Best Practices in Strategic Information

BEST PRACTICES SERIES 6

Comprehensive Dashboard
for Effective Programmatic Decision Making

MINISTRY OF HEALTH SRI LANKA

NATIONAL STD/AIDS CONTROL PROGRAMME

VOLUNTARY HEALTH SERVICES — VHS — WE SERVE THE PEOPLE WHO SERVE YOU

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Foreword

HIV/AIDS response globally has been a fountainhead of innovations and best practices that were evolved to customise the program and match the needs of the epidemic. Last three decades of HIV programming has seen several systems and initiatives that evolved to be called global best practices. A few efforts have been made to systematically document such best practices in HIV/AIDS response so that the lessons learnt from them can benefit the other programs or other areas or countries. These best practices span the entire spectrum of the HIV/AIDS program primarily focussing on prevention and treatment strategies, service delivery, community participation, multi-stakeholder response, financial systems and supply chain. However, there are very limited instances of documenting best practices in Strategic Information Management related to HIV/AIDS.

National STD/AIDS Control Programme of Sri Lanka has evolved robust Strategic Information Management systems over the decades, upon the foundations of the much stronger STD control program in the country. STD surveillance system, HIV case reporting system, HIV cohort tracking system and data dissemination practices are some shining examples of best practices in Strategic Information for HIV/AIDS that NSACP has developed over years. An exercise has been carried out to systematically review such initiatives from the lens of documenting best practices and this publication is an outcome of such an effort. I sincerely hope that this publication will not only highlight the achievements and lessons learnt from the past experiences, but also show us the way forward in further strengthening them.

In preparation of these best practices, we thank Dr Ariyaratne Manathunge, Consultant-Venereologist and Coordinator-SIMU, NSACP for his leadership and coordinating the technical assistance to NSACP as nodal officer for SIMU-NSACP. His strategic guidance in developing and bringing out the best practices document (book on best practices, best practices series and book of abstracts on best practices) covering both existing and emerging is highly appreciable. As a part of this, VHS-CDC Project in partnership with NSACP is bringing out "Best Practices Series" covering one book on each best practice on Strategic Information. In this regard, this book on best practice titled *"Comprehensive Dashboard for Effective Programmatic Decision Making"* has been developed for effective dissemination. We also appreciate the contributions made by SIMU team, all the NSACP senior officials, key stakeholders and peripheral STD clinic team members in developing these best practices.

We appreciate the technical support being extended by VHS-CDC Project with the support of Centers for Disease Control and Prevention (CDC-INDIA) in planning and conducting this study in a participatory manner for introducing evidence based comprehensive capacity building plan for the Strategic Information Management team.

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Acknowledgements

VHS-CDC Project has undertaken efforts to bring out publications in the form of: book on best practices, best practices series and book of abstracts for dissemination by NSACP at national and international level. As a part of this technical cooperation initiatives, VHS-CDC Project in partnership with NSACP has also developed "Best Practices Series" on seven titles as one Best Practice book on each title.

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

We also thank Ms T Sudha, Senior Program Associate, VHS-CDC Project for her support in ensuring communication and coordination.

We trust that, these documents will be of more useful to the readers for understanding the best practices for adoption and replication.

Once again, we acknowledge the support extended by SIMU unit-NSACP, NSACP and CDC in providing technical assistance to NSACP on SI related initiatives.

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Acronyms

AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
ART	Antiretroviral Therapy
CDC	Centers for Disease Control and Prevention
DHIS 2	District Health Information System 2
DIC	Drop in Centre
EID	Early Infant Diagnosis
EIMS	Electronic Information Management System
EMR	Electronic Medical Record
EMTCT	Elimination of Mother to Child Transmission
FSW	Female Sex Worker
GFATM	Global Fund to Fight AIDS, TB and Malaria
HIV	Human Immunodeficiency Virus
ICTA	Information Communication Technology Agency
KP	Key Population
LIFE	Lanka Interoperability Framework
LFU	Loss to Follow Up
LIMS	Laboratory Information Management System
M & E	Monitoring and Evaluation
MSM	Males who have sex with males
NGO	Non-Government Organization
NSACP	National STD/AIDS Control Programme
NSP	National Strategic Plan
PLHIV	People Living with HIV
PMS	Pharmacy Management System
PMTCT	Prevention of Mother to Child Transmission
SI	Strategic Information
SIMU	Strategic Information Management Unit
SOA	Service Oriented Architecture
SOP	Standard Operating Procedure
STD	Sexually Transmitted Disease
STI	Sexually Transmitted Infection
TB	Tuberculosis
UNAIDS	Joint United Nations Program on HIV/AIDS
VHS	Voluntary Health Services
WHO	World Health Organisation

Comprehensive Dashboard for Effective Programmatic Decision Making

EXECUTIVE SUMMARY

Introduction: Dashboard is a data presentation & visualisation tool to assist program managers in their routine programmatic decision making and contributes to improving both efficiency and effectiveness of the program management. Development of a comprehensive dashboard for NSACP is identified as an emerging best practice in Strategic Information under NSACP.

Objectives: To evolve a comprehensive dashboard for NSACP that can support effective programmatic decision making and link it with the existing data systems

Methods: Secondary review of the program requirements and identifying dashboard indicators, identifying the data sources and exploring the potential data visualisation options for the dashboard

Results: Existing core indicators under NSACP and their data sources, current SI system and data flow mechanisms, published documents and reports have been reviewed to identify the core dashboard indicators. It is ensured that they are in line with the latest National Strategic Plan 2018-22 as well as international reporting requirements. Data sources, disaggregation and periodicity of reporting along with definitions of core indicators have been proposed. Data visualisation options and effective means of communicating them to program managers on a real time basis have been recommended. The program areas include STI management, Key Population prevention, PMTCT, HIV diagnosis, care & treatment and laboratory management. Indicators include those related to need, inputs, processes, outputs, outcomes and impacts of NSACP.

Conclusion: The dashboard presents a comprehensive view of the program, highlights critical indicators important for monitoring progress & gaps and underlines the aspects that need attention and immediate action, thereby contributing to effective program management. The potential use of data that it will promote in the program and the support it will provide to the program managers will make it emerge as a best practice under SI.

INTRODUCTION

Dashboard is a data presentation & visualisation tool to assist program managers in their routine programmatic decision making and contributes to improving both efficiency and effectiveness of the program management.

An effective dashboard

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

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.

NEED FOR A COMPREHENSIVE DASHBOARD FOR NSACP

Currently, NSACP has a paper-based documentation system at all its reporting units. SIM 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. Thus, developing a comprehensive dashboard for case and program management will be a significant value addition to the strategic information functions being performed by the SIM unit.

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.

PROCESS OF DEVELOPING DASHBOARD INDICATORS

In view of the above, The Voluntary Health Services – Centers for Disease Control (VHS-CDC) Project has initiated the work on developing dashboard indicators for NSACP. Accordingly, the activity was carried out during Jan – Feb 2018 and the report on comprehensive dashboard indicators was submitted to NSACP. The key steps undertaken include

- ✓ Identifying dashboard requirements
- ✓ Assessing the current NSP indicators
- ✓ Understanding the existing data systems & sources of indicators
- ✓ Exploring the 'slice & dice' potential of the indicators
- ✓ Visualising the best possible ways to present the indicators
- ✓ Learning from the best practices in the region
- ✓ Considering the issue of coherence with AIDS Data Hub, WHO/UNAIDS websites, etc.
- ✓ Examining the mechanisms to link it with EIMS & website

In the process of development of the dashboard, the following areas and documents were thoroughly reviewed.

- ➥ Existing core indicators under NSACP and their data sources
- ➥ Current SI system under NSACP to identify the potential sources of data on various key program areas
- ➥ Various published documents and reports on NSACP website including annual reports, NSP, M&E plans, Evaluation reports, etc.
- ➥ Published HIV/AIDS dashboards of various South East Asian countries
- ➥ International guidelines and recommendations from WHO, UNAIDS, CDC, The World Bank and The Global Fund on core indicators to be reported
- ➥ Reports of exploratory visits by CDC-VHS delegations to Sri Lanka

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**. 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 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.

KEY ASPECTS OF THE PROPOSED DASHBOARD INDICATORS

The key aspects considered in finalising the dashboard indicators include

- ✓ In line with the current strategies and indicators under NSACP as outlined in the latest National Strategic Plan 2018-22.
- ✓ Also aligned with the international reporting requirements.
- ✓ Presents the proposed data sources, proposed disaggregation and periodicity of reporting.
- ✓ Proposed definitions for the dashboard indicators have also been added.
- ✓ Recommended ways of data visualisation for on the electronic format
- ✓ Proposed means of communicating the same to the national and provincial program managers on a real time basis.

KEY PROGRAM AREAS FOR DASHBOARD

Dashboard indicators have been developed for the following key program areas.

- ✓ Overall Program Indicators
- ✓ Prevention – STI Management
- ✓ Prevention – Key Population Interventions
- ✓ PMTCT
- ✓ HIV Diagnosis, Treatment & Care
- ✓ Laboratory Management

Indicators have been grouped into key program elements covering **Need – Impact – Outcome – Output – Process – Input Indicators.**

A snapshot of the propose dashboard indicators is as below:

S.No.	Type	Proposed Dashboard Indicator	International Reporting Requirement
		Overall Programme	
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	

S.No.	Type	Proposed Dashboard Indicator	International Reporting Requirement
		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)
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	

PROPOSED DATA VISUALISATION OPTIONS

The following data visualisation options were suggested for the development of dashboard.

- ✓ 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
- ✓ Donut charts to show the distribution of key impact/ service delivery numbers across provinces
- ✓ Speedometers/ Thermometers with colour categories to show achievement levels (High/Mod/Low)
- ✓ Coloured icons showing absolute numbers
- ✓ Metered Scales with pointers to show the progress of cascade indicators
- ✓ Infographic styled graphs – bar graphs, pie charts, etc.
- ✓ Performance scorecards to identify and highlight the poor performing facilities/ districts/ provinces

✓ Thematic tables showing the list of gap areas for a given indicator
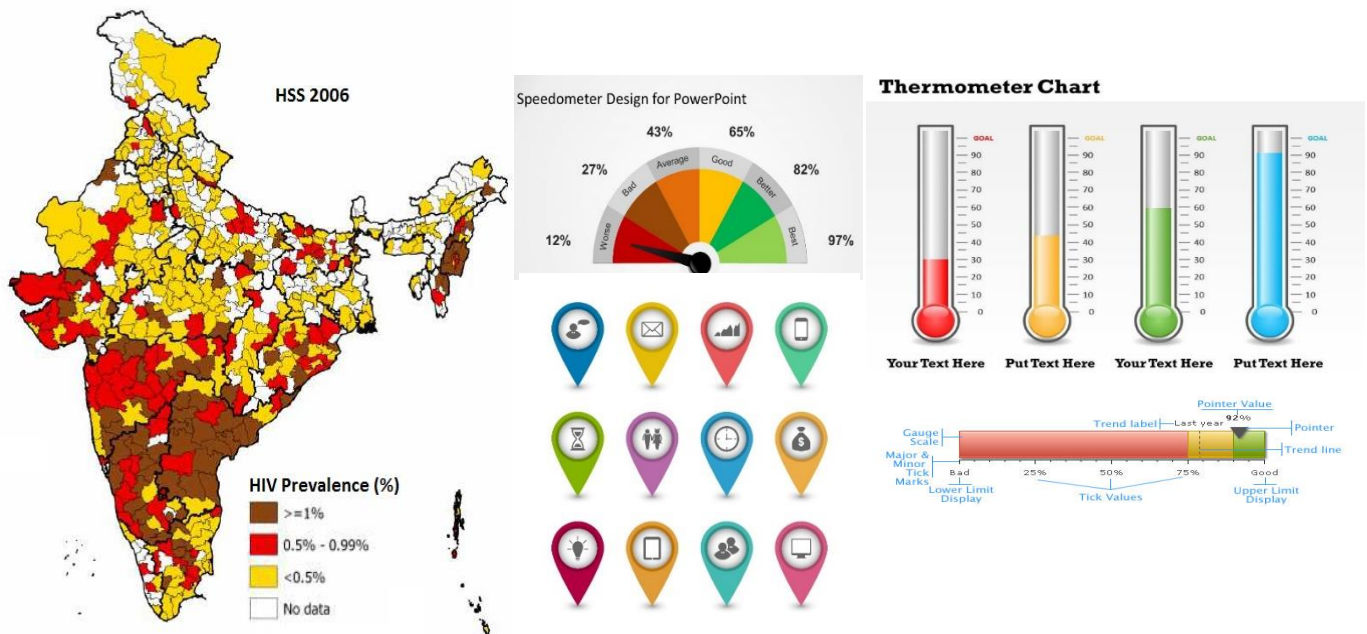
POSSIBLE LIMITATIONS

The following **limitations** were also identified that may affect the development and operationalisation of an effective dashboard and hence, need to be addressed carefully.

- Data flow limitations
- Limitations in data on disaggregation
- Reporting gaps
- Data quality issues
- Possible technical snags

CONCLUSION

NSACP SIM Unit will be the nodal agency leading the development of the comprehensive dashboard with the technical support of VHS-CDC Project. There will be only one comprehensive dashboard for the program and different data systems including the upcoming EIMS will be integrated with the dashboard. A roll out and capacity building plan will also be evolved for its smooth and effective use at all levels. The program aims to develop this dashboard as a best practice over the next year.