TRAINING REPORT

Training on
Data Management & Analysis of STD/HIV Data for District STD Clinic Staff

5-7, August 2019
Galle Face Hotel, Colombo, Sri Lanka

Jointly organized by

National STD/AIDS Control Programme (NSACP), Sri Lanka

&

The Voluntary Health Services (VHS), India

Supported by Centers for Disease Control and Prevention

(CDC/DGHT-India)

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Report Title	:	Training on Data Management & Analysis of STD/HIV Data for District STD Clinic Staff – Training Report
No. of pages	:	129 pages including wrapper pages
Year of Publication	:	August 2019
Technical Guidance & Mentoring team	:	Dr Joseph D Williams, Director Projects, VHS Dr Ariyaratne Manathunge, Consultant-Venereologist, SIMU, NSACP
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Designed by	:	Ms T Sudha, Senior Programme Associate, VHS-CDC Project
Photo Courtesy	:	Dr Ariyaratne Manathunge, Consultant-Venereologist, NSACP Dr S Muraliharan, Medical Officer/Planning, NSACP
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Training on Data Management & Analysis of STD/HIV Data for District STD Clinic Staff
5-7, August 2019 at Colombo Sri Lanka

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Acronyms

ACASI	Audio Computer Assisted Self Interview
AIDS	Acquired Immunodeficiency Syndrome
ANC	Ante-Natal Care
AR	Attributable Risk
ART	Anti-Retroviral Treatment
CAPI	Computer Assisted Personal Interviewing
CDC	Centers for Disease Control and Prevention
CON'T	Continued
CSS	Cross-Sectional Study
CSS	Case-Control Study
C&S	Care & Support
CST	Care, Support & Treatment
DD	Data Dictionary
DGHT	Division of Global HIV & TB
DM	Data Management
DQA	Data Quality Assurance
DSCS	District STD Clinic Staff
EPI Unit	Epidemiology Unit
FcFT	Facilitator cum Feedback Team
FGD	Focus Group Discussion
FSW	Female Sex Worker
GIGO	Garbage In Garbage Out
GIS	Geographical Information Systems
HIV	Human Immunodeficiency Virus
HSS	HIV Sentinel Surveillance
IBBS	Integrated Biological and Behavioral Surveillance
IDI	In-Depth Interviews
IEC	Information Education Communication
KAP	Knowledge Attitude and Practice
KP	Key Population
Litt.	Literature

M&E	Monitoring and Evaluation
MSM	Men who have Sex with Men
NO	Nursing Officer
NSACP	National STD/AIDS Control Programme
OR	Operational Research
OR	Odds Ratio
PAR	Population Attributable Risk
PEPFAR	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 Human Immunodeficiency Virus
PM	Project Management
PMTCT	Prevention of Mother To Child Transmission
PPT	Power-Point Presentation
PrEP	Pre-Exposure Prophylaxis
PRT	Peer Review Team
RCT	Randomized Controlled Trial
REC	Research Ethics Committees
RR	Risk Ratio / Relative Risk
STD	Sexually Transmitted Diseases
STI	Sexually Transmitted Infections
SI	Strategic Information
SIMU	Strategic Information Management Unit
TA	Technical Assistance
TB	Tuberculosis
TCT	Training Coordination Team
TDM	Training on Data Management
TNA	Training Needs Assessment
VHS	Voluntary Health Services
Vs.	Versus
WHO	World Health Organization

Foreword

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

I am happy to write a foreword to this training report on the *"Training on Data Management & Analysis of STD/HIV Data for District STD Clinic Staff"* organized by National STD/AIDS Control Programme (NSACP), Sri Lanka and The Voluntary Health Services (VHS), India - Supported by Centers for Disease Control and Prevention (CDC/DGHT-India) - (VHS-CDC Project) from 5-7, August 2019 at Colombo/ Sri Lanka.

The goal of the training is to build the data skills of District STD Clinic Staff (i.e.,) Public Health Inspectors (PHIs) and Nursing Officers working at STD/HIV clinics under NSACP in order to enhance the data quality, improve the data analysis and strengthen the use of HIV/AIDS data reported by the clinics for routine monitoring purposes. The training was conducted with the following objectives:

- To build the understanding of the Public Health Inspectors and Nursing Officers working at STD/HIV clinics on the datasets & program reporting under NSACP;
- To introduce the basic principles and approaches of data recording & reporting;
- To orient the participants to various methods of improving data quality at clinic level;
- To build the basic skills in analysis of program data; and
- To improve the presentation and use of data for programme monitoring purposes.

Training and capacity building are the key elements of VHS-CDC Project in providing Technical Assistance to NSACP on Strategic Information with the support of CDC/DGHT-India. This is one of the series of training activities planned and conducted according to the findings of a formal assessment of training and capacity building.

This training was very much useful for participants in learning skills of Basics of Data Management & Data Quality; Analysis of Data using Excel; Presentation, Communication & Use of Data. This training was conducted through participatory methodologies, contributed for enhancing knowledge and skills and supported with hands-on training. This report contains the goal, objectives, profile of participants, process adopted including proceedings, steps involved in Data Management, guidelines & suggestions, key learnings, key outcomes, feedback, recommendations & follow-up plans and other relevant details.

On behalf of NSACP, I wish to express my sincere thanks to Dr Joseph D Williams, Director Projects-VHS for his immense support in ensuring partnerships and continue to support in providing TA. We acknowledge and appreciate the strategic support being extended by Dr T Ilanchezhian, Senior Technical Advisor, VHS-CDC Project for coordinating with NSACP and SIMU in providing TA on SI and managing, coordinating and conducting this training program. Thanks to VHS-CDC Project team, resource persons/ trainers for the support extended in successful conduct of this training.

Thanks to VHS-CDC Project team for conducting sessions by involving SIMU officials already trained by VHS-CDC Project in similar data management & analysis. This has contributed for building in-country capacities & greater engagement of in-country resources.

My gratitude should go to Dr Melissa Nyendak, Country Director, Division of Global HIV AND TB, CDC India for the strategic leadership and guidance in providing Technical Assistance to NSACP, Ministry of Health, Nutrition & Indigenous Medicine, Govt. of Sri Lanka and CDC team for their support and guidance in these technical assistance initiatives.

Appreciate Dr Ariyaratne Manathunge, Consultant-Venereologist cum Coordinator-SIMU, NSACP for his strategic leadership in coordinating the technical cooperation initiatives on TA to NSACP on SI with VHS-CDC Project, CDC team and contributions on meaningful, successful conduct of the Training on Data Management & Analysis of STD/HIV Data for District STD Clinic Staff.

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

Acknowledgement

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

The Voluntary Health Services (VHS-CDC Project) with the support of Centers for Disease Control and Prevention (CDC/DGHT-India) in partnership with National STD/AIDS Control Programme (NSACP), Ministry of Health, Nutrition & Indigenous Medicine, Govt. of Sri Lanka is providing TA to NSACP on Strategic Information through a technical partnership initiative on the following areas:

- Enhance SIM Unit capacity to utilize electronic and manual program data for decision making;
- Improve capacity of SIM Unit to carryout management, analysis, documentation, and dissemination of summary program data reports;
- Improve capacity of SIM Unit to conduct and disseminate results of operational research; and
- Consultation with stakeholders on monitoring & documentation of accomplishments & sustainability plans.

As part of this technical cooperation initiatives, VHS-CDC Project is providing capacity building initiatives, system strengthening, documentation and dissemination. In accordance with the capacity building initiatives, the project is organizing a series of training programs. VHS-CDC Project with the support of CDC/DGHT-India and in partnership with NSACP has organized an *"Training on Data Management & Analysis of STD/HIV Data for District STD Clinic Staff"* for three days.

To support this training, the project has developed an agenda based on needs assessment, resource kit (with presentations, exercises, tools and resource materials), identified and

engaged international professional trainer along with VHS-CDC Project team and conducted the training program by adopting participatory approaches supported with intensive hands-on training. This training was conducted with the great participation and contribution from SIMU-NSACP.

VHS-CDC Project has documented the training program and brought out this report titled "Training on Data Management & Analysis of STD/HIV Data for District STD Clinic Staff". This training report contains a brief on the key stakeholders and organizers involved in conducting this training program, CDC support on Technical Assistance to NSACP on Strategic Information; an overview of training on Data Management; (objectives & methodologies of training; details & profile on participants, facilitators & coordination team; Pre & Post-Training Assessment analysis & Post-Evaluation analysis; feedback of participants; and recommendations), day wise proceedings; exercise formats; outcome of the training; and follow-up plans. This training report comprehensively captured the overall plan, process and outcomes of the training program.

We thank Dr Rasanjalee Hettiarachchi, Director-NSACP for her leadership and supportive guidance for this technical cooperation initiative.

We wish to acknowledge & thank Dr Ariyaratne Manathunge, Consultant - Venereologist, NSACP for his continuous support, strategic guidance and cooperation being extended in execution of this technical cooperation initiative. Appreciate his strenuous support in systematic planning, serving as a facilitator and contributing for successful conduct of the training. Also acknowledge the support extended by Dr S Muraliharan, Medical Officer/Planning, NSACP as a facilitator and coordination team member. Acknowledge the support extended by SIMU team, senior consultants in NSACP, SI team in peripheral STD clinics and key stakeholders.

We sincerely thank & acknowledge the technical guidance & support being extended by Dr Melissa Nyendak, Country Director, Division of Global HIV AND TB, CDC India, Mr Lokesh Upadhyaya, Associate Director for Management & Operations, CDC/DGHT-India and CDC team. Wish to thank Ms Srilatha Sivalenka, Public Health Specialist, CDC/DGHT-India for her support in this cooperation initiatives.

We would like to thank Dr Yujwal Raj, Technical Advisor (SI), VHS-CDC Project for his support and contribution in developing resource materials, conducting the training along with VHS-CDC team and served as a team member in facilitating for conducting this training program.

We would like to thank Dr T Ilanchezhian, Senior Technical Advisor for his initiative, systematic support, planning, serving as a facilitator and conducting this training program as successful one by ensuring good coordination with VHS-CDC team and SIMU team.

We thank Ms T Sudha, Senior Programme Associate, VHS-CDC Project for her support extended in preparations for conducting the training and communication, consolidation of the report and designing of this document.

We thank Mr B Kamalakar, Finance Controller and Mr S Sathyaraju, Associate Manager Finance, VHS-CDC Project and admin team for their support in logistics coordination, finance management & other arrangements.

Also acknowledge the participation and support extended by Mr Suneel Kumar Chevvu, M&E Officer and Ms K Priya, Senior Programme Associate, VHS-CDC Project.

Overall, this training program was successfully, meaningfully and effectively conducted. We greatly appreciate the fullest cooperation extended by NSACP & SIMU in this technical cooperation initiatives and in conducting this training program.

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

National STD/AIDS Control Programme (NSACP), Sri Lanka: National STD/AIDS Control Programme (NSACP), Govt., of Sri Lanka is a comprehensive program aimed at prevention and control of STDs & HIV/AIDS being implemented by the Ministry of Health, Nutrition & Indigenous Medicine in all the provinces of Sri Lanka.

The *key functions of NSACP* includes: Preventive services; Diagnosis treatment and care services for HIV; Strategic Information Management; and Health Systems Strengthening. The country is currently implementing its National Strategic Plan (NSP) 2018-2022 for HIV/AIDS control. NSP 2018-22 aims at ending AIDS in Sri Lanka by 2025. NSACP networks with 31 full time, 20 branch STD Clinics and 21 ART centres.

Strategic Information Management Unit (SIMU): 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. The monitoring and evaluation of the STD/HIV treatment & care and Laboratory services of NSACP is currently carried out using a manual paper-based system. Currently, SIMU-NSACP is in the process of developing an automated Electronic Information Management System (EIMS) which will provide timely information for efficient patient management and monitoring of HIV care and ART Program.

Some of the **unique strengths of Strategic Information (SI) system** includes: National HIV Monitoring & Evaluation Plan 2017-22 that outlines the broad vision, objectives, approaches and tools used in the program; standardized forms and formats specific to each field for feeding EIMS; redesigned the website for transparency and dissemination; bringing out comprehensive annual report; long-standing, dynamic leadership of SIM unit with strong institutional memory as a great asset to NSACP; good time series data on HIV prevalence through HIV Sentinel Surveillance and IBBS; system well-positioned to be evolved into a strong HIV case reporting system; and replacing the paper-based system with an EIMS for efficient patient management and monitoring of HIV care & ART program.

PEPFAR/India: The U.S. President's Emergency Plan for AIDS Relief (PEPFAR) provides strategic, targeted support to strengthen the quality and impact of India's strong government-led response to HIV/AIDS. India's epidemic is concentrated among key populations, which include sex workers and their clients, men who have sex with men, transgender individuals, people who inject drugs, and mobile populations. The PEPFAR/India provides Technical Assistance (TA) to the Government of India (GoI) and its partners, to maximize impact on the HIV epidemic in India, by strengthening capacity in critical program areas within GoI, the private sector, and with civil society partners. PEPFAR/India has two implementing agencies in India: Centers for Disease Control and Prevention (CDC) and U.S. Agency for International Development (USAID).

CDC/DGHT-India: The U.S. Centers for Disease Control and Prevention's Division of Global HIV and Tuberculosis (DGHT) Program in India has focused its efforts on preventing new infections, increasing access to services for persons living with HIV and tuberculosis (TB), supporting a single monitoring and evaluation system, and strengthening the work of civil society organizations. DGHT provides TA on a broad range of issues, including prevention of HIV (including parent to child transmission), addressing care and treatment needs of key affected populations - people who inject drugs, men who have sex with men, commercial sex workers, trans-gender individuals, addressing comorbidities of TB and HIV, strengthening laboratory systems, blood safety, and strategic information.

The Voluntary Health Services – Cooperative Agreement (CoAg.,) implementing partner of CDC for providing TA on SI: Voluntary Health Services (VHS) was established in 1958 by Dr K S Sanjivi, an eminent physician, and visionary leader. Today, VHS is a 465 bedded multi-specialty tertiary teaching hospital guided by the philosophy of "unto the last". VHS is registered as a non-profit society under the Indian Registration of Societies Act, 1860. Since 1995, VHS with 60 years of committed service has been at the forefront of managing comprehensive community health and STI/HIV prevention programs.

VHS has wide range experience in implementing innovative HIV/AIDS prevention, care and support programs, building the capacity of Civil Society Organizations (CSOs), training of Health Care Providers (HCPs), strengthening Strategic Information (SI), providing Technical Assistance (TA), facilitating knowledge transfer, etc.

Over 25 years, VHS has been the nodal agency for implementing HIV/AIDS prevention, care, support and treatment programs in Tamil Nadu, partnering closely with the Government of India (GoI), National AIDS Control Organization (NACO), State AIDS Control Societies (SACS), line departments and other key stakeholders.
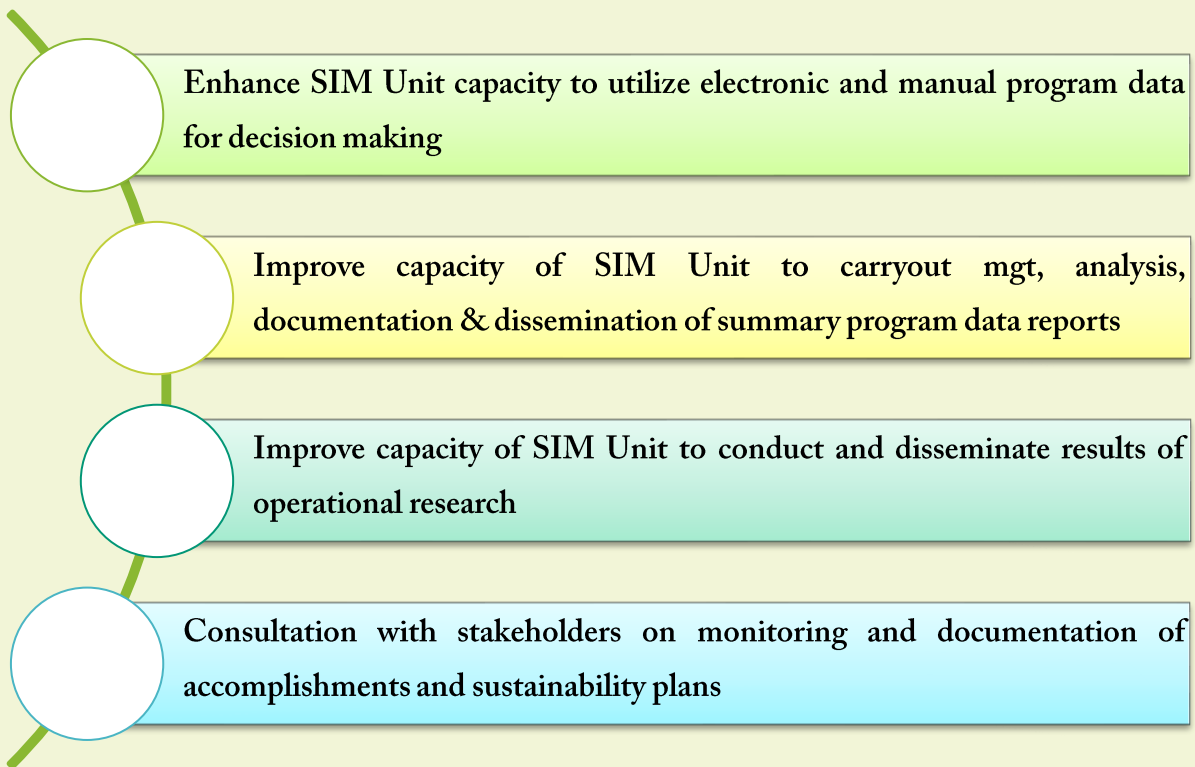
VHS has implemented several large, multi-site and multi-layered donor-funded programs including the USAID supported AIDS Prevention and Control (APAC) project; Bill and Melinda Gates Foundation (BMGF) supported Tamil Nadu AIDS Initiative (TAI) and GFATM supported Multi-country South Asia-Diversity in Action (MSA-DIVA) project. Currently, managing Centers for Disease Control and Prevention (CDC), Department of Health and Human Services, United States Government supported Technical Assistance to NACP IV. VHS has been involved in knowledge sharing initiatives both within the country and internationally. Through the USAID supported South-To-South HIV/AIDS Resource Exchange (SHARE) project, VHS provided TA to 12 selected sub-Saharan African nations and promoted bi-directional knowledge transfer of high-impact policies, practices and innovations for strengthening the HIV/AIDS program and improving health outcomes.

CDC support on Technical Assistance to NSACP on Strategic Information: The PEPFAR is a United States Governmental initiative to address the global HIV/AIDS epidemic. PEPFAR and CDC is providing support to NSACP through its' Cooperative Agreement implementing partner The Voluntary Health Services (VHS) through its VHS-CDC Project. Overall goal is to enhance the contribution of Strategic Information (SI) towards the National HIV/AIDS response in Sri Lanka by facilitating Technical Assistance (TA) and cooperation on identified priority areas. Key strategies on TA to NSACP being adopted will include Evidence-based TA; Horizontal exposure & vertical expertise; Bottom up strategy; and Comprehensive in outlook.

VHS-CDC Project and NSACP jointly facilitated the exploratory visits, inter-agency visits, interactions with senior officials at Ministry & NSACP, key stakeholders and facilitated field visits. Through this process, CDC, VHS-CDC Project and NSACP jointly identified the specific areas of TA on SI. For facilitating Technical Cooperation Initiatives, Letter of Intent (LoI) was signed between Ministry of Health, Nutrition and Indigenous Medicine, Govt. of Sri Lanka and CDC/DGHT-India during February 2018.

NSACP and VHS-CDC Project jointly held discussions and identified TA areas for support and developed a comprehensive technical assistance plan on the following four broad areas:

Enhance SIM Unit capacity to utilize electronic and manual program data for decision making

Improve capacity of SIM Unit to carryout mgt, analysis, documentation & dissemination of summary program data reports

Improve capacity of SIM Unit to conduct and disseminate results of operational research

Consultation with stakeholders on monitoring and documentation of accomplishments and sustainability plans

As part of this TA initiatives, VHS-CDC Project is providing capacity building initiatives, system strengthening, documentation and dissemination. In accordance with the capacity building initiatives, the project is organizing a series of training programs which includes:

- National Capacity Building Workshop on Operational Research in HIV/AIDS (qualitative & quantitative).
- National Training on Scientific Writing in HIV/AIDS.
- International Training on Data Management and Analysis of HIV/AIDS Data for SIMU and reporting units.
- International Training on DHIS 2 (District Health Information Software 2) Design and Customization Academy.

VHS-CDC Project in partnership with SIMU has accomplished the major activities in accordance with Focused Outcome and Impact Table (FOIT) arrived at and agreed upon. Some of the major activities accomplished will include but not limited to: undertaking research studies; conducting training programs for SIMU and SI team (Operational Research, Scientific Writing, Data Management, DHIS 2 and training on transition from paper-based to EIMS (for roll-out of EIMS); documentation and dissemination of best practices; sharing regional best practices on SI in the context of Sri Lanka; development of technical report on dashboard; developing plans and systems for development of dashboard; facilitating exposure visits and participation in the conferences; knowledge transfer; and other key initiatives supported with technical guidance, mentoring & follow-up. In addition, the project is also in the process of developing web-based Dashboard Indicator graphs (DBI), animated analytic graphs, infographics, etc., for incorporating to the existing NSACP website; Update M&E plan to align with 2018-2022 National Strategic Plan (including operational plan for post EIMS); Develop reports for Stakeholders: Design analytic reports based on SI relevant to stakeholders (development of fact sheets/ ready reckoner for policy makers and program managers); and Process documentation on the expériences of TA to NSACP & Dissemination with SIM Unit/ NSACP and way forward.

Considering the overall capacity plans evolved, VHS-CDC Project has organized *"Training on Data Management & Analysis of STD/HIV Data for District STD Clinic Staff"* for Public Health Inspectors and Nursing Officers from Peripheral STD Clinic.

Chapter 2: Training on Data Management & Analysis of STD/HIV Data

2.1. Overview of the training program

VHS-CDC Project with the support of CDC in partnership with SIMU-NSACP, MoH-GoSL jointly organized the "Training on Data Management & Analysis of STD/HIV Data" from 5-7, August 2019 at GF Hall-I, Galle Face Hotel, Colombo/ Sri Lanka for District STD Clinic Staff (i.e.,) Public Health Inspectors and Nursing Officers from STD Clinics.

Goal: To build the data skills of Public Health Inspectors and Nursing Officers working at STD/HIV clinics under NSACP in order to enhance the data quality, improve the data analysis and strengthen the use of HIV/AIDS data reported by the clinics for routine monitoring purposes.

The *Objectives* of the program are:

- To build the understanding of the Public Health Inspectors and Nursing Officers working at STD/HIV clinics on the datasets & program reporting under NSACP;
- To introduce the basic principles and approaches of data recording & reporting;
- To orient the participants to the various methods of improving data quality at the clinic level;
- To build the basic skills in analysis of program data; and
- To improve the presentation and use of data for programme monitoring purposes.

The *methodologies* adopted in the training program includes:

- Active Learning through discussions & review of examples & case studies
- Learning by Doing
- Individual Hands-on/ Practical Exercises
- Group Exercises
- Parallel work on selected data

This training on Data Management for the PHIs and Nursing Officers was conducted with systematic planning by adopting participatory methodologies, supported with group exercises, hands-on training, mentoring by experts, use of clinic level data in analyzing & presenting, recap on each day learnings in an interactive way, question & answer session, etc. As a part of this training, undertaken pre & post assessment and post-training evaluation.

2.2.   Participants

VHS-CDC Project has developed a criterion for identifying and selecting participants for the training program. The participants for the training have been selected based on the criteria by SIMU in consultation and coordination with the training coordinator-NSACP. Through a process, SIMU-NSACP has identified and nominated 28 participants from District STD Clinics. The category of participants identified for the training program will include Public Health Inspectors and Nursing Officers.

The *criteria* adopted for selection of participants will include but not limited to:

- **At present, the person should directly work District STD clinic.**
- **Plans to continue to work in the same position.**
- **Involved in STD Clinic and collecting/ reporting data.**
- **Having basic skills in using computer.**
- **Agreeing to participate & complete follow-up actions as evolved in the training.**
- **Willing to learn through training and mentorship.**

The major *Roles and Responsibilities of PHIs and Nursing Officers* in the context of Strategic Information will include but not limited to:

- Registering patient
- Managing the register
- Preparing the returns
- Finding lost to follow up patients
- Contact tracing
- Health education and other related activities

2.2.1. Profile of Participants

In this training program, 28 participants have undergone training which includes 24 male and 4 female participants.
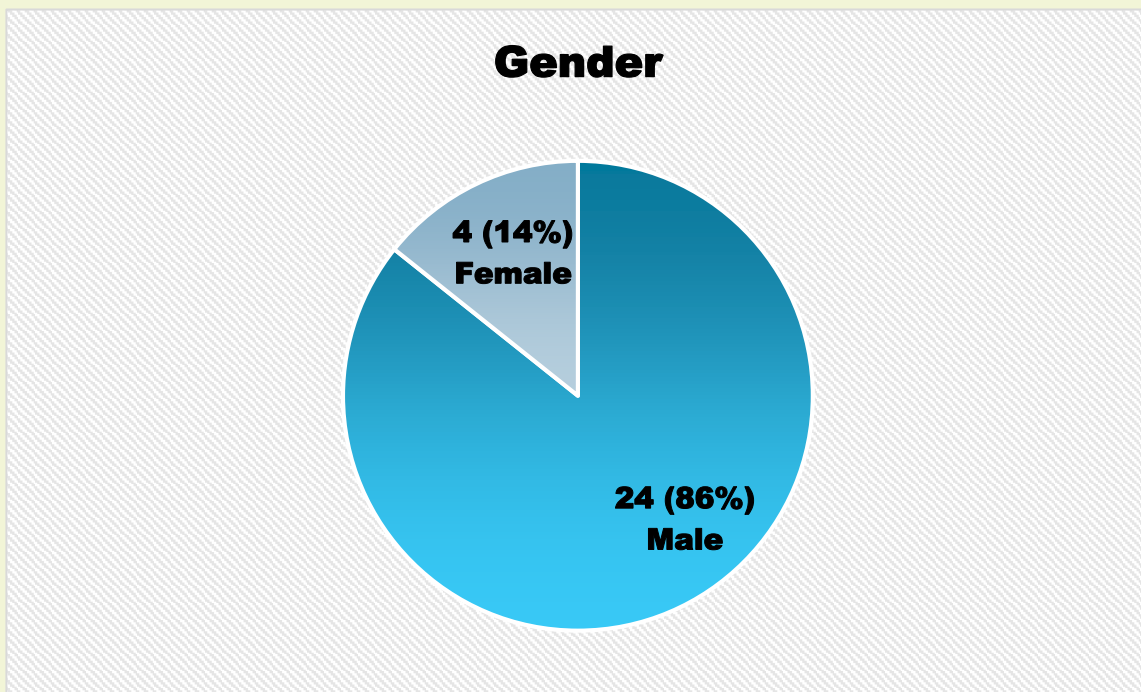
Similarly, 24 Public Health Inspectors and 4 Nursing Officers represented and benefited through this training program.
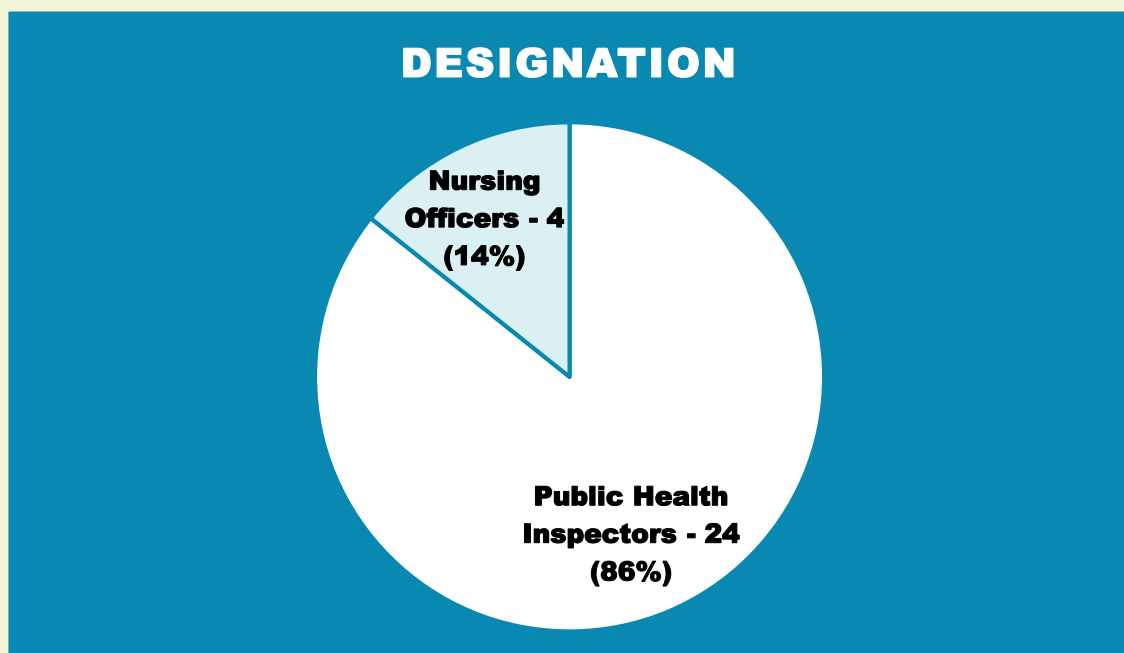
In this training program, amongst the 28 participants 82% (23) of them had more than 10 years of experience and remaining 18% is with 4-10 years of experience in this position.
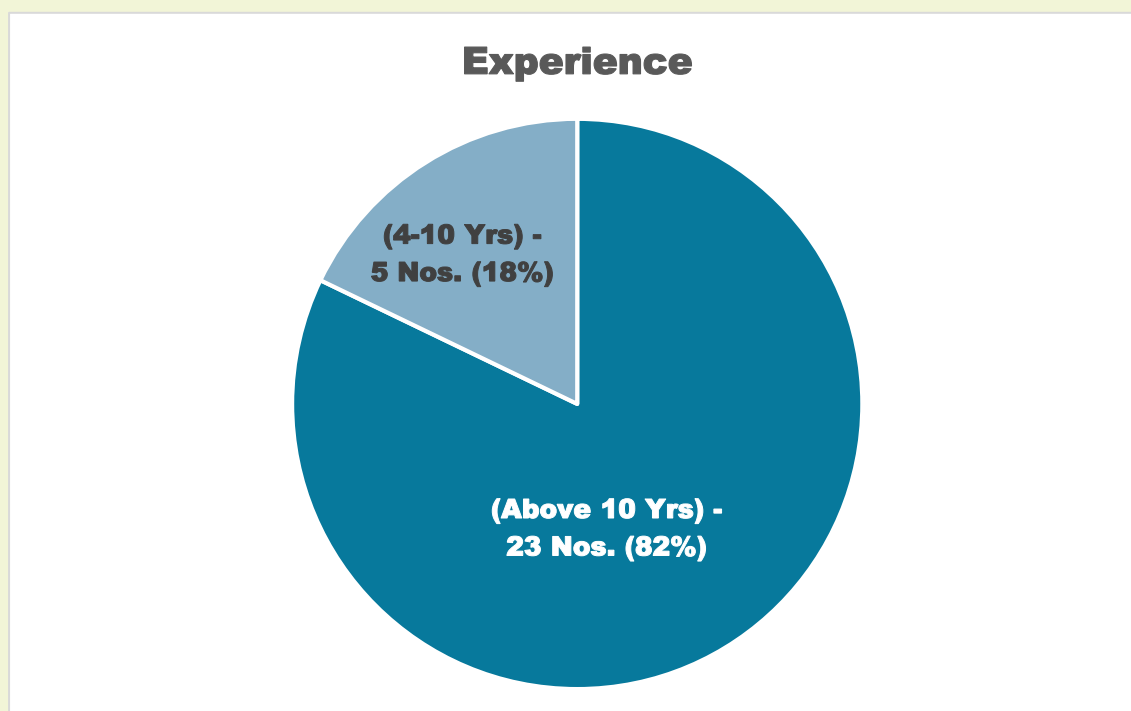
2.2.2.   List of District STD Clinic Staff capacitated

The *list of District STD Clinic Staff* undergone the training program and capacitated on Data Management is given below:

S. No.	Participant's Name, Designation & Organization	Contact Number and Email-ID
1	Mr L H S T Kumara, Public Health Inspector (PHI), STD clinic, Base hospital, Balapitiya.	912256822 / 717955553 lhstkumara@gmail.com
2	Mr S M Shiyamdeen, Public Health Inspector (PHI), STD clinic, Badulla.	702233515 smsdeen1236781@gmail.com
3	Mr Thalagaha W C P Gunarathna, Public Health Inspector (PHI), STD clinic, Badulla.	714222246 stdclinic.badulla@gmail.com

| S. No.	Participant's Name, Designation & Organization	Contact Number and Email-ID
4	Mr G D G A S Gunaratne, Public Health Inspector (PHI) STD/AIDS Control unit, Anuradhapura.	715625391 sampaag@gmail.com
5	Mr G S Priyantha, Public Health Inspector (PHI), STD clinic, General Hospital, Matara.	714412542 Samangabadage123@yahoo.com
6	Mr J Ediriweera, Public Health Inspector (PHI), STD clinic, General Hospital, Matara.	718145011 stdmatara@gmail.com
7	Mr K V C S Wijegunaratne, Public Health Inspector (PHI), STD clinic, Kalutara.	713579646 duleekakvc@gmail.com
8	Mr H M U Herath, Public Health Inspector (PHI), STD clinic, Teaching Hospital, Kurunegala.	714078041 upul8903@gmail.com
9	Mr U C B Senanayake, Public Health Inspector (PHI), STD clinic, District General Hospital, Matale.	718049022 Chamindasenanayake77@gmail.com
10	Mr R M S S Rasnayake, Public Health Inspector (PHI), STD clinic, NSACP.	771094975 newsusara@gmail.com
11	Mr H K Mannapperuma, Public Health Inspector (PHI), STD clinic, NSACP.	714359105 mannapperumahk@gmail.com
12	Mr Thurairasa Sivananthan, Public Health Inspector (PHI), STD clinic, District General Hospital, Vavuniya.	777585882 sivananthant@yahoo.com

S. No.	Participant's Name, Designation & Organization	Contact Number and Email-ID
13	Mr P M Dinesh Pathiraja, Public Health Inspector (PHI), STD clinic, District General Hospital, Chilaw.	711326826 / 714134187 dinesh317pathiraja@gmail.com
14	Mr M D H Perera, Public Health Inspector (PHI), STD clinic, District General Hospital, Negombo.	711903668 p.harendra@yahoo.com
15	Mr Chandana Dolewatta, Public Health Inspector (PHI), STD clinic, District General Hospital, Gampaha.	718111835 sajeewadolewatta@gmail.com stdclinic.gampaha@gmail.com
16	Mr G Nakkeeran, Public Health Inspector (PHI), STD clinic, T.Hospital, Jaffna.	776203797 stdclinicjaffna@gmail.com
17	Mr P Prasad Kumar, Public Health Inspector (PHI), STD clinic, G.Hospital, Rathnapura.	718018123 phiprasad@gmail.com
18	Mr H M Chinthaka, Public Health Inspector (PHI), STD clinic, Teaching Hospital, Kandy.	702228411 Hmcsbandara456@gmail.com
19	Mr D M N D Bandara, Public Health Inspector (PHI), STD clinic, D.G.Hospital, Moneragala.	776316395 Bandaranishantha597@gmail.com
20	Mr S R D Weerathunga, Public Health Inspector (PHI), STD clinic, Galle.	718260633 rajithaweerathunga66@gmail.com
21	Ms K K N Ranaweera, Nursing Officer, STD clinic, NSACP, Colombo.	714926511 nadeepar@gmail.com

S. No.	Participant's Name, Designation & Organization	Contact Number and Email-ID
22	Ms M A L Savithri, Nursing Officer, STD clinic, NSACP, Colombo.	773592400 lakshikasavithri1984@gmail.com
23	Ms W M T Chandrarathna, Nursing Officer, HIV clinic, NSACP, Colombo.	718083750 malaranaweera916@gmail.com
24	Ms J H I Sanjeewanie, Nursing Officer, STD clinic, NSACP, Colombo.	718353372 isanjeewanie5@gmail.com
25	Mr Mr G Mathanakumar, Public Health Inspector (PHI), STD clinic, Kilinochchi.	777341994 mathans007@gmail.com
26	Mr E M Anpalagan Fernando, Public Health Inspector (PHI), STD clinic, DGH, Mannar.	775248741 rdhsmnr@gmail.com
27	Mr A M S S K Weerasinghe, Public Health Inspector (PHI), STD clinic, DGH, Kegalle.	714913347 manjulasskweerasinghe@gmail.com
28	Mr K Jatheeswararuban, Public Health Inspector (PHI), STD Clinic, DGH, Mullaitivu.	778744522 jatheesk@gmail.com
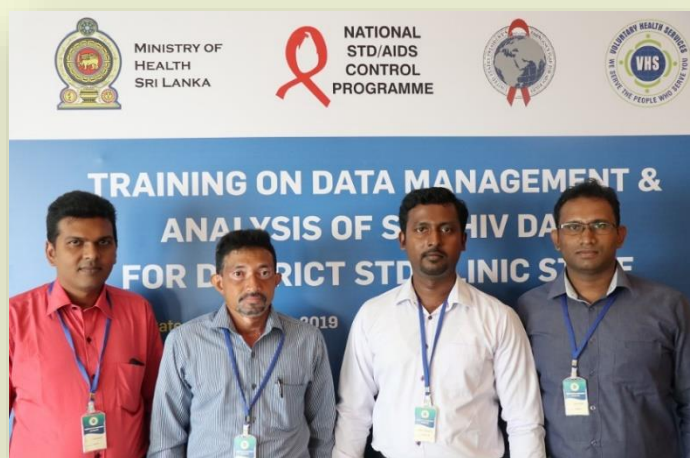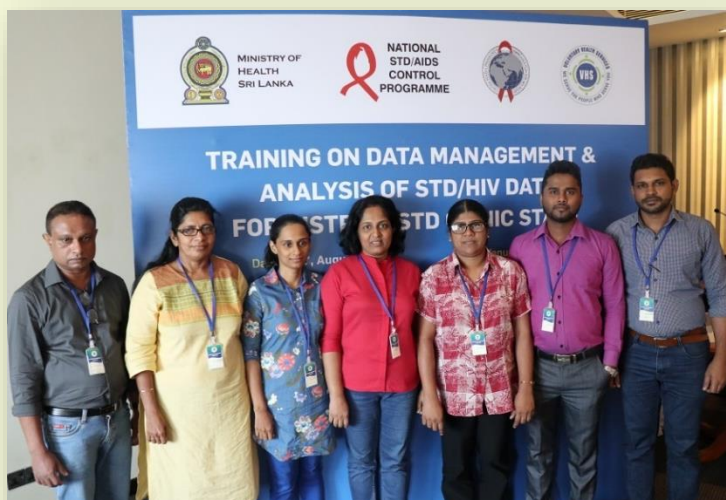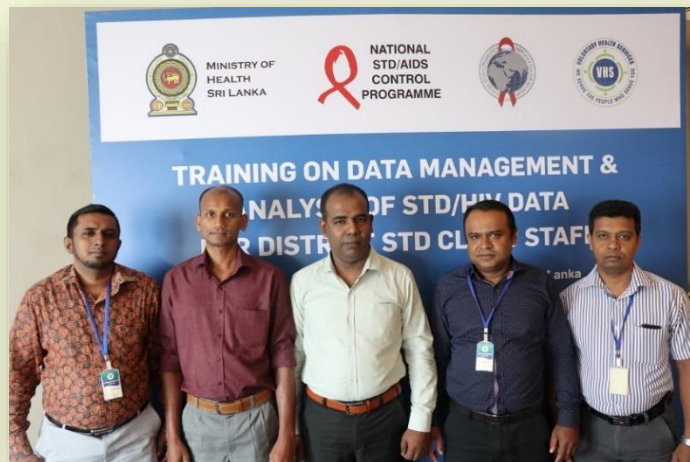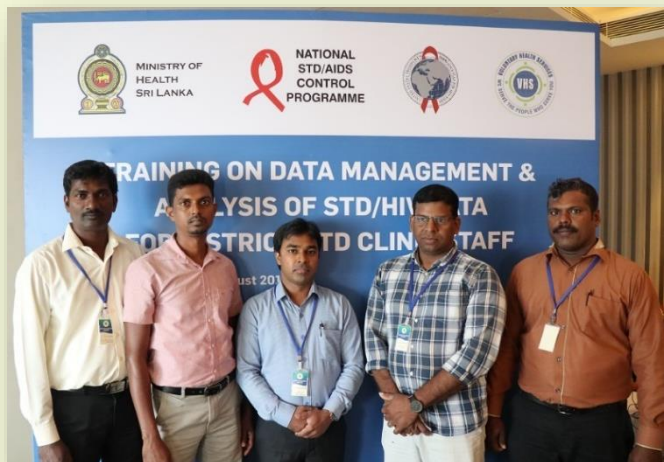
2.3. Facilitators & Coordination Team

VHS-CDC Project has undertaken strategic efforts and identified resource persons for facilitating and coordination of the entire training program. The criteria considered in selecting the facilitators may include but not limited to minimum 10 years of experience in designing and conducting the training programs at national level/ international level; experience in conducting training on Data Management; ability in developing resource materials in accordance with training needs; understanding the country SI systems in Sri Lanka; credibility of the trainers with acceptability among the stakeholders; understanding and ability to coordinate between the facilitators; willingness to adopt participatory and innovative methodologies including providing hands-on training; and other aspects.

Facilitators: VHS-CDC Project under the leadership of Director Projects Dr Joseph D Williams with the technical team had series of meeting in identifying, prioritizing and finalizing the core team of faculties considering the need for enhancing knowledge and skills on Data Management for District Clinic STD Staff such as: Pubic Health Inspectors and Nursing Officers from District STD Clinics. The facilitators involved by VHS-CDC Project in consultation and coordination with SIMU for conducting the training are:

- Dr Yujwal Raj, Technical Advisor (SI), VHS-CDC Project.
- Dr Ariyaratne Manathunge, Consultant-Venereologist, NSACP.
- Dr Joseph D Williams, Director Projects, VHS.
- Dr S Muraliharan, MO/Planning/SIM unit/NSACP.
- Dr T Ilanchezhian alias Dr IC, Senior Technical Advisor, VHS-CDC Project.
- Mr Suneel Kumar Chevvu, M&E Officer, VHS-CDC Project.

VHS-CDC developed Terms of Reference (ToR), facilitated concalls and meetings. This has contributed for effective team building in planning and conducting the training programs.

Training Coordination Team (TCT): VHS-CDC Project had a consultation with SIMU-NSACP for planning, conducting, coordinating and ensuring follow-up for the training program. The project has evolved clear cut roles and responsibilities of each stakeholders for conducting the training. The TCT was formed with the following members:

VHS-CDC Project:	The *role/ purpose of the TCT* are:
• Dr Joseph D Williams, Director Projects • Dr T Ilanchezhian, Sr. Technical Advisor • Ms T Sudha, Senior Programme Associate • Ms K Priya, Senior Programme Associate • Mr Sathyaraju, Associate Manager-Finance	• Identifying training needs. • Confirmation and developing profile of participants. • Briefing the facilitators. • Contribute for logistics planning, resource materials development and distribution. • Support in registration and ensuring time management. • Providing feedback to experts.
NSACP: • Dr Ariyaratne Manathunge, Consultant-Venereologist & Coordinator-SIMU • Dr S Muraliharan, MO/ Planning	

Periodicity:
- The TCT met on the previous day evening for planning the training program.
- The TCT met everyday evening for reviewing and providing feedback.
- The TCT had final meeting on completion of the training and provided feedback.

Methodology: The TCT team had formal meetings during the training days and through virtual mode for systematic planning, suggestions and experiences.

2.4. Resource Materials

Need Assessment and Training Agenda: VHS-CDC Project in consultation with SIMU identified the training needs, developed resource materials and conducted the international training on Data Management for SIMU and SI team as a model for three days. Based on the training experiences, the agenda has been customized for conducting training on Data Management for PHIs and Nursing Officers considering the training needs, nature of responsibilities, ability in the computer skills, etc.

Resource kit for training program: VHS-CDC Project has developed 12 presentations, 6 exercises, 3 tools and reference/ reading materials for conducting the training program for the District STD Clinic Staff team. The details on the same is given below:

Content	• Basics of Data & Data Quality • Analysis using Excel, Communication & Use of Data • Presentation, Communication & Use of Data
Presentations	• Developed 12 Power-Point Presentations supported with hand-outs.
Exercises	• Developed 6 exercises for facilitating group exercises supported with mentorship/ hands-on trianing.
Tools	• Developed tools such as Pre-Assessment, Post-Assessment and Post-Evaluation
Reference and Reading Materials	• Collected and shared important further reading/ reference materials on data management

2.5. Planning and management of the training program

Stages in conducting training program: The project with the support and coordination of SIMU-NSACP undertaken systematic and strategic efforts for planning, conducting and undertaken follow-up plans. VHS-CDC Project along with SIMU has evolved 5 stages in planning and conducting this training.

Stage 1
Planning

Stage 5
Follow-up

Stage 2
Resource Team
and Materials

Stage 4
Post-Training
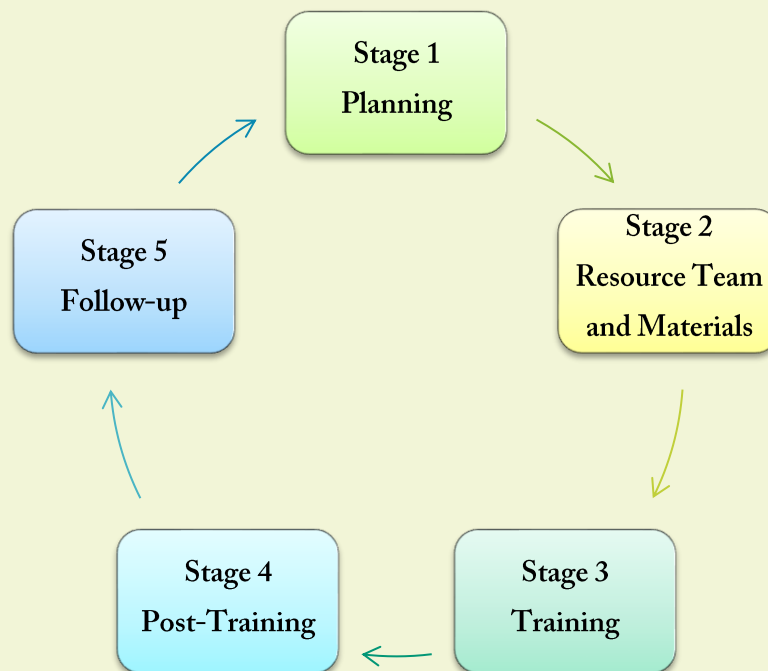
Stage 3
Training

The specific activities undertaken during every stage of the training program will include:

Stage 1: Planning

- Planning:
    - Planning meeting with SIMU and NSACP.
    - Development of brief outline based on the needs and expectations.
    - Discussions with the key stakeholders.
    - Training Need Assessment.
    - Reviewing the feedback on the previous training conducted on Data Management.
    - Understanding the roles and responsibilities of the PHIs and Nursing Officers.
- Participants:
    - Development of criteria for participants.
    - Communication to the participants and coordination with the Training Coordinator.
    - Finalization of participants and development of their profile.

- Logistics:
  - Development of accommodation, travel plan, ticket booking, hall arrangements and other logistics support.
  - Finalization of the food menu and other requirements.
  - Systematic planning and efforts for arranging the hall with the cluster seating, sound system, communication aids, wi-fi and other needful infrastructure for creating enabling environment for conducting the training program.
- Branding:
  - Undertaken efforts for branding the display and other related materials including banner, certificates, presentations, etc.
- Planning for stationeries:
  - The project undertaken efforts for stationery and resource materials (bag, scribbling pad, pen, folder, communication aids, design and printing of certificates, etc.).
- Budget and financial planning:
  - Based on planning meeting, developed budget for planning & conducting the training considering various aspects such as resource materials, consultants, hall, accommodation, stationeries, resource kit, travel and other aspects.

Stage 2: Resource Team & Resource Materials

- Resource team:
  - The project evolved criteria, identified resource persons, prioritized and finalized the team.
  - Developed ToR and initiated contract signing for engaging the resource team in designing and conducting the training.
- Pre-production:
  - Finalized agenda based on the training needs and previous training experiences.
  - Development of tools, presentations, resource & reference materials, exercises, etc.
  - Internal review on the presentations and exercise sheets.
  - Suggestions and feedback on the materials developed and finalization of resource kit.
  - Evolved plans for dissemination.
- Resource kit:
  - Developed resource kit with presentations, exercises, tools, reference materials, etc.
  - Developed systems for sharing the soft copies of the presentations and exercises through e-group to participants for easy reference and undergoing hands-on training.
- Training Coordination Team (TCT):
  - Formed Training Coordination Team for systematic planning and coordination of the training program.

Stage 3: Training

- Before Training:
    - Issue of welcome letter
    - Allocation of rooms
    - Registration and provided resource kit
- During Training:
    - Inaugural
    - Training Agenda & Training sessions
    - Training sessions by facilitators including VHS-CDC and SIMU
    - Group formation
    - Feedback sessions/ experience sharing/ peer review learning
    - Recap
    - Group work/ hands-on training with peer review & review by facilitators
    - Pre & Post Evaluation
    - Post Training evaluation
    - Follow-up plans
    - Training Coordination Team Meeting

Stage 4: Post-Training

- Joint meeting between VHS-CDC and SIMU on the overall training program
- Analyzing pre & post-assessment tools
- Analyzing post-evaluation
- Analyze the individuals feedback provided
- Preparation of report

Stage 5: Follow-up

- Sharing the soft copy of the report and other reference materials for follow-up
- Emails through e-groups for updating and facilitate experience sharing
- Mentoring and follow-up support by SIMU team.
- Strategic guidance and supervision by the Consultant-Venereologists and Medical Officers trained on data management in the respective STD clinics.
- Undertaking team efforts in improving the quality on data management by the trained team available in the respective clinics with the guidance of SIMU.

2.6. Innovative approaches

Some of the innovative approaches in conducting the training program will include:

Criteria for selection	Customization of training materials	Engagement of capacitated SIMU team	Experience sharing	Post-Assessment
Training Need Assessment	Simulation Games	Utilizing in-country capacities	Peer review	Networked National Trained Team
Need based Agenda	Participatory methodology	Translation in local languages	E-group	Follow-up communication
Pre-Assessment	Intensive Hands-on experience	Use of field level data	Recap	Facilitators & TCT Meetings
Resource Kit	Presentations	Group learning	Post-training evaluation	Feedback

2.7. Coordination between the stakeholders

The **key stakeholders** involved in the training program will include: VHS-CDC Project/ facilitators, CDC and NSACP (including SIMU & Training Coordinator). VHS-CDC Project developed a concept note along with role of key stakeholders, presented with the key stakeholders in the planning meeting and finalized the overall training plan, execution plan and follow-up plans.

VHS-CDC — VHS-CDC Project

Facilitators

NSACP — NSACP-SIMU

Training Coordinator

The coordination between VHS-CDC and NSACP-SIMU at every stage of the planning & execution has helped in ensuring systems in technical delivery, logistics coordination and overall achievement of the objectives of the training. This training has demonstrated the success through greater engagement of each stakeholder at every stage of the program.

2.8. Day wise sessions and content covered

Day 1: Basics of Data Management & Data Quality

Data sources – Recording in Registers

Principles of database management

Understanding datasets

Variables & Indicators

Data quality assessment

Steps to improve data quality

Day 2: Analysis using MS Excel

Preliminary data analysis

Hands-on practice of Excel for data entry, DQA & analysis

Day 3: PPT Communication & Use of Data

Data Interpretation

Data Presentation

Communication of analysis results

Use of data for decision making

Detailed day wise agenda for the three-day training program is attached in annexure.

2.9. Key Learnings

The training on Data Management for PHIs and Nursing Officers has contributed for the following key learnings:

- Hands-on training on:
    o Understanding the data systems & data flow at STD/HIV clinics & identifying the issues that affect the data
    o Understand the role of participants in improving the data under NSACP
    o Understanding datasets, components, structure & database management principles
    o Variables & Indicators – Types and how to manage
    o Data Quality Assessment & Adjustments using Excel
    o How to apply the data quality assessment to Quarterly Returns
    o How to present the data in appropriate graphs

2.10. Outcomes

The key outcomes of the Training on Data Management & Analysis of STD/HIV Data for District STD Clinic Staff:

- Built a systematic understanding about data, its components, database structures, variables & indicators.
- Familiarized and done hands-on practice on MS Excel on applying data quality assessment & conducting basic data analysis on programme data.
- Will directly contribute to enhancing the data quality at every STD/HIV clinic AT THE TIME OF DATA ENTRY ITSELF.
- Clinic staff will be able to do basic analysis of the clinic data & present it in the form of graphs.
- Will improve the data management skills required to complement the upcoming EIMS system.

2.11. Training evaluation and effectiveness

2.11.1. Pre & Post-Training Assessment Analysis

As a part of the training, pre & post assessment was conducted with the participants (PHIs and Nursing Officers). Overall, 28 participants undergone the training program and all participants submitted the pre & post-training assessment forms. The overall comparison on the pre & post assessment is given below:

Pre & Post-Assessment Score

Legend	
Pre-Assessment	Post-Assessment
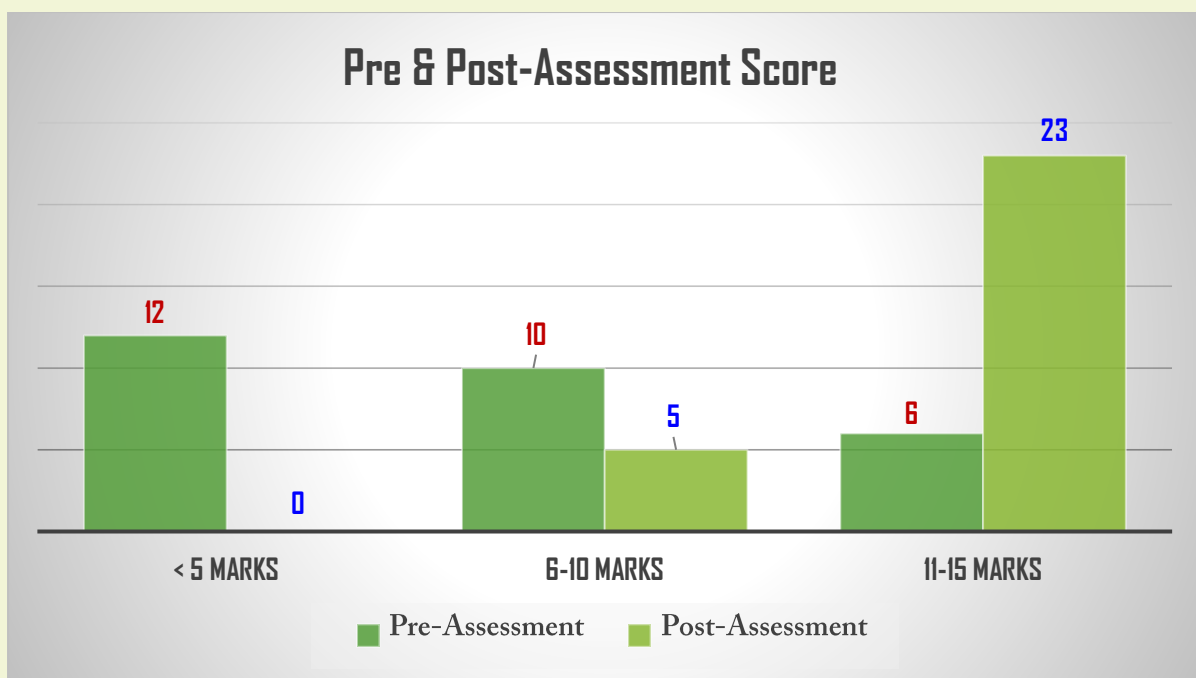
In the pre-assessment,

- Overall 42.86% (12) respondents have fallen in the category of scoring <5 marks.
- 35.71% (10) respondents have fallen in the category of scoring 6-10 marks.
- 21.43% (6) respondent has fallen in the category of scoring between 11 and 15.

Overall, about 88% (22) of the respondents fallen in the category of scoring <10 marks against the overall scoring of 15 marks. In which more than 50% of them has fallen in <5 marks category.

In the post-assessment,

- Overall 82% (23) respondents has moved to the category of scoring 11-15 marks (moved from 6-10 scoring in pre-assessment) against the overall scoring of 15 marks.
- 17.86% (only 5) respondents has fallen in the category of scoring between 6 and 10 which includes moving all the respondents from <5 marks to the level of scoring between 6-10.

Overall, more than 82% of the respondent has scored highest marks and above. All the respondents has improved in their knowledge through the training program. This shows the training has created effectiveness in providing needful knowledge and skills among the participants with correct understanding in accordance with the training objectives and outcomes.

Participants filling the Pre & Post-Assessment Tool
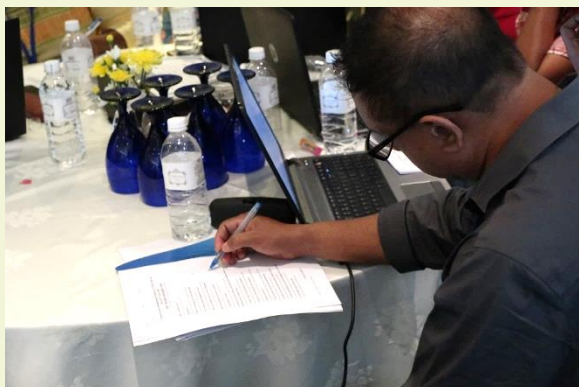
2.11.2.   Training Evaluation – Analysis

	Exemplary	Very Good	Good	Average	No Comments	Total	Total of (4 & 5)	Overall %
	5	4	3	2	1			
Course content								
I understood the learning objectives well.	20	8				28	28	100.00
The course content met my expectations & was in line with the learning objectives.	18	10				28	28	100.00
I found the course material (slides, handouts, exercises, etc.) useful & easy to follow.	22	6				28	28	100.00
Training received was adequate for my position/ experience.	19	9				28	28	100.00
The course will directly or indirectly improve the performance of my duties.	17	8	3			28	25	89.29
I am clear about where to find answers to questions that I have about Data Management.	19	7	2			28	26	92.86
Structure & process of training								
The training sessions are well structured & appropriately scheduled.	21	7				28	28	100.00
Instructional methods used during training are effective.	17	11				28	28	100.00
Participation and interaction were encouraged during the sessions.	22	6				28	28	100.00

	Exemplary	Very Good	Good	Average	No Comments	Total	Total of (4 & 5)	Overall %
	5	4	3	2	1			
The speed/ pace at which the training was conducted was appropriate.	20	6	2			28	26	92.86
I was comfortable with the length of the sessions & length of the workshop.	18	9	1			28	27	96.43
Group works/ hands-on exercises are well structured with clear instructions.	25	3				28	28	100.00
Guidance & mentoring support was adequately provided during group works/ exercises.	24	4				28	28	100.00
Adequate chance was given for participants to ask questions and resolve doubts.	24	4				28	28	100.00
There was ample opportunity to practice the skills I am supposed to learn.	19	6	1			26	25	96.15
I received adequate feedback from the facilitators during the practice sessions.	22	6				28	28	100.00
Trainers & Mentors – Knowledge & Delivery Style								
The facilitators were knowledgeable on the subject matter.	20	8				28	28	100.00
The facilitators explained the concepts clearly and in an understandable way.	19	9				28	28	100.00

	Exemplary	Very Good	Good	Average	No Comments	Total	Total of (4 & 5)	Overall %
	5	4	3	2	1			
The facilitators effectively handled the questions that were asked.	21	7				28	28	100.00
The examples & experiences quoted by the trainers were relevant & apt to my situation.	20	8				28	28	100.00
I was well engaged during the sessions/ The sessions were kept alive, interesting & interactive.	22	6				28	28	100.00
How would you rate their facilitation skills overall, on a scale of 5?	22	3	2	1		28	25	89.29
Facility & Amenities								
The venue and seating arrangement were comfortable and suitable for the training.	18	8	1	1		28	26	92.86
The environment was free from distractions and conducive to learning.	24	4				28	28	100.00
The audio-visual set up was good and clear.	19	9				28	28	100.00
The quality of food was good.	19	9				28	28	100.00
Overall								
How will you rate the training, overall, on a scale of 5?	25	3				28	28	100.00

	Exemplary	Very Good	Good	Average	No Comments	Total	Total of (4 & 5)	Overall %
	5	4	3	2	1			
I am satisfied with the training course.	22	6				28	28	100.00
I will recommend this course to others.	23	5				28	28	100.00

Overall training evaluation has conducted in 5 areas with 29 questions by applying 5-point scale. The above table reveals the effectiveness of the training program and evaluation of the training program in the perspectives of the participants. Overall (75.86%) 22 questions/ evaluation criteria has scored 100% in all aspects (this shows all aspects are Exemplary and Very Good).

2.11.3. Consolidated information on the Post-Training Evaluation

VHS-CDC Project analyzed the Post-Evaluation Tools filled by each participant and consolidated the same on the areas of: a) What do you like about the course; b) How can we strengthen and improve this training further; c) Would you recommend including any other topics in the training course; and d) Any other comments.

What do you like about the course?

- This training course very useful for our job responsibilities.
- As a PHI, I always work with Excel. By participating in this training, learnt more technical terms, knowledge and skills on use of excel for data management.
- Clearly presented program. Well organized and well explained. Much satisfied. Well-motivated.
- Methodologies adopted: - Lecture; recap; group work; exercise; mentoring; question & answer session; peer learning; etc., are good.
- Good lecture, group work, skill training, resource materials and accommodation.
- Good facilitators and understood the data management.
- Team formation, group work, translation in local language and mentors for each group for guiding.
- Before I come to this program, I have little bit knowledge about Data Management. This training provided a good change for improving my knowledge and skills.
- Thanks for sharing wonderful presentations and soft copies.
- Recap session everyday.
- Motivating everyone to participate and share without discrimination.
- Guiding principles allowing everyone to share suggestions and ideas.
- It helps to improve our duties and responsibilities.
- Lecturing style and explanation is very good. Exercise and group work is excellent. Good training environment. Good resource persons.
- Data management is very important for our services. For improve our excel knowledge. Specially the facilitators learnt simply and properly.
- This course is more relevant and valuable for us as persons who handling and preparing returns.
- It's a very beautiful training program – well conducted and coordinated.

How can we strengthen and improve this training further?

- Request to provide keys and formulae for enabling us to practice. However, the same is also available in the excel.
- The time and the content provided is sufficient supported with skill training.
- SIMU may need to conduct such type of training once in a year.
- Everything is perfect.
- E-group can be used for sharing additional resource materials by SIMU/ trainers.
- Arranging virtual support in providing clarifications and encouraging to sustain the knowledge and skills.

Would you recommend including any other topics in the training course?

- Overall the training content in this training is sufficient.
- Inservice/ refresher training may be provided.
- Include content or provide opportunities to learn about multi-media presentation, graphs, etc.
- Orientation on EIMS.
- How to prepare presentation in PPT?
- Course content is well structured.
- Actually, you have learnt what we need for our work.

Any other comments.

- Facilitators are good, knowledgeable, practical and conducted sessions.
- Dr Ariyaratne, Dr Murali, Dr Ilanchezhian and Dr Yujwal has very well facilitated the training in an orderly way with technical clarity and mentoring.
- Overall, this training was very useful in gaining knowledge and skills.
- Recap session was much useful to regain and refresh.
- Satisfied with the training program and got motivated to improve systems at clinic level.
- Mentoring and guidance provided on use of excel during group work by facilitators and Ms Sudha is good.
- Very good training course.
- Very good accommodation, food, hall and other facilities.
- Facilitators are good for data management. Perfectly trained us. Thank you very much VHS-CDC Project and facilitators.

- Thanks to SIMU for the opportunity provided and thanks to VHS-CDC Project and team for the conduct of training.
- Presentations are very good and thanks for sharing the soft copies for reference as and when required.
- E-group formation and efforts undertaken to share day wise presentation – good idea.
- Ms Sudha and Mr Sathyaraju extended support during the practical exercises on Excel is appreciable.
- The group photo session was good.
- The VHS-CDC and organizers shared the day wise presentations and photos through e-group on every day. This was useful to refresh and prepare for recap.
- Overwhelmed with the provision of certificate for the participants.

2.12. Feedback of Participants

"Overall this training program is well planned and professionally organized. This training program will be of very useful for our job and performing our duties. It helps to improve our knowledge with Excel Worksheet and use the same for data collection and reporting. It is a very good experience. Our facilitators are good in conducting the training sessions in a simple and practical manner."

– Mr S M Shiyamdeen,
Public Health Inspector (PHI), STD clinic, Badulla.

"This training on data management is a very excellent training. Good opportunity for us in benefiting through this training program. We gained more knowledge about data management, handling and analyzing the data. We are confident that, we can improve our STD clinic through this training. I am over whelmed with the reception and support provided by the VHS-CDC project team in registration, arranging training facilities, sharing soft copy of the presentations, accommodation, engaging technical experts and all other support for effective learning."

– Mr G Mathanakumar,
Public Health Inspector (PHI), STD clinic, Kilinochchi.

"Overall training content is good. Perfect methodologies. Very useful for our job responsibilities."

– Mr Thurairasa Sivananthan,

Public Health Inspector (PHI), STD clinic, District General Hospital, Vavuniya.

"Training program is excellent. Explained the methods in an understandable method by adopting multiple participatory methodologies and hands-on training. This training helps us to increase our work responsibilities in a quality manner. I am confident that, will carryout my job responsibilities by ensuring quality and contribute for systematic reporting."

– Mr E M Anpalagan Fernando,

Public Health Inspector (PHI), STD clinic, DGH, Mannar.

"Training courses are more useful for us to develop our knowledge and skills. Teaching way is very interactive and attractive. Existing knowledge is refreshed and new things are studied. Studied things can be applied properly for the quarterly return data."

– Ms W M T Chandrarathna,

Nursing Officer, HIV clinic, NSACP, Colombo.

"The training program was very useful for us. Methodologies are very interesting and simple. We were well understood of the contents. We can increase our excel knowledge through this training. Now we can prepare the data base on quarterly returns without any mistakes."

– Ms J H I Sanjeewanie,

Nursing Officer, STD clinic, NSACP, Colombo.

"Training contents are covered by more areas and valuable contents of MS Excel introduce the sessions. Presenters and all the facilitators are very good in presenting the sessions. Thanks to VHS-CDC Project and the facilitator. Finally, in these three days, I improved my knowledge in MS Excel including other areas. I am planning to practice by continue to work in excel."

– Mr L H S T Kumara,

Public Health Inspector (PHI), STD clinic, Base hospital, Balapitiya.

"Training course content and training was very useful and knowledgeable. The VHS-CDC Project and the Facilitators are very helpful, supportive, committed and contributed. We gained new ideas about data analysis and our knowledge will support for our improved submission of Quarterly Returns. Thanks to SIMU, NSACP and VHS-CDC team."

– Mr H M Chinthaka,
Public Health Inspector (PHI), STD clinic, Teaching Hospital, Kandy.

"Overall training content is good. Methodologies adopted is also good. Gained very good knowledge and skills on data management within three days. We should apply the knowledge in our clinics for preparing Quarterly Returns. We understood about the valuable data. The collected data will be entered accurately and send for returns in a timely manner. Thanks for including and conducting this training. Overall very well conducted the training."

– Mr H M U Herath,
Public Health Inspector (PHI), STD clinic, Teaching Hospital, Kurunegala.

"The training program was very useful for us. Methodologies are very interesting and simple. The course content was very well understandable. We can apply our excel knowledge in a quality manner. Now we can prepare the database without any mistakes. We can prepare our quarterly returns very well. The VHS team and the facilitators are very friendly and very helpful. Thank you VHS and NSACP team."

– Ms K K N Ranaweera,
Nursing Officer, STD clinic, NSACP, Colombo.

"Gained the knowledge on data system and data flow, indicators and variables. Exercises were very good and understandable. Through this training, now we can identify where we made errors in the data quarterly returns. My ability in clinic data quality and analysis practices is improved by learning the formulae and so on. Quarterly STD returns, ART Returns and Cross-Sectional Database is prepared by me in the clinic. The recap session was very helpful in getting clarity, regaining and remembering. So, this training is very important to me. Thanks to VHS-CDC Project, CDC and NSACP for given me this opportunity."

– Mr P M Dinesh Pathiraja,
Public Health Inspector (PHI), STD clinic, District General Hospital, Chilaw.

"Course content, technical deliberations, interactions, exercises, resource materials and other arrangements are very good. Teaching methods in an interactive way with different techniques are very much useful. This course will be very useful for preparing Quarterly Returns and other statistics. This will be very useful for upgrade our job responsibilities. Thanks to VHS team."

– Mr R M S S Rasnayake,
Public Health Inspector (PHI), STD clinic, NSACP.

"This training on data management with three-days of intensive, residential training was very useful and satisfactory. Content, methodology, presentations, exercises, hands-on training and other opportunities were very good. Learnt lot and after long time undergone such as good and useful training program. E-group was formed and networked all the participants. This e-group was very useful. Method adopted for sharing presentations through e-group is a novel idea. Accommodation was very good and food also good. Very knowledgeable and good facilitators. We are awaiting for more programs like this. Thank you."

– Mr K Jatheeswararuban,
Public Health Inspector (PHI), STD Clinic, DGH, Mullaitivu.

"This training is very important for us to perform our duty in a more meaningful manner. We gathered and gained a lot of knowledge and skills on data management as well as MS Excel. Very useful training and important functions has been introduced to us to enable us to improve our quality in reporting. We are confident in using excel for data collection, analyzing and reporting. We agree to continuously practice in our clinic responsibilities and sustain the knowledge and skills gained through this training. Good opportunity. Good learning. Good environment. Good team contributed in capacitating me."

– Mr Chandana Dolewatta,
Public Health Inspector (PHI), STD clinic, District General Hospital, Gampaha.

"Training contents are very useful for carrying out my duties and responsibilities at STD clinic. The contents are designed considering our needs. The technical aspects such as: agenda, presentation, exercises, group learning, hands-on training, recap, pre & post assessment, etc., was very useful and motivated me to concentrate and learn. Three days very

useful and meaningful training. Thanks for including Nursing Officers in this training. After this training, we feel this is an interesting subject. Presentations are very good and methodologies are good. All the facilitators are very good and helpful. Now we have good idea about data analyzing and how to work and how to support for our Quarterly Returns. Thanks for everyone."

– Ms M A L Savithri,
Nursing Officer, STD clinic, NSACP, Colombo.

"After a long time I have undergone a training on Data Management. This training was very much useful in all aspects for me and possibly for my team also. This has helped in understanding the need, importance of data collection, analysis, presentation at the respective reporting units…. This will also help in strengthening the STD clinic level program and evolve plans to overcome the gaps by analyzing the data. Overall, very much useful, informative and learning."

– Mr G Nakkeeran,
Public Health Inspector (PHI), STD clinic, T.Hospital, Jaffna.

"Overall this training program was well planned, need based, participatory, practical and more related to our needs. The sessions on recap was useful in learning, sharing and regaining knowledge."

– Mr H K Mannapperuma,
Public Health Inspector (PHI), STD clinic, NSACP.

"Five positive aspects of the training are: good training, well-coordinated, useful resource materials, enabling environment (accommodation, food, hall, facilities, etc.), need based and comprehensive training."

– Mr G D G A S Gunaratne,
Public Health Inspector (PHI), STD/AIDS Control unit, Anuradhapura.

2.13. Follow-up, suggestions and recommendations

During the training, during feedback sessions, Training Coordination Team meetings, some of the follow-up plans, suggestions and recommendations emerged are:

- All the trained participants were requested to continue to practice this data management in excel formats by using various methods introduced on day-to-day basis for further enhancing and sustaining the knowledge and skills.
- All the trained participants were requested to develop systems and practices for effective use of data management by adopting various methods introduced.
- SIMU will continue to extend needful strategic guidance, technical update and follow-up through the existing systems with all the trained participants.
- Participants were encouraged to write to SIMU and/or VHS-CDC for obtaining any additional clarifications, technical updates at any point of time.
- Similar training on data management will be provided to the Consultant-Venereologists and Medical Officers from the respective STD clinics will be trained. These trained personnel will also provide needful guidance and support to the co-workers/ District STD Clinic members.
- SIMU will integrate the technical update, mentoring and review mechanism as a part of the ongoing review system and field visits.
- SIMU and NSACP has also planned to provide training on EIMS to enable them to use the EIMS data for efficient data analysis, presentation and dissemination.
- The e-group formed by networking all the trained personnel will be maintained and encouraged for experience sharing, sharing resource materials and update by SIMU team.

Chapter 3: Training proceedings

3.1.   Day 1 (5th August 2019)

August 2019

M	T	W	T	F	S	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Monday 5th Aug 2019

3.1.1.   Registration

Registration of Participants: Ms T Sudha, Senior Programme Associate from VHS-CDC Project and NSACP jointly undertaken the registration process between 0900-0915 hrs at the venue. The participants (PHIs and Nursing Officers) and facilitators have registered in the registration format. Participants were also provided with resource kit including bag, pad, pen, agenda, etc. In addition to the registration and resource kit, each participant was provided with Welcome Note along with a brief on the logistic support as a part of the training program. Overall, 28 participants were registered and 9 members (facilitators, documenters, organizers/ coordination team) were registered.

3.1.2.   Brief Inaugural Function

Introduction of VHS, VHS-CDC Project, Key Initiatives & Welcome Address: VHS-CDC Project and NSACP has jointly organized a brief inaugural function between 0915-1000 hrs. Dr T Ilanchezhian, Senior Technical Advisor, VHS-CDC Project has provided welcome address and brief introduction of the program. In his speech:

- Briefly introduced about VHS, Project Management Unit of VHS and VHS-CDC Projects initiatives.
- Briefly narrated the process adopted for evolution of this technical cooperation initiative and focus areas of VHS-CDC Project in providing TA on SI.
- Highlighted the key activities and TA extended/ undertaken by VHS-CDC Project on SI over a period.
- Also highlighted the training approaches being adopted by VHS-CDC Project in capacity building of the SIMU and SI team in the country.

In continuation of this brief introduction, he welcomed the chief guests and participants for this training program.

Lighting of the Lamp: As a symbol of inaugurating the training program, lighting of the lamp was held by the following officials/ chief guests:

- Dr Ariyaratne Manathunge, Consultant-Venereologist, NSACP
- Dr Joseph D Williams, Director Projects, VHS
- Dr T Ilanchezhian, Senior Technical Advisor, VHS-CDC Project
- Dr S Muraliharan, MO/Planning/SIM unit/NSACP
- Dr Yujwal Raj, Technical Advisor (SI), VHS-CDC Project
- Mr Suneel Kumar Chevvu, M&E Officer, VHS-CDC Project
- Public Health Inspectors (PHIs) & Nursing Officers representing the participants

Introductory note: Dr Ariyaratne Manathunge, Consultant-Venereologist cum Coordinator, SIMU-NSACP has delivered an introductory note. During the introductory note, he highlighted on the VHS-CDC Project's cooperation with SIMU-NSACP with the support of CDC in roll-out of technical cooperation initiatives. During the introductory note, he mentioned that:

> *"I would like all the participants to extend the fullest cooperation by participating and benefiting through this training program. This training program is primarily designed for PHIs and Nursing Officers considering the roles and responsibilities, contributions in data collection and data management. PHIs and Nursing Officers are the main responsible persons for collecting and preparing data at the STD clinic level. On submission of the data by the respective STD clinics, the NSACP will become responsible to consolidate from clinics, analyze and present it and submit as per requirements.*

> *We are confident that, you have some idea about the data management and use of Excel. Because data is not only for reporting to Colombo (NSACP) but for projecting the country's scenario at the global level. Wish to inform that, VHS–CDC Project's Technical Advisor on SI Dr Yujwal is an expert on Data Management and MS–Excel. I hope everybody will utilize this opportunity to the fullest extent. Thank VHS-CDC Project and CDC for the support being*

extended to SIMU in a systematic way with good collaboration. I also wish and hope that this VHS-CDC Project should extend its support to NSACP for one more year. Request to benefit through this training program and feel free to clarify and gain knowledge and skills on data management".

<div align="right">

– Dr Ariyaratne Manathunge,

Consultant-Venereologist cum Coordinator, SIMU-NSACP.

</div>

Introduction of Facilitators: VHS-CDC Project team has introduced the facilitators of the training program:

- Dr T Ilanchezhian alias Dr IC, Senior Technical Advisor, VHS-CDC Project introduced Dr Ariyaratne Manathunge, Consultant-Venereologist cum Coordinator, SIMU-NSACP.
- Mr Suneel Kumar Chevvu, M&E Officer, VHS-CDC Project introduced Dr Yujwal Raj, Technical Advisor (SI), VHS-CDC Project.
- Ms Priya Krishnaswamy, Senior Programme Associate, VHS-CDC Project introduced Dr S Muraliharan, MO/Planning/SIM unit/NSACP.

This session has helped the participants to understand the profile of the trainers and get acquainted with.

Introduction of Participants: Dr T Ilanchezhian requested each participant to share their name, designation, years of experience, place of work, experience in managing data and other relevant details. Each participant introduced themselves. This process has helped to enable the facilitators to understand about each of the participant for facilitating interactive sessions.

Pre-Assessment: Dr Ilanchezhian and Ms Sudha administered the pre-assessment by distributing forms to each of the participant. This Pre-Assessment form had 15 questions with four options for each question. The team has also facilitated in translation of select questions based on the needs and requirements. Each participant filled in the pre-assessment tool and submitted. This has helped the trainers to understand what they already know, what the participants are in need of and planning for the training sessions to enable everyone to come to the uniform level of understanding on the training subject.

Objectives & Expected Outcomes of the training program: Dr Yujwal Raj facilitated interactions to understand on the needs and expectations from the participants in this training on data management.

- In response to this, each participant shared their expectations in the training program for the benefit of enhancing their knowledge and skills, improving their job responsibilities, enhancing the efficient data management, etc.
- In continuation of this, Dr Yujwal Raj made a presentation on objectives & expected outcomes of the training in an interactive way.

During this session, he mentioned that, overall *goal* is to build the data skills of Public Health Inspectors and Nursing Officers working at STD/HIV clinics under NSACP in order to enhance the data quality, improve the data analysis and strengthen the use of HIV/AIDS data reported by the clinics for routine monitoring purposes. In this session, he also shared about the objectives, training outcomes, facilitators, sessions/ session plans, materials, common guiding principles, day wise course content, training methodologies, etc.

He informed that, this training will be organized by adopting the following methodologies and emphasized more focusses on hands-on training considering the importance of acquiring more skills on data management by using excel:

- Active Learning through discussions & review of examples & case studies
- Learning by Doing
- Individual Hands-on/ Practical Exercises
- Group Exercises
- Parallel work on selected data

As a part of the presentation cum discussion, through a participatory process, formulated the basic guiding principles which need to be adopted during the training program. Some of the *guiding principles* emerged and finalized through consensus will include:

- Please attend ALL sessions
- Keep to time schedule

- Put mobile phones on VIBRATE or turn OFF
- Move to a location where you can see the screen
- Participate actively
- Feel free to seek clarifications
- Avoid arguments & side talks
- Respect others' point of views
- Assist your neighbours, when necessary

In this session, Dr Yujwal Raj also informed the participants that,

- Participants requires familiarity with
- HIV/AIDS program data
- Microsoft Excel
- Basic understanding of data
- Participants should be involved in data collection, reporting, analysis and presentation of HIV/AIDS data.
- Participants should have laptop/ computer to do practical exercises.
- Participants should have a sample, preferably real, dataset to work on a relevant analysis.

In continuation of the presentations, Dr Yujwal Raj encouraged *question and answer session* on understanding the overview of the program.

Overall, the training needs has been integrated in the agenda and scheduled the sessions in a systematic manner considering the needs and expectations of the participants. Further, Dr Yujwal Raj encouraged the participants to clarify the doubts as an when required both during the session and at the end of the session. He also stressed that, lot of practical exercises will be undertaken as a part of this training methodology.

Inaugural address: Dr T Ilanchezhian briefly introduced Dr Joseph D Williams, Director Projects, VHS. During the introduction, he mentioned that, Dr Williams is heading and leading various projects at VHS, having more than 20 years of strategic leadership and experienced in Public Health Management. He is a well experienced and well-known

professional in implementation of projects, providing technical assistance, facilitating knowledge transfer, managing multi-dimensional projects, administering large grants awarded by international funding agencies, demonstrating innovations, researches and many more. He added that, he is leading this technical assistance project on strategic information which is being implemented in collaboration with SIMU-NSACP. He invited Director Projects to deliver the Valedictory address.

Dr Williams delivered valedictory address and, in his speech, he highlighted:

> *"The Voluntary Health Services is based in Chennai/INDIA. VHS is a multi-specialty hospital with 60 years of dedicated services on health. This hospital is equipped with 465 beds and 23 departments. VHS has a project division and managing various health programs. This project on VHS-CDC Project is supported by CDC-Department of Health Services, United States of America. VHS-CDC Project is providing technical assistance on SI for SIMU-NSACP. This technical assistance has three major objectives and this workshop very well fits in one of these objectives, particularly for use of data and building the capacities. I have three comments to make, as far as data management and reporting challenges are concerned such as: Uniformity of understanding; Quality of data; and How to use your data at clinic level. Data analysis can help us building the data at local levels. I request all the participants to benefit through this training program. I also thank Dr Ariyaratne Manathunge, Consultant-Venereologist and Coordinator-SIMU, NSACP for his initiative to train all peripheral units and I am sure that they will be followed up in the couple of days for better routine monitoring purposes".*
>
> *– Dr Joseph D Williams, Director Projects, VHS*

Vote of thanks: On behalf of NSACP and VHS-CDC Project, Dr S Muraliharan, MO/Planning/SIM unit/NSACP has delivered vote of thanks in the inaugural function.

The *Master of Ceremony* of the inaugural function was coordinated by Dr T Ilanchezhian, Senior Technical Advisor, VHS-CDC Project.

Photo Glimpse of Inaugural Function

Introductory Note delivered by
Dr Ariyaratne Manathunge,
Consultant-Venereologist, NSACP

Inaugural Address delivered by
Dr Joseph D Williams,
Director, Projects, VHS

Lighting of Lamp by Dr Ariyaratne Manathunge, Consultant-Venereologist, NSACP
along with Dr Joseph D Williams, Director Projects, VHS

Lighting of Lamp by Public Health Inspector

Welcome address by Dr T Ilanchezhian,
Senior Technical Advisor, VHS-CDC Project

3.1.3.   Sessions and Exercises

| Day 1 | 5th Aug'19 | Monday | 1015-1800 hrs |

Session wise Presentations and Exercises

Exercise 3: Assessment of NSACP datasets - 2018 CROSS-SECTIONAL DATABASE -NET TOTAL

S. No.	Date of registratio mm/dd/yyyy	year of registration	Clinic No	Any other clinic no.	SEX	Date of Birth mm/dd/yyyy	Age at registration (years)	current date	age todate	Age cat	Age Group
1417	6-Sep-2014	2014	CO/M/0960	None	M	1-Jan-1995	19	31-Dec-18	24	15+	20 to 24
1418	NA		CO/M/005	None	M	NA	NA	31-Dec-18	#VALUE!	NA	
1419	NA		CO/M/0006	None	M	NA	NA	31-Dec-18	#VALUE!	NA	
1422	NA		CO/M/0132	None	M	NA	NA	31-Dec-18	#VALUE!	NA	
1424	NA		CO/F/0559	F/436	F	NA	NA	31-Dec-18	#VALUE!	NA	
1199	15-Sep-15	2015	KA/M/0118	None	M	31-Jan-98	17	31-Dec-18	21	15+	20 to 24
797	7-Jul-2014	2014	CO/F/0975	none	F	8-Nov-1997	16	31-Dec-17	20.2	15+	20 to 24

Session 1: Importance of Good Data Management Practices in the Program

Time: 1 hour (1015 – 1115 hrs)

Materials / Methodology:

- Power-Point Presentation
- Interactive Session
- Discussion

Facilitator:

Dr Yujwal Raj

Core Content Covered:

- Importance of data management
- Process involved in data collection
- Purposes of data management systems
- Data management at different levels
- Meaning of good data management
- Good things, challenges and areas for improvement in data management at STD clinic level
- Followed by discussions

Key highlights: As a part of the presentation, each participant shared on GOOD THINGS, CHALLENGES and areas for IMPROVEMENT in data management at STD clinic level. Some of the key suggestions emerged during the discussions will include:

GOOD THINGS	CHALLENGES	IMPROVEMENT
- System of recording - Monthly provincial review - Presentations on analysis - Analysis and use of data to focus on areas & KP - Data available for a long time - NSACP support is very well - Can analyse success & failure/ performance	- Work hard – training data submission - Double counting – STD/HIV - ART QR and completed - HIV patients move from place to place – data shifting - KP registrations – double counting - Compatibility between different formats/ labs - Everyone in clinic should be aware of Data Mgt.	- Paper to electronic - Simplify the registers - Clinic level training in Data Management

Session 2: Introduction to principles of database management

- **Exercise 1: Understanding data management at STD/HIV Clinic**
- **Exercise 2: Reviewing the Database**

Time: 45 mins (1130–1215 hrs) **Materials / Methodology:** - Power-Point Presentation - Interactive Session - Exercise Formats - Hands-on Exercise **Facilitators:** Dr Yujwal Raj[1] Dr Ariyaratne Manathunge[2] Dr Joseph D Williams[2] Dr S Muraliharan[2] Dr T Ilanchezhian[2]	**Core Content Covered:** - Importance and definition of DATA, INFORMATION and KNOWLEDGE. - Explained in detail on DATA, INFORMATION and KNOWLEDGE. - Data lifecycle with six steps covering creating data; processing data; analyzing data; preserving data; giving access to data; and re-using data. - Explained each step with examples. - Details on database, database management system, creating database structure, key principles, compiled datasets, etc. - Principles of good data management plan. - Details on MetaData, coding and data dictionary, efficient timely data flow, data storage and retrieval, data protection and sharing, maximizing data usefulness, data preparation, data analysis, etc. - Presentation followed with question and answer session and follow-up.

Key highlights: The team was divided into groups and provided with exercise formats and participants completed the following exercises:

- Exercise 1: Understanding data management at STD/HIV Clinic
- Exercise 2: Reviewing the Database

Note: The exercises was initiated during the session and the same exercise was continued during the post-lunch on the same day.

[1] **Presenter**   [2] **Co-Presenter**

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EXERCISE 1: UNDERSTANDING DATA MANAGEMENT AT STD/HIV CLINIC

(Answer the following questions based on your work experience at STD/HIV Clinic)

1. Name & Location of the facility: …………………

2. Your designation: …………………

3. Brief of your functions: …………………

    …………………

    …………………

4. How many registers you manage at the STD/HIV clinic? …………………

5. List of registers you manage at the STD/HIV clinic: …………………

    …………………

    …………………

6. Whom do you collect data from? List all the beneficiaries whose details are documented.

    …………………

    …………………

7. Mention a few information fields that you collect data on in your routine work.

    …………………

    …………………

8. How frequently do you collect the data? Daily/ Weekly/ Monthly/ Other …………………

9. What challenges do you face while collecting the data from the beneficiaries?

    …………………

    …………………

    …………………

10. How frequently do you record the data in the registers? …………………

11. Do you have a data dictionary to guide you on the filling of registers? …………………

12. Were you trained in the definitions and filling of register columns? …………………

13. What challenges do you face while recording data in the registers? …………………

    …………………

    …………………

14. Are you involved in quarterly reporting of the data from your clinic? …………………

15. What is/are the name/s of the report/s that you submit? …………………

    …………………

16. How frequently do you report the data to higher centres? ....

17. How do you convert the data in registers to data in the reports? Manual counting/ Individual data entry/ any other method of aggregation? ....

18. What challenges do you face while aggregating data from the registers? ....

19. Who does the data entry into the computer? ....

20. What challenges do you face while entering the data into the computer format? ....

21. Do you verify the report for errors or missing fields before submitting? ....

22. How do you store your registers? ....

23. Who has access to the registers? Is the data security ensured? ....

24. How do you store or protect the quarterly reports? ....

25. Do you often refer to old registers or reports to take out old data? Is it easy or difficult? ....

26. Are you able to submit the data to NSACP in time every quarter? If no, what are the reasons? ....

27. Is the process of data recording, aggregation & reporting, a burden or difficult task for you? If yes, how do you like to improve the system so that it is more efficient & of better quality? ....

EXERCISE 2: REVIEWING THE DATABASE

Review the 'Exercise 2 Dataset' given to you and fill the following table.

S No	Observe/ Identify	Observations/ Details
1	Is it a single dataset or compiled dataset? Why do you say so?	
2	What is a case in this database?	
3	No. of cases	
4	No. of fields and their names	
5	Primary key	
6	Metadata is adequate and clear	
7	**Any of the key principles violated in the dataset?**	
A	One row for one case	
B	No duplicate variables/ column heads	
C	No duplicate primary key	
D	No sub-totals in rows; sub-totals/ totals in columns are OK	
E	No merged cells; No merged headings	
F	No blank cells (Fill blank cells with some code or Impute)	
G	No two data types in one column (Text/Num/Code)	
H	Short & crisp variable names; Not too long	

DATASETS (Hands-on working sheet)																
				2003		2004		2005		2006		2007		2008	
State	District_name	Site_name	Site_Type	NT	NP	NT	NP	NT	NP	NT	NP	NT	NP	NT	NP
Andhra Pradesh	Visakhapatnam	Priyadarshini Service Organization, Vishakhapatnam	FSW	250	32	250	35	250	39	250	27	250	22	248	12
Andhra Pradesh	East Godavari	East Godawari	FSW	250	113	250	102	250	67	250	23	250	39	244	45
Andhra Pradesh	Prakasam	Lakshmi Development Society, Ongle, Prakasam	FSW	250	61	250	27	250	18	250	11	250	18	235	16
Andhra Pradesh	Hyderabad	Hyderabad	FSW	250	40	250	25	250	30	250	24	249	18	250	37
Andhra Pradesh	Kurnool	Parameswari, Kurnool	FSW	250	22	250	25	250	8	249	6	249	9	249	12
Andhra Pradesh	Warangal	Warangal	FSW	250	32	250	47	250	32	249	22				
Andhra Pradesh	Guntur	Needs Society, Chilakaluripet, Guntur	FSW			250	36	250	33	250	15	250	32	213	19
Andhra Pradesh	West Godavari	Action for Development, Bhimavaram (New 07)	FSW									249	41	247	35
Andhra Pradesh	Khammam	JAGRUTI (New 07)	FSW									250	39	247	66
Andhra Pradesh	Adilabad	AIRTDS,Mancherial (New 07)	FSW									217	10	249	38
Andhra Pradesh	Nalgonda	ANKITA (New 07)	FSW									250	25	227	21
Andhra Pradesh	Srikakulam	Swageti Project,Youth Club of Bejjipuram (New 07)	FSW									250	15	243	10
Andhra Pradesh	Warangal	MARI, Hnamkonda (New 07)	FSW									120	8	248	12
Andhra Pradesh	Khammam	JAGRUTI (New 07)	FSW			248	12								
Andhra Pradesh	Nalgonda	ANKITA (New 07)	FSW					250	11						
FSW: Female Sex Workers; NT: Number Tested; NP: Number Positive															

Session 3: Understanding datasets under NSACP–Issues with Program Data

- **Exercise 3: Assessment of NSACP datasets (ART Cross sectional database)**

Time: 1 hour 15 mins
(1215-1330 hrs)

Materials / Methodology:

- Power-Point Presentation
- Question & answer session
- Exercise Format
- Practical Exercise

Facilitators:

Dr Ariyaratne Manathunge[1]
Dr Yujwal Raj[2]
Dr Joseph D Williams[2]
Dr S Muraliharan[2]
Dr T Ilanchezhian[2]

Core Content Covered:

- Introduction on NSACP
- Main data systems at NSACP
- Data management from STD and HIV clinics
- HIV case reporting system
- Monitoring and evaluation of STD clinics
- Sources of STD data
- Registers maintained at STD clinics
- Quarterly reporting at STD clinics
- Monitoring and evaluation of ART centers
- Database of HIV clinics

Key highlights: The presentation was followed with question & answer session. This has helped the facilitators and participants to understand the datasets under NSACP. Followed with the discussions, exercises on the following:

- Exercise 3: Assessment of NSACP datasets (ART Cross sectional database)

Also informed that, all STD forms will be converted into electronic and reporting will be undertaken through EIMS.

[1] **Presenter**   [2] **Co-Presenter**

S. No.	Date of registratio mm/dd/yyyy	year of registration	Clinic No	Any other clinic no.	SEX	Date of Birth mm/dd/yyyy	Age at registration (years)	current date	age todate	Age cat	Age Group
											Exercise 3: Assessment of NSACP datasets - 2018 CROSS-SECTIONAL DATABASE -NET TOTAL
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1422	NA		CO/M/0132	None	M	NA	NA	31-Dec-18	#VALUE!	NA	
1424	NA		CO/F/0559	F/436	F	NA	NA	31-Dec-18	#VALUE!	NA	
1199	15-Sep-15	2015	KA/M/0118	None	M	31-Jan-98	17	31-Dec-18	21	15+	20 to 24
797	7-Jul-2014	2014	CO/F/0975	none	F	8-Nov-1997	16	31-Dec-17	20.2	15+	20 to 24

EXERCISE 3: ASSESSMENT OF NSACP DATASETS

Review the NSACP Dataset brought by you in your group and fill the following table.

S.No.	Attributes of Dataset	Observations/ Details	
1	Name of the dataset		
2	Reference Period of dataset		
3	Geographic Scope	National/ Provincial/ District/ Clinic Details:	
4	**Data Lifecycle**	Who performs this function?	When/ At what frequency?
A	Collecting data		
B	Creating dataset		
C	Processing data		
D	Analysing data		
E	Preserving data		
F	Have access to data		
G	Publish results		
H	Using & reusing data		
5	**Assessment of Utility & Usability**	Score the following on a scale of 3, where 3 is good, 2 is moderate, 1 is low	
A	Explains epidemic		
B	Reflects program performance		
C	Availability of data at desired level		
D	Feasibility of extraction & use		

6	Probable issues with the dataset at various steps	Discuss & write the key issues affecting the dataset at each step below.
A	Collecting data	
B	Documenting in Registers	
C	Counting & Aggregation	
D	Data entry	
E	Reporting	
F	Compilation & Analysis	

Interactions with participants by Director–NSACP: Dr Rasanjalee Hettiarachchi, Director, NSACP has visited the training program and observed the program. In continuation of this, Dr Joseph D Williams, Director Projects, VHS provided a brief introduction about the Director-NSACP. Dr Rasanjalee Hettiarachchi, Director, NSACP interacted with the participants. During the interaction, the Director-NSACP has emphasized that, VHS-CDC Project has organized this training program for PHIs and Nursing Officers. It is one of the important training program for each one of you for strengthening the data management at every reporting unit level and overall strengthening data management system at country level.

VHS-CDC Project has identified good training team supported with very useful course materials along with the hands-on training. Please make use of the training program for improving your knowledge and skills and contributing for the overall country program.

Director-NSACP recalled and appreciated the efforts undertaken by VHS-CDC Project with the support of CDC in organizing international training on data management in Chennai for NSACP and SIMU team. In continuation of this training program, VHS-CDC Project is organizing this training program for capacitating Nursing Officers and Public Health Inspectors working at peripheral STD clinics. In continuation of this training program, VHS-CDC Project is also planning to conduct training on Data Management for Consultant-Venereologists and Medical Officers. Through the process, the team associated in data collection and reporting at each of the peripheral STD clinic will be trained to contribute for strengthening data management system at every level.

Participation of Dr Rasanjalee Hettiarachchi, Director, NSACP in the training program and interactions with the Facilitators and Participants

Exercise 1 & 2 (1430–1515): The respective team continued the exercises such as:

    Exercise 1: Understanding data management at STD/HIV Clinic; and Exercise; and Exercise 2: Reviewing the Database with the guidance of facilitators supported with hands-on training and mentoring.

Each member on the team has learnt the skills through these exercises.

Session 4: Mapping Variables & Indicators – From Registers to Reports

- ## Exercise 4: Variables and Indicators (Part A and B)

Time: 1 hour (1515–1615 hrs)	
Materials / Methodology: • Power-Point Presentation • Interactive Session • Exercise Formats • Group Work	**Core Content Covered:** • Definition of variable • Different viewpoints on variables • Importance of focus on key variables • Levels of measurement • Qualitative vs. Quantitative • Types of variables • Indicators – types of indicators, computing indicators, examples of indicators, etc.
Facilitators: Dr S Muraliharan[1] Dr Ariyaratne Manathunge[2] Dr Yujwal Raj[2] Dr Joseph D Williams[2] Dr T Ilanchezhian[2]	

Key highlights: In continuation of the presentation, posted some of the statements and requested participants to identify whether it is variable or indicator. This exercise has enabled the participants to understand importance and differences on variables and indicators. Followed with the team has undergone the exercise on the following exercises with the support of facilitators, mentorship, hands-on training, etc.:

Exercise 4: Variables and Indicators:

PART A: Review the NSACP datasets. List out at least 10 variables from the dataset. Write the variable values & the type (Text/ Number). Mention the source register & dis-aggregations available for the variable.

PART B: Write 5 indicators that you report regularly in the quarterly return. Classify them and indicate their num, den, units & importance.

This session was conducted by Dr S Muraliharan, Medical Officer/Planning, NSACP who has been trained on Data Management and involved as a Trainer.

EXERCISE 4: VARIABLES & INDICATORS

PART A: Review the NSACP datasets that you have brought. List out at least 10 variables from the dataset. Write the variable values & the type (Text/ Number). Mention the source register & dis-aggregations available for the variable.

S. No	Variable	Variable Values	Type of Variable	Source Register	Dis-aggregations Available

EXERCISE 4: VARIABLES & INDICATORS

PART B: Write 5 indicators that you report regularly in the quarterly return. Classify them and indicate their num, den, units & importance

Indicator 1	
Type	
Num	
Den	
Units	
Importance	
Indicator 2	
Type	
Num	
Den	
Units	
Importance	
Indicator 3	
Type	
Num	
Den	
Units	
Importance	
Indicator 4	
Type	
Num	
Den	
Units	
Importance	
Indicator 5	
Type	
Num	
Den	
Units	
Importance	

Session 5: Data quality assessment – Internal review of facility data

Time: 1 hour (1615–1715 hrs)

Materials / Methodology:

- Power-Point Presentation
- Interactive Session
- Demonstration
- Question & Answer Session

Facilitators:
Dr Yujwal Raj[1]
Dr Ariyaratne Manathunge[2]
Dr Joseph D Williams[2]
Dr S Muraliharan[2]
Dr T Ilanchezhian[2]

Core Content Covered:

- Data quality (Real World Information system)
- Importance of data quality assessment
- Reasons for poor data quality, common errors during data collection/ data entry/ data validation
- Data quality at every step
- Impute missing data
- Key attributes of data quality
- Use of granular data in DQA
- Availability of relevant indicators in reporting format, summarize and how to assess and conclude.
- Completeness, correctness, accuracy, consistency-internal, outliers, over time, external validity, etc.
- Good data is valid, reliable and complete.
- Precision, timeliness, integrity, confidentiality, etc., with examples for each one.

Key highlights: This presentation has been conducted in an interactive way, opportunity was provided to clarify the doubts at every stage, each aspect was supported with exercises/ graphs/ examples to enable everyone to understand.

The session also was concluded with summing up of data quality attributes, indicators to assess and key things to look for.

[1] **Presenter**   [2] **Co-Presenter**

Session 6: Steps to improve data quality at facility level

- ### Exercise 5: DQA & Adjustments in the datasheet used during the exercise 2

Time: 45 mins (1715–1800 hrs)

Materials / Methodology:

- Power-Point Presentation
- Interactive Session
- Demonstration
- Hands-on Exercise

Facilitators:

Dr Yujwal Raj[1]
Dr Ariyaratne Manathunge[2]
Dr Joseph D Williams[2]
Dr S Muraliharan[2]
Dr T Ilanchezhian[2]

Core Content Covered:

- Key steps to improve data quality
- Adjustments and validation
- Analysis of missing patterns
- Impute missing data
- Methods of imputations
- Other data adjustments
- Validation of quality control data
- Useful excel functions

Key highlights:

Exercise 5: DQA and Adjustments: The participants were provided with the following instructions:

- **Answer the questions in the format based on your work experience at STD/HIV Clinic.**
- **Document the issues and challenges faced at various steps of the data management.**

Based on the instructions, the respective group undertaken DQA and Adjustments in the datasheet shared and used during the exercise 2. This exercise has contributed for learnings such as: understanding data management system at their clinics and, the roles of different staff and the issues and ways to improve the data management and data quality at their clinic.
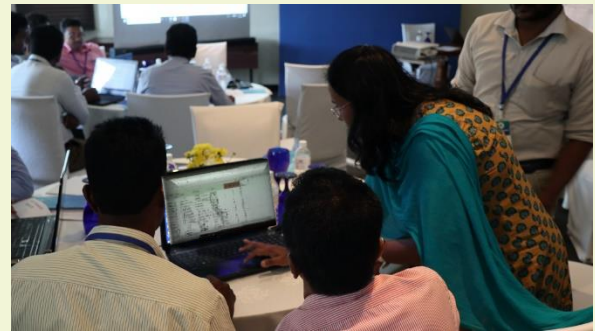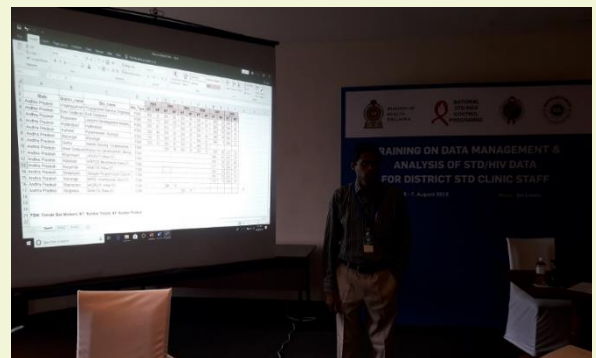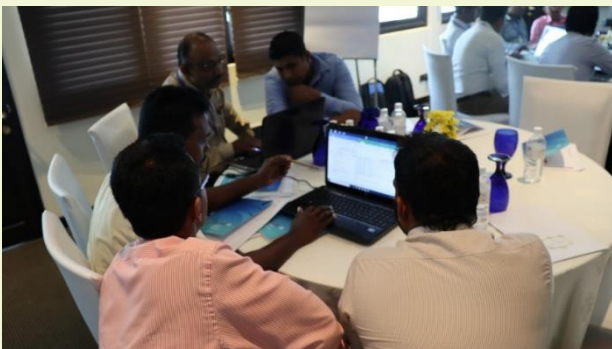
[1] **Presenter**   [2] **Co-Presenter**

Photo Glimpse of DAY 1 Proceedings

Presentations handled by the Facilitators

Hands-on Exercises facilitated by the Facilitators

3.2. Day 2 (6th August 2019)

Tuesday 6th Aug 2019

3.2.1. Sessions and Exercises

| Day 2 | 6th Aug'19 | Tuesday | 0900-1800 hrs |

Session wise Presentations and Exercises

Data Analysis

Session 7:
Preliminary Data Analysis – Measures & Methods

TRAINING ON DATA MANAGEMENT & ANALYSIS OF STD/HIV DATA FOR DISTRICT STD CLINIC STAFF
NSACP & VHS-CDC Project
5-7 Aug 2019, Colombo, Sri Lanka

Table - 6 : Number of samples tested for HIV infection -2018

Clinic	District	Province	Year	No.screened for HIV(ELISA,PA,RAPID)				No.positive				No.tested by a confirmatary test(WB,LB)				No. confirmatory test positives			
				STD p.samples	Antenatal samples	Pre e.samples	Other samples	STD p.samples	Antenatal samples	Pre e.samples	Other samples	STD p.samples	Antenatal samples	Pre e.samples	Other samples	STD p.samples	Antenatal samples	Pre e.samples	Other samples
Kandy	KANDY	CENTRAL	2018	2984	21575	71	3574	18	0	0	7	20	0	0	3	16	0	0	2
Matale	Matale	CENTRAL	2018	589	9033	18	514	17	10	0	1	13	9	0	1	8	1	0	0
Nuwaraeliya	NUWARA	CENTRAL	2018	475	11160	757	826	20	20	105	6	14	15	0	1	7	0	0	0
Ampara	AMPARA	EASTERN	2018	411	5512	0	405	3	0	0	0	3	0	0	0	3	0	0	0
Batticalloa	Batticaloa		2018	8	6989	0	838	0	0	0	0	0	0	2	0	0	0	0	0
Kalmunai	AMPARA	EASTERN	2018	2930	12719		766	2	1	0	0	0	0	0	0	0	2	0	0
Trincomalee	TRINCOM	EASTERN	2018	355	9537	30	961	1	9	0	1	1	1	0	1	0	0	0	1
Anuradhapura	ANURADH	NORTH CE	2018	737	17241	3090	8733	8	2	0	2	8	2	0	2	8	0	0	2
Polonnaruwa	POLONNA	NORTH CE	2018	963	3925	1328	4882	3	0	1	400	3	0	1	4	3	0	4	1
Chilaw	PUTTALAM	NORTH W	2018	1781	15529	8	1152	8	0	0	0	7	0	0	0	9	0	0	0
Kurunegala	KURUNEG	NORTH W	2018	4252	26285	0	6544	74	12	0	0	13	3	0	0	4	1	0	0
Jaffna	JAFFNA	NORTHER	2018	271	10638	0	6544	3	0	0	0	2	0	0	0	2	0	0	0
Kilinochchi	Kilinochchi		2018	108	1770	463	298	0	2	0	0	0	0	3	0	0	0	0	0
Mannar	MANNAR	NORTHER	2018	0	1390	441	397	0	0	0	0	0	0	0	0	0	0	0	0
Mulathive		NORTHER	2018	0	751	0	0	0	0	0	0	3	0	0	0	0	0	0	0
Vaunija	VAUNIYA	NORTHER	2018	515	2961	3	1047	3	0	0	0	3	0	0	0	3	0	0	0
Embilipitiya		SABARAG	2018	479	11	10	215	0	0	0	1	0	0	0	0	0	0	0	0
Kegalle	KEGALLE	SABARAG	2018	1838	13413	93	2618	41	80	0	27	21	4	0	2	10	1	0	3
Ratnapura	RATNAPU	SABARAG	2018	3004	18266	0	3448	5	7	0	1	3	7	0	0	0	0	0	0

Instructions

Checking for principles of database management
1 Check for the principles of database management. If they are violated, correct them.
2 Introduce a primary key to the data and give code.
3 Change the variable names to simple, short, uniform names.
4 Add metadata if required.

Data Quality Assessment
1 Check for availability/ reporting status of the facilities. Use count function. Express it as %.
2 Check for completeness of the data for each indicator. Use countif function & expres as %. Highlight the blank cells using conditional formatting.
3 Check for correcness of data wherever possible. Use if function & identify incorrect data. Highlight incorrect data using conditional formatting.
4 Calculate HIV positivity % for screening & confirmation test, for each group and total also.
5 Identify if there is any outlier in the HIV positivity rates among the clinics.
6 After reviewing the completeness, correctness & consistency (outliers), calculate mean or average of the remaining data and impute the missing/incorrect data/ o
7 Fill the missing data with the correct data under the names of districts and provinces.

Data Analysis
1 Recode the province name from text to number.
2 Calculate the median HIV positivity rate.
3 Use the median as cut-off & label them as high positivity & low positivity.

Dr T Ilanchezhian welcomed the participants and briefly shared the overall training plan of the day. In continuation of this, Dr T Ilanchezhian and Dr Yujwal Raj jointly facilitated and conducted recap session on the learnings from day 1. Invited each participant to share the learnings. Some of the key learnings expressed during the recap session by the participants:

- Data source is the first step in data lifecyle.
- Data analysis is a part of data lifecyle. It is part of 3rd step.
- Dataset is nothing but set of data – it can be single dataset and combined data. Database is generally large (including aggregation and segregation of data).
- Database structure (rows are also called as records/ cases and columns are also called as fields/ variables).
- Primary key – it is part of the database structure.
- Primary key is unique identifier – unique ID or case ID.
- Primary key is a variable which is unique ID.
- Data label – part of database structure. Data label is nothing but explanation of variable name (LCU – Last time Condom Usage) – it is part of meta data. Expanding the variable name. Value label is coding.
- Six steps in data lifecyle: Creating data; processing data; analyzing data; preserving data; giving access to data; and re-using data.
- Forms of indicators – it can be in four forms: Indicator can be Number; Percentage; Rate; and Ratio.
- Percentage always calculated on 100. Rate can have any denominator – some indicators we call them in % or in rate.
- In principles of data management:
    o No blank cells
    o Primary key is created with alpha numeric code (state, district, patient name).
    o In the primary key there should not be repetitions or duplications.
    o No sub totals in rows.
    o Same case should not be in two rows.
- Type of variables:
    o Categorical – other names are also called us discrete variable or quantitative variables. Under categorical: nominal (grading cannot be done – e.g., whether pregnant or not), ordinal – grading or ranking or ordering can be done – e.g., third pregnancy – ordinal.

- o Continuous – other names for continuous: numeric & quantitative variables
- o Examples of other ordinal – education (illiterate, primary, secondary, age group) but age is a continuous numerical variable.
- o Interval scale: temperature, Body Mass Index – where absolute ratio is not possible
- o Ration variable: Ex., age, weight, height, number of people tested, number of people visited STD clinic (zero is not possible)
- o There are four types of variables.
- o Impact is a large area, place, long-term / big program. Impact cannot be for small program. Ex., Impact of sex workers program in the country.

- Data dictionary: All the definition of variables and indicators are called data dictionary. Ex., definition of Loss-to-follow-up – standard definition for uniformity.

- Difference between new case and new infection.
  - o New case it is deducted
  - o New infection is acquired this year
  - o Prevalence is all infection – all new and old (it is entire population).

- Indicator is calculated/ computed data whereas variable is a collected data.

- Indicates the process, outcomes in the program. That is why it is called as indicators. Outcome of the indicators: % of positive pregnant women receiving PMTCT services.

- Indicators are essential for the program to decide on the success or failure of the program.

- Type of indicators: Based on the type of indicators, there are 5/6 type of indicators:
  - o Indicators of need/ Epidemic indicators - Size of KP, HIV prevalence, what program we need to do?
  - o Input Indicators – three main inputs are very important: Finance, HR, Commodities (e.g., drugs/ condom)
  - o Process Indicators - No. of outreach camps; No. of trainings; Counselling duration; Waiting time at ART clinic, what are we doing?
  - o Output Indicators - No. of facilities opened; No. of tests done; No. of KP reached; Cascade indicators, output is immediate results…. but outcome is long-term results.
  - o Outcome Indicators - Condom uptake; No. of sexual partners; Health seeking behaviour (long-term results).

- o Outcome are intermediate, impact may take more long-term (4 to 5 years).
- o Impact Indicators - New HIV infections/ Incidence; AIDS deaths/ Mortality; Survival (even long-term).

The team members shared the recap covering each session/ topic and core content covered on the day 1. The facilitators also provided needful clarifications at every stage. This process has enabled the participants to regain the learnings, overcome the doubts and clarifications and develop everyone on the same page with a common understanding on the learnings.

Group Formation: Five (05) groups have been formed in the identified thematic areas to enable the team to continuously use the data pertaining to the particular theme/ component and carryout exercises as a team during day 2 and 3. In accordance with, facilitators & SIMU team jointly enabled in formulation of the group with the interest shown/ expertise available.

Group No.	Program Areas	Groups
Group 1	STD	• Mr Thurairasa Sivananthan • Mr G Nakkeeran • Mr Mr G Mathanakumar • Mr E M Anpalagan Fernando • Mr K Jatheeswararuban
Group 2	ART 1	• Mr G S Priyantha • Mr R M S S Rasnayake • Mr H K Mannapperuma • Ms K K N Ranaweera • Ms M A L Savithri • Ms W M T Chandrarathna • Ms J H I Sanjeewanie
Group 3	ART Cross Sectional	• Mr S M Shiyamdeen • Mr G D G A S Gunaratne • Mr U C B Senanayake • Mr P Prasad Kumar • Mr D M N D Bandara • Mr A M S S K Weerasinghe

Group No.	Program Areas	Groups
Group 4	STD 2	- Mr L H S T Kumara - Mr Thalagaha W C P Gunarathna - Mr J Ediriweera - Mr K V C S Wijegunaratne - Mr H M Chinthaka - Mr S R D Weerathunga
Group 5	ART 2	- Mr H M U Herath - Mr P M Dinesh Pathiraja - Mr M D H Perera - Mr Chandana Dolewatta
Accordingly, the team was formed and seated for participating in the technical session and hands-on experiences on a continuous basis. Each group was asked to identify a facilitator from the team members for ensuring interactions, learnings, guiding, etc.		

Session 7: Preliminary data analysis – measures & methods

- ## Exercise 6: NSACP Datasets (HIV Data) format

Time: 1 hour (0930–1030 hrs)

Materials / Methodology:

- Power-Point Presentation
- Interactive Session
- Exercise Formats
- Practical Exercise

Facilitators:

Dr Yujwal Raj[1]
Dr Ariyaratne Manathunge[2]
Dr Joseph D Williams[2]
Dr S Muraliharan[2]
Dr T Ilanchezhian[2]

Core Content Covered:

- Basic measures (Sum/Total; Sub-totals; Percentage; Distribution; Min-Max; Cut-off based; Top & bottom; Quartiles; Average/ Mean; and Median).
- Computing new variables (Recoding text to numeric variables; Converting continuous to categorical variables; and Computing new variables – age groups, percentages).
- Indicator estimation (Number; Percentage; Rate; and Ratio).
- Levels of Measurement
- Nominal Variable (Categorical/ Discrete data; Distinct groups; No ordering/ Order is not meaningful; and Gender, Occupation, Marital status, Colour, Yes/No).
- Ordinal Variable (Categorical/ Discrete data; Distinct groups; Ordering meaningful; Distance/gap between two level in the order is not meaningful; and Stages of disease, Severity of disease, Mild-Moderate-Severe, Low-Medium-High, Education, Ranks).
- Interval Variable (Numeric/ Continuous data; Distance/gap between two levels can be measured & is meaningful; Subtraction is possible between values; No absolute zero/ No Common Reference Point; Zero is not meaningful; and Temperature, Age groups, Distance b/w two points).

	• Ratio Variable (Numeric/ Continuous data; Absolute zero is meaningful; Levels can be expressed as ratio or number of times of one another; and Height, Weight, Prevalence rate). • Useful excel functions (Sort & Filter; Replace; Go to; Pivot tables; V-look Up; Conditional Formatting; Remove Duplicates; and Sum, Average, Median, Quartiles).

Key highlights:

Exercise 6: The participants were asked to estimate the basic measures from the NSACP dataset which the team have cleaned in DQA exercise. Also requested the team to work on the following:

- Convert continuous to categorical variable
- Estimate four indicators

Each team has undertaken exercise in a team with the guidance and support of the facilitators and gained experiences.

[1] **PRESENTER**   [2] **CO-PRESENTER**

Checklist_Sample tested HIV and Syphilis 2018.xlsx - Excel

O17 = 0

Table - 6 : Number of samples tested for HIV infection -2018

Clinic	District	Province	Year	No.screened for HIV(ELISA,PA,RAPID)				No.positive				No.tested by a confirmatary test(WB,LB)				No. confirmatory test positives			
				STD p.samples	Antenatal samples	Pre e.samples	Other samples	STD p.samples	Antenatal samples	Pre e.samples	Other samples	STD p.samples	Antenatal samples	Pre e.samples	Other samples	STD p.samples	Antenatal samples	Pre e.samples	Other samples
Kandy	KANDY	CENTRAL	2018	2984	21575	71	3574	18	0	0	7	20	0	0	3	16	0	0	2
Matale	Matale	CENTRAL	2018	589	9033	18	514	17	10	0	1	13	9	0	1	8	1	0	0
Nuwaraeliya	NUWARA	CENTRAL	2018	475	11160	757	826	20	20	105	6	14	15	0	1	7	0	0	0
Ampara	AMPARA	EASTERN	2018	411	5512	0	405	3	0	0	0	3	0	0	0	3	0	0	0
Batticalloa	Batticaloa		2018	8	6989	0	838	0	0	0	0	0	0	2	0	0	0	0	0
Kalmunai	AMPARA	EASTERN	2018	2930	12719		766	2	1	0	0	0	0	0	0	0	2	0	0
Trincomalee	TRINCOM	EASTERN	2018	355	9537	30	961	1	9	0	1	1	1	0	1	0	0	0	1
Anuradhapura	ANURADH	NORTH CE	2018	737	17241	3090	8733	8	2	0	2	8	2	0	2	8	0	0	2
Polonnaruwa	POLONNA	NORTH CE	2018	963	3925	1328	4882	3	0	1	400	3	0	1	4	3	0	4	1
Chilaw	PUTTALAM	NORTH W	2018	1781	15529	8	1152	8	0	0	0	7	0	0	0	9	0	0	0
Kurunegala	KURUNEG	NORTH W	2018	4252	26285	0		74	12	0	0	13	3	0	0	4	1	0	0
Jaffna	JAFFNA	NORTHER	2018	271	10638	0	6544	3	0	0	0	2	0	0	0	2	0	0	0
Kilinochchi	Kilinochchi		2018	108	1770	463	298	0	2	0	0	0	3	0	0	0	0	0	0
Mannar	MANNAR	NORTHER	2018	0	1390	441	397	0	0	0	0	0	0	0	0	0	0	0	0
Mulathive		NORTHER	2018	0	751	0	0	0	0	0	0	3	0	0	0	0	0	0	0
Vauniya	VAUNIYA	NORTHER	2018	515	2961	3	1047	3	0	0	0	3	0	0	0	3	0	0	0
Embilipitiya		SABARAG	2018	479	11	10	215	0	0	0	1	0	0	0	0	0	0	0	0
Kegalle	KEGALLE	SABARAG	2018	1838	13413	93	2618	41	80	0	27	21	4	0	2	10	1	0	3
Ratnapura	RATNAPU	SABARAG	2018	3004	18266	0	3448	5	7	0	1	3	7	0	0	0	0	0	0

Instructions | HIV Infection | Syphilis

Practical Exercise 7: Data entry using MS Excel

Time: 1 hour (1030–1130 hrs)	**Description of the exercise:**

Materials / Methodology:
 	
 • Demonstration
 • Interactive Session
 • Exercise Formats
 • Practical Exercise
 	
 Facilitators:
 	
 Dr Yujwal Raj[1]
 Dr Ariyaratne Manathunge[2]
 Dr Joseph D Williams[2]
 Dr S Muraliharan[2]
 Dr T Ilanchezhian[2]
	• **Objectives:**
	    o To make participants
	    o Learn the basic features of MS Excel
	    o Learn to enter formulae in Excel
	    o Familiar with the advanced options for analysis in Excel
	
	 • **Instructions:**
	    o Perform the basic functions in Excel to better visualise the data.
	    o Conduct data quality assessment on the data using basic excel formulae.
	    o Perform data analysis to calculate the totals, positivity rates and quartiles.
	
	 • **Key Learnings:**
	    o Participants develop skills to perform basic operations in Excel.
	    o Participants develop skills to write formulae and perform analysis using Excel.

[1] **Presenter**	[2] **Co-Presenter**

Practical Exercise 8: DQA & Basic data analysis using basic functions in Excel and Introduction to advanced use of MS Excel and Formulae

Time: 1 hour 30 mins &

3 hours 15 mins

(1145–1315 & 1415–1730 hrs)

Materials / Methodology:

- Demonstration
- Practical Exercise

Facilitators:

Dr Yujwal Raj[1]
Dr Ariyaratne Manathunge[2]
Dr Joseph D Williams[2]
Dr S Muraliharan[2]
Dr T Ilanchezhian[2]

Core Content Covered:

- Objectives:
  - To make participants
  - Learn the basic and advanced features of MS Excel
  - Perform data preparation functions on any dataset
  - Learn to enter formulae in Excel
  - Perform data quality checks and data analysis on datasets in database format
  - Learn to generate pivot tables in Excel
- Instructions and Key Learnings:

Instructions and Key Learnings:

	Instructions for Hands-on Practice of MS Excel	Develop skills in performing/ using functions in Excel
	Checking for principles of Database Mgt.	
1	Check for the principles of database management. If they are violated, correct them.	Adding Header, Deleting Rows, Cell navigation using Ctrl, Shift & Arrow keys, Adjusting Column Widths
2	Introduce a primary key to the data and give code.	Inserting Rows & Columns, Fill series, Left Function, Join Function
3	Change the variable names to simple, short, uniform names.	Find & Replace, Fill Cell Colour
4	Add metadata if required.	Insert New Sheet, Rename, Paste Special, Transpose
	Data Quality Assessment	
1	Check for availability/ reporting status of the facilities. Use count function. Express it as %.	Count Function, Inserting Formula

2	Check for completeness of the data for each indicator. Use countif function & express as %. Highlight the blank cells using conditional formatting.	Countblank Function, Locking formula, Conditional Formatting
3	Check for correctness of data wherever possible. Use if function & identify incorrect data. Highlight incorrect data using conditional formatting.	If function, Conditional Formatting
4	Calculate HIV positivity % for screening & confirmation test, for each group and total also.	Inserting Formulae, Sum function
5	Identify if there is any outlier in the HIV positivity rates among the clinics.	Inserting Formulae, Setting Cut-offs
6	After reviewing the completeness, correctness & consistency (outliers), calculate mean or average of the remaining data and impute the missing/incorrect data/ outlier.	Average function
7	Fill the missing data with the correct data under the names of districts and provinces.	Go To function
	Data Analysis	
1	Recode the province name from text to number.	If function
2	Calculate the median HIV positivity rate.	Median function
3	Use the median as cut-off & label them as high positivity & low positivity.	If function
4	Identify the minimum and maximum work load centres, based on total no. of samples tested for HIV.	Min & Max functions
5	Identify the high and low patient load centres, using quartiles based on total no. of samples tested for HIV.	Quartile function
6	Convert the numeric variable of patient load to categorical variable using quartiles based on total no. of samples tested for HIV.	If function

7	Calculate the proportional distribution of the samples tested by the type of sample.	Inserting Formula
8	Calculate the province-wise count of facilities, total tested, total positive, % positivity, using pivot tables.	Pivot Table
9	Bring the data of Syphilis positivity from the other sheet to the sheet of HIV infection, using Vlookup function.	Vlookup Function
	Indicator Estimation	
1	Estimate four or five indicators - a number, a percentage, a rate, a ratio - from the given data.	Inserting formula
2	Estimate them separately for different provinces.	Pivot Table, Sumif, Countif functions
	Preparing Graphs	
1	Prepare a bar graph, line graph, a pie chart & a combined graph based on the above data.	Inserting graphs & setting options
2	Present the province wise data using graphs.	Inserting graphs & setting options
	Data Interpretation	
1	Draw conclusions & inferences on indicators estimated, for the country & for each province.	

Note: Exercise and hands-on training sessions were held from 1145–1315 and 1415–1730 hrs on a continuous basis with a lunch break between 1315–1415.

[1] **PRESENTER**   [2] **CO-PRESENTER**

At the end of the day, between 1730–1800 hrs, participants were encouraged to undertake work on their datasets with the support and guidance of the facilitators. This has provided opportunity for developing needful knowledge and skills with every individual and encouraging/ inculcating the practical experiences on working on datasets.

The facilitator requested the participants to continue to practice excel and mentioned the quote as:

"More you Love Excel….. More you Learn Excel".

3.3. Day 3 (7ᵗʰ August 2019) Proceedings

3.3.1.   Sessions and Exercises

| Day 3 | 7th Aug'19 | Wednesday | 0900-1645 hrs |

Session wise Presentations and Exercises

Session 8: How to Present the Data/Information

TRAINING ON DATA MANAGEMENT & ANALYSIS OF STD/HIV DATA FOR DISTRICT STD CLINIC STAFF
NSACP & VHS-CDC Project
5-7 Aug 2019, Colombo, Sri Lanka

Table - 7: Number of samples tested for syphilies -2018

Clinic	District	Province	Year	No. tested by VDRL				No.VDRL positive				No.TPPA/TPHA tested				No.TPPA/TPHA positive			
				STD p.sam	Antenatal	Pre e.sam	Other san	STD p.sam	Antenatal	Pre e.sam	Other san	D p.sampl	natal sam	e.sampl	ther sampl	STD p.sam	Antenatal	Pre e.sam	Ot
Kandy	KANDY	CENTRAL	2018	2857	21376	3508	1889	84	19	2	13	2129	19	2	313	75	0	0	
Matale	Matale	CENTRAL	2018	528	9022	1061	225	7	0	0	7	462	0	0	115	11	0	0	
Nuwaraeli	NUWARA	CENTRAL	2018	436	11159	895	993	32	60	2	7	395	56	2	15	13	1	0	
Ampara	AMPARA	EASTERN	2018	469	5512	559	375	6	35	2	3	367	24	1	2	8	0	1	
Batticaloa	Batticaloa	EASTERN	2018	6	7743	1322	1658	0	2	0	0	0	2	0	0	0	1	0	
Kalmunai	AMPARA	EASTERN	2018	568	12631	900	628	2	0	0	0	302	0	0	0	3	0	0	
Trincomal	TRINCOM	EASTERN	2018	356	9537	1291	828	15	110	7	12	356	110	7	828	10	3	2	
Anuradha	ANURADH	NORTH CE	2018	741	17241	3241	3550	13	15	3	7	213	13	1009	9	10	0	1	
Polonnaru	POLONNA	NORTH CE	2018	996	3925	1328	4703	9	0	0	11	9	0	0	11	9	0	0	
Chilaw	PUTTALA	NORTH W	2018	1797	15529	1431	1152	20	22	1	0	1793	22	3	181	32	1	0	
Kurunegal	KURUNEG	NORTH W	2018	2775	26285	3986	1684	127	47	0	3	2282	47	0	256	68	0	0	
Jaffna	JAFFNA	NORTHER	2018	271	10638	1869	6310	6	70	13	63	209	59	8	268	7	0	0	
Kilinochch	Kilinochch	NORTHER	2018	108	1770	1476	298	0	0	1	0	0	0	1	0	0	0	0	
Mannar	MANNAR	NORTHER	2018	0	1390	441	397	0	0	0	0	0	0	228	149	0	0	0	
Mulathive		NORTHER	2018	0	751	0	0	0	0	0	0	0	0	0	0	0	0	0	
Vauniya	VAUNIYA	NORTHER	2018	512	2961	1007	1047	7	9	8	10	512	9	8	507	2	0	0	
Embilipitiya		SABARAGA	2018	405	11	10	183	3	0	0	0	187	0	0	101	3	0	0	
Kegalle	KEGALLE	SABARAGA	2018	1357	13354	1576	1085	103	87	10	14	1047	92	12	20	36	2	1	
Ratnapur	RATNAPU	SABARAGA	2018	2252	18266	0	5035	17	26	0	12	2341	56	0	2805	24	3	0	

Instructions | HIV Infection | Syphilis

Session 9: Communication of Data Analysis Results

TRAINING ON DATA MANAGEMENT & ANALYSIS OF STD/HIV DATA FOR DISTRICT STD CLINIC STAFF
NSACP & VHS-CDC Project
5-7 Aug 2019, Colombo, Sri Lanka

Session 10: Data Use for Programme Monitoring

TRAINING ON DATA MANAGEMENT & ANALYSIS OF STD/HIV DATA FOR DISTRICT STD CLINIC STAFF
NSACP & VHS-CDC Project
5-7 Aug 2019, Colombo, Sri Lanka

Dr T Ilanchezhian welcomed the participants and on behalf of VHS-CDC Project, announced the information on logistics considering the last day of the training program.

Recap: 0900–0930 hrs: Dr Yujwal Raj and Dr T Ilanchezhian jointly facilitated the recap session and requested the participants to share what they have learned on the second day of the training program. The participants were asked to share on individual wise. Some of the learnings expressed by the participants are:

- GIGO – Garbage In Garbage Out
- Tracing sheet (not scrolling down)
- Good Quality Data are:
    - Eight attributes for data quality
    - A PIT with four Corners (APITCCCC)
        - Availability/ Reporting Status
        - Completeness
        - Correctness/ Accuracy/ Validity
        - Consistency (Consistency over time; Consistency – Internal/ Reliability; and Consistency – External/ Validity/ Representativeness)
        - Precision/Adequate Disaggregations
        - Others (Timeliness; Integrity; and Confidentiality)
- Attempting data quality assessment & validation may not always ensure quality, but, at least makes one aware of poor quality, if any, while drawing inference & gives an opportunity to improve it !!!
- Quality data is needed at program level for decision making, for undertaking operational research, etc.
- Some of the reasons for poor quality data will be: biases, data entry errors, compilation errors, fraudulent practices, etc.
- Collecting information from incorrect or unauthentic document may lead to error in data collection.
- Identify specific quality issues on DQA and address the same.
  DQA should be performed on the most granular data; not on aggregated data – Facility-wise, month/quarter-wise data; Individual-level data; Not on annual, province level data.

Recommended to do DQA for programme data at facility or district level; NOT ABOVE

Granular data allows to localise the error/ drill down to the exact issue. Granular data allows to fix the exact issue, without altering the other data which is good

- Completeness of data means that all variables for all reporting units are being collected and reported, reporting formats are completely filled without any blanks.
- Basic measures are Mean, Median and Mode:
    - Mean is an average value
    - Median is a middle value – when the data is clean without out-layers and when there are out-layers use media.
    - Mode – Most frequent observation
- Moving average – it is the method to correcting / smoothing the out-layers
- Mean imputation
- Five types of COUNT functions:
    - SIMPLE COUNT – it will count numbers
    - COUNT A – counting number + text
    - COUNT BLANK – counting blank cells
    - COUNT IFs & Its – will be introduced on the third day of the training.
- Introduction to advanced use of MS Excel and Formulae
    - Adjust with column
    - Entry header
    - Insert new column
    - Insert new sheet
    - Rename the sheet
    - Paste special [transpose, ascending and descending order, pasting value]
    - Find & replace
    - Wrap text
    - Learn to provide variable names
    - Selection of columns and rows
    - Filling colors, etc
- Three types of layout:
    - Normal
    - Page break preview
    - Page layout

- Learnt overall on all aspects of Data Quality Assessment
- Comprehensive understanding on basic data analysis using basic functions in Excel

The team members shared the recap covering each session/ topic and core content covered on the day 2. The facilitators also provided needful clarifications at every stage. This process has enabled the participants to regain the learnings, overcome the doubts and clarifications and develop everyone on the same page with a common understanding on the learnings. This has also helped in preparing the participants for the learnings on the third day.

Practical Exercise 8: Data Interpretation – continuation of use excel with new functions

Time: 1 hour 30 mins
(0930–1100 hrs)

Materials / Methodology:

- Demonstration
- Practical Exercise

Facilitators:

Dr Yujwal Raj[1]
Dr Ariyaratne Manathunge[2]
Dr Joseph D Williams[2]
Dr S Muraliharan[2]
Dr T Ilanchezhian[2]

Description of the exercise:

The facilitators requested the participants to continue the practical exercise by using the Clinic wise datasets and encouraged the respective groups to carryout the learnings. The following groups have initiated and continued the practical exercises:

Group No.	Program Areas
Group 1	STD
Group 2	ART 1
Group 3	ART Cross Sectional
Group 4	STD 2
Group 5	ART 2

Each group/ team members continued the exercises and learnt on the following:

- Sorting the data
- Selection of entire data:
    - Ctrl + Shift + Right Arrow
    - Ctrl + Shift + Down Arrow
- Sort and filter
- Custom sort
- Formulae:
    - IF
    - Conditional Formatting (COUNT – IF – Conditional)
    - BETWEEN
- Meta Data
- Mean
- Standard Deviation

	• Lower cut-off • Upper cut-off • Quartile • Array • Minimum and Maximum value • And others Dr Yujwal, Dr T Ilanchezhian, Dr Ariyaratne, Dr Murali, Ms Sudha and Mr Sathyaraju provided guidance to the team to enable them to understand, practice and acquire needed skills.
[1] **PRESENTER**	[2] **CO-PRESENTER**

Session 8: Presenting Data Graphically – Tables, Graphs, Charts

Time: 2 hours
(1115–1315hrs)

Materials / Methodology:

- Power-Point Presentation
- Discussion
- Interactive Session
- Question & Answer Session

Facilitators:

Dr Ariyaratne Manathunge[1]
Dr Joseph D Williams[2]
Dr Yujwal Raj[2]
Dr S Muraliharan[2]
Dr T Ilanchezhian[2]

Core Content Covered:

Dr Ariyaratne made a presentation on "Presentation of DATA and INFORMATION". In this presentation, he has explained on the following with examples and samples:

- Ways to present the data – Text, Tables, Figures and Illustrative Graphs.
- Types of Charts / Graphs – Bar Charts, Pie Charts and Line Charts.
- Presentation through Geographical Information System.
- And other relevant details.

During the presentation, Dr Ariyaratne shared the examples on each type of presentation using the NSACP specific data. This has enabled the participants to understand on the methods of presenting the data for review, analysis and dissemination.

[1] **Presenter**   [2] **Co-Presenter**

Lunch break: 1315 – 1415

Session 9: Communication of analysis results – Abstracts, Policy Briefs, Folders, Handouts, Posters, Papers

Time: 1 hour
(1415 – 1515 hrs)

Materials / Methodology:

- Power-Point Presentation
- Discussion
- Interactive Session
- Question & Answer Session

Facilitators:

Dr Yujwal Raj[1]
Dr Ariyaratne Manathunge[2]
Dr Joseph D Williams[2]
Dr S Muraliharan[2]
Dr T Ilanchezhian[2]

Core Content Covered:

In this session, presentation highlighted and explained on the different methods used for communication of data analysis results covering:

- Scientific Abstracts
- Scientific Papers/ Articles
- Policy Briefs
- Handouts
- Posters
- Reports
- Presentation

The facilitator has explained each method of communication with examples and needful guidelines on the same.

[1] **Presenter**   [2] **Co-Presenter**

Session 10: Use of Data for Programmatic Decision Making

Time: 45 mins
(1515–1600 hrs)

Materials / Methodology:

- Power-Point Presentation
- Discussion
- Interactive Session
- Question & Answer Session
- Practical Exercise

Facilitators:

Dr Yujwal Raj[1]
Dr Ariyaratne Manathunge[2]
Dr Joseph D Williams[2]
Dr S Muraliharan[2]
Dr T Ilanchezhian[2]

Core Content Covered:

The facilitator conducted this session in an interactive way by engaging the participants and covered the following:

- Data use – an approach
- Evidence led approach
  - Evidence driven recasting of Migrant strategy
  - Roll-out of OST program
  - Setting up of Link ART Centers
  - District prioritization through data triangulation
  - Refining focus based on evidence
  - Lessons from evaluation study
- Knowledge management
  - Two main forms of knowledge management
  - Components of knowledge management
  - Knowledge creation
  - Knowledge collection and archiving
  - Knowledge sharing and dissemination
  - Knowledge translation
  - Translating knowledge into practice
- Way forward
  - Moving to structural to functional approach
  - New evidence
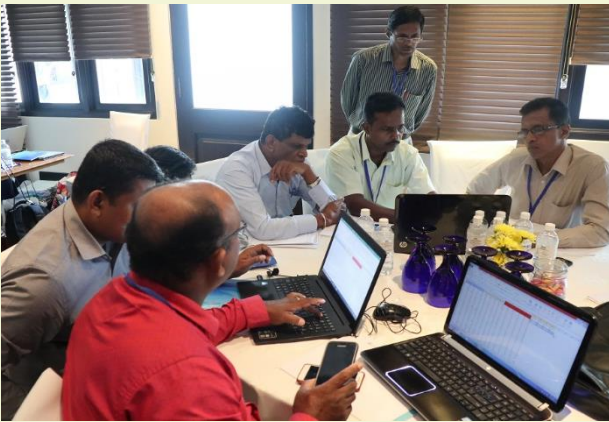 - Knowledge management

[1] **Presenter**   [2] **Co-Presenter**

Final summing up and question & answer session: Panel discussion was held by involving Dr Ariyaratne, Dr Murali, Dr Ilanchezhian & Dr Yujwal and facilitated question & answer session and encouraged each participant to clarify the doubts. The panel team provided explanations on the questions, doubts and clarifications raised by the participants. In continuation of the final round of question and answer session, the panel team has also recapped the take home messages to the participants.

Post–Assessment: VHS-CDC Project administered pre-assessment on the first day before commencing the training proceedings. In continuation of this, Dr Ilanchezhian and Ms Sudha administered post-assessment by providing a standardized tool with each participant. The translation was also provided by the respective team members wherever needed. Each participant has filled in and submitted the post-assessment form. The project team has analysed the pre & post-assessment (the analysis provided in Chapter 2: Training on Data Management & Analysis of STD/HIV Data – 2.11. Training evaluation and effectiveness – sub-section 2.11.1. Pre & Post-Training Assessment Analysis).

Post-Training Evaluation: Dr Ilanchezhian and Ms Sudha has administered post-training evaluation by using the 5 point-scale covering the aspects such as: course content, structure and process of training, trainers & mentors – knowledge and delivery style, facilities and amenities and overall feedback. Overall, the evaluation tool has five sections with 29 questions. Each participant was encouraged to fill in unanimously to understand the overall feedback on the training program. The same has been analysed and presented in Chapter 2: Training on Data Management & Analysis of STD/HIV Data – 2.11. Training evaluation and effectiveness – sub-section 2.11.2. Training Evaluation – Analysis). VHS-CDC Project has analyzed the post-training evaluation and considered the suggestions for planning and conducting the other training programs.

3.3.2.   Valedictory Function

Valedictory function was held between 1600-1645 as a part of conclusion of the training on Training on Data Management and Analysis of HIV/AIDS Data for District STD Clinic Staff team conducted from 5-7, August 2019. This valedictory function was jointly organized by NSACP and VHS-CDC Project.

Welcome Note: Dr T Ilanchezhian has briefly explained on the technical cooperation, objectives, different capacity building initiatives undertaken for SIMU and SI team, etc. During the brief he informed that, VHS-CDC Project in collaboration with SIMU has conducted training on Operational Research, training on Scientific Writing, training on Data Management for SIMU team, DHIS2 training for SIMU, exposure visits and other initiatives. Dr Ilanchezhian has also explained the process adopted in planning and conducting the training program for the PHIs and Nursing Officers. He welcomed,

Welcome address by Dr T Ilanchezhian, Senior Technical Advisor, VHS-CDC Project

- Dr Rasanjalee Hettiarachchi, Director, NSACP
- Dr Ariyaratne Manathunge, Consultant-Venereologist cum Coordinator, SIMU
- Dr Muraliharan, Medical Officer/Planning, SIMU
- Dr Yujwal Raj, Technical Advisor (SI), VHS-CDC Project and SIMU team.

He welcomed Dr Joseph D Williams, Director Projects-VHS who is the lead in overall planning and managing this technical assistance initiatives on Strategic Information. He welcomed the VHS-CDC team members such as:

- Mr Suneel Kumar Chevvu, M&E Officer, VHS-CDC Project
- Ms T Sudha, Senior Programme Associate, VHS-CDC Project
- Ms K Priya, Senior Programme Associate, VHS-CDC Project
- Mr S Sathyaraju, Associate Manager – Finance, VHS-CDC Project

He also thanked Dr Williams for the strategic support and mentoring support being extended to me and to the team. Thanked the VHS-CDC team for the support in registration, logistics coordination, ensuring communication, documentation and all other supports for successful conduct of this training program. He also welcomed all the Public Health Inspectors and Nursing Officers who has undergone this training program, benefited through this training program and proposed to utilize the knowledge and skills learnt through this training program.

Feedback by participants: Dr T Ilanchezhian invited the participants to share the experiences and feedback on the training program undergone:

> *Mr Prasad Kumar, PHI, STD clinic, Rathnapura: I have attended this three-day training program on data management…. When I came to attend this training program, I have no idea about Data Management.*

Mr Prasad Kumar, PHI, STD clinic, Rathnapura is sharing his feedback
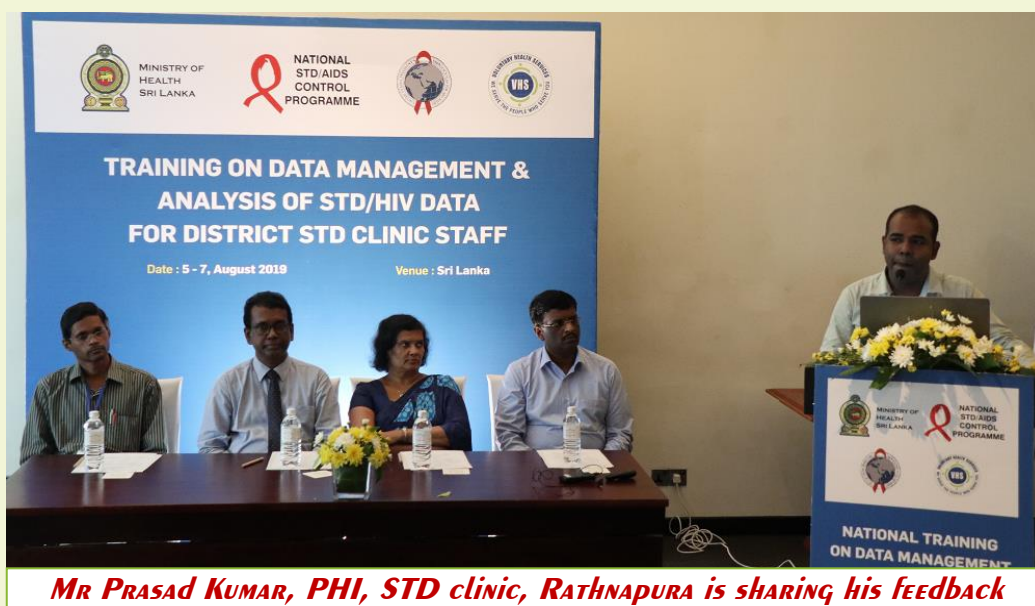
I have also no idea about the training. Overall this three-day training program on data management was more informative, provided opportunity for developing knowledge and skills. Gained more knowledge and skills through this intensive three-day training supported with hands on training. This training has also changed my and our attitude on data is boring subject. Now this has developed a positive mind set. This training was more valuable for me and my team. This training is very professionally managed by giving weightage to technical and other coordination aspects. Overall, very good enabling environment, good learnings and gained positive thoughts to perform effectively and with motivation. Thank Dr Williams, Dr Ilanchezhian, Dr Yujwal, Dr Ariyaratne and SIMU and VHS-CDC team. This training has also provided opportunity to know other PHIs working in other STD clinics and getting connected or experience sharing and helping each other.

Mr Shiyamdeen, PHI, STD clinic, Badulla: Thanks to VHS-CDC and SIMU for organizing such a meaningful, professional and long awaited and needed training to PHIs and nursing officers. This three-day training was very systematically planned, very good agenda based on the need, conducted training in an interactive and participatory way, supported with very good informative resource materials, technical soundness of the training team and well-coordinated in all aspects. I know little about excel and has some experience. But we use to do lot of mistakes and use to utilize excel with minimal functions.

Sharing of feedback by Mr Shiyamdeen, PHI, STD clinic, Badulla

Now this training has provided comprehensive knowledge and skills on excel based data management, provided confidence, overcome mistakes, use multiple functions of excel, use of our own data for analysis, identifying gaps and undertaking efforts to overcome the same, etc. This also helped in understanding on how to present the data for policy makers, decision making and dissemination. We are confident, we will be able to contribute effectively with this training in excel based data management and EIMS based reporting. The facilitators together helped by providing hands-on training, clarity, mentoring, guidance by considering each one's level of understanding and requirements. Thanks to Dr Ariyaratne for arranging this. Thanks to Dr Williams and VHS-CDC team for their systematic technical expertise provided in enhancing our knowledge and skills. The benefits received through this training will be transformed into action and our reporting skills will be further improved.

In continuation of feedback, Dr Yujwal Raj made a presentation and shared the key highlights of the training program as:

Key Learnings

Hands-on Training on:
- Understanding the data systems & data flow at STD/HIV clinics & identifying the issues that affect the data
- Understand the role of participants in improving the data under NSACP
- Understanding datasets, components, structure & database management principles
- Variables & Indicators – Types and how to manage
- Data Quality Assessment & Adjustments using Excel
- How to apply the data quality assessment to Quarterly Returns
- How to present the data in appropriate graphs

Outcomes from the training

- Built a systematic understanding about data, its components, database structures, variables & indicators
- Familiarised and done hands-on practice on MS Excel on applying data quality assessment & conducting basic data analysis on programme data
- Will directly contribute to enhancing the data quality at every STD/HIV clinic AT THE TIME OF DATA ENTRY ITSELF
- Clinic staff will be able to do basic analysis of the clinic data & present it in the form of graphs
- Will improve the data management skills required to complement the upcoming EIMS system

Next Steps

- Set up procedures and deadlines within your clinic to get data in time
- Work on your quarterly return and set up quality assessment checks at the time of data entry
- Compile the quarterly returns of the last three years into a database structure
- Practice Excel more and more….

Introductory Note and Special Address: In continuation of brief introduction, Dr Joseph D Williams, Director-Projects, VHS, delivered introductory note and special address. In his speech, he spoke as below:

"*VHS-CDC Project with the support of CDC is in the process of providing Technical Assistance on SI by signing LoI between CDC/India and MoH/Govt. of Sri Lanka. This collaborative/ partnership initiative has paved way for System Strengthening; Capacity Building; Documentation and Dissemination of Best Practices; etc. We feel proud and happy to partner and work closely with Director–NSACP, Dr Ariyaratne and the SIMU team.*

I am confident that, you are all very enthusiastic on the last day of the training program on completion of the training successfully. After the training, while you are returning to your duties, you may have responsibilities to continue the ongoing regular activities, accomplish the backlogs and other related activities. I am requesting each of the Nursing Officers and Public Health Inspectors to continue to excel in using Excel for adopting and using the knowledge and skills acquired through this training program.

I am also requesting Dr Ari and the SIMU team to undertake systematic efforts for monitoring on the follow-up of this training program, provide needful follow-up guidance and initiate efforts to understand the impact of the training program.

During the course of the training program, we also had a privilege to visit few STD clinics. This visit has provided understanding about the key functions of STD clinics, roles of PHIs and Nursing Officers, usefulness of various training programs conducted earlier and other details. This visit has also provided an eye–opener to understand how important the Public Health Inspectors and Nursing Officers are considering: PHIs/NOs serving as first point of contact with patients; playing critical role in collecting data, reporting to SIMU for understanding the achievement of the project considering the need for reporting to the Govt. and to the other agencies at national and international level. The PHIs/NOs role are very important in managing data in Public Health System. The impact of the training

will be known based on the improvements in the quality of data, submission of report, timely submission, etc.

During his address, he also mentioned that, the Balapitiya STD clinic team including the Consultant-Venereologist are functioning well, they have internal review system, piloting the EIMS and sharing the feedback, introducing innovations, etc. Similarly, this may happen in such clinics. Also observed that, in Ragama Clinic, the Nursing Officer has introduced color-coding system for the patient files/ each year.

Dr Joseph D Williams, Director-Projects, VHS delivered Introductory Note and Special Address

He also mentioned that, the SIMU-NSACP has rich legacy of data. This data can be effectively collected, analyzed, presented and used for dissemination and program strengthening.

Again and again, I wish to reiterate that, it is very much important to emphasize and use data. Considering this importance, VHS-CDC Project is conducting this training on data management for PHI and NOs.

On behalf of CDC and on behalf of VHS, we are extremely grateful and thankful to the Director of NSACP who has afforded all her cooperation and cordiality. He thanked Director-NSACP for the guidance and cooperation extended and readily accepting our suggestions and giving inputs. He thanked Dr Ariyaratne, who has been associated with this technical cooperation initiatives from the beginning, he is very much instrumental for conducting the training on data management for PHIs and Nursing Officers. Thanked Dr Ari for the support extended at every stage of technical cooperation initiatives. Also thanked Dr Muraliharan-SIMU and VHS-CDC team Dr IC and Dr Yujwal for making this successful. He requested all the trained team to continue to practice the skills and ensure effective data management at all levels".

Valedictory Address: Dr Rasanjalee Hettiarachchi, Director, NSACP delivered valedictory address. In her valedictory address, she mentioned:

"On behalf of NSACP, we appreciate and sincerely thank CDC for the generous support being provided in extending Technical Assistance on Strategic Information through its implementing partner – The Voluntary Health Services.

Our sincere thanks, appreciation and congratulations to Dr Joseph D Williams, Director Projects of VHS, Dr T Ilanchezhian, Senior Technical Advisor of VHS-CDC Project and the entire team for their efforts in systematic planning, developing course materials, engaging resource persons, coordination and successful conduct of training programs in close coordination and partnership with SIMU and NSACP.

VHS-CDC Project has adopted capacity building approaches and undertaken series of efforts to built the capacities of SIMU team and SI team at Peripheral STD Clinics. As a part of such capacity building initiatives, this training on data management for Peripheral STD clinic team members including PHIs and Nursing Officers is successfully conducted by VHS-CDC Project. We request to make use of this training program, undertake regular follow-up efforts for sustaining and improving the skills gained through the training, enhance the

quality of reporting and timely reporting, use data for understanding the program gaps and evolve plans to address the same.

I have also undergone this training program. This training is very much useful. VHS-CDC Project is very good in providing TA and working with SIMU team. VHS-CDC team is very good in facilitating the training programs in handling sessions, conducting exercises, mentoring, guiding, providing technical update, etc. Also, wish to thank Dr Ariyaratne and the SIMU team. I also wish to mention that, VHS-CDC always brings best resources by understanding the country context and facilitate in conducting the training program. Request VHS-CDC Project to continue to support in such similar initiatives for enhancing the quality and effective data management system in the country".
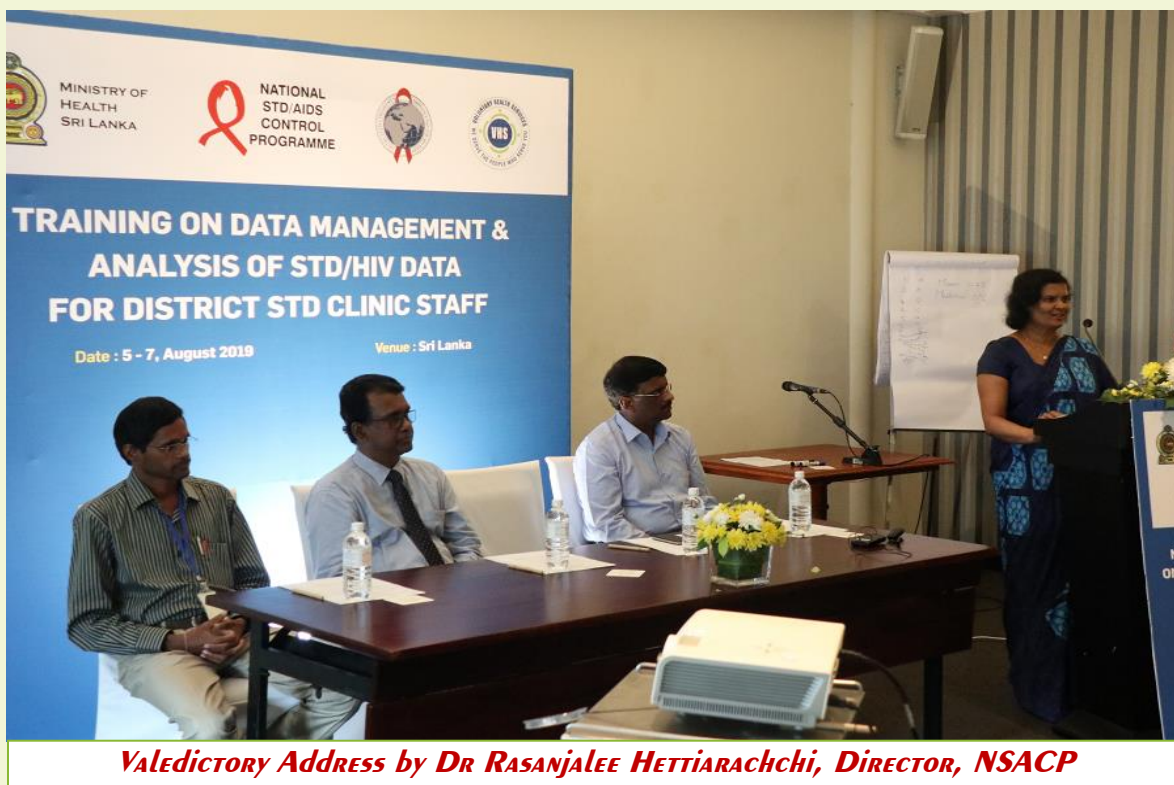
Valedictory Address by Dr Rasanjalee Hettiarachchi, Director, NSACP

Dr Rasanjalee Hettiarachchi, Director, NSACP, Dr Ariyaratne Manathunge, Consultant-Venereologist, NSACP, Dr Joseph D Williams, Director Projects, VHS and Dr Yujwal Raj, Technical Advisor (SI), VHS-CDC Project jointly distributed the certificates for each one of the participants underwent training on Data Management.

NSACP and VHS-CDC Project officials jointly distributing certificate to the participants

On behalf of NSACP and SIMU, in appreciation; recognition; contribution and for successful conduct of the training, Dr Rasanjalee Hettiarachchi, Director-NSACP, Dr Ariyaratne Manathunge, Consultant-Venereologist, NSACP jointly handed over and recognized by giving a memento to Dr Joseph D Williams, Director Projects, VHS. This recognition has also been provided considering the ongoing technical assistance, technical collaboration, capacity building initiatives and dedicated involvement of VHS-CDC team.

NSACP Honouring Dr Joseph D Williams, Director Projects, VHS

On behalf of VHS-CDC Project, in recognition of the collaboration, support and partnerships with VHS-CDC Project and cooperation extended in successful conduct of the training program.

Dr Williams, Director Projects handed over a memento to Dr Rasanjalee Hettiarachchi, Director, NSACP, Dr Ariyaratne Manathunge, Consultant-Venereologist, NSACP and Dr S Muraliharan, Medical Officer/Planning, NSACP. VHS-CDC Project has also provided and honoured Dr Yujwal Raj, Technical Advisor (SI), VHS-CDC Project in recognition of his support in conducting this training program.

VHS-CDC Project Honouring Dr Rasanjalee Hettiarachchi, Director, NSACP

VHS-CDC Project Honouring Dr Ariyaratne Manathunge, Consultant-Venereologist, NSACP

VHS-CDC Project Honouring Dr S Muraliharan, Medical Officer/Planning, NSACP

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

VHS-CDC Project Honouring Dr Yujwal Raj, Technical Advisor - SI, VHS-CDC Project

Dr Ariyaratne has delivered vote of thanks. In his speech, he recalled the process and methodologies adopted in evolution of this technical collaboration, MoU signed between CDC and MoH and the capacity building approaches adopted by VHS-CDC Project. Overall, SIMU and the team is benefiting through this technical assistance initiatives on SI.

He thanked Dr Joseph D Williams, Director Projects, VHS for his strategic leadership and support in leading this initiative. He thanked Dr T Ilanchezhian, Senior Technical Advisor, VHS-CDC Project for his professional coordination, technical support and contribution in conducting this training as facilitator, coordinator and supporter.

He thanked Ms T Sudha, Senior Programme Associate, VHS-CDC Project for her continuous support in ensuring communication, documentation of the training, registration and all other support. He thanked Mr Sathyaraju, Associate Manager – Finance, VHS-CDC Project for his support in logistics coordination including venue, ticket, food, travel, transport and other related activities. He also thanked Mr Suneel Kumar, M&E Officer and Ms Priya, Senior Programme Associate, VHS-CDC Project for their participation and support in conducting this training.

He thanked the support and encouragement extended by Dr Rasanjalee Hettiarachchi, Director, NSACP and for her participation in this valedictory function, delivering valedictory address, distributing certificates and grace the occasion. He thanked Dr Yujwal Raj for his systematic training, Dr Muraliharan for his support as Coordination Committee Member and Trainer, Dr Himali Perera, Training Coordinator and the NSACP team.

Requesting all the PHIS and Nursing Officers to utilize this training, undertake follow-up, continue to practice to learn excel and improve in data capturing and management. Overall the training was very successful by ensuring technical aspects through systematic planning, supported with resource materials, trainers, tools, exercises and innovative methodologies.

The Master of Ceremony of the valedictory function was coordinated by Ms Priya, Senior Programme Associate, VHS-CDC Project

In continuation of the Valedictory function, group photo session was held.

4.1. Training agenda

Goal: To build the data skills of Public Health Inspectors (PHIs) and Nursing Officers working at STD/HIV clinics under NSACP in order to enhance the data quality, improve the data analysis and strengthen the use of HIV/AIDS data reported by the clinics for routine monitoring purposes.

Objectives:

- To build the understanding of Public Health Inspectors (PHIs) and Nursing Officers working at STD/HIV clinics on the datasets & program reporting under NSACP.
- To introduce the basic principles and approaches of data recording & reporting.
- To orient the participants to the various methods of improving data quality at the clinic level.
- To build the basic skills in analysis of program data.
- To improve the presentation and use of data for programme monitoring purposes.

Outcomes:

- Built understanding about the registers, reporting formats and indicators to be reported routinely under NSACP.
- Exposed participants to basic principles and methods of data management.
- Made the participants appreciate the importance of data quality in program reporting.
- Enhanced knowledge and skills for conducting basic analysis of program data through hands-on practice on examples and actual program data.
- Improved skills on effective use of data for program monitoring.

Facilitators:

- Dr Yujwal Raj, Technical Advisor (SI), VHS-CDC Project.
- Dr Ariyaratne Manathunge, Consultant-Venereologist, NSACP.
- Dr Joseph D Williams, Director Projects, VHS.
- Dr S Muraliharan, MO/Planning/SIM unit/NSACP.
- Dr T Ilanchezhian *alias* Dr IC, Senior Technical Advisor, VHS-CDC Project.
- Mr Suneel Kumar Chevvu, M&E Officer, VHS-CDC Project.

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SCHEDULE

</div>

Time	Session	Session Details	Facilitators
0900 – 1730	**Day 1 (5th August 2019)**		
0900 – 0915	Registration		Ms T Sudha & Ms K Priya
0915 – 1000	Inaugural • Introduction of participants/ facilitators • Objectives & Expected Outcomes of the workshop		Dr Williams Dr Ariyaratne
1000 – 1015	Pre-assessment		Dr Ilanchezhian
1015 – 1115	Importance of good data management practices in the programme	Discussion	Dr Yujwal Raj
1115 – 1130	Break		
1130 – 1215	Introduction to principles of database management – Recording & Reporting	Presentation & Practical Exercise	Dr Yujwal Raj
1215 – 1330	Understanding datasets under NSACP – Issues with Programme Data	Group Exercise	Dr Ariyaratne
1330 – 1430	Lunch		
1430 – 1530	Mapping Variables & Indicators – From Registers to Reports	Presentation & Group Exercise	Dr Muraliharan
1530 – 1630	Data quality assessment – Internal review of facility data	Demonstration & Group Exercise	Dr Yujwal Raj
1630 – 1730	Steps to improve data quality at facility level	Presentation & Discussion	Dr Yujwal Raj
1730 – 1800	Participants work on their datasets with facilitators		

Time	Session	Session Details	Facilitators
0900 – 1730	**Day 2 (6th August 2019)**		
0900 – 0930	Recap		Dr Williams Dr Ariyaratne Dr Yujwal Raj & Participants
0930 – 1030	Preliminary data analysis – measures & methods	Presentation & Practical Exercise	Dr Yujwal Raj Dr Ariyaratne
1030 – 1130	Data entry using MS Excel	Demonstration & Practical Exercise	Dr Yujwal Raj All Facilitators
1130 – 1145	Break		
1145 – 1315	DQA & Basic data analysis using basic functions in Excel	Demonstration & Practical Exercise	Dr Yujwal Raj Dr Ariyaratne Dr Muraliharan & All Facilitators
1315 – 1415	Lunch		
1415 – 1545	DQA & Basic data analysis using MS Excel (Contd…)	Demonstration & Practical Exercise	
1545 – 1730	Introduction to advanced use of MS Excel – Pivot Tables, Formulae & Macros	Presentation, Demo & Practical Exercise	Dr Yujwal Raj
1730 – 1800	Participants work on their datasets with facilitators		

Time	Session	Session Details	Facilitators
0900 – 1730	Day 3 (7th August 2019)		
0900 – 0930	Recap		Dr Williams Dr Ariyaratne Dr Ilanchezhian & Participants
0930 – 1100	Data Interpretation	Demo & Practical Exercise	Dr Yujwal Raj
1100 – 1115	Break		
1115 – 1215	Presenting Data Graphically – Tables, Graphs, Charts	Presentation & Discussion	Dr Ariyaratne
1215 – 1315	Presenting Data Graphically – Tables, Graphs, Charts	Demonstration & Practical Exercise	Dr Yujwal Raj Dr Ariyaratne & All Facilitators
1315 – 1415	Lunch		
1415 – 1515	Communication of analysis results – Abstracts, Policy Briefs, Folders, Handouts, Posters, Papers	Presentation & Discussion	Dr Yujwal Raj
1515 – 1645	Use of Data for Programmatic Decision Making	PPT & Practical Exercise	Dr Yujwal Raj
1645 – 1700	Post-assessment and training evaluation		Dr Ilanchezhian
1700 – 1730	Valedictory		Dr Rasanjalee, Director, NSACP Dr Ariyaratne Dr Williams

4.2.   Training Need Assessment Form

1. Mention the category of personnel/ officials proposed to participate in the training program and their key responsibilities.

Designation / category of persons	No. of participants	Key responsibilities

2. Whether the proposed participants has undergone any of the training on Data Management and Analysis previously? **YES / NO**

    If yes, please specify.

    ....

    ....

    ....

    ....

3. What are all the expectations from the upcoming International Training on Data Management and Analysis of HIV/AIDS Data including data skills, data quality, data analysis and use of HIV/AIDS data for epidemiological & programmatic? Please specify.

    ....

    ....

    ....

4.3. Pre & Post-Training Assessment Forms

(To be answered by the participants before the training)

1. **Fields in a database refer to?**   (   )
    (A) Rows (B) Columns (C) Cases (D) Data cells

2. **Information is…..**   (   )
    (A) Raw Data (B) Processed Data (C) Input data (D) Organized data

3. **Which of the following is not a "Graphic representation"?**   (   )
    (A) Pie Chart (B) Bar Chart (C) Table (D) Histogram

4. **Data recording, reporting & aggregation are steps in**   (   )
    (A) Data management (B) Data analysis (C) Modelling (D) Communication

5. **5. Which of the following is not a form of data communication?**   (   )
    (A) Policy Brief (B) Report (C) Data Table (D) Article

6. **Which of the following are the aspects of data quality?**   (   )
    (A) Accuracy (B) Completeness (C) Consistency (D) All the above

7. **A good database is one without**   (   )
    (A) Blank cells (B) Merged cells (C) Duplicate variables (D) All the above

8. **A descriptive list of names, definitions and attributes of data elements**
    collected in an information system or database is called   (   )
    (A) Dataset (B) Data Manual (C) Data Dictionary (D) Variable List

9. **'Presence or absence of genital discharge' is an example of**   (   )
    (A) Nominal variable (B) Ordinal variable (C) Interval variable (D) Ratio variable

10. Proportion of males visiting STD clinic is an example of ( )
    (A) Output indicator (B) Outcome indicator (C) Process indicator (D) Input indicator

11. Precision of data refers to ( )
    (A) Completeness of dataset (B) Adequate details (C) Repeatability (D) Accuracy

12. Data of an indicator over time is best represented using a ( )
    (A) Bar graph (B) Line graph (C) Pie chart (D) Area plot

13. Function in Excel used to generate crosstabs of different variables is ( )
    (A) What If analysis (B) Pivot Tables (C) Macros (D) Formulae

14. Which of the following is used in Excel to highlight cells of a particular type?( )
    (A) Filter (B) Sort (C) Conditional Formatting (D) Merge cells

15. The smallest element of data is called ( )
    (A) Information (B) Indicator (C) Variable (D) Case

4.4.   Training Evaluation Form

Please rate your level of agreement with each of following statements on a scale of 1-5:

5	4	3	2	1
Exemplary	Very Good	Good	Average	No Comments

	Rate
Course content	
I understood the learning objectives well.	
The course content met my expectations & was in line with the learning objectives.	
I found the course material (slides, handouts, exercises, etc.) useful & easy to follow.	
Training received was adequate for my position/ experience.	
The course will directly or indirectly improve the performance of my duties.	
I am clear about where to find answers to questions that I have about Data Management.	
Structure & process of training	
The training sessions are well structured & appropriately scheduled.	
Instructional methods used during training are effective.	
Participation and interaction were encouraged during the sessions.	
The speed/ pace at which the training was conducted was appropriate.	
I was comfortable with the length of the sessions & length of the workshop.	
Group works/ hands-on exercises are well structured with clear instructions.	
Guidance & mentoring support was adequately provided in group works/ exercises.	
Adequate chance was given for participants to ask questions and resolve doubts.	
There was ample opportunity to practice the skills I am supposed to learn.	
I received adequate feedback from the facilitators during the practice sessions.	
Trainers & Mentors – Knowledge & Delivery Style	
The facilitators were knowledgeable on the subject matter.	
The facilitators explained the concepts clearly and in an understandable way.	
The facilitators effectively handled the questions that were asked.	
The examples & experiences quoted by the trainers were relevant & apt to my situation.	

	Rate
I was well engaged during the sessions/ The sessions were kept alive, interesting & interactive.	
How would you rate their facilitation skills overall, on a scale of 5?	
Facility & Amenities	
The venue and seating arrangement were comfortable and suitable for the training.	
The environment was free from distractions and conducive to learning.	
The audio-visual set up was good and clear.	
The quality of food was good.	
Overall	
How will you rate the training, overall, on a scale of 5?	
I am satisfied with the training course.	
I will recommend this course to others.	

What did you like about the course?

How can we strengthen and improve this training further?

Would you recommend including any other topics in the training course?

Any other comments.