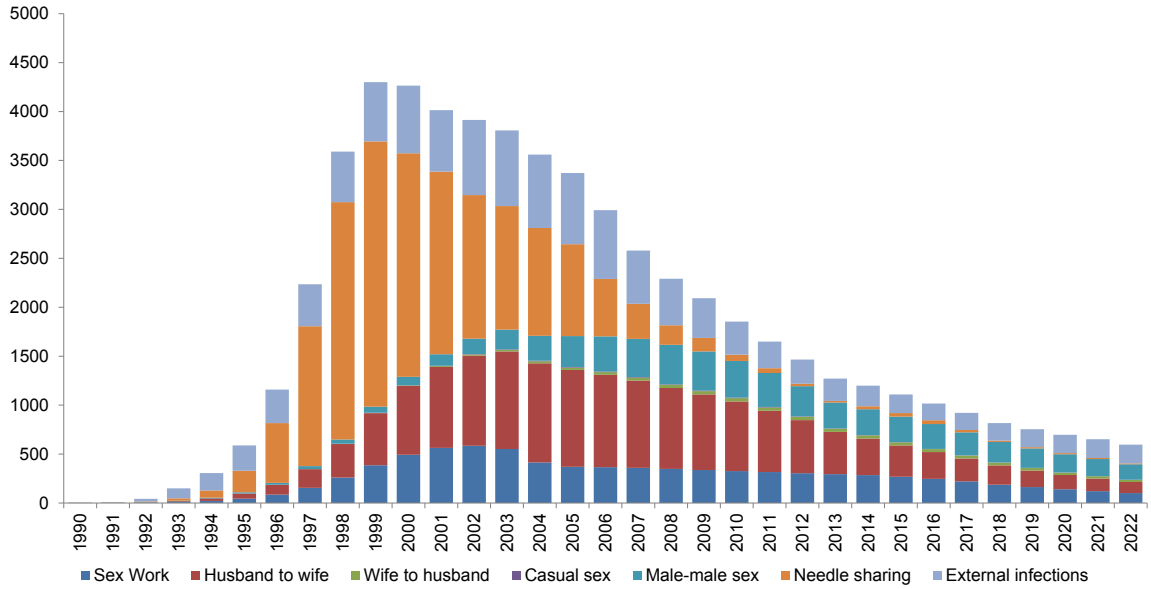
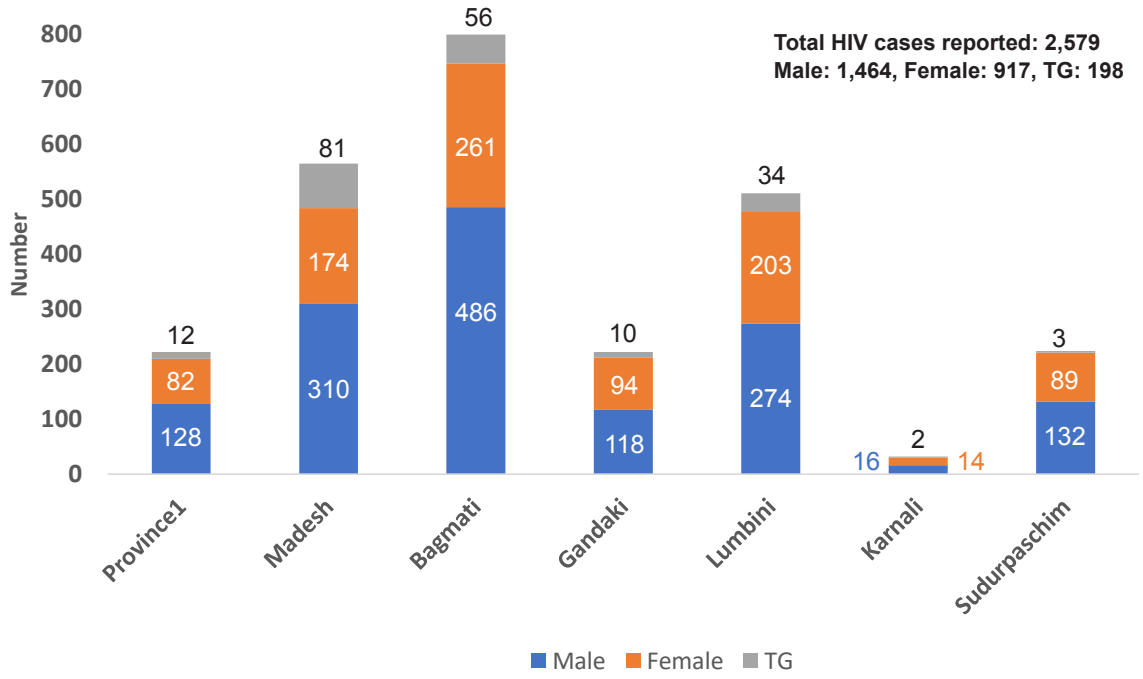


TABLE 1: HIV INCIDENCE IN NEPAL,2021

HIV incidence per 1000	0.02
Percentage of women 15-19 years living with HIV (of estimated adult PLHIV)	53%
Annual number of new infections; male to female ratio	1.17:1

Source: National HIV Infection Estimates, 2022

FIGURE 2: DISTRIBUTION OF HIV CASES BY PROVINCE AND GENDER



Source: Routine program data (IHMIS/DHIS2 and partner organizations reporting system, 2021)

Province wise distribution of HIV cases depict that Bagmati province followed by Madhesh province has the highest prevalence. The male to female ratio is also highest in Bagmati province (Figure 2).

2.2 STRUCTURAL AND POLICY RESPONSE

2.2.1 STRUCTURAL RESPONSE

As of July 2021, there are 189 service sites providing HIV Testing and Counseling (HTC), including 147 government sites; 83 Anti Retroviral Therapy (ART) sites and 45 ART dispensing centers in 76 districts; 33 sites providing Cluster of Differentiation4 (CD4) count services in 27 districts; and 8 sites of 5 provinces providing Viral Load (VL) testing services (NCASCb, 2021). The HTC services are free of cost, and includes both clinic based and community based counseling and testing. The priorities of ART program are adherance and retention, multi-month dispensing, tracking, Community and Home Based Care (CHBC). Community-based PMTCT (CB-PMTCT) program has been expanded in all 77 districts of Nepal. Early Infant Diagnosis (EID) service is available for babies born to the HIV-positive mothers to detect HIV status among exposed baby at the earliest.

HIV related data are reported monthly from Service Delivery Points (SDP) or local level to Integrated Health Information Management Section (IHIMS) of Management Division (MD) using District Health Information Software2 (DHIS2) platform. DHIS2 platform is used by IHIMS for monthly aggregated data reporting from SDP or local level to national system.

The main objective of the system managed by national HIV program is to record individual level data of HIV testing and treatment services and use of biometric system. It also helps in eliminating client duplication through the Unique Identifier (UI) system. DHIS2 Tracker is functional in all ART sites in the country. This system has three interlinked systems; namely DHIS2 Tracker, mobile Health (mHealth) and biometrics.

All components of HIV programs are not integrated to IHIMS. However, efforts are ongoing to develop recording registers and monthly reporting forms of those components of HIV program not reporting to IHIMS/DHIS2. NCASC is leading the process to use DHIS2 tracker as electronic recording forms and is working on integrating monthly reports from DHIS2 Tracker to IHIMS/DHIS2 with an aim to ensure recording of HIV related data for whole HIV Care Continuum from ONHIS.

2.2.2 POLICY RESPONSE

Since the first case of HIV was identified in 1988, the government has come up with policy guidelines starting from the first National AIDS Prevention and Control Program in 1988. The principal policy guidance at present is to respond through an integrated approach by all relevant stakeholders including the government, non-government organisations, donors, and infected and affected communities with a common objective. Since the National HIV Strategic Plan 2016-2021, Nepal has embarked on a Fast-Track approach towards ending the AIDS epidemic as a public health threat by 2030, through achieving the ambitious 95-95-95 targets by 2026 (NCASC, 2016).

National HIV response is led by the high-level National AIDS Council (NAC) which is chaired by the Honorable Prime Minister, with high level representation of numerous ministries and government entities, civil society and representatives and partners. NCASC plays the central role in the implementation of the HIV response in the country. NCASC leads the overall planning, providing implementation guidance, implementation (prevention and continuum of care) and monitoring of HIV response. It coordinates a range of technical partners, technical working groups and CSOs to ensure the emerging needs of care and support for PLHIV, protecting human rights by reducing stigma and discrimination and creating enabling environment for coordinated and multisectoral response. HIV/AIDS and STI Control Board (HSCB) is envisioned to act as a secretariat of NAC, where the greater policy guidance to the various ministries for multi-sectoral response to the epidemic and monitoring of national response is designed. However, currently HSCB is not functional, and NCASC undertakes all its responsibilities. The National Planning Commission is the apex advisory body for formulating national plans, and assesses resource needs, identifies sources of funding and allocates budget.

At the provincial level, Provincial Health Directorates (PHD) under provincial ministries are responsible for HIV responses. The Health Section under each local government are also responsible for coordination of health programs. Federal policies, stretegies and guidelines can be used by sub-national governments as a reference document to develop their policies, strategies and guidelines.

Table 2: CHRONOLOGY OF NATIONAL STRATEGIES IN RESPONSE TO HIV EPIDEMIC IN NEPAL

Years	Response efforts
1988	First National AIDS Prevention and Control Program
1990-1992	First Medium-Term Plan
1993	National Policy on Blood Safety
1993-1997	Second Medium-Term Plan
1995	National Policy on HIV and AIDS
1997-2001	Strategic Plan for HIV and AIDS Prevention
2002-2006	National HIV/AIDS Strategy
2006-2011	National HIV/AIDS Strategy
2011	National Policy on HIV And STI, 2011
2011-2016	National HIV/AIDS Strategy
2014-2016	Nepal HIV Investment Plan
2016-2021	National HIV Strategic Plan 2016-2021
2016-2021	National Consolidated Guidelines on Strategic Information of HIV Response in Nepal 2016-2021
2021-2026	National HIV Strategic Plan 2021-2026

2.3 STRATEGIC INFORMATION OF HIV RESPONSE

2.3.1 UNDERSTANDING STRATEGIC INFORMATION

Strategic Information is the information and knowledge that guides health policy, planning, resource allocation, program management, service delivery and accountability. SI of HIV program cascade helps program managers, policy makers and other stakeholders to assess the effectiveness, uptake interventions, and establish links between services along the cascade.

As countries scale up their HIV responses towards universal access, there is an increasing recognition of the need to invest in strategic information to guide program planning and sustain national and international commitment and accountability. The main activities related to strategic information are: a) Monitoring and Evaluation of HIV response; b) Surveillance of HIV and sexually transmitted infections; and c) Research.

The axiom “Know your epidemic, know your response” highlights the importance and necessity of strategic information for HIV response. It explains that the epidemics and their context differ from place to place. Therefore, knowing who is affected, how they were infected, where they are, and their risk behavior is critical in designing effective response to reach those in need. In turn, monitoring of those responses is vital in maximizing their effectiveness, responsiveness and cost-effectiveness.

For an effective response to HIV, strategic information systematically collects, collates, analyses, and applies the findings to address the issues like service access, program coverage, service quality, and acceptability and leads to further understanding of HIV epidemic. SI provides the critical evidence to stakeholders to make informed decisions for the improvement of the programs.

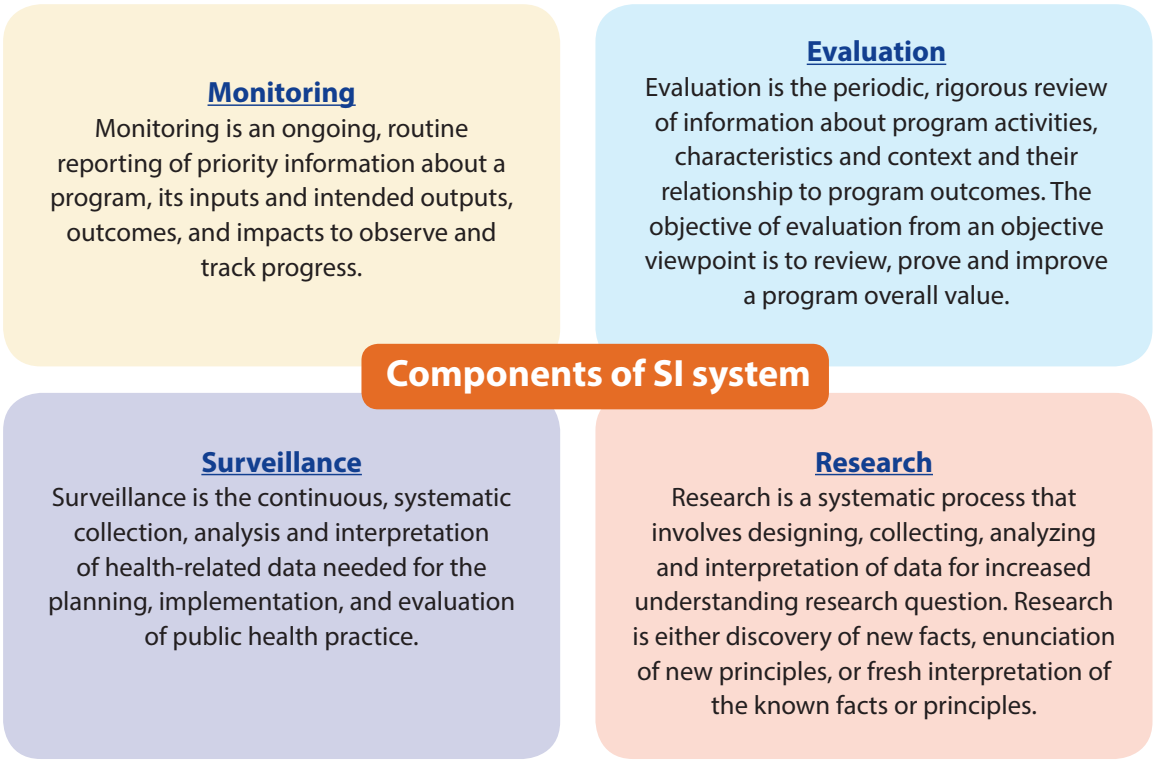
BOX 1: THREE ROLES OF HIV STRATEGIC INFORMATION

Why collect and use strategic information?

- Strategic information provides the critical evidence to make informed decisions that improve program at all levels.
- Documenting outputs, outcomes and impact is crucial to the focus and sustainability of program.
- The availability of information is central to the accountability and transparency of decision-making by policymakers.

Source: WHO (2020) Consolidated HIV Strategic Information Guidelines

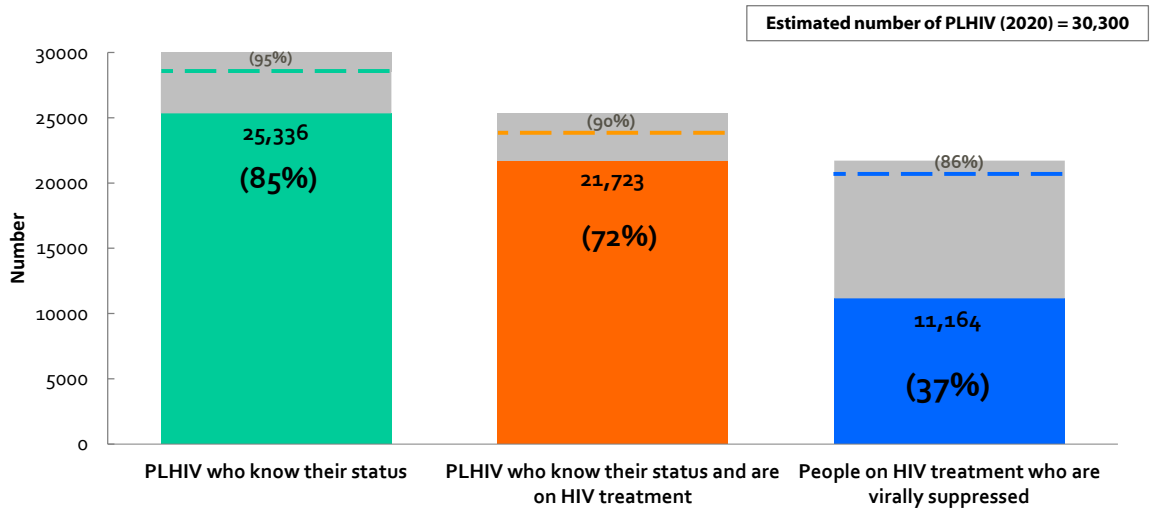
FIGURE 3: COMPONENTS OF STRATEGIC INFORMATION SYSTEM



2.4 HIV CASCADE OF SERVICES: IMPROVING LINKAGES AND QUALITY OF LIFE

The term “cascade” highlights that a sequence of services is needed to achieve desired impacts. It encompasses prevention, treatment, and care interventions. The concept of “cascade” also informs tracking of patients from prevention to treatment and care interventions; and highlights the gradual attrition of coverage of the eligible population over the steps. Monitoring the cascade of services requires a set of consolidated indicators covering the entire sequence.

FIGURE 4: HIV TESTING AND TREATMENT CASCADE, 2021



Source: NHSP 2021-2026

2.5 MONITORING HIV NATIONAL RESPONSE: FROM INPUTS TO IMPACT

To assist measurement of linkage of service from prevention to care continuum, and outcomes of the health sector response to HIV, the selected indicators are organized in result chain built along a sequence of context analysis, input, output, outcome and impact (Figure 5). These indicators allow review of the entire result chain to identify bottlenecks and, by addressing them, improve the overall quality of the programmatic response. The result chain provides a structure for analysis and facilitates alignment in support of country data systems.

The following are the components of monitoring of HIV national response:

i) **Know your epidemic:** It starts with an overall review of the epidemic of the country itself. This describes the key populations that are most affected, the size, and location of these populations. Disaggregation by KP, age, sex, geographic location is essential at this stage. Key tasks also include data analysis and synthesis to better understand current and future directions of the epidemic and its consequences.

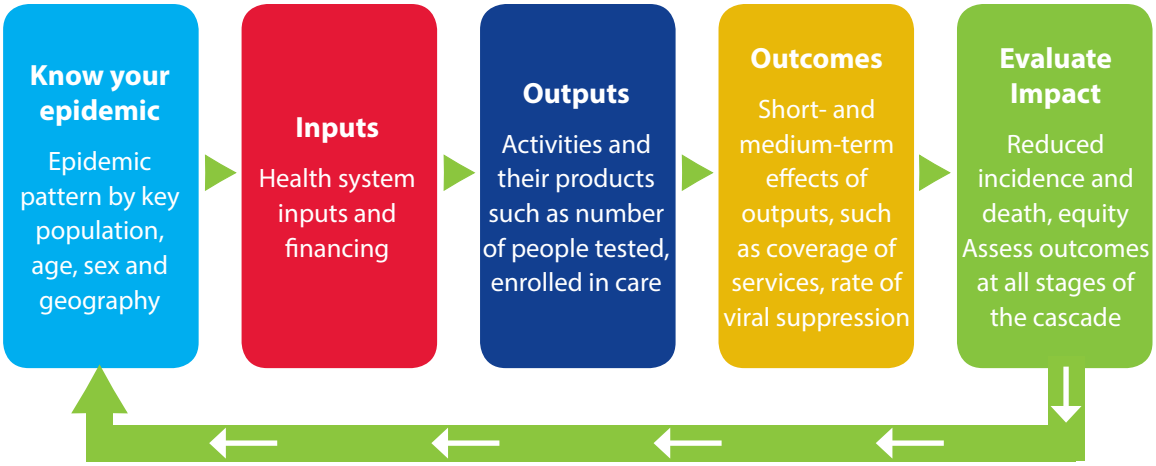
ii) **Inputs:** Inputs are the resources invested in the health sector response to HIV. In addition to financial resources, they include human resources, health services infrastructure and governance (i.e., policy and management).

iii) **Outputs:** Outputs are the immediate result of activity or program, for example, the number of people on ART by the end of reporting period.

iv) **Outcomes:** Different sets of program outputs contribute together to form the outcome. For example, enrollment and continuation of ART are program outputs, while resulting viral suppression is the outcome of these outputs. Outcomes can occur at any stage of the prevention and treatment response, including changes in behaviors (prevention outcomes).

v) **Impacts:** The ultimate target of any program is to have an impact on epidemiologic measures such as HIV incidence, mortality, and the rate of mother-to-child transmission (MTCT) of HIV in the population.

FIGURE 5: HIV RESULT FRAMEWORK: FROM INPUT TO IMPACTS



Chapter 3

METHODS OF DEVELOPING THIS GUIDELINES

The following approaches were taken while developing the updated version of the guidelines:

1. **Review of the previous version:** This is an updated version of the national consolidated guidelines on strategic information on HIV response in Nepal (2016-2021). The current version has updated the document with latest data, policy guidelines and has incorporated the components of strategic information. This version is expected to provide HIV policy makers, project managers and other stakeholders with more hands-on reference and practical application.
2. **Review of literature:** Preparation of this guidelines required review of latest policy documents such as NHSP (2021-2026), Annual Report of Ministry of Health and Population (MoHP) (2020), Local Government Operations Act 2074, etc. To align the national response with international commitments, the Global AIDS Monitoring Report 2022, Global AIDS Strategy 2021-2026, WHO consolidated Strategic Information Guidelines, Nepal's SDG report 2021, etc. were reviewed. The data in the guidelines have been referred from IBBS surveys, IHIMS/DHIS2 routine program data, project data from partner organizations, factsheet developed by NCASC etc.
3. **Consultation with stakeholders:** Stakeholder consultation meeting was conducted on April 2022 where Government, UN agencies and partners jointly discussed the need to update the guidelines, components of SI, and approaches for developing this updated version. Based on the feedback of the meeting, the framework and timeline for the updating process was finalized.
4. **Partner interviews:** Organizational visits on one-to-one basis was done and interviews were conducted with the partners, that generated the key information in the update process.
5. **National consultative workshop:** The information from partner interviews were incorporated into a draft version of the report that was reviewed during two-days national consultative workshop in July 2022. The workshop convened the government and partners to identify the priority national monitoring frameworks, tools, research agenda, etc., and review the draft of the guidelines.

Chapter 4

STRATEGIC INFORMATION SYSTEM IN USE

4.1 STRATEGIC INFORMATION OF NATIONAL HIV PROGRAM

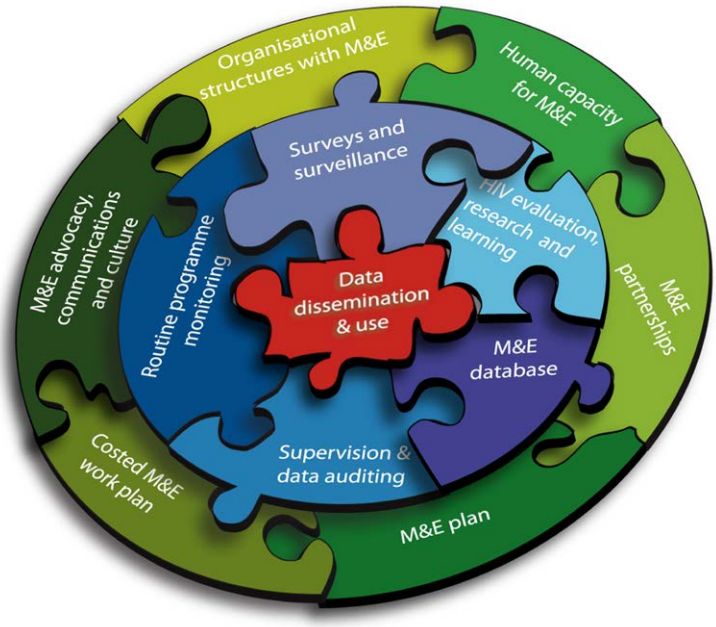
The national HIV program collects data through a range of mechanisms including routine program data collection (such as at HTC sites, ART sites, Prevention of Mother to Child Transmission (PMTCT), Opioid Substitution Therapy (OST) sites and targeted intervention programs). This data is reported monthly through DHIS2 of IHIMS. The individual client related data are collected through DHIS2 tracker by NCASC. The primary purpose of this system is to record all the information of clients in real time so that the information can be accessed as required for their treatment and effective implementation of the HIV related programs.

Surveys such as Demographic and Health Surveys (DHS), National Health Facility Survey (NHFS) and Multi Indicator Cluster Survey (MICS) collect data every five years. NCASC also conducts IBBS surveys among key population every 2-3 years. A National AIDS Spending Assessment (NASA) is conducted every 3-5 years.

4.2 COMPONENTS OF FUNCTIONAL M&E SYSTEM

The M&E system comprises of 12 components as depicted in the figure below. Each component requieres functionality for the system to effectively produce timely results for utilization in program improvement. The data/ information use is the ultimate goal of the M&E system and hence forms the center of all components.

FIGURE 6: PRINCIPLES OF FUNCTIONAL M&E SYSTEM



UNAIDS has developed 12 Components Monitoring and Evaluation System Strengthening Tool in 2009 (MESST) which is now widely used to assess monitoring and evaluation plans and systems by accessing data collection, reporting, and management systems to measure indicators of program and project success

(UNAIDS, 2009). Nepal conducted its last MESST assessment in December 2018 that recommended improvement for various component of HIV strategic information system (NCASC, 2018).

The subsections below presents a discussion of the composition and functioning of the NHSP M&E system components, which reflects the multi-sectoral and broad nature of the national HIV and AIDS response in Nepal.

ORGANIZATIONAL STRUCTURE WITH M&E

The Monitoring, Evaluation, Surveillance and Research Section under the overall leadership of the NCASC takes the lead in executing the NHSP M&E Plan. Furthermore, the dedicated IHIMS section at Management Division (MD) under the Department of Health Services (DoHS) is responsible for collecting and aggregate data on all health indicators. The key role of IHIMS is to manage health service information from the community to the DoHS through predefined process and procedure. NCASC is leading the process to use DHIS2 Tracker as recording forms electronically and working on integrating monthly reports from DHIS2 Tracker to IHIMS/DHIS2 with an aim to ensure recording of HIV related data from one national HIV information system. PHDs and health offices are responsible for implementing HIV SI related activities at province and local level.

AIDS Healthcare Foundation (AHF), Epidemic Control (EpiC) Nepal/FHI 360 and Save the Children/ Global Fund are the key partners for executing HIV response programs in Nepal as well as key contributors for strengthening the national HIV SI system. The United Nations partners, including WHO and UNAIDS are extending their support for strategic guidance, advocacy, coordination and technical support as needed to deliver life-saving HIV services as well as robust national HIV M&E System.

HUMAN CAPACITY FOR M&E

NCASC has dedicated team who are responsible for implementing M&E activities of HIV response at the national level and provide technical support to provincial and district level human resource for implementation of SI activities. The dedicated health worker at the SDPs or health section chief of local government manage data and submit monthly reports to IHIMS. The Monitoring, Evaluation, Surveillance and Research Section of NCASC takes lead on SI activities in the country. The Global Fund program supports other staff at NCASC to strengthen SI of national HIV program. The dedicated M&E units of partners are responsible for assisting the execution of SI activities.

M&E PARTNERSHIPS

Successful implementation of the M&E priorities highly depends on partnerships among key stakeholders that entail structures such as the Monitoring, Evaluation, Surveillance and Research Section at NCASC, M&E unit at implementation partners, Strategic Information Technical Working Group (SI-TWG), IHIMS, CBOs, community people, etc. SI-TWG is the key forum where the Government, External Development Partners (EDPs) and partners actively take part in discussions on national SI plan, strategy and its execution. The Terms of Reference (ToR) of SI-TWG is attached in Annex 1.

M&E PLAN

This guidelines will provide operational guidance for M&E of the national HIV response. It is based on NHSP 2021-2026 and other key global guidance and commitments. This guidelines was developed in consultation with various stakeholders to select prioritized national indicators,

and global reporting indicators. Each indicator is clearly defined in terms of its data sources, the frequency of data collection, and the entity responsible for the collection of data.

COSTED M&E WORK PLAN

M&E plans will be costed down by spelling out the activities that will be conducted every year. The budget of SI components is recommended to be at least 5-10% of the total HIV budget. The costed National M&E work plan will be jointly prepared and shall integrate activities of all relevant stakeholders.

M&E COMMUNICATION, ADVOCACY AND CULTURE

This refers to the presence of policies and strategies within the organization to promote M&E functions. Without continuous communication and advocacy initiatives, it is difficult to reinforce the M&E culture within the organization. People engaged in the program request for use of M&E data before and/or during HIV review, planning and costing. NCASC routinely publishes its data on the website and SI products (epi fact sheets, IBBS fact sheets, web updates, and annual reports). In addition to these, there will be sharing of information obtained from different national level surveys (IBBS, size estimation, etc.).

ROUTINE PROGRAM MONITORING

Data needs to be collected and reported on a continuous basis to show whether the project activities are driven towards meeting the set objectives. There is a national guidelines for recording, collecting, collating, and reporting program monitoring data from health information system as well for instructions on how data should be maintained.

SURVEYS AND SURVEILLANCE

Periodic data collection for some indicators that cannot be tracked through routine data collection are collected through surveys and surveillance. NCASC conducts IBBS surveys in regular intervals among key populations in different clusters to provides information for SI framework. NCASC currently adopts ‘second generation surveillance system’ to monitor the epidemic and generates evidence for planning. It plans to adopt third-generation surveillance system in the future. Similarly, NCASC plans to collect data from Sexually Transmitted Infection (STI) sentinel surveillance depending on the need of data and its feasibility.

M&E DATABASE

IHIMS is responsible for the collection of all health services related data in Nepal which uses DHIS2 system for reporting aggregated data from health facilities and districts. DHIS2 does not capture all relevant data needed for program information (ART, HTS, OST, STI, PMTCT). HIV Care and ART Tracking System is a system based on DHIS2 tracker platform developed to record all the information individuals receiving HIV related services. This system keeps personal information record of everyone to whom the field staff of implementing partner have contacted or clients who have visited for services: HIV prevention, and HIV testing and counselling services, the gateway of the HIV program.

SUPERVISION AND DATA AUDITING

Supportive supervision implies that an individual or organization can regularly supervise the M&E process in such a way that the supervisor offers suggestions on ways of improvement. Data auditing implies that the data is subjected to verification to ensure its reliability and validity. National

guidelines, as well as tools exist for supportive supervision on M&E, and monitoring which is conducted as per the national protocols (Annex 2). A protocol for auditing routine HIV service data from health service site exists, and data audits are regularly conducted and feedbacks provided to service sites. NCASC should carry out Routine Data Quality Audit (RDQA) and On-Site Data Verification (OSDV) at all sites annually and share a report to the stakeholders. It should also provide orientation to the concerned health worker on the use of standard recording tools and regularly monitor recording and reporting as per standard tools.

HIV EVALUATION, RESEARCH, AND LEARNING

Evaluation of projects are done at specific times most often mid-term and at the end of the project. The midterm review of NHSP will be conducted in 2023/24 to evaluate the targets of NHSP. Joint reviews of the HIV response are conducted with the participation of partners during annual reporting. An inventory of completed and on-going country-specific evaluation and research studies should be maintained and updated regularly. NCASC should conduct a national forum for validation, dissemination and discussion of the findings of HIV research and evaluation and these findings should be used in planning and other programming documents. Similarly, NCASC, with support from implementing partners and stakeholders, should organize program review at provincial and national level.

DATA DISSEMINATION AND USE

NCASC promotes the purposeful use of program data for decision-making in policy and programming. Data use will be promoted through synthesizing, producing and disseminating information through electronic and print media, such as annual reports, newsletters, brochures, fact sheets, best practices and lessons learned.

4.3 MONITORING FRAMEWORK (2022-2026)

The monitoring framework of national priority indicators (2022-2026) is guided by NHSP 2021-2026 and recent global guidelines. Below is the monitoring framework (2022- 2026) of national HIV program in Nepal highlighting the indicator's level, baseline value, yearwise target distribution, source of data, responsible entity and frequencey of data collection.

TABLE 3: MONITORING FRAMEWORK OF NATIONAL HIV PROGRAM (2022-2026)

Indicator no.	Indicator type	Indicators	Baseline		Targets					Data Source	Responsible for collecting data	Frequency of reporting
			Year	Value	2022	2023	2024	2025	2026			
1	Impact	HIV incidence rate per 1000 population	2019	0.03	-	-	-	-	0.02	AIDS Epidemic Modeling (AEM)/ Spectrum Mathematical modeling	NCASC	Annually
2	Impact	HIV prevalence in young people aged 15-24 years	2019	0.02	0.02	0.02	0.02	0.02	0.02	AEM/Spectrum Mathematical modeling	NCASC	Annually
3	Impact	Mother-to-child transmission rate of HIV of <5% in breastfeeding populations	2021	6.8	6.2	5.7	5.1	4.5	4	AEM/Spectrum Mathematical modeling	NCASC	Annually
4	Impact	AIDS-related deaths	2019	739	454	359	264	169	<100	AEM/Spectrum Mathematical modeling	NCASC	Annually
5	**Impact**	**HIV prevalence among key population**										
5.1	Impact	Men who have sex with men	2017	5.5	-	-	-	-	4.13	IBBS Surveys	NCASC in collaboration with partners	Every 3-5 years
5.2	Impact	Male sex workers	2017	7.2	-	-	-	-	5.4	IBBS Surveys	NCASC in collaboration with partners	Every 3-5 years
5.3	Impact	Transgender people	2017	8.3	-	-	-	-	6.2	IBBS Surveys	NCASC in collaboration with partners	Every 3-5 years
5.4	Impact	People who inject drugs	2017	5.58	-	-	-	-	4.18	IBBS Surveys	NCASC in collaboration with partners	Every 3-5 years

Indicator no.	Indicator type	Indicators	Baseline		Targets					Data Source	Responsible for collecting data	Frequency of reporting
			Year	Value	2022	2023	2024	2025	2026			
5.5	Impact	Female sex workers	2017	1.45	-	-	-	-	1.09	IBBS Surveys	NCASC in collaboration with partners	Every 3-5 years
5.6	Impact	Migrants	2017	0.4	-	-	-	-	0.35	IBBS Surveys	NCASC in collaboration with partners	Every 3-5 years
5.7	Impact	Prison inmates	2020	1.9	-	-	-	-	0.9	Ad Hoc Research	NCASC in collaboration with partners	Every 3-5 years
6	Outcome	Percentage of MSM reporting use of a condom with their most recent partner	2017	74	-	-	-	-	95	IBBS Surveys	NCASC in collaboration with partners	Every 3-5 years
7	Outcome	Percentage of MSW reporting condom use with most recent client	2017	83.2	-	-	-	-	95	IBBS Surveys	NCASC in collaboration with partners	Every 3-5 years
8	outcome	Percentage of TG reporting use of a condom with their most recent partner	2017	77	-	-	-	-	95	IBBS Surveys	NCASC in collaboration with partners	Every 3-5 years
9	Outcome	Percentage of PWID reporting use of a condom with their most recent partner	2019	42.7	-	-	-	-	90	IBBS Surveys	NCASC in collaboration with partners	Every 3-5 years
10	Outcome	Percentage of FSW reporting use of a condom with their most recent partner	2019	81.1	-	-	-	-	95	IBBS Surveys	NCASC in collaboration with partners	Every 3-5 years
11	Outcome	Percentage of migrants reporting use of a condom with their most recent partner	2019	68.2	-	-	-	-	90	IBBS Surveys	NCASC in collaboration with partners	Every 3-5 years

Indicator no.	Indicator type	Indicators	Baseline		Targets					Data Source	Responsible for collecting data	Frequency of reporting
			Year	Value	2022	2023	2024	2025	2026			
12	Outcome	Percentage of PWID reporting the use of sterilized injecting equipment last time they injected	2019	85.03	-	-	-	-	95	IBBS Surveys	NCASC	Every 3-5 years
13	Output	People living with HIV knowing their status	2021	25,336	26,411	27,429	28,330	29,095	29,839	IHMIS Monthly ART Report 9.3/9.4/9.5	NCASC	Monthly
14	Output	Percentage of pregnant women with known HIV status	2019	57.2	73	79	84	90	95	IHMIS-3.6 - Maternal and Newborn Health Service Register	NCASC	Monthly
15	Output	Percentage of pregnant women living with HIV who received antiretroviral therapy to eliminate vertical HIV transmission	2019	63	77	81	86	90	95	IHMIS Monthly PMTCT Report 9.3/9.4/9.5	NCASC	Monthly
16	Output	Percentage of people living with HIV currently receiving antiretroviral therapy	2019	63	77	81	86	90	95	IHMIS Monthly ART Report 9.3/9.4/9.5	NCASC	Monthly
17	Outcome	Percentage of adults and children with HIV known to be on treatment 12 months after initiation of ART	2019	91	92	93	94	95	95	HIV Care and ART Tracking System	NCASC	Annually
18	Outcome	Percentage of adults and children receiving ART who are virally suppressed	2021	51	70	76	82	89	95	IHMIS Monthly ART Report 9.3/9.4/9.5	NCASC	Monthly
19	Output	Percentage of health facilities dispensing antiretroviral therapy that experienced a stock-out of at least one required antiretroviral drug in the last 12 months	2021	0	0	0	0	0	0	HIV Care and ART Tracking System	NCASC	Monthly

Indicator no.	Indicator type	Indicators	Baseline		Targets					Data Source	Responsible for collecting data	Frequency of reporting
			Year	Value	2022	2023	2024	2025	2026			
20	Output	Percentage of HIV-positive patients who were screened for TB in HIV care or treatment settings	2021	92	100	100	100	100	100	IHMIS Monthly ART Report 9.3/9.4/9.5	NCASC	Monthly
21	Output	Percentage of donated blood units screened for HIV in a quality assured manner	2021	100	100	100	100	100	100	Database system used in Blood Bank	NRCS	Annually
22	Outcome	Experience of stigma and discrimination at health facilities (%)	2011	7	-	-	-	-	2	PLHIV Stigma Index Survey	PLHIV Networks and partners	Every 3-5 years
23	Output	Number of rapid HIV screening/testing conducted among key populations (cumulative)	2022	17,400	17,400	34,800	52,200	69,600	87,000	IHMIS 7.1 - HIV testing and Counseling Service Register	AHF Nepal	Monthly
24	Output	Number of new HIV case finding and linkage to treatment and care services (cumulative)	2022	387	387	774	1,161	1,548	1,934	IHMIS 7.1 - HIV testing and Counseling Service Register	AHF Nepal	Monthly
25	Output	Number of supports to clients for transportation of samples for viral load and commodities (cumulative)	2022	3,128	3,128	6,256	9,384	12,513	15,642	Monthly Data Report	AHF Nepal	Monthly
26	Output	Number of KPs reached with individual and/or small group-level HIV prevention interventions designed for the target population	2021	25,507	11,431	12,373	-	-	-	First contact form and follow up contact form	EpiC Nepal/ FHI 360	Semi annually

Indicator no.	Indicator type	Indicators	Baseline		Targets					Data Source	Responsible for collecting data	Frequency of reporting
			Year	Value	2022	2023	2024	2025	2026			
27	Output	Number of Priority Population (PP) reached with the standardized, evidence-based intervention (s) required that are designed to promote the adoption of HIV prevention behaviors and service uptake	2021	11,911	9,069	8,259	-	-	-	First contact form and follow up contact form	EpiC Nepal/ FHI 360	Semi annually
28	Output	Number of KPs who tested HIV-positive (all approaches)	2021	1,542	1,150	1,300	-	-	-	HIV testing and counseling service register (IHMIS 7.1)	EpiC Nepal/ FHI 360	Monthly
29	Output	Number of individuals who received HIV Testing Services for HIV and received their test results.	2021	14,483	14,303	14,445	-	-	-	HIV testing and counseling service register (IHMIS 7.1)	EpiC Nepal/ FHI 360	Monthly
30	Output	Number of individuals who were identified and tested using index testing services and received their result	2021	1,723	5,043	2,375	-	-	-	Index based partner testing register	EpiC Nepal/ FHI 360	Quarterly
31	Output	Number of individuals who were tested positive using index testing services	2021	373	733	475	-	-	-	Index based partner testing register	EpiC Nepal/ FHI 360	Quarterly
32	Output	Number of newly diagnosed HIV-positive persons who received testing for recent infection with a documented result during the reporting period	2021	1,014	954	1,039	-	-	-	HIV recency testing register	EpiC Nepal/ FHI 360	Quarterly
33	Output	Number of individual HIV self-test kits distributed	2021	12,005	12,000	12,035	-	-	-	Self-testing register	EpiC Nepal/ FHI 360	Quarterly

Indicator no.	Indicator type	Indicators	Baseline		Targets					Data Source	Responsible for collecting data	Frequency of reporting
			Year	Value	2022	2023	2024	2025	2026			
34	Output	Number of individuals provided with self-testing who received a reactive result	2021	676	720	455	-	-	-	Self-testing register	EpiC Nepal/ FHI 360	Quarterly
35	Output	Number of individuals who have been newly enrolled on (oral) antiretroviral PrEP to prevent HIV infection in the reporting period	2021	32,21	3,451	4,500	-	-	-	PrEP initial service register	EpiC Nepal/ FHI 360	Quarterly
36	Output	Number of individuals, excluding those newly enrolled, that return for a follow-up visit or re initiation visit to receive pre-exposure prophylaxis (PrEP) to prevent HIV during the reporting period	N/A	N/A	N/A	1,350	-	-	-	PrEP follow up service register	EpiC Nepal/ FHI 360	Quarterly
37	Output	Number of ART patients with no clinical contact (or ARV drug pick-up) for greater than 28 days since their last expected contact who restarted ARVs within the reporting period	2021	732	967	648	-	-	-	HIV treatment and Care Register (IHMIS 7.4) and HIV Treatment Care record (IHMIS 7.5)	EpiC Nepal/ FHI 360	Monthly
38	Output	Number of ART patients (who were on ART at the beginning of the quarterly reporting period) and then had no clinical contact since their last expected contact	2021	2,253	554	412	-	-	-	HIV treatment and Care Register (IHMIS 7.4) and HIV Treatment Care record (IHMIS 7.5)	EpiC Nepal/ FHI 360	Monthly

Indicator no.	Indicator type	Indicators	Baseline		Targets					Data Source	Responsible for collecting data	Frequency of reporting
			Year	Value	2022	2023	2024	2025	2026			
39	Output	Number of HIV-positive KPs who are receiving care and support services outside of the health facility	2021	14,569	10,606	14,547	-	-	-	Case management register	EpiC Nepal/ FHI 360	Semi annually
40	Output	Number of KPs who were diagnosed with and treated for an STI during the reporting period	2021	2,176	1,984	1,355	-	-	-	Sexually Transmitted infection Register (HMIS 7.2)	EpiC Nepal/ FHI 360	Monthly
41	Output	Number of health services provided to clients and reported on Online Risk Assessment (ORA)	2021	3,754	11,266	17,196	-	-	-	Mero Sathi	EpiC Nepal/ FHI 360	Quarterly
42	Output	Number of health care workers (HCWS), police, and other stakeholders that participate in stigma and discrimination reduction and gender-transformative trainings	2021	1,861	6,700	5,280	-	-	-	Training Attendance	EpiC Nepal/ FHI 360	Monthly
43	Output	Percentage of people who inject drugs reached with HIV prevention programs - defined package of services (Year 2024 is till 31 July)	2019	81.76%	87%	90.63%	91.25%	-	-	Routine Report – Online Program Management Information System (OPMIS)	Save the Children	Monthly
44	Output	Number of needles and syringes distributed per person who injects drugs per year by needle and syringe programs (Year 2024 is till 31 July)	2019	114	125	130	-	-	-	Routine Report – OPMIS	Save the Children	Monthly

Indicator no.	Indicator type	Indicators	Baseline		Targets					Data Source	Responsible for collecting data	Frequency of reporting
			Year	Value	2022	2023	2024	2025	2026			
45	Output	Percentage of migrants and their spouse reached with HIV prevention programs - defined package of services (Year 2024 is till 31 July)	2019	36.86%	70%	85%	90%	-	-	Routine Report - OPMIS	Save the Children	Monthly
46	Output	Number of people in prisons and other closed settings reached with HIV prevention programs - defined package of services (Year 2024 is till 31 July)	2019	17611	11,425	13,091	13,730	-	-	Routine Report - OPMIS	Save the Children	Monthly
47	Output	Percentage of people who inject drugs that have received an HIV test during the reporting period and know their results (Year 2024 is till 31 July)	2019	80.37%	82.80%	84.28%	54.75%	-	-	Routine Report - OPMIS	Save the Children	Monthly
48	Output	Percentage of migrants and their spouse that have received an HIV test during the reporting period and know their results (cumulative) (Year 2024 is till 31 July)	2019	2.16%	70%	75%	40%	-	-	Routine Report - OPMIS	Save the Children	Monthly
49	Output	Number of people in prisons or other closed settings that have received an HIV test during the reporting period and know their results (Year 2024 is till 31 July)	2019	6,923	10,282	11,901	7,141	-	-	Routine Report - OPMIS	Save the Children	Monthly

Indicator no.	Indicator type	Indicators	Baseline		Targets					Data Source	Responsible for collecting data	Frequency of reporting
			Year	Value	2022	2023	2024	2025	2026			
50	Output	Completeness of facility reporting: Percentage of expected facility monthly reports (for the reporting period) that are actually received	2019	97.71%	100%	100%	100%	-	-	IHMIS Monthly PMTCT Report 9.3/9.4/9.5	NCASC	Monthly
51	Output	Number of Public Service Announcement developed and disseminated using different platforms (radio, television, social media, newspaper, etc.) (cumulative)	2078/79	14	16	18	20	22	24	Brief report	NCASC and partners	Annually

Note: *The targets set for 2024 for indicators whose data are collected by Save the Children are only for the period of Jan-Jul 2024.

**Above-mentioned indicators' details can be obtained through indicator reference document maintained by UNAIDS, PEPFAR and the Global Fund, which can be accessed through:

https://indicatorregistry.unaids.org/

https://www.state.gov/wp-content/uploads/2021/09/FY22-MER-2.6-Indicator-Reference-Guide.pdf

https://www.theglobalfund.org/media/4309/fundingmodel_modularframework_hanadbook_en.pdf

4.4 MONITORING AND SUPERVISION

Supervision is another crucial element of SI system to ensure that the actions are directed in the right direction and goals are met. Supervision supports to exchange ideas, trouble shoot challenges, and implement rapid capacity strengthening. Federal to provincial, federal to local, provincial-local, federal/provincial/local to SDP supervision are conducted as required. Partners conduct their own monitoring and supervisory visits, including program, M&E and finance team, to support implementing partners on the ground for troubleshooting. Joint monitoring and supervision visits of Government, partners and UN agencies is recommended to ensure holistic and supportive supervision. The monitoring and supervision tools of the national HIV program are in Annex 2.

4.6 EVALUATION, SURVEILLANCE AND RESEARCH PLAN 2021-2026

Nepal uses the following surveys and assessment for surveillance of HIV response in Nepal

- Nepal Demographic Health Survey (NDHS)
- National AIDS Spending Assessment (NASA)
- National Commitment Policy Index (NCPI)
- National Health Facility Survey (NHFS)

IBBS are crucial to measure HIV sero-prevalence and associated HIV risk behavior among key population. Nepal has conducted several IBBS in specific key population and specific areas in the past, while since 2019 it has been conducting national surveys. The following table depicts the list of IBBS surveys conducted till date in Nepal.

TABLE 4: LIST OF IBBS SURVEYS CONDUCTED TILL DATE IN NEPAL

Key populations at higher risk	Survey areas	Survey years
Female Sex Workers	Kathmandu Valley	2004, 2006, 2008, 2011, 2015, 2017
	Pokhara Valley	2004, 2006, 2008, 2011, 2016
	16 Terai Highway Districts	1999, 2003, 2006, 2009, 2012, 2016, 2018
	6 Terai Highway Districts	2004, 2006, 2009, 2012, 2016, 2018
People who Inject Drugs (Male)	Kathmandu Valley	2002, 2005, 2007, 2009, 2011, 2015, 2017
	Pokhara Valley	2003, 2005, 2007, 2009, 2011, 2015, 2017
	Eastern Terai Districts	2003, 2005, 2007, 2009, 2012, 2015, 2017
	West to Far West Terai Districts	2005, 2007, 2009, 2012, 2016, 2017
	National Level	2019
People who Inject Drugs (Female)	Kathmandu Valley	2016
	Pokhara Valley	2017
Men who have Sex with Men and Transgender people	Kathmandu Valley	2004, 2007, 2009, 2012, 2015, 2017
	Terai Highway Districts	2016,2018
	Pokhara Valley	2017
Male labor migrants	Western to Mid & Far Western Districts	2006, 2008, 2010a, 2012, 2015, 2017
	Eastern Districts	2018
Wives of labor migrants	Far-Western region	2008, 2010, 2018

IBBS, though being quite rich in data collection, it is a resource and time-consuming approach. With the strengthening of case-based data collection through HIV Care and ART Tracking System or other information system, the discussion on whether IBBS can be slowly phased out and case-based surveillance be strengthened has started. In 9 June 2022 NCASC integrated all the components of HIV prevention, testing, care and support components managed by partners into HIV Care and ART Tracking System and circulated letter and provided log in details to all service delivery points to start recording data in HIV Care and ART Tracking System. Similarly, donor specific variables were also added in the information system. Some innovative approaches (such as IBBS lite) can be taken to make IBBS cost effective and keeping the surveillance system intact.

Evaluation of projects of partners is done at specific times most often mid-term and at the end of the project. For this, the Social Welfare Council (SWC) conducts the evaluation by forming an independent committee of experts. As per the recommendation received from SWC during mid-term evaluation, improvements will be made at the remaining period, to the extent possible. These reports are shared with NCASC, service sites and other stakeholders as required. Partners also have their own internal annual evaluation mechanism.

National HIV Research Agenda 2013 identified that more research is necessary in the field of care and support, health services research, treatment, and cross-cutting issues, such as gender and inclusion of the key population on at higher risk of HIV. Also, in the field of the prevention research, MSM/TG and transport workers tend to be less focused. The review also suggests lack of evaluation, intervention research, including economic evaluation.

The table below lists the priority and suggested evaluation, surveillance, and research areas for the next 5 years.

TABLE 5: EVALUATION, SURVEILLANCE AND RESEARCH PLAN 2022-2026

	Timeline	Responsible entity
Priority Evaluation, Surveillance and Research Areas		
Evaluation of effectiveness of behavioral and biomedical interventions in preventing new HIV infections and reducing HIV related risky behaviors.	2024	NCASC
Evaluate the drug use patterns among PWID in Nepal	2023	NCASC
Assessment of socio-economic and health impact among young PLHIV (16-24 years)	2022/23	NCASC
Evaluation of effectiveness of care and support services in reducing loss to follow up and promoting retention in HIV treatment.	2023	NCASC
National IBBS survey among key population (MSM, TG) (Details in Annex)	2022-2023	NCASC
National and sub-national estimated of HIV	2022	NCASC and Partners
Mathematical Modelling to estimate health achievement and economic benefits	2022	NCASC and Partners
National AIDS Spending Assessment (NASA)	2022-2023	NCASC and Partners

	Timeline	Responsible entity
Midterm evaluation of NHSP 2021-2026	2023-2024	NCASC and Partners
Suggested Evaluation, Surveillance and Research (Based on resource availability)		
Thematic research (Elimination of Vertical Transmission of HIV (eVT), HIV treatment outcomes, PrEP, self-testing, online reach, community-based ART dispensing sites)	2023-2026	NCASC and Partners
Mapping and size estimation of key populations		
Assessment of HIV prevention, testing, treatment, care, and support cascade		
HIV Drug Resistance Survey		
National IBBS survey among key population (PWID, FSW, migrants, prison inmates)		
Data Quality Assessment of national HIV program		

Chapter 5

MANAGEMENT OF STRATEGIC INFORMATION

A functional and effective M&E system generates, analyses, and uses strategic information. The M&E system for response to HIV should ensure that relevant and quality information is accessible (to all stakeholders) along the cascade at the right time, in the right place and in the right format for use. This section describes the key components of proper management of strategic information.

5.1 DATA SOURCES

Data generated from SDPs form the backbone of data collection, whereas additional information is collected from surveillance and survey. Routine data are collected through IHMIS (HTC, STI, ART, PMTCT, OST and targeted intervention program). IBBS surveys, NDHS, MICS, NASA, NHFS, vital registration and size estimation through mathematical modelling, collect additional data. Partners collect data through their independent information management system, such as Merodata used by EpiC Nepal/FHI 360, and Online Program Management Information System (OPMIS) used by Save the Children. These system collects the data on services delivered by the implementing partners of the projects, are fully functional, regularly reviewed and data quality constantly monitored. The data from partners and private sectors are crucial and integrated within HIV Care and ART Tracking System with an aim to ensure recording of HIV related data through ONHIS.

5.2 DATA COLLECTION

Nepal currently adopts IHMIS/DHIS2 system for monthly reporting and DHIS2 tracker for recording of each client details electronically. The client-level data are recorded at the paper-based register at service sites. Health workers enter records in the registers and then reports to the higher reporting units.

It is crucial that individual-level data be collected to track the achievement of 95-95-95 target. Since IHMIS and DHIS2 only provide aggregate data, DHIS2 tracker is currently on use to track individual data at HIV treatment sites.

HIV CARE AND ART TRACKING (DHIS2 TRACKER, MHEALTH AND BIOMETRIC SYSTEM)

DHIS2 Tracker keeps records of all personal information of clients for HIV testing and counselling services, medical History of client, ART and follow-ups, PMTCT, EID, and discontinuation of follow up to services. Once the client is registered in the system, all the related information is entered during their treatment process, and it can be retrieved from the system at any time. Additionally, this system also ensures easy transfer of client information and facilitates referral of clients to other

sites. This system is inter-linked with Biometric System for scanning the fingerprint of clients, which makes it easier to trigger the duplication and makes transferring of clients easier. Biometric system is used if the clients are confirmed to be HIV positive or enrolled in HIV care. This system registers new clients in HIV Care and ART Tracking System with a unique identification code (alphanumeric code). It identifies whether the client is registered in another ART center of Nepal. mHealth consists of automated and manual push Short Message Service (SMS) methods to send frequent and timely messages to the clients for appointment reminder and general awareness messages.

In 9 June 2022, all the other components (HIV prevention, testing, care and support services) recording forms managed by partners has been integrated within this information system to ensure recording of individual level data to ensure ONHIS.

5.3 DATA MANAGEMENT

Even if the data has been collected with well-defined procedures and standard recording tools, they need to be checked for any inaccurate or missing data. Good data management system assures accessibility, reliability, and timeliness of data. Proper data management consists of following components:

- **Data security:** Data security is the practice of protecting information from unauthorized access, corruption, or theft throughout its entire lifecycle. The security of hard copy and electronic data are maintained at all the SDPs, health offices, NCASC and partners by assigning concerned personnel for data use who are oriented on data security. Data access and sharing of electronic data is limited only to the authorized person with password protection and authorization. Nepal government has formulated “The Electronic Transaction Act, 2063” to secure the electronic data that has defined various types of offences and punitive laws against any violation of rules related to electronic data security and privacy.
- **Confidentiality:** Confidentiality of data is maintained by exposing the data only to the client, health care provider and data focal person. Ensuring confidentiality by using client code against their name, storing hard copy files in proper lockers, and assigning authorized personnel, and protecting electronic data using passwords are practiced across SDPs; local, provincial, national level; and partners’ organizations. Health workers and all data focal personnel are regularly oriented on maintaining confidentiality.
- **Use of unique identifiers:** Use of unique identifiers links an individual from prevention to care continuum for better treatment outcomes. The Unique Identification Code system recommended by the IHIMS is used across the national HIV system.
- **Data repository:** All the received individual-level information at the center from DHIS2 tracker are recorded on the central server of National Information Technology Center (Ministry of Science and Technology).
- **Data disposal:** Data disposal is an equally important aspect of data management as it supports to keep the data secure and cost effective. With more than three decades long national HIV program in Nepal, hard copy data and electronic data like are facing challenges of proper space. Hence, a national guidelines that describes data disposal process is a key need.

- Currently, data are managed based on national guidelines, common practices and organizations’ policies and procedures. It is important to formulate national data management guidelines to ensure uniformity across the national HIV program.

5.4 DATA QUALITY ASSURANCE

Data quality assurance refers to the procedures for ensuring that monitoring and evaluation (M&E) data are accurate, complete, consistent, and reliable. Quality data are very important for measuring progress on interventions and for evidence-based decision-making at the program level. Data quality assurance identifies quality issues in the data, specifies ways to correct identified problems, and stipulates the plan for regular periodic assessments of data quality.

DIMENSIONS OF DATA QUALITY

- **Validity:** the degree to which the data measure what they are intended to measure
- **Accuracy:** the percentage of data fields containing correct data
- **Availability:** ability of the system to report the data, including availability of registers to validate reported data and percentage of facilities submitting monitoring reports
- **Completeness:** The proportions of data fields that are complete (no missing data)
- **Timeliness:** the proportion of reports submitted on time

KEY METHODS AND APPROACHES FOR DATA QUALITY ASSURANCE AS DIMENSION OF DATA QUALITY

Data verification for public sites done at three levels:

- **Data verification at service sites:** Before sending the report to the higher levels, all the reports should be verified to check if any error or inconsistency has occurred and then approved and reported by responsible officials.
- **Data verification at local level:** At the local, health section is responsible for verifying and reporting of monthly data submitted by different service sites.
- **Data verification at PHD and national level:** At the PHD and national level data, inconsistency should be checked and, if any fault noticed, should be notified to PHD and local level for clarification. Monitoring, Evaluation, Surveillance and Research Section of NCASC regularly reviews and provides feedbacks on reported data to officials of PHD, local level and SDPs.

DATA QUALITY ASSESSMENT

Data Quality Assessment (DQA) is a participatory exercise that verifies the output level indicators with the evidence and supports strengthening M&E systems at service site with technical support from NCASC. Currently, NCASC and partners use separate DQA tools and techniques. A national DQA guidelines will be developed that will be used by government and partners, to ensure uniformity and better data quality.

5.5 DATA ANALYSIS AND USE

Data analysis is the process of synthesizing data and summarizing the health situation and trends to be used by decision-makers. Usually, the analysis is carried out to track the epidemic trends, comparison of results of by indicators for performance measurement (targets vs achievements) and to guide for program improvement.

The use of data at various tiers of health system are as follows:

SERVICE DELIVERY POINTS

- Monitoring loss to follow-up
- Monitoring early warning indicators

- Monitoring access to and coverage of services
- Improving facility management
- Establishing accountability for work

NATIONAL AND SUBNATIONAL LEVELS:

- Developing program targets and linkages between HIV testing and ART services
- Adjusting the focus of outreach interventions and programming for key populations
- Estimating the number of HIV-positive pregnant women for targeting the ART/PMTCT program
- Informing policy
- Informing resource allocation
- Evaluating interventions/innovations/pilot tests.

GLOBAL AND REGIONAL LEVELS

- monitoring impact: global and regional incidence, prevalence, mortality trends
- measuring outcomes: coverage and access
- costing calculations
- lives-saved calculations
- triangulating data to project unmet needs
- Modelling for infection estimates

5.6 DATA REPORTING

HIV data are reported through mid-term and end term evaluation to monitor indicators prioritized by NHSP and Annual Health Report of DoHS to monitor fiscal year progress. Similarly, GAM reporting is done on an annual basis to monitor progress towards indicators at regional and global level. Besides GAM, the data are reported to other ministries, donors, partners meeting forums, annual review meetings etc.

5.7 DATA DISSEMINATION

Dissemination of HIV data is critical to gain commitments for improved response to HIV epidemic and as well to express the accountability for the commitments made. Following are the key strategies recommended as a mechanism for HIV data dissemination:

- Data sharing/dissemination meetings
- Presentations at respective sites
- Partners, line agencies and stakeholders during coordination meetings
- Presentation at the national and international conferences and seminars
- Contribute to global, national and provincial HIV database
- Web updates
- Data use advocacy sessions
- National and provincial review
- Joint annual review
- Publication of key findings in national and international peer review journals

Chapter 6

COORDINATION AND RESOURCE MOBILIZATION

6.1 ROLES OF DIFFERENT STAKEHOLDERS

The national response to HIV in Nepal is a multi-sectoral program and is comprised of various players or stakeholders with different roles and responsibilities but governed by a common goal and framework. The roles for key stakeholders in the implementation of the M&E plan are outlined as follows:

TABLE 6: ROLES AND RESPONSIBILITIES OF DIFFERENT STAKEHOLDERS

Stakeholder	Roles and responsibility
NCASC	✓ Provide overall leadership in execution of the M&E Plan ✓ Coordinate all NHSP M&E activities ✓ Promote all national HIV M&E system ✓ Ensure wider dissemination of the NHSP and M&E Plan ✓ Conduct data aggregation and management from sectors ✓ Ensure that standardized tools are developed and used by implementing partners ✓ Perform regular data analysis and produce periodic report and other information products ✓ Ensure proper functioning of the Nation HIV Database ✓ Develop guidelines and tools for assurance of the quality of data ✓ Conduct data quality assessments ✓ Perform field monitoring of interventions and provide M&E technical support as per the need ✓ Strengthen M&E capacity for the HIV response ✓ Produce and disseminate various information products ✓ Conduct national surveys within their scope and produce timely reports on national surveys ✓ Ensure all the global reporting requirements
Provincial Health Directorate	✓ Assist in the execution of M&E plan ✓ Oversee all M&E activities at provinces ✓ Ensure that standardized tools are used by implementing partners ✓ Ensure proper functioning of the National HIV Database at provincial level ✓ Conduct data quality assessments ✓ Perform field monitoring of interventions and provide M&E technical support as per the need

Stakeholder	Roles and responsibility
Implementing Partners	✓ Assist in execution of M&E plan ✓ Perform routine data collection ✓ Aggregate, clean and report data in a timely manner through the district focal person ✓ Maintain primary data collection records with maximum confidentiality and security ✓ Perform data quality assurance at all levels ✓ Perform field monitoring of activities ✓ Ensure adequate in-house capacities for M&E ✓ Utilize data regularly for program improvement
Beneficiaries	✓ Provide authentic data to service providers on request ✓ Participate in monitoring and evaluating services through providing feedback to service providers, responding to survey questionnaires, and participating in review meetings.
Service sites	✓ Collect and record data ✓ Regular reporting ✓ Maintain update and completeness of data ✓ Quality assurance of data

6.2 COORDINATION MECHANISMS FOR SI SYSTEM

SI-TWG is the key mechanism for stakeholders for discussing the overall SI issues, identify challenges, trouble shoot them and take remedial actions, and discuss on strengthening SI system. The ToR of SI-TWG is in Annex 1. Regular meetings of SI-TWG would support to strengthen SI of national HIV program.

6.3 CAPACITY STRENGTHENING PLAN 2022- 2026

One of the strategic actions mentioned in the NHSP is to build the capacity of CSOs for monitoring, documentation, and reporting. The following capacity strengthening priorities have been jointly identified and prioritized for the next 5 years:

TABLE 7: CAPACITY STRENGTHENING PLAN 2022-2026

Initiative	Target audience	Frequency
Regional and National HIV Estimation Workshop	Monitoring, Evaluation, Surveillance and Research Section of NCASC and other stakeholders	Biannually, Annually and need basis
Participation in national and international conferences	M&E staff of all stakeholders	Annually
Participation in national and international DHIS2 Tracker related trainings	M&E staff of all stakeholders	Annually
Community led Monitoring training	KP and community in 14 districts	Annually
HIV Care and ART Tracking System	Health workers working at SDPs, responsible staff of PHD and local levels and staff of key stakeholders	Annually
Training on recording and reporting of national HIV program	Health workers working at SDPs, responsible staff of PHD and local levels and staff of key stakeholders	Annually
Training on methodology of surveillance surveys and size estimation.	M&E staff of all stakeholders	Annually

6.4 RESOURCES IN SI SYSTEM

The NHSP has anticipated that 5.07 million United States Dollar (USD) is required to meet the SI related objectives in the next 5 years, which amounts to 2.5% of the total budget in HIV response. This is much lower than the global practice to allocate at least 5-10% towards SI system, and among the lowest funded component of HIV response. This illustrates the need to increase the share of SI component within the HIV response budget.

Chapter 7

RECOMMENDATIONS FOR STRENGTHENING THE HIV SI SYSTEM

The recommendations have been derived from the consultative workshops, key informant interviews, recommendations from Annual Report 2020/2021 of DoHS, review report of NHSP 2016-2021, MESST survey 2018, national consolidated SI guidelines 2016, etc.

FORMULATE OR ACTIVATE GUIDING DOCUMENTS

The formulation of several guidelines, action plans and strategic documents have been pending due to Coronavirus Disease (COVID-19) and other issues. The following guiding documents should be formulated by NCASC:

- Update national costed M&E plan annually based on NHSP 2021-2026 and this guidelines.
- Develop HIV sustainability and accountability plan that strengthens ownership for SI component.
- An inventory of completed and on-going country-specific evaluation and research studies to be maintained and updated regularly.
- A tool to track resources in HIV should be developed and updated annually.
- Develop Standard Operating Procedures (SOP) and other guidelines for targeted interventions.
- Develop national SI for HIV plan focused on emergency and humanitarian settings.
- Develop national data management guidelines.

CONDUCT SURVEYS AND ASSESSMENTS

Several surveys and assessment that used to be conducted regularly have been disrupted due to COVID-19 and other reasons, and it is recommended to conduct them soon:

- Nepal conducted its last MESST assessment in December 2018, and another MESST is recommended.
- Review methodology and update methods to conduct national level IBBS surveys in different key populations of HIV.
- Conduct Cascade Assessment including development of routine cascade on HIV prevention, treatment, PMTCT, if possible, by KPs.
- Assess effectiveness of routine monitoring activities to improve performance.

STRENGTHEN DATA QUALITY

The gaps in data quality can be improved with improved data base, data verification system, frequent monitoring. The following recommendations have been provided for strengthening data quality:

- NCASC should carry out RDQA and OSDV at all sites annually and share a report to the stakeholders.
- NCASC should conduct a joint monitoring of HIV program periodically with diverse stakeholders.
- Promote reporting of HIV positive data from only confirmatory three-tier HIV testing sites i.e., HIV Counselling and Testing Sites.
- Strengthen data verification processes at all levels
- Improve database to track HIV-positive mothers and exposed baby for EID.
- Conduct supportive monitoring visit at SDPs from the province and Centre. Plan for frequent Joint annual review of HIV specific program and response.
- Frequent monitoring visit should be performed to intensify the services at birthing centre and beyond birthing centre.

STRENGTHEN DATA USE AND DISSEMINATION

The HIV data use and dissemination should be strengthened by:

- Develop knowledge management plan.
- Emphasize data use beyond HIV factsheet.
- NCASC should conduct a national forum for validation, dissemination, and discussion of the findings of HIV research and evaluation and these findings will be used and referenced in planning and other programming documents.
- NCASC, with support from implementing partners and stakeholders should organize program review at provincial and national level, and data's web-based dissemination.
- Plan to disseminate routine program data information, related to project achievements and cascade analysis of 95:95:95, with stakeholders semiannually.
- Promote sub national data generation and use. Plan for more participation of province level staff in the National M&E Plan development process.
- Hard to reach population and gender specific needs are still needed to be addressed when analyzing data.

CAPACITY STRENGTHENING

The following capacity strengthening activities have been recommended:

- Training programs focusing on major non-reporting private hospitals and Non-Government Organizations (NGOs) should be done by NCASC and IHIMS to ensure reporting to IHIMS
- NCASC should also provide orientation to the partners (service providers) on the use of standard recording tools (including changes/updates/ modification) and regularly monitor recording and reporting as per standard tools. Data management, analysis, use and dissemination training should be provided to all responsible staff of ART Centers.

REFERENCES

FHI (2000) Behavioural surveillance surveys: guidelines for repeat behavioural surveys in populations at risk of HIV. FHI, Arlington, USA.

ICMR (2011) Integrated Behavioral and Biological Assessment (IBBA): Guidelines for surveys of populations at risk of HIV infection. Indian Council of Medical Research and FHI. New Delhi, India.

NCASC (2016). National Strategic Plan 2016-2021. National Center for AIDS and STD Control. Kathmandu, Nepal.

NCASC (2017). National Consolidated Guidelines on Strategic Information of HIV Response in Nepal 2016-2021. National Center for AIDS and STD Control. Kathmandu, Nepal.

NCASC (2018). Assessment of Nepal National HIV, Tuberculosis and Malaria programs M&E systems using the 12 components Monitoring and Evaluation System Strengthening Tool (MESST). National Center for AIDS and STD Control. Kathmandu, Nepal.

NCASCa (2021). National HIV Strategic Plan 2021-2026. National Center for AIDS and STD Control. Kathmandu, Nepal.

NCASCb (2021). National HIV infection estimate 2021. National Center for AIDS and STD Control. Kathmandu, Nepal.

NCASCc (2021). World AIDS Day 2021 Factsheet. National Center for AIDS and STD Control. Kathmandu, Nepal.

NPC (2015). Sustainable Development Goals 2016-2030 National (Preliminary) Report. National Planning Commission. Kathmandu, Nepal.

Robert M, Keith S, Tobi S, Douglas H (2005). Review of sampling hard-to-reach and hidden populations for HIV surveillance. AIDS 2005, Vol 19 (suppl 2).

UNAIDS (2009). 12 Components Monitoring and Evaluation System Assessment Tool. Joint United Nations Programme on HIV/AIDS. Geneva, Switzerland.

UNAIDS (2021). Global AIDS Strategy 2021-2026. Joint United Nations Programme on HIV/AIDS. Geneva, Switzerland.

WHO (2013). Introduction to HIV/AIDS and sexually transmitted infection surveillance: Module 4: Introduction to respondent-driven sampling. World Health Organization. Geneva, Switzerland.

WHO (2020). Consolidated HIV Strategic Information Guidelines, World Health Organization. Geneva, Switzerland.

ANNEXES

ANNEX 1: TERMS OF REFERENCE OF STRATEGIC INFORMATION TECHNICAL WORKING GROUP

Government of Nepal
Ministry of Health and Population
National Centre for AIDS and STD Control
Teku, Kathmandu

STRATEGIC INFORMATION TECHNICAL WORKING GROUP (SI-TWG) TERMS OF REFERENCE

I. BACKGROUND

Strategic Information (SI) is a crucial part of the national HIV response in Nepal to ensure - policymaking, programming and investment decisions are evidence-informed at all levels. The HIV Strategic Information Technical Working Group (SI-TWG) was established in 2007 as a national technical body to advise the National Centre for AIDS and STD Control (NCASC) on HIV-related SI, including surveillance of HIV and other sexually transmitted infections (STI); monitor and evaluate progress of the national HIV strategy implementation; support to fulfill essential national and international reporting requirements, and facilitate HIV/STI-related research activities in Nepal and provide technical assistance to NCASC and partners. In summary, SITWG support to establish a harmonized SI system for HIV in the country to guide appropriate interventions and responses to achieve the treatment targets of 90-90-90 and Sustainable Development Goal 3 (HIV and AIDS) to help end the AIDS epidemic.

II. OBJECTIVES

The main objectives of SI-TWG are to:

1. Advise NCASC on SI related functions including surveillance, monitoring & evaluation, and research at all levels of the National HIV Program;
2. Function as a national technical body to support NCASC and its partners in designing, managing, and implementing appropriate and quality HIV & STI related surveillance, monitoring and evaluation and research activities in the country

III. SCOPE OF WORK

The SI-TWG will provide technical inputs in development and implementation of national SI framework and guidelines for national HIV surveillance, monitoring & evaluation and research programme through its Chair (Director of NCASC).

Specific responsibilities will include:

a) Facilitate the implementation of a comprehensive surveillance system for HIV & STIs:

- Support NCASC in review, development and finalization of national surveillance framework and guidelines.

- Support in review of data collection tools, data quality assessment/monitoring checklists, data verification and analysis procedures, storage (data handling), dissemination and use according to the national guidelines.
- Advise the NCASC and its partners on HIV and STI surveillance system strengthening based on the type of epidemic in the country.
- Support in reviewing geographical and epidemiological coverage of existing Second-Generation Surveillance activities and make recommendations to NCASC.

b) Support the implementation of the national Monitoring & Evaluation system for HIV & STIs:

- Monitor SI-related activities to ensure implementation of activities as per the minimum recommended standard.
- Facilitate periodic reviews and evaluation of national HIV programme (external/independent review and evaluation).
- Support in setting national target and assumptions ensuring that national planning and strategy processes are grounded in accurate data.
- Support in development and review of recording and reporting tools and techniques for data generation and use.

c) Support in research:

- Provide technical advice to identify and develop research priorities to strengthen the HIV prevention and treatment activities and periodic review of them.
- Support to review the research finding and provide constructive feedback and advice the national program to consider the finding while designing national manuals, guidelines and protocols

IV. CHAIR AND SECRETARIAT

The SI-TWG meeting is chaired by the NCASC Director. The NCASC will serve as the secretariat to the SI-TWG, specifically meeting arrangements, sending invitations and logistical support. It will also support specific functions, such as the creation and moderation of electronic discussions groups. Secretariat will be responsible to mobilize funding if needed for the functionality of the SI-TWG.

V. MECHANISMS AND MEETINGS

- The SI-TWG will meet a minimum of once in a quarter, four times a year. A quorum of more than half will be required for the meetings. Smaller working group meetings may take place on specific areas as decided by the SI-TWG. In addition, electronic discussion groups will be used to facilitate the exchange of views before and after formal meetings.

Every meeting will start with the review of previous minutes, and only then the agenda for that day's meeting will be discussed. Progress and results of recent SI activities will be discussed to make recommendations for further implementation and improvements. The discussion will include a review of recent surveillance and M&E activities and their implementation.

- Meeting will be called by the member secretary (Chief of Monitoring, Evaluation, Surveillance and Research Section of NCASC) of SI-TWG with the consent of chair and all the records of the proceedings will be kept at the NCASC and minutes of each meeting will be prepared. Meeting minutes will be e-mailed to all the participants and members within a week of the close of each meeting.
- When discussing issues with conflict of interest to any member/representative of the organization, the Chair has the authority to decide on the participation of the member/representative from the organization in that particular discussion.
- Members need to send an official letter of resignation to the Chair if he/she deems to resign from the SI-TWG.
- If the SI-TWG requires to suspend the membership of a member, more than 50% of members should agree on the decision.

ANNEX

MEMBERSHIP

The HIV and STI SI-TWG will comprise of major stakeholders involved in HIV and STI Surveillance, Monitoring and Evaluation and Research in Nepal and will draw experts from a mix of practitioners, academics, United Nations, bilateral/multilateral donors and national and international non-governmental organizations. The SI-TWG will include 17 core members, representing the range of disciplines and encompass the relevant expertise required for surveillance, monitoring, evaluation and research related to HIV and STI. Whenever necessary NCASC can invite additional experts to participate in addition to the core members, as an invitee.

The core members will be representatives from the organizations listed below. Formal nomination of experts from the organizations will be requested by NCASC on the basis of expertise, scientific, technical and programmatic competence in surveillance, monitoring, evaluation and research. NCASC will also request nomination of an alternate member who will act as the core member in his/her absence. The alternate member will be copied in all email threads of SI-TWG correspondences. It is the responsibility of the main member to inform the alternative member to attend meetings in his/her absence.

CORE MEMBERSHIP: 17

1. NCASC
2. WHO
3. UNAIDS
4. Save the Children
5. FHI360
6. AIDS Healthcare Foundation
7. IHMIS section
8. NHRC
9. UNICEF
10. USAID
11. National Public Health Laboratory (NPHL)
12. National Association of People Living with HIV/AIDS (NAP+N)
13. Experts: 5 (nominated by the director)

NCASC can invite experts from different organizations to participate in addition to the core SI-TWG members, as and when required.

Considering the current and expected strategic information priorities for the coming years, membership of the SI TWG is guided by the following criteria:

- Experience in chosen technical areas (HIV-related surveillance, research, monitoring, evaluation, drug resistance, information system design, statistics and medical laboratory).

Members of SI-TWG will normally serve for a period of two years. The membership will end automatically after two years; and is renewable, based on SI priorities and technical needs at that time. If any core member leaves his/her organization, it is the responsibility of the organization to formally inform the SI-TWG in advance. In such case, NCASC will request for new nomination from the organization. The Chair can terminate any member(s) with unsatisfactory performance and unable to attend (or send representative in his or her absence) routine meetings of SI-TWG for more than two consecutive times.

ANNEX 2A: INTEGRATED MONITORING AND SUPERVISION CHECKLIST FOR NATIONAL HIV PROGRAM

Government of Nepal
Ministry of Health and Population
National Centre for AIDS and STD Control
Teku, Kathmandu

INTEGRATED MONITORING AND SUPERVISION CHECKLIST FOR NATIONAL HIV PROGRAM

GOALS OF MONITORING AND SUPERVISING PROGRAM IN THE CONTEXT OF HIV & AIDS

The goal of Monitoring and Supervision of national HIV program is to improve the quality-of-service delivery at sites. The purpose of the checklist is to collect information and provide feedback to improve the management of HIV & AIDS service & programme accordingly.

THE OBJECTIVES OF MONITORING AND SUPERVISION TOOL ARE:

- To collect information about the comprehensive HIV and AIDS care package
- To identify problems in delivering the quality HIV and AIDS Service
- To evaluate the current quality of HIV and AIDS Services
- To review the quality and adequacy of the ARV drugs, Laboratory tests & counseling process
- To review recording and reporting system of HIV and AIDS care services (HTC, PMTCT, ART and OST services including Logistic services) and provide necessary feedback

USERS OF THIS TOOL (WHO SHOULD USE IT?)

This tool can be used by officials from NCASC and other related personnel and by internal supervisors, i.e. Supervising staffs of implementing agencies in conducting supervision and monitoring of the HIV related services. This tool can be used to analyze the status of HIV related care and service including the logistics and recording/reporting system by observing the site, review related documents (records, register and report) and interviewing with the concerned personnel at the site.

FREQUENCY OF USING THIS TOOL (HOW OFTEN SHOULD IT BE USED?)

This tool is recommended to fill and prepare in every supervision and monitoring visit conducted by the supervisor at the site. Supervisor of implementing agencies should visit at least once a month in the service site. It is recommended to visit NCASC staff on quarterly basis in a newly established site for the initial year of the program followed by at least every six months in successive years.

LIMITATIONS OF USING THIS TOOL

This tool is less helpful if only recorded data are analyzed without discussion with related staff at the site or just by doing quick observations of the site or service delivery points.

NOTE:

HTC service monitoring
PMTCT service monitoring
ART service monitoring (logistics part only)
OST service monitoring
ART service monitoring (R&R/ DHIS2 Tracker excluding logistics & PMTCT part)
Local authorities monitoring (Pallika)

Name of Visited Facility:	District:
Date of Visit:	
Name & Designation of Visitors:	

1. HIV Testing and Counseling (HTC) Program Monitoring Checklist			
S.N.	**Activities**	**Yes/No**	**Remarks**
1	Is a person /staff assigned to do counseling?		
2	Has the working counselor/assigned staff received training on HIV Testing and Counseling?		
3	Has the working counselor/assigned staff received training on HIV related IHMIS recording and reporting tool?		
4	Is IHMIS 7.1 available on the site? If yes, mention # of registers.		
5	Has IHMIS 7.1 register been used for recording HTC services?		
6	If yes, is the register maintained properly (Completeness, Timeliness, Accurate) *(Review the register)*		
7	Is the counselor/assigned staff clear about the national HIV testing algorithm? (*Ask the counselor*)		
8	Has confidentiality maintained?		
9	Hard copy of the monthly report is in a separate file?		
10	Are records consistent to the submitted report? (*Please verify at least last 2 months reports and mention the variation in remarks*)		
11	Were any clients found HIV positive during last 4 months? *(Mention the number in Remarks).*		
12	Are the tested positive clients separately reported for individual case reporting? *(Check in monthly report accordingly)*		

1. HIV Testing and Counseling (HTC) Program Monitoring Checklist			
S.N.	**Activities**	**Yes/No**	**Remarks**
13	Are all the tested positive clients referred to the HIV care?		
14	Do you carry out HIV tests? If yes, do you follow national HIV testing algorithm *(Visit laboratory unit to check and ask)*		
15	Has lab technician received training on HIV Rapid testing?		
16	Is the test result directly provided to the client/relatives of the client?		
17	Can the register provide the total number of HIV test from the Gynae OPD? (*Only ask in case of Hospital*)		
18	Are HIV Test kits (Determine, Unigold and STAT-PAK) not expired? (*Check expiry date*)		
19	Is there enough stock of test kits? Verify the stock on hand and stock in the register.		

2. PMTCT Program Monitoring Checklist at health institutions that provides HIV screening to pregnant women			
S.N.	**Activities**	**Yes/No**	**Remarks**
Section 1. Monitoring at ANC clinic.			
1	Have working staffs received training on PMTCT? (Mention how many staffs have received the training in remarks column)		
2	Is there use of Maternal and Newborn Health Service Register (IHMIS 3.6) for PMTCT record?		
3	If yes, is the register maintained properly (Completeness, Timeliness, Accurate) (Check the register)		
4	Are the duty staffs clear about the PMTCT recording and reporting? (Ask about IHMIS register and recording)		
5	Are records consistent to the submitted report? (Please verify at least last 2 months reports of HIV test and mention the variation in remarks)		
7	Was any pregnant woman found HIV positive during last one year? If yes, mention the number in remarks.		
8	If 'Yes', were they referred to the ART services?		
Section 2. At Labor and Delivery (L&D) unit.			
9	Have working staffs at Labor and Delivery (L&D) unit received training on PMTCT? (Mention how many staffs have received the training in remarks column)		
10	Is there use of Maternal and Newborn Health Service Register (IHMIS 3.6) for PMTCT record?		
11	If 'No', what is the standard recording tool used in L&D?		
12	Does that tool capture recording of PMTCT services?		

2. PMTCT Program Monitoring Checklist at health institutions that provides HIV screening to pregnant women			
S.N.	**Activities**	**Yes/No**	**Remarks**
13	If 'Yes', is the register maintained properly (Completeness, Timeliness, Accurate) (Check the register)		
14	Are the duty staffs clear about the PMTCT recording and reporting? (Ask about IHMIS register and recording)		
15	Are records consistent to the submitted report? (Please verify at least last 2 months reports of HIV test and mention the variation in remarks)		
16	Was any pregnant woman found HIV positive during last one year? If yes, mention the number in remarks.		
17	If 'Yes', were they referred to the ART?		

3. ART centre-Logistic Management Monitoring Checklist			
S.N.	**Activities- Logistic management**	**Yes/No**	**Remarks**
1	Commodities protected from the direct sunlight.		
2	Provision of the locking system in windows and doors in the storeroom.		
3	Storerooms ensured in such a way that the roof does not leak, and the walls and the floor are not damp.		
4	Is ARV Drug Dispensing Register available and maintained?		
5	Is ARV Drug Dispensing Register updated right after dispensing the ARVs?		
6.	Is STI/OI Drug Dispensing Register available and maintained?		
7	Is STI/OI Drug Dispensing Register updated right after dispensing the STI/OI drugs?		
8	Is Test Kits Dispensing Register available and maintained?		
9	Is Test Kits Dispensing Register updated right after dispensing the test kits?		
10	Is Expiry Tracking Chart maintained and updated for ARVs?		
11	Is stock book maintained and updated?		
12	If 'Yes', was there stock out of any ARV drug during last one year?		
13	Is stock on hand and stock in book match? *(Verify any one item and mention in remarks)*		
14	Is expired drug/test kits segregation and disposal in practice?		
15	Did the site submit Bi-monthly consumption and requisition report in time? *(Check last bi-monthly report)*		
16	Is ART Counselor managing commodities according to FEFO (First Expiry First Out) system to prevent from expiration *(Ask about FEFO, check shelves check-in/out register)*		

17	Is store temperature being monitored? If 'Yes', check the temperature log sheet and mention highest and lowest temperature of the past one year.		
18	Is total storage area for storing HIV commodities adequate? If 'No', has it been notified to concerned authority?		
19	Is there any sign of pests/rodents' infestation? If 'Yes', what pests/rodents control measures were taken and if they were effective in controlling the damage?		

4. Opioid Substitution Therapy (OST) Program Monitoring Checklist			
S.N.	Activities	Yes/No	Remarks
1	Are healthcare providers trained on OST?		
2	Is dispensing machine working?		
3	Is there drinking water available for clients?		
4	Is there availability of OST register IHMIS 7.6?		
5	How many clients are taking Buprenorphine and Methadone?		
6	Is the IHMIS 7.6 register maintained properly (completeness, timeliness, accurately)? *(Only if the register is in use if not mention the reason in remarks)*		
7	Is client dose tracking sheet maintained?		
8	Hard copy of the monthly report is in a separate file?		
9	Are there any data discrepancies found between the reported numbers and register? (Please check the past month report and verify with the register)		
10	Is there good coordination between medical unit and social support unit? (Discuss with officials of medical unit).		
11	Is Stock book maintained and available? *(Check any one item and tally with the stock book)*		
12	Is a separate store with locking system available?		
13	Is a safe to keep methadone and buprenorphine available at dispensing room?		
14	Is there a provision of security guard?		
15	Is psychiatrist available for medical unit?		
16	Are there separate dispensing window and staff assigned for methadone and buprenorphine distribution?		
17	Is there a provision of staff to look after store and admin?		

5.a. ART Program Monitoring Checklist			
S.N.	**Activities**	**Yes/No**	**Remarks**
1	Is there a separate room for ART service?		
2	Is there individual file maintained for each ART taking client?		
3	How many clients are currently taking service?		
4	How many PLHIV are not enrolled on ART and why?		
5	How many children are available in care?		
6	Has the dose of child adjusted according to weight? (*please verify by reviewing child files)*		
7	Have the children been disclosed about their HIV status?		
8	Has VL test been performed to all eligible clients as recommended?		
9	If VL test is done, how many have VL >1000 copies? (*review the file of client with high VL and assess its management)*		
10	Are all clients screened for TB in each visit?		
11	If Yes, how many have received IPT?		
12	How many are currently enrolled in IPT? (to be verified a by reviewing clients fille)		
13	Are all clients prescribed Cotrimoxazole as per eligible criteria?		
14	Is filing system of individual files maintained properly/systematically?		
15	Is national HIV testing and treatment guidelines in Nepal available at the site?		
16	Have the working counselor and doctor received training on HIV Clinical Management? *(Mention how many staffs have received the training in remarks column)*		
17	Has the working counselor received training on HIV related HMIS recording reporting? *(Mention how many staffs have received the training in remarks column)*		
18	Are there Treatment and Care register (HMIS 7.4) and Patient HIV care and ART treatment record (HMIS 7.5) available?		
19	Is the register maintained and updated completely and timely? (eg. client's demographic information, ART start date, regimen, CD4 count at start and current, viral load, PMTCT, EID, IPT, treatment substitution/switch, TB Assessment, Treatment status, adherence level etc.		
20	Were all HIV positive identified pregnant women (both newly identified & previously identified) enrolled in ART? (*Please check and compare the number reported from PMTCT service and recorded in HMIS 7.4*)		
21	Have all HIV exposed live births/babies received ARV prophylaxis? *(check in the HMIS 3.6 and HMIS 7.4 register)*		
22	Were all the exposed babies sample for DNA PCR testing within 2 months? (Mention # in remarks column)		

23	Is preparation and submission of monthly report through HMIS done in time? *(Check hardcopy report and report submitted in HMIS/DHIS2)*		
24	Is hard copy of the monthly report in a separate file?		
25	Is there any data discrepancies found between the reported numbers and register? *(Please check the past month report and verify with the register, e.g. # clients death, transferred out, lost to follow up, stopped and currently on ART)*		
26	Does calculated number of clients currently on ART match with the sum of number of clients on original 1st line, substituted 1st line and switched to 2nd line? *(Check the calculation in monthly report (HMIS 9.3,9.4,9.5) including the consistency by ART regimen and mention the variation in remarks.)*		
27	Are there any clients who's adherence level reported at 'C' level, i.e. less than 80%? *(Mention the numbers in remarks)*		
28	Does ART Counselor coordinate with CHBC & care and support team in the district for proper management of ART service and track LFU/MIS cases? *(Ask counselor and discuss if any CHBC staff is there at ART site)*		

5.b. HIV Care and ART Tracking System Monitoring Checklist (DHIS2 Tracker, mHealth and Biometric System)

S.N.	Activities- Logistic management	Yes/No	Remarks
1	Does ART counsellor receive training/orientation on HIV care and tracking system?		
2	Are computer and internet functioning?		
3	Does ART counselor enter the individual record in the HIV care and tracking system on a daily basis? *(Check the new client record of previous month whether it is entered in the system)*		
4	Does counsellor take biometric sample (left thumbprint) of the patient? (Mention the number of clients enrolled using biometric system).		
5	Verify 3 patients data entered into DHIS2 Tracker system in comparison with IHMIS 7.4 and 7.5.		
6	Is there any issue related to the HIV Care and ART Tracking system (consent for SMS, biometric etc)? (Mention it in remarks if any)		

6. Monitoring checklist for local authorities (Pallika/ DHO/DPHO)

S.N.	Activities	Yes/No	Remarks
1	Is there enough stock of HIV related IHMIS tools (IHMIS 7.1-7.6 including IHMIS 3.6)		
2	Have the HIV related IHMIS registers dispatched to all the service delivery sites at district?		
3	Do the service delivery sites submit monthly reports to the district including bimonthly logistic report?		

4	Is the received report updated timely in IHMIS database system? *(Please check the updates in the IHMIS system)*		
5	Is there any verification carried out after receiving reports from the service sites?		
6	Is there any discussion meeting carried out regarding the IHMIS/ DHIS2 output?		

Overall Recommendation and Suggestion:

1.....

2.....

3.....

4.....

ANNEX 2B: PREP CLINICAL SERVICE MONITORING CHECKLIST

Government of Nepal
Ministry of Health and Population
National Centre for AIDS and STD Control
Teku, Kathmandu

PRE-EXPOSURE PROPHYLAXIS (PREP) CLINICAL SERVICE MONITORING CHECKLIST

Service site:		Date (MM/DD/YYYY):	
Monitored by and designation:		Name of Interviewee	

S.N.	Activities	Yes	No	Remarks
	Are all KP HIV negative clients offered for PrEP? (Check data)			
	Is there a standard training offered to site staff on PrEP provision?			
	Does a PrEP initiation visit, as documented in the client assessment- or intake- or other such- form, include ALL the following? **Tick (√) all that apply:** ( ) Risk assessment ( ) HIV testing ( ) Screening for contraindications ( ) Risk reduction counseling ( ) Clear counseling on PrEP, including benefits, side effects, risks ( ) Linkage to, or verification of existing linkage to, community peers and support networks, and any other applicable referrals ( ) Providing services in a non-judgmental and professional manner			

ANNEX 2C: CCC MONITORING CHECKLIST

Government of Nepal
Ministry of Health and Population
National Centre for AIDS and STD Control
Teku, Kathmandu

COMMUNITY CARE CENTER (CCC) MONITORING CHECKLIST

Service site:		Date (MM/DD/YYYY):	
Monitored by and designation:		Name of Interviewee	

S.N.	Activities
1	How many clients are enrolled in the previous month? Male: …… Female: …….
2	Is a standard National CCC SOP and filing system (including confidentiality) being maintained at all times? Yes No. If no, why? ……
3	How many clients' samples were collected for VL in the last period/month? Last week …….. Maximum per month ……
4	How many clients came for PMTCT service? Last week …….. Maximum per month ……
5	Interaction with the client: What are the major services you were offered?

ANNEX 2D: CHBC MONITORING TOOL MONITORING CHECKLIST

Government of Nepal
Ministry of Health and Population
National Centre for AIDS and STD Control
Teku, Kathmandu

COMMUNITY AND HOME-BASED CARE (CHBC) MONITORING CHECKLIST

Service site:		Date (MM/DD/YYYY):	
Monitored by and designation:		Name of Interviewee	

S.N.	Activities
1	How many PLHA received CHBC service last month? (Verify the number with the compiled report and their recording) Male: …… Female: ……
2	Is National CHBC guidelines available at site? Yes No. If no, why? ……
3	Are CHBC kits available? Yes. …… sets No.
4	What are the major challenges during CHBC program implementation?

ANNEX 2E: OUTREACH EDUCATOR MONITORING CHECKLIST

Government of Nepal
Ministry of Health and Population
National Centre for AIDS and STD Control
Teku, Kathmandu

OUTREACH EDUCATOR MONITORING CHECKLIST

Service site:		Date (MM/DD/YYYY):	
Name of outreach educator:		Area of Outreach:	
Monitored by and designation:		Name of Interviewee:	

	Yes	No	Not Applicable	Areas for improvement
Provided education on HIV prevention				
Provided HIV screening				
Referred to HIV testing services				
Offered PrEP services				
Distributed condom/lube				
Distributed needle/syringe				

ANNEX 3: IBBS SURVEYS AMONG KEY POPULATIONS AT HIGHER RISK IN NEPAL

BACKGROUND

Since Nepal is concentrated epidemic zone; key population remains the focus of the National HIV Strategic Plan 2022-2026. Nepal has adopted strengthening of the Second-Generation Surveillance (SGS) system as one of the key principles of strengthening surveillance of HIV and STI in Nepal. One of the major components of SGS and strategy of NHSP is to conduct Integrated Biological and Behavioural Surveillance (IBBS) among key populations at higher risk of HIV in selected high-risk areas in the regular interval based on the national plan on HIV and STI surveillance. IBBS surveys have been successfully conducted in various rounds in Nepal for a decade among key populations at higher risk for HIV.

OBJECTIVES

1. To track the trend in the prevalence of STI (syphilis & other selected STIs) and HIV infection among selected survey population in Nepal.

NCASC, in consultation with Strategic Information Technical Working Group may revise the objectives and methodology of IBBS based on latest available parameters.

METHODOLOGY

The methodology can be updated based on the latest developments and recommendations for conducting surveillance surveys in the field of HIV and AIDS.

SURVEY DESIGN: Serial Cross-sectional Study Design

Survey populations:

Survey populations	Definitions of the survey populations
People who inject drugs (PWID)	The people who inject drugs are defined as: *"Those current male and female injectors aged 15 years or above who have been injecting drugs for at least three months prior to the date of survey".*

Men who have sex with men (MSM) and transgender (TG) people	For the purposes of this survey, MSM and TG are divided into two sub-groups: (a) MSW and TG SW and (b) non-MSW and Non-SW TG. MSW are defined as: "*Those males aged 15 years or above who have had sexual relations, (either oral or anal) with another male in the 12 months preceding the survey in exchange for money or other commodities".* Non-MSW are defined as: "*Those males aged 15 years or above who have had sexual relations (either oral or anal) with another male in the 12 months preceding the survey without receiving a cash payment or other commodities".* *TG are defined as: "those aged 15 years or above whose gender identity (self-identification as woman, man, neither or both) not matching one's assigned sex (identification by others as male, female or intersex based on physical/genetic sex)".* *More specifically, "they are effeminate men attracted to same-sex, who sometimes cross-dress and have a receptive role during anal sex".* TG SW are defined as: "*Those TG aged 15 years or above who have had sexual relations, (either oral or anal) with another male in the 12 months preceding the survey in exchange for money or other commodities".* Non-SW TG are defined as: "*Those TG aged 15 years or above who have had sexual relations (either oral or anal) with another male in the 12 months preceding the survey without receiving a cash payment or other commodities".*
Female sex workers	The FSWs are defined as: "Women aged 15 years and above reporting having been paid in cash or kind for sex with a male within the last 6 months".
Truckers (proxy of clients of FSW)	The truckers (proxy clients of FSW) are defined as: "*male truck drivers aged 18 years or above or their helpers aged 15 years and above intercepted at the Pathlaiya truck stop along the Mahendra Highway".*
Male Labor Migrants	Male Labor Migrants are defined as: "All the male returnee migrant aged 15–49 years, having stayed continuously or with an interruption for at least 3 months in India as a migrant worker and having returned to Nepal within three years prior to the date of the survey".

FORMATIVE ASSESSMENT:

Before the data collection process, formative assessment needs to be conducted to obtain the baseline information regarding the target population. This needs to be done in close collaboration and consultation with CBOs. Depending upon the feasibility, need, and as recommended by the CSOs, formative assessment will be conducted using various methodologies such as focus group discussions, in-depth interviews, mapping, observations, etc. (For more details, please see UNAIDS pre-surveillance assessment) The duration of formative assessment will be about five days.

Formative assessment will be conducted to obtain information on following topics:

- Identifying hotspots and subpopulations at risk-taking into account what is currently known
- determining the feasibility of conducting surveillance in selected subpopulations, including accessibility, willingness to participate, potential harm to the subpopulation and possible sampling approaches
- Confirming types of risk behavior practised by key population
- Gathering information so as that it helps in field works
- Questions regarding social network
  - How many key populations are above 15 years of age?
  - Can you please tell me how you and your friends interact with each other or what activities you do together and where?
  - Would you mind telling me how many gathers at the particular locations and what is the peak time?
- Questions regarding survey acceptability, seeds, and survey procedures
  - Are you willing to participate in the survey? Why? Why not?
  - Do you know different types of population members (who are diverse in age, income, risk, etc.)?
  - Can you help us to contact members of the target population, or do you have any outreach programs to reach them?
  - What type of survey technique would be more comfortable and effective for reaching the target population?

The findings of formative assessment will be discussed in SI-TWG group meeting in order to finalize the methodology of the national survey. Based on the findings, the study area and methodology will be finalized. Thus, it is to be noted that the proposed methodology might change after the findings from formative assessment.

TABLE 8: SAMPLING TECHNIQUE AND SIZE BY KEY POPULATION

Key populations at higher risk of HIV	Survey Sites	Sampling Technique	Sample Size
FSW	Nepal (all epidemic zones)	Two-Stage Cluster sampling	3,476
PWID	Nepal (all epidemic zones)	Respondent driven sampling & Two-stage cluster sampling	1,512
MSM/TG People	Nepal (all epidemic zones)	Respondent driven sampling	1,564
MLM	Nepal (all epidemic zones)	Two-stage cluster sampling	2,760

TWO-STAGE CLUSTER SAMPLING

A cluster is a naturally occurring unit or grouping within a population. Clusters can be of different types. For example, FSWs can be accessed at places such as lodges, hotels, dance restaurants, massage parlours, homes, street corners, bus stops, parks, tea shops along the roadsides (Bhatti pasals), and outside cinema halls.

Injecting drug users can be accessed at places where they use or buy drugs: for example, their homes and friend's homes, dealers' homes, parks, and empty lands, bushes, or abandoned or empty buildings.

Clustering allows sampling of hard-to-reach populations, for whom a complete list of all individuals is not available but for whom it is possible to list the venues where they tend to gather. Cluster sampling captures more visible and accessible portions of the population (those who gather at venues) in the survey. The total survey area is first divided into clusters of minimum population size. (FHI, 2000)

First Stage: Clusters will be selected using probability proportionate to size (PPS) method. The size of the cluster comes from the mapping exercise conducted prior to the survey.

Second Stage: Selected clusters in the first stage are visited, and a complete list of eligible survey participants by locations is developed. From each cluster selected in the first stage, equal numbers of participants are selected randomly, using systematic sampling procedure.

RESPONDENT DRIVEN SAMPLING (RDS)

RDS is a form of chain referral sampling which is similar to snowball sampling (Robert M., Keith S. et al, 2005. This is based on social or peer networks of the survey population. In RDS, recruitment of the survey participants starts from the seeds that are the initial contacts. Seeds are selected purposively considering their network size, age, and other characteristics so that initial contacts selected are diverse in nature.

Each seed is provided three coupons to recruit their peers. One seed can recruit up to three eligible respondents from his or her network. Each successfully interviewed respondent is provided three coupons to recruit up to three peers from their network. RDS is a dual incentive system. First or primary incentive is for self-participation, and the secondary incentive is for recruiting subsequent eligible participants from their networks. The double incentive is implemented to encourage participation of larger number of population (WHO, 2013).

In RDS method, sampling frame is not required. However, study team need to do the mapping of the survey area, list out the locations with estimated size of eligible survey population.

Moreover, specific time period by locations where survey population can be approached by the study team should also be explored. The estimated population size of survey population is an important tool for monitoring the recruitment coupons floating in the field.

SAMPLE SIZE

There are different ways of calculating the sample size for surveys. IBBS surveys have major objective to monitor the trend in the selected indicators. The most suitable formula for calculating sample size for such surveys is explained in the box below. Sample size may vary in each round of BSS and IBBS surveys depending on the basic data used for the sample size calculation as

described below. **To calculate the sample size** following steps should be followed:

1. List out at least 5 - 10 key indicators which will be estimated from the survey.
2. Compile the P1 values for each indicator. This can be done from the previous round of IBBS.
3. Decide what percentage change on this indicator need to be detected from the survey. Then add that percentage in the P1 and get the value of P2. Usually, 10 -15% is taken, but NCASC will now take 10% change as a reference for behavioural surveys.
4. Choose the value of D (design effect). It is normally 2 for cluster sampling but can be changed by the user as per need.
5. Choose the power of the test. Normally it is 80%.

The sample size for RDS sampling method is not calculated in advance. The RDS method suggests stopping recruiting respondents in the survey once the state of equilibrium is reached in the selected indicators. So, the sample size is known towards the end of the recruitment only.

However, in IBBS surveys where survey population within a specified geographical area is to be captured, and the survey is to be completed in a specific time period, practice is to calculate a sample size in advance which will be large enough to ensure that equilibrium is reached (ICMR, 2011). In general, RDS attain equilibrium when at least six waves of recruitments are generated by most of the seeds. Recruitment should start with a relatively small number of seeds and let the recruitment waves to grow.

The following formula is considered best fit and has been used in Nepal also.

$$n = D\frac{\left[\sqrt{2P(1-P)}Z_{1-\alpha} + \sqrt{P_1(1-P_1)+P_2(1-P_2)}Z_{1-\beta}\right]^2}{\Delta^2}$$

Where,

D = Design effect

P_1 = the known/assumed value of the indicator of interest or the estimated proportion of the target population that has the characteristic of interest at the time of the survey (control group)

P_2 = the value of the indicator of interest in the treatment group such that the quantity (P_2 - P_1) is the magnitude of change one desires to be able to detect

$P = (P_1 + P_2)/2$

Z 1 - a = the z-score corresponding to the probability with which one desires to be able to conclude that an observed change of size (P_2 - P1) would not have occurred by chance. Use a/2 if a two-sided test is planned

Z_1 - b = the z-score corresponding to the degree of confidence with which one desires to be certain of detecting a change of size (P_2 - P_1) if one actually occurred

= (P_2-P_1), the minimum difference between groups worth detecting

Source: Family Health International (2000) Behavioural surveillance surveys: guidelines for repeat behavioural surveys in populations at risk of HIV. FHI, Arlington, VA.

TABLE 9: PROPOSED SAMPLE SIZE FOR KEY POPULATION*

PWID		Female sex worker	
Variable	**Sample size**	**Variable**	**Sample size**
Knowledge- ABC	1,336	Knowledge- ABC	1,326
Visited VCT/HTC in last 12 months	1,073	Visited VCT/HTC in last 12 months	1,194
Needle Syringe sharing behavior in past week	652	Use of Condom with most recent client	604
Met with OE/PE in last 12 months	1,438	Met with OE/PE in last 12 months	1,048
Consistent condom use among Female partner	915	Prevalence of HIV	3,476
Prevalence of HIV	1,512	Visited DIC in last 12 months	1,386
Consistent condom use among FSW	1,418		
MSM and TG		**Male labor migrants**	
Variable	**Sample size**	**Variable**	**Sample size**
Prevalence of HIV	1,564	Knowledge- ABC	1,439
knowledge of all three indicators- ABC	1,419	Visited VCT/HTC in last 12 months	400
condom use by total MSM at last anal sex	732	Visited DIC in last 12 months	320
Condom use at last sex	828	Met with OE/PE in last 12 months	528
Met with OE/PE in last 12 months	1,264	Condom use at last sex	1,357
Visited DIC in last 12 months	1,438	Consistent condom use	1,194
Visited VCT /HTC in last 12 months	979	Prevalence of HIV	2,760

***Note:** Sample size can be updated based on the availability of the latest parameters and other methodological developments.

TRAINING TO FIELD STAFF

The research organization will recruit field survey team. Researchers having similar experience and related academic degree will be recruited for the field team. Similarly, experienced lab personnel and clinicians will be hired to test blood samples (HIV test, gonorrhoea, and chlamydia) and identification of STIs and their syndrome management.

Intensive training will be conducted by field researchers. The training will be entirely based on IBBS training curriculum prepared by NCASC. The content of the training will be based on IBBS training curriculum. All the contents and modules will be based on IBBS training curriculum.

DATA COLLECTION TECHNIQUE

Survey site will be set up in consultation with the community network and its network partners. An area that is centrally located and easily accessible by most of the participants will be selected. The field office will have separate rooms for each activity, such as administration of the questionnaire, general physical and STI examinations, blood drawing and laboratory testing of blood, and post-test counseling with fulfilling minimum requirements like separate interior waiting room with reception away from biological testing sites, private space for interview and HTC separately and a bathroom.

SURVEY PROCESS

I) SCREENING AND TAKING CONSENT:

Before initiating the actual interview, participants will be asked certain questions to ensure that they meet the eligibility criteria. Eligibility test will be carried out by the field worker according to information on screening and eligibility form. Eligible participants will be explained in detail about the purposes of the survey and support required from them to obtain consent. Those who agree to give consent will be provided with a consent form. If consent is not obtained from the eligible participants, the refusal form will be completed.

II) INTERVIEWING:

After the screening process, eligible participants will be interviewed by an interviewer with a questionnaire. Unique ID will be given to each participant. In case of RDS, respective coupon number in the respective questionnaire will be noted. The checklist form of the participant will be returned to the participant with the signature of the interviewer.

III) PRE-TEST COUNSELING:

After the interview, the participant will proceed for pre-test counseling which will be conducted by the HTC counselor. During this period along with counseling activities, the participant will be assigned with laboratory number in test list voucher and the checklist form, which will also be signed by HTC counsellor. In the same session, an appointment will also be fixed by HTC counselor to provide the test results

IV) BLOOD DRAWING:

Survey process will further continue with participant's blood drawing activities carried out by trained health workers. The checklist form of the participant will be updated at this stage as well.

V) EXPLANATION ABOUT RDS (VALID ONLY FOR RDS DESIGN)

Another interview known as exit interview will proceed after blood drawing process, where the coupon manager will conduct an exit interview; explain about the recruitment explanations and recruitment coupon will be provided to the participant. Along with these processes, the primary incentive will be provided to participant and incentive-tracking form will also be maintained by the coupon manager. Finally, the checklist form of the participant will be updated again with the signature of the coupon manager.

VI) POST-TEST COUNSELING:

During this phase, the participant will be provided test results with post-test counseling by HTC counselor. If any referral is needed, the participant will be asked to visit particular referral site. During the post-test counselling process, participant's checklist form will be updated again and retained at the site by the HIV Counseling and Testing (HCT) counsellor.

VII) SECONDARY INCENTIVES AND TEST RESULTS (VALID ONLY FOR RDS DESIGN)

Secondary incentive manager will complete incentive-tracking form, and the participant will again be asked to go the HCT counselor to receive the test results. The test voucher will be retained from the participant at this stage. If any referral is needed to the participants along post-test counselling, they will be suggested to visit the referral site and the participant will be out of whole survey process.

VIII) QUALITY MANAGEMENT:

These overall activities will further strengthen with the support of quality management process. Survey supervisor, who will review screening/checklist form on a daily basis, will conduct this process. Similarly, interview questionnaire and coupon tracking excel database will also be reviewed and maintained daily, and the reviewed questionnaire will be transported to the office. This quality management process will be continued throughout the survey process.

TABLE 10: VARIABLES FOR IBBS SURVEY*

Categories	Variables
General information	Place of birth, current place of residence, duration of stay at current place and previous place of residence
Personal information	Age, ethnicity, educational status, marital status, age at marriage, current living situation, birth history, pregnancy history, knowledge and use of family planning, history of sex work, and income from sex work and other works, sexual orientation
Information on sexual intercourse	Age at first sex, type and number of sex partners, professional background of client/sex partner, number of clients/sex partners in a day, last week or/and last month
Use of condom and information on sex partners	Condom use with different sex partners (steady and one-time) - in the last sex and the last month, knowledge and use of female condoms (for FSW), access to condoms
Condom accessibility and lubricants	Carry condoms, place to buy condoms and lubricant, the duration is taken to buy condom and lubricants, preferred a place to buy condoms and lubricants.
Use of oral and injecting drugs	Types of drugs used, duration of drug use, frequency of drug use, treatment, needle sharing behaviors, access to safe needles
Alcohol use	Ever use of alcohol, types, had alcohol during last sex.
Awareness of HIV and AIDS	Knowledge of HIV/AIDS and misconceptions
Exposure to intervention programme	Exposure to outreach and peer-education, use of drop-in center, visited HIV testing and counselling centers and STI services and participation in community awareness events.
Sexually transmitted infection	Knowledge and use of services available for sexually transmitted infection, currently experiencing STI symptoms
Psychosocial and structural factors	Housing instability, distress, depression, self-esteem, social support, suicidality, stigma, experience of institutional based discrimination, violence, cross-border movement for illicit drug use
Biological (lab testing)	HIV, syphilis, Chlamydia Trachomotitis and Neisseria Gonorrhoea test, Hepatitis B and Hepatitis C

*Note: Variables can be added and removed as per the latest needs of the HIV program.

DATA COLLECTION TOOLS

Behavioral data: Behavioral data will be collected using semi-structured questionnaire related to HIV and STIs. Some of the required data will also be collected from the screening and checklist list form. NCASC will provide the required tools. Pretesting will be done to check the consistency, flow and content of the questionnaire. Feedback issues, if any, that arise during pre-testing will be noted and addressed.

TABLET COMPUTER DATA COLLECTION:

An application will be developed as per finalized questionnaire. A through the range, skip, the logic check will be assessed during the pretesting. Issues, if any, which arise during pretesting will be notified to the NCASC team. After pre-testing, the data will be exported in statistical software to check the order and format of the variables, and the observation/result will be shared with the study team.

Enumerators will be trained on how to collect data, store it and synchronize with the central database.

PAPER-BASED:

During the training, enumerators will be trained to collect the data as per the survey requirement. Furthermore, enumerators will be trained to do back checks every day after the data collection to reduce the missing data, and to ensure completeness of data. If there is any issue/error in the data collection form, the enumerator will rectify it, note it down and submit to the supervisor whenever they meet. If there are some errors which cannot be solved at that moment, the enumerator will go to the health facilities the next day and try to rectify the error, if possible.

A data description table or codebook will be prepared by data manager based on the finalized questionnaire. This data description table will contain information on question number in questionnaire, full question, variable name that will be in database (e.g., educational status will be edustat), variable type, variable length, code list, mandatory (it is mandatory to be filled), checks (like edit controls, range checks, skip pattern), and error message (if response wrongly entered).

Based on finalized data description table, a database will be prepared. A double entry format of the database will be created using range checks, logic checks, and skip pattern. The database thus created will be validated by entering the pretested or proxy data to ensure the order, correctness of question, the correctness of different checks, screen pattern, feasibility in entering data, and clarity of the database. Any issue that arises during validation will be noted down and rectified. This process is continued until all such issues are addressed. After the validation, a total of 10 questions (proxy) will be entered and data will be extracted into a statistical format. The extracted data will be manually checked to make sure it is in it is the analysable format. If there is no issue, the database will be validated and finalized.

A pre-entry preview will be conducted by the enumerator to check the code/response before data entry, and clarify text, which is difficult to read, and deal problem regarding header information. This process will help in ensuring the accuracy of the data entry process and increase the speed of data entry. The enumerators will note down the corrections they made during the pre-entry review and submit it to the data manager.

The study team will provide a brief orientation to the data entry operator on the basics of the database, data description table, the information to enter, rules for entering the data (E.g., upper case in the case of text). The role of the second data entry operator will be communicated clearly. The process of data entry will be done under the regular monitoring of the data manager.

Heads up double data entry procedure will be used for data entry. Two different individuals will do data entry. The second person entering the data will reconcile all the discrepancies that arise during the data entry. The second data entry person will be a bit experienced when compared to first. If any error arises, the second person will first check the code/response recorded in the questionnaire and check if it is due to transcription error or wrong data entry by first. Depending on this, the second data entry operator will reconcile the data. The discrepancies between the first and second entry operator will be recorded by second data entry person and will be shared to survey team.

After the completion of data entry by data entry operators, data manager will randomly select 5% of all data entered and will cross-verify with the source (questionnaire). If any discrepancies are found, the data manager will correct the data and record it. After data quality check by the data manager, the data will be exported in statistical software for analysis.

COLLECTION OF BIOLOGICAL DATA:

National guidelines “National Consolidated Guidelines for Treating and Preventing HIV in Nepal 2016” will be followed for collection of biological data. Details of these are in the guidelines.

STATISTICAL ANALYSIS PLAN

Data will be analyzed in statistical software. The univariate and bivariate analysis will be performed on all variables. For descriptive analysis, the mean and standard deviation will be calculated for the continuous variable and percentage/proportion for categorical variables.

ANNEX 4: LIST OF CONTRIBUTORS

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