Accelerating Strategic Information Management Capacity (ASIMaC)

Training Needs Assessment and Training Plan
for
Strategic Information at NSACP

REPORT

Undertaken and submitted by
The Voluntary Health Services (VHS),
Supported by Centers for Disease Control and Prevention (CDC),
(VHS-CDC Project),
Rajiv Gandhi Salai, T.T.T.I. Post, Taramani, Chennai – 600 113,
Tamil Nadu, INDIA.

Submitted to
National STD/AIDS Control Programme (NSACP)
Ministry of Health, Nutrition & Indigenous Medicine, Govt. of Sri Lanka
No.29, De Saram Place, Colombo 10, Sri Lanka.

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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Development of this Training Need Assessment and Training Plan is technically and financially supported by CDC/DGHT-India through its' Cooperative Agreement Implementing Partner VHS-CDC Project/India as a part of TA to NSACP in close coordination and cooperation with SIMU-NSACP.

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Foreword

Strategic information is one of the key building blocks of any health system. In the NSACP, it is especially important – reaching our ambitious targets of eliminating AIDS by 2025 requires ongoing program and monitoring and a good knowledge of our high-risk populations. The NSACP is now entering a new phase in terms of strategic information management, with a new electronic information management system (EIMS). This is going to accelerate monitoring and evaluation efforts, providing the program new capabilities and efficiencies in terms of using data for decision making, and sharing data with different stakeholders. It is important that all program stakeholders are up to speed with the new system so we can leverage these capabilities for ongoing systems strengthening.

Training and other capacity building measures will be key to this effort. However, we need to regard capacity building not just as a discrete one-time training program, but instead creating a culture of ongoing learning. Using our data will be key to this, with the new system we will be able to review the data, identify system bottlenecks and address them in a timely fashion. Through this ongoing process we will all be learning what works and what doesn't.

We also need to be sharing data more, so there is a wider understanding about the epidemic, the progress we're making and the distance we still have to go. Giving people skills in data analysis and visualization at the clinic level will help consultants use data for improved decision making, and help them share data about the local epidemic status through their existing outreach programs.

There are already high levels of motivation and a commitment to ongoing program improvement within NSACP. We have a really strong team. The new EIMS gives us new tools to help us accelerate efforts towards our goals, and make sure we are achieving a high level of program quality. This "*Training Needs Assessment and Training Plan*" is an important first step in institutionalizing this new system, and institutionalizing a culture of ongoing learning. With these two factors in place, I am looking forward to seeing the program eliminate AIDS in less than a decade, according to our targets. As we proceed, what we learn in combatting AIDS will be an important lesson for Sri Lanka's health system and the world's HIV community at large.

We wish to express our sincere thanks to Dr Ariyaratne Manathunge, Consultant-Venereologist and Coordinator-SIMU for his support in planning and bringing out the assessment report. We also appreciate the contributions made by SIMU team, all the NSACP senior officials, key stakeholders and peripheral STD clinic team members.

We appreciate the technical support being extended by VHS-CDC Project with the support of Centers for Disease Control and Prevention (CDC/DGHT-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.

We acknowledge and thank VHS-CDC Project including Director Projects, Senior Technical Advisor and team for their immense support in ensuring partnerships and continue to support in providing TA. We also appreciate the strategic support being extended by VHS-CDC Project in this technical cooperation initiative. We acknowledge their support in undertaking and bringing out a report on "*Training Needs Assessment and Training Plan for Strategic Information at NSACP*" for introducing evidence-based capacity building plans and systems.

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

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

Acknowledgment

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.

NSACP and SIMU conducts training programs as induction training, refresher training programs and other specific training programs for the SIMU team, Consultant-Venereologist, Medical officers, Public Health Nursing Sister, Public Health Inspectors and others associated with the Strategic Information reporting. NSACP believes in providing ongoing capacity building to enhance the knowledge and skills to enable the staff at SIMU office and reporting units to contribute in strengthening the Strategic Information System.

VHS-CDC Project with the support of CDC has undertaken a Training Need Assessment (TNA) and Training Plan for SI team. This study identified the training needs, best practices in the existing capacity building, mapped resources for conducting training programs, etc. This study has been conducted by engaging various key stakeholders associated with. This study finding will be of more useful in strengthening systematic comprehensive capacity building system for SI team considering the existing reporting mechanism and emerging EIMS based reporting.

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 sincerely acknowledge and appreciate the leadership and guidance provided by Dr Ariyaratne Manathunge, Consultant-Venereologist and Coordinator-SIMU, NSACP, Sri Lanka in planning and completion of the entire study supported with strategic technical guidance. We also acknowledge the support and contributions made by the senior officials in NSACP, peripheral STD clinics team, EIMS developers, website developers, SIMU team and other key stakeholders.

We would appreciate the strategic guidance and coordination extended by Dr T Ilanchezhian, Senior Technical Advisor, VHS-CDC Project in planning and completion of the entire study and providing needful technical support in bringing out this meaningful report.

We acknowledge the contributions of Ms Anna Schurmann, Consultant, VHS-CDC Project for her contribution in conducting this study and support extended in bringing out this report.

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

We trust that, this Training Need Assessment (TNA) and Training Plan will be of more useful to the SIMU and NSACP team in undertaking evidence based systematic capacity building initiatives for further enhancing knowledge and skills.

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

Dr Joseph D Williams,
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Acknowledgement for contributors

We would like to acknowledge the following people who we spoke to and who contributed to the findings in this assessment:

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- Dr T Ilanchezhian, Senior Technical Advisor, VHS-CDC Project.

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- Dr Anuruddha, Medical Lab Technician, Gampaha STD Clinic

STD Clinics: List of STD clinics team represented and participated in the study:

- STD Clinic, Teaching Hospital, Ragama (Western Province)
- STD Clinic, District General Hospital, Gampaha (Western Province)
- STD Clinic, General Hospital, Nagoda, Kaluthora (Western Province)
- STD Clinic, Kandy, (Central Province)
- STD Clinic, Base Hospital, Avissawella, (Western Province)
- STD Clinic, Provincial General Hospital Premise, Ratnapura (Sabaragamywa Province)
- STD Clinic, District General Hospital, Kagalle (Sabaragamywa Province)
- STD Clinic, NSACP, Colombo (Western Province)

List of STD clinics visited and contributions made by the team:

- STD Clinic, Teaching Hospital, Ragama (Western Province)
- STD Clinic, District General Hospital, Gampaha (Western Province)

Study support Coordination:

- Ms T Sudha, Senior Programme Associate, VHS-CDC Project

Acknowledge the support and contributions made by each one of the officials and members of SIMU, NSACP, Peripheral STD clinics, key stakeholders and all those who has contributed for the study.

Further, we would like to acknowledge the technical and financial support extended by VHS-CDC Project team and CDC/DGHT-India team.

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Tables and Figures

Acronyms

AIDS	Acquired Immunodeficiency Syndrome
ARV	Antiretrovirals
ART	Antiretroviral Therapy
CDC	Centers for Disease Control and Prevention
CME	Continuing Medical Education
CoAg	Cooperative Agreement
DGHT	The Division of Global HIV & TB
DHIS 2	District Health Information System 2
EIMS	Electronic Information Management System
GoSL	Govt. of Sri Lanka
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
IBBA	Integrated Behavioral and Biological Assessments
I/C	In-charge
ICT	Information Communication Technology
KII	Key Informant Interviews
KP	Key Population
KSC	Knowledge, Skills and Capabilities
M & E	Monitoring and Evaluation
MLT	Medical Laboratory Technologist
MO	Medical Officer
NGO	Non-Governmental Organization
NO	Nurse Officer
NRL	National Reference Laboratory
NSACP	National STD/AIDS Control Programme
NSP	National Strategic Plan
PDHS	Provincial Director of Health Services
PEPFAR	U.S. President's Emergency Plan for AIDS Relief
PHI	Public Health Inspector
PHLT	Public Health Laboratory Technician
PHNS	Public Health Nursing Sister
PLHIV	People Living with HIV
PMTCT	Prevention of Mother To Child Transmission
SI	Strategic Information
SIMU	Strategic Information Management Unit
SPSS	Statistical Package for the Social Sciences
STD	Sexually Transmitted Disease
STI	Sexually Transmitted Infection
TA	Technical Assistance
TNA	Training Need Assessment
ToT	Training of Trainers
VHS	Voluntary Health Services

Executive Summary

The National STD/AIDS Control Programme (NSACP) of the Ministry of Health, Nutrition & Indigenous Medicine, Govt. of Sri Lanka is the focal point for the prevention and control of sexually transmitted infections (STI) including HIV. The NSACP has enjoyed many successes and also has ambitious plans for the future. Central to the programs successes is program monitoring and strategic information management. Strategic information management includes data capture, collation, aggregation, analysis, visualization and data dissemination. All these processes require specific knowledge, skills and capabilities.

In line with the National HIV/STI Strategic Plan Sri Lanka 2018-2022, a training needs assessment and training plan has been developed for the NSACP, in the area of strategic information management.

Rationale: The introduction of a new Electronic Information Management System (EIMS) provides an opportunity to review the capacity building needs to ensure the program is well prepared to roll out the new system. This training needs assessment and training plan will build on and leverage existing strengths and regional resources at every step. Its purpose is to ensure that the program has the right capacities to leverage the new EIMS for ongoing program improvement.

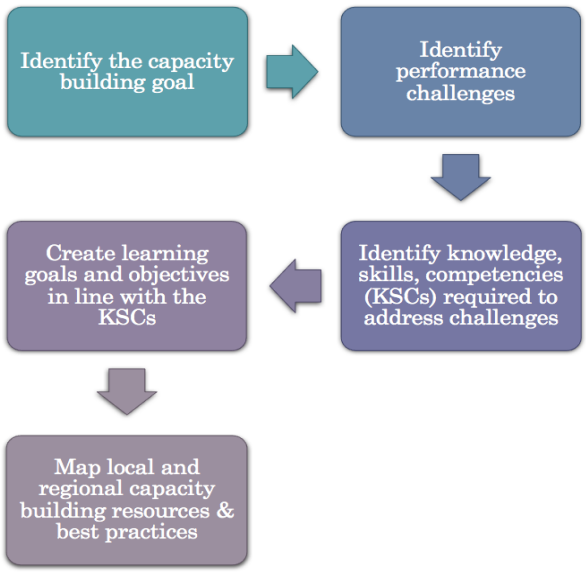
Audience: This document is primarily intended for the NSACP senior management team and the SIMU unit – NSACP, Ministry of Health, Nutrition and Indigenous Medicine, for their internal planning.

The assessment process took the following steps:

1. Identifying the capacity building goal
2. Identifying performance challenges in the way of that goal
3. Identifying the knowledge skill & competencies required to address the challenges
4. Creating learning objectives
5. Mapping capacity building best practices and resources in the country and region
6. Creating a training plan

This process and the findings are summarized in Figure a below:

Figure a: An Overview of the Assessment Approach



Methodology: The assessment methodology used a combination of primary and secondary research approaches to identify priority training needs. This included key informant interviews, group meetings and a desk review of program documents.

Learning objectives: From the assessment, the following learning objectives have been identified, listed below in a sequence from data capture (in the new system) to data use:

a. To create capacity to use the new EIMS at reporting units and the SIM unit
b. To foster data analysis at the reporting units
c. To foster data visualization and dissemination at the reporting units and the SIM Unit
d. To promote data use at the reporting units

Outputs: Some of the important training needs identified include basic computer skills, system management, monitoring and evaluation frameworks, research methodologies and scientific writing. The assessment identified regional resources (both institutions and individuals) for providing training on identified areas and highlighted the need for a participatory approach to capacity building planning. The assessment has helped develop a comprehensive need-based training plan covering a two year period (2018-2020) and identified mechanisms for enhancing knowledge and skills of SI teams in effectively and efficiently performing their current and future roles. The assessment recommends that capacity building should be done in a phased manner with systematic planning focusing on key strategic information management skills.

Recommendations: The assessment covered the full range of strategic information management functions, to identify priority capacity building requirements. To clarify next steps, the following recommendations have been prioritized:

1. **Adopt the training plan into the existing training calendar:** The training plan calls for building skills in the EIMS, and fostering greater local ownership

2. **Adopt the additional capacity measures**: Help make NSACP a learning organization by ensuring that capacity building is not just seen as training. Adopt the additional capacity measures described in Section 3.6, as feasible.

3. **Team self-assessment checklist:** In particular, the team self-assessment checklist should be adopted. This is to be administered in hand with a **supportive supervision visit**, will help create clinic-based ownership and demand for SIM capacity building. It will ensure training and capacity building needs are identified by the clinics themselves. This will institutionalize the training needs assessment process, and ensuring that the process is participatory. The SIMU team will, however, need to collate and organize the training needs from the self-assessment checklist.

4. **Online and blended learning approaches**: Foster a transition towards greater emphasis on online and blended learning approaches. The assessment made recommendations for Consultants and MOs to get trained through online and blended approaches only. A variety of reasons were given for not engaging in online training at this time. However, we suggest all cadres should be transitioned toward online and blended training approaches. This will create cost efficiencies and also ensure consistency in training delivery quality. The network

enhancements required to make the EIMS functional will make online training more possible. Efforts may be made to introduce e-groups, distance learning, seminars, blogs for sharing best practices and experiences, etc.

5. **Develop training guidelines** to standardize training planning processes, ensure that all trainings have defined learning objectives, training manual, resource materials, pre and post-tests (as appropriate), a clear curriculum, are skills based, and post training follow up mechanisms are well defined. A generic planning checklist is provided in Appendix 5 as a planning tool that can be institutionalized to facilitate this standardization.

6. **National Training Coordination Committee**: Establish a training coordination committee to support the training coordinator. This will help ensure scheduled trainings reflect the whole program's needs. It will also help institutionalize the training guidelines and prioritize requirements from the self-assessment checklist. The committee can also coordinate efforts to **empanel experts** and **manage capacity building partnerships** with external technical assistance agencies or universities.

7. **Roles and responsibilities of SI team**: Roles and responsibilities of different cadre of personnel associated with SI team at different levels has been developed considering the existing and emerging responsibilities in the context of introduction of EIMS. The draft roles and responsibilities may be further reviewed and ratified by the senior management team.

8. **Utilizing the TA agencies support:** Technical assistance from VHS-CDC, FHI-360 and the Global Fund may be utilized **to** develop of training manuals, capacity building and technical update initiatives.

9. **Ensure quarterly review meetings to celebrate data use:** All existing meeting platforms need to be better utilized for data sharing. In addition the quarterly review meetings can be used to celebrate instances of clinic-level data use for routine management and outreach. This will improve motivation and engagement around strategic information management.

1. Introduction

The National STD/AIDS Control Programme (NSACP) of the Ministry of Health, Nutrition & Indigenous Medicine, Govt. of Sri Lanka is the focal point for the prevention and control of sexually transmitted infections (STI) including HIV. The program has enjoyed success in maintaining the HIV epidemic at a low level over time, due in part to active monitoring. While the program and the Strategic Management Information Management Unit in particular have many strengths, the introduction of a new Electronic Information Management System (EIMS) provides an opportunity to review the capacity building needs to ensure the program is well prepared to roll out the new system. This training needs assessment and training plan will build on and leverage existing strengths and regional resources at every step. Its purpose is to ensure that the program has the right capacities to leverage the new EIMS for ongoing program improvement.

This training need assessment and training plan is primarily intended for the NSACP senior management team and the SIMU unit – NSACP, Ministry of Health, Nutrition and Indigenous Medicine, for their internal planning. This report will also be useful for key stakeholders directly or indirectly associated with NSACP in providing technical assistance, conducting training programs and developing systems.

The scope of this assessment includes capacities in data collection, reporting, aggregation, analysis, interpretation, dissemination and use at all levels of the health system.

What will this involve? Capacity building is a process for improving the ability of persons, organizations and systems to meet objectives, address stakeholders' needs and improve performance. It generally involves an ongoing, systematic and planned process with clearly defined objectives, outcomes, implementation strategies and performance indicators.

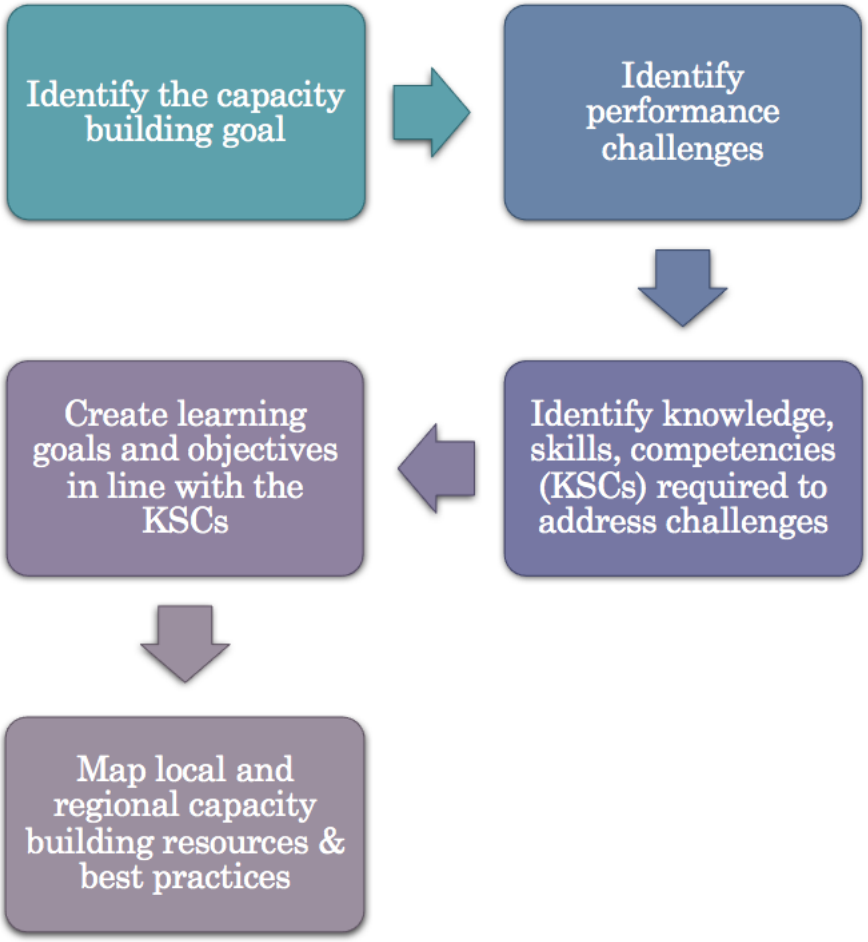
Assessing capacity building needs is a process of first clarifying the goal you are working towards – what are the capacities you want to achieve? Next, identify key performance challenges within strategic information management; then the additional knowledge, skills and competencies (KSCs) required to address these challenges and improve performance. Once the KSCs are identified, learning objectives were created that are specific enough to be measurable. The learning objectives are then aligned with appropriate capacity building measures. A list of costed training options are laid out, alongside complementary post –training mechanisms, such as self-assessment checklists, supportive supervision and post-training WhatsApp groups (see Figure 1).

The resulting training plan is aligned with the National HIV/STI Strategic Plan 2018-2011, specifically the guiding principle prioritizing strategies based on evidence.[1] This Training Needs Assessment and Plan will build the capacity of the NSACP to create

[1] The guiding principles include; Strategies Based on Evidence; Human Rights and Stigma Reduction; Gender Based Approach; Meaningful Involvement of People Living with HIV; Community Involvement and Engagement; Coordinated Approach; Multi- Sectoral Partnerships; Quality Improvement and Quality Assurance and Broad Political Commitment. See: NSACP, 2017. National HIV/STI Strategic Plan Sri Lanka 2018-2022. Colombo.

strategies based on their own routine data and evidence. With the capacity to collect, analyze, share and use strategic information to adapt to a dynamic epidemic, the NSACP will become a learning organization, with ongoing capacity building at its core. This will ensure it can adapt to a dynamic epidemic and keep the country moving towards the goal of eliminating HIV by 2025.

Figure 1: An Overview of the Assessment Approach



1.1. The NSACP: Background

The National STD/AIDS Control Programme (NSACP) is a specialized public health program under the Ministry of Health, Nutrition & Indigenous Medicine, Govt. of Sri Lanka. NSACP is responsible for coordinating, planning, implementation, monitoring and evaluation of the national response to the control and prevention of STIs including HIV. The country is currently implementing its National Strategic Plan (NSP) 2018-2022 for HIV/AIDS control. NSP 2018-22 aims to end AIDS in Sri Lanka by 2025, an ambitious target that is five years ahead of the global target of ending AIDS by 2030. There are precedents for achieving ambitious public health goals; Sri Lanka has successfully established the universal immunization program and eradicated Malaria.

Although Sri Lanka is a low HIV-prevalent country with an infection rate of less than 0.1% amongst the adult population, case detection is rising among young people. This highlights the need for close monitoring. To achieve the first step of ending AIDS, the country needs to reach **targets 90-90-90** by 2020 (90% of PLHIV know their HIV status; 90% of PLHIV diagnosed receive ART; 90% of all people on ART have viral suppression). The NSACP is working proactively towards these goals, and continues to maintain low HIV prevalence.[2] The current status towards these goals is illustrated in Table 1, below.

Table 1: Status towards UNAIDS goals

UNAIDS goals	Sri Lanka's current status
90% of all PLHIV know their HIV status	68% of people living with HIV know their status
90% of all PLHIV diagnosed receive ART	Of them, 54% are on ARV treatment
90% of all people on ART have viral suppression	Of them, 93% are virally suppressed

1.2. VHS-CDC Technical Assistance

The Presidents Emergency Plan for AIDS Relief is a US government initiative to address the HIV epidemic. PEPFAR and CDC have been supporting NSACP to optimize the quality, coverage, and impact of the national HIV/AIDS program, so it can achieve its ambitious goals (ending AIDS by 2030). PEPFAR and CDC not only support collaboration within countries, but also support inter-country collaboration to facilitate mutual learning, knowledge sharing and co-creation of innovative approaches. CDC India through its cooperative implementing partner, the Voluntary Health Services (VHS), Chennai is extending Technical Assistance (TA) to strategic information management at NSACP.

[2] NSACP, 2017. Annual Report 2017. Colombo

Through a situation assessment,[3] CDC, VHS-CDC Project and NSACP jointly identified the following specific areas of technical assistance for strategic information management, with objectives defined as follows:

1. **To enhance the capacities of in-country Strategic Information Management (SIM) unit team in use of program data for decision making and dissemination.**
2. To further improve the capacity of the SIM unit in data management, analysis and reporting.
3. Strengthen capacity of SIM unit team in data use, documentation and dissemination at national, regional and global levels.

Further to Objective 1, the TA team has agreed to work on **assessing training needs and developing training plans** for the Strategic Information Management team, and in the area of strategic information across the program. Developing a *Training Needs Assessment and a Training Plan* is also timely, as it will help shepherd in the new Electronic Information Management Services (EIMS). These efforts will also further progress towards Objectives 2 and 3 – and will introduced a systematic process for enhancing quality and sustaining efforts.

1.3. Strategic Information Management Processes

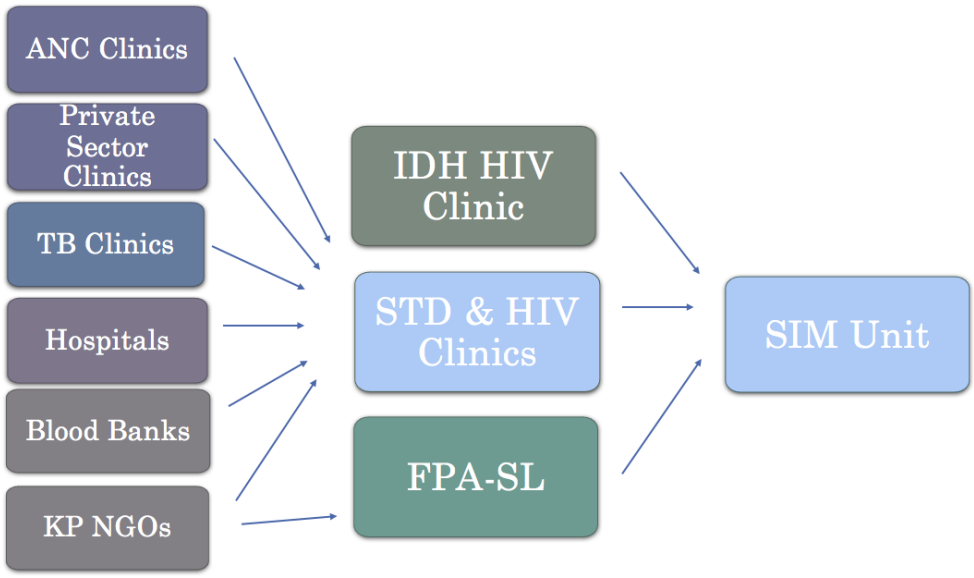
In these efforts, strategic use of data and evidence to inform decision making is essential. Health information is one of the essential building blocks of a strong health system. Health management information systems produce data about health service provision and population health status to be used for decision making and program planning at all levels of the health system.[4] The NSACP has a well-developed and organized set up to generate and strategically manage health information. The NSACP's Strategic Information Management (SIM) unit is the key team responsible for providing information and evidence to guide the country in its HIV and STD policy and planning, resource allocation, program management, service delivery and accountability. It has two components – HIV Surveillance and related areas for epidemic tracking and Routine M&E reporting system for program monitoring.

The **current system** manages the flow of data from the reporting units, where it is captured in about 15 different registers by laboratory staff, pharmacy staff, PHIs, PHNs, MOs and Consultants; then aggregated at regular intervals in excel by the PHIs and PHNSs; and then reported to the SIM unit quarterly. *This process will be expedited with the new EIMS.* The system is dynamic and there have been ongoing efforts to improve data quality, including a data quality audit checklist, and now plans for a new electronic information management system (EIMS).

[3] Voluntary Health Services 2017. Situation Assessment of Strategic Information System under NSACP, Sri Lanka & Strategies and Approaches of Technical Assistance to SI under NSACP. Chennai.

[4] AbouZahr, C., & Boerma, T. (2005). Health information systems: the foundations of public health. *Bulletin of the World Health Organization, 83*(8), 578-583.

Figure 2: The flow of data reporting in the NSACP. *This assessment is focusing on the two boxes in blue – the STD and HIV clinics and the SIM unit.*



The SIM team provide feedback and supportive supervision for ongoing improvements to data quality. They also analyze the data for the annual report, reporting to different agencies such as the WHO and the Global Fund, and creating other information products as required, such as the website: http://www.aidscontrol.gov.lk. In addition the SIM unit also conducts HIV and STI surveillance and research, including monitoring and evaluation of STI and HIV services and provides support to the epidemiology unit in conducting the IBBS and other epidemiological activities.

In 2017 VHS-CDC Project conducted a situation assessment of the Strategic Management Unit,[5] and found a number of program assets, listed below:

- The **National HIV Monitoring & Evaluation Plan 2017-22** outlines the program's broad vision, objectives, approaches and tools – providing a common sense of purpose to all stakeholders.
- **A Commitment to Dissemination:** There are comprehensive annual reports, and a newly designed website with detailed program information, and a suite of publications – providing a high level of transparency.
- **Long-standing, dynamic leadership**, providing strong institutional memory.
- Quality time-series data is available on HIV prevalence through HIV Sentinel Surveillance and IBBS
- The system is well-positioned to become a strong HIV case reporting system
- A new EIMS for efficient patient management and monitoring of HIV care & ART program.

[5] Voluntary Health Services 2017. Situation Assessment of Strategic Information System under NSACP, Sri Lanka & Strategies and Approaches of Technical Assistance to SI under NSACP. Chennai.

Throughout the assessment, the goal is to leverage these local system assets in building and expanding individual and systems strategic information management capacity.

The new EIMS: The new EIMS will include modules on STD care, HIV care, pharmacy laboratory an NGO module, a queue management module and a reporting module. It is currently being beta-tested and will soon to be implemented and scaled up across the country. Once it is rolled out there will be a need to develop the capacity of the Strategic Information Management team and reporting units (clinics) for electronic reporting, and subsequent aggregation and analysis.

2. Methodology

2.1. Objectives

The following objectives were adopted to guide the assessment process:

1. To identify existing challenges in strategic information management
2. To identify the knowledge and skills required to overcome the challenges
3. To identify subsequent learning objectives
4. To identify existing systems and mechanisms for capacity building within NASCP, and
5. To map best practices in SIM capacity building and resources available for Capacity Building
6. To develop a training plan for building the capacity of the team and individuals, based on the training needs identified.

2.2. Methodology

As a rapid process, this training needs assessment focused on collecting information that provided a useful snapshot of training needs to support further planning and training development.

a. Secondary Review

The details of the secondary research component are described in Table 2, with document types and the details gleaned from these documents.

Table 2: Methodology – Secondary review

Document type	Details gathered
Program documents	The vision for strategic information as part of NSACP's broader vision, mission and objectives and future plans. *Priority documents for review will include the M&E Plan, the National Strategic Plan, the External Review Plan, organograms, documents describing the new EIMS system, and the Annual Plans. Additional documents will be selected through consultation with the Strategic Information Management Unit team*
Training plans	In-service training delivered so far
Communications plan	What kind of communication, dissemination and knowledge sharing has been conducted
Websites of relevant universities, training institutes, research and evaluation agencies, individuals	Existing strategic management training resources in the country and region
DHIS2 User Guide	Functions of the DHIS 2 component in the new EIMS

b. Primary Research

The details of the primary research methodologies, respondent groups, target sample and the completed sample are described in Table 3. The approach has a strong qualitative focus, attempting to capture training needs in term of respondents' own words, and through descriptions of the challenges they face in their work flow – especially regarding strategic information management. For clinic staff, the assessment ensured at every point that their strategic information responsibilities were understood in the broader context of their larger work load. Group discussions and key informant interviews were conducted with interview guides developed in hand with the SIMU team.

Table 3: Methodology – Primary Research

Method	Respondent groups	Target sample size	Achieved Sample	
Group meetings	Discussions with the SIMU team: Meetings SIMU team (see tool in Annexure)	1meeting (6-7 officers)	1	
	Discussion with the reporting units. Facilitate regional group meetings to understand perceived requirements and priority tasks (see tool in Annexure)	2 meetings – with 15-20 members total, covering 6 STD clinics	1 meeting with 4 group discussions	
KIIs	Coordinator, SIMU	1	1	
	With one person in each cadre	12	Total: 33	
			PHI	6
			PHNS	5
			MLT	5
			PHLT	2
			Consultant	5
			MO	7
			Pharm	1
			NO	3
	EIMS development team	1	3	
	DHIS 2 Expert	-	1	
	Official from the Global Fund	1	1	
	Other external stakeholders	-	1	
Survey	A survey tool posting to select reporting units	25	25	
Field visits & workplace observation	Visit facilities and work sites to observe work context and address any additional information needs after the group meetings	2	2	

2.3. Limitations of the Methodology

There are a number of limitations to the methodology adopted, primarily stemming from the fact that the assessment was rapid in nature. The limitations are described below:

- The assessment was primarily qualitative, based of self and peer reporting on challenges and capacity building needs. This may not be objective.
- It was not based on a more objective observation of workplace performance or work outputs (such as analysis of reporting data), according to a checklist. This can be regarded as the 'gold standard' of a training needs assessment, but was not feasible in this context.
- The assessment was based on entire cadres of health workers, it was not individually focused. There is a great deal of variation within cadres in terms of capacity. The most obvious being that many older workers may not have used computers as a tool for work, even if they have used it for recreational purposes.
- In every case the sample was not randomized or representative, it was a convenience or purposive sample. Participants were selected for their proximity to Colombo (convenience) and to get a variety of health worker types (purposive).
- The quantitative component – a short self-administered survey - had limited coverage and therefore was not representative, there was a high non-response rate. In many cases, respondents ticked every option provided as being a training priority.
- The assessment only covered training needs in terms of strategic information management. The focus was very specific, but did take into account SIMU tasks within the context of their larger workload.
- Study participants reported training needs reflected their understanding of their current role. Most did not have an understanding of the upcoming changes with the new EIMS. For this reason, in all cases it was necessary for the assessment to go beyond reported training preferences.
- At the time of the assessment, the DHIS 2 module was still in development. There was not a common vision about what the module would look like or what capabilities it would provide. For this reason, the assessment relied on a review of the user manual and a key informant interview with an external expert.

The above limitations have not affected the identification of training needs or development of a training plan.

3. Findings

3.1. Capacity Goal

The Coordinator for Strategic Information identified the **immediate goal** as everyone being trained and up to speed with this new system. In addition, the vision is for **reporting units to have greater ownership of the data**, for them to use it for facility management decision making and find insights in it. The expectation is that in two years' time, everything will be online and the clinics can make their own infographics.

Who needs to be trained? Staff numbers by cadre are provided in Annexure 7 (NSACP Staff team at STD clinics – consolidated summary). Everyone except the assistants need to be trained, and are covered by this assessment.

3.2. Existing Capacity Building Platforms in the NSACP

Strategic information management training in the NSACP program has not had wide coverage, and health workers in the program have largely trained themselves, by searching the internet or calling people from the SIMU team on the phone. Most training that has been conducted within NSACP is focused on clinical skills for HIV/STD service delivery. An external review found that training had been insufficient,[6] and there are now concerted efforts to address this. The different training platforms and types of training that NSACP has relied on to build their health workers capacity are described below.

Pre-service Training: The internal two-month 'preservice training' (or induction training) is coordinated by the NSACP training coordinator for all new staff. It is held in the NSACP auditorium by senior consultants from within the national program, with content contributed from all the program units. It is delivered according to a set curriculum, set by the NSACP's senior management team.

In-Service Training: In-service training is organized in an ad-hoc manner according to expressed needs, or according to different opportunities that arise from local and regional universities or training sites (for example the GIS training described below, and a 5 days counselling program). It is typically funded through discretionary funds requested through the Ministry of Health's Education Training and Research division. Three different training formats were specifically mentioned:

Refresher Training: The whole senior team from NSACP travels to each province to deliver a one-day knowledge and skills update. In the past year, seven provinces were covered.

GIS training 2018: 10 NSACP staff did a GIS training course at the University of Peradeniya in Kandy. This is an example of the ad-hoc training programs provided to the SI team in addition to the regular training programs. The general consensus was that while this was a good course it was not useful as the software (ArcGIS) was too expensive and no-one owned a copy. They were given a free download that would last a

[6] National STD and AIDS Control Program, Ministry of Health, Nutrition & Indigenous Medicine, Govt. of Sri Lanka 2017. National Health Sector Response to HIV and Sexually Transmitted Infections in Sri Lanka, External Review Report 2017. Colombo.

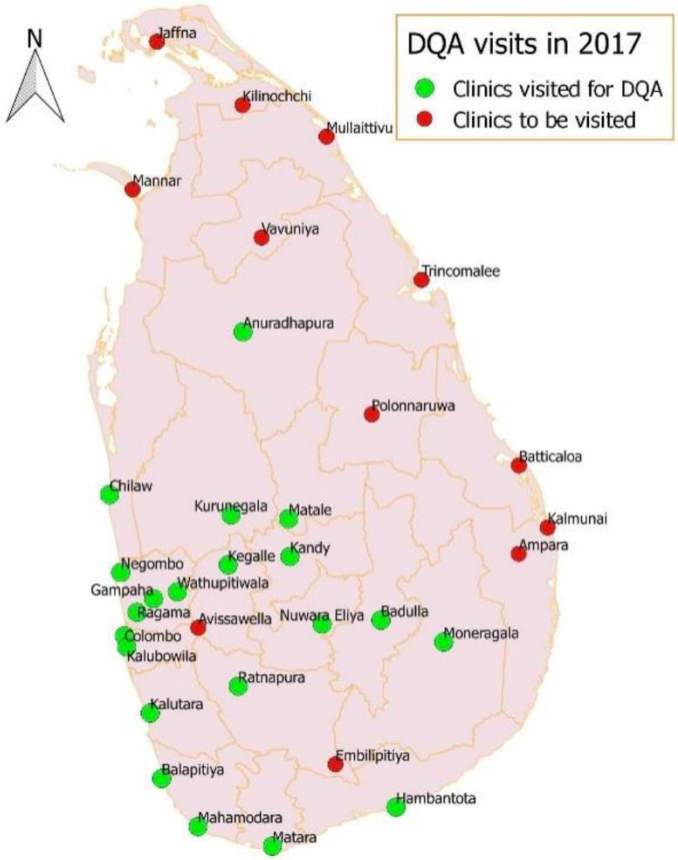
?year, but a number of people said their internet connection was too slow to actually download it. For this reason, they were not able to practice and ultimately master these skills. It was also suggested that there was not enough practice time within the course itself.

Strengthening Capacity for Data Analysis 2017: This training program included 25 people, and resulted in the development of guidelines for data analysis within the NSACP program.

On the Job Training & Existing Problem Solving Platforms: Once a week a HIV problem solving clinic is conducted where problematic patients are discussed, who have, for example, ongoing chronic clinical problems or are defaulting on their medicines. In addition, junior doctors will routinely get the opinion of a senior consultant on a complex medical issue. In this way, clinical staff learn from each others' experience and their seniors.

Supportive Supervision: The SIMU team visited a number of reporting units to conduct data quality assessments in 2017. The map of these visits is provided below.[7] These visits also provided an opportunity for the SIMU team to deliver problem solving support and hand-holding for strategic information management tasks.

Figure 3: Geographic Coverage of DQA Supportive Supervision Visits, 2017



[7] NSACP, 2017. Annual Report 2017. Colombo

Continuing Medical Education Programs on Sexual Health: The Sri Lankan College of Sexual Health and HIV Medicine is the peak professional body for venereologists in Sri Lanka, and most NSACP Consultants and MOs are members. It offers ongoing continuing medical education (CME) programs in the area of sexual health and venerology. It facilitates opportunities for postgraduate education, scientific research, fellowship, networking and learning. At this stage CME is not a requirement for maintaining medical licensure, nevertheless the college has an active membership. (The Sri Lankan College of Sexual Health and HIV Medicine http://www.slcoshh.org/).

Exposure visit and participation in conferences: The SIMU team and reporting units are provided with limited opportunities to gain knowledge and skills through participation in exposure visits, participation in conferences at the national and international level.

3.3. Strategic Information Management Challenges

What is preventing optimum strategic information management performance?

Training needs can only be prioritized as such if they clearly address a perceived challenge in the workplace or health system. For this reason, to begin, the assessment asked people to identify challenges in terms of strategic information management within NSACP, at the national and the clinic level. This assessment has not attempted to quantify the scope or extent of these challenges, they may consistent in all clinic locations. All the strategic information management challenges listed here can be addressed by enhancing knowledge, skills and capabilities in part or in whole. These measures are described in the subsequent section (see Table 11).

3.3.1. Challenges in Data Management & Reporting

Data quality issues: Data quality is often poor in the current paper based system, with duplicate entries about the same patient in multiple registers. The people reporting the data (Public Health Inspectors and the Public Health Nurses) emphasized the poor data quality, they explained that this is because clinical staff often do not fill out the Patient records in full, their handwriting can be difficult to follow, and there are so many registers (15 in all) that need to be maintained and referenced. Each different patient type requires different forms, and different registers. This makes compiling quarterly returns arduous, and is a reason for late reporting (about 20 of 33 clinics regularly report on time).

Poor quality data cannot be effectively used to track program performance. It also limits the confidence and value decision makers place on data, undermining demand for data in decision making processes.

Challenges in Patient Tracking: With a paper based system it is difficult to track patients over time, as the details about them are kept in multiple registers – often covering a time span of many years for patients on ARVs. In addition, it is very difficult to retrieve data relating to a patient's care over time. Only if clinic staff recall can they find the right details.

Data Entry and Reporting is Time-Consuming: Reporting is also very time-consuming so it can distract from other tasks, such as patient care. Some registers are also located in peripheral clinics, making report compilation arduous. Different reports need to be compiled at different times, sometimes using the same data. This is a very time consuming process.

Stock-outs: With the current paper based system, managing stock to prevent stock-outs is considered as a challenge. This necessitates the need for introducing prevent system for managing supply chain management system. Efforts are being made to integrate into the proposed EIMS system.

Human Resource Constraints: Some of the facilities are equipped with needed staff. In some facilities, short-staffed and there is a high staff turnover (as a part of transfer at specific intervals as per the existing Govt. procedure, promotions, retirement, etc.), which means ongoing capacity building is required to bring staff up to speed.

Infrastructure Constraints: Some clinics do not have sufficient space to ensure privacy to patients, which may affect the information patients share – again affecting data quality. In some clinics, space constraints make it difficult to store patient records. In addition, most clinics have very old computers. Some of the facilities are not have been full-fledged network connectivity. This makes reporting an even slower process.

Lack of Computer Skills: Some of the older clinic staff have limited exposure to computers, especially the nurses. The exact number is hard to quantify, but stakeholders suggested about a third of people did not have basic computer skills. In addition, the software developers highlighted that many people are embarrassed to admit their lack of computing ability, so we can expect this to be under-reported if we ask directly.

3.3.2. Challenges in Local Data Use and Dissemination

Need for more Local Ownership: With hierarchical reporting structures, staff at lower levels often see themselves only as data producers and are unaware of their responsibilities in analyzing, interpreting and using data for clinic-level decision making.[8] This is also the case at the NSACP. Currently data is collected with the view to reporting it up to the SIMU office. There is limited clinic-level ownership, dissemination or use of the data.[9] Without an appreciation of the data's utility, it is hard for clinic staff to prioritize accurate reporting over their many other tasks.

Low Priority in maintaining data management at clinical level: Data reporting is done by clinical staff who have many other responsibilities, including seeing patients, patient clerking, outreach testing, outreach lectures in workplaces and community groups and KP tracking. Little importance is given to data entry and reporting responsibilities – there is no sense of the gravity of the task. For this reason, it is difficult to always maintain data entry as a priority.

Poor Skills in Data Analysis, Synthesis and Presentation: Presentations at SIMU quarterly meetings (sometimes only held twice a year) are often long and overly comprehensive, without offering any real insight. There is often a failure to present data in user-friendly, comprehensible, and accessible formats, as well as difficulties in translating information into practical and actionable guidance. Poor synthesis and packaging of data, excessive levels of detail and inappropriate presentation formats constrain stakeholders' ability to understand the data and apply them to decision making.

Missed Opportunities for Data Sharing: The above described challenges, along with a lack of skills in data visualization and presentation, mean that the many meeting forums available for data sharing may limit in utilizing to advocate for the NSACP program. This includes within the hospital complex, in the community during outreach events, in the health system and in the program overall. Even within a hospital, prevalence about syphilis or HIV among ANC patients' needs to be conveyed back to the

[8] Li, Michelle; Brodsky, I.; Geers, E. 2018. Barriers to Use of Health Data in Low and Middle Income Countries: A Review of the Literature. MEASURE Evaluation, Chapel Hill.

[9] Also highlighted in: National STD and AIDS Control Program, Ministry of Health, Nutrition & Indigenous Medicine, Govt. of Sri Lanka 2017. National Health Sector Response to HIV and Sexually Transmitted Infections in Sri Lanka, External Review Report 2017. Colombo.

Maternal Health ward to help the maternal and child health outreach workers pass on prevention messages.

Lack of Feedback on Data Quality: While there is active feedback from the SIMU team on the quality of HIV data, there is a need for further strengthening in providing feedback on STI data.

3.3.3. Challenges in Relationships with Communities & the Private Sector

No comprehensive knowledge about KP Communities: Due to stigma, legal and social exclusion, many KP communities in Sri Lanka maintain a low profile and visibility.[10] An example is the situation of casual sex workers, who typically work for hotel owners who conspire to keep them hidden, discouraging them from seeking care. In addition, KP mapping skills are not strong within the NSACP. While mapping studies have been done, they are typically done by consultants and with donor support. As donor support is reducing for HIV in Sri Lanka, there is a need for the NSACP to take institutionalize this function and make it part of routine epidemiological surveillance.

Collecting Data from the Private Sector: Collecting data from the private sector is an ongoing challenge.

The above challenges may not be a common challenge across the country in the entire reporting units. This may vary from unit to unit and province to province. NSACP-SIMU is also in the process of providing laptop and other accessories for computers supported with operational guidelines, mentoring support and training as a part of the proposed EIMS.

[10] This was also highlighted as a challenge in the National Strategic Plan. See: NSACP, 2017. National HIV/STI Strategic Plan Sri Lanka 2018-2022. Colombo.

3.4. Learning Objectives

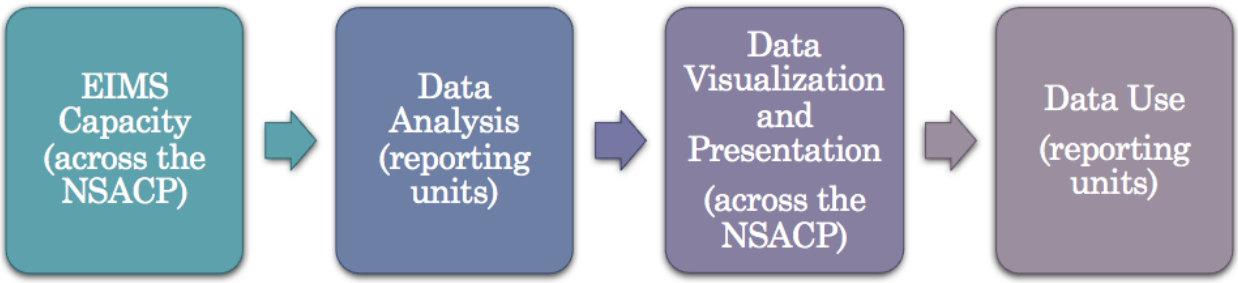
With an understanding of the capacity building goal, the challenges in the way of achieving that goal and the knowledge and skills required to address the challenges, it is possible to define the learning objectives that we are working towards. The following objectives have been identified, listed below in a sequence from data capture (in the new system) to data use:

- To create capacity to use the new EIMS at reporting units and the SIM unit
- To foster data analysis at the reporting units
- To foster data visualization and dissemination at the reporting units and the SIM Unit
- To promote data use at the reporting units

Following this sequence, training should be conducted in a phased manner, so that new knowledge and skills in EIMS can provide a foundation for subsequent training in data analysis and sharing.

Figure 4: Learning Priorities in a Sequence from Data Capture to Use

3.5. Knowledge and Skills Required



What knowledge and skills do the teams require to address the challenges?: To understand training needs, it is important to identify what additional knowledge, skills and competencies are required to address existing challenges (described in the previous section). Not all of the challenges described in the previous section can be overcome with additional knowledge and skills, yet in most cases, capacity building is at least one component of the solution.

Using the EIMS: The introduction of the NSACP Electronic Information Management System (EIMS) will address many of the identified challenges described in the previous section; including reducing data errors, freeing up clinician time by creating efficiencies in entry and reporting, and making it easier to keep patient data confidential. These added efficiencies will hopefully support timely submission of quarterly returns. Knowledge and skills required for the new EIMS are described in Table 4.

Table 4: Summary of Knowledge, Skills and Competencies Required for new EIMS

Application	All stakeholders need to be trained in the EIMS application. Training will occur according to functional groups, so, for example, all Lab Technicians will be trained together on the laboratory module. About 300 NSACP health workers will be trained in the different applications, according to their role (see Annexure 1).
Software	System managers will need to be trained in basic Linux and Ubuntu applications so they can address and solve basic systems software problems. In addition, they will need to be trained to address common hardware problems in terms of computer terminals, keyboards, screens and printers. This will not be a stand-alone position, but an add-on to an existing clinical role, so a Public Health Inspector or a Medical Officer could volunteer to be trained, or they may be requested to adopt this role. About 40 people will be trained in this role (see Annexure 1).

Basic Computer Skills: Computer skills will ensure even uptake of the new EIMS, and allow everyone in the facility to share the roles of data capture and reporting. It was not exactly clear how many people might need this training, but the SIMU team suggest about 100 people should be trained (about one third of program staff).

Computer Skills Grow on their Own

One Medical Officer recounted a story of working in Kilinochchi district in 2009, right after the war ended. Within the district, there were 30 Public Health Nurses who had never seen a computer before, as the area had not had power for the previous 30 years. Computers were installed in that year, but no-one got any formal computer training. Slowly, everyone taught themselves, so they could complete their work efficiently. Computer skills grew to such an extent that in 2015, the district was able to conduct a population based survey with the same Public Health Nurses using a tablet-based data collection tool. This anecdote illustrates the relatively high level of motivation and engagement in professional development activities within the NSACP.

Monitoring and Evaluation Frameworks & Research Skills: Providing M&E and research skills will provide senior staff a big-picture idea of how clinic data can be made useful for improved management decision making. It will also provide the basic research skills necessary to conduct clinic-level research and assessment. Building research skills within the NSACP was also highlighted as a priority in the National Strategic Plan.[11]

M&E Leadership: A number of stakeholders suggested there was a need for greater local leadership for strategic information management. This includes fostering motivation and engagement around data entry and reporting responsibilities, and guiding team work, and improved oversight and review of strategic information management processes. Planning and conducting team trainings for the entire team involved in data collection, reporting, analyzing, etc.

[11] NSACP, 2017. National HIV/STI Strategic Plan Sri Lanka 2018-2022. Colombo.

Data Analysis: Data analysis skills will allow Public Health Inspectors and Public Health Nurses to do simple analyses of the data, to get insights and inform decision making – facilitating stronger local ownership of the data. This will also help clinic-level health workers in the NSACP identify and address bottleneck and challenges, and to enhance quality service delivery.

Analyzing local data will also help staff get a better sense of the epidemic in their local area, to better inform outreach efforts.[12] Learning how to analyze data to create an epidemiological profile will help the team answer the key epidemiological questions such as the levels and trends of STI and HIV in the district, key drivers and vulnerabilities driving the epidemic and the gaps in HIV response to the epidemic needs. This will in turn improve the overall quality of the data reporting and performance of the facility. The need for skills in data analysis was also highlighted in the National Strategic Plan.[13] Data analysis can be taught through DHIS2, Excel and SPSS.

Data Visualization, Communication and Presentation: The way that information is synthesized, packaged, and communicated to decision-makers impacts its perceived relevance, and use in decision making. Data visualization has two functions, it helps analyze and identify insights from the data; and it also helps communicate data to different audiences in novel ways. Presenting data in ways that address decision making priorities will also promote data use. Data visualization can be taught through DHIS2, Excel to PHIs, PHNSs and through SPSS to consultants and MOs.

In hand with this, there is also a need to build communication and presentation skills. This will increase the effectiveness of advocacy and outreach efforts, a priority highlighted in the National Strategic Plan.[14] Considering the variety of audiences to be reached through advocacy efforts, skills in communicating through different media (including face to face presentations, and social media) need to be developed.

Interpersonal Skills for working with KPs: Stakeholders highlighted that some health workers (such as MOs) are assigned to work in STD and HIV clinics, and come to their workplaces with negative attitudes that makes working with KPs difficult. For this reason, members of KPs do not feel comfortable and risk behaviours are under-reported, making it difficult to understand or address the epidemic's dynamics. There is a need for health workers to address their own attitudes and prejudices on deployment within the NSACP (as part of in-serve training). This will strengthen their relationship with KPs, improving care-seeking, and improve patient reporting. This was also highlighted in the National Strategic Plan as a priority, under the banner of 'creating a supportive environment' and combatting stigma.[15]

[12] Also highlighted in: National STD and AIDS Control Program, Ministry of Health, Nutrition & Indigenous Medicine, Govt. of Sri Lanka 2017. National Health Sector Response to HIV and Sexually Transmitted Infections in Sri Lanka, External Review Report 2017. Colombo.
[13] NSACP, 2017. National HIV/STI Strategic Plan Sri Lanka 2018-2022. Colombo.
[14] NSACP, 2017. National HIV/STI Strategic Plan Sri Lanka 2018-2022. Colombo.
[15] NSACP, 2017. National HIV/STI Strategic Plan Sri Lanka 2018-2022. Colombo.

Table 5: Summary: Key Skills Required

Domain	Specific Skills
Basic Computer Skills	Turning the computer on Logging in Using the barcode scanner Using a mouse or trackpad Typing/ using the keyboard Using the printer Using the scanner Basic Linux Basic Office programs Sending an email
Data Visualization	Creating infographics and conceptual diagrams (qualitative) Basic graphs in Excel and DHIS 2 (quantitative)
Supportive Supervision and Data Auditing	Data auditing and validation Interpersonal communication skills Providing feedback
Data Analysis	Quantitative data collection and analysis Advanced Excel software SPSS Skills for interpreting programmatic implications of M&E data
Data Dissemination	Identifying the audience, purpose and key messages of each specific dissemination effort (presentation, brief), and crafting dissemination products accordingly. Presentation skills Social Media Scientific and policy writing Desk top publishing Documentation
Data Use	Matching decisions to specific indicators Ensuring decisions are informed by available data Assessing constraints to data use
SIM Leadership	Fostering a sense of purpose around SIM tasks Providing motivation and feedback around SIM tasks
Basic Research Skills & M&E	M&E Frameworks Group Discussions, KIIs Case studies Study design

3.6. Best Practices to Meet CB Objectives

***How* should we best build SIM capacity in the NSACP?:** Through the assessment process, a number of stakeholders highlighted that health workers in Sri Lanka were highly motivated in seeking ongoing learning opportunities. Aside from training, a number of simple best practice low- or zero-cost interventions and approaches are proposed to complement and follow up training efforts to build the skills described in the previous section (see Table 5). These capacity building mechanisms will leverage this pre-existing motivation and further cultivate a culture of ongoing learning and professional development. In turn this will create incentives for improved SIM performance. These have been selected to suit the organizational context of the NSACP and the identified capacity building goals and objectives, described in the previous section.

Preferred Training Format: Most stakeholders reported that they prefer contiguous-day (as opposed to, for example, one day a week over three weeks) classroom-based training programs. There is perceived benefit in everyone being together in the same room, providing an opportunity for people from different clinics to meet, socialize and learn together.

A number of stakeholders mentioned that trainings should be skills based, include group work, include lectures and discussion. Readings and homework (for example, local data analysis) should be sent out prior to the commencement of the training, so people can start thinking about the material and then be more receptive to training content.

In addition, a number of respondents mentioned that having everyone together for a training program was also an opportunity to have some team-building and social activities such as a dinner or a sight-seeing visit. This allows people to build work relationships, to share information and skills and learn from each other. This should always be factored in to training planning.

A number of people said online training would suit Consultants – as they will usually have a private practice they need to maintain, so do not prefer residential training programs. Online programs for most staff were not preferred because it's perceived as difficult to maintain motivation and engagement with such a format. In addition, senior staff were not sure their staff would be sufficiently motivated to pursue an online program.

It is clear that there is not a pre-existing readiness to embrace online training at this time for most staff. However, this can be revisited. Connectivity is currently poor and most NSACP health workers are not used to using computers as a learning tool. Once the hardware and online capability is in place for the new EIMS and the system is up and running, people may also be more willing to engage in online or blended training (including, for example, distance learning seminars and skype-based training).

Table 6: Summary of Preferred Training Formats

Cadre	Preferred Format
Consultants	Online or blended approaches
All other staff	Contiguous-day training programs where everyone is together

EIMS Support: One clinic staff person (probably the PHI, 1 per clinic) will be given training to play the role of "systems manager", one person who is given more comprehensive training and can address common hardware and software problems, and can trouble shoot more complex problems. In addition, in cases of staff transfers or absences where a trained systems manager is not available, a dedicated telephone number (or "hotline") needs to be established so that the ICT Coordinator from the SIMU unit can assist with urgent queries. This will ensure systems glitches do not interrupt workflows.

Clear Transition Plan: Many stakeholders reported concerns about the transition process from paper based to electronic patient records. The timeline, training plan, hardware procurement and reporting transition process needs to be communicated to all stakeholders well in advance so everyone has a common vision of the EIMS rollout.

Assign Roles and Responsibilities to the Clinic Team: Job responsibilities in the NSACP are generic and do not reflect the day to day responsibilities of the reporting units or SIMU team. It is very difficult to change job descriptions as they are government documents. However, clear roles and responsibilities provide people with an unambiguous sense of direction, and clear lines of accountability for specific tasks being completed – helping increase motivation and engagement. In Annexure 3, clearly defined SIM roles and responsibilities are provided for each cadre. In many cases, these are team responsibilities, not individual responsibilities. **Team based responsibilities** will help work around the high staff turnover and ensure that everyone can work across roles for greater efficiency, and team spirit. It will also foster a common sense of ownership over strategic information management functions. These roles and responsibilities have been adapted from NSACP induction training slides, but also expanded to include a greater emphasis on data analysis and dissemination through discussion with the SIMU team.[16] This simple intervention has no cost attached to it. These need to be ratified through a stakeholder meeting to get everyone's commitment to the roles and responsibilities. In addition, roles and responsibilities can be reviewed periodically. Once ratified, these roles and responsibilities should be communicated to all stakeholders, and be accessible and visible to all (for example, posted on the wall).

Team Based Approaches to EIMS and SIM Strengthening: A team-based self-assessment leverages the high level of motivation and engagement within the NSACP for ongoing program improvement. Medical Officers and Consultants can lead a team-based approach to assessing the clinic team's capabilities in monitoring and evaluation, and then seek additional support as required. The team will first fill out a self-assessment checklist to identify their own strengths and weakness and then work

[16] These expanded responsibilities are adapted from the following document: UNAIDS Monitoring and Evaluation Reference Group, 2009. Standards for a Competency Based Approach to Monitoring and Evaluation Curricula and Trainings. Geneva.

together to address any challenges identified, including seeking support from the SIMU team where required. This assessment can be done prior to scheduled **supportive supervision visits** from the central SIMU team. This will create local ownership of strategic information management functions and capability, and help teams be more proactive in seeking support. A format is provided in the Annexures, adapted on a tool developed by MEASURE Evaluation, and tailored to the local systems context.[17] This will ensure training and capacity building needs are identified by the clinics themselves. However, information about training needs will need to be regularly collated by the SIMU team, and a suitable training plan devised.

Increase Supportive Supervision for Data Quality: Some data quality visits have been made, but they have been too few in number.[18] Visits need to be regularized and also prioritized according to the clinics that are struggling to report quality data in a timely fashion. In addition, visits will need to ensure people are using the new EIMS and to provide support for any challenges faced. Increased feedback on data quality was also highlighted as a priority in the National Strategic Plan.[19]

An Online M&E Library: M&E resources, guides and frameworks from groups such as MEASURE Evaluation, UNAIDS and WHO can be posted on an online library for staff to access for self-study. A short paragraph from the SIMU Coordinator and the central SIMU team can explain why each resource is useful and relevant to the Sri Lankan epidemic and programmatic context.

Develop a Post Training follow-up WhatsApp Group: While not everyone within NSACP has **smart phones**, many do and usage is likely to increase over time. Two groups that will likely have smart phones or access to smart phones are those trained as Systems Managers, and those trained in Advanced Excel. For these two groups, a post training WhatsApp group can be set up to share tips, successes and solicit advice for any challenges faced. This is an efficient way to build group rapport, and also provide post-training follow up support.

Develop Infographics for Shortcuts and Tips: One of the training priorities is to develop Advanced Excel skills. To leverage the WhatsApp group, a weekly shortcut or Excel tip can be sent out as a visual WhatsApp message. Attractive infographics can be made in PowerPoint at almost no cost, or a graphic designer can mock them up quickly at a low cost. Examples are provided as in Annexure 4.

Motivation and Recognition: Use the Quarterly Review Meetings to Celebrate Data Use: The quarterly review meeting format needs to be revised so that it's not just about simple data reporting. Clinic teams should use this internal NSACP platform to share examples of how they have used the analyzed data to better reach their population and more effectively manage the clinics. It needs to be a celebration of data use. Awards can be provided to the best use of data for program and service delivery improvement. This recognition will increase motivation around strategic information management.

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[17] Bhattarai, Hare Ram. 2017. Guide to a Team Based Approach to Building Capacity for Health Information Management. MEASURE Evaluation, Chapel Hill.

[18] Also highlighted in: National STD and AIDS Control Program, Ministry of Health, Nutrition and Indigenous Health, Govt. of Sri Lanka. 2017. National Health Sector Response to HIV and Sexually Transmitted Infections in Sri Lanka, External Review Report 2017. Colombo.

[19] Data analysis can be taught through DHIS2, Excel and SPSS.

Template Presentations and a Plan for Improved Data Sharing: The assessment revealed a number of missed opportunities to share data at different meetings within the NSACP, within the health system at large, and in the community. At the same time, it was clear that health workers are very busy. For this reason, the central SIMU team can create template PowerPoint presentations with standard formats for data visualizations. These can then be tailored to the clinic's own needs and the needs of the specific audience for each presentation by the clinic team themselves. A list of different meeting platforms in provided below in Table 7. These meeting platforms provide opportunities to collectively discuss, review and interpret data. In particular, the monthly meetings need to be better utilized to review data so there is a clear understanding of who is being left behind in outreach efforts. In addition, promoting active data use at these meetings will help create a culture of data use.

Alongside this, each clinic should develop a data sharing plan for their regular meetings within the community and the health sector. This should be aligned to the points in time when different management and policy decisions are made at different levels of the health system.[20]

[20] The following tool may be helpful: MEASURE Evaluation, 2007. Decision Making Calendar, Chapel Hill. https://www.measureevaluation.org/resources/tools/data-demand-use/ddu-decision-calendar

Table 7: Existing Meeting Platforms for Clinics to Share their Data

Meeting platform	Frequency	Run by	Key stakeholders present
Outreach Meetings (in factories, workplaces, communities)	Ad-hoc – approx. twice weekly	PHI, PHNS, MO-IC	Various.
Clinic Meetings	Monthly	MO-IC, Consultant	Clinic staff
District Meetings	Monthly	Regional Directorate of Health Services	All health workers across district
Provincial Meetings	Quarterly	Provincial Directorate of Health Services	All PH-IC across province (e.g. MO-IC, Consultants)
Review Meetings	Quarterly	NSACP	All NSACP health workers across country

Research and Knowledge Management Oversight Committee: A technical working group bringing together experienced social scientists, epidemiologists, laboratory scientists and clinicians needs to be formed to brainstorm priority research questions and what kind of research designs can best address these questions. This will require fostering institutional partnerships with academic institutions, medical colleges, social sciences institutions, research institutes and other private research organizations. Funds also need to be factored into annual budgets to ensure this research can occur. This was also highlighted as a priority in the National Strategic Plan.[21]

Bring out Bulletins on Different Topics: M&E Bulletins can be produced every 6 months, with detailed analysis of all the data on various thematic areas such as PMTCT, KP coverage, ART, and STD profiles. This will build clinic workers own knowledge of the epidemic and the national program. In addition, analysis tasks can be shared among different health workers within the NSACP so creating the bulletins represents a collective country-wide effort, and there is a sense of common ownership. Topics for these bulletins can be brainstormed annually in the "Research and Knowledge Management Oversight Committee" described above, and ratified during the quarterly meetings. Topics should be tied to advocacy or decision-making priorities.

A Training Coordination Committee: An NSACP training coordination committee can support the training coordinator by establishing common guidelines and overseeing processes for organizing training programs. The committee can work to create an annual plan with a timeline, designating point persons for each training, develop sub-activities for each training, provide ongoing oversight and review of training activities. This will ensure that all training activities are smoothly integrated into program workflows and schedules.

[21] NSACP, 2017. National HIV/STI Strategic Plan Sri Lanka 2018-2022. Colombo.

3.7. Capacity Building Resources

***Who* are the best providers for SIM capacity building?:** One of the guiding principles in the assessment was to leverage existing local resources as much as possible. In addition, most stakeholders highlighted they prefer training to be internal, conducted by people who understand the context, the program, the health system and the epidemic. It will also build NSACP consultant leadership if they build skills in adult education and training.

At the same time, a number of stakeholders reported that they wanted a certificate from a reputed organization. For this reason, it is recommended that the NSACP partner with external agencies so training can be tailored to the program's needs, and yet a certificate from a reputed organization can be provided to all those that complete training. Such partnerships with academic institutions will also facilitate research collaborations.

The assessment asked stakeholders for recommendations of known training providers in Sri Lanka and the region in strategic information management. These have all been catalogued in the table below according to capacity building domain. In addition, further research identified additional providers in the region, all listed in Table 7.

The SIM unit may also empanel trainers or resource persons for developing training curriculum, training manuals, conducting training programs and providing need-based technical support both onsite and offsite.

Table 8: Capacity Building Providers in Sri Lanka and the Region.

Priority Capacity Building Domain	Training Provider – Individual and Institutions
EIMS Application & DHIS 2 EIMS Software & DHIS 2 Basic Computer Skills	• Lunar Technologies: http://www.lunartechnologies.net/ • Sri Lankan Institute Development Administration: http://www.slida.lk/ • National School of Business Management: http://nsbm.lk/ • ESoft: http://esoft.lk/blog/branch/colombo-head-office/ • National Institute of Health Sciences: http://nihs.gov.lk/ • National Apprentice and Industrial Training Authority: http://www.naita.gov.lk/ • Sri Lankan Institute Development Administration: http://www.slida.lk/ • National School of Business Management: http://nsbm.lk/ • Information and Communication Technology Agency of Sri Lanka: https://www.icta.lk/
Intermediate Excel	• Dr Dileepa Endagamage Wedage at University of Sri Jayawardenepura, Colombo: http://mgt.sjp.ac.lk/dsc/dmew/ • Sri Lankan Institute of Development Administration: http://www.slida.lk/ • National School of Business Management: http://nsbm.lk/ • ESoft: http://esoft.lk/blog/branch/colombo-head-office/ • National Institute of Health Sciences: http://nihs.gov.lk/ • National Apprentice and Industrial Training Authority: http://www.naita.gov.lk/ • Post Graduate Institute of Science, University of Peradinya: http://www.pgis.pdn.ac.lk/pgdip.php
Basic Research & M&E Frameworks	• Dr Manuj Verasinghe, University of Colombo • Professor Rajita Wickramsinghe: http://medicine.kln.ac.lk/depts/publichealth/prof-wickremasinghe.html • Dr Himanshu Negandhi, Public Health Foundation of India/ Indian Institute Public Health Delhi • PHFI Online & Project Based M&E Certificate Course: https://phfi.org/iiph-delhi/training-programs/ • VHS, Chennai, http://vhschennai.org/ • Sambodhi, http://sambodhi.co.in/
M&E Leadership	• Virtual Leadership Development Program: https://www.msh.org/resources/virtual-leadership-development-program-vldp
KP Mapping and Epidemic Size Estimation	• Dr Manuj Weerasinghe, University of Colombo • Dr Tobi Saider • Dr Yujwal Raj Pinnamaneni
Scientific Writing	• Laili Irani & Niranjan Saggurti, Population Council of India
Data visualization and presentation (including GIS)	• Indian Institute of Human Settlements, Bangalore. http://iihs.co.in/

4. Training Plan for Strategic Information Management Functions

Following the assessment, priority trainings have been identified illustrated on Table 8. These training programs are scheduled aligning with for the period from 2018-2022. As this is a cadre-based assessment, additional individual requirements have not been prioritized at this time.

1. **System-Wide Capacity to Use the new EIMS:** This plan for EIMS training is described in detail in Annexure 1. Annexure 1 is designed to be a stand-alone document for planning in hand with Lunar Technologies and other partners. A snapshot is also provided below.

2. **Data Analysis & Visualization at the Reporting Unit Level:** Training for data analysis and visualization is provided below. The idea is that this would be a program tailor made to the needs of the NSACP, including simple analysis, with a strong focus on communicating data through identifying key messages, visualization, and understanding the decision-making needs of the audience. This budget does not include materials development or curriculum design.

3. **Data Use at the Reporting Unit Level:** This program would again be tailored to the needs of the NSACP, and very much focused on giving program leaders an understanding of M&E frameworks, so they can understand the utility of routine data for answering research questions; provide leadership around data and research at the local level and even design research in their locality. Materials exist that can easily be adapted, but this budget does not include material development or program design.

4. **KP Mapping and Epidemic Size Estimation:** As the nature of the epidemic in Sri Lanka is unique, this training program would again need to be tailored to the NSACP's requirements. A tool has already been developed for KP Mapping, and teaching materials exist that can easily be adapted. This budget does not include the cost of material development or program design.

5. **Team Self-Assessment Checklist Orientation:** A brief orientation to this checklist (see Annexure 2) will help consultants and MO-ICs understand how to implement it, and ensure they take ownership of team-based quality improvement efforts.

Table 9: Training Plan for SI team, NSACP, 2018-2020

	CB Measure	Target Cadres	Nos.	Nodal Person	Length	Budget Required	Timeframe
1	Training on EIMS Software	See Annex 1	40	Dr Muraliharan Amila	See Annex 1	Within Lunar Tech contract	Before 31st Dec 2018
	Training on EIMS Applications		300	Dr Muraliharan Amila		Within Lunar Tech contract	Before 31st Dec 2018
	Training in Basic Computer Applications		100	Dr Muraliharan Amila		Within Lunar Tech contract	Before 31st Dec 2018
2	Training in Data Analysis and Visualization using Advanced Excel& DHIS 2	PHNS, PHIs, MLTs & PHLTs – 41	41	Dr Muraliharan Dr Himali	3 days	SLR 467,000	2019 Q2
	Training in Data Analysis and Visualization, Using SPSS	Consultants	35	Dr Muraliharan Dr Himali	3 days	SLR 454,250	2019 Q2
3	Training in M&E Frameworks & Basic Research	Consultants	35	Dr Muraliharan Dr Himali	3 days	SLR 454,250	2019 Q3
4	KP Mapping	PHNs & PHIs	41	Dr Muraliharan Dr Himali	3 days	SLR 467,000	2019 Q4
5	Team Self Assessment Checklist Orientation	Consultants & MO-ICs	59	Dr Muraliharan Dr Himali	1 day	SLR 320,850	2020 Q1

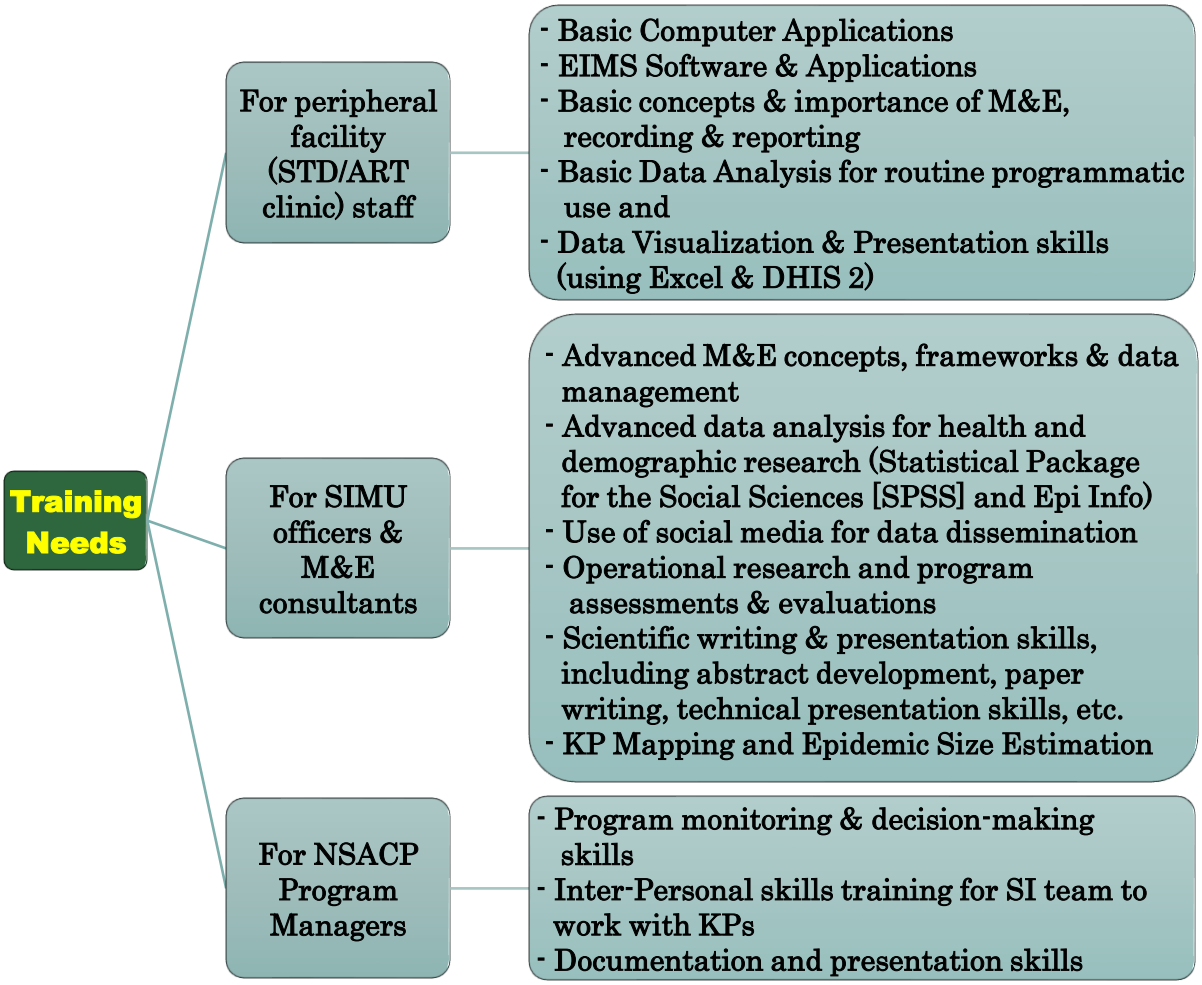
4.1. Monitoring for Strategic Information Management Capacity Building

To ensure the objectives are achieved, monitoring is required. The following results indicators have been selected to monitor whether the training needs and assessment plan is implemented according to the timeline (see Table 9). These results indicators are suggestions only, and can be adopted or discarded as per the NSACP teams' preferences.

Table 10: Results Indicators for the Training Needs Assessment and Training Plan

Objective	Results Indicators	Achieved (y/n)
To create capacity to use the new EIMS at reporting units and the SIM unit	Revised roles and responsibilities defined for all SIM tasks within NASCP, taking into account new EIMS	
	All cadres trained in EIMS & DHIS2	
	Preservice EIMS SIM training topics defined and institutionalized	
	Adopt and deploy a standardized tool and process for assessing team based knowledge, skills and competencies and establish a formal mechanism to routinely use this tool to determine career development needs and to provide a basis for performance reviews.	
	Develop a DQA Supportive Supervision Roster	
	Systems manager available for every clinic	
Data analysis at the reporting units	Develop / adapt and promote standardized curricula to train specific categories of personnel in M&E technical and managerial skills.	
	All relevant cadres trained in DHIS2, Excel or SPSS as appropriate.	
Data analysis, visualization and presentation at the reporting units and the SIM Unit	Develop guidelines for presenting data at the quarterly review meetings	
	Develop templates for reporting data at existing meeting platforms	
	Post training analysis & visualization WhatsApp group established	
	Data sharing plan created, including through social media	
	Bulletins on different topics: schedule and analysis plan created	
	Training in scientific writing	
Data use at the reporting units	At quarterly meetings, all reporting units are able to provide examples of data use	
Cross-cutting support	Costed training plan adopted	
	Relevant cadres trained in M&E frameworks, research skills	
	Online M&E library developed	

5. Training Needs



6. Recommendations

The assessment covered the full range of strategic information management functions, to identify priority capacity building requirements. The entire assessment was action-oriented, and this document provides extensive guidance on moving forward. To clarify next steps, the following recommendations have been prioritized:

1. **Adopt the training plan into the existing training calendar:** The training plan calls for building skills in the EIMS, and fostering greater local ownership

2. **Adopt the additional capacity measures**: Help make NSACP a learning organization by ensuring that capacity building is not just seen as training. Adopt the additional capacity measures described in Section 3.6, as feasible.

3. **Team self-assessment checklist:** In particular, the team self-assessment checklist should be adopted. This is to be administered in hand with a **supportive supervision visit**, will help create clinic-based ownership and demand for SIM capacity building. It will ensure training and capacity building needs are identified by the clinics themselves. This will institutionalize the training needs assessment process, and ensuring that the process is participatory. The SIMU team will, however, need to collate and organize the training needs from the self-assessment checklist.

4. **Online and blended learning approaches**: Foster a transition towards greater emphasis on online and blended learning approaches. The assessment made recommendations for Consultants and MOs to get trained through online and blended approaches only. A variety of reasons were given for not engaging in online training at this time. However, we suggest all cadres should be transitioned toward online and blended training approaches. This will create cost efficiencies and also ensure consistency in training delivery quality. The network enhancements required to make the EIMS functional will make online training more possible. Efforts may be made to introduce e-groups, distance learning, seminars, blogs for sharing best practices and experiences, etc.

5. **Develop training guidelines** to standardize training planning processes, ensure that all trainings have defined learning objectives, training manual, resource materials, pre and post-tests (as appropriate), a clear curriculum, are skills based, and post training follow up mechanisms are well defined. A generic planning checklist is provided in Appendix 5 as a planning tool that can be institutionalized to facilitate this standardization.

6. **National Training Coordination Committee**: Establish a training coordination committee to support the training coordinator. This will help ensure scheduled trainings reflect the whole program's needs. It will also help institutionalize the training guidelines and prioritize requirements from the self-assessment checklist. The committee can also coordinate efforts to **empanel experts** and **manage capacity building partnerships** with external technical assistance agencies or universities.

7. **Roles and responsibilities of SI team**: Roles and responsibilities of different cadre of personnel associated with SI team at different levels has been developed considering the existing and emerging responsibilities in the context of introduction of EIMS. The draft roles and responsibilities may be further reviewed and ratified by the senior management team.

8. **Utilizing the TA agencies support:** Technical assistance from VHS-CDC, FHI-360 and the Global Fund may be utilized **to** develop of training manuals, capacity building and technical update initiatives.

9. **Ensure quarterly review meetings celebrate data use:** All existing meeting platforms need to be better utilized for data sharing. In addition, the quarterly review meetings can be used to celebrate instances of clinic-level data use for routine management and outreach. This will improve motivation and engagement around strategic information management.

Capacity Building Systems – Recommendations

Strong & Sustainable Capacity Building System for NSACP:

- Set up National Training Coordination Committee to plan capacity building initiatives, support the Training Coordinator and strengthen training systems
- Establish a panel of experts to be resource people for CB activities
- Adapt & develop training curriculum, manuals & tools for conducting the planned training programs, leveraging from existing resources
- Prioritize training plans & evolve mechanism for conducting trainings other than supported through TA–including scheduled trainings, on-site trainings, learning & exposure visits, participation in international conferences & workshops, etc.
- Introduce system for conducting induction training for new recruits on joining the program at STD clinics

HR Policies for Effective Capacity Building:

- Efforts to fill up the existing vacancies and improvise the infrastructure by evolving a plan and mobilizing resources
- Develop systems for retaining the existing trained team for minimum 2-3 years (without transfers) for roll-out of the EIMS, for continuity and effective reporting.
- Motivation and recognition for the SI team on best performance / quality reporting / use of data, etc.

Support Systems for Continuous & Ongoing Capacity Building:

- Hotline / helpline to enable peripheral STD clinics to clarify operational issues on reporting through EIMS.
- Use of virtual platforms for providing technical update and follow-up
- Use of internal platforms (Quarterly Review Meeting) for experience sharing and capacity building.
- Enhancing mentoring and supportive supervision for program personnel
- Bulletin on thematic areas with detailed data analysis (for internal sharing).
- Strengthening systems for data analysis & use of program data for decision making.
- Effective utilization of TA agencies support in capacity building.

7. Conclusions

The assessment has followed a well-defined process to assess the strategic information management training needs for the NSACP. The assessment revealed that capacity building should be done in a phased manner at regular intervals with systematic planning focusing on key strategic information management skills. Some of the important training needs identified include basic computer skills, system management, M&E frameworks, research methodologies and scientific writing. The assessment identified regional resources (institutions & individuals) for providing training on identified areas and highlighted the need for a participatory approach to capacity building planning. The assessment has helped develop a comprehensive need-based training plan and identified mechanisms for enhancing knowledge and skills of SI teams in effectively and efficiently performing their current and future roles. The assessment also recommended that the training plan to align with the M&E plan of 2020 and the National Strategic Plan 2018-2022.

The assessment outputs are depicted in Table 11 below. Moving from the dark section, towards the lighter section:

1. First the challenges are defined, then
2. The additional knowledge required to address these challenges, then
3. The best mechanisms to build this capacity, and then finally
4. Suggestions on who can provide the training or capacity building support.

Table 11: Summary of the Training Needs Assessment and the Training Plan

Challenges	Addl Knowledge Required	CB Mechanisms	Who will provide training
Poor quality data Challenges in Patient Tracking Data Entry and Reporting is Time Consuming Stock-outs difficult to manage Human Resource Constraints Infrastructure constraints	EIMS Applications & Software	Training in EIMS, including DHIS2 Supportive supervision for data quality Handholding by the "Systems Manager" Clear transition plan Team based approach: self-assessment Clear roles and responsibilities	Lunar Technologies, in hand with SL training provider
Lack of Computer Skills	Basic computing	Basic computer training	
Lack of Local Ownership Low Priority given to SIM	M&E Frameworks & Leadership, Research skills	M&E Frameworks & Research Training An online M&E Library Use meetings to celebrate data use Bulletins on different topics	VHS, SIMU Team
Poor skills in data, analysis, synthesis and presentation	DHIS2, Excel	Training in data analysis, visualization and presentation using DHIS2 and excel, Post-training WhatsApp group Infographics for short cuts and tips Use meetings to celebrate data use	IIHS Bangalore, SIMU Team
Missed opportunities for data sharing	Data presentation skills Documentation Scientific Writing	Create PowerPoint templates for clinics Create a data sharing plan. Bulletins on different topics Research & KM coordination committee	SIMU Team
Lack of feedback on STD data quality	How to enter data correctly, common data FAQs	Team-based self- assessment checklist, Supportive supervision	SIMU Team
Poor Knowledge of KP Communities	KP Mapping Developing case studies	KP Mapping Training Bring out bulletins on different topics	SIMU Team
Poor patient reporting	Interpersonal skills for treating KPs, Attitude self-assessment	Incorporated into induction training	NSACP Training Coordinator
Collecting data from the private sector	Building influence, leadership	Cover this in induction training	NSACP Training Coordinator

Annexure 1: NSACP EIMS Training Plan

September 2018

This document describes the training required to rollout the EIMS at scale for the National STD and AIDS Control Program (NSACP) in Sri Lanka. Three different subsets of training are defined; for (1) Systems Managers; (2) Basic Computer training and (3) Training in the different EIMS applications.

Format: Training will need to be skills-based with plenty of opportunity for practice. It needs to be conducted in small groups of no greater than 25 participants.

Who will conduct the training?: Training will need to be conducted by a specialized agency with experienced trainers. The software developer, Lunar Technologies, has informally indicated they have limited bandwidth or capacity to conduct training at scale. However, a developer should be present at all trainings, as it is during training that many system bugs are identified (even with prior beta-testing). These need to be identified and remedied immediately.

Post-test format: In all cases a post-test format will need to be administered to assess trainees comfort with each of the functional areas. These results can be used to assess the effectiveness of the training and plan post-training follow up (who receives support in what topics).

How will training be rolled out geographically?: Training will be conducted in province clusters depicted in Table A1, and according to the schedule described in Table 2.

Where will the training be conducted?: Training will be conducted in hospital auditoriums or the auditoriums attached to the Regional Director of Health Services' offices. Trainees will need to bring and use their own laptops after they have been procured and delivered, as they need to be trained on the actual laptops they will use, and on a laptop that has Linux.

Additional products: As well as training, a system manual and "Frequently Asked Question" formats (approximately 10 in number, according to identified needs) will need to be developed. Every effort will be made to ensure the user manual is easy to use and helpful to all users. Videos have also been suggested as a reference tool, but most users report this is not their preferred format to receive information, so these are not recommended at this time.

1. **Systems Managers**
   System Managers will be trained to be the point people in each clinic who can provide day to day support to all staff in EIMS functioning, including software and hardware trouble shooting. These people will be self-nominated from each clinic, but will ideally be Public Health Inspectors (they may include the Medical Officer In-Charge where there is no PHI).

   Training Content & Approach: Content will include basic Linux & Ubuntu; hardware trouble shooting; coaching and mentoring (soft skills); basic functions in all applications. Training will be hands-on and skills based, and will include

problem solving activities to prepare systems managers to trouble-shoot users queries.

Equipment & Resources: This needs to be scheduled after the initial laptop procurement and they will bring their own designated laptop with Linux uploaded (see Table 2 for timeline).

Location: Training will be scheduled in a RDHS office, university or hospital auditorium in a location convenient to the majority of the participants according to the provincial clusters outlined in the table below (see Table 1).

Additional resources: The additional resources required to be developed to support this training include a Systems Manual, QREFs, template presentations they can make during monthly meetings (something like "5 top tops for Feb").

2. **Basic Computer Use**

Medical Officers and the SIMU team estimate that about 30% of their staff need basic computer training, with a ballpark figure of 100 people. This training program will cover turning the computer on, using a keyboard, using a mouse, data entry, printing, scanning barcodes, and basic Linux. Systems managers can serve as resource people during the training to build their own skills in hand-holding and one-on-one teaching.

Timeframe: This will be scheduled so it occurs right before the Application trainings, described below. This training will be scheduled to last 1 day, with lots of time for practice and problem solving. This needs to be scheduled after the systems management training (see Table 2 for timeline).

Equipment & Resources: This will need to occur after the initial laptop procurement and they will bring their own designated laptop from the facility with Linux uploaded.

The resource material developed for the system managers can also be used for these trainings. In addition, system managers will be encouraged to develop further materials as per the needs identified.

Location: Training will be scheduled in a RDHS office, university or hospital auditorium in a location convenient to the majority of the participants according to the provincial clusters outlined in the table below (see Table 1).

Logistics: Lunch and all training materials will be provided by the vendor (photocopies etc.).

Table A1: Province Clusters for EIMS Training

Provinces	# clinics to be covered	# staff to be trained[22]	Notes
Northern, Eastern	9	62	Tamil speaking
Central, Uva, North Western, North Central	9	85	Many remote clinics, may require additional support.
Southern, Sabaragamuwa	8	64	
Western	8	94	Colombo province

3. **Application Training**
   Different staff will need to be trained on different applications according to their designation and facility-based responsibilities (see Table 3 for summary). Most of these functional applications are expected to take one day of training each (some will require only half a day). Each scheduled program will include extensive practice with dummy data. Systems managers can serve as resource people during the training to build their own skills in hand-holding and one-on-one teaching.

   Timeframe: This needs to be scheduled after the systems management training. (see Table 2).

   Equipment & Resources: This will need to occur after the initial laptop procurement and they will bring their own designated laptop from the facility with Linux uploaded. The resource material developed for the system managers can also be used for these trainings. In addition, system managers will be encouraged to develop further materials as per the needs identified.

   Location: Training will be scheduled in a RDHS office, university or hospital auditorium in a location convenient to the majority of the participants according to the provincial clusters outlined in the Table 1. The one variation here is that the chief pharmacist can be trained in their lab in Colombo, as the numbers are so few.

   Logistics: Lunch and all training materials will be provided (photocopies etc.).

Table A2: Timeline

Dates	Task	Who responsible
September 2018	Order laptops	Dr Murali, Amila and GFATM Procurement officer
November 2018	Receive laptops	GFATM Procurement officer
November 2018	System Manager Training in Colombo	Lunar Technologies
November 2018	Basic Computer Skills in 4 province clusters	Lunar Technologies
December 2018	Application training in 4 province clusters	Lunar Technologies

[22] All staff excluding assistants

Table A3: Summary of Required EIMS Trainings

	Topic	Cadres to be trained	Numbers to be trained	Topics Covered (list)	Length
1	**Systems Management**	Probably the PHIs, sometimes MOIC or Consultant.	40 *34 Clinics, 6 additional NSACP consultants*	• Why the new EIMS? How this system serves the NSACP • How to do system back-ups • How to run during power failure – min functions (turn off printer, internet) • Tailoring EIMS for local context, (e.g. List of drugs, list of tests, per site availability) • Networking, internet connection • DHIS-2 – report generation • Managing hardware, barcodes, printing, trouble shooting • Connecting to network, and internet • Connecting to printer • Basic Linux/ Ubuntu • Switching back and forth between Windows and Linux • **How to provide active mentoring/ coaching & supportive supervision** • **All Application Areas**	3 days
2	**Basic Computing Skills**		100 *Guess according to reports from various clinical staff*	• Turning computer on and off • Using a mouse • Printing, printer connections • The keyboard • Using the internet • Basic Linux	1 day

	Topic	Cadres to be trained	Numbers to be trained	Topics Covered (list)	Length
3	**Application Areas**				
a	Patient Registration	Nurses, PHI, PHIN (ALL)	113	• Why the new EIMS? How this system serves the NSACP • Patient Registration • Injection room • Bleeding room • Default tracing • Generate PHN number, print sticker • Generate labels for lab samples • Print token number	1 day
b	ART Stock Maintenance	Chief Pharmacist	2 All	• Stock maintenance (ARVs, STD drugs)	½ day
c	Pharmacy	Pharmacists & Nurses	75	• Why the new EIMS? How this system serves the NSACP • Dispensing drugs • Stock maintenance • Returns • Using the barcode reader • Printing label with instructions	2 day
d	Laboratory	MLT & PHLT	78	• Why the new EIMS? How this system serves the NSACP • Microcopy • Serology • Culture • Molecular • Stock management • Returns • Reception (Receiving and reports) • Reconfirmation • Using web came to take picture of samples and results	1 day for for MLTs; 1 day for PHLTs

	Topic	Cadres to be trained	Numbers to be trained	Topics Covered (list)	Length
				• Barcode reader • Barcode printer	
e	Medical Records	MOs/ Consultant/ PG trainees	161 All	• Patient Registration • Maintaining medical records • Default tracing • Barcode reader • Managing barcodes for smear slides	1 day
f	Data analysis & visualization	**PHNS & PHIs & MLTs & PHLTs – 41 (+9 extra for places where the MOIC should know this)**	41	All DHIS 2 • Analyze data in pivot tables • Use the data visualizer app • Using the GIS app • Using the Maps app	2 days
g	Data quality and approval	Consultants & MOICs	59	All DHIS 2 • Conduct data quality checks • Approve data	1 day

Annexure 2: Reporting Unit SIM Self-Assessment Checklist

This self-assessment checklist can be conducted by Consultants or MOs with the reporting unit team prior to a scheduled Supportive Supervision visit from the Central SIMU team. Going through this checklist will help the reporting unit have a stronger sense of ownership of their own data and data processes, and support them in being proactive in seeking support from the central SIMU team.

Name of the Facility_____

Data of the Assessment_____

Name and contact of person leading team self-assessment_____

_____

Desired SIM Attributes at Reporting Unit Level	Status *(MO or Consultant to write in details)*
Do we know the SIM system?	
Can we explain the structure and purpose of the EIMS and SIM?	
Do we agree that SIM processes support us in providing better services?	
Do we understand the purpose of data elements and indicators relevant to STDs and HIV? Can we provide an example?	
Do we conduct regular meetings to review administrative matters related to strategic information management?	
Do we know our facility and the team?	
Do we use appropriate and functional computer hardware and software networked to the facility level?	
Do we submit reports and upload data to server using the EIMS?	

Have we faced any challenges in this regards?	
Do we have trained staff available to fulfill SIM responsibilities?	
Do we all have written SIM roles and responsibilities, and are familiar with them?	
Do we work as a team to fulfil SIM responsibilities?	
Do we know our catchment area?	
Are we familiar with key STD & HIV indicators for our catchment area?	
Can we estimate the KP numbers?	
Do we know our data?	
Do we accurately record service data? Do we accurately record lab data? Do we accurately record pharmacy data?	
Do we balance data capture and reporting and clinical delivery well?	
Do we have a documented policy on confidentiality, privacy, and security of personal health data?	
Do we know what is meant by "privacy" and "confidentiality" in relation to providing health services? Do we know how to maintain privacy and confidentiality of a patient's personal data? Do we keep the personal data of patients confidential?	

Have we conducted a data quality audit?	
Do we all have knowledge and skills to periodically check data quality at our level?	
Do we know how to use our data?	
Do we aggregate, group and analyze the data using DHIS 2, Excel or another program?	
Do we create easy to understand data visualizations? (such as graphs)	
Do we use PowerPoint to present and explain data to external audiences?	
Do we use data to identify gaps, make plans, and take action? Can we think of examples?	
Can we use our data to make recommendations at quarterly meetings?	
Do we proactively ask for SIM support when we need it?	
Training needs	
After considering our capacity in terms of strategic information management, what additional knowledge skills and capacities do we require?	
What is the best way for us to build these?	

Annexure 3: SIM Roles and Responsibilities

In all cases, these key suggested responsibilities are a combination of predefined responsibilities and additional ones added to emphasize EIMS management and data dissemination and use – developed in discussion with the SIMU team. All new responsibilities added are in italics. These suggested roles should be ratified through a stakeholder meeting, and reviewed periodically. These responsibilities are assigned to specific cadres, but must be understand as team based responsibilities.

Table A4: SIM Unit Roles and Responsibilities

Cadre	SIM Responsibilities
Consultant Venereologist, Coordinator/ Strategic Information.	• Coordination of strategic information in HIV and STDs • Supervision of SIM unit staff • Provide guidance and contribute to data collection, analysis • Provide guidance and contribute to publications and website • Provide consultant services to HIV and STD clinics of NSACP • Participation in postgraduate training and examinations conducted by Postgraduate institute of Medicine, University of Colombo • *Provide feedback on data reports* • *Set SI operational targets* • *Present information in easy-to-understand, visually appealing formats* • *Compare results across facilities or regions* • *Conduct trend analyses* • *Take action supported by evidence* • *Present data at meetings*
Medical Officer, SIM Unit, NSACP	• Data management • On site data verification • Report generation • Preparation of dashboard reports • Organizing review meetings • Preparation of reports • *Provide feedback on data reports* • *Present information in easy-to-understand, visually appealing formats* • *Prepare ad-hoc newsletters, bulletins and briefs* • *Compare results across facilities or regions* • *Conduct trend analyses* • *Take action supported by evidence* • *Respond to requests and recommendations from reporting units* • *Develop strategies and plans using data*
PHNS, SIM Unit NSACP	• Data entry, basis data analysis and preparation of graphs from the quarterly ART returns. • Data entry, basis data analysis and preparation of graphs from the format named Strategic Information on HIV cases.

	• Training of Healthcare workers. • Perform other tasks as requested by the SIM Coordinator • *Present information in easy-to-understand, visually appealing formats*
Development Officer, SIM Unit NSACP	• Data entry, basis data analysis and preparation of graphs from the quarterly STD clinic returns. • Data validation / Quality control /Supervision • Perform other tasks as requested by the SIM Coordinator. • *Present information in easy-to-understand, visually appealing formats*
MO, Informatics	• Coordination of the development of the electronic Patient Information system (EIMS) • Training of Healthcare workers. • Preparation of reports • Staff training in ICT • Any other duties in SIM Unit
ICT Officer, SIM Unit NSACP	• Maintenance of website • Participate in the development, regular revision, and updating of the information systems • Attend to hardware and software issues of NSACP • Perform other tasks as requested by the SIM Coordinator.
M&E officer-GFATM	• Routinely perform quality control check of M & E work, record and report physical process and performance of findings compared to targets. • Participate in and support the documentation process of the GFATM Grant • Perform other tasks as requested by the SIM Coordinator.

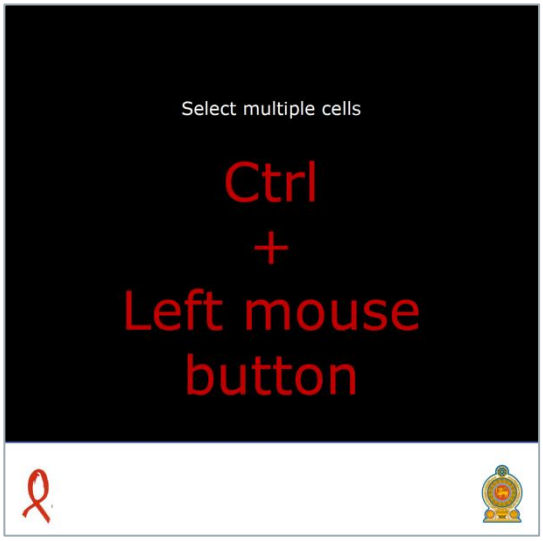
Table A5: Reporting Units: SIM Roles and Responsibilities

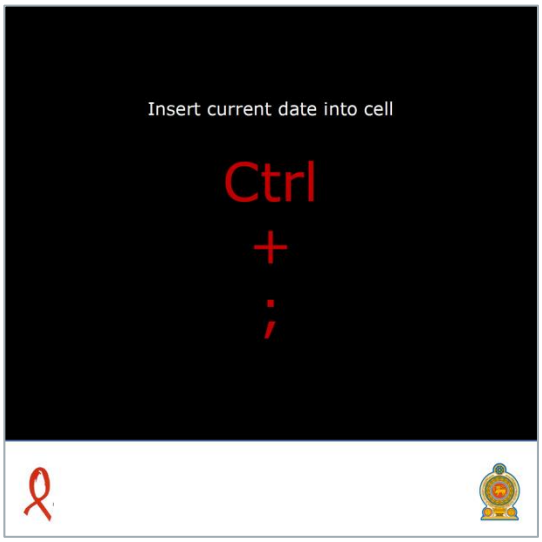
Cadre	SIM Responsibilities
Nursing Officer	• Patient Registration • Inventory Management • Maintain Registers
PHI	• Patient Registration • Maintain Statistics & Conduct Quarterly Returns • Maintain Registers • *Identify high risk groups in the community – mapping* • *Contact tracing* • *Defaulter tracing* • *Analyze and present clinic level data* • *Present information in easy-to-understand, visually appealing formats* • *Respond to data queries from NSACP*
PHNS	• Patient Registration • Maintain Statistics & Conduct Quarterly Returns • Maintain Registers • Identify high risk groups in the community – mapping • *Contact tracing* • *Defaulter tracing* • *Analyze and present clinic level data* • *Present information in easy-to-understand, visually appealing formats* • *Respond to data queries from NSACP*
Pharmacist	• Maintain records and registers • Stock or inventory management • *Collect data on number of patients on different regimens* • *Prepare drug estimates* • *Analysis and maintaining lab diagnostic data* • *Preparing lab test kits, estimates based on MLT*
Medical Officer	• Implement national STI/HIV surveillance • Maintain patient information management systems • Ensure data quality – check patient records for completeness • Organize and implement proper M&E systems • Research • Compilation and dissemination of information **Data use** • *Assess current situation with regard to availability and accessibility of facilities and improve* • *Interpret and utilize data for program planning and coordination* • *Conduct regular staff meetings, review data* • *Quality Assurance Audits* • *Carry out advocacy for policy makers*

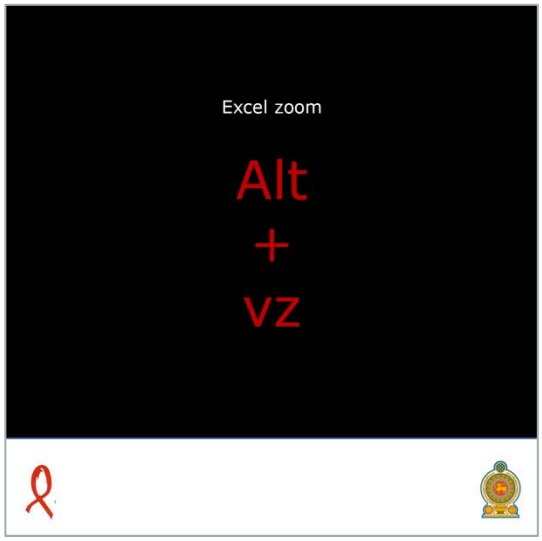
	• *Plan and implement suitable preventive activities in the community with emphasis on most at risk populations* • *Mentor new staff in SIMU responsibilities*
Medical Laboratory Technician, Public Health Laboratory Technician	• Stock or inventory management • Data management • Correct reporting • Surveys • *Sample reception* • *Patient registration (directly from other institutions)* • *Sample rejection* • *Reporting of samples (microscopy lab)* • *Preparing statistics*
Facility Assistants	• Assist with data entry as required
Consultant/ MOIC	• Assess current situation with regard to availability and accessibility of facilities and improve the situation of the clinic • Program planning and coordination in the area- e.g.: schools, KPs • Participating in review meetings at NSACP and RDHS office • Responsible for data management (EIMS) • Regular staff meetings • Attend meetings at provincial level • Quality assurance • Maintain statistic • *Present information in easy-to-understand, visually appealing formats* • *Compare results across facilities or regions* • *Conduct trend analyses* • *Find root causes of any gaps* • *Take action supported by evidence* • *Develop strategies and plans using data* • *Present data at meetings* • *Mentor new staff in SIMU responsibilities*
Systems Manager (role may be given to PHI or MOIC)	• *Trouble shoot software and hardware system glitches* • *Liaise with SIMU ICT Officer and Lunar Technologies in cases of complex problems, or required systems adjustments* • *Tailor system to local context, for example, set the different lab tests available in the drop down boxes.*

Annexure 4: Infographics for the Post-training WhatsApp Group

These infographics are described in the CB Best Practices section.







Appendix 5: Training Planning Checklists

3 tools to support smooth organization of training programs. These will need to be adapted to each training program scheduled.

1. Preparation Checklist

	Done y/n
Scheduling	
Set date and time for training	
Create agenda with topics and time allocations	
Obtain approval and request letters with appropriate signatures from concerned officials	
Identify and invite participants	
Reserve support staff for day – to conduct sign in, serve lunch etc.	
Materials preparation	
Confirm numbers, establish participant contact list	
Create registration/sign in sheets for use on day	
Create evaluation form	
Complete all photocopying • Sign in sheet • Agenda • Manuals • Handouts • Pre and Post training evaluation • Completion certificates	
Prepare materials for each session (post it notes, markers, chart paper	
Arrange supplies • Flipcharts • Colour markers • Post-it notes • Notebooks • Folders • Name badges & lanyards • Tape, sticky putty or tacks to put things on the walls	
Arrange equipment • Computers with internet connectivity • Printer • Screen • LCD projector • Facilitator Laptop	
Logistics	
Arrange catering: refreshments and lunch as required	
Set up room the night before or early on the day – chairs arranged, all equipment available, decorated to make it comfortable	
Read through all materials	
Conduct a facilitation team meeting to discuss roles and	

responsibilities. Include support staff as required (if there is more than one facilitator)	
Signage created to help participants find training room	

2. Training Checklist on the Day

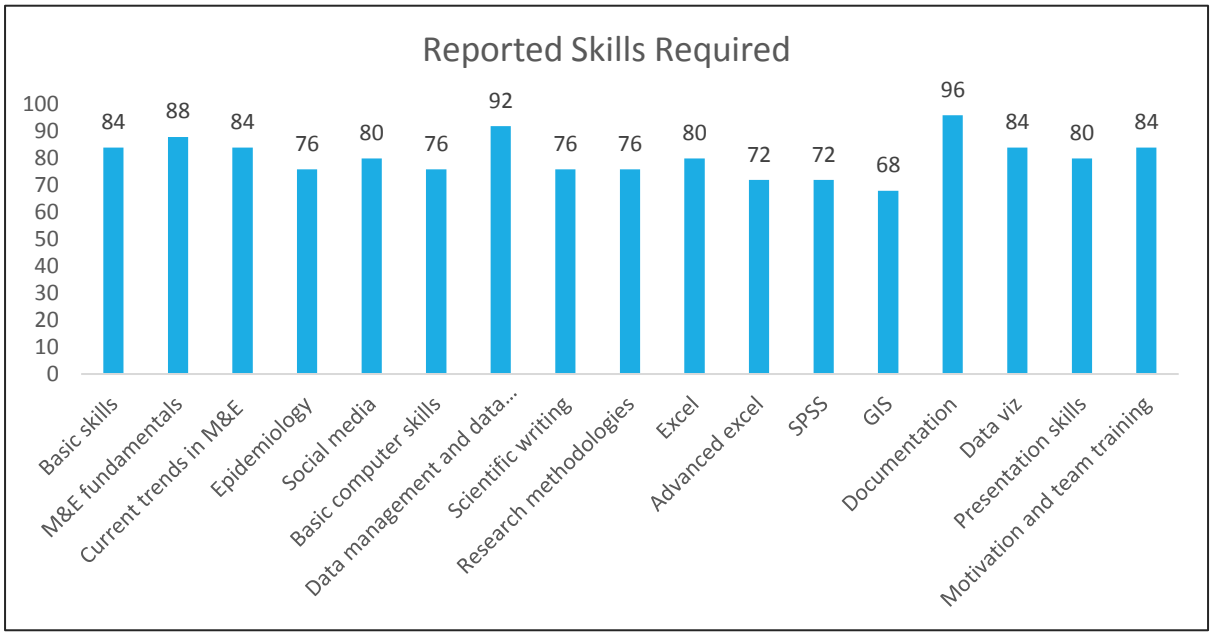
	Done y/n
Before training	
Tables, chairs and equipment arranged (was it done night before?)	
Sign in table set up, everyone signed in	
Set up a clock/watch so it is visible, for timekeeping	

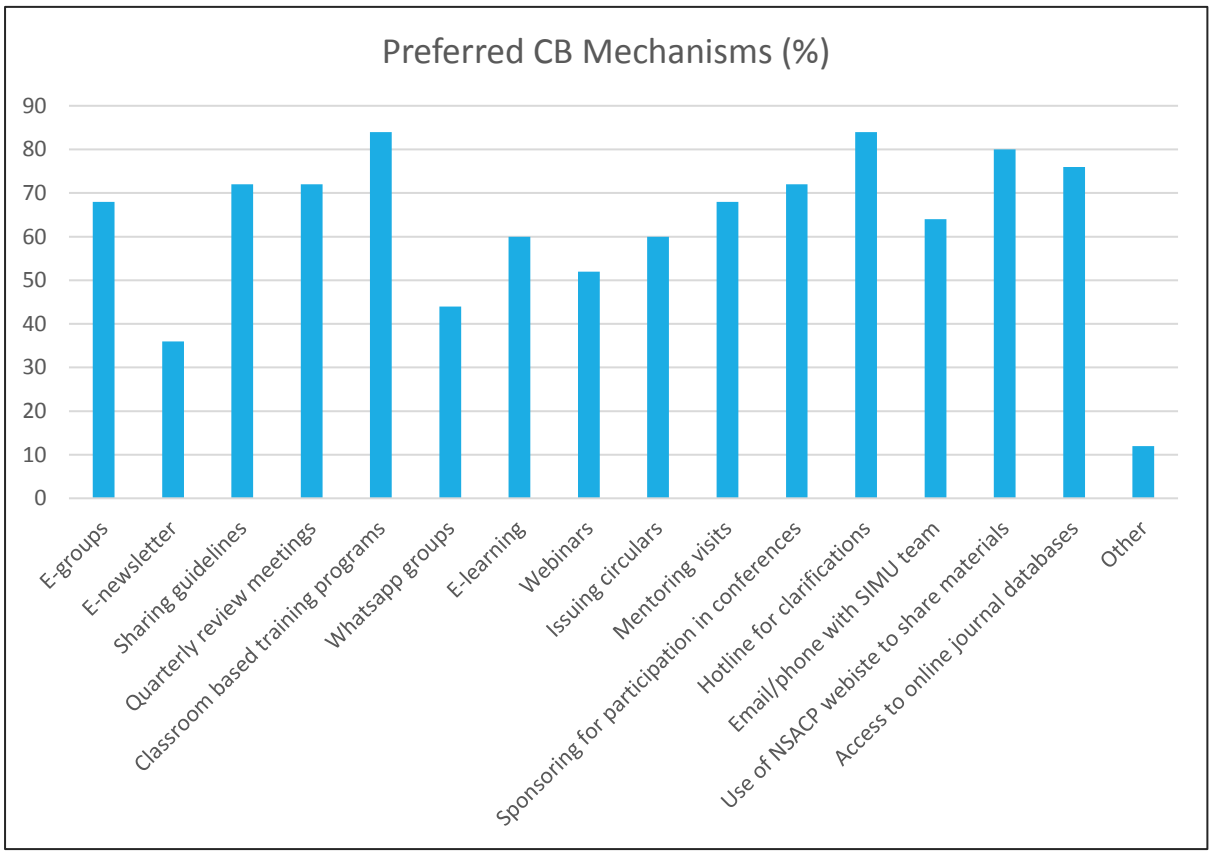
3. Training Follow up

	Done y/n
Training follow-up	
Develop a list of areas that require follow up. Incorporate into supportive supervision plan	

Annexure 6: Results of Questionnaire

In the graphs following are the results of the questionnaire. The questionnaire had 25 respondents from a variety of different cadres within the NSACP.





Annexure 7: NSACP Staff team at STD clinics – consolidated summary

Province	District	Name of STD Clinic	Consultant	MOIC	MO	PHNS	PHI	NO	MLT	PHLT	DO	MA	Assistant	Total
Eastern	Batticaloa	Batticaloa	0	1	0	1	1	1	0	0	0	0	1	5
	Ampara	Ampara	0	1	1	0	1	0	1	0	0	0	2	6
		Kalmunai	0	1	0	0	1	1	1	0	0	1	2	7
	Trincomalee	Trincomalee	0	1	0	0	1	1	2	0	0	0	2	7
Western	Colombo	Colombo	13	0	13	2	6	12	16	4	8	5	25	104
		Kalubowila	1	0	3	0	0	3	0	1	1	0	4	13
		Awissawella	1	0	0	0	0	0	0	0	0	0	0	1
	Gampaha	Ragama	1	1	3	1	1	2	2	4	1	0	4	20
		Gampaha	1	1	1	1	1	2	1	1	0	0	2	11
		Negombo	1	1	1	0	1	1	1	1	0	0	2	9
		Wathupitiwala	0	0	1	1	0	1	0	0	0	0	0	3
	Kalutara	Kalutara	1	1	2	0	1	2	1	1	1	1	4	15
North Central	Anuradhapura	Anuradhapura	1	1	1	0	1	5	1	2	0	0	2	14
	Polonnaruwa	Polonnaruwa	1	1	0	0	1	2	1	0	0	0	2	8
Northern	Jaffna	Jaffna	1	1	1	0	1	1	1	1	0	1	3	11
	Kilinochchi	Kilinochchi	0	0	1	0	0	0	0	1	0	0	1	3
	Mannar	Mannar	0	0	0	0	1	0	0	1	0	0	2	4
	Mulative	Mulative	0	0	1	0	1	0	0	0	0	0	1	3
	Vavuniya	Vavuniya	0	1	0	0	1	1	1	1	0	0	1	6
North Western	Puttalam	Chilaw	1	1	1	0	1	2	1	1	1	0	3	12
	Kurunegala	Kurunagala	1	1	2	0	2	4	1	2	1	0	6	20
Central	Matale	Matale	1	1	1	0	1	1	1	1	0	0	2	9
	Kandy	Kandy	1	1	8	0	1	6	1	2	2	0	5	27
	Nuwara Eliya	Nuwareliya	1	1	1	0	1	2	1	0	0	0	3	10

Province	District	Name of STD Clinic	Consultant	MOIC	MO	PHNS	PHI	NO	MLT	PHLT	DO	MA	Assistant	Total
Uva	Badulla	Badulla	1	1	2	0	1	6	2	1	1	1	8	24
	Monaragala	Monaragala	1	1	0	0	1	1	0	0	1	0	3	8
Sabaragamua	Kegalle	Kegalle	1	1	1	0	1	1	1	1	1	1	4	13
	Ratnapura	Rathnapura	1	1	2	0	1	3	1	1	0	0	4	14
		Embilipitiya	1	0	0	0	0	0	0	0	0	0	0	1
Southern	Galle	Mahamodara	1	0	2	0	1	2	2	1	0	1	3	13
		Balapitiya	0	1	3	0	1	2	1	2	1	1	3	15
	Matara	Matara	1	1	0	0	2	4	1	2	1	1	2	15
	Hambantota	Hambantota	1	1	0	0	1	3	1	0	1	1	3	12
Grand Total			**35**	**24**	**52**	**6**	**35**	**72**	**43**	**32**	**21**	**14**	**109**	**443**