

Comprehensive Dashboard Indicators on STD/HIV/AIDS

TECHNICAL REPORT

The Voluntary Health Services (VHS)

(Supported by Centers for Disease Control and Prevention [CDC])

&

National STD/AIDS Control Programme (NSACP)

Ministry of Health, Nutrition & Indigenous Medicine, Govt. of Sri Lanka

VHS-CDC PROJECT



MINISTRY OF
HEALTH
SRI LANKA



NATIONAL
STD/AIDS
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Foreword



Letter of Intent (LoI) was signed between Ministry of Health, Nutrition & Indigenous Medicine, Govt. of Sri Lanka and CDC/DGHT-India for undertaking technical collaboration initiatives for strengthening SI systems with the initiatives of NSACP. In accordance with the LoI signed, VHS-CDC Project with the support of CDC is providing technical collaboration initiatives on Strategic Information.

This technical document on *“Comprehensive Dashboard Indicators on STD/HIV/AIDS”* has been developed for NSACP as a part of Technical Assistance on Strategic Information for NSACP by VHS-CDC Project with the support of Centers for Disease Control and Prevention (CDC). This document has been developed through a consultative process which includes: National Workshop on development of Dashboard Indicators by engaging key stakeholders, meetings and discussions with SIMU team, interactions with EIMS developers & website development agencies, discussions with NSACP officials, reporting units, service facilities, field visits and consultants. This document has also been developed by undertaking systematic secondary review of the documents, publications, research reports published by NSACP.

This technical document presents the proposed dashboard indicators that may be monitored at various level of NSACP in Sri Lanka. The selection of indicators has been done keeping in mind the current and proposed program strategies under NSP 2018-2022 and the key epidemic priorities of Sri Lanka. The indicators have also been aligned with the international reporting requirements to the Global Fund and the UNAIDS Global AIDS Monitoring frameworks. This technical document will be of more useful for SIMU / NSACP team.

We thank VHS-CDC Project team efforts in developing the comprehensive dashboard indicators as a model for integrating with website and in the emerging EIMS development. This document is more appropriate and will contribute to strengthening effective monitoring system and program strengthening.

We would like to thank VHS-CDC Project and team for their systematic, strategic technical contribution in bringing out this technical document on *“Comprehensive Dashboard Indicators on STD/HIV/AIDS”* with the review and suggestions from NSACP.

Our sincere thanks to Dr Ariyaratne Manathunge, Consultant-Venereologist and Coordinator-SIMU, NSACP for his strenuous committed efforts in developing partnerships and his contribution in bringing out this comprehensive dashboard indicators considering the need of the hour. Also thank the SIMU team and senior consultants in NSACP for their contribution in the process of developing and finalizing dashboard indicators.

We thank the Country Director and CDC/DGHT-India team for their support in this model inter-country initiatives and providing strategic technical assistance.

Request all the NSACP officials and key stakeholders to widely refer and use this document. We are also happy to acknowledge the operational plan and further technical assistance plans proposed by VHS-CDC Project in developing the dashboard indicators, enhancing the website and introducing infographics and other models of presentation for easy understanding and dissemination. This process will contribute to enhance the systems for effective monitoring, strengthening programs and dissemination. Thank everyone who has contributed in bringing out this document.

Dr. Rasanjalee Hettiarachchi,
Director,
National STD/AIDS Control Programme (NSACP),
Sri Lanka.

Acknowledgments

We are pleased to bring out this technical document that presents the proposed dashboard indicators that may be monitored at various levels of NSACP in Sri Lanka. The selection of indicators has been done keeping in mind the current and proposed program strategies under NSP 2018-2022 and the key epidemic priorities of Sri Lanka. The indicators have also been aligned with the international reporting requirements to the Global Fund and the UNAIDS Global AIDS Monitoring frameworks. For the indicators proposed, detailed definition, possible sources of data, required disaggregation and key remarks have also been mentioned. Further, appropriate ways of representing the dashboard indicators in the form of data visualisations have also been proposed. It is hoped that this document will enable the developers of the EIMS as well as the SIM unit of NSACP to structure and develop their future dashboards to emerge as efficient tools for programmatic decision making.



We wish to highly appreciate and acknowledge the leadership, support and guidance being extended by the Director, NSACP, Sri Lanka in the entire process of technical collaboration and bringing out this report.

We deeply appreciate the critical leadership and guidance provided by Dr Ariyaratne Manathunge, Consultant-Venereologist and Coordinator-SIMU, NSACP, Sri Lanka in the entire process of development and finalisation of dashboard indicators. The contribution of the entire SIM unit of NSACP is greatly acknowledged. We also acknowledge the feedback and contribution of all the other stakeholders including NSACP program divisions, consultant - Venereologists from various STD clinics, Strategic Information Management Unit, Epidemiology Unit, Family Health International (FHI 360), Family Planning Association of Sri Lanka (FPASL), website development agency, agency developing EIMS and other partner organisations. We would appreciate the technical support of the technical experts from VHS-CDC Project in the entire process from conceptualisation to finalisation of the comprehensive dashboard indicators.

We would like to thank Dr T Ilanchezhian, Senior Technical Advisor and Dr Yujwal Raj, Technical Advisor-SI, VHS-CDC Project for their systematic technical support / contribution in bringing out this technical document along with me. This technical report on "*Comprehensive Dashboard Indicators on STD/HIV/AIDS*" has been developed through a process with the review and suggestions from NSACP. We also thank Ms T Sudha, Senior Programme Associate, VHS-CDC Project for her support in ensuring communication, coordination and designing this document.

VHS-CDC Project and VHS place on record our sincere thanks and gratitude to Dr Timothy Holtz, Country Director, Dr Ryan D. McGee, Deputy Country Director, Mr Lokesh Upadhyaya, Associate Director for Management and Operations and Ms Srilatha Sivalenka, Public Health Specialist and CDC/DGHT-India team for their strategic guidance and support being extended in providing Technical Assistance to NSACP, Ministry of Health, Nutrition & Indigenous Medicine, Govt. of Sri Lanka in this technical assistance initiative.

We trust that, this technical report on "*Comprehensive Dashboard Indicators on STD/HIV/AIDS*" will be of more useful to the readers and NSACP officials.

Once again, we acknowledge the support extended by SIM Unit-NSACP, senior officials NSACP and CDC team in providing TA to NSACP on SI related initiatives.

Dr Joseph D Williams,
Director Projects,
The Voluntary Health Services (VHS),
Chennai/INDIA.

Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
ART	Antiretroviral Therapy
ARV	Antiretroviral
BB	Beach Boys
BCC	Behaviour Change Communication
CBO	Community Based Organisation
DIC	Drop in Centre
EID	Early Infant Diagnosis
ELISA	Enzyme Linked Immunosorbent Assay
EMTCT	Elimination of Mother to Child Transmission
EQAS	External Quality Assurance Scheme
FHB	Family Health Bureau
FPASL	Family Planning Association Sri Lanka
FSW	Female Sex Worker
GAM	Global AIDS Monitoring
GFATM	Global Fund to Fight AIDS, TB and Malaria
HBV	Hepatitis B Virus
HCV	Hepatitis C Virus
HIV	Human Immunodeficiency Virus
HIV DR	HIV Drug Resistance
HSS	HIV Sentinel Surveillance
HTS	HIV Testing Services
IBBS	Integrated Biological and Behavioural Surveillance Survey
IDH	Infectious Disease Hospital
IEC	Information, Education and Communication
KP	Key Population
LFU	Loss to Follow Up
MSM	Males who have sex with males
NAC	National AIDS Committee
NGO	Non-Government Organisation
NRL	National Reference Laboratory
NSACP	National STD/AIDS Control Programme
NSP	National Strategic Plan
OI	Opportunistic Infection
OST	Oral Substitution Treatment
PAC	Provincial AIDS Committee
PE	Peer Educator
PEP	Post Exposure Prophylaxis
PLHA	People Living with HIV and AIDS
PLHIV	People Living with HIV
PMTCT	Prevention of Mother to Child Transmission
PreP	Pre Exposure Prophylaxis
PWID	People Who Inject Drugs

QA	Quality Assurance
SD	Strategic Direction
SIM	Strategic Information Management
SLBFE	Sri Lanka Bureau of Foreign Employment
SRH	Sexual And Reproductive Health
STD	Sexually Transmitted Disease
STI	Sexually Transmitted Infection
TB	Tuberculosis
TG	Transgender
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNICEF	United Nations Children's Fund
VDRL	Venereal Disease Research Laboratory test
VL	Viral Load
WHO	World Health Organisation
WHO SEARO	World Health Organisation South East Asia Regional Office

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Chapter 1: Background & Introduction

1.1. Background

National STD/AIDS Control Programme (NSACP) of Government of Sri Lanka is a comprehensive program aimed at prevention and control of STDs & HIV/AIDS being implemented by the Ministry of Health, Nutrition & Indigenous Medicine in all the provinces of Sri Lanka. It is under the overall supervision and guidance of the National AIDS Committee. It offers a bouquet of interventions ranging from STD care & treatment, HIV counselling & testing, blood safety, condom programming, prevention of mother to child transmission of HIV, Antiretroviral Therapy (ART) for HIV positive individuals, prevention interventions for key population (KP) in collaboration with implementation partners and NGOs, and various IEC activities. Community based testing has been introduced in Colombo at select drop-in-centres for the key population groups and is planned to be scaled up to other districts as well. The country is currently implementing its National Strategic Plan (NSP) 2018-2022 for HIV/AIDS control. NSP 2018-22 aims at ending AIDS in Sri Lanka by 2025, an ambitious target that is five years ahead of the global target of ending AIDS by 2030.

The Strategic Information Management (SIM) System is the key system that is responsible for providing information and evidence to guide the country in its health policy and planning, resource allocation, program management, service delivery and accountability. A robust SI system is critical for strong evidence driven programming. Evidence from surveillance, program monitoring and HIV/AIDS research together complement each other in providing direction to the programmatic decision making.

The third Strategic Direction (SD) of NSP 2018-2022¹ aims at strengthening Strategic Information systems and Knowledge Management for an evidence-based response, and has identified four sub-strategies. They are as follows.

- 3.1. HIV & STI Surveillance
- 3.2. Program Monitoring & Routine Reporting
- 3.3. HIV/AIDS/STI Research
- 3.4. Knowledge Management

Under each of these sub-strategies, priority actions to be undertaken have been identified in the NSP. They are as follows.

3.1. HIV & STI Surveillance

- Ensure regular HSS every two years among KPs and strengthen the system, conduct IBBS every 5-6 years and coordinate and integrate the two systems
- Prioritise surveillance among MSM with wider coverage by location, by sub-typologies and employ innovative methods for recruitment

¹ Towards Ending AIDS, National HIV/STI Strategic Plan, Sri Lanka, 2018-2022

- Further strengthen STI surveillance and ensure data is entered electronically and reported regularly
- Strengthen mortality surveillance
- Establish drug resistance surveillance for HIV
- Establish a strong HIV case-based surveillance system
- Integrate the entire HIV case tracking system from screening to viral suppression into the new electronic database that is being developed

3.2. Program Monitoring & Routine Reporting

- Provide regular feedback from the SIM Unit to ART centres regarding LFU and any other relevant findings after analysing quarterly ART returns and Excel databases
- Analyse program data on a regular basis
- Fast track the electronic system for data management through an integrated web-based data system
- Enhance capacity of NSACP and facility staff to conduct regular analysis of existing data

3.3. HIV/AIDS/STI Research

- Create an environment that supports research involving relevant research organisations and universities and revitalise the research sub-committee of NAC
- Plan special studies and surveys to answer key questions
- Engage KPs, and CBOs as relevant in research studies and surveys

3.4. Knowledge Management

- Develop an overarching Knowledge Management Strategy for NSACP

Strategic Information Management system under NSACP in Sri Lanka broadly has two components – HIV Surveillance and related areas for epidemic tracking and Routine M&E reporting system for program monitoring.

1.2. Overview of SI system under NSACP in Sri Lanka

Strategic Information Management system under NSACP in Sri Lanka has the following components.

1. Program monitoring & reporting from all STD clinics & ART centres
2. HIV Surveillance (HIV Sentinel Surveillance & IBBS) & HIV Estimations
3. HIV Case Reporting
4. HIV/AIDS related research activities

The SIM Unit of NSACP manages the Program Monitoring functions of NSACP. It is responsible for ensuring availability and accessibility to complete information on indicators listed in the strategic plan document. SIM unit closely monitors the quarterly reporting from

STD & HIV clinics across the country. All the quarterly reports are verified and compiled regularly. The data is published in every annual report. Standardised formats have been developed and used uniformly across all the centres. Quarterly return forms from STD and ART clinics have been revised recently to capture all the relevant information. Individual excel reporting of PLHIV in pre-ART care and on ART captures all the critical information required for follow up and case tracking, as well as cascade analysis. Data is analysed regularly and published in every annual report of NSACP.

SIM unit conducts periodic trainings and supervisory visits to the peripheral centres to monitor and handhold the staff in M&E activities. It also conducts quarterly review meetings of all STD clinics to review the documentation and outcomes at these centres.

SIM unit brings out a series of publications showcasing the progress and achievements of NSACP from time to time. It also coordinates reviews and assessments of various program components, including mid-term and external reviews of NSACP. SIM unit maintains the website of NSACP that is one of the most resourceful online repository for all information related to HIV/AIDS in Sri Lanka. It is constantly updated and made more dynamic for ease of use. The transparency and open data policy of NSACP, Sri Lanka is worth emulating by many other countries.

SIM unit also coordinates the data compilation and submission for international requirements as and when required. SIM Unit also compiles and monitors the key and vulnerable population prevention programs under GFATM. SIM unit supports the Epi Unit in the planning and implementation of surveillance activities including HIV Sentinel Surveillance & IBBS. SIM unit also carries out HIV estimations once in two years and brings out the overall HIV estimates for Sri Lanka.

SIM unit has developed a National HIV M&E Plan 2017-22 that outlines the broad vision, objectives, approaches and tools used in the program. This is a comprehensive document that supports the roll out and implementation of M&E activities in the country. This document is being modified in line with the new NSP 2018-22.

SIM Unit has taken lead in shifting the entire paper-based system of monitoring to an electronic IT based platform through the development of Electronic Information Management System (EIMS). EIMS is aimed at integrating all the program components of NSACP including HIV care and treatment, Laboratory Information, ART and pharmacy management and with all peripheral centres linked to NSACP. It will also capture individual patient tracking data from ART centres.

The Global Fund supports the interventions for key and vulnerable populations in Sri Lanka. Ministry of Health, Nutrition & Indigenous Medicine through NSACP is the Principal Recipient 1 (PR1) that works with and collects data related to prison inmates and migrants. Family Planning Association (FPA) of Sri Lanka is the Principal Recipient 2 (PR2) and is the nodal agency implementing the Global Fund funded program for prevention among KP. Under the GFATM program for key populations, a strong and robust M&E system has been

put in place by FPA that captures individual level information on KPs and the services provided to them. All components of field level recording including KP registration and service delivery through peer calendar, referrals & escorts and HIV testing are all integrated into the system. It has been successfully implemented and stabilised across all program units.

The key strategies adopted by NSACP for HIV Surveillance and epidemic monitoring include HIV Sentinel Surveillance once in two years, Integrated Biological & Behavioural Surveillance, HIV Case Reporting and HIV Estimations. Surveillance activities under NSACP are largely coordinated by the Epidemiology Unit at NSACP. Sri Lanka has one of the longest and well-managed systems for HIV Sentinel Surveillance in the world. Right from the first round conducted in 1990, overall 22 rounds of HIV Sentinel Surveillance were conducted over the last 27 years i.e. from 1990 – 2017. The last round was held in 2016. The last round of HIV Sentinel Surveillance HSS 2016 included four risk groups – FSW, MSM, PWID & Clients of FSW – covering almost all provinces of the country. After the last round of size estimations of KP in 2013 and IBBS in 2014, NSACP has planned for the next round in 2017. And keeping with the NSP strategy, the current exercise has been scaled up to cover all the districts of the country.

HIV case reporting system in Sri Lanka has improved significantly since 2011 with better reporting from STD clinics, private hospitals/labs and blood banks, that are the three primary sources of HIV screening in Sri Lanka. All confirmatory tests for HIV are done only at NRL, NSACP and samples screened HIV positive from all sources are sent to NRL for confirmation. This is a unique strength of Sri Lanka's program where all HIV positive cases are confirmed from a single point, making it enormously efficient to identify and track the positive cases for follow up. Entire HIV case reporting is monitored and cases tracked by the Epidemiology (Epi) unit of NSACP, that coordinates very well with the reporting centres and NRL. New case reporting format (revised 1214 form) has been introduced recently and is being widely used by all the reporting centres. This form captures the demographic and epidemiological information required for surveillance purposes. Epi Unit publishes the case reporting data every quarter in the form of a one-page update. Aggregate numbers of HIV testing are reported every year in the NSACP annual report. More detailed analysis of case reporting data is shared with other NSACP officers, STD clinics, etc. once in six months.

NSACP commissions and conducts regular research activities on various key areas in order to generate evidence to support program. Some small surveys have been conducted such as the RSA on Transgender people, Acceptance of the OrAQuick saliva test, rapid assessment of drug users, etc all of which have direct relevance to program design.

1.3. Core NSP Indicators under NSACP

The following table presents the core indicators under NSACP identified in NSP 2013-17, their targets and possible data sources to report on the indicators. This has been now updated and revised in the new National Strategic Plan 2018-22. The set of indicators proposed in NSP 2018-22 are presented subsequently.

Core NSP Indicator (NSP 2013-17)	2017 Target	Possible Data Source
SD 1.1. Prevention of transmission of HIV among key affected populations		
HIV Prevalence among FSW, MSM, PWUD/PWID and Beach boys	<1%	HIV Sentinel Surveillance
FSW, MSM, PWUD/PWID and Beach boys reached by prevention services	80%	Key Performance Indicators report for GF from FPA 2017
FSW, MSM, PWUD/PWID and beach boys report consistent condom use	80%	IBBS 2015
PWID report sharing of used needles	<5%	IBBS 2015
SD 1.2. Prevention of transmission of HIV among vulnerable groups		
HIV prevalence among vulnerable populations	<0.1%	Annual report 2016
Vulnerable populations receive at least one exposure to an HIV awareness program	80%	
Military and police personnel are reached with HIV prevention programs	80%	
SD 1.3. Prevention of transmission of HIV among general population including young people		
Young women and men aged 15–24 both correctly identify ways of preventing the sexual transmission of HIV and who reject all major misconceptions about HIV transmission	80%	DHS 2016 amongst ever married girls and women
SD. 1. 4. Elimination of Mother to child transmission of HIV (EMTCT) and congenital syphilis		
ANC attendees received Provider Initiated Counselling and Testing (PICT)	>50%	FHB report 2016
Identified HIV-positive pregnant women received ART to reduce the risk of mother-to-child transmission	100%	MTCT data
Infants born to identified HIV-infected mothers received ARV drugs	100%	MTCT data
Syphilis prevalence among antenatal women	< 1%	MTCT data
SD. 1. 5. Blood Safety		
Blood units will be screened for HIV in a quality assured manner and will be collected as voluntary non-remunerative donations	100%	Website of the National Blood Transfusion service
SD. 1. 6. Maintain Quality and Coverage of STI services		
STD clinics to have facilities to provide comprehensive care to STD clinic attendees including essential STI screening facilities	80%	

Core NSP Indicator (NSP 2013-17)	2017 Target	Possible Data Source
Staff delivering STI care at government STD clinics to be trained within 6 months of reporting to duty.	80%	
SD. 2. Diagnosis treatment and care		
KPs report having received an HIV test and know the results	80%	IBBS 2015
Eligible PLHIV received ART	80%	
PLHIV tested for TB and vice-versa using PICT approach, according to guidelines	100%	
SD. 3. Strategic Information Management Systems		
IBBS of KPs are undertaken on a regular basis and reported to measure outcomes and the impact of the response	Regular	
Monitoring of HIV services (including ART, EMTCT, condom programming, blood safety) is integrated into the HIMS and reported	Regular	
HIV related operational research is coordinated and prioritized by the SIM unit with the concurrence of relevant coordinators	Regular	
SD. 4. Health Systems Strengthening		
HIV/AIDS is included in the training curriculum for health workers	100%	
Supportive supervision and quality assurance system for HIV services institutionalized		
NGOs report increased organizational, financial and technical support from the government as well as development partners		
SD. 5. Supportive Environment		
HIV/AIDS law and policies containing non-discrimination principles are widely disseminated and implemented	100%	
PLHIV reveal accepting attitudes towards them	80%	Stigma report
Deaths reported due to refusal of treatment	0	

The following tables present the impact, outcome and output indicators identified in the new **NSP 2018-22**.

Impact Indicators

1. % of KP living with HIV – disaggregated by typology (FSW, MSM, TG, BB, PWID, Prisoners), for western province
2. % of KP with active Syphilis – disaggregated by typology (FSW, MSM, TG, BB, PWID, Prisoners), for western province
3. Gonorrhoea rate among adult males
4. Annual rate of reported cases of congenital syphilis per 100,000 live births
5. Annual rate of reported cases of MTCT of HIV per 100,000 live births
6. Percentage of infants born to mothers living with HIV, who tested positive for HIV (MTCT rate)

Outcome Indicators

1. Last time condom use/ sterile needle-syringe use among KP
2. Percentage of young people 15-24 years who know the correct ways of HIV prevention
3. Percentage of estimated PLHIV who have been tested for HIV, i.e. who know their status
4. Percentage of adults and children with HIV known to be on treatment 12 months after initiation of ART
5. Percentage of people living with HIV and on ART who are virologically suppressed
6. Percentage of ART sites implementing a standard protocol for tracking ART patients
7. Percentage of research studies and special surveys conducted
8. Percentage of HIV response financed domestically
9. Percentage of KPs who avoided seeking HIV testing because of fear of stigma, fear or experienced violence, and/or fear or experienced police harassment or arrest
10. Percentage of KPs with HIV who avoided receiving HIV medical care because of fear of stigma, fear or experienced violence, and/or fear or experienced police harassment or arrest

Output Indicators

1. % of KP (FSW, MSM, TG, BB, PWID, Prisoners) reached with prevention interventions
2. % of KP (FSW, MSM, TG, BB, PWID, Prisoners) who have received an HIV test in past 12 months and know results
3. Percentage of pregnant women attended antenatal care service
4. Percentage of pregnant women tested for HIV in last 12 months
5. Percentage of pregnant women tested for syphilis in last 12 months
6. Percentage of HIV positive pregnant women receiving ART
7. Percentage of syphilis sero- positive pregnant women who were appropriately treated
8. Percentage of adults and children currently receiving ART among all adults and children living with HIV
9. Percentage adults and children living with HIV and who have been diagnosed who are currently receiving antiretroviral therapy
10. Percentage of people living with HIV that initiated ART with CD4 count of <200 cells/mm³
11. Number and percentage of newly diagnosed HIV positive people newly enrolled in and receiving care
12. Percentage of HIV exposed infants born within the past 12 months who received a virological HIV test within two months of birth
13. EIMS established
14. Establishment of case based surveillance system
15. % of nationally defined indicators on HIV/AIDS/STIs for which information is available
16. Percentage of districts with government facilities providing ART
17. STD clinics expanded to base hospitals (type A)

18. Training programs conducted according to a comprehensive training plan developed annually
19. Initial training of all staff delivering STI care at government STD clinic received within 6 months of appointment
20. Percentage of ART sites with at least one supportive supervision visit in the last 12 months
21. Percentage of units established in NSACP according to a new organogram designed to reach the goal of Ending AIDS by 2025
22. Percentage of job positions vacant
23. Percentage of meetings of National AIDS council
24. Percentage of meetings of National AIDS Committee and its subcommittees
25. Vagrancy ordinance and Penal code 365a reviewed and repealed
26. Brothel Ordinance amended

1.4. Relevance, Importance & Data Sources of Dashboard Indicators

Dashboard indicators are meant to be the core indicators that capture all the critical aspects of program implementation and present them to the program managers at higher levels for their immediate attention and quick action. Hence, the dashboard indicators have to be action-oriented and precise with a clearly defined data collection system. A manual or handbook or data definitions for the core dashboard indicators may be developed for greater clarity and uniform application by various facilities across the country.

Dashboard indicators may be identified and evolved based on national program requirements, priorities and international commitments. Going with the latest international guidelines, it is important that the data on dashboard indicators be collected in a granular fashion/ disaggregated structure, so that the data is amenable for local action.

Currently, NSACP has a paper-based documentation system at all its reporting units. SIMU unit collects quarterly returns using Excel-based formats that are compiled and analysed by them. However, since they are not integrated into one system, sometimes, the data on linkages, cross-referrals, patient tracking and follow-up etc. could be missing. M&E data is used for annual reporting and can also be used for improving program management. M&E mechanisms such as identifying centres with good and poor data management, taking actions on poor performing centres, etc may be strengthened. Scorecard for rating the facilities to assess the performance can be developed for routine monitoring and identification of poorly performing facilities.

SIM Unit of NSACP is in the process of developing an Electronic Information Management System (EIMS) to computerise the data collection and reporting as well as to integrate all the program components into one system. It will integrate HIV care, ART, laboratory, STI management and all other components of the program. In this process, NSACP aims to develop a dashboard for the EIMS that can improve the overall program efficiency and at the

same time align itself with the international commitments of periodic reporting. EIMS may also give access to the peripheral facilities to see their own dashboards, thereby enhancing their ability to appreciate data and its use in the program. Further, the electronic platform may have the ability to produce standard scheduled reports – weekly, monthly, quarterly – as the need may be, to ensure that the dashboard indicators are periodically communicated to the required audience in a report format.

Various sources of data under NSACP – HIV Sentinel Surveillance, HIV Case Reporting, HIV Estimations, SIM reporting from STI clinics and ART centres and research – may be aligned to generate the dashboard at the desired intervals. However, out of these, HIV case reporting and SIM reporting are more regular, monthly or quarterly, and the others are only conducted once in a few years. Hence, the primary sources of dashboard indicators for regular program monitoring should evolve from these two routine reporting systems.

Simple Excel-based analysis of indicator data can be undertaken to generate the dashboard indicators. Simple aggregations and dis-aggregations are more meaningful for programmatic decision making than any advanced statistical outcomes. Percentages, percentiles, averages, medians and counts are the simple tools used for dashboard indicators. Certain qualitative indicators may also be captured and presented on the dashboards to support and explain the quantitative indicators presented in the form of graphics. SIM Unit staff may have access to data for internal analysis through a password protected mechanism while only the analysed indicators may be presented for the open public access on the website or other platforms.

Audience-specific prioritisation of core indicators may be done to ensure that only the required indicators are generated and displayed for specific level and type of program managers. While the heads of specific program components may require dashboards of only their respective components, the overall head of the program and policy makers would need only 3-4 core impact indicators that capture the overall performance of the program. Similarly, provincial or facility level program personnel may have dashboards customised to their requirements.

1.5. Preparation of the current report

SIMU, NSACP has requested VHS-CDC Project to share the potential and key dashboard indicators on each program area and common international requirements so that they can be incorporated into the EIMS. The target audience for this report include:

- SIMU team members in NSACP
- Software development team engaged by SIMU for development of EIMS
- Technical officers/ consultants in each program area under NSACP

In order to develop the current report, the following process has been followed.

1. Review of the existing core indicators under NSACP and their data sources
2. Review of the current SI system under NSACP to identify the potential sources of data on various key program areas
3. Review of various published documents and reports on NSACP website including annual reports, NSP, M&E plans, etc.
4. Review of published HIV/AIDS dashboards of various South East Asian countries
5. Review of international guidelines and recommendations from WHO, UNAIDS, CDC, The World Bank and The Global Fund on core indicators to be reported
6. Review of reports of exploratory visits by VHS-CDC delegations to Sri Lanka
7. Discussions with VHS-CDC Proejct experts and consultants
8. Discussions with NSACP SIMU team and other program officers at NSACP
9. Review and finalisation of the report and dashboard indicators

A National Workshop on Developing Dashboard Indicators was jointly organised by the National STD/AIDS Control Programme (NSACP), Sri Lanka and the Voluntary Health Services, Supported by Centers for Disease Control and Prevention (VHS-CDC Project) at **NSACP Conference Hall**, NSACP, De Seram Place, **Colombo** on **27 Aug 2018** from **0930 – 1230** hrs. The purpose of the meeting was to present and discuss the proposed dashboard indicators with a larger group of stakeholders in the program and partner agencies including NSACP program divisions, consultant-Venereologists from various STD clinics, Strategic Information Management Unit, Epidemiology Unit, Family Health International (FHI360), Family Planning Association of Sri Lanka (FPASL), website development agency, agency developing EIMS and other partner organisations. The meeting aimed at evolving a consensus among the stakeholders and take their feedback in finalising the dashboard indicators. Some important suggestions emerged in the meeting to improve the dashboard indicators and the proposed dashboard indicators were broadly agreed upon.

Through the above process, VHS-CDC Project has finalised the dashboard indicators with the feedback and suggestions of NSACP and consensus of all the key stakeholders.

Structure of the Report

1. This report presents the proposed dashboard indicators in line with the current strategies and indicators under NSACP as outlined in the latest National Strategic Plan 2018-22.
2. It is also aligned with the international reporting requirements.
3. It further presents the proposed data sources, proposed disaggregation and periodicity of reporting.
4. Proposed definitions for the dashboard indicators have also been added.
5. Further, it also presents the proposed ways of data visualisation for these dashboard indicators on the electronic format and the proposed means of communicating the same to the national and provincial program managers on a real time basis.

6. This document will be useful as a ready reckoner for M&E personnel at all levels to understand and apply the data on core indicators.
7. It will help in improving the existing indicators and developing new indicators.
8. It will help in evolving a comprehensive set of indicators in place that can be planned as an outcome of EIMS and be used for upgradation of NSACP website
9. The set of dashboard indicators with appropriate visualisations will greatly enhance the efficiency and effectiveness of program managers at all levels of NSACP.

Chapter 2: Proposed Dashboard Indicators for NSACP

Dashboard is a data presentation and visualisation tool to assist program managers in their routine programmatic decision making. A well-designed dashboard eliminates all the clutter and highlights the critical indicators in a form that makes it easy for the program managers to identify the critical misses or failures in the program service delivery. An effective dashboard contributes to improving both efficiency and effectiveness of the program management and hastens the achievement of targets.

An effective dashboard will have the following features.

1. Presents a comprehensive view of the program with details on
2. Presents critical indicators, important for monitoring progress and gaps in service delivery
3. Does not clutter the view with details
4. Presents indicators in a fashion that highlights the aspects that need attention and immediate action
5. Allows for drill down of indicators, if required, to disaggregated levels to identify the units at a lower level

This section proposes certain indicators to be a part of the EIMS Dashboard, based on the current programmatic structure of NSACP. The indicators are presented by the program area and are categorised as outcome/impact indicator, output indicator, process indicator and input indicator. Appropriate level and criteria of aggregation/ dis-aggregation have also been indicated for each indicator, along with proposed frequency of reporting and possible sources of data.

2.1. Overall Program Impact Indicators

A. HIV Incidence/ No. of new HIV infections in the country

Importance: This indicator reflects the overall impact of the NSACP whose goal is to end the HIV/AIDS epidemic in the country by 2025. This indicator estimated at the total population level is an important marker of overall success of the program, especially its package of prevention services. It reflects the progress against the international goal of zero new HIV infections.

Definition: Estimated no. of new HIV infections occurring in the country in a given year

Level of disaggregation: National & Provincial

Reporting Frequency: Once in two years

Source: HIV Estimations

Remarks: HIV estimations are carried out in Sri Lanka using the internationally recommended Spectrum model, updated local data and the latest epidemiological assumptions.

B. HIV Mortality/ No. of AIDS-related Deaths in the country

Importance: This is the second most important indicator that reflects the overall impact of the NSACP. While the earlier reflects the impact of prevention programs, this indicator estimated at the total population level is an important marker of overall success of the care and treatment programs. It reflects the progress against the international goal of zero AIDS-related deaths.

Definition: Estimated no. of AIDS-related deaths occurring in the country in a given year

Level of disaggregation: National & Provincial

Reporting Frequency: Once in two years

Source: HIV Estimations

Remarks: HIV estimations are carried out in Sri Lanka using the internationally recommended Spectrum model, updated local data and the latest epidemiological assumptions.

2.2. Prevention: STI Management

Outcome Indicator:

1.1. Prevalence of common STIs based on etiological diagnosis

Importance: This indicator reflects the overall outcome of the STD prevention & control program. Prevalence of STIs in specific risk groups indicates the level to which the program could contain the spread of STIs among that risk group or general adult males & females. It is the outcome of the STI diagnosis and treatment program that is the hallmark of Sri Lanka's NSACP. It is important to monitor this indicator among key population, especially MSM in the context of Sri Lanka's HIV epidemic.

Definition: No of STI patients with confirmed etiological diagnosis/ No of STI clinic attendees tested for the specific STI. Common STIs that can be considered for this indicator: Syphilis & Gonorrhoea

Level of disaggregation: National, Provincial & District level; Disaggregated by STD clinic attendees – male & female, pregnant women, FSW & MSM

Reporting Frequency: Quarterly

Source: Quarterly Return from STD Clinics; STD Laboratory registers

Remarks: Numerator for all the three STIs can be obtained from quarterly return from STD clinics (Table 1). However, denominator on number tested is available only for Syphilis from quarterly return from STD clinics (Table 7). Denominator for other STIs can be collected from STD laboratory registers and should be included in the quarterly return as well. Similarly, disaggregation by male & female STD clinic attendees is only available for numerator from Table 1. Disaggregation for pregnant women is available only Syphilis for both numerator & denominator from Table 7. Disaggregation for FSW & MSM are available only for numerator from Table 10 of the quarterly return from STD clinics. Denominator is not currently reported in the format and needs to be added.

Output Indicator:

1.2. % of STI cases treated

Importance: This indicator reflects the immediate output of the STD prevention & control program i.e. to diagnose and treat STIs effectively and completely. Effective treatment will in turn lead to the overall reduction of STD prevalence in the targeted populations. As above, it is important to measure and monitor this indicator among key population.

Definition: $\frac{\text{No of STI patients with confirmed etiological diagnosis received treatment} \times 100}{\text{No of STI patients with confirmed etiological diagnosis}}$

Level of disaggregation: National & Provincial; Disaggregated by STD clinic attendees – male, STD clinic attendees - female, pregnant women, FSW & MSM

Reporting Frequency: Quarterly

Source: Quarterly Return from STD Clinics (Table 5)

Remarks: Currently, only the treatment for Syphilis is reported in the quarterly return from STD clinics. Treatment for other STDs is not reported. That needs to be added to the reporting format, with the required dis-aggregations, captured adequately.

Process Indicator:

1.3. No. of STI clinic attendees visiting STI clinics

Importance: This is an important process indicator that reflects the uptake of STI services by the public, awareness among them about STIs and their treatment seeking behaviour. This is an important intermediate step in determining the outcomes of controlling STIs in various population groups.

Definition: No. of patients registered at STD clinics

Level of disaggregation: National & Provincial; Disaggregated by Male & Female; New & Old; Age (<25 yrs/>25 yrs)

Reporting Frequency: Quarterly

Source: Quarterly Return from STD Clinics (Table 2)

Remarks: This indicator is being reported from all STD clinics regularly. New & old segregation and documentation of age may need to be improved.

Input Indicator:

1.4. % of STI clinics reporting Stock outs in STI test kits and STI drugs

Importance: Key resource input for successfully implemented STI prevention and control program is the supply of test kits for diagnosis of STIs and drugs for the treatment of STIs, besides human resource at the STD clinics. HR can be considered as a separate admin indicator on the dashboard. So, it is important to monitor the STD clinics where stock outs are reported, to ensure smooth and effective implementation of the program.

Definition: No. of STD clinics reporting stock out of test kits or STI drugs X 100/ Total no. of STD clinics

Level of disaggregation: National & Provincial

Reporting Frequency: Quarterly

Source: STD Clinic registers

Remarks: This indicator is not being reported currently. It needs to be added to the quarterly return from STD clinics. Reporting and analysis of data on drugs and commodities should be more real time. Benchmarks can be set by taking last three-year averages. This will help in prevention of stock outs rather than reporting and managing them. Currently, it is proposed as a quarterly reporting indicator since there is no monthly reporting system form STD or HIV clinics. If the reporting system changes with EIMS, then the frequency can be reduced to monthly.

2.3. Prevention: Key Population (KP) Interventions

The key population groups that are important in the context of Sri Lanka's epidemic include Female Sex Worker (FSW), Men who have Sex with Men (MSM), Persons who Inject Drugs (PWID), Beach Boys (BB), Transgenders (TG) and Prisoners (Pri). Of these, higher number of HIV cases are being detected among MSM compared to other groups, though significant risk exists among these groups in various parts of the country.

Indicator of Need:

2.1. Size of key population (FSW/MSM/PWID/BB/TG/Pri)

Importance: This indicator sets the denominator for all the interventions and impact assessment. The size of KP assessed through one of the scientifically accepted methods and updated not more than a year before can be used for programmatic purposes.

Definition: No. of key population members that fit the case definition in a given area in a specified period of time

Level of disaggregation: National, Provincial & District level;

Reporting Frequency: Annual

Source: Exercises on size estimation of KP; Prisoner intervention data

Remarks: Though size estimation of KP is carried out once in a few years, it is good to update it twice or at least once a year through programmatic mapping or any other method. An updated recent size estimation will be helpful in proper estimation of various other indicators.

Impact Indicator:

2.2. No. of new cases of HIV detected in each key population

Importance: This indicator captures the final impact of all the prevention interventions for key population. Since the key population testing for HIV is closely monitored and well documented at the STD clinics as well as at the KP interventions, it is easy to estimate the new cases of HIV occurring in the key population groups. In a low prevalence context as Sri Lanka, number of incident cases of HIV is a more sensitive marker of impact than incidence or prevalence of HIV. This indicator will also lend itself to be the first indicator in the cascade tracking of PLHIV among KP and can be used in conjunction with treatment cascade indicators.

Definition: No. of new cases of confirmed HIV positive detected among a specific key population in the last quarter

Level of disaggregation: National, Provincial & District level; Intervention-wise reporting

Reporting Frequency: Quarterly

Source: Quarterly Return from STD Clinics; FPASL quarterly report on KP Interventions; Prisoner intervention data

Remarks: Since FPASL interventions are currently carrying out individual tracking and reporting of service delivery to KP, this data may be used to estimate the impact indicator. If the coverage of KP interventions reach near saturation, then this indicator will automatically give population incidence.

Outcome Indicator:

2.3. Consistent Condom Use among FSW/MSM/BB/TG or Consistent use of clean needle-syringe among PWID

Importance: This indicator reflects the overall outcome of the KP prevention & control program that includes behaviour change communication, condom promotion and promotion of clean needles & syringes. This is one of the most important indicators that will determine the rate of HIV transmission among KP, and that can be improved through effective outreach and behaviour change communication.

Definition: No. of KP who used condom or clean needle-syringe during every high risk act (sex/ injection) in the last quarter x 100/ Total no. of KP estimated in that geographic area

Level of disaggregation: National, Provincial & District level; Intervention-wise reporting

Reporting Frequency: Quarterly

Source: FPASL quarterly report on KP Interventions, IBBS trend data on CCU, Prisoner intervention data

Remarks: This indicator is captured by the Peer Educators in their PE calendars, that needs to be aggregated and reported. Data from PE Calendars will be more dynamic and constantly updated. However, it is also good to capture the consistent condom use trend data from various rounds of IBBS as background information on the dashboard, for the sake of comparison.

Output Indicator:

2.4. Prevention coverage of KP (% of KP reached with package of prevention services; Separately for each key population (FSW/MSM/PWID/BB/TG/Pri))

Importance: This indicator captures the performance of the KP interventions in reaching out to the KP with prevention services. It is the immediate output of the prevention outreach that is in turn critical for overall prevention of HIV transmission.

Definition: No. of KP reached with package of prevention services in the last quarter x 100/
Total no. of KP estimated in that geographic area

Level of disaggregation: National, Provincial & District level; Intervention-wise reporting

Reporting Frequency: Quarterly

Source: FPASL quarterly report on KP Interventions; Prisoner intervention data

Remarks: The package of prevention services can be defined by the program based on what are offered and what are critical to control HIV transmission among KP.

Process Indicator:

2.5. % of KP tested for HIV (For each key population - FSW/MSM/PWID/BB/TG/Pri)

Importance: Out of different prevention services provided to KP, a critical service is the testing for HIV. Assessment of HIV positivity status of KP at periodic intervals as defined by the program is critical to detect new cases and link them to treatment and care. This is not only important for the healthy life of infected persons, but also to control HIV transmission to their partners.

Definition: No. of KP tested for HIV in the last quarter x 100/ Total no. of KP estimated in that geographic area

Level of disaggregation: National, Provincial & District level; Intervention-wise reporting

Reporting Frequency: Quarterly

Source: FPASL quarterly report on KP Interventions; Prisoner intervention data

Remarks: HIV testing of KP is reported both by the KP interventions and STD clinics.

2.6. Condom Gap or unmet need for condoms (For each KP – FSW/MSM/BB/TG)

Importance: Condom is the mainstay of prevention of HIV transmission. Through the peer outreach program, condoms are distributed to the KP based on their sexual behaviour and estimated condom demand. If the program is not able to fulfil the condom demand in the field, it may lead to potential reduction in condom use and hence increase the chances of HIV transmission. Hence, it is an important process indicator to be monitored.

Definition: (Estimated condom demand per month – No. of condoms distributed) x 100/
Estimated condom demand per month for a specific KP in a specific geographic area

Level of disaggregation: National & Provincial

Reporting Frequency: Quarterly

Source: FPASL quarterly report on KP Interventions

Remarks: There are several methods of estimation of condom demand. A uniform method as recommended under the national guidelines may be followed at all interventions.

Input Indicator:

2.7. Availability of adequate number of peer educators at all KP interventions

Importance: Availability of trained peer educators is an important input to the success of prevention outreach interventions. Depending on the national norms, there should be one peer educator for every defined number of KP. NGOs that have the capacity to work with the KP, and recruit and engage peer educators should be in place. Gaps in human resource at PE level will have direct bearing on the number of KP reached with prevention services, and hence, important to monitor.

Definition: (No. of PE positions approved as per norms – No. of peer educators in place) x 100/ No of PE positions approved as per norms

Level of disaggregation: National, Provincial & District level; Intervention-wise reporting

Reporting Frequency: Quarterly

Source: FPASL quarterly report on KP Interventions; Prisoner intervention data

Remarks: Nil

2.4. Prevention Of Mother To Child Transmission Of HIV & Syphilis (PMTCT)

PMTCT is one of the important strategies under HIV/AIDS control and globally, the programs have evolved and geared up towards achievement of elimination of mother to child transmission of HIV and Syphilis (EMTCT). Sri Lanka aspires to be the second country in the region to achieve this goal and is appropriately positioned to achieve the same. WHO/UNAIDS have evolved the indicators for monitoring and certification of elimination of MTCT. The same set of standard cascade monitoring indicators recommended by WHO/UNAIDS may be included in the national dashboard for close monitoring and action.

Following are the list of **EMTCT indicators** recommended to be included in the dashboard.

Impact Indicators:

3.1. No of new paediatric HIV infections per 100,000 live births

3.2. Mother to Child Transmission (MTCT) Rate (disaggregated by breastfeeding and non-breastfeeding practices)

3.3. No of cases of congenital Syphilis per 100,000 live births

Importance: These are the globally monitored indicators for PMTCT developed by WHO/UNAIDS. Targets for these indicators are internationally agreed upon as the impact targets to define elimination of MTCT. All the countries are expected to report to WHO/UNAIDS on these indicators on regular basis.

Definition:

3.1. No. of HIV exposed babies detected positive at 18 months x 100,000/ Total no. of live births in that year

3.2. No. of HIV exposed babies detected positive at 18 months/ No. of live births to HIV positive pregnant women

3.3. No. of babies reported with congenital Syphilis x 100,000/ Total no. of live births in that year

Level of disaggregation: National, Provincial & Facility level

Reporting Frequency: Annual

Source: PMTCT reporting from HIV clinics

Remarks: Sri Lanka has already achieved the impact targets for EMTCT and these indicators are regularly reported.

Cascade/Process Indicators:

3.4. Antenatal Care Coverage (at least one visit)

3.5. Coverage of HIV testing of pregnant women

3.6. Antiretroviral treatment coverage of HIV-positive pregnant women

3.7. Coverage of HIV testing of exposed babies at 18 months

3.8. Coverage of syphilis testing of pregnant women

3.9. Treatment coverage of syphilis-seropositive pregnant women

Importance: Every step in the cascade of mother and baby tracking is critical for achieving the elimination of MTCT. Starting with achieving universal ANC care for pregnant women, the cascade indicators track the testing and treatment uptake among pregnant women for HIV and Syphilis.

Definitions:

3.4. No. of pregnant women registered for ANC care x 100/ Estimated no. of pregnant women

3.5. No. of pregnant women tested for HIV x 100/ Estimated no. of pregnant women

3.6. No. of HIV positive pregnant women received ART x 100/ No. of pregnant women detected HIV positive

3.7. No. of HIV exposed babies tested for HIV at 18 months x 100/ No. of HIV exposed babies

3.8. No. of pregnant women tested for Syphilis x 100/ Estimated no. of pregnant women

3.9. No. of Syphilis sero-positive pregnant women received treatment x 100/ No. of Syphilis sero-positive pregnant women

Level of disaggregation: National & Provincial

Reporting Frequency: Quarterly

Source: PMTCT reporting from HIV clinics

Remarks: Sri Lanka has gaps in process indicator for EMTCT and these indicators are regularly reported.

2.5. HIV Diagnosis, Treatment & Care

HIV testing and treatment cascade indicators are the most important indicators evolved by the international community as a part of the 90-90-90 framework and Fast Track Strategy to reach the goal of end of AIDS by 2030. All the countries are expected to develop, report and monitor the treatment cascades among the population groups that matter to the country specific epidemic.

Indicator of Need:

4.1. Estimated no. of PLHIV

Importance: This indicator sets the denominator for all the testing and treatment cascade indicators. Usually, this number is estimated based on models such as Spectrum or case-based surveillance data. In Sri Lanka, Spectrum model-based projections are generated once in two years to estimate the number of PLHIV in the country.

Definition: Estimated no. of PLHIV

Level of disaggregation: National & Provincial

Reporting Frequency: Annual or once in two years

Source: HIV estimations using Spectrum or AEM

Remarks: Nil

Impact Indicator:

4.2. Survival rates among PLHIV on ART at 12, 24, 36, 48 & 60 months

Importance: The primary end objective of the entire testing and treatment program is to improve the survival of PLHIV and to enable them lead a healthy and productive life. Besides, the program also contributes to prevention by reducing the transmissibility. Thus, the key impact indicator that needs to be monitored is the survival among PLHIV receiving ART.

Definition: No. of PLHIV alive and on ART at the end of 12/24/36/48/60 months x 100/ No. of PLHIV initiated on ART at the beginning of the specified period

Level of disaggregation: National & Provincial

Reporting Frequency: Annual

Source: Quarterly return from ART centres; ART linelist from ART centres

Remarks: Cohort tracking of PLHIV initiated on ART is being done regularly at all ART centres in Sri Lanka and individual data is reported through Excel based formats to SIM unit of NSACP. SIM unit conducts cohort analysis on this data at regular intervals to generate these indicators.

Outcome Indicators:

4.3. % of PLHIV aware of their status

4.4. % of PLHIV who know their status receiving ART

4.5. % of PLHIV receiving ART virally suppressed

Importance: As mentioned above, these three are the most important cascade indicators in the fast track strategy evolved by WHO/UNAIDS. Achievement of 90-90-90 for these three indicators by 2020 and 95-95-95 by 2030 has been slated as the essential targets to reach the goal of End of AIDS. Thus, all countries are asked to align their reporting mechanisms to measure, report and monitor these three critical indicators.

Definitions:

4.3. No of PLHIV who know their HIV status x 100/ Estimated no. of PLHIV

4.4. No. of PLHIV who are currently receiving ART x 100/ No. of PLHIV who know their status

4.5. No. of PLHIV who are virally suppressed x 100/ No. of PLHIV currently receiving ART

Level of disaggregation: National & Provincial

Reporting Frequency: Annual

Source:

4.3. Quarterly return from STD clinics & Spectrum-based estimates

4.4 & 4.5. Quarterly return from ART centres; ART linelist from ART centres

Remarks: Individual data on PLHIV receiving ART is reported through Excel based formats to SIM unit of NSACP. The last two indicators can be estimated from that data.

Cascade/ Process Indicators:

4.6. HIV Testing coverage of key and vulnerable population

4.7. Linkage loss/ Lost to follow up between referral – screening – confirmation of HIV test results

4.8. Linkage loss/ Lost to follow up between confirmation and initiation on ART

4.9. Lost to follow up on ART

4.10. Viral load testing coverage of PLHIV receiving ART

Importance: These process indicators track the movement of population from uptake of HIV testing till viral load suppression and measure the effectiveness of linkages and patient tracking mechanisms under the NSACP. Linkage losses at any stage can affect the achievement of final outcomes, and hence, these are critical to be monitored and plugged.

Definitions:

4.6. No. of key and vulnerable persons tested for HIV x 100/ Estimated no. of Key and vulnerable population in that geographic area

4.7a. (No. of persons referred from TB clinics, ANC clinics, KP NGOs & hospitals for screening at STD clinics - No. of persons screened at STD clinic out of the referrals) x 100/ No. of persons referred from TB clinics, ANC clinics, KP NGOs & hospitals for screening at STD clinics

4.7b. (No. of persons screened HIV positive at STD clinic/ Blood Bank/ Private Lab/ KP DIC (CBT) - No. of persons tested at NRL for confirmation out of the screened positive cases) x 100/ No. of persons screened HIV positive at STD clinic/ Blood Bank/ Private Lab/ KP DIC (CBT)

4.8. (No. of persons confirmed HIV positive at NRL - No. of persons initiated on ART) x 100/ No. of persons confirmed HIV positive at NRL

4.9. No. of PLHIV on ART who are lost-to-follow-up x 100/ No. of PLHIV initiated on ART in the specified period

4.10. No. of PLHIV on ART assessed for viral suppression x 100/ No. of PLHIV currently receiving ART

Level of disaggregation: National & Provincial

Reporting Frequency: Quarterly

Source:

4.6. Quarterly return from STD clinics & size estimates of key and vulnerable population

4.7 & 4.8. Registers at TB clinic, ANC clinic, KP NGOs, Hospitals and registers & repeat sample request slips at STD clinics; Screening test reports & registers at STD clinic, Blood Bank, Private Lab, KP DIC (CBT) and registers & repeat sample request slips at NRL

4.9 & 4.10. Quarterly return from ART centres; ART linelist from ART centres

Remarks: NSACP estimates the size of key and vulnerable population through size estimation exercises and other research studies. Linkage losses between various steps of referral, screening, confirmation, linking to pre-ART care and initiation on ART are not being systematically documented and reported under NSACP. These indicators need to be included in the newly developed EIMS so that all the facilities that are involved in the testing and treatment cascade are integrated and report on these linkage losses.

Input Indicator:

4.11. No. of ART centres reported ART Drug stock outs

Importance: Ensuring continuous supply of the ARV drugs is an essential element of successful treatment program, aimed at high drug adherence and improved survival of PLHIV. Thus, it is important to monitor the ART centres where drug stock outs are being reported so that necessary action can be taken for redistributing the existing stocks or emergency purchase of existing stocks.

Definition: No. of ART centres reported stock out of ARV drugs in the last quarter x 100/
Total no. of ART centres

Level of disaggregation: By ART drug/ regimen

Reporting Frequency: Quarterly

Source: Quarterly return from ART centres

Remarks: Stock out reporting is not a part of the quarterly return submitted by the ART centres to SIM unit of NSACP. However, this needs to be added by drug and regimen so that stock position can be closely monitored. Reporting and analysis of data on drugs and commodities should be more real time. Benchmarks can be set by taking last three-year averages. This will help in prevention of stock outs rather than reporting and managing them. Currently, it is proposed as a quarterly reporting indicator since there is no monthly reporting system from STD or HIV clinics. If the reporting system changes with EIMS, then the frequency can be reduced to monthly.

2.6. Laboratory Management

An efficient laboratory system is a strong enabler in strengthening the HIV/AIDS service delivery. Linkage losses between different levels of laboratory network, availability of test kits, quality assurance mechanisms, drug resistance patterns and availability of trained lab staff are some of the key aspects that need to be monitored at the highest level to ensure smooth implementation of laboratory services. While the first aspect is covered in the above section, the proposed dashboard indicators for the other areas are as below.

5.1. Availability of test kits and reagents

Importance: STD clinics & HIV clinics under NSACP perform a wide range of clinical tests for STIs & HIV diagnosis as well as for clinical work-up of PLHIV. Similarly, NRL is the single nodal laboratory in the country that performs even a wider range of tests including confirmation of HIV positives, viral load testing, drug resistance testing, etc. Hence, ensuring adequate supply of various test kits and reagents for smooth functioning of laboratory services is important.

Definition: No. of labs reporting stock out of test kits or reagents x 100/ No. of testing labs reporting

Level of disaggregation: By type of test; By type of lab (NRL/STD Clinics/ HIV Clinics)

Reporting Frequency: Quarterly

Source: Lab registers

Remarks: Labs are not currently connected to any electronic form of reporting. EIMS should integrate lab reporting of various test results, QA data as well as stock position of various test kits and reagents.

5.2. Quality Assurance for various laboratory tests

Importance: Monitoring the quality of various laboratory tests performed across the network of laboratories under NSACP is important to ensure adherence to protocols and to eliminate mistakes in clinical management of cases. NRL provides external quality assurance to various STD clinics while NRL itself sends samples to NARI, India or other international labs for QA on some other higher tests. This data needs to be reported and monitored at the highest level under NSACP.

Definition: Discordance rates in quality assurance testing

Level of disaggregation: By type of test; By internal and external QA

Reporting Frequency: Annual

Source: Lab Registers

Remarks: Labs are not currently connected to any electronic form of reporting. EIMS should integrate lab reporting of various test results, QA data as well as stock position of various test kits and reagents.

5.3. Levels of drug resistance

Importance: Drug resistance testing is being done at NRL for various anti-microbial drugs used for STI management as well as ARV drug resistance. It is important to monitor the drug resistance patterns and compare them with the international standards and references.

Definition: Standard definitions as per international norms for drug resistance testing

Level of disaggregation: By type of drug

Reporting Frequency: Annual

Source: Lab Registers

Remarks: Labs are not currently connected to any electronic form of reporting. EIMS should integrate lab reporting of various test results, QA data as well as stock position of various test kits and reagents.

5.4. Availability of laboratory staff

Importance: Availability of trained laboratory staff is critical to efficient delivery of testing and treatment services across the country. Monitoring the smooth functioning of all testing laboratories through trained personnel is important to minimise delays in testing and issue of results, follow up of referrals for higher level testing and to ensure quality of testing.

Definitions: No. of labs reporting vacancies in positions of lab staff x 100/ Total no. of labs reporting

Level of disaggregation: By type of test; By internal and external QA

Reporting Frequency: Quarterly

Source: Lab Registers

Remarks: Labs are not currently connected to any electronic form of reporting. EIMS should integrate lab reporting of various test results, QA data as well as stock position of various test kits and reagents.

The following table summarises the proposed dashboard indicators and also indicates which of them fulfil the international reporting requirements under GFATM or UNAIDS (GAM).

S.No.	Type	Proposed Dashboard Indicator	International Reporting Requirement
Overall Program			
A	Impact	HIV Incidence	GFATM, UNAIDS (GAM 2018)
B	Impact	HIV Mortality	GFATM, UNAIDS (GAM 2018)
STI Management			
1.1	Outcome	Prevalence of common STIs based on etiological diagnosis/ Syphilis among pregnant women	GFATM, UNAIDS (GAM 2018)
1.2	Output	% of STI cases treated	
1.3	Process	No. of STI clinic attendees visiting STI clinics	
1.4	Input	% of STI clinics reporting Stock outs in STI test kits and STI drugs	
KP Prevention			
2.1	Need	Size of KP	UNAIDS (GAM 2018)
2.2	Impact	No. of new HIV cases detected	GFATM, UNAIDS (GAM 2018)
2.3	Outcome	Consistent Condom Use/ Clean N-S Use	GFATM, UNAIDS (GAM 2018)
2.4	Output	Prevention coverage of KP	GFATM, UNAIDS (GAM 2018)
2.5	Process	% KP tested for HIV	GFATM, UNAIDS (GAM 2018)
2.6	Process	Condom Gap	
2.7	Input	Availability of adequate number of peer educators at all KP interventions	
PMTCT			
3.1	Impact	No of new paediatric HIV infections per 100,000 live births	
3.2	Impact	Mother to Child Transmission (MTCT) Rate	GFATM, UNAIDS (GAM 2018)
3.3	Impact	No of cases of congenital Syphilis per 100,000 live births	UNAIDS (GAM 2018)
3.4	Cascade	Antenatal Care Coverage (at least one visit)	
3.5	Cascade	Coverage of HIV testing of pregnant women	UNAIDS (GAM 2018)
3.6	Cascade	ART coverage of HIV-positive pregnant women	GFATM, UNAIDS (GAM 2018)
3.7	Cascade	Coverage of HIV testing of exposed babies at 18 months	
3.8	Cascade	Coverage of syphilis testing of pregnant women	
3.9	Cascade	Treatment coverage of syphilis-seropositive pregnant women	
HIV Diagnosis, Treatment & Care			
4.1	Need	Estimated no. of PLHIV	
4.2	Impact	Survival rates among PLHIV on ART at 12, 24, 36, 48 & 60 months	GFATM, UNAIDS (GAM 2018)
4.3	Outcome	% of PLHIV aware of their status	UNAIDS (GAM 2018)
4.4	Outcome	% of PLHIV who know their status receiving ART	GFATM, UNAIDS (GAM 2018)

S.No.	Type	Proposed Dashboard Indicator	International Reporting Requirement
			2018)
4.5	Outcome	% of PLHIV receiving ART virally suppressed	UNAIDS (GAM 2018)
4.6	Process	HIV Testing coverage of key and vulnerable population	
4.7	Process	Linkage loss/ Lost to follow up between referral – screening – confirmation of HIV test results	
4.8	Process	Linkage loss/ Lost to follow up between confirmation and initiation on ART	
4.9	Process	Lost to follow up on ART	
4.10	Process	Viral load testing coverage of PLHIV receiving ART	
4.11	Input	No. of ART centres reported ART Drug stock outs	GFATM, UNAIDS (GAM 2018)
		Laboratory Management	
5.1	Input	Availability of test kits and reagents/ % of labs reporting stock out of test kits or reagents	
5.2	Outcome	Quality Assurance for various laboratory tests/ % of labs with discordance	
5.3	Outcome	Levels of drug resistance	
5.4	Input	Availability of laboratory staff/ % labs reporting vacancies	

Chapter 3: Visualisation & Communication of Dashboard Indicators

As noted in the previous chapter, dashboard indicators are meant to support the program managers in programmatic decision making by quickly and intuitively highlighting to them the key gaps and lapses in the program and enabling them focus their attention in fixing the issues within the shortest possible timeframe. Hence, appropriate form of visualisation that enables easy summarisation of the key message to the audience is very important. More efficient is the automated communication of the key messages to the appropriate audience in the form of email alerts, sms alerts, phone notifications, etc. This section presents some ideas for data visualisation and communication of dashboard indicators.

3.1. Data Presentation Formats

The following presentation formats may be used to showcase the key dashboard indicators:

1. Graded colour-coded geo-spatial maps for district-level/ province level differentials: These are geo-spatial maps that can show geographic distribution of different levels of achievement of a given indicator
2. Donut charts to show the distribution of key impact/ service delivery numbers across provinces
3. Speedometers/ Thermometers with colour categories to show achievement levels (High/Mod/Low)
4. Coloured icons showing absolute numbers
5. Metered Scales with pointers to show the progress of cascade indicators
6. Infographic styled graphs – bar graphs, pie charts, etc.
7. Performance scorecards to identify and highlight the poor performing facilities/ districts/ provinces
8. Thematic tables showing the list of gap areas for a given indicator

The following table summarises the proposed data presentation formats in the dashboard for each of the proposed dashboard indicators.

S. No.	Type	Indicator	Dis-aggregation	Categories	Visualisation Format – National Level	Visualisation Format – Provincial / District Level
Overall Program						
A	Impact	HIV Incidence	National & Provincial	Absolute number	Coloured Icons	Donut with provincial numbers in the arc & total national figure at the centre; District map with nos.
B	Impact	HIV Mortality	National & Provincial	Absolute number	Coloured Icons	Donut with provincial numbers in arc & total national figure at centre; District map with nos.
STI Management						
1.1	Outcome	Prevalence of common STIs based on etiological diagnosis	National, Provincial & District; STD clinic attendees – male, STD clinic attendees - female, pregnant women, FSW & MSM	High/Mod/Low	Speedometer	Colour-coded Provincial & district level map
1.2	Output	% of STI cases treated	National & Provincial; STD clinic attendees – male, STD clinic attendees - female, pregnant women, FSW & MSM	Quartiles	Coloured Icons	Colour-coded Provincial Map
1.3	Process	No. of STI clinic attendees visiting STI clinics	National & Provincial; Male & Female	Quartiles	Coloured Icons	Colour-coded Provincial Map
1.4	Input	% of STI clinics reporting Stock outs in STI test kits and STI drugs	National & Provincial	Absolute number	Thermometer	Donut with provincial numbers in the arc & total at the centre

S. No.	Type	Indicator	Dis-aggregation	Categories	Visualisation Format – National Level	Visualisation Format – Provincial / District Level
		KP Prevention				
2.1	Need	Size of KP	National, Provincial & District level	Absolute number at national level; High/Mod/Low for provincial	Coloured Icons	Colour-coded Provincial & district level map
2.2	Impact	No. of new HIV cases detected	National, Provincial & District level;	Absolute number	Coloured Icons	Donut with provincial numbers in the arc & total national figure at the centre; District map with nos.
2.3	Outcome	Consistent Condom Use/ Clean N-S Use	National, Provincial & District level	High/Mod/Low	Speedometer	Colour-coded Provincial & district level map
2.4	Output	Prevention coverage of KP	National, Provincial & District level	Quartiles	Coloured icons	Colour-coded Provincial & district level map
2.5	Process	% KP tested for HIV	National, Provincial & District level	Quartiles	Coloured icons	Colour-coded Provincial & district level map
2.6	Process	Condom Gap	National & Provincial	High/Mod/Low	Coloured icons	Colour-coded Provincial Map
2.7	Input	Availability of adequate number of peer educators at all KP interventions	National, Provincial & District level	Quartiles	Thermometer	Bar Graph with descending order of vacancies

S. No.	Type	Indicator	Dis-aggregation	Categories	Visualisation Format – National Level	Visualisation Format – Provincial / District Level
		PMTCT				
3.1	Impact	No of new paediatric HIV infections per 100,000 live births	National & Provincial	Absolute Numbers	Line graph showing year-wise data against target	Bar Graph
3.2	Impact	Mother to Child Transmission (MTCT) Rate	National & Provincial	Absolute Numbers	Line graph showing year-wise data against target	Bar Graph
3.3	Impact	No of cases of congenital Syphilis per 100,000 live births	National & Provincial	Absolute Numbers	Line graph showing year-wise data against target	Bar Graph
3.4	Cascade	Antenatal Care Coverage (at least one visit)	National & Provincial	Quartile	National cascade	Colour-coded Provincial Map
3.5	Cascade	Coverage of HIV testing of pregnant women	National & Provincial	Quartile	National cascade	Colour-coded Provincial Map
3.6	Cascade	ART coverage of HIV-positive pregnant women	National & Provincial	Quartile	National cascade	Colour-coded Provincial Map
3.7	Cascade	Coverage of HIV testing of exposed babies at 18 months	National & Provincial	Quartile	National cascade	Colour-coded Provincial Map
3.8	Cascade	Coverage of syphilis testing of pregnant women	National & Provincial	Quartile	National cascade	Colour-coded Provincial Map
3.9	Cascade	Treatment coverage of syphilis-seropositive pregnant women	National & Provincial	Quartile	National cascade	Colour-coded Provincial Map

S. No.	Type	Indicator	Dis-aggregation	Categories	Visualisation Format – National Level	Visualisation Format – Provincial / District Level
		HIV Diagnosis, Treatment & Care				
4.1	Need	Estimated no. of PLHIV	National & Provincial level;	Absolute number		Donut with provincial numbers in the arc & total national figure at the centre
4.2	Impact	Survival rates among PLHIV on ART at 12, 24, 36, 48 & 60 months	National & Provincial level;	Absolute number	Pointers on a metered scale	Bar graphs
4.3	Outcome	% of PLHIV aware of their status	National & Provincial level;	Absolute number	Pointers on a metered scale/ National Cascade	Bar graphs
4.4	Outcome	% of PLHIV who know their status receiving ART	National & Provincial level;	Absolute number	Pointers on a metered scale/ National Cascade	Bar graphs
4.5	Outcome	% of PLHIV receiving ART virally suppressed	National & Provincial level;	Absolute number	Pointers on a metered scale/ National Cascade	Bar graphs
4.6	Process	HIV Testing coverage of key and vulnerable population	National & Provincial level;	High/ Mod/ Low	Speedometer	Colour-coded Provincial Map
4.7	Process	Linkage loss/ Lost to follow up between referral – screening – confirmation of HIV test results	National & Provincial level;	High/ Mod/ Low	National Cascade	Colour-coded Provincial Map

S. No.	Type	Indicator	Dis-aggregation	Categories	Visualisation Format – National Level	Visualisation Format – Provincial / District Level
4.8	Process	Linkage loss/ Lost to follow up between confirmation and initiation on ART	National & Provincial level;	High/ Mod/ Low	National Cascade	Colour-coded Provincial Map
4.9	Process	Lost to follow up on ART	National & Provincial level;	High/ Mod/ Low	National Cascade	Colour-coded Provincial Map
4.10	Process	Viral load testing coverage of PLHIV receiving ART	National & Provincial level;	High/ Mod/ Low	National Cascade	Colour-coded Provincial Map
4.11	Input	No. of ART centres reported ART Drug stock outs	National	Absolute numbers	Coloured Icons	
		Laboratory Management				
5.1	Input	Availability of test kits and reagents/ % of labs reporting stock out of test kits or reagents	National	Absolute numbers	Coloured Icons	
5.2	Outcome	Quality Assurance for various laboratory tests/ % of labs with discordance	National	High/ Mod/ Low	Thermometer	
5.3	Outcome	Levels of drug resistance	National	High/ Mod/ Low	Thermometer	
5.4	Input	Availability of laboratory staff/ % labs reporting vacancies	National	Absolute numbers	Coloured Icons	

3.2. Sample Data Visualisation Options

Following are some of the sample graphics that can be used in the dashboards for various indicators.

Graded colour-coded geo-spatial maps for district-level/ province level differentials

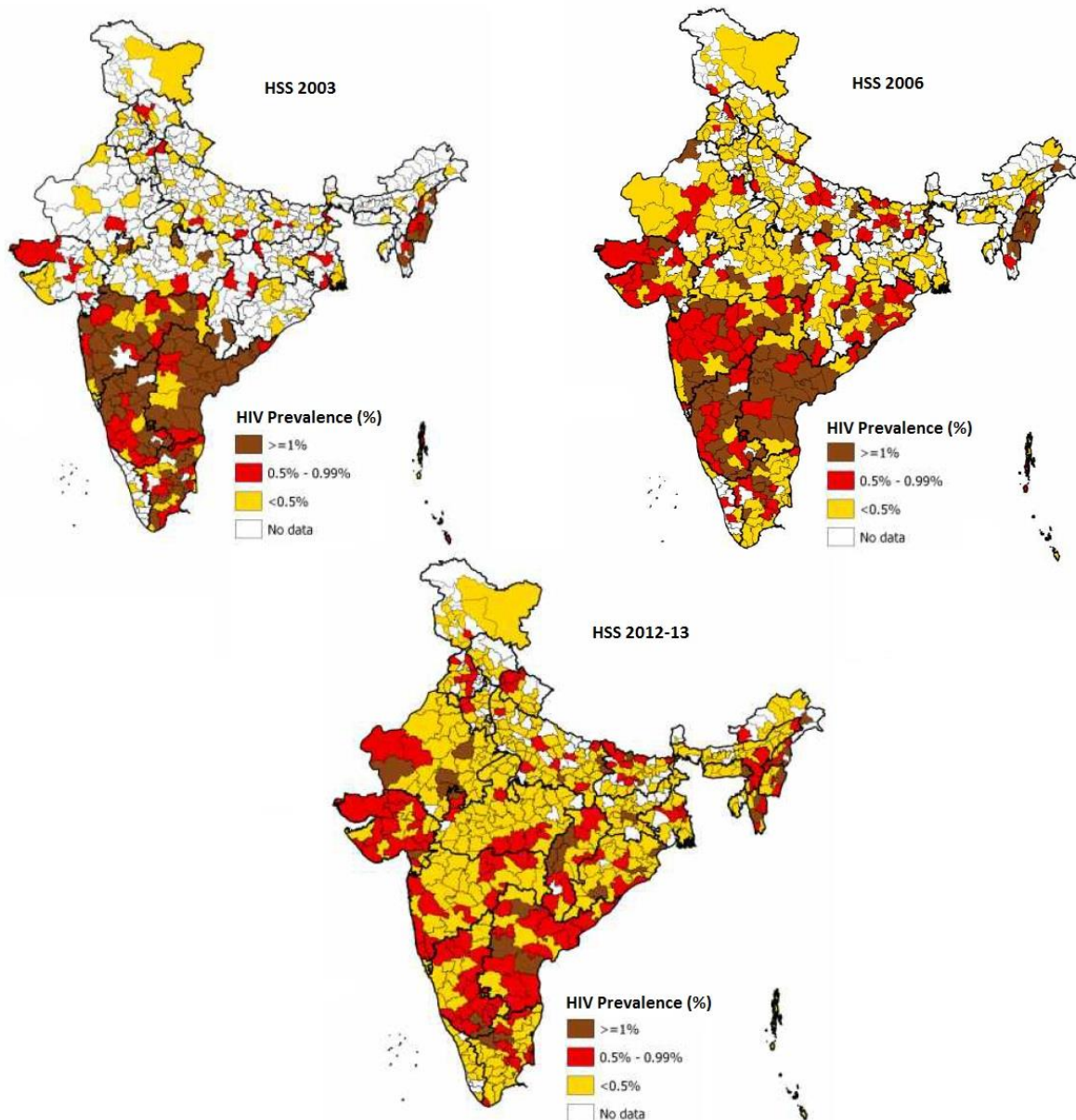


Figure 1: HIV Prevalence among ANC Clinic Attendees at District Level, India, HSS 2003, 2006 & 2013

Speedometers with colour categories to show achievement levels (High/Mod/Low)

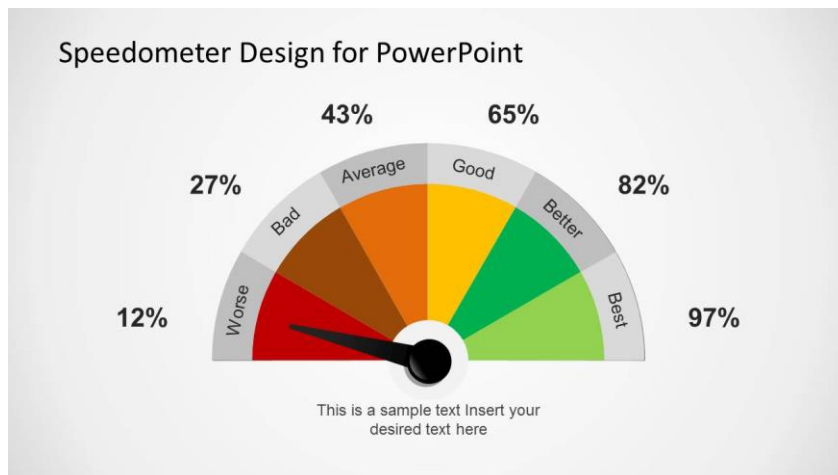
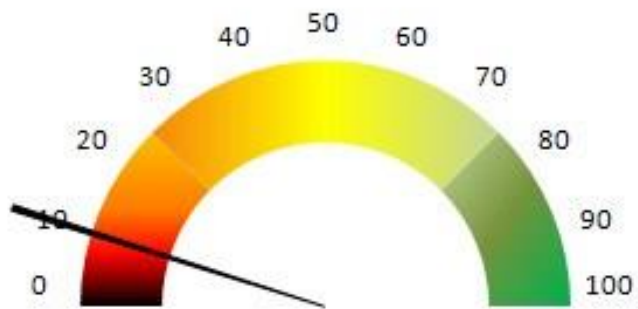
Speedometer – Low, Medium & High



Your text here. Your text here.

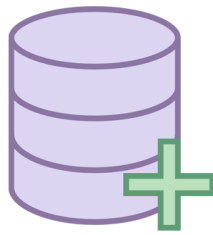
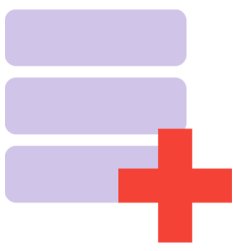
- You can change the position of the needle by editing the data in the worksheet
- You can change the values for Low, Medium and Good



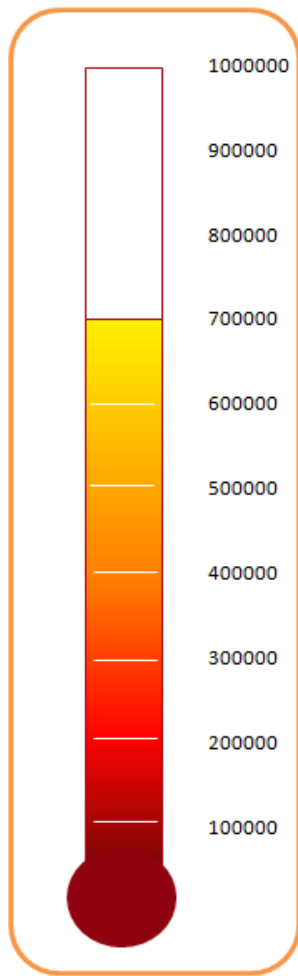


Coloured icons showing absolute numbers

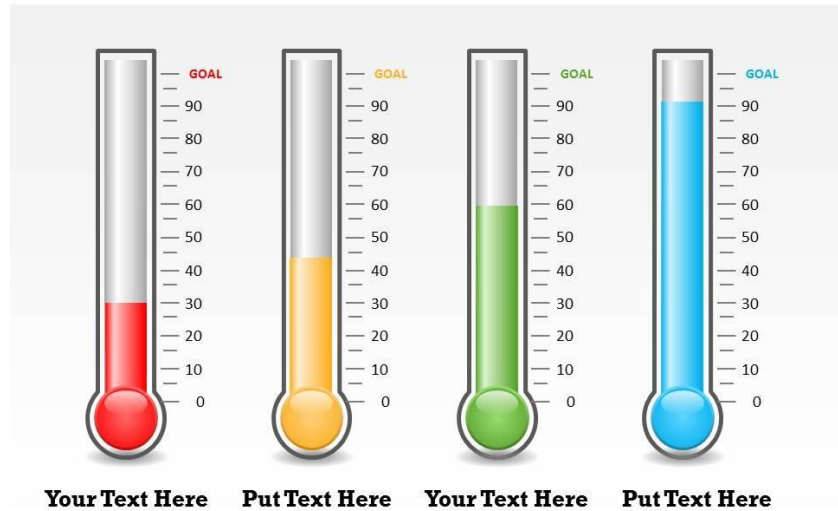




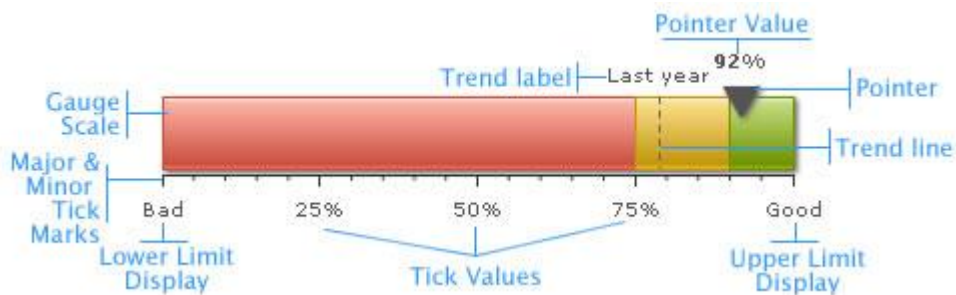
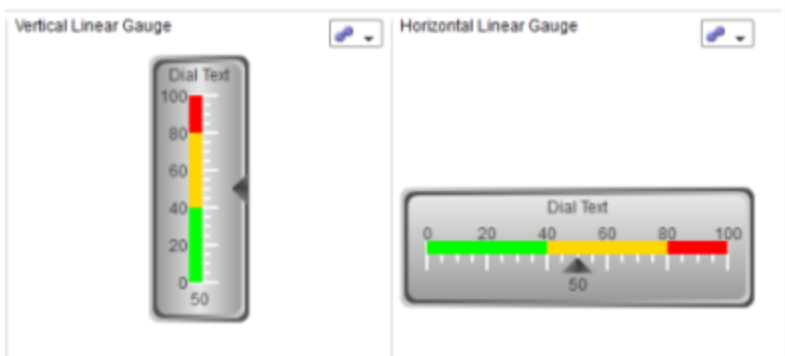
Thermometer charts showing achievement levels of various indicators

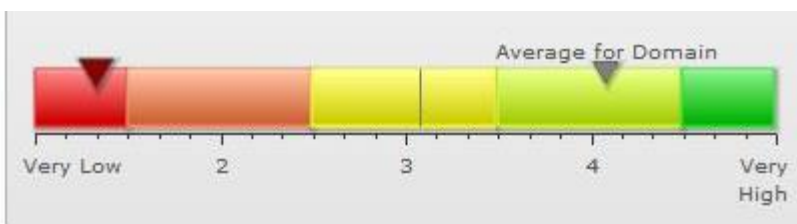
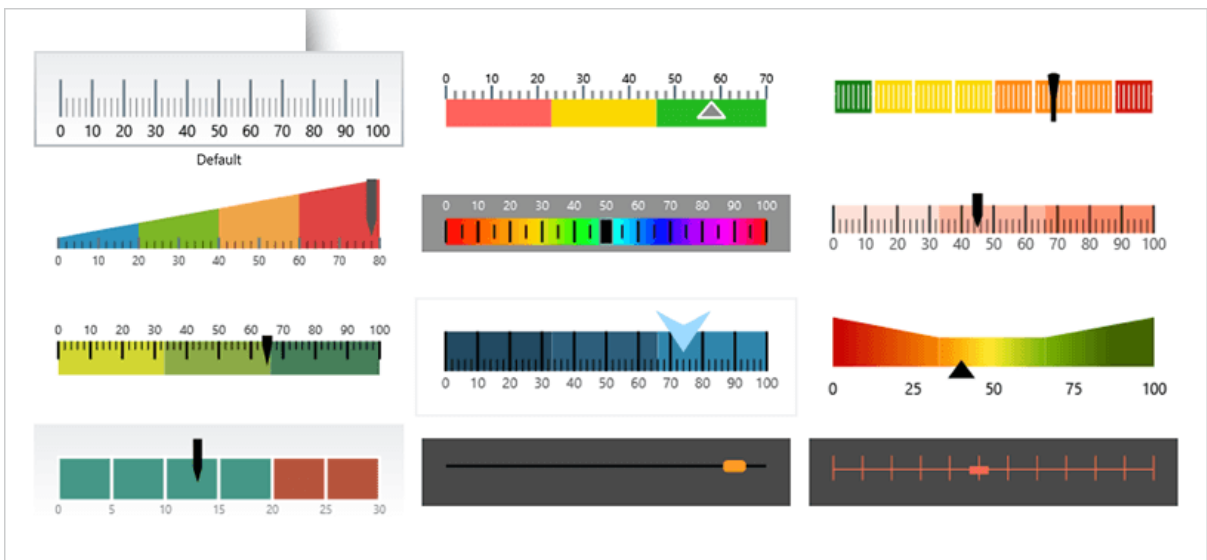
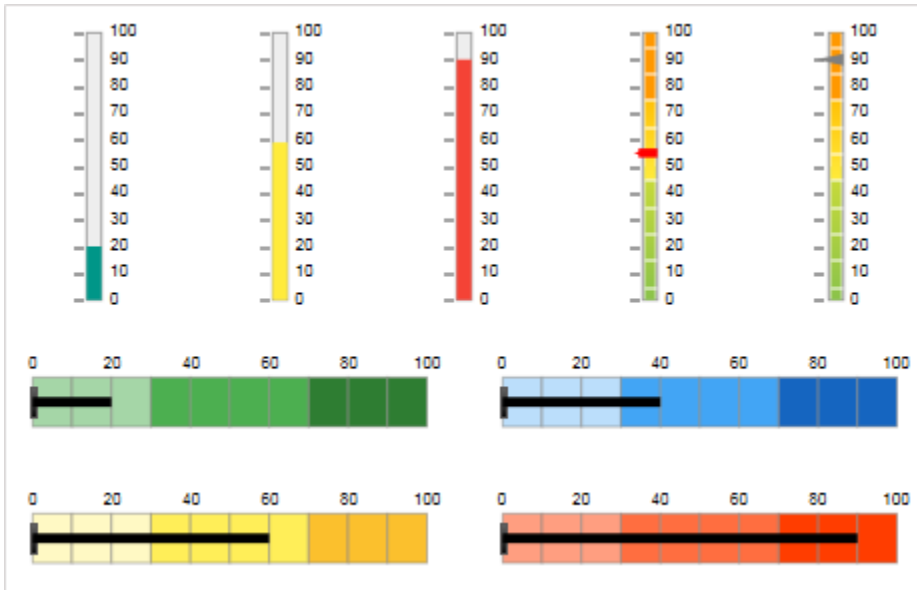


Thermometer Chart



Metered Scales with pointers to show the progress of cascade indicators

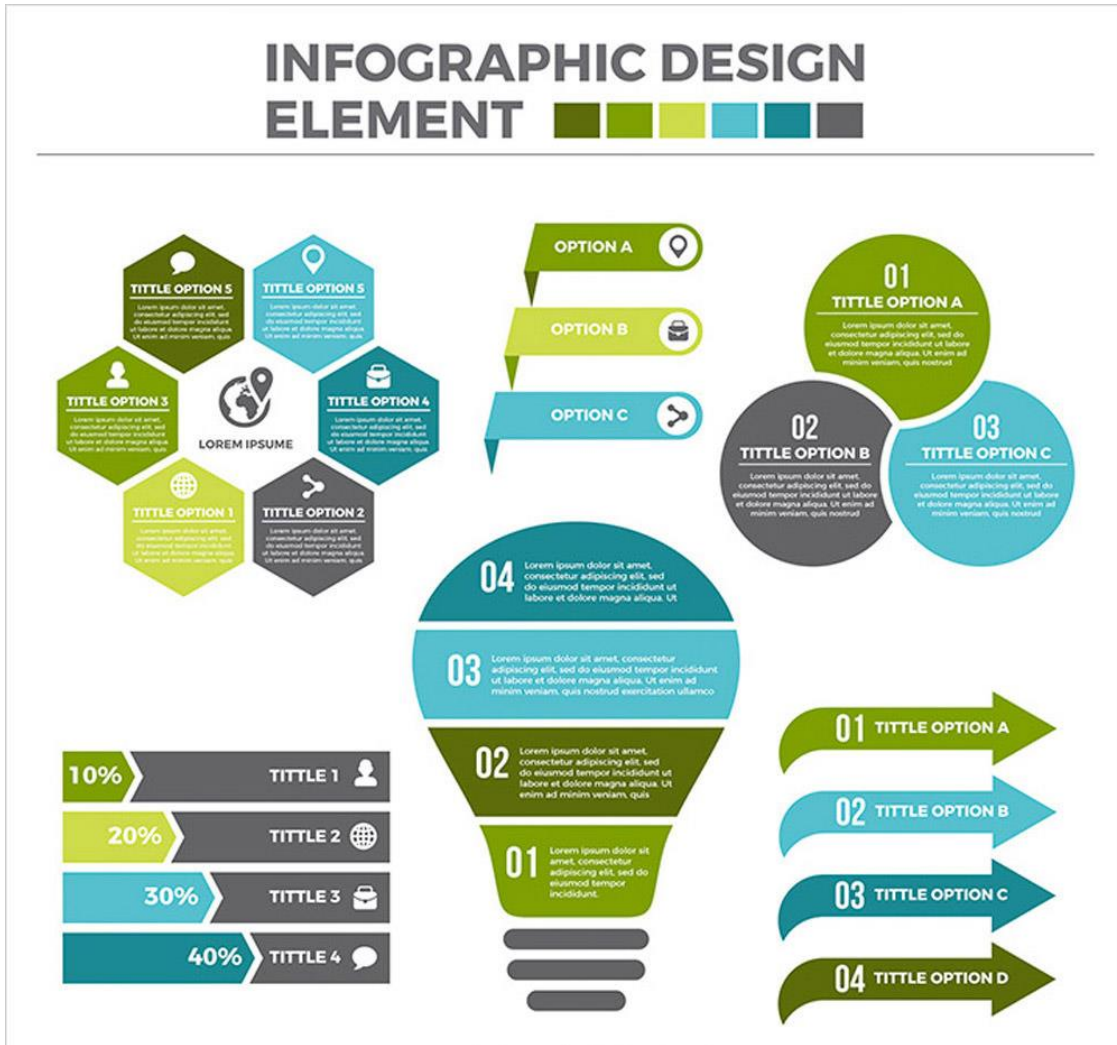




Infographic styled graphs – bar graphs, pie charts, etc.



INFOGRAPHIC DESIGN ELEMENT



3.3. Communication of Dashboard Outputs to Program Managers

- The dashboard will be enabled with automated generation of standard reports that can be emailed to specific target audience at pre-defined intervals.
- Standard reports can also be published to website, blog and social media channels.
- Automated alerts in the form of SMS, Email or Mobile notifications on key dashboard indicators backed by pre-defined Targets and Thresholds can be put in place for real time monitoring and action.
- Reports & Alerts will be customised to the receiving stakeholder and the level of program.

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