# Training on
# Data Management & Analysis of STD/HIV Data for
# Consultant-Venereologists & Medical Officers - Batch II

## TRAINING REPORT

**2-3, December 2019 | 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)**

**(VHS-CDC Project)**

MINISTRY OF HEALTH SRI LANKA

NATIONAL STD/AIDS CONTROL PROGRAMME

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MINISTRY OF HEALTH SRI LANKA

NATIONAL STD/AIDS CONTROL PROGRAMME

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| **Designed by** | : | **Ms T Sudha, Senior Programme Associate, VHS-CDC Project** |
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# Contents

# 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 second batch of the *"Training on Data Management & Analysis of STD/HIV Data for Consultant-Venereologists & Medical Officers"* 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 2-3, December 2019 at Colombo/ Sri Lanka.

The goal of the training is to impart & advance the data management skills of Consultant-Venereologists & Medical Officers in order to improve the data quality, strengthen the data analysis and use of STD & HIV/AIDS programme data for an evidence-based programming under NSACP. The training was conducted with the following objectives:

- To improve the understanding of the Consultant-Venereologists & Medical Officers on the programme datasets under NSACP from an evidence-based approach
- To introduce the basic principles and approaches of data management
- To apprise the participants of the various methods of data quality assessment, validation & adjustments
- To build the basic skills in programme data analysis using MS Excel
- To improve the presentation, dissemination and use of data for programmatic 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.

VHS-CDC project with the support of CDC has overall organized training on data management for four (04) batches and capacitated 95 officials from SIMU, NSACP and District STD Clinic Team. This training report is based on the training conducted for the fourth batch on data management and second batch of training on data management for Consultant-Venereologists and Medical Officers.

This training was very much useful for the participants in learning the skills of Basics of Data & Data Quality; DQA & Data Analysis using MS Excel; SPSS and Presentation, Communication & Use of Data. This training was conducted with the methodologies such as: Active Learning through Discussions, Review of examples & Case studies; Learning by Doing; Individual Hands-on/ Practical Exercises; Group Exercises; Parallel work on selected data; and mentoring support.

This training report contains the training goal, objectives, profile of participants, process adopted including day wise/ session wise proceedings, steps involved in Data Management, guidelines & suggestions, key learnings, key outcomes, feedback, pre & post assessments, post-training evaluations, 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 and technical assistance 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 technical team, admin & finance team and resource persons/ trainers for the systematic support extended in successful conduct of this training.

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

My gratitude should go to Dr Melissa Nyendak, Country Director, CDC/DGHT-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 technical/ financial 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 Consultant-Venereologists & Medical Officers.

**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;
- Introduce data quality audit at each reporting unit level and contribute for quality reporting;
- 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 the second batch of the *"Training on Data Management & Analysis of STD/HIV Data for Consultant-Venereologists & Medical Officers"* for two days.

To support this training, the project has developed an agenda based on needs assessment, resource kit (with presentations, exercises, tools and resource materials) & resource book. VHS-CDC Project has 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 Consultant-Venereologists & Medical Officers – Batch II".* 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; details on the resource book; 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.

VHS-CDC project with the support of CDC has overall organized training on data management for four (04) batches and capacitated 95 officials from SIMU, NSACP and District STD Clinic Team. This training report is based on the training conducted for the fourth batch on data management and second batch of training on data management for Consultant-Venereologists and Medical Officers.

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 cum Coordinator-SIMU, 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, 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 continued support and guidance 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, VHS-CDC Project for his leadership initiative, systematic support, planning, ensuring communication & coordinating and conducting this training program in a successful manner. Also thank him for serving as a facilitator in conducting this training program for achieving the desired training objectives 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 S Sathyaraju, Associate Manager Finance, VHS-CDC Project and admin team for their support in logistics coordination, finance management & other arrangements.

Overall, this training program was meaningfully, successfully 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.**

# 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 |
| CSS | Cross-Sectional Study |
| CSS | Case-Control Study |
| C&S | Care & Support |
| CST | Care, Support & Treatment |
| CVs | Consultant-Venereologists |
| 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 |
| MOs | Medical Officers |
| 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 |
| PMTCT | Prevention of Mother To Child Transmission |
| PrEP | Pre-Exposure Prophylaxis |
| PRT | Peer Review Team |
| RCT | Randomized Controlled Trial |
| REC | Research Ethics Committees |
| RR | Risk Ratio / Relative Risk |
| SPSS | Statistical Package for the Social Sciences |
| STD | Sexually Transmitted Diseases |
| SI | Strategic Information |
| SIMU | Strategic Information Management Unit |
| TA | Technical Assistance |
| TB | Tuberculosis |
| TCT | Training Coordination Team |
| TNA | Training Needs Assessment |
| VHS | Voluntary Health Services |
| WHO | World Health Organization |

# Chapter 1: Introduction

**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.

**Key functions of NSACP:**

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.

**Unique strengths of Strategic Information (SI) system**:

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.

**Voluntary Health Services:**

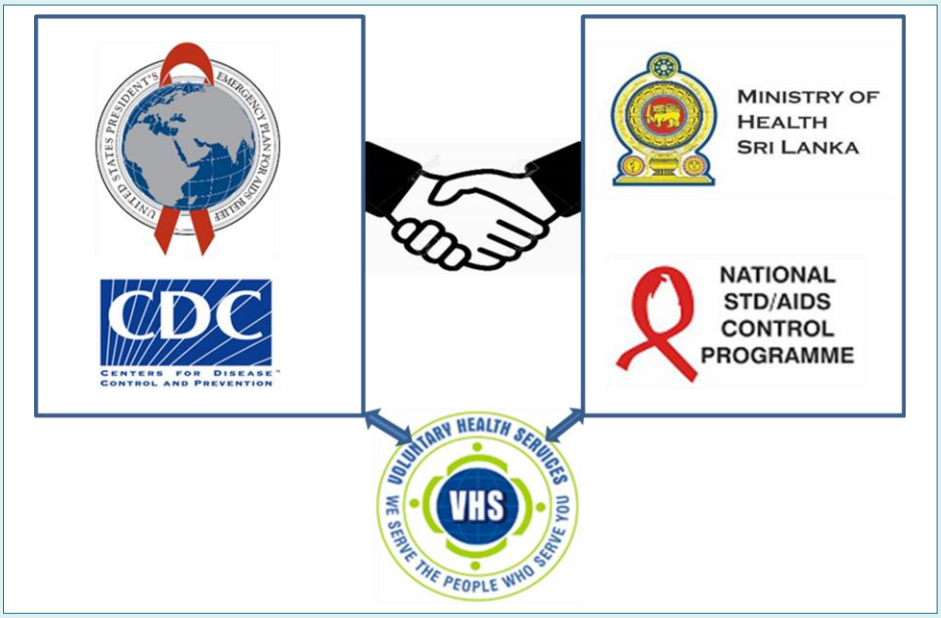
The Voluntary Health Services is a Cooperative Agreement (CoAg.,) implementing partner of CDC for providing Technical Assistance on Strategic Information. VHS was established in 1958 by Dr K S Sanjivi, an eminent physician, and visionary leader. Today, VHS is a 465 bedded multi-specialty tertiary teaching 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.




***Technical Collaboration between NSACP - PEPFAR:CDC - VHS***

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 management, analysis, documentation & 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 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 has organized a series of training programs which includes:

- National Capacity Building Workshop on Operational Research in HIV/AIDS.
- 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.
- Training on Data Management and Analysis of HIV/AIDS Data for District STD Clinic Staff (Public Health Inspectors and Nursing Officers).

- Training on Data Management & Analysis of STD/HIV Data for Consultant-Venereologists & Medical Officers (Batch I & II).

VHS-CDC project has undertaken capacity building initiatives in accordance with the Training Need Assessment study conducted, Focused Outcome and Impact Table (FOIT) activity plan and fulfilling the desire capacity building needs of SIMU-NSACP. The project has also proposed to undertake "Training on Transition from Paper-Based to Electronic Information Management System" for all STD clinic team in the entire country for roll-out of EIMS.

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 process documentation on the overall expériences of TA to NSACP & Dissemination with SIM Unit/ NSACP and way forward.

Considering the overall capacity plans evolved, VHS-CDC Project has organized the second batch of the **"Training on Data Management & Analysis of STD/HIV Data for Consultant - Venereologists & Medical Officers – Batch II"** representing from all STD Clinic in the entire country.

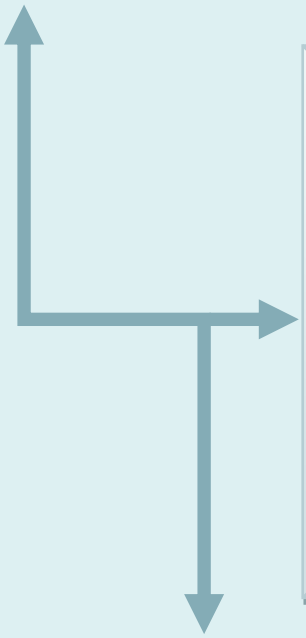
VHS-CDC project with the support of CDC has organized similar training for District STD Clinic Staff (Public Health Inspectors and Nursing Officers), selected Consultant-Venereologists and Medical Officers, during August 2019.

# 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 for Consultant-Venereologists & Medical Officers" for batch II from 2-3, December 2019 at Galle Face Hotel, Colombo/ Sri Lanka.

**Goal: To impart & advance the data management skills of Consultant-Venereologists & Medical Officers in order to improve the data quality, strengthen the data analysis and use of STD & HIV/AIDS programme data for an evidence-based programming under NSACP.**



**The Objectives of the program are:**

- **To improve the understanding of the Consultant-Venereologists & Medical Officers on the programme datasets under NSACP from an evidence-based approach**
- **To introduce the basic principles and approaches of data management**
- **To apprise the participants of the various methods of data quality assessment, validation & adjustments**
- **To build the basic skills in programme data analysis using MS Excel**
- **To improve the presentation, dissemination and use of data for programmatic purposes.**

**The methodologies adopted in the training program includes:**

- **Active Learning through Discussions; Review of examples; and Case studies**
- **Learning by Doing**
- **Individual Hands-on/ Practical Exercises**
- **Group Exercises**
- **Resource materials**
- **Parallel work on selected data**
- **Mentoring support**

This training on Data Management for the Consultant-Venereologists & Medical Officers was conducted based on the training needs. Supported 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. In this training program, a Resource Book on Data Management was also brought out and shared with each participant for reference.

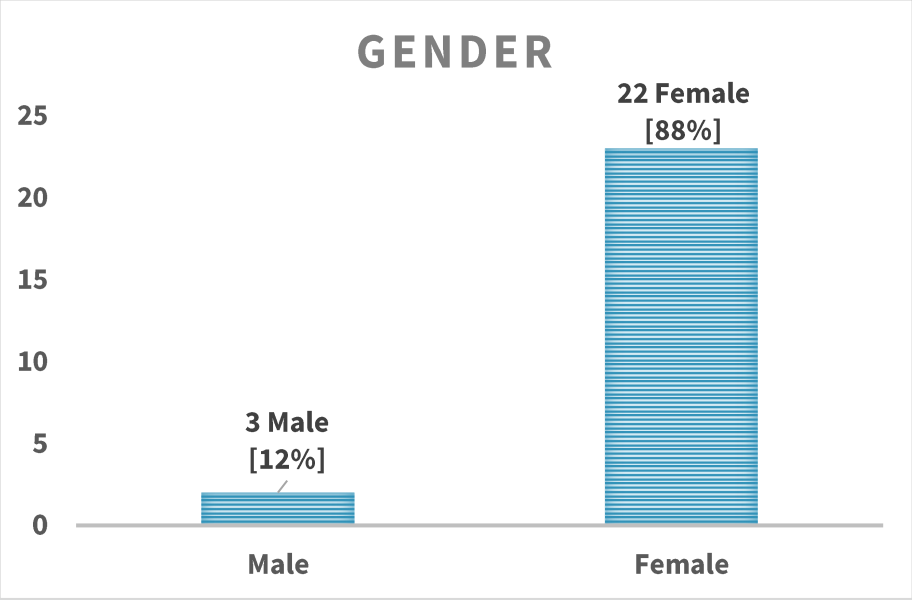
## 2.2. Participants

VHS-CDC Project in consultation with SIMU-NSACP has identified and selected participants for the 2nd batch of the training program. Through a process, SIMU-NSACP has identified and nominated 25 participants from District Peripheral STD Clinics representing from the entire country. The category of participants identified for the training program will include Consultant-Venereologists and Medical Officers. The **criteria** adopted for selection of participants will include but not limited to:

- At present, the person should directly work District Peripheral STD clinic.
- Plans to continue to work in the same position.
- 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.
- Experience in handling data or associated with data management.

### 2.2.1. Profile of Participants

In this training program, 25 participants have undergone training which includes 3 male and 22 female participants.




Amongst the 25 participants, 6 participants are Consultant-Venereologists and remaining 19 participants includes Medical Officers, Medical Officer In-Charge, Senior Registrars, Registrars, Acting Consultants, Diploma Trainee, etc. represented and benefited through this training program.

### 2.2.2. List of participants capacitated

The **list of Consultant-Venereologists and Medical Officers** capacitated in the training program is given below:

| S. No. | Participant Name, Designation & Address | Contact number & Email ID |
|---|---|---|
| 1 | **Dr H A D P Nimalrathna**,<br>Diploma Trainee,<br>STD Clinic, Ragama. | 0718339386<br>dilapra@gmail.com |
| 2 | **Dr W S Chamani Dileka**,<br>Senior Registrar,<br>NSACP. | 0772647431<br>chamdileka@gmail.com |
| 3 | **Dr Chandrika Jayakody**,<br>Consultant-Venereologist,<br>NSACP. | 0718258509<br>wcjksovis@gmail.com |
| 4 | **Dr Geethani Samaraweera**,<br>Consultant-Venereologist,<br>STD Clinic, NSACP. | 0714934505<br>geethanisamaraweera@gmail.com |
| 5 | **Dr Nimali Widanage**,<br>Acting Consultant-Venereologist,<br>STD Clinic, NSACP. | 0772096344<br>Nimw81@gmail.com |
| 6 | **Dr K Chandrakumar**,<br>Medical Officer In-Charge,<br>STD Clinic, Vavuniya. | 0777146765<br>palamuthiersolai@gmail.com |
| 7 | **Dr Waruni Pannala**,<br>Acting Consultant-Venereologist,<br>STD Clinic, Polonnaruwa. | 0773913389<br>warunip@yahoo.com |
| 8 | **Dr H M A H Karunaratne**,<br>Senior Registrar / Venereologist,<br>NSACP. | 0773320102<br>anruddha@gmail.com |
| 9 | **Dr Chathurika Wickramarathne**,<br>Acting Consultant-Venereologist,<br>STD Clinic, Kilinochchi. | 0773646693<br>chatulakmali@yahoo.com |
| 10 | **Dr D L D C Liyanage**,<br>Acting Consultant-Venereologist,<br>NSACP. | 0718569518<br>dulariliyanage@gmail.com |
| 11 | **Dr Shalinie S Nanayakkara**,<br>Senior Registrar,<br>STD Clinic, NSACP. | 0767884636<br>sshalinie@ymail.com |
| 12 | **Dr K A C R Wijesekara**,<br>Senior Registrar,<br>HIV Clinic, NSACP. | 0716534033<br>randimadr@yahoo.com |
| 13 | **Dr M P V R Perera**,<br>Senior Registrar,<br>HIV Clinic, NSACP. | 0716534381<br>Vindyaperera85@gmail.com |
| 14 | **Dr M D A Peter**,<br>Medical Officer,<br>HIV Clinic, NSACP. | 0714444651<br>rasikadilransi@gmail.com |

| S. No. | Participant Name, Designation & Address | Contact number & Email ID |
|---|---|---|
| 15 | **Dr Pamini Achchuthan**,<br>Medical Officer,<br>STD Clinic, Baticoloa. | 0715353834 / 0773783775<br>stdbatti@gmail.com |
| 16 | **Dr Jeewanthi De Livera**,<br>Medical Officer,<br>STD Clinic, NSACP. | 0773871697<br>jkdelivera@yahoo.com |
| 17 | **Dr M A C Jayawardena**,<br>Medical Officer,<br>STD Clinic, Gampaha. | 0714493622<br>chamilajayaw@gmail.com |
| 18 | **Dr Gayan Mahakumbura**,<br>Registrar,<br>NHSL. | 0779553154<br>mawoexe@gmail.com |
| 19 | **Dr Udari Gallage**,<br>Registrar,<br>NHSL. | 0772399005<br>udarigallage@gmail.com |
| 20 | **Dr Nadeera Kumarasinghe**,<br>Registrar,<br>NHSL. | 0773146537<br>nadeera_kumarasinghe@yahoo.com |
| 21 | **Dr Kanchana Wirasinghe**,<br>Registrar,<br>NHSL. | 0718456619<br>wirasinghekanch@gmail.com |
| 22 | **Dr Hemantha Weerasinghe**,<br>Medical Officer,<br>NSACP. | 0714224988<br>hemantha01@gmail.com |
| 23 | **Dr Y K K Attanayake**,<br>Registrar,<br>NHSL. | 0772508645<br>Yuwani_attanayake@yahoo.com |
| 24 | **Dr A R T M Ramanayake**,<br>Diploma Trainee,<br>SIM Unit. | 0714062777<br>Madushi.rama@gmail.com |
| 25 | **Dr Chani Dumendra Ratnayaka**,<br>Diploma Trainee,<br>SIM Unit. | 0714407653<br>chanidumendra@gmail.com |

## 2.3. Facilitators & Coordination Team

VHS-CDC Project has formed the Facilitators team and Training Coordination Team:

**Facilitators:**

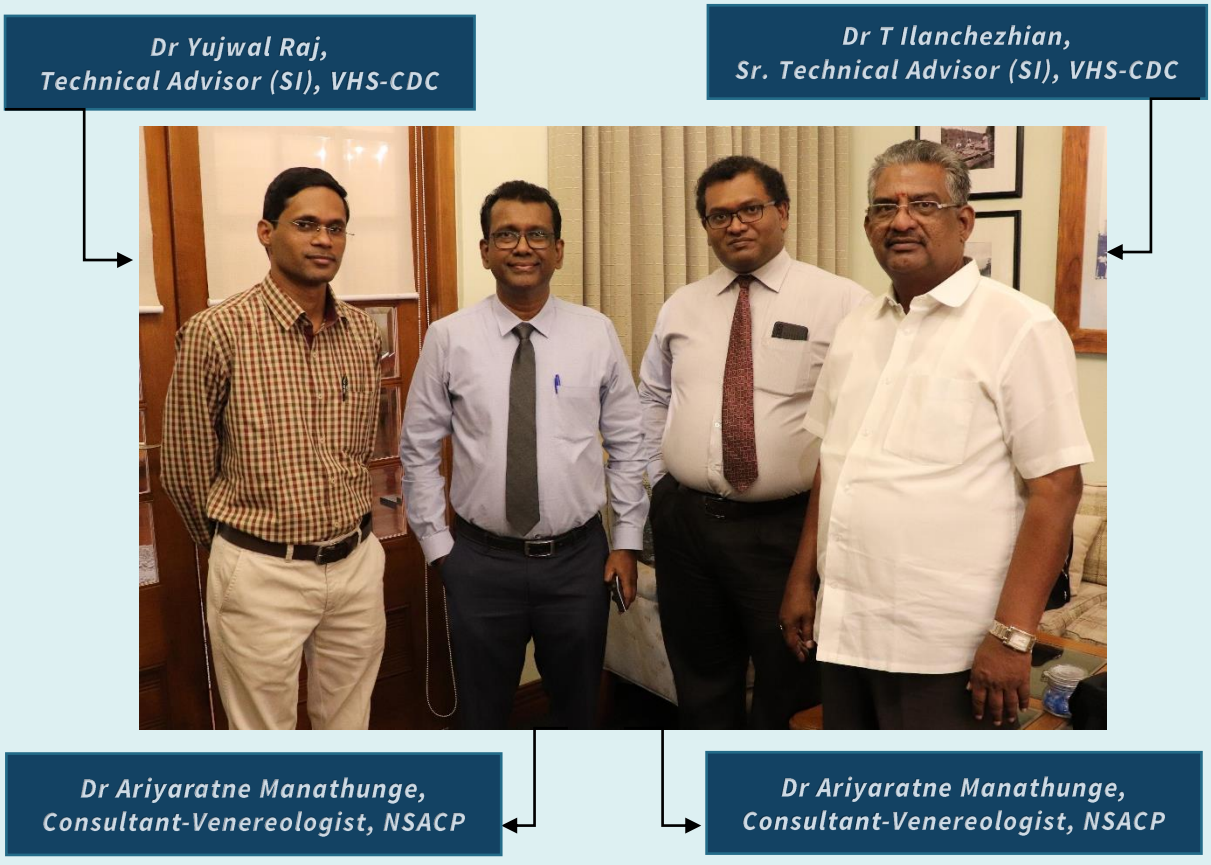
**Criteria:** The broad criteria considered and prioritized the consultants through a process and in consultation with SIMU and other stakeholders:

- Minimum 10 years of experience in designing and conducting the training program at national/ international level.
- Experienced/ capacitated on training on data management (undergone similar training.
- Directly involved or associated with SIMU and having good understanding on SI system in the country.
- Credibility of the Facilitators with acceptability among the stakeholders.
- Preference to the person who has already conducted training program on data management in accordance with the training needs identified.
- Willingness to adopt participatory and innovative methodologies including providing hands-on training.

**Members:**

- Dr Yujwal Raj, Technical Advisor (SI), VHS-CDC Project.
- Dr Ariyaratne Manathunge, Consultant-Venereologist, NSACP.
- Dr T Ilanchezhian alias Dr IC, Senior Technical Advisor, VHS-CDC Project.
- Dr S Muraliharan, MO/Planning/SIM unit/NSACP.

VHS-CDC developed Terms of Reference (ToR), facilitated concalls & meetings. This has contributed for effective team building in planning & conducting training. The previous experiences in conducting similar training, feedback and suggestions emerged during the batch I training on data management has also been taken into account and incorporated in training plan & course materials.



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

<table>
<tr><td>VHS-CDC Project:<ul><li>Dr Joseph D Williams, Director Projects</li><li>Dr T Ilanchezhian, Sr. Technical Advisor</li><li>Ms T Sudha, Sr. Programme Associate</li><li>Mr Sathyaraju, Associate Manager-Finance</li></ul></td><td rowspan="2">The role/ purpose of TCT are:<ul><li>Identifying training needs.</li><li>Confirmation and developing profile of participants.</li><li>Briefing the facilitators.</li><li>Contribute for logistics planning, development of resource and distribution.</li><li>Support in registration and ensuring time management.</li><li>Providing feedback to experts.</li></ul></td></tr>
<tr><td>NSACP:<ul><li>Dr Ariyaratne Manathunge, Consultant-Venereologist & Coordinator-SIMU</li><li>Dr S Muraliharan, MO/ Planning</li></ul></td></tr>
<tr><td colspan="2">Periodicity:<ul><li>The TCT met on the previous day evening for planning the training program.</li><li>The TCT met everyday evening for reviewing and providing feedback.</li><li>The TCT had final meeting on completion of training and provided feedback.</li></ul></td></tr>
<tr><td colspan="2">Methodology: The TCT team had formal meetings during the training days and through virtual mode for systematic planning, suggestions and experiences.</td></tr>
</table>

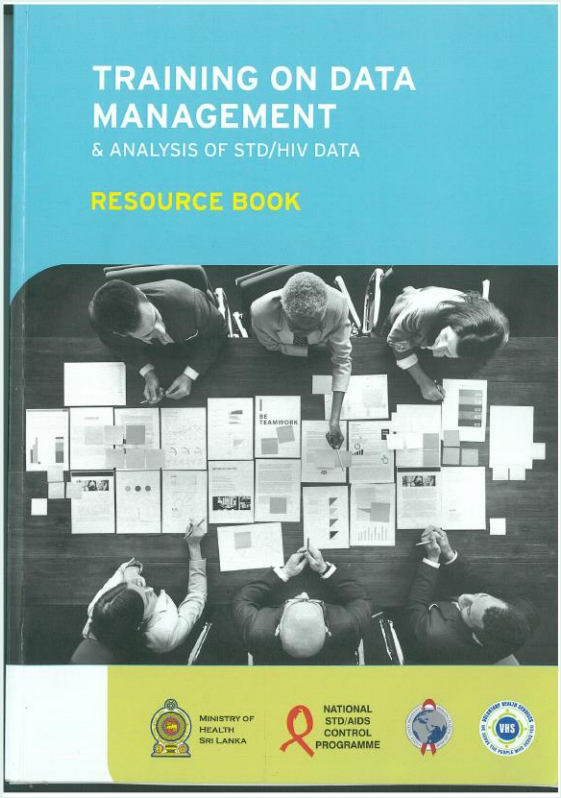

*Training Coordination Team (TCT)*

## 2.4. Resource Materials

**Training Need Assessment and development of Agenda**

| | |
|---|---|
| Steps involved in TNA and development of agenda | • Consultation with SIMU team.<br>• Consultation with Consultant-Venereologists and Medical Officers for identifying the training needs.<br>• Secondary review.<br>• Understanding roles & responsibilities of Consultant - Venereologists & Medical Officers in data management<br>• Consultation with Training Coordinator at NSACP<br>• Review of the previous similar programs, its contents, feedback, evaluation, etc.<br>• Development of training needs.<br>• Prioritization & finalization of training needs in accordance with country specific needs.<br>• Development of draft agenda, review, feedback and finalization of the agenda.<br>• Development of broad outline and concept note for conducting the training program. |
| Development of Course materials | **Contents:**<br>• Day 1: Basics of Data & Data Quality<br>  ○ Data sources<br>  ○ Databases & structures<br>  ○ Assessing datasets<br>  ○ Variables & Indicators<br>  ○ Data quality assessment<br>  ○ Data adjustments<br>• Day 2: Using MS Excel/ SPSS & Data Presentation/ Communication<br>  ○ Performing DQA & Basic data analysis using MS Excel<br>  ○ Orientation to SPSS<br>  ○ HIV/AIDS specific data analysis<br>  ○ Graphical presentation of data<br>  ○ Communication of analysis results<br>• **Presentations:** Developed 13 PPTs supported with handouts.<br>• **Exercises:** Developed 6 exercises for facilitating group exercises supported with mentorship/ hands-on training.<br>• **Tools:** Developed tools such as: Pre-Assessment, Post-Assessment and Post-Training Evaluation tool.<br>• **Reference and reading materials:** Collected and shared important further reading/ reference materials on data management. |

**Resource Book:** VHS-CDC Project has brought out a **"Resource Book"** on training on data management.




**Purpose:**

- To provide comprehensive reference materials on data management for reading.
- To use as a ready reckoner for referring to the information on data management during the training and during the follow-up/ undertaking data management efforts.
- To use the resource book by the STD clinic team including Consultant-Venereologists, Medical Officers, Public Health Inspectors and Nursing Officers.
- To share the same with other Ministries for enhancing the systems on data management.

**Audience:**

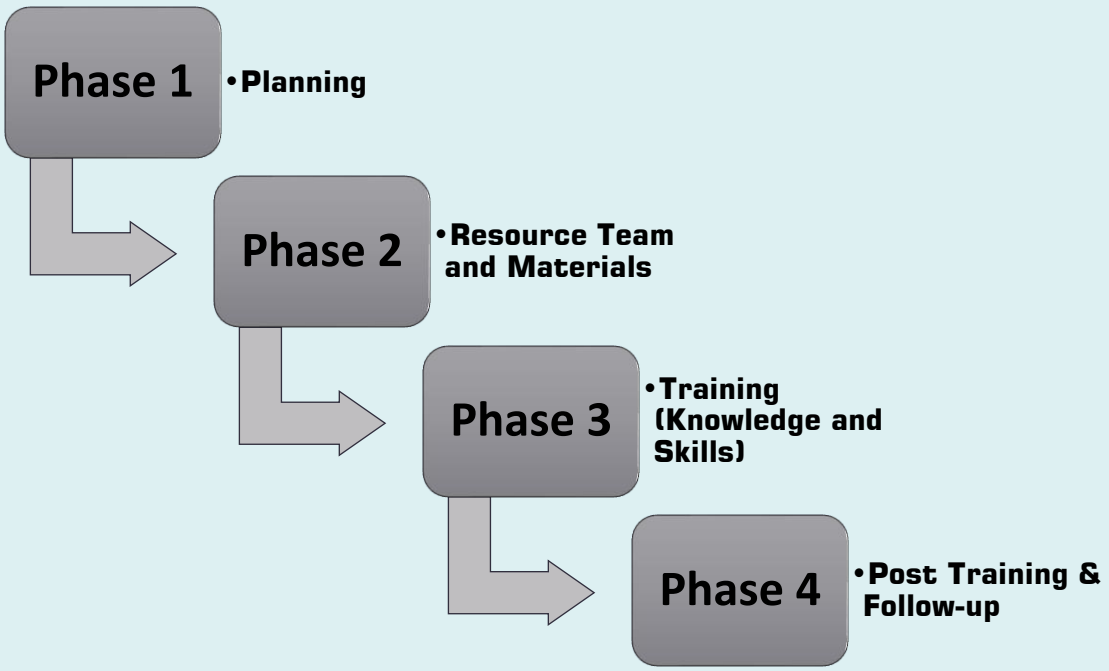
| Direct Audience | Indirect Audience |
|---|---|
| Officials at SIMU<br>Consultant-Venereologists<br>Medical Officers | District STD Clinic Staff<br>• Public Health Inspectors<br>• Nursing Officers<br>• Lab Technicians<br>• Development Officers<br>• ICT Officers<br>Other Ministries |

Resource Book - Training on Data Management and Analysis of STD/HIV data has been compiled and brought out as a ready reckoner with comprehensive information on data management. This resource book contains presentations, exercises, reference materials, etc. This resource book is a complementary reading material for the training program planned and in accordance with the training agenda.

VHS-CDC Project has shared the soft copy of the resource book in pendrive to all the participants and shared the same through e-group constituted for this purpose.

## 2.5. Planning & management of the training program

**Phases in conducting the training program:** VHS-CDC Project in consultation, coordination and with the engagement of SIMU-NSACP and Training Coordinator-NSACP has evolved systematic, rigorous efforts with meticulous planning and coordination for conducting the training program in a successful manner. VHS-CDC Project along with SIMU has undertaken activities in different phases and the same is depicted below:




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

| **Phase 1: Planning:** |
|---|
| • Planning:<br>  ○ Planning meeting with SIMU, NSACP and Training Coordinator-NSACP.<br>  ○ Development of brief outline based on the needs and expectations.<br>  ○ Secondary review, review of previous training reports and feedbacks.<br>  ○ Training Need Assessment.<br>  ○ Reviewing the feedback on the previous training conducted on Data Management.<br>  ○ Understanding the roles and responsibilities of the PHIs and Nursing Officers.<br>• Participants:<br>  ○ Development of criteria for participants.<br>  ○ Communication to the participants and coordination with the Training Coordinator.<br>  ○ Finalization of participants and development of their profile.<br>  ○ Sending final communication on the training venue and other instructions. |

- Logistics:
    - Development of accommodation, travel plan, ticket booking, hall arrangements and other logistics support.
    - Finalization of the food menu and other requirements.
    - Systematic planning & efforts for arranging hall with cluster seating, sound system, communication aids, wi-fi & other infrastructure for creating enabling environment for conducting training.
- Branding:
    - Undertaken efforts for branding the display (banner, hall display, direction boards) and other related materials including certificates, presentations, resource book/ reference materials, ID cards, etc.
    - Developed a table calendar with the group photo of the participants and provided to the participants.
- 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 plans evolved, technical/ financial team jointly discussed and developed budget for planning & conducting the training considering various aspects such as resource materials, consultants, hall, accommodation, stationeries, resource kit, travel and other aspects.

**Phase 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.
    - Facilitated coordination between the resource team members for understanding the training plan, ensuring coordination in conducting training, etc.
- 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.
    - Feedback, suggestions provided by the Consultants as a part of batch-I training and District STD Clinic team has also been considered and improved the training plan, course content, presentations and other coordination.
    - Evolved plans for dissemination.
- Resource Book:
    - Discussions with SIMU on the relevance of developing resource book.
    - Finalization of the core content of the resource book.
    - Designing of resource book on data management.
- Resource kit:
    - Developed resource kit with presentations, exercises, tools, reference materials, pendrive, 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.

**Phase 3: Training (Knowledge and Skills):**

- Before Training:
  - Issue of welcome letter
  - Allocation of rooms
  - Registration and provided resource kit
- During Training:
  - Inaugural
  - Training Agenda & Training sessions
  - Introduction of participants
  - Training sessions by facilitators including VHS-CDC and SIMU
  - Feedback sessions/ experience sharing/ peer review learning
  - Recap
  - Group work/ hands-on training with peer review
  - Simulation games
  - Pre & Post Evaluation; Post Training evaluation
  - Follow-up plans
  - Training Coordination Team Meeting
  - Sharing the soft copy of the resource materials with each participant

**Phase 4: Post-Training & Follow-up:**

- 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 training report/ documentation
- Sharing soft copy of the report and other reference materials for follow-up
- Emails through e-groups for updating and facilitate experience sharing
- Need based mentoring and follow-up support by SIMU team.
- Undertaking team efforts in improving the quality on data management by trained team available in the respective clinics with the guidance of SIMU.

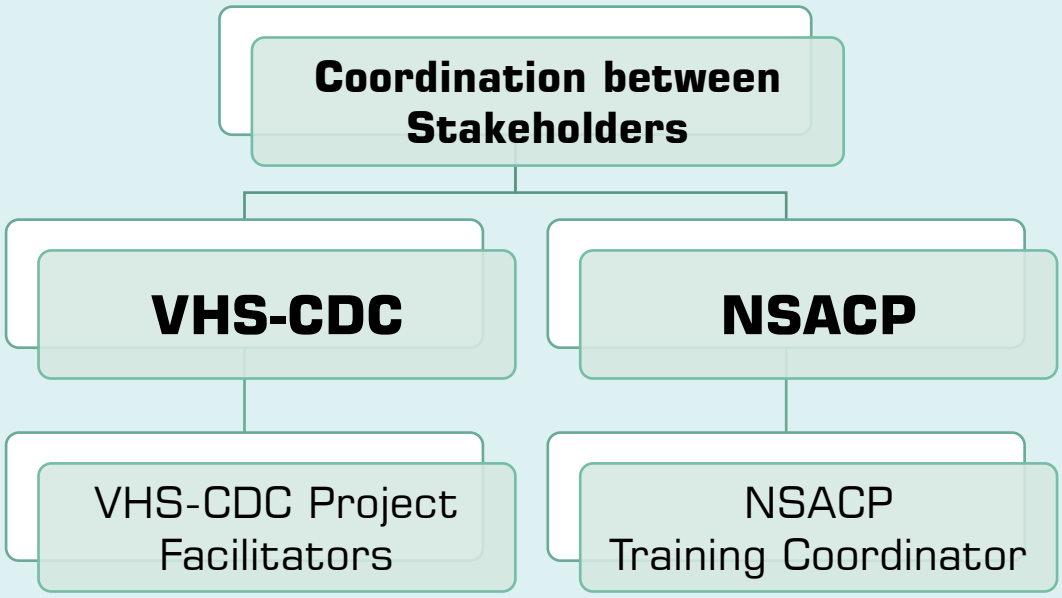
## 2.6. Innovative approaches

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

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

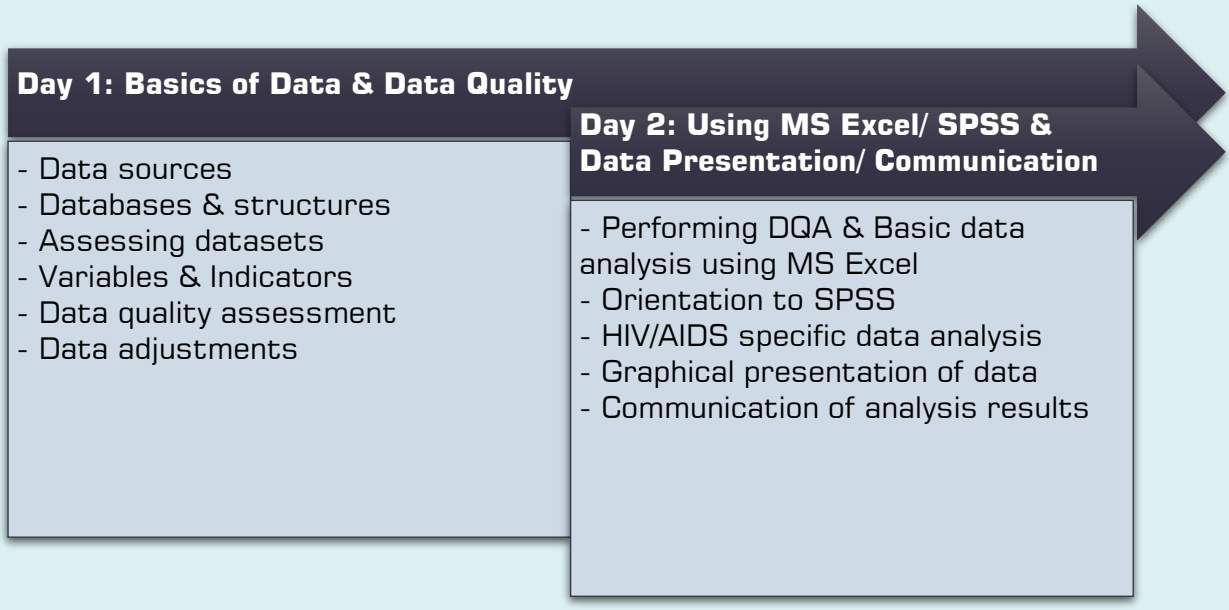
## 2.7. Coordination between the stakeholders

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.



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




## 2.9. Key Learnings

The training on Data Management for Consultant-Venereologits and Medical Officers has contributed for the following key learnings:

**Hands-on training on:**

- **Understanding datasets, components, structure & database management principles**
- **Variables & Indicators – Types and how to manage**
- **Data Quality Assessment & Adjustments using Excel**
- **Introduction to Data Management using SPSS**
- **Exposure to Cohort Database using MS Access**
- **Data Triangulation**
- **Communication of Data Analysis Results**

## 2.10. Outcomes

The key outcomes of the Training on Data Management & Analysis of STD/HIV Data for Consultant-Venereologists and Medical Officers:

- ✓ **Identified important questions/ topics of programmatic relevance suitable for secondary data analysis.**
- ✓ **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 on conducting DQA & analyzing programme data under NSACP through hands-on practice on MS Excel.**
- ✓ **Improved skills on effective use of data to make evidence-based decision making under the programme.**
- ✓ **Evolved a data analysis plan as a follow-up to the workshop and identified the next steps.**

## 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 (Consultant-Venereologists and Medical Officers).

Name: ..... Qualification: ..... Designation: .....

Place of work: .....

**Training on Data Management & Analysis of STD/HIV Data for Consultant-Venereologists & Medical Officers – Batch II**

**PRE & POST-TRAINING ASSESSMENT FORM**

*(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) Modeling (D) Communication

**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?** ( )

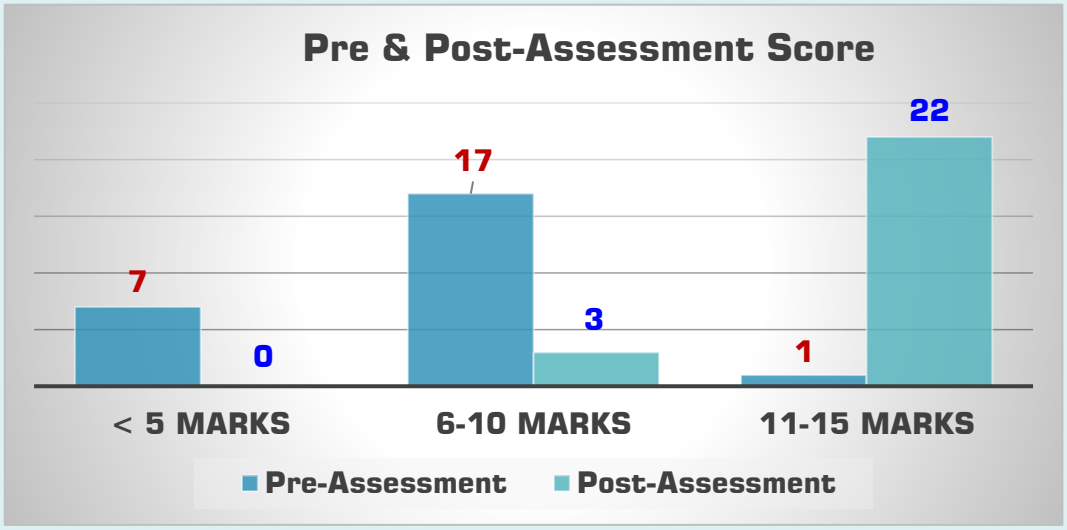
(A) Filter (B) Sort (C) Conditional Formatting (D) Merge cells

**15. The smallest element of data is called** ( )

(A) Information (B) Indicator (C) Variable (D) Case

*** ***Thanks for Answering*** ***

Overall, 25 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:




**In the pre-assessment,**

- Overall 28% (7) respondents have fallen in the category of scoring <5 marks.
- 68% (17) respondents have fallen in the category of scoring 6-10 marks.
- 4% (1) respondent has fallen in category of scoring between 11 and 15.

Overall, about 96% (24) of the respondents fallen in the category of scoring <10 marks against the overall scoring of 15 marks. In which 28% (7) of them has fallen in <5 marks category.

**In the post-assessment,**

- Overall 88% (22) respondents has moved to the category of scoring 11-15 marks against the overall scoring of 15 marks.
- Only 12% (3) respondents has fallen in the category of scoring between 6-10.

Overall, more than 88% 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.

### 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. | 22 | 3 | | | | 25 | 25 | 100 |
| The course content met my expectations & was in line with the learning objectives. | 17 | 6 | 2 | | | 25 | 23 | 92 |
| I found the course material (slides, handouts, exercises, etc.) useful & easy to follow. | 22 | 3 | | | | 25 | 25 | 100 |
| Training received was adequate for my position/ experience. | 18 | 7 | | | | 25 | 25 | 100 |
| The course will directly or indirectly improve the performance of my duties. | 20 | 5 | | | | 25 | 25 | 100 |
| I am clear about where to find answers to questions that I have about Data Management. | 19 | 6 | | | | 25 | 25 | 100 |
| **Structure & process of training** | | | | | | | | |
| The training sessions are well structured & appropriately scheduled. | 20 | 5 | | | | 25 | 25 | 100 |
| Instructional methods used during training are effective. | 21 | 4 | | | | 25 | 25 | 100 |
| Participation and interaction were encouraged during the sessions. | 17 | 8 | | | | 25 | 25 | 100 |
| The speed/ pace at which the training was conducted was appropriate. | 20 | 4 | 1 | | | 25 | 24 | 96 |
| I was comfortable with the length of the sessions & length of the workshop. | 19 | 6 | | | | 25 | 25 | 100 |
| Group works/ hands-on exercises are well structured with clear instructions. | 23 | 2 | | | | 25 | 25 | 100 |

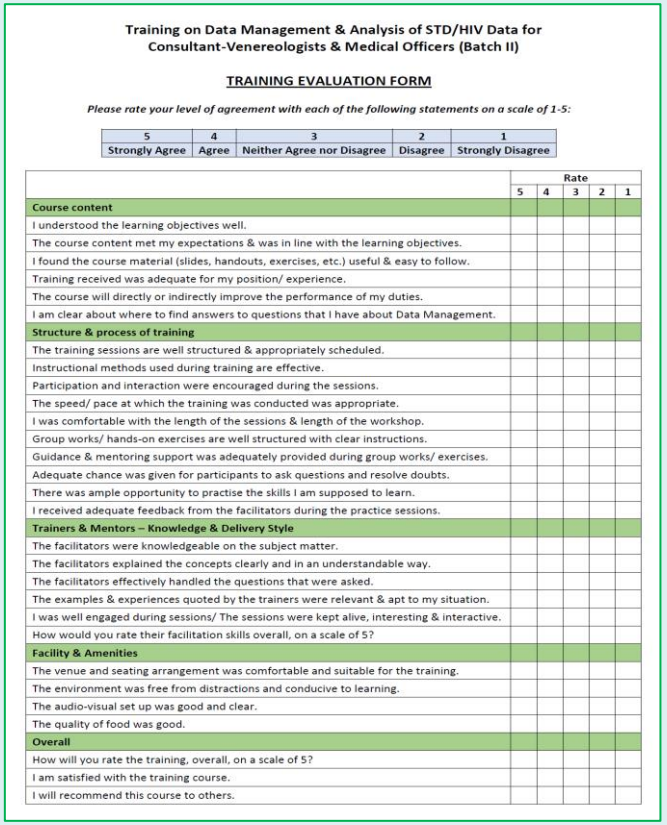
| | Exemplary | Very Good | Good | Average | No Comments | Total | Total of (4 & 5) | Overall % |
|---|---|---|---|---|---|---|---|---|
| | 5 | 4 | 3 | 2 | 1 | | | |
| Guidance & mentoring support was adequately provided during group works/ exercises. | 24 | 1 | | | | 25 | 25 | 100 |
| Adequate chance was given for participants to ask questions and resolve doubts. | 21 | 4 | | | | 25 | 25 | 100 |
| There was ample opportunity to practice the skills I am supposed to learn. | 18 | 7 | | | | 25 | 25 | 100 |
| I received adequate feedback from the facilitators during the practice sessions. | 23 | 2 | | | | 25 | 25 | 100 |
| **Trainers & Mentors – Knowledge & Delivery Style** | | | | | | | | |
| The facilitators were knowledgeable on the subject matter. | 21 | 4 | | | | 25 | 25 | 100 |
| The facilitators explained the concepts clearly and in an understandable way. | 19 | 6 | | | | 25 | 25 | 100 |
| The facilitators effectively handled the questions that were asked. | 23 | 2 | | | | 25 | 25 | 100 |
| The examples & experiences quoted by the trainers were relevant & apt to my situation. | 18 | 7 | | | | 25 | 25 | 100 |
| I was well engaged during the sessions/ The sessions were kept alive, interesting & interactive. | 20 | 5 | | | | 25 | 25 | 100 |
| How would you rate their facilitation skills overall, on a scale of 5? | 21 | 2 | 1 | 1 | | 25 | 23 | 92 |
| **Facility & Amenities** | | | | | | | | |
| The venue and seating arrangement were comfortable and suitable for the training. | 19 | 2 | 2 | 2 | | 25 | 21 | 84 |
| The environment was free from distractions and conducive to learning. | 23 | 2 | | | | 25 | 25 | 100 |

| | Exemplary | Very Good | Good | Average | No Comments | Total | Total of (4 & 5) | Overall % |
|---|---|---|---|---|---|---|---|---|
| | 5 | 4 | 3 | 2 | 1 | | | |
| The audio-visual set up was good and clear. | 19 | 6 | | | | 25 | 25 | 100 |
| The quality of food was good. | 24 | 1 | | | | 25 | 25 | 100 |
| **Overall** | | | | | | | | |
| How will you rate training, overall, on a scale of 5? | 23 | 2 | | | | 25 | 25 | 100 |
| I am satisfied with the training course. | 24 | 1 | | | | 25 | 25 | 100 |
| I will recommend this course to others. | 20 | 5 | | | | 25 | 25 | 100 |

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 (86.20%) 25 questions/ evaluation criteria has scored 100% in all aspects (this shows all aspects are Exemplary and Very Good).



**Training on Data Management & Analysis of STD/HIV Data for Consultant-Venereologists & Medical Officers (Batch II)**

**TRAINING EVALUATION FORM**

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

| 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|
| Strongly Agree | Agree | Neither Agree nor Disagree | Disagree | Strongly Disagree |

| | Rate | | | | |
|---|---|---|---|---|---|
| | 5 | 4 | 3 | 2 | 1 |
| **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 during group works/ exercises. | | | | | |
| Adequate chance was given for participants to ask questions and resolve doubts. | | | | | |
| There was ample opportunity to practise 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. | | | | | |
| I was well engaged during 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 was 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. | | | | | |

### 2.11.3. Consolidated information on 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; and

c) Any other comments.

| What do you like about the course? |
|---|
| ➢ Overall the training course, agenda and the presentations are good.<br>➢ Methodologies including hands-on training and recap sessions.<br>➢ The course facilitators has conducted the training program very practically, aligning with objectives and explained in a way we can understand.<br>➢ E-group formed and networked all the participants through this e-group – even though we work in the same field, we never had group such as for experience sharing and update.<br>➢ Appreciate the system adopted for sharing soft copies of the presentations and exercises and avoiding unwanted paper usage.<br>➢ The facilitators encouraged to clarify doubts in their own languages and motivated at every stage.<br>➢ Two days very intensive, meaningful and very useful training.<br>➢ Very systematic in planning, managing time, covering contents, explanation provided, hands-on training imparted, efforts undertaken for developing knowledge & skills, etc.<br>➢ Training venue, accommodation, food, blend with technical sessions in an enabling environment.<br>➢ Thanks to the organizers for providing such a good hospitality, training, course materials, mentoring and guidance, etc. |
| **How can we strengthen and improve this training further?** |
| ➢ SIMU can provide needful follow-up and guidance to all the trained team.<br>➢ Printed copy of the resource materials may be provided to all district STD clinics for reference.<br>➢ Self-initiative is equally important to further develop skills and continue to practice. |
| **Any other comments.** |
| ➢ Training was conducted considering the needs, realities, context, etc.<br>➢ Training conducted in English in a way participant can understand – was good.<br>➢ This training will be of very useful for effective data collection and reporting.<br>➢ With this knowledge, we will be able to guide and monitor the PHIs and Nursing Officers who has already been trained on this – who are also responsible or collecting and entering the data.<br>➢ Entire team at STD clinic involved in data management has been trained in a phased manner. This will help for uniform and coordinated effort in reporting.<br>➢ Thanks to VHS-CDC Project, CDC and SIMU for their timely effort.<br>➢ Thanks to Dr Ariyaratne, Dr Ilanchezhian, Dr Yujwal, Ms Sudha and Mr Sathyaraju for their systematic support and coordination in conducting this training. |

## 2.12. Feedback of Participants

*This training on data management is a very good training program. Gained very good knowledge and skills about excel & data management and introduction to SPSS. Overall, the training content was very useful and well-structured and efficiently conducted the training program. Thanks to SIMU and VHS-CDC project for the great opportunity extended for undergoing this training program.*

*– Dr Jeewanthi De Livera,*
*Medical Officer, STD Clinic, NSACP.*

*Overall, the training content was adequate and very useful. Methodologies adopted were interesting and it was really useful in enhancing knowledge and skills and will be useful in managing data effectively in STD clinics, program planning and implementation. Will be too happy if intensive training on SPSS is organized by SIMU. Thanks for the opportunity provided in enhancing the knowledge and skills.*

*– Dr Y K K Attanayake,*
*Registrar, NHSL.*

*This training program is a very useful one to me as it is provided lots of knowledge and skills in handling data. Overall, benefited and will continue to practice such knowledge and skills at clinic and at my personal level.*

*- Dr Udari Gallage,*
*Registrar, NHSL.*

*As a Venereology Registrar, this data management training was very useful. Lessons were organized well supported with practical sessions. The trainers were very skillful and able to explain in a simple way including statistical concepts. Finally, I would like to thank VHS-CDC team including Dr IC and the SIM Unit headed by Dr Ariyaratne and the organizers for the opportunity provided.*

*- Dr Nadeera Kumarasinghe,*
*Registrar, NHSL.*

*The training program was very useful for clinicians and as well as for researchers. I am sure, will use all the knowledge and skills in day-to-day life at clinic for efficient data management. Thanks to VHS-CDC team and NSACP for the opportunity.*

*– Dr H A D P Nimalrathna,*
*Diploma Trainee, STD Clinic, Ragama.*

*Complex concepts of data management was simplified and thought in an efficient way by adopting multiple methodologies and hands-on training.*

*– Dr A R T M Ramanayake,*
*Diploma Trainee, SIM Unit.*

*The training on data management will definitely contribute for further strengthening the data quality system, collection of data, analysis of data, submission of report and use of data for programmatic decisions.*

*– Dr Geethani Samaraweera,*
*Consultant-Venereologist, STD Clinic, NSACP.*

*This is my first training on data management on HIV/AIDS. It will be helpful for my future career as Venereologist and immediately help in contributing for strengthening in maintenance of register, checking the registers, identifying the errors, ensuring correctness of data, analysis of data by using simple formulas, identifying the program gaps and initiate efforts for overcoming the gaps.*

*– Dr W S Chamani Dileka,*
*Senior Registrar, NSACP.*

*This training was very useful in all aspects. It has given motivation to focus, improve and provide appropriate time for data management at clinic level. Thanks to SIMU and VHS-CDC team for the excellent, well-planned and course content training.*

*– Dr Pamini Achchuthan,*
*Medical Officer, STD Clinic, Baticoloa.*

## 2.13. Follow-up, suggestions and recommendations

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

- **Each participant will need to undertake personal interest, allocate time for practicing to sustain the skills and continue to practice is equally important.**
- **The resource persons including in-country experts involved in conducting the training from SIMU may be contacted for further clarity and update.**
- **The participants can share their experiences, new learnings, best practices, etc., through e-groups among the co-trainees.**
- **SIMU may plan for in-service training program as a part of the overall training plan for sustaining the trained people and coordinating the technical update.**

# Chapter 3: Training proceedings

## 3.1. Day 1 (2nd December 2019)

### 3.1.1. Registration

**Registration of Participants:** The registration process held between 0830-0900 hrs and the same was facilitated by VHS-CDC Project team. The participants and facilitators were registered.

Participants were provided with **resource kit** including pad, pen, pen drive, 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. Overall, 25 participants and 6 members (facilitators, documenters, organizers/ coordination team) were registered.

### 3.1.2. Brief Inaugural Function

**Introduction of the program and welcome address:** VHS-CDC and NSACP has jointly organized a brief inaugural function between 0900-0930 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 by VHS-CDC Project on SI.**
- **Highlighted the training approaches being adopted by VHS-CDC in capacity building of the SIMU and SI team in the country.**
- **Briefly narrated the process adopted for planning & conducting this training program.**

- **Thanked Director-NSACP; Dr Ariyaratne Manathunge, Consultant - Venereologist cum Coordinator - SIMU, NSACP and SIMU team.**

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 lamp was held by the following officials/ chief guests:

- Dr Rasanjalee Hettiarachchi, Director, NSACP
- Dr Ariyaratne Manathunge, Consultant-Venereologist SIMU, NSACP
- 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
- Ms T Sudha, Senior Programme Associate, VHS-CDC Project.
- Mr S Sathyaraju, Associate Manager-Finance, VHS-CDC Project.
- Dr Geethani Samaraweera, Consultant-Venereologist, STD Clinic, NSACP.
- Dr Hemantha Weerasinghe, Medical Officer, NSACP.

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

**Inaugural Address:** Dr Ariyaratne, Consultant-Venereologist, SIMU has delivered the inaugural address. He highlighted on VHS-CDC Project's technical cooperation with SIMU-NSACP with the support of CDC in roll-out of technical cooperation and TA initiatives over a period.

During the inaugural address, he stated that:

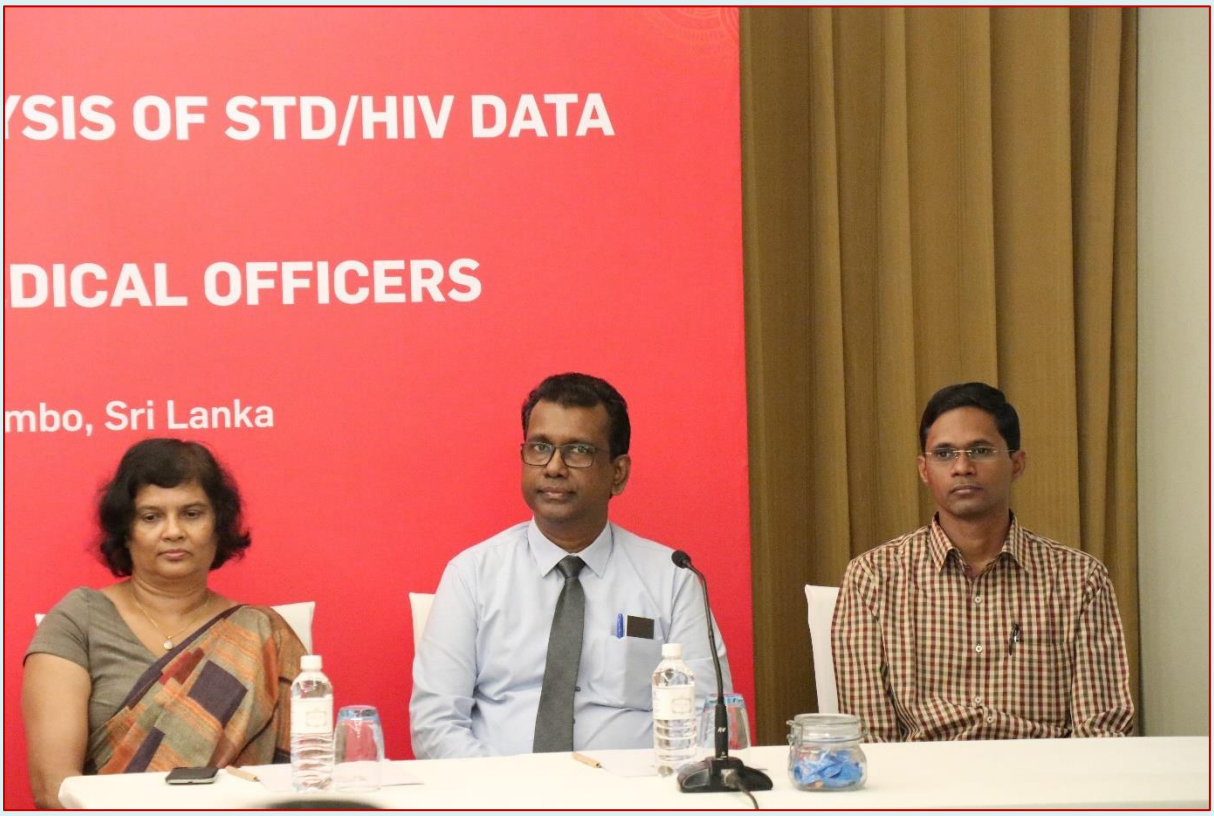
**"SIMU-NSACP is very happy in associating with VHS-CDC project supported by CDC and benefiting through the Technical Assistance. Through a process, this technical cooperation has been evolved, signed Letter of Intent (LoI) between Ministry and CDC and the TA related activities in progress. VHS-CDC project with the support of CDC is providing strategic support in capacity building of SIMU team and SI team at District STD Clinics.**

**Some of the important, need-based training programs conducted by them will include Operational Research, Scientific Writing, DHIS2, etc. Also, they have extended support in capacity building of Consultant-Venereologists and STD Clinic team on data management for three batches and this training is the fourth batch on data management. This data management training will be very useful for introducing data quality audit, enhancing the data collection and reporting.**

**This training is being conducted based on the tested modules/ tools/ presentations/ exercises in the context of Sri Lanka considering the existing and emerging needs.**

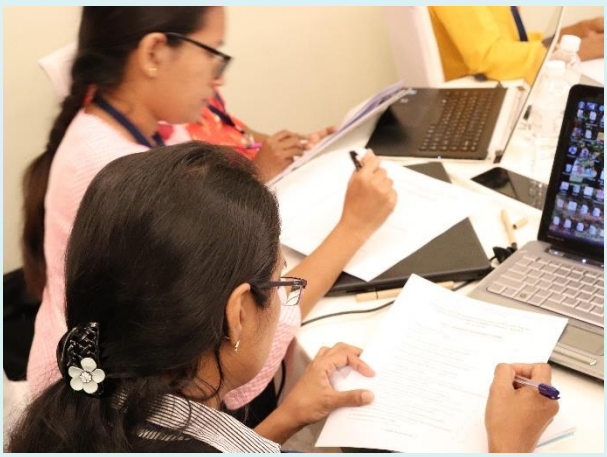
**We thank VHS-CDC project and CDC for their support and partnerships.**

**He requested all the participants to actively participate and benefit through this very meaningful and important training program".**


YSIS OF STD/HIV DATA
DICAL OFFICERS
mbo, Sri Lanka


ING ON DATA MANAGEMENT & ANALYSIS OF STD/HIV DATA
FOR
CONSULTANT-VENEREOLOGISTS & MEDICAL OFFICERS

**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.

Dr T Ilanchezhian briefly introduced the training program. During this session, he mentioned that, overall **goal** is to impart & advance the data management skills of Consultant-Venereologists & Medical Officers in order to improve the data quality, strengthen the data analysis and use of STD & HIV/AIDS programme data for an evidence-based programming under NSACP.

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 methodologies such as:

- Active Learning through Discussions; Review of examples; and Case studies
- Learning by Doing
- Individual Hands-on/ Practical Exercises
- Group Exercises
- Parallel work on selected data

This training will primarily emphasize more on hands-on training considering the importance of acquiring more skills on data management by using excel.

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

Dr Yujwal Raj informed that, 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 in this training program. Further, he 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.

**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.

At the end of the inaugural session, Dr T Ilanchezhian informed that: all PPTs and exercise formats will be shared through e-group formed and introduced Ms Sudha, Senior Programme Associate and Mr Sathyaraju, Associate Manager-Finance who can be contacted for any immediate help during the training program.

### 3.1.3. Sessions and Exercises

## Session 1: Identifying & mapping data sources for HIV/AIDS analysis

**Exercise 1: Identifying Programmatic Questions & Mapping Data Sources:**

- **Part-A: List all the Known HIV/AIDS Data Sources & Identify the Key Information Areas**
- **Part-B: Mapping Data Sources/ Datasets with Programmatic Questions**

**Time:** 1 hour 30 minutes (0930-1100 hrs)

**Materials / Methodology:**

- Power-Point Presentation
- Interactive Session
- Discussion
- Exercise Formats
- Hands-on Exercise

**Facilitators:**

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

**Core Content Covered:**

- Planning Program Data Analysis
- Program areas (current state of epidemic, drivers of epidemic, program response & gaps and information gaps)
- Programmatic questions (epidemic questions, progress & priority questions, performance questions, questions on evidence and information gaps)
- Discussion on the programmatic questions/ issues for decision making
- Reviewing the questions for primary and secondary data analysis
- Rich evidence bases of NSACP
- Listing out the data sources
- Mapping the program questions with datasets

**Key highlights:** The team seated in the respective tables formed as groups and provided with exercise formats and participants completed the following exercises:

**Exercise 1: Identifying Programmatic Questions & Mapping Data Sources:**

- Part-A: List all the Known HIV/AIDS Data Sources & Identify the Key Information Areas
- Part-B: Mapping Data Sources/ Datasets with Programmatic Questions

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

During the process of the discussions, the participants shared the following programmatic questions:

- **Are we using resources in right time? – whether we use efficiently the time in treating the right patient?**
- **Are there a needy visiting the clinic?**
- **How to prevent incident cases?**
- **How to roll-out PREP services and whom should be targeted?**

- ≈ **Are we reporting it correctly – analyses whether new cases are repeated cases?**
- ≈ **More and more new cases are seen HIV among MSM. Are we reaching these MSM, are we promote BCC to those MSMs?**
- ≈ **There are several defaulters – what are all the reasons? How to minimize the defaulters?**
- ≈ **Study the stigma impact on patients.**
- ≈ **Where are the issues in ensuring, providing optimum health services?**
- ≈ **How to improve the counselling to overcome self-stigma among PLHIV?**
- ≈ **How to address factors? Why it is not influencing the youth in adhering behaviour/ practices or how to reshape your communication strategy based on evidences?**
- ≈ **And other questions.**

In continuation of the discussions on the programmatic questions, emphasize was made on use questions, analyze data and understand. The data analysis can happen based on the training imparted during these two-days.

## EXERCISE 1: IDENTIFYING PROGRAMMATIC QUESTIONS & MAPPING DATA SOURCES

### Part-A: List all the Known HIV/AIDS Data Sources & Identify the Key Information Areas

| S. No. | Known HIV/AIDS Data Sources/ Datasets | Key information areas/ Broad themes |
|---|---|---|
| | | |
| | | |
| | | |

### Part-B: Mapping Data Sources/ Datasets with Programmatic Questions

| S. No. | Programmatic Question/ Issue for Decision Making | Probable Data Sources/ Datasets for Analysis *(Mention S.Nos. from Part A Table)* |
|---|---|---|
| | | |
| | | |
| | | |

## Session 2: Principles of database management

**Exercise 2:**

**2.1. Exercise Dataset 2**
**2.2. Reviewing the Database**
**2.3. Data Management Systems – Assessment Tool**
**2.4. Data Management Checklist**

**Time:** 1 hour
(1115–1215 hrs)

**Materials / Methodology:**

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

**Facilitators:**

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

**Core Content Covered:**

- Importance and definition of DATA, INFORMATION and KNOWLEDGE.
- Explained in detail on DATA, INFORMATION and KNOWLEDGE.
- Principles of good data management plan.
- Purposes of Data Management Systems.
- What does good data management means?
- What are all good things in data management system?
- 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 MetaData, coding and data dictionary, efficient timely data flow, data storage and retrieval, data protection and sharing, maximizing data usefulness, data preparation, data analysis, long-term planning, etc.
- Details on database, database management system, creating database structure, key principles, compiled datasets, 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 2:**

**2.1. Exercise Dataset 2**
**2.2. Reviewing the Database**
**2.3. Data Management Systems – Assessment Tool**
**2.4. Data Management Checklist**

During the exercise, the facilitators provided needed guidance to the team and mentorship to gain needed practical experiences.

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

| 2.1. Exercise Dataset 2 (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** | | | | | | | | | | | | | | | |

## 2.2. 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 | |

## 2.3. Data Management Systems – Assessment Tool

| Data Management Systems - Assessment Tool | National | State | District | Action to be taken |
|---|---|---|---|---|
| Standard operating procedures have been written that define roles and responsibilities for data compilation, reporting, data analysis, dissemination and use. | | | | |
| There is a comprehensive, singular, master list of health facilities, with unique facility identifier and service domain, that includes the private sector and special facilities (military, etc.). | | | | |
| There is a formal mechanism to update and keep current the master facility list (e.g., a census of all facilities is conducted every 5 years). | | | | |
| Data collection systems for client data (e.g. clinical episodes) are standardized across all implementing partners and donors. | | | | |
| Personnel (clinicians and other staff) have been trained in the collection of the client data, and for the input of the data into the computer database (where applicable). | | | | |
| Printed guidelines are available at all health facilities (and in applicable community-based programs) to assist with client-level data collection. | | | | |
| Health data (paper or electronic) are stored appropriately and according to national policies. | | | | |
| There is a schedule/plan for update, reproduction, and distribution of data collection tools. | | | | |
| The data flow pattern (i.e., data flow from client encounter forms -> summary tools [e.g., a register or tally sheet] -> periodic aggregate reporting form) is clearly defined and understood by staff. | | | | |
| There are printed guidelines available at all health facilities (and in applicable community-based programs) to assist with data compilation and reporting. | | | | |
| Relevant staff at health facilities (and in applicable community-based programs) have received training on data compilation and reporting. | | | | |
| Data disaggregations by key stratifiers (age, sex, geography) are maintained during compilation and transfer in order to permit equity analysis. | | | | |

| Data Management Systems - Assessment Tool | National | State | District | Action to be taken |
|---|---|---|---|---|
| Data transfer to the next level occurs in a timely way, making use of innovation and IT where appropriate and available. | | | | |
| There is a data quality assurance plan that is shared with health programs, other government ministries, donors and other stakeholders to guide activities aimed at improving data quality. | | | | |
| Routine health data quality assurance standards are defined and enforced, including completeness, timeliness, accuracy, integrity, and consistency over time. | | | | |
| Roles and responsibilities for data quality are assigned at each level, including verification of data, summarizing data quality issues, and developing and implementing improvements strategies. | | | | |
| Training and capacity development for data quality assurance are provided at facility, district, and national levels using standard methods. | | | | |
| Systematic and comprehensive assessments of facility data quality are conducted regularly in advance of health sector planning, including analysis of completeness, timeliness, accuracy, and consistency over time (e.g., data quality review) and which result in published reports describing data quality issues and plans to address them. | | | | |
| Data management staff conducts regular checks of accuracy and completeness of data prior to submitting reports to the next level (using automated electronic checks where appropriate). | | | | |
| Data quality assurance is linked to the health sector planning cycle in the country so that information on data quality is available prior to the use of data for planning. | | | | |
| There is collaboration between the MOH, government agencies (e.g., national statistics office) and other national stakeholders (e.g., donors, universities, etc.) on data quality assurance so that assessments are conducted with an element of independence (i.e., no conflict of interest). | | | | |

## 2.4. Data Management Checklist

| Databases | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| **Name of database** | | | | |
| **1. Type of data** | | | | |
| What kinds of data - survey, interview, observation, machine or instrument collected, physical samples, models, etc. - are you collecting? | | | | |
| What formats - paper, digital, image, audio, other - will the data be in? | | | | |
| Will it be reproducible? What would happen if it got lost or became unusable later? | | | | |
| **2. Data formats and standards** | | | | |
| Do you have data dictionaries, code books or other documentation to explain terms, variable names, codes and abbreviations used? | | | | |
| Have you provided documentation describing how the data were collected or created? | | | | |
| Have you used standard collection methods, standard data formats, and standard file format choices (if these exist for your research field)? | | | | |
| **3. Data access policies** | | | | |
| Have you removed personal or sensitive information from your data to ensure privacy protection? | | | | |
| Have you established who owns the copyright of your data? | | | | |
| Do you have documentation on how institutional and personal credit should be acknowledged for your data? | | | | |
| Are your data, records, and files labeled and logically organized? | | | | |
| Have you used consistent and easy to understand file names? | | | | |
| **4. Data use and distribution** | | | | |
| How will your data be made available? | | | | |
| Do you plan to limit re-use or re-distribution of your data? If so, why and for how long? | | | | |
| **5. Data preservation and archiving** | | | | |
| Have you made arrangements for the long-term storage and preservation of your data (both physical and digital collection items)? | | | | |
| Do you have data security plans in place to ensure that copies of your data are stored and backed up on a regular basis? | | | | |
| Are you using data formats and software that enable sharing and ensure long-term validity of data, such as non-proprietary software and software based on open standards? | | | | |
| When converting from one format to another, have you checked that no data are lost or changed in the process? | | | | |

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

### Exercise 3: Assessment of NSACP datasets

**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 S Muraliharan[2]
Dr Yujwal Raj[2]
Dr T Ilanchezhian[2]

**Core Content Covered:**

- Introduction on NSACP
- Main data systems at NSACP
- Data utilization
- Data management from STD and HIV clinics
- HIV case reporting system
- Probable mode of transmission
- Monitoring and evaluation of STD clinics
- Sources of STD data
- Registers maintained at STD clinics
- Quarterly STD return
- Monitoring and evaluation of ART centers
- Database of HIV clinics
- Summary of databases (HIV case report database; STD clinic database; ART Cross sectional database; and ART cohort database)

**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**

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

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

## 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<br>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 programme performance | | |
| C | Availability of data at the 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 | | |

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

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

**Time:** 1 hour
(1430–1530 hrs)

**Materials / Methodology:**

- Power-Point Presentation
- Interactive Session
- Exercise Formats
- Group Work

**Facilitators:**

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

**Core Content Covered:**

- Definition of variable
- Different view points on variables
- Importance of focus on key variables
- Levels of measurement (nominal & ordinal)
- Levels of Measurement – Metric Scale (Interval & Ratio)
- Qualitative vs. Quantitative
- Types of variable values (Text Variables, Numeric Variables and Alphanumeric Codes)
- Other issues on variables
- Indicators – types of indicators, computing indicators, examples of indicators, etc.

**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.

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

## EXERCISE 4: VARIABLES & INDICATORS

**PART A: Review the NSACP datasets that you have brought. List out at least 20 variables from the dataset. Write the variable values. Classify them based on the level of measurement. Mention the source register & dis-aggregations available for the variable.**

| S. No | Variable | Variable Values | Level of Measurement | Source Register | Disaggregations Available |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |

**PART B: Evolve 12 indicators – 2 of each type – based on the variables listed above. 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 | |

## Session 5: Data Quality Assessment

**Time:** 1 hour
(1530–1630 hrs)

**Materials / Methodology:**

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

**Facilitators:**

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

**Core Content Covered:**

- Data quality (Real World Information system)
- Importance of data quality assessment
- GIGO
- Reasons for poor data quality, common errors during data collection/ data entry/ data validation
- Data quality at every step
- Conclusions from DQA
- 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 was conducted in an interactive way. Opportunity was provided to the participants for clarifying the doubts at every stage of the session. 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.

The facilitators also provided opportunity for clarifying the doubts of the participants with examples.

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

## Session 6: Data Adjustments and Validation

### Exercise 5: Data Adjustments in the Dataset

**Time:** 1 hour
(1630–1730 hrs)

**Materials / Methodology:**

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

**Facilitators:**

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

**Core Content Covered:**

- Key steps to improve data quality
- Adjustments and validation
- Summing up DQA
- Conclusions from DQA
- Actions to fix quality issues
- Adjustments
- 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: Data Adjustments in the Dataset:** 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 group exercise on Data Adjustments in the datasheet shared. 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**

## Exercise 5: Data Adjustments in the Dataset (Example only)

| Sno | Province | District | Month | Name of the Facility | Total tested during the month | Total clients received post-test and results | Total ANC positives during the month | Total ANC Positives linked to ART during the month | Total Non ANC positives during the month | Total Non ANC clients linked to ART during the month |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | WP | Dist1 | JAN 18 | ICTC AMALAPURAM | 702 | | 0 | 0 | 14 | 12 |
| 2 | WP | Dist1 | JAN 18 | ICTC RAMACHANDRAPURM | 483 | | 1 | 1 | 12 | 11 |
| 3 | WP | Dist1 | JAN 18 | ICTC TUNI | 652 | | 0 | 0 | 10 | 9 |
| 4 | WP | Dist1 | JAN 18 | ICTC PEDDAPURAM | 437 | | 2 | 2 | 16 | 22 |
| 5 | WP | Dist1 | JAN 18 | ICTC DH – RAJAMEHINDRAVARAM | 742 | | 0 | 0 | 76 | 69 |
| 6 | WP | Dist1 | JAN 18 | ICTC RMC KAKINADA | 722 | | 0 | 0 | 46 | 44 |
| 7 | WP | Dist1 | JAN 18 | ICTC TBIDH GGH KAKINADA | 583 | | 0 | | 23 | 18 |
| 8 | WP | Dist3 | JAN 18 | SA AH - BAPATLA (P&V) | 815 | | 0 | | 154 | 15 |
| 9 | WP | Dist3 | JAN 18 | SA AH - NARSARAOPET (P&V) | 1243 | | 2 | | 34 | 32 |
| 10 | WP | Dist3 | JAN 18 | SA CHC - CHILAKALURIPETA (V) | 590 | | 2 | 2 | 7 | 7 |
| 11 | WP | Dist3 | JAN 18 | SA CHC - MACHERLA (V) | 350 | | | 0 | 5 | 7 |
| 12 | WP | Dist3 | JAN 18 | SA CHC - VINUKONDA (I) | 315 | | 1 | 1 | 9 | 8 |
| 13 | WP | Dist3 | JAN 18 | SA DH - TENALI (V) | 673 | | | 0 | 39 | 35 |

At the end of the day, team of facilitators (Dr Ariyaratne, Dr IC and Dr Yujwal) conducted a panel discussion and provided opportunity for the participants to seek clarifications on the aspects covered. Participants clarified their doubts and facilitators provided needed explanation with examples. Dr Ilanchezhian, Ms Sudha and Mr Sathyaraju jointly shared the logistics announcement s and other details.

## 3.2. Day 2 (3rd December 2019)

### 3.2.1. Sessions and Exercises

Dr T Ilanchezhian welcomed the participants and briefly shared the overall training plan of the day. Also made logistics announcements.

**Recap: 0830-0900 hrs:** 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 by adopting unique innovative approach and encouraged everyone to contribute. Some of the key learnings expressed during the recap session by the participants:

- Four levels of measurements including nominal, interval, etc.
- Defining data, information and knowledge.
- Data is collection of information about facts.
- Outcome is a medium term.
- Impact is a long term.
- Outputs is for smaller area.
- Outcome is for larger area.
- Impact is for national/ continental.
- Indicators – compute through collected data, variables are collected data.
- Reasons for poor quality data biases will include: social desirability bias, recall bias, interviewer bias, documentation error, entry error and intentional manipulations.
- Three different types of data.
- One row for one case.
- Precision means more details, having more and more details, having disaggregated data.
- Alpha-Numeric code.
- Data gets into information, information is a processed data.
- Ratio level of measurement – there is an absolute zero, zero has meaning, zero is a numerical value.
- Output – immediate results
- Impact – longer, larger, community level/ population.
- Fields in database – it is a variable/ column / field, it is part of database, headings are called as variable names.
- Principles of data management (no blank cells, cases should not be repeated, one row for one case, variable name should not be repeated, primary key, no sub-totals).
- Type of variables:
    - 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.
    - Continuous – other names for continuous: numeric & quantitative variables
    - Examples of other ordinal – education (illiterate, primary, secondary, age group) but age is a continuous numerical variable.
    - Interval scale: temperature, Body Mass Index – where absolute ratio is not possible
    - Ration variable: Ex., age, weight, height, number of people tested, number of people visited STD clinic (zero is not possible)
    - There are four types of variables.
    - 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.
- Secondary data – data collected for other purposes.

- Primary data – data freshly collected for a research/ study.
- Meta data – data about the data, description of data.
- Ordinal variables – E.g., stage of disease
- Reliability – is repeatability, applying use of various methods, answers will be the same. Internal consistency (e.g.,) age and marriage.
- Internal variable, qualitative measurement, not absolute, arbitrary zero (e.g.,) temperature.
- Three types of consistency – consistency over time, internal consistency and external consistency (the first two consistencies are more important).
- There are six types of indicators.
- There are eight aspects of data quality.
- 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.
- Percentage always calculated on 100. Rate can have any denominator – some indicators we call them in % or in rate.
- Difference between new case and new infection.
    - New case it is deducted
    - New infection is acquired this year
    - Prevalence is all infection – all new and old (it is entire population).

In the recap session, participants recalled the learnings of the day 1 – it is not on session wise/ topic wise. 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.

## Session 7: HIV/AIDS Specific Data analysis – measures & methods

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

**Time:** 1 hour
(0900–1000 hrs)

**Materials / Methodology:**

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

**Facilitators:**

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

**Core Content Covered:**

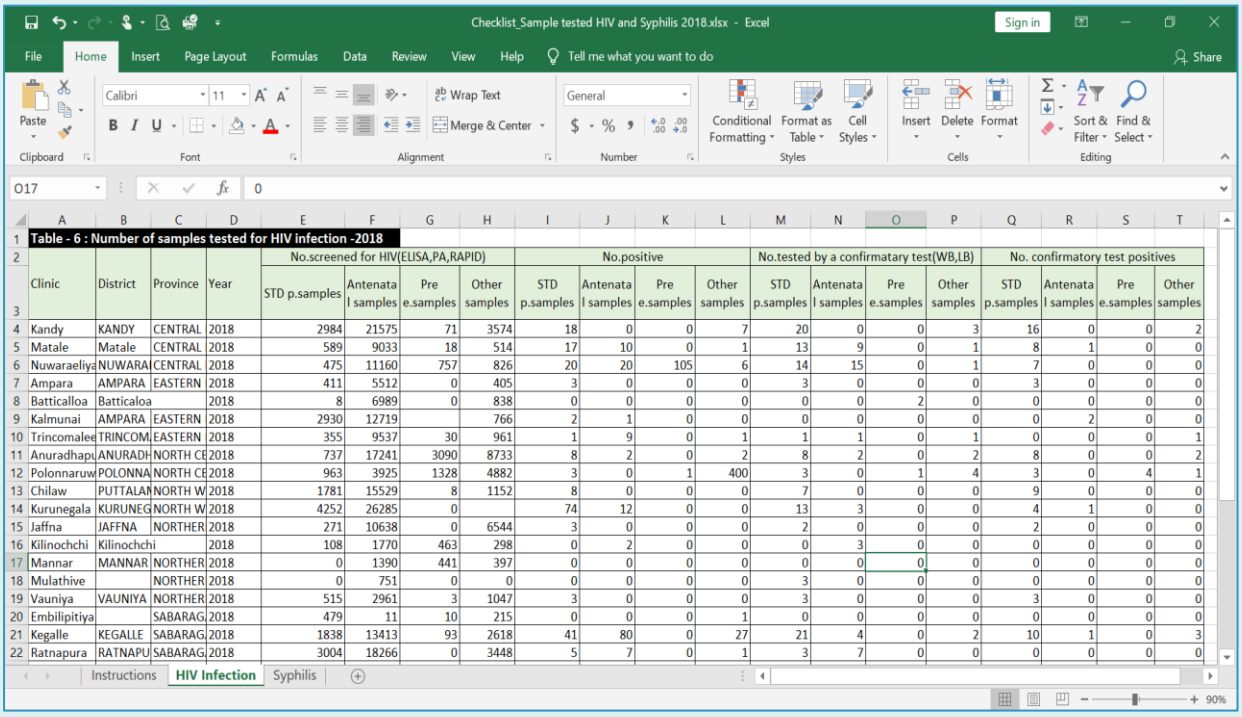
- Basic measures (Sum/Total; Sub-totals; Percentage; Distribution; Min-Max; Cut-off based; Top & bottom; Quartiles; Average/ Mean; and Median).
- Computing new variables (Recoding text to numeric variables; Converting continuous to categorical variables; and Computing new variables – age groups, percentages).
- 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).

**Epidemic Analysis:**

- HIV & STD Positivity rates (Levels; Trends; and Differentials by demographic & risk characters)
- Size of beneficiaries

| | |
|---|---|
| | • Profile of beneficiaries (STD Clinic attendees; and PLHIV)<br>• Vulnerabilities/ Risk Behaviours among KP - Typology, Partner volume, condom use, STI uptake<br><br>**Progress Analysis:**<br>• Progress against targets (Levels; Trends; Differentials by province/ district; and Differentials by other characteristics).<br>• Gaps in Achievement<br>• Different Denominators<br><br>**Performance Analysis:**<br>• Performance Indicators (Levels; Trends; Differentials by province/ district; and Differentials by other characteristics)<br>• Best & worst performing units<br>• Performance Quartiles<br>• Performance Quadrants<br><br>**Cascade & Cohort Analysis:**<br>• Testing and treatment cascade<br>• Prevention cascade<br>• PLHIV cohort analysis<br>  ○ Incidence of Opportunistic infections<br>  ○ Mortality rates<br>  ○ Survival analysis<br>• Positive Pregnant Women & Exposed Baby cohort analysis |
| **Key highlights:**<br><br>**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:<br><br>• Convert continuous to categorical variable<br>• Estimate four indicators<br><br>Each team has undertaken exercise in a team with the guidance and support of the facilitators and gained experiences.<br><br>Facilitators explained in detail on HIV/AIDS Specific Analysis from Programme Data covering: Epidemic Analysis, Progress Analysis, Performance Analysis and Cascade & Cohort Analysis. This session provided opportunities to understand different analysis in analyzing the program data. This session is followed with the question and answer session and facilitators provided with clarifications. | |
| **[1] Presenter** | **[2] Co-Presenter** |

# Exercise 6: NSACP Datasets (HIV Data) format



Checklist_Sample tested HIV and Syphilis 2018.xlsx - Excel

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 | NUWARAI | 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 |
| Anuradhapu | ANURADH | NORTH CE | 2018 | 737 | 17241 | 3090 | 8733 | 8 | 2 | 0 | 2 | 8 | 2 | 0 | 2 | 8 | 0 | 0 | 2 |
| Polonnaruw | POLONNA | NORTH CE | 2018 | 963 | 3925 | 1328 | 4882 | 3 | 0 | 1 | 400 | 3 | 0 | 1 | 4 | 3 | 0 | 4 | 1 |
| Chilaw | PUTTALAI | 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 |

## Session 8: DQA & Basic data analysis using Excel

**Time:** 3 hours
(1000–1315 hrs) – 15 mins tea break

**Materials / Methodology:**

- Power-Point Presentation
- Interactive Session

**Facilitators:**

Dr Yujwal Raj[1]

**Core Content Covered:**

**Basic & Advanced Functions in MS Excel:**

- Understanding Excel Layout
- Sheet Visualisation Functions
- Dealing with Rows & Columns
- Cell Formatting
- Cell Navigation
- Paste Special
- Dataset Functions
- Analytic Functions
- Basic Formulae
- Advanced Formulae
- Advanced Operations

**Description of the Data entry using MS Excel:**

- **Objectives:**
  - To make participants
  - Learn the basic features of MS Excel
  - Learn to enter formulae in Excel
  - Familiar with the advanced options for analysis in Excel
- **Instructions:**
  - Perform the basic functions in Excel to better visualise the data.
  - Conduct data quality assessment on the data using basic excel formulae.
  - Perform data analysis to calculate the totals, positivity rates and quartiles.
- **Key Learnings:**
  - Participants develop skills to perform basic operations in Excel.
  - Participants develop skills to write formulae and perform analysis using Excel.

**Commonly Used Formulae in MS Excel:**

- General Rules
- Number Functions
  - Count
  - Sum
  - Min-Max
  - Quartiles
  - Mean/Average
  - Median

- Text Functions
  - Join
  - Left, Right & Mid
- Logical Functions
  - And
  - Or
- Special Functions
  - If
  - Vlookup

**Basic data analysis using basic functions in Excel and Introduction to advanced use of MS Excel and Formulae:**

**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:**

- Insert a completeness check for each of the first 7 tables in the STD quarterly return.
- Select blank cells and replace it with a suitable code for 'Not Applicable' wherever appropriate.
- Insert at least one logical error check for each of the first 7 tables in the STD quarterly return.
- Convert table 6 of four quarters into a database format.
- Create a DQA sheet for the STD quarterly return, for at-a-glance quality assessment.

**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. | 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/average of remain data & impute missing/incorrect data/outlier. | Average function |
| 7 | Fill missing data with correct data under names of districts & provinces. | Go To function |
| | **Data Analysis** | |
| 1 | Recode province name from text to no. | If function |
| 2 | Calculate 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 numeric variable of patient load to categorical variable using quartiles based on # of samples tested for HIV | If function |
| 7 | Calculate proportional distribution of the samples tested by 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/ line graph/ pie chart & a combined graph based on above data. | Inserting graphs & setting options |
| 2 | Present province wise data using graph. | Inserting graphs & setting options |
| | **Data Interpretation** | |
| 1 | Draw conclusions & inferences on indicators estimated, for the country & for each province. | |

**Key highlights:** Facilitator explained in detail on basic and advanced function in MS-Excel. This session provided opportunities to understand the basic and advanced functions in MS-Excel. In addition, this session also has helped in understanding on commonly used formulae in MS-Excel and the methods and procedures in developing formulae in excel.

[1] **Presenter**

## Session 9: Orientation to Statistical Package for the Social Sciences (SPSS) for basic analysis

**Time:** 1 hour 30 mins
(1415–1545 hrs)

**Materials / Methodology:**

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

**Facilitators:**

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

**Core Content Covered:**

- Introduction – why use of SPSS?
- Syntax
- Choosing appropriate scales and measures
- Reliability and validity
- Scales of measurement
- Preparing a code book
- Rules for naming of variables
- Opening an existing data file
- Creating a data file and entering data
- Variable names
- Defining variables and value labels
- Missing data
- Changing the SPSS options
- Data entry using excel
- Screening and cleaning the data

**Key highlights:** During the feedback session, the participants expressed their interest to have a basic understanding on advanced statistical analysis tool and emphasized on the need to have broad understanding on SPSS. Considering this, a special session was accommodated and training on SPSS was conducted with the objective of providing basic understanding and overview of SPSS.

The project and facilitators facilitated to download the free software package on SPSS for trial and learning. VHS-CDC team extended support to the participants in sharing the links, facilitate in downloading and guiding them in gothrough the SPSS. The training program was supported with demonstration and participants also practically accessed the information in their respective laptops.

This session has provided an eye-opener for all participants to understand the need and relevance of SPSS in analyzing the data for research and programmatic purposes.

This session is followed with the question and answer session and facilitators provided with clarifications.

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

## Session 10: Presenting Data Graphically – Tables, Graphs, Charts

**Time:** 45 mins
(1545-1630 hrs)

**Materials / Methodology:**

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

**Facilitators:**

Dr Ariyaratne Manathunge[1]
Dr S Muraliharan[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**

## Session 11: Communication of analysis results

**Time:** 30 mins
(1630-1700 hrs)

**Materials / Methodology:**

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

**Facilitators:**

Dr Yujwal Raj[1]
Dr Ariyaratne Manathunge[2]
Dr T Ilanchezhian[2]
Dr S Muraliharan[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.

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

**Final summing up and question & answer session:** Panel discussion was held by involving Dr Ilanchezhian, Dr Yujwal, Dr Ariyaratne & Dr Murali and facilitated:

- Question & answer session
- Encouraged each participant to clarify the doubts
- Also requested to share any of the additional information to the team and to the facilitators, etc.

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.

- 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).
- This analysis has helped to understand the effectiveness of the training program and enabled the facilitators to introduce appropriate methodologies in the forthcoming training programs.

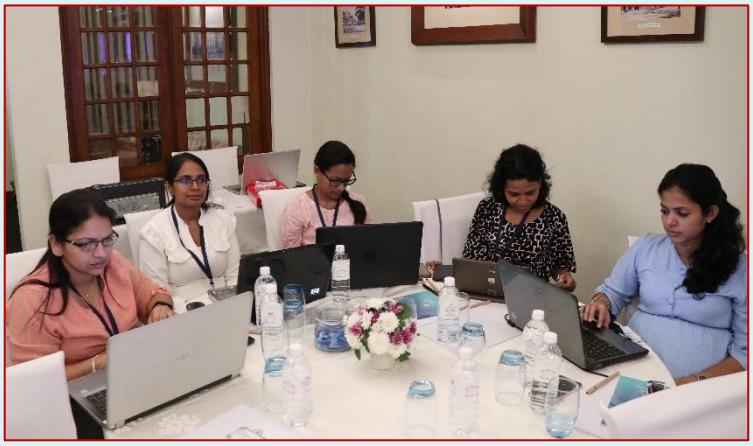
**Post-Training Evaluation:** VHS-CDC Project has developed a pre-tested post-training evaluation tool. This tool was administered by Dr Ilanchezhian and Ms Sudha. This post-training evaluation tool is with 5 point-scale covering the aspects such as:

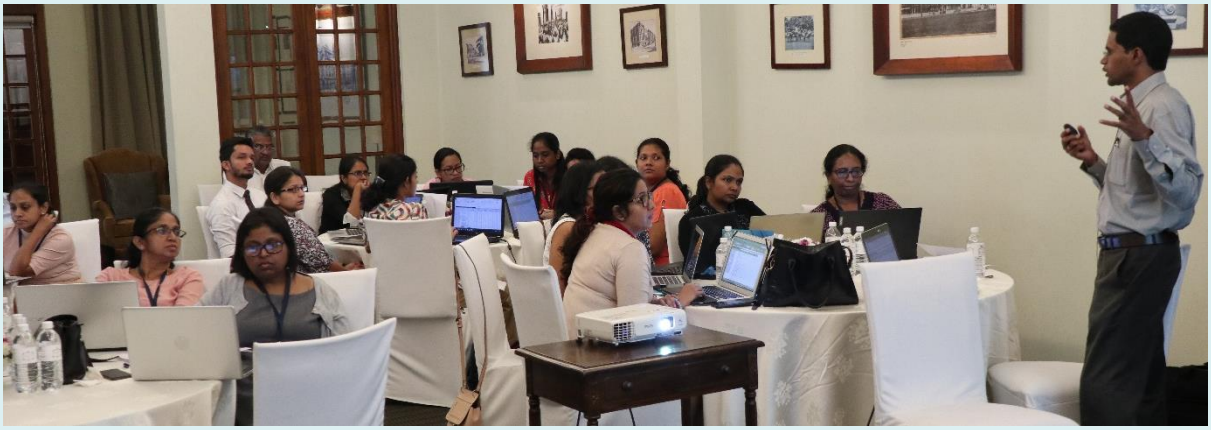
- Course content
- Structure and process of training
- Trainers & mentors – knowledge and delivery style
- Facilities and amenities
- Overall feedback

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 other similar training programs.

## Photo Glimpse of Sessions and Hands-on Sessions:




ALYSIS OF STD/HIV DATA
MEDICAL OFFICERS
Colombo, Sri Lanka
Study Room 1


MINISTRY OF HEALTH SRI LANKA
NATIONAL STD/AIDS CONTROL PROGRAMME


Data Analysis
ANALYSIS OF STD/HIV DATA
TS & MEDICAL OFFICERS

### 3.2.2. Valedictory Function

Valedictory function was held between 1630-1700 as a part of conclusion of the training on Training on Data Management and Analysis of HIV/AIDS Data for Consultant-Venereologists and Medical Officers – batch II conducted from 2-3, December 2019. This valedictory function was jointly organized by VHS-CDC Project and NSACP with the support of CDC/DGHT-India.

**Welcome Note:** On behalf of VHS-CDC Project, on behalf of Dr Joseph D Williams, Director Projects and on behalf of NSACP, Dr T Ilanchezhian has delivered welcome note. In this welcome note, he briefed on:

- The objectives of the technical cooperation, key focus areas, approaches and other details.
- Also explained that, VHS-CDC Project has organized the training programs on Operational Research, Scientific Writing, Data Management for SI team, DHIS2 training for SIMU, exposure visits and other initiatives.
- Process adopted in planning and conducting this training program.
- Also explained that, VHS-CDC project with the partnership of NSACP, with the support of CDC has conducted training on data management for three batches. With this training, capacitated 4 batches and overall capacitated 95 officials involved in SI at SIMU, NSACP and District STD Clinic Team.

He welcomed Dr Ariyaratne Manathunge, Consultant-Venereologist & Coordinator, SIMU; Dr Muraliharan, Medical Officer/Planning, SIMU; Dr Yujwal Raj, Technical Advisor (SI), VHS-CDC Project; and SIMU team. Also, he welcomed the VHS-CDC team members: Ms T Sudha, Senior Programme Associate and Mr S Sathyaraju, Associate Manager – Finance.

During his welcome note, he recalled and thanked 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 welcomed all the medical professionals who has undergone this training program and benefited through this training program. Also, appealed the participants 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:

**Dr Chandrika Jayakody, Consultant-Venereologist, NSACP:**

**This training on data management will be very much useful for our personal career and in performing the roles and responsibilities associated with strategic information and reporting. We have so many review meetings and planning meetings, however, the analytical presentations are very minimal in these meetings. With this training program, I am confident and we are confident that, we can undertake good initiatives to make use of the available data, undertake quality audit on data, analyze data, overcome gaps, undertake programmatic decisions, prepare and submit quality quarterly reports, enhance systems in data collection and reporting, etc. As a trained person, I can also**

mentor my team at STD clinic in ensuring the uniformity in data collection, analysis, reporting, etc. Its very well organized, very good workshop, supported with more hands-on training, mentoring, review process and supportive guidance. The content, methodology, presentation and resource materials were very relevant, useful and in the context of our responsibilities. Thanks to VHS-CDC project for extending support in organizing and capacitated me and in the entire country.

**Dr Geethani Samaraweera, Consultant-Venereologist, STD Clinic, NSACP:**

Appreciation to VHS-CDC project for systematic planning and undertaken efforts in designing the agenda, course materials, presentations, methodologies, tools, exercises, etc., considering our needs in the context of Sri Lanka.

Really, it is a very good, meaningful and useful program. This training is very important for me and my team at STD clinics considering the importance of data generation, ensuring quality, use of data and submission of reports by ensuring quality/ uniformity.

This training has provided opportunities to enhance knowledge and skills for performing the roles and responsibilities considering the existing situation and emerging situation such as EIMS. Overall, this training was well organized, delivered effectively and enhanced knowledge and skills to enable me to perform effectively to further enhance quality of data.

**Dr M P V R Perera, Senior Registrar, HIV Clinic, NSACP:**

Thanks to Dr Ari, SIMU for identifying me and inviting me for this training program. Thanks to VHS-CDC project and CDC for their generous support in providing strategic TA on data management.

This training has contributed for enhancing the capacity of knowledge and skills among all SI team in the country including at District STD clinic team for effectively perform by all clinics in ensuring quality data and submission of reports. This training will also contribute for producing and submitting correct data in an expected manner for presenting the country scenario at national and international level. This training was very practical, useful and very interesting. This training also has provided opportunity to keep every audience very active in learning and sharing. The opportunity provided for clarifications, recap sessions, e-group formation, sharing of soft copy of the presentations and other approaches are unique and very useful.

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 datasets, components, structure & database mgt. principles
- Variables & Indicators – Types and how to manage
- Data Quality Assessment & Adjustments using Excel
- Data Management using SPSS
- Exposure to Cohort Database using MS Access
- Data Triangulation
- Communication of Data Analysis Results

**Outcomes from the training**

- Identified important questions/ topics of programmatic relevance suitable for secondary data analysis
- Exposed participants to basic principles and methods of data management
- Made participants appreciate importance of data quality in program reporting
- Enhanced knowledge and skills on conducting DQA & analyzing programme data under NSACP through hands-on practice on MS Excel
- Improved skills on effective use of data to make evidence-based decision making under the programme
- Evolved data analysis plan as follow-up to workshop & identified next steps

**Next Steps**

- Work more on NSACP datasets
- Explore Excel functions and options
- Use SPSS with survey data
- Identify topics for analysis and commission
- Practice…. Practice…. & Practice….

**Certificate Distribution:** Dr Ariyaratne, Dr T Ilanchezhian, Dr Muraliharan and Dr Yujwal Raj jointly distributed the certificates for each one of the participants underwent training on Data Management.



**Concluding remarks and Vote of thanks:** Dr T Ilanchezhian thanked Dr Ariyaratne and his team for the support extended for successful conduct of the training program for four batches including this training program. He also thanked for his contribution as a facilitator and contributing in conducting the training. In continuation of this brief note, he invited Dr Ariyaratne to deliver vote of thanks.

During his note, he recalled the efforts undertaken, process adopted in evolution of this technical cooperation which is being contributing for system development & capacity building of SI team in the country. Through this technical cooperation initiative, SIMU and the SI team is benefiting through this technical assistance initiatives on SI.

He expressed his appreciation and thanks to Dr Joseph D Williams, Director Projects, VHS for his proven leadership and support in leading this TA initiative. He also 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.

Dr Ariyaratne mentioned and 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 S Sathyaraju, Associate Manager – Finance, VHS-CDC Project for his support in logistics coordination including venue, ticket, food, travel, transport and other related activities.

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 contribution in conducting the training, Dr Muraliharan for his support as Coordination Committee Member and NSACP team. In this training, VHS-CDC team has engaged the SIMU team as a trainer based on the training conducted earlier.

Dr Ariyaratne requested all the participants to utilize this training, undertake follow-up, continue to practice in excel for effective data 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 Dr T Ilanchezhian, VHS-CDC Project

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

# Chapter 4: Annexures

## 4.1. Training agenda

**Goal:** To impart & advance the data management skills of Consultant-Venereologists & Medical Officers in order to improve the data quality, strengthen the data analysis and use of STD & HIV/AIDS programme data for an evidence-based programming under NSACP.

**Objectives:**

- To improve the understanding of the Consultant-Venereologists & Medical Officers on the programme datasets under NSACP from an evidence-based approach
- To introduce the basic principles and approaches of data management
- To apprise the participants of the various methods of data quality assessment, validation & adjustments
- To build the basic skills in programme data analysis using MS Excel
- To improve the presentation, dissemination and use of data for programmatic purposes

**Outcomes:**

- Identified important questions/ topics of programmatic relevance suitable for secondary data analysis
- Exposed participants to basic principles and methods of data management
- Made the participants appreciate the importance of data quality in programme reporting
- Enhanced knowledge and skills on conducting DQA & analyzing programme data under NSACP through hands-on practice on MS Excel
- Improved skills on effective use of data to make evidence-based decision making under the programme
- Evolved a data analysis plan as a follow-up to the workshop and identified the next steps

**Facilitators:**

- Dr Yujwal Raj, Technical Advisor (SI), VHS-CDC Project.
- Dr Ariyaratne Manathunge, Consultant-Venereologist, NSACP.
- Dr T Ilanchezhian, Senior Technical Advisor, VHS-CDC Project.
- Dr S Muraliharan, MO/Planning/SIM unit/NSACP.

**SCHEDULE**

| Time | Session | Session Details | Facilitators |
|---|---|---|---|
| **0830 – 1730** | **DAY 1 (2nd December 2019):** | | |
| 0830 – 0900 | Registration | | |
| 0900 – 0930 | Welcome address | | Dr T Ilanchezhian |
| | Inaugural address and brief note | | Dr Ariyaratne |
| | Introduction of participants/ facilitators | | All Participants |
| | Objectives & Expected Outcomes of the workshop | | Dr Yujwal Raj |
| | Pre-Assessment | | Dr T Ilanchezhian<br>Ms T Sudha |
| 0930 – 1100 | Planning data analysis – Identifying programmatic questions & mapping data sources | Discussion & Practical Exercise | Dr Yujwal Raj<br>Dr Ariyaratne<br>Dr T Ilanchezhian<br>Dr S Muraliharan |
| 1100 – 1115 | Break | | |
| 1115 – 1215 | Introduction to principles of database management | 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 | Variables & Indicators | Presentation & Group Exercise | Dr Yujwal Raj<br>Dr Ariyaratne<br>Dr T Ilanchezhian<br>Dr S Muraliharan |
| 1530 – 1630 | Data quality assessment | Presentation & Discussion | Dr Yujwal Raj<br>Dr Ariyaratne<br>Dr T Ilanchezhian<br>Dr S Muraliharan |
| 1630 – 1730 | Data Adjustments & Validation | Demonstration & Group Exercise | Dr Yujwal Raj |

| Time | Session | Session Details | Facilitators |
|---|---|---|---|
| **0830 – 1730** | **DAY 2 (3rd December 2019):** | | |
| 0830 – 0900 | Recap | | Dr Ariyaratne &<br>Dr T Ilanchezhian |
| 0900 – 1000 | HIV/AIDS Specific Data analysis – measures & methods | Presentation & Practical Exercise | Dr Yujwal Raj |
| 1000 – 1115 | DQA & Basic data analysis using Excel | Demonstration & Practical Exercise | Dr Yujwal Raj |
| 1115 – 1130 | Break | | |
| 1130 – 1315 | DQA & Basic data analysis using Excel (Contd…) | Demonstration & Practical Exercise | Dr Yujwal Raj<br>Dr Ariyaratne<br>Dr T Ilanchezhian<br>Dr S Muraliharan |
| 1315 – 1415 | Lunch | | |
| 1415 – 1545 | Orientation to SPSS Package for basic analysis | Demonstration & Practical Exercise | Dr Yujwal Raj |
| 1545 – 1630 | Presenting Data Graphically – Tables, Graphs, Charts | Discussion & Group Exercise | Dr Ariyaratne |
| 1630 – 1700 | Communication of analysis results | | Dr Yujwal Raj |
| 1700 – 1730 | Question & Answer Session | Presentation & Discussion | Dr Yujwal Raj<br>Dr Ariyaratne<br>Dr T Ilanchezhian<br>Dr S Muraliharan |
| | Post-assessment & training evaluation | | Dr T Ilanchezhian<br>Ms T Sudha |
| | Valedictory and Group Photo | | |

## 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

**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. 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** | | | | |
|---|---|---|---|---|---|
| | **5** | **4** | **3** | **2** | **1** |
| **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 during group works/ exercises. | | | | | |
| Adequate chance was given for participants to ask questions and resolve doubts. | | | | | |
| There was ample opportunity to practise 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. | | | | | |

| | Rate | | | | |
|---|---|---|---|---|---|
| | 5 | 4 | 3 | 2 | 1 |
| The examples & experiences quoted by the trainers were relevant & apt to my situation. | | | | | |
| I was well engaged during 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 was 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?**

**Any other comments.**

**VHS-CDC Project**

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**Supported by Centers for Disease Control and Prevention (CDC/DGHT-India)**
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