



USAID
FROM THE AMERICAN PEOPLE



Improving RHIS Performance For Better Health System Management

Routine Health Information System Course Trainer Guide

January 2010

Acknowledgments

Improving RHIS for health system management has evolved over time. We have learned from the experiences of training in South Africa and Mexico as well as from countries like China, Haiti, Cote d'Ivoire, and Paraguay that are applying the PRISM framework and its tool for improving their information system. Based on this experience, the PRISM tools have been modified and the course has been revised accordingly.

The revised course also includes more information on developing solutions and building skills such as prioritization of problems using empowerment criteria, advocacy, self-assessment, and feedback. We have added a new section on the Global Fund M&E system to address the emerging information needs of HIV/AIDS, tuberculosis, and malaria in information systems. Another section deals with ethical considerations in health information systems.

CESAG is organizing the third RHIS course for francophone countries. We would like to thank CESAG for translating and adapting the course into French. Without the expert technical contribution of Alimou Mamadou Barry, David Kofi, and Jerome Bassene, this work would not have been possible.

Special thanks to the following lecturers for conducting the training:

Mr. Jerome Bessene, Secretary General, CESAG
Dr. Diakhate Moussa, Chief, HMIS, Ministry of Health and Prevention
Dr. Amani Koffi, Director ISMS, CESAG
Dr. David Koffi, Professor, ISMS, CESAG
Dr. Mamadou Moustapha Thiam, Assistant Professor, CESAG
Dr. Khady Seck Diop, Assistant Professor, CESAG
Dr. Ibrahima Mane, Assistant Professor, CESAG
Dr. Denise Aplogan, Assistant Professor, CESAG
Mr. Ahmadou Traore, Director, ISMS, CESAG

MEASURE Evaluation Team

Dr. Gnassou Leontine
Dr. Mamadou Alimou Barry
Dr Anwer Aqil
Dr. Theo Lippeveld

Special thanks to Andrea T. Dickson, Senior Communications Advisor, John Snow, Inc., and World Education for editing the manuscript.

We hope that the revised course will further strengthen the skills for improving RHIS in different parts of the world. As we promote continuous improvement, we also plan to improve the course by sharing experiences of skills learned and addressing needs as they arise.

Anwer Aqil

Theo Lippeveld

Acknowledgment of the first and second course

The second RHIS course was organized by National Institute of Public Health, Cuernavaca, Mexico in collaboration with the Ministry of Health Mexico and MEASURE Evaluation. The course now includes a revised management assessment tool and more material on solutions such as prioritization and advocacy.

The course organizers would like to acknowledge the team of experts who adapted and translated this curriculum for the Latin American context: Juan Eugenio Hernandez Avila, Instituto Nacional de Salud Publica en Mexico; Dr. Rafael Lozano Ascencio, Secretaria de Salud; and Lina Sofia Palacio Mejia, Instituto Nacional de Salud Pública. A special thanks goes to Dr. Mauricio Hernandez-Avila, Instituto Nacional de Salud Publica (INSP) who provided the leadership for this course.

The original course was piloted in August 2005 as a collaboration among the School of Health Systems and Public Health, University of Pretoria, the MEASURE Evaluation Project, and Health Information Systems Programme (HISP). The pilot course was organized by Continuing Education at University of Pretoria (Pty) Ltd.

The contributors to the original curriculum included: Anwer Aqil, John Snow, Inc., Dai Hozumi, John Snow, Inc., MEASURE Evaluation Project; Theo Lippeveld, John Snow, Inc., MEASURE Evaluation Project; Andy Beke, School of Health Systems and Public Health, University of Pretoria; Beth Gragg, World Education, Inc.; Calle Hedberg, Health Information Systems Programme (HISP); MEASURE Evaluation Project; Anne LaFond, John Snow, Inc., MEASURE Evaluation Project; John Matjila, School of Health Systems and Public Health, University of Pretoria; Katherine Shields, World Education, Inc.; Norah Stoops, Health Information Systems Programme (HISP).

This curriculum was developed in part with support from the MEASURE Evaluation Project, a global project supported by the United States Agency for International Development (USAID) (cooperative agreement number GPO-A-00-03-00003-00) implemented by the Carolina Population Center at the University of North Carolina at Chapel Hill in partnership with Tulane University, ORC Macro International, John Snow Inc., and The Future Group.

MEASURE EVALUATION is funded by The U.S. Agency For International Development (USAID) through Cooperative Agreement GHA-A-00-08-00003-00 and is implemented by The Carolina Population Center At The University Of North Carolina At Chapel Hill, in partnership with Futures Group International, John Snow, Inc., Macro International Inc., Management Sciences For Health, and Tulane University. The views expressed in this manual do not necessarily reflect the views of USAID or the United States government.

MEASURE Evaluation strengthens the capacity of host-country programs to collect and use population and health data. We are a key component of the United States Agency for International Development's (USAID) Monitoring and Evaluation to Assess and Use Results (MEASURE) framework and we promote a continuous cycle of data demand, collection, analysis and utilization to improve population health conditions.

MEASURE Evaluation fosters demand for effective program monitoring and evaluation. We seek to empower our partners as they improve family planning, maternal and child health, nutrition and prevent HIV/AIDS, STDs and other infectious diseases worldwide.

For more information, please contact:

Anwer Aqil, MD, MCPS, MPH, DrPH,
Senior HIS Advisor;
aaqil@jsi.com

MEASURE Evaluation
Carolina Population Center
University of North Carolina at Chapel Hill
206 W. Franklin St., 2nd Floor, Chapel Hill, NC 27516
Phone: (919) 966-7482 - Fax: (919) 966-2391
Email: measure@unc.edu - Internet: www.cpc.unc.edu/measure

Table of contents

Acknowledgments.....	2
Materials list	8
Introduction to the Trainer’s Guide	11
Vocabulary glossary	19
Acronyms.....	22
I. INTRODUCTION TO RHIS IMPROVEMENT CONCEPTS.....	23
1. Opening & introductions	24
2. Orientation to RHIS Course.....	26
3. Pre-test.....	30
4. Health systems and HIS.....	32
5. HMN Framework	42
6. RHIS basics	43
7. Global Fund M&E System: Linking RHIS, the M&E System Strengthening Tool, and Indicator Selection	50
8. Managing the RHIS performance improvement process	61
9. Introduction to the PRISM framework	79
II. PRISM TOOLS.....	105
10. Overview of PRISM Tools	106
11. Diagnostic Tool	114
12. RHIS Overview & Facility/Office checklist Tool	131
13. RHIS Management Assessment Tool.....	139
14. Organizational and Behavioral Assessment tool (OBAT).....	144
III. FIELD VISIT	166
16. RHIS in the host country.....	167
17. Field visit preparation.....	168
18. Field visit: Guidelines for trainers	171
19. Field visit: De-briefing.....	172
IV. ANALYSIS OF FIELD DATA	173
20. Data entry.....	174
21. Analysis: Diagnostic Tool	176
22. Analysis: RHIS Management Assessment Tool.....	180
23. Analysis: RHIS Overview and Facility/Office Checklist	182
24. Analysis: Organizational & Behavioral Assessment Tool.....	184
25. Problem tree analysis	188
V. TAKING ACTION	193
26. Prioritize Causes/Determinants	195
27. Prepare Management Objectives	200
28. Solution development	203
29. Effective solutions.....	206
30. Advocacy for Improving RHIS or Health System	211
31. Self-regulation	217
32. Feedback Report.....	223

33. Periodic Reports.....	230
34. Ethical Considerations in RHIS	234
35. Implementing RHIS improvement.....	237
36. Home Action Plans.....	241
VI. CLOSING	246
37. Post-test and final evaluation.....	247
38. Closing ceremony	250
Appendix 1: Answer Code Sheet - OBAT	251

Course Schedule

Week 1

Day 1—Monday	Day 2—Tuesday	Day 3—Wednesday	Day 4—Thursday	Day 5—Friday	Day 6—Saturday
1. Official opening & introduction 2. Orientation to course 3. Pre-test 4. Health systems & RHIS	8. Managing RHIS performance process	10. Overview of PRISM Tools 11. Diagnostic tool 12. RHIS Overview Tool 13. RHIS Management Assessment Tool	15. Synthesis of PRISM tools 16. RHIS in the host country	FIELD VISIT	19. Field visit: debriefing 20. Data entry 22a. Poster
LUNCH					
5. HMN Network 6. RHIS basics 7. Global Fund MESST HIV/AIDS, TB, Malaria	9. Introduction to the PRISM framework	14. Organizational and behavioral assessment	17/18. Prep for field work	FIELD VISIT, CONTINUED	

Week 2

Day 6—Monday	Day 7—Tuesday	Day 8—Wednesday	Day 9—Thursday	Day 10—Friday
21. Analysis: diagnostic tool 22. Analysis: management assessment	25. Problem tree analysis and criteria for prioritization	30. Advocacy for RHIS issues 31. Self-assessment	35. Implementing RHIS improvement	Home action plan, cont. 37. Post-test and course evaluation 38. Closing ceremony
LUNCH				
23. Analysis: RHIS overview/checklist 24. Analysis: OBAT	26. Prioritization of causes 27. Prepare management objectives 28. Solution development 29. Effective solutions	32. Feedback report 33. Other periodic reports 34. Ethical considerations in RHIS	36. Home action plan	

Materials List

For All Sessions

- Computer, projector and screen
- Flipchart easels, paper and several markers
- Tape
- Participant Manual (1 per participant)
- PRISM Tools (1 set per participant)
-

1. Opening/Introductions

- Podium for official opening if desired
- 1 blank piece of paper per participant and trainer
- Extra colored markers on each table
- Slides
-

2. Orientation to RHIS Course

- Slides
-

3. Pre-test

- Handout 1: Pre-Test
-

4. Health systems and HIS

- Slides
-

5. HMN Framework

- WHO\HMN framework v2.0
-

6. RHIS basics

- Slides
- Readings (handouts):
- RHINO brochure
- Theo Lippeveld. "Routine Health Information Systems: The Glue of a Unified Health System." Presentation at the Potomac Workshop, March 2001.
- Lippeveld T, Sauerborn R, Bodart C. Design and Implementation of Health Information Systems. WHO, Geneva 2000.

7. Global Fund MESST

- Slides
- Excel Files
- Reading M&E Tool Guide

8. Managing the performance improvement process

- Slides
- Reading handout: Gladwin, J., R.A. Dixon and T.D. Wilson. "Rejection of an innovation: Health information management training materials in east Africa." Health Policy and Planning: 17 (4): 354-361. Oxford University Press, 2002.

9. Introduction to the PRISM framework

- Blank pages of A4 paper cut in half (about 100 pieces)
- Slides
- Reading handout:
- Aqil, A., Lippeveld, T., Hozumi, D. (2009) "PRISM Framework: A Paradigm Shift for Designing, Strengthening and Evaluating Routine Health Information Systems" paper accepted for publication by Journal of Health Policy and Planning, Oxford University
- Exercise handouts

10. Overview of PRISM Tools

- PRISM Tools
- Slides

11. Diagnostic Tool

- PRISM Tools
- Soft copy of Diagnostic Tool loaded onto computer with projector
- Sample facility data

12. RHIS Overview Tool

- PRISM Tools
- Slides

13. RHIS Management Assessment Tool

- PRISM Tools
- 1 blank copy of the RHIS Management Assessment Tool for each participant
- Slides

14. Organizational and Behavioral Assessment tool

- PRISM Tools
- Soft copy of Organizational & Behavioral Assessment Tool loaded onto computer with projector
- Sample data
- Slides

15. Synthesis of PRISM Tools

- Flipchart with table summarizing tools

16. RHIS in the host country

- RHIS Overview Tool, filled out for the host country (handout for all)

17. Field visit preparation

- Blank PRISM Tool forms for each participant and/or each team

18. Field visit: Guidelines for trainers

- For each field group: List of field group participants assigned to their group; cell phone contact list for all group facilitators; contact information and directions/map for the field sites; extra blank copies of PRISM Tools

19. Field visit: Debriefing

- None

20. Data entry

- 1 computer per field work group (participants may be able to use their own laptops)
- CDs with PRISM Tools (at least 1 per group)
- At least 1 blank CD or flash drive for transferring files

21. Analysis: Diagnostic Tool

- Computer with data from field loaded Print-outs of field data from Diagnostic Tool or all participants
- Slides

22. Analysis: RHIS Management Assessment Tool

- MAT filled out in the field
- Flipchart with table for summarizing scores

23. Analysis: RHIS Overview & Facility Checklist

- RHIS Overview (distributed earlier)
- Facility/office checklists filled out in field

24. Analysis: Organizational and Behavioral Assessment Tool

- Handouts with charts showing results of OBAT (1 per participant)
- Slides

25. Problem tree analysis

- 50+/- pieces of blank paper (A4 cut in half)
- Flipcharts with labels
- Tape
- Slides

26. Prioritize Causes/determinants

- Problem tree from previous exercise (flipcharts and papers on wall)

27. Prepare Management Objectives

- Slide
- Handout

28. Solution development

- Slides

29. Effective solutions

- Slides

30. Advocacy for improving RHIS or HS

- Katherine Kaufer Christoffel, "Public Health Advocacy: Process and Product," American Journal of Public Health, 2000;90:722-726
- Slides
- Handout

31. Self-regulation

- Slides
- Handout

32. Feedback report

- Slides
- Handout

33. Periodic reports

- Slides
- Handout

34. Ethical considerations in HIS

- Slides

35 Implementing RHIS Improvement

- Slides
- Handout

36. Country Action Plans

- Handout 2: Home Action Plan
- Slides

37. Post-test and final evaluation

- Handout 3: Post-test
- Handout 4: Final Evaluation

38. Closing ceremony

- Certificates

Introduction to the Trainer's Guide

This training course on Improving RHIS performance and use of information for health system management is an international course on the comprehensive assessment of information use with an emphasis on problem-solving. The course meets an urgent need, which has been identified in the field, for capacity-building in routine health information systems (RHIS) to help professionals use RHIS more effectively.

What is the purpose of this training?

The objective of this course is to provide a rapid transfer of knowledge and skills in RHIS performance strengthening at both the national and sub-national levels.

Objectives of the course:

By the end of the course, participants will be able to:

- ◆ Understand the roles of RHIS in health service management.
- ◆ Understand three categories of determinants that influence RHIS
- ◆ Acquire skills to carry out the process of improving RHIS performance, including assessment, analysis, and problem-solving.

Who is the target audience for this training?

This course was designed for:

- ◆ Government and NGO professionals who are responsible for management of health services and health programs at national as well as sub-national levels.
- ◆ Government and NGO professionals who are responsible for management of RHIS.
- ◆ Government and NGO professionals who are responsible for the monitoring and evaluation of health programs.
- ◆ Staff of technical assistance projects that aim to improve health system management.

What content does the course cover?

This course is based on the PRISM conceptual framework for assessing and strengthening RHIS performance. The PRISM, or three-point framework, is predicated on the assumption that improving the performance of RHIS requires interventions that also address the organizational/environmental and behavioral determinants as well as the technical determinants. It broadens the analysis of RHIS to include the behavior of the collectors and users of data and the context in which these professionals work.

The course introduces a set of PRISM tools for improving performance of RHIS. The tools provide knowledge and skills for assessment, analysis, and solutions.

Field work is an important component of the course. Participants will be introduced to examples of how RHIS is used for district health system management. They will also have an opportunity to use the PRISM tools in the field.

How is the training organized?

The curriculum is designed as a full-time, two week training. It includes a day-long field visit to collect data at health facilities and administrative offices. However, the section on Global Funds MESST is optional and could be deleted if the time is limited.

How do I use this Trainer's Guide?

This Trainer's Guide is intended to be easy to use, with quick references to all the key information you will need during a session. At the beginning of each session, the guide provides the length of the session, materials required (in addition to basic equipment such as flipchart stands and projectors), advance preparation needed, if any, and the learning objectives for the session. Handouts are numbered and referenced in bold when they are to be used during a session.

Participants receive a Participant Manual containing most task sheets and reference materials used in the sessions, as well as the text of the lecture material shown on the slides. This eliminates the need for frequently distributing handouts and disrupting the sessions.

RHIS Poster Session

One evening event is planned for participants to showcase RHIS successes and challenges in their own regions or organizations. Interested participants are encouraged to bring data collection forms, training manuals, or any other materials related to their RHIS activity about which they are most enthusiastic, and set up an informal display showcasing their approach. Other participants can then circulate and talk with each other to exchange ideas.

Tips for Trainers

A. Introductory activities

Time is scheduled on Day One for participants to introduce themselves and talk a little about their experiences and backgrounds. An introductory activity is a good opportunity to set a participatory tone for the training; it signals to participants that their experiences are valued, and that communication in the classroom will not just be one-way from trainer to participants.

One activity is suggested in the Trainer's Manual, but here are some alternate exercises. Choose one that is appropriate for the group.

"FIND YOUR MATCH":

- ◆ Cut postcards into odd-shaped halves ahead of time. Make sure that there are enough halves for each person in the room to have one (all participants, trainers, and observers). Put all the postcard halves into a basket and mix them up.
- ◆ When ready to begin this activity, pass the basket with the postcards around the room. Each participant should take a half postcard out of the basket.

FIND YOUR MATCH. Instruct Participants to:

- **Look** for the person whose postcard matches theirs.
 - **Interview** their "match" for no more than 5 minutes to find out the following information about each other: Refer to the flipchart with these instructions:
 - **Name**
 - **Agency/organization**
 - **Position/title**
 - **Interests, hobbies, some other little-known fact about themselves**
 - **Expectations for the course**
 - Briefly **introduce** each other to the rest of the group.
- ◆ As the participants introduce each other to the whole group, write their stated expectations for the course on a flipchart. When all the introductions are complete, review these expectations and help the group to compare their stated expectations to the goals of the course.
 - ◆ Also indicate that the trainers will try to draw on the breadth of experiences in the room as much as possible. They should also feel free to talk with one another and to use one another as resources.

“YOUR PLACE IN THE WORLD:”

- ◆ On the wall in front of the room, post a large wall map of the region in which the training is being held. Provide markers, stick pins, or colored dot stickers, enough for everyone in the room.

YOUR PLACE IN THE WORLD. Instruct Participants to:

- **Pair up** with someone they do not know. They should **interview** their partner for no more than five minutes to find out the same information as listed on page xiii.
- When the interviews are complete, the pairs will come to the front room and **place a stick pin or a colored dot on the map** showing the place where they are currently working. (If time allows, the trainer can ask them to briefly describe the situation where they are working. Or, if there are enough different colored stick pins or colored dots, participants can also show where they were born).
- **Introduce** their partner to the group.

- ◆ As the participants introduce each other to the whole group, write their stated expectations for the course on a flipchart. When all the introductions are complete, review these expectations and help the group compare their stated expectations to the goals of the course.
- ◆ Also indicate that the trainers will try to draw on the breadth of experiences in the room as much as possible. They should also feel free to talk with one another and to use one another as resources.

B. Managing Group Work

Many of the activities in this course ask the trainer to put participants into small groups. Here are some tips for managing group work.

FORMING GROUPS:

Several activities require that participants work with others from their own country. In other cases, you will want to mix up the groups so that members from different countries can share experiences. You can simply ask the class to count off, or to form their own groups with strangers, but there are other creative ways to form mixed groups:

- Ask participants to find others born in the same month (or set of months).
- Make a “puzzle” out of colored paper or postcards cut into pieces; members draw a puzzle piece at random and search for the rest of their puzzle.
- For some activities such as field visits, trainers may choose to create the groups in advance to ensure a mix of different countries, genders, and experiences.

REPORTING BACK

It is important to acknowledge the work participants do in groups and give them feedback. However, it can be time consuming and repetitive if five groups report back all of their responses to every question. Here are some suggestions for different ways to report back:

- Ask each group to report their answers to only one of the questions. Then invite others to add new ideas that were not stated yet and discuss.
- Ask each group to pick only two or three of their responses to report back, with each group having to add something that has not been said before.
- Ask groups to pair off and report back to each other. Then they can report just the answers they had in common to the full class, or ask questions that came out of their discussion.
- Ask groups to write down their responses in large letters on flipchart paper and post it on the wall. Give participants time to circulate around the room and read all the responses displayed. Then discuss in plenary.

C. Daily Evaluation

Evaluation is an important step in the learning process, and should be used constantly throughout the training. By informally asking questions and observing performance during activities, you can continuously check participants' learning, emotional state, and energy levels. You should use this information to focus your teaching on the topics that demand more attention.

A short period has been scheduled at the end of each day for a brief evaluation activity. Using a variety of techniques – writing, reflection, physical movement, games, and group discussion – will help keep participants interested and avoid boredom with filling out a traditional questionnaire at the end of every day. Some activities you could use include the following:

REVIEW THE DAY'S OBJECTIVES

Ask participants to take a blank piece of paper and to **write their answers** to the following:

- On a scale of 1 – 5, (with 5 being “maximum possible,”) to what extent were each of the day's learning objectives met?
- What suggestions do you have for the next day of this training?

WRITTEN EVALUATIONS

To evaluate how effective the day was for participants, ask them to take a few minutes to **write their thoughts** about these questions.

◆ Write on a flipchart:

- What was most useful for you today?
- What was most difficult? What suggestions do you have for overcoming this difficulty?
- What suggestions do you have for tomorrow?

ROLE-PLAY

Ask participants to **role-play** an illustration of a valuable lesson that they learned today, or ask them to **draw a picture** of something valuable that they learned during the day, and then to explain it to the group afterward.

TEMPERATURE CHECK

Find out how participants are feeling. Ask participants to write **down one or two words that best describe how they are feeling** at that moment and then share it with the rest of the group if they want.

PHYSICAL CONTINUUM

Ask participants to think about a statement such as: “Today, we achieved our learning objectives.” Ask participants to **stand** at one end of the room if they strongly agree with the statement, at the other end of the room if they strongly disagree, or to choose a place somewhere in between that represents their feelings. Ask a few participants to discuss why they placed themselves where they did. Note: This is a good technique to use to explore controversial subjects, when it is important for everyone to see what others think about a topic. It can be used to clarify values or to help people reflect and share their learning. However, it is best used with a group who are comfortable sharing opinions publicly.

PAPER FIGHT:

(Note: This activity requires physical activity and may not be appropriate for all groups.) Ask each person to take a piece of paper and to **write a question** on it **that will help evaluate** how well the day’s objectives have been met. (For example, a participant might write, “What is good RHIS performance?”) When each person has written a question, ask them to **make a ball out of the paper**. Then ask them to **stand up**, facing one another in two teams.

Explain that they will “fight” one another with the paper balls, each team throwing the balls at the other team until the trainer says “Stop.” The goal is to get as many paper balls on the other team’s side as possible. When everyone is ready, say, “On your mark, get set, GO!” and watch the paper fight for a few minutes. After about a minute, call “Time!”

Ask the two teams to **collect the paper balls** remaining on their side. Then instruct the teams to open up their papers and read the questions silently. Teams take turns **asking each other the questions** found on the papers. If desired, you may name one of the teams the “winner” for getting the most correct answers to the questions.

MOOD METER

The mood meter provides a subjective assessment of participant perception of training effectiveness. It provides a useful guide to the trainer on how participants experience training. It reflects participant perception of facilitation style and training methodology. The mood meter is used during training, on a daily basis. Participants are asked to tick in the selected column that best reflects their perception upon completion of the days' training. Upon completion of the training module or course, the mood meter is analyzed.

Draw the mood meter on flipchart paper and post on a wall near the exit. Provide several pens or markers. Keep each day's mood meter for reporting on the course.

	DAY 1	DAY 2	DAY 3
 IT'S GREAT!			
 IT'S OKAY			
 IT'S NOT SO GOOD			

Alternative: Instead of the table above, make a graph with the days of the training along the bottom x-axis and numbers 1 to 100 along the left-hand y-axis. Invite participants to put a sticker or mark to show their mood each day. In this way you have a graph of the class mood that can be examined at the end of the course.

FOUR QUESTIONS

Give each participant four cards or pieces of paper. Ask them to **write the answers to the following questions**, one on each card.

- What did you like today?
- What did you dislike today?
- For tomorrow, what would you like more of?
- What would you like less of?

Then all participants post their responses on four different walls of the training room. Invite everyone to circulate and view the responses. Make a summary of them the next morning.

THE STEERING COMMITTEE

The Steering Committee is another way to build evaluation into the training. At the end of each day, two or three participants (“volunteer teams”) meet with the trainers and course organizers for about 30 minutes to give feedback on the day. They talk about what went well, what could be improved, and any other suggestions. They discuss both what went on in the classroom, and other issues such as logistics. This meeting gives the course organizers a chance to learn about and respond to ideas that can improve the course. It also gives participants a direct voice in course management.

VOLUNTEER TEAMS

Involving training participants in the management of the course can help build a sense of ownership and keep the trainers in touch with what participants are thinking. On the first day of the training, ask participants to sign up as volunteers to help with the daily management of the course. Two or three participants can sign up for each day of the course. Some tasks the volunteer teams can help with include the following:

- Lead ice breakers or energizing activities after lunch.
- Help manage the schedules and act as timekeepers.
- Collect feedback from other participants about the course.
- Attend Steering Committee at the end of the day.
- Get people started at the beginning of the next day by recapping the past day’s activities and summarizing the results of the previous night’s Steering Committee discussion.
- In general, give participants a voice in the course.

Vocabulary glossary

Accuracy	In terms of data quality: The match of data transmitted from one level to another in the RHIS, e.g. from client records at facility to the monthly RHIS summary report to the district.
Activity	Defined action that is required as part of implementation of a plan.
Advocacy	Promoting a strategy or change to an organization's leaders or policy-makers, typically relating to a decision that is outside one's own scope of control. May involve other actors (within and/or outside the organization) to bring influence to bear on decision-makers. In the PRISM framework, defined as those factors affecting RHIS performance that are related to individual behavior, such as motivation, attitude, empowerment, and confidence.
Behavioral determinants	
Competence	Ability to perform a task to specifications
Completeness	In terms of data quality: Degree to which RHIS data (1) covers all geographical areas, services and facilities, and (2) is filled out in full on data collection forms.
Confidence	How comfortable a person feels performing a certain task with
Culture of information	Organization has the capacity and control to promote values and beliefs among organizational members for the collection, analysis, and use of information to accomplish organizational goals and mission.
Data	Unprocessed numbers
Data demand	In terms of the data demand and information use model, demand exists when the decision-maker understands what kind of information is needed for a particular decision, and he/she proactively seeks out that information.
Data demand and information use (DDIU) model	Model for understanding RHIS performance that examines the feedback cycle leading from demand for information, to data collection and availability, to use of information, to feedback, which in turn increases demand for information
Data quality	Degree to which RHIS data is consistent, timely, complete, and relevant
Decision support system (DSS)	Type of computerized information system designed to support decision-making, with analytical reporting and trend analysis. Characterized by user-friendly graphical interface with connection to a data warehouse

Evaluation	Assessment of whether or not program objectives have been achieved
Evidence-based decision-making	A management approach based on using reliable quantitative information to guide decisions about targeting resources efficiently.
Goal	Specific outcome that must be accomplished in order to achieve some larger, overall result (e.g. to accomplish the mission).
Health information system	System that provides specific information support to the decision-making process at each level of an organization (Hurtubise).
Health system	System of all actors, institutions, and resources that undertakes “health actions” – i.e. actions whose primary purpose is to promote, restore, or maintain health (WHO).
Indicator	Defined, measurable data indicating progress toward objectives.
Information	Data that have been processed and interpreted so that they have meaning and can be used for decision-making.
Information generating process	Process by which RHIS data is transformed into information that is used for decision-making. Includes the steps of: defining info needs/indicators, data collection, data transmission, data processing, and data analysis; and management issues affecting this process: resources and organizational rules.
Lot quality assurance sampling (LQAS)	Sampling technique
Monitoring	Continuous, systematic process of checking that implementation is proceeding according to plan.
Objective	Specific outcome that must be accomplished in order to achieve a goal. It may be a milestone along the way when implementing a strategy.

Organizational determinants	In the PRISM framework, defined as those factors affecting RHIS performance which are related to environmental or systemic issues, or the context in which the RHIS functions. These could include resources, the health system structure, roles and responsibilities of personnel, organizational culture, and budget control.
PRISM framework	Model for understanding the factors that drive RHIS performance, using a three-part framework of technical, organizational, and behavioral determinants. Intended to help RHIS professionals with needs assessment, strategy planning, and improvement processes.
Proxy indicator	Indicator used to study a situation, phenomenon, or condition for which no direct information is available.
Resource	Input needed to perform a task, such as funds, personnel, infrastructure, or materials.
RHIS performance	Effectiveness of a routine health information system, defined in terms of data quality and use of information.
Root problem	In terms of problem tree analysis, defined as the deepest underlying cause of a given performance problem; no further causes can be identified contributing to it.
Routine health information system (RHIS)	On-going (period of less than one year) data collection on health status and behaviors, health interventions, and health resources.
Self-efficacy	People's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances (Bandura).
Stakeholder	Individual or organization that will be affected in some significant way by the outcome of a process and can affect the outcome of that process.
Strategy	Method, set of activities, and/or process required in order to achieve a goal.

Target	Specific, measurable figure to be achieved on a given indicator, as part of a goal or objective (e.g. 90% on-time reporting rate).
Task	Defined action that is required as part of implementation of a plan. (Also “activity.”)
Technical determinants	In the PRISM framework, defined as those factors affecting RHIS performance which are related to system components such as indicators, personnel training, technology, forms, data submission, and reporting.
Timeliness	In terms of data quality: Degree to which RHIS data is up-to-date and available when needed, and submitted on time according to established deadlines.
Use of information	Use of information occurs when the decision-maker is explicitly aware of a decision and its alternatives; and considers relevant information in the process of making the decision.

Acronyms

ANC	Antenatal care
ARI	Acute respiratory infection
DCI	Data collection instruments
DDIU	Data Demand and Information Use
DHIS	District health information system
DSS	Decision support system
EPI	Extended program of immunization
HIS	Health information system
HIV/AIDS	Human immunodeficiency virus / Acquired immunodeficiency syndrome
HMIS	Health management information system
IT	Information technology
LQAS	Lot quality assurance sampling
MESSST	M&E Systems Strengthening Tool designed for Global Fund
MOH	Ministry of Health
OPD	Outpatient department
PAHO	Pan-American Health Organization
PRISM	Performance of Routine Information System Management
RHINO	Routine Health Information Network
RHIS	Routine health information system
SAVVY	Sentinel Vital Events Registration with Verbal Autopsies
VCT	Voluntary counseling and testing
WHO	World Health Organization