

TEFT Case Study: “Amanga” National ART Training

Background

The Ministry of Health (MOH) of the country Amanga¹ recently made some major revisions to its national HIV Care and Treatment Guidelines. In order to remain in alignment with recent updates from the World Health Organization, it has heavily revised antiretroviral treatment (ART) guidelines, including a change in the first-line regimen of ART medicines. In addition, the MOH has determined that for the new guidelines to be effective, they must be implemented at all its health facilities, from village health posts and health centers to district and regional hospitals.

The national ART curriculum for health care workers is also being revised to reflect these changes. The new, first-line ART medicines are scheduled to arrive in the country in two-to-three months, and the MOH has asked that the training be rolled out to coincide with the arrival of these medicines. Their rationale is that well-trained health care workers (HCWs) will be able to confidently place eligible patients on the new regimen. To quickly prepare the health workforce, the MOH has set an initial goal of training around 10% of its providers (roughly 3,000 health care workers) from all cadres (physicians, nurses, clinical officers, medical assistants, and others) within 4 months of the medicine’s arrival. The training will be delivered to all cadres together. It will be taught by trainers from various MOH partner organizations throughout the country, in collaboration with regional and district health offices.

In technical working group meetings, concerns have been raised about conducting the training for all cadres together, rather than targeting the content based on the role of the provider. Some members are also concerned that the government’s new policy doesn’t clearly articulate the scope of practice expected for different cadres. Likewise, they worry the policy may not adequately address the varying HIV care and treatment services provided by different types of health care facility, such as health posts and regional hospitals.

¹ *Amanga, Alia, and other details in this case study are fictional; any resemblance to real people, places, or situations is coincidental.*

Determining an Evaluation Plan: The Training Evaluation Framework and Tools

In Amanga, health care worker training is being developed and led by a partner organization, OT Associates. Soon after the Ministry's decision to move ahead with the in-service training, the OT-based training program manager and her colleague Alia, who is heading the evaluation, sit down together to discuss an evaluation plan for the program. Alia is familiar with the Training Evaluation Framework and Tools (TEFT), and thinks the 6-step process it outlines might help them think through how to go about evaluating such an ambitious training program in a meaningful way. She begins this initial meeting with a copy of the **Training Evaluation Framework Template** (Step 1), which they look over together.

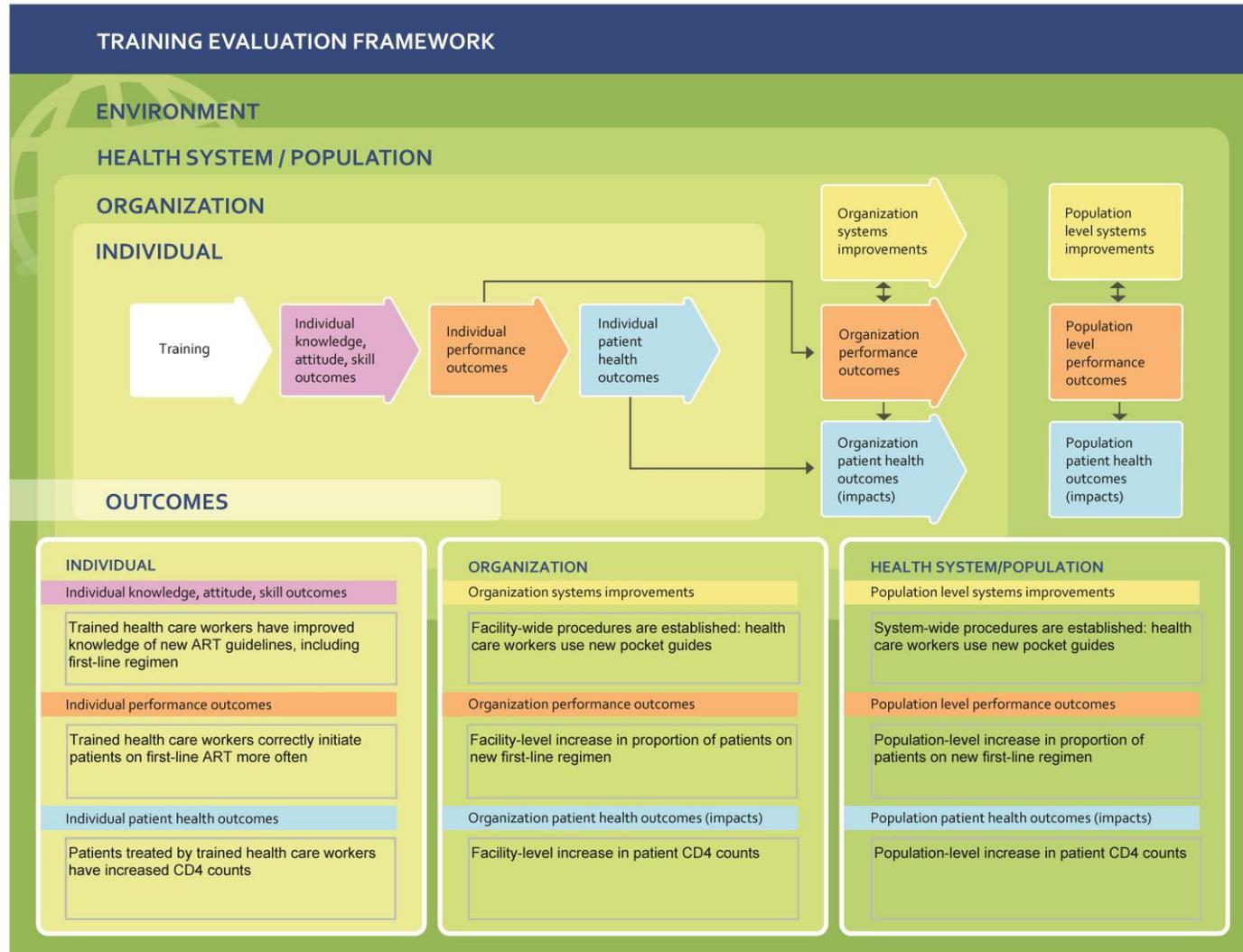
Step 1: Identify Anticipated Outcomes

Tool: Training Evaluation Framework Template

Alia and her colleague begin from the left side of the graphic, at the individual level. In the purple arrow, which shows the trainees' content knowledge, skills, and attitudes, they write the outcome "*increased knowledge of new ART guidelines.*" In the orange arrow, which shows performance outcomes, they input "*HCWs correctly initiate first line ART for eligible patients.*" They also note that the same types of outcomes should be expected at the organizational level.

For the blue arrows, indicating changes at the patient level, the two agree that measurable change would *not* likely be seen for patient health in such a short period of time. However, to keep the ultimate goal of the MOH in mind, they complete the description of the logical flow of outcomes and impacts for the training program, including all boxes at the health system/population level. Their completed framework is shown below.

Example 1



The completed template provides them with an idea of what their outcomes might be, but many questions remain, including at which level or levels they should focus the evaluation. The two go on to use the next two TEFT steps to arrive at this decision.

Step 2: Address Situational Factors

Tool: Situational Factors Worksheet

For Step 2, Alia and the manager print out and use the **Situational Factors Worksheet** to identify relevant issues that could affect their evaluation design or findings. They fill in the boxes in the worksheet that are most relevant to their situation, noting how they might address each issue. They also underline their ideas for data collection methods, so that they can refer to them easily when they are further along in their planning. Some factors don't seem to present an issue for their training, so they leave those blank.

Example 2

TEFT Situational Factors Worksheet: <i>Amanga ART Training</i>	
Factors that might affect the evaluation (with examples)	What is the issue and what can you do about it in your evaluation?
Individual Level	
Trainee background: Knowledge, experience, education	Issue: <i>Concerns that multiple training cadres taught from one curriculum might result in some trainees not having adequate background knowledge to absorb and use the new content.</i> What to do: <i>When analyzing results of pre- and post-content knowledge assessments, compare across cadres to determine if there is a cadre-related difference.</i>
Trainee life circumstances: Family demands, health status, attitude, motivation	Issue: <i>Some stakeholders have noted that participation in training is motivated more by "sitting fee" than by desire for new skills.</i> What to do: <i>Include questions in pre- and post-training survey related to motivation to use new knowledge on the job.</i>

TEFT Situational Factors Worksheet: *Amanga ART Training*

<p>Other: (List)</p>	<p>Issue:</p> <p>What to do:</p>
<p>Organization/Facility Level</p>	
<p>Management support: Staff access to management and/or mentoring; management belief in training, motivation to support trainees</p>	<p>Issue: <i>Training implementers report that management support for trainees to perform new skills is highly variable across facilities.</i></p> <p>What to do: <i>Include questions in follow-up interviews with training participants about management support. Analysis of these results can tease out whether performance outcomes might have been affected by any management-related barriers to performing new skills.</i></p>
<p>Human resources: Staffing levels, salaries, burnout</p>	<p>Issue: <i>Many facilities are understaffed. This results in high patient loads and burnout among staff. This could affect the ability of the trainees to implement the skills they learned in the training.</i></p> <p>What to do: <i>In the evaluation, review patient records to collect data about the number of patients seen per day, working hours, etc. Possibly include observations of queues and the number of staff on duty.</i></p>
<p>Supplies and equipment: Medicines, medical supplies, equipment</p>	<p>Issue: <i>The program manager anticipates that key medicines may not always be available. Similarly, other necessary supplies and equipment may not always be available.</i></p> <p>What to do: <i>Include an observation component in the evaluation. During observation, use a checklist with the key supplies and medications that might influence trainees' ability to perform new skills on the job. Collect data on these issues during post-training evaluation activities.</i></p>
<p>Infrastructure: Space, privacy, water, ventilation, protection from weather, adequate number of beds, toilet facilities</p>	<p>Issue: <i>Previous projects have noted space concerns at several clinical facilities. In addition, not all facilities have access to regular and consistent viral load testing.</i></p> <p>What to do: <i>Use CD4 counts instead of viral load as primary indicator of patient health outcomes. In the observation component of the evaluation, note infrastructure issues that might affect health care worker performance. Consider an evaluation design that matches facilities according to</i></p>

TEFT Situational Factors Worksheet: Amanga ART Training

	<i>infrastructure (as well as patient load, rural/urban, etc.) so that these kinds of issues are comparable between intervention and non-intervention groups. Review results of observations made by previous projects if information is easily accessible and relevant.</i>
Facility systems: Appointments, records, patient flow, referrals	Issue: <i>Records at most facilities are paper-based, and sometimes incomplete.</i> What to do: <i>Review patient records to determine whether or reporting quality is sufficient, particularly regarding new guidelines and ART regimen.</i>
Other: List	Issue: What to do:
Health System/Population Level	
National, regional, and community systems: Laboratories, supply chain	Issue: <i>Delivery of needed medicines and health facility supplies are frequently disrupted.</i> What to do: <i>When analyzing data, check to see if outages correlate with regions experiencing supply chain disruptions and any differences in training outcomes</i>
Policies (national, regional, local): Clarity, consistency of policies with content and skills taught in training	Issue: <i>Stakeholders have expressed concern that scope of practice for different cadres is not clearly articulated in national policies.</i> What to do: <i>In post-training interviews, include questions about policy-related barriers to performing newly learned skills.</i>
Patient needs: Most commonly seen health issues in region, patient demographics, etc.	Issue: <i>In several regions of the country, heart disease and diabetes care and treatment take precedence over emerging HIV needs. This may reduce health care worker performance of newly learned HIV care and treatment skills.</i> What to do: <i>When comparing across regions, try to assure that regions with lower HIV prevalence relative to other conditions are distributed evenly between the intervention and non-intervention groups.</i>
Partner programs:	Issue: <i>There are no other organizations conducting ART training</i>

TEFT Situational Factors Worksheet: *Amanga ART Training*

<p>Multiple training organizations, duplicative trainings</p>	<p><i>in the country, so there is no anticipated confounder to evaluating outcomes of the national training.</i></p> <p>What to do: <i>N/A</i></p>
<p>Health workforce: Size of workforce relative to population, education and training level, attrition</p>	<p>Issue: <i>The shortage in skilled health care workers is a problem across the country, causing high patient loads and related health care worker attrition.</i></p> <p>What to do: <i>Since the problem is not likely to vary across comparison groups, this should not affect the ability to compare the early intervention with the later intervention group. However, if the evaluation data do not suggest training-related outcomes, this may be because heavy workloads impact trainees' ability to perform their newly learned tasks.</i></p>
<p>Pre-service program: Quality, relevance, updated content</p>	<p>Issue: <i>Amanga's pre-service programs have varying amounts of HIV content, and some have not been updated recently. Thus, health care workers will likely come to the training with a range of background knowledge.</i></p> <p>What to do: <i>Include questions in pre-test knowledge assessment regarding level of training.</i></p>
<p>Available community support resources:</p> <p>Women's and youth groups, HIV-specific counseling, family or community organizations</p>	<p>Issue: <i>The new training includes an emphasis on referrals for counseling and support. Facilities in more rural areas often lack these kinds of support resources, and/or patients avoid using them because of stigma.</i></p> <p>What to do: <i>Include questions in follow-up interview to determine community support resources available to patients at given facilities, frequency of referral, and perceived frequency of use. Consider patient exit interviews to establish likelihood of using community support resources and/or adding questions to facility observation checklist regarding what kind of community support resources are available.</i></p>
<p>Other: (List)</p>	<p>Issue:</p> <p>What to do:</p>

Step 3: Refine the Scope of the Evaluation

Tool: Evaluation Considerations Tool

At this point, the training program manager shares her reservations about the ambitious intentions for the training, given the short time frame for its development. She worries there isn't enough time to properly develop the curriculum, and that the speed at which the revised guidelines have been developed may lead to problems down the road.

In addition, the colleagues note that problems in health care worker performance could result in serious issues in the future. For example, if health care workers are not providing effective counseling on the importance of ART adherence, this could lead to widespread drug resistance, as well as increased morbidity and mortality among patients living with HIV. If the training isn't effective, the MOH will need to make some critical decisions quickly about how to address the situation. Because of these concerns, the OT evaluator knows it is very important to do an evaluation of provider performance within 6 months of the final training, to catch potential performance gaps early.

Alia suggests that the **Considerations Tool** might help them work through these concerns. Based on their discussion, they mark the considerations as follows:

Example 3

Evaluation Considerations Tool		
Considerations	Ratings	Notes
Intervention Scope	<div style="display: flex; justify-content: space-between;"> Small Scope Large Scope </div>	<i>National-level training with multiple cadres</i>
Use of Evaluation Findings	<div style="display: flex; justify-content: space-between;"> Routine Reporting Program, Funding Decisions </div>	<i>Findings will be used for decision-making on next steps for rollout of new guidelines</i>
Evaluation Time Frame	<div style="display: flex; justify-content: space-between;"> Very Short Time Frame Long Time Frame </div>	<i>4 months after training</i>
Access to Data	<div style="display: flex; justify-content: space-between;"> No Access to Relevant Data Good Access to Quality Data </div>	<i>MOH assures access to health care workers post-training as well as access to facility data</i>
Evaluation Resources	<div style="display: flex; justify-content: space-between;"> Minimal Resources Significant Resources </div>	<i>Evaluation resources are limited; 1.5 full time employment for staffing, plus a modest additional budget</i>

- **Intervention Scope and Use of Evaluation Findings:** The scope of the intervention is large, and the evaluation findings will provide key information for decision-making about next steps for training the workforce in the new ART guidelines.
- **Time frame:** The government’s ambitious training schedule and need for rapid information on the effects of the training, however, limits the evaluation time frame significantly.
- **Resources:** In their favor, the MOH will ensure that adequate human resource capacity and a modest budget are dedicated to the evaluation.
- **Access to Data:** Because the MOH has made the evaluation a priority, the evaluation will also have adequate access to facility-level data and the ability to observe health care provision at the facilities.

As the two colleagues noted while completing the Training Evaluation Framework, despite the large scope of the intervention, the short time frame will make it impossible for them to measure patient health outcomes at *any* level (individual, facility, or population) in the near future. They decide instead that the evaluation should focus on provider performance—how health care workers implement the key competencies covered in the training. They reason that this will give a good idea of the effectiveness of the training in preparing health care workers to follow the new ART guidelines. Given the complexities related to this training program, they agree that also looking at **individual knowledge gained** from the training would provide them with information about outcomes that can be closely linked to the training. If the anticipated knowledge increases don’t materialize, they will be better able to delve into the possible causes of the gap—whether they are due to the training itself or due to other contextual issues.

Next, Alia and her colleague discuss whether they should try to measure changes in provider performance at the individual level or at the facility level. Given their short time frame, they think it will be more feasible to evaluate performance changes at the individual level, but they decide to check in with their primary contact at the MOH before settling on this decision. The three meet, and the OT staff show their colleague the work they have done. Though she approves of what they have outlined, she conveys to them clearly that the MOH’s goal is to ensure that patients receive high quality care at any facility they visit. Therefore, they agree

that they will evaluate **health care worker performance change at the facility level**, because it is the best outcome for the training program to demonstrate. In addition, they decide to monitor a key situational factor: whether the facility is receiving a reliable supply of the new medications.

A number of methodological questions surface at this point: To learn about practice changes, will they need to observe a sample of providers on the job before and after the training to see if their practices have changed? If all facilities will be having providers undergo training, how will they find a comparison group? And if they decide to measure at the facility level, how can they compare the different facilities, given the multiple facility types and professional cadres?

Alia says she will keep these methodology questions in mind as she refines their evaluation questions and considers possible indicators. For this she will turn to the materials and examples in TEFT Steps 4 and 5.

Step 4: Define Evaluation Questions, Objectives, and Indicators

Tool: Questions and Indicators Template

Alia is very clear that the key outcome of interest for her evaluation will be at the organization level to determine how the trainees perform their newly-learned skills, particularly initiation of patients on the new first-line regimen. The evaluation will need to determine whether trainees are able to apply the skills and knowledge from the training at their worksite, and whether they are providing high quality care to their patients.

To think about her evaluation questions, and to sketch out some possible indicators, Alia uses the **Questions and Indicators Template**. This tool helps her focus on what she might measure to evaluate changes in knowledge, skills, and attitudes, and in on-the-job performance. She writes out a few ideas: *What about using written pre- and post-tests of health care workers' knowledge and attitudes, and using checklists of key competencies and observation to explore on-the-job performance outcomes?*

She also references the **Situational Factors Worksheet** she and her OT colleague worked on the day before and adds: *What about patient record reviews? What about follow-up interviews with training participants?*

She sets these aside for the moment and completes the template. This should help her select the most relevant indicators for her evaluation. She also must remember that she needs to be very focused in her evaluation, because of the short time frame and the relatively limited resources she has for conducting evaluation activities.

Example 4

Questions and Indicators Template				
General Evaluation Questions	More Specific Evaluation Questions	Very Specific Evaluation Questions	Anticipated Outcomes	Outcome Indicators
Did Amanga’s training on new national guidelines result in improvements in health care workers’ knowledge and on-the-job performance in correctly prescribing antiretroviral treatment (ART)?	<i>Did the trained health care workers (“trainees”) show increases in knowledge of the new guidelines on first-line ART regimens?</i>	<i>Did the trainees show improved scores between pre- and post-test knowledge tests on the new guidelines on first-line ART regimens?</i>	<i>Improved scores on questions related to new guidelines on first-line ART regimens.</i>	<i>% increase in trainees’ post-training test scores compared with pre-training scores.</i>
	<i>Did the trained health care workers show improvements in correctly prescribing first-line ART regimens?</i>	<i>Did the trainees show improved on-the-job performance of prescribing first-line ART regimens?</i>	<i>Increased proportion of health care workers performing correct prescribing of first-line ART regimens.</i>	<i>% of trainees who are rated on an observation checklist as correctly performing first-line ART prescription at least 80% of the time</i>
	<i>Were there differences in knowledge and performance based on cadre?</i>	<i>Did some cadres show greater improvement than others in pre- and post-tests and in on-the-job performance?</i>	<i>Differences among cadres in % improvement on pre- and post-test and observation scores.</i>	<i>Differences among health care worker cadres in % improvements on pre- and post-test and observation scores related to prescribing first-line ART.</i>

Now that she is narrowing in on some key indicators and starting to think about the specifics of her evaluation, Alia returns to the **Situational Factors Worksheet** (Step 2) to review

the factors that should be included in the evaluation to address possible confounders to the desired outcomes of the training. She notes that the evaluation will need to:

- evaluate provider performance at the facility level within 6 months of the last training;
- disaggregate data by cadre, facility type, and previous ART training, and sample accordingly;
- note adequacy of staffing level at facilities;
- note whether there are adequate resources and infrastructure at each facility; and
- examine patient records to determine how many patients are being put on the new regimen.

It will also need to:

- Ask: “Is the new first line drug regimen in stock?”
- Check whether health care workers are *formerly trained* or whether the new training was their first.
- Ask health care workers about their roles in providing antiretroviral medications, given that roles may vary across setting and cadre

Step 5: Choose Evaluation Design and Methods

Tool: Design and Methods Example Tables

Step 5 involves making decisions regarding the design and methods to be used in the evaluation. As with the other parts of the TEFT, Alia has already jotted down some ideas about possible ways she might gather the information she needs to answer her evaluation questions, such as doing observations of on-the-site performance, interviewing health providers, collecting facility level data, and using pre- and post-tests of content knowledge. Now she will develop these ideas further. The TEFT materials contain some of the examples of training outcome evaluation designs, and Alia reviews these to see if she can model her own evaluation on aspects of these.

- **Comparing training with non-training**

Since Alia will be evaluating outcomes at the facility level, she focuses on those examples as she considers which design might be best. To begin with, she knows that in order

to attribute changes in trainee knowledge and performance to the training, she will need to have some sort of **comparison between a group that received the training and a group that did not**. She could use a non-experimental pre- and post-design, comparing all the training groups to their baseline before the training, but Alia recalls that this design, which lacks a non-trained comparison group, is the least likely to allow for attribution of the outcomes to the intervention. So Alia hopes she can use a comparison or control group.

The design that would be most rigorous and allow attribution of outcomes at the facility level to the training is the cluster randomized controlled trial, in which groups of facilities are assigned randomly to the intervention or non-intervention condition. However, Alia recognizes that the training will be provided to facilities rapidly and according to MOH schedules, so the evaluation does not have enough control to implement this design. Since the training will be conducted in different facilities over a period of months, Alia decides to compare trained individuals and facilities which have completed the training first (she calls this the “early-training group”), compared with those which have not yet had the training (the “late-training group”). She wants to compare the 2 groups at 2 different time points: before and after the training is conducted, and will look at several pre- and post- training measures.

Recognizing that the training will begin soon, she knows she will need to act quickly, and consults with her MOH partners to find out about the calendar for rollout of the training, so she can gather baseline (or “pre-training”) data on her early-training group. The MOH has said it wants 10% of the workforce trained within four months, and her OT colleagues anticipate the training will take place over a 4-day period. She sketches out a few key points about her design:

- 2 Groups of individuals and their facilities: “Early-training” (those trained in the first three weeks) and “Late-training” (those trained in weeks 9-11 of the 16 week period).
- 2 Time-points for data collection for both groups: Pre-training and Post-training
- Data to be collected:
 - Individual trainees’ content knowledge related to new ART guidelines (using written test)

- Individual trainees' performance on key competencies related to new ART guidelines (using observation checklist)
- Facility data - new patients on new first-line regimen (extracted from facility records)
- Process measures to address situational factors (using interviews, observation checklist)

Step 6: Plan the Evaluation

Tool: Evaluation Planning Template

Now that she has taken time to understand the objectives of the training and worked through the many factors, considerations, questions and indicators, and designs and methodologies related to her evaluation, Alia can draft her evaluation plan. Together, she and the project manager have benefited from several TEFT tools, using them to guide discussion and frame their needs and concerns. To complete the **Evaluation Planning Template**, she will refer back to all of the tools she has completed and compile them into the template. A sample of Alia's template is below; her answers are represented in italics.

(Sample) Training Outcome Evaluation Planning

Template: Amanga

Title of evaluation:

Outcome Evaluation of in-service training for health care workers on new HIV/ART care guidelines in Amanga

Date of evaluation plan:

30 September 2012

TRAINING INTERVENTION OVERVIEW

Background:

Write a brief description that helps set the context for the intervention. Describe the training and its significance and context (including any existing epidemiological and needs assessment data), target population, and time frame.

The Ministry of Health (MOH) of Amanga revised its national HIV Care and Treatment Guidelines in May 2012. In order to remain in alignment with recent updates from the World Health Organization, it has revised antiretroviral treatment (ART) guidelines, including a change in the first-line regimen of ART medicines. The MOH has determined that the new guidelines must be implemented at all its health facilities, from village health posts and health centers to district and regional hospitals.

The national ART curriculum for health care workers is also being revised to reflect these changes. To quickly prepare the health workforce, the MOH has set a goal of training approximately 3,000 health care workers in the new guidelines within the next 4 months.

Training Program Logic Model:

If you have completed the Training Evaluation Framework Template (Step 1), you may want to refer to your answers now. The relationship between the Training Evaluation Framework Template and a traditional logic model is that the colored arrows on the TEFT template are an expanded version of the outcomes and impact columns on the logic model. If you prefer, you may also complete the whole logic model table, available below.

Planning Template: Logic Model Table

Inputs	Activities	Outputs	Outcomes		Impacts
			Shorter term	Longer term	
<ul style="list-style-type: none"> • Revised curriculum • Experienced trainers • Training program expertise • Funds • Trainees able to take time off work 	<p>Conduct training for 3,000 health care workers on new HIV/ART guidelines including new first-line regimen</p>	<p>3,000 health care workers trained in new guidelines</p>	<ul style="list-style-type: none"> • Trained health care workers have improved knowledge of new ART guidelines, including new first-line regimen • Trained health care workers correctly initiate patients on first-line ART more often • Patients treated by trained health care workers have increased CD4 counts 	<ul style="list-style-type: none"> • Facility-wide procedures are established: health care workers use new pocket guides • Facility-level increase in proportion of patients on new first-line regimen • Facility-level increase in patient CD4 counts 	<ul style="list-style-type: none"> • System-wide procedures are established: health care workers use new pocket guides • Population-level increase in proportion of patients on new first-line regimen • Population-level increase in patient CD4 counts

EVALUATION OVERVIEW

Rationale/significance of this evaluation:

Describe the reason for conducting the evaluation, and the intended use for the information gained in the evaluation.

The new first-line ART medicines are scheduled to arrive in the country within 2 to 3 months. The MOH has indicated that the training should be rolled out to coincide with the arrival of these medicines and must be completed within a period of 4 months. In technical working group meetings, concerns have been raised about the proposed training format, which is to conduct the training for all cadres together, rather than targeting the content based on the role of the provider. Some members are also concerned that the government's new policy doesn't clearly articulate the scope of practice expected for different cadres. Likewise, they worry the policy may not adequately address the varying HIV care and treatment services provided by different types of health care facility, such as health posts and regional hospitals. There are also concerns that if health care workers are not adequately trained, they may provide ineffective counseling on the importance of ART adherence, which could lead to widespread drug resistance, as well as increased morbidity and mortality among patients living with HIV. Thus, there is a significant need to rapidly evaluate the effectiveness of the training on the new ART guidelines to see if the training is effective, and to guide critical decisions regarding next steps for preparing the workforce for the new care practices.

Outcome evaluation questions to be answered:

If you have completed the Questions and Indicators Template (Step 4), you may want to refer to your answers now. If not, take a moment to write down the specific evaluation questions that your evaluation seeks to answer.

Process evaluation questions to answer:

If you have completed the Situational Factors Worksheet (Step 2), review the "What you can do" column for items that you will track during the evaluation process.

What management support is there at the facilities to support or inhibit trainees in performing their newly learned skills on the job?

Are there any issues related to availability of the necessary drugs, supplies, or infrastructure that might impact the trainees in performing their newly-learned skills on the job?

What is the motivation that trainees have to perform their newly learned skills on the job?

Evaluation methods:

Please list the indicators you will be tracking, and who the subjects of your evaluation will be, including sample size. Describe the methods you will use to collect data for the indicators that you chose. You may want to refer to the Question and Indicators Template, as well as the example tables in the Design and Methods Example Tables (Step 5).

Data on knowledge gained will be evaluated using a written pre- and post-training test. There will also be questions related to motivation: The health care workers' intention to perform the newly learned skills on the job.

On-the-job performance will be evaluated using a competency checklist completed during expert observations before training and after the training. The observers will also use a checklist to track several factors that may impact performance, including facility patient load, staffing levels, and availability of key medications, supplies, and infrastructure.

Staff at facilities will be interviewed briefly to confirm the information above and to learn about management support for trainees performing their newly learned skills on the job.

Evaluation design:

Describe the design of your evaluation: Is this an experimental design (with a randomized control group), a quasi-experimental design (with a non-randomized comparison group), or a non-experimental design (with no comparison group)? Are you comparing data across multiple time points (pre-post)? You may want to refer to the Design and Methods Example Tables.

The training will be conducted in different facilities over a period of months. Comparisons will be made between trained individuals and facilities that have completed the training first (the "early-training group"), compared with those that have not yet had the training (the "late-training group"). Several pre- and post-training measures for the 2 groups will be compared at 2 different time points: before and after the training is conducted.

- *Two groups of individuals and their facilities: "early-training" (those trained in the first 4 weeks) and "late-training" (those trained in the last 4 weeks of the 16-week period).*
- *Time-points for data collection for both groups: pre-training and post-training*
 - *Data to be collected:*
 - *Individual trainees' content knowledge related to new ART guidelines (using written test)*

- *Individual trainees' performance on key competencies related to new ART guidelines (using observation checklist)*
- *Facility data: new patients on new first-line regimen (extracted from facility records)*
- *Process measures to address situational factors (using interviews, observation checklist)*

M&E plan:

This table, which is divided into two sections, will help you pull together a number of the decisions you have made for your evaluation plan, including the outcomes you have chosen to evaluate, the indicators you will use to evaluate those outcomes, and the data collection methods you will use.

In section 1, complete the first 3 columns using the decisions you have made and the tools you have already completed regarding outcomes, indicators, and data collection methods. Enter each outcome you have chosen to evaluate on its own row. You may need to insert additional rows, depending upon the number of outcomes you will evaluate.

Next, complete the remaining columns in section 1, further detailing your plans for executing the evaluation.

To complete section 2, you may find it useful to review your entries in the Situational Factors Worksheet. Use this information to complete the columns. This will help you monitor the indicators you will evaluate and address factors that may influence the outcome of the training.

M&E Plan (Section 1 of 2)

Outcomes	Indicators	Methods	Tools/Data Sources	When/ Frequency	Person(s) Responsible
<i>Improved scores on questions related to new guidelines on first-line ART regimens</i>	<i>% increase between pre- and post-test scores among trained health care workers</i>	<i>Written test of content knowledge</i>	<i>Written test given to trainees</i>	<i>Immediately before training and immediately after training</i>	<i>Alia</i>
<i>Increased % of health care workers performing 80% or more correct on prescribing first-line ART using observation checklist</i>	<i>% of health care workers demonstrating 80% or more correct in observation checklist</i> <i>% of newly eligible patients placed on the new regimen</i>	<i>Expert clinicians will observe trainees in patient encounters and score them on competencies related to new guidelines</i>	<i>Observation checklist</i>	<i>Once, before training, and once, within 2 months after training</i>	<i>Alia, Observer</i>
<i>Differences in percentage improvement on pre- and post-test and observation scores among cadres.</i>	<i>Differences among health care worker cadres in % improvement on pre- and post-test and observation scores related to prescribing first-line ART</i>	<i>Expert clinicians will observe trainees in patient encounters and score them on competencies related to new guidelines</i>	<i>Observation checklist</i>	<i>Immediately before training and immediately after training</i>	<i>Alia, Observer</i>

M&E Plan (Section 2 of 2)

Process factors	What will be evaluated	Methods	Tools/Data Sources	When/Frequency	Person(s) Responsible
<i>Management support for trainees performing new skills</i>	<i>Presence, and nature of management support or lack of support for trainees performing new skills</i>	<i>Interviews with trainees and facility staff</i>	<i>Interview guide</i>	<i>Once, during post-training observation activities</i>	<i>Alia</i>
<i>Heavy workload</i>	<i>Patient load at facility</i>	<i>Interview or survey facility staff</i>	<i>Checklist</i>	<i>Once, during post-training observation activities</i>	<i>Alia, Observer</i>
	<i>Staffing at facility</i>	<i>Interview or survey facility staff</i>	<i>Checklist</i>	<i>Once, during post-training observation activities</i>	<i>Alia, Observer</i>
<i>Availability of supplies and medications</i>	<i>Availability of new first-line ART</i>	<i>Interview or survey facility staff</i>	<i>Checklist</i>	<i>Once, during post-training observation activities</i>	<i>Alia, Observer</i>
	<i>Availability of other key supplies and infrastructure</i>	<i>Interview or survey facility staff</i>	<i>Checklist</i>	<i>Once, during post-training observation activities</i>	<i>Alia, Observer</i>
<i>Motivation of trainees to perform new skills on the job</i>	<i>Intention to perform new skills</i>	<i>Questions on pre- and post-training written test</i>	<i>Written test</i>		<i>Alia</i>

Data collection:

In this section, you may want to add more detail on how you will collect the data that you've listed in the M&E Plan. In addition to identifying the source(s) of the data and the person(s) responsible for collection, you may want to detail here how they will be trained, the process for tool development and piloting, when data will be collected, and how it will be transferred for management and storage.

The Monitoring and Evaluation (M&E) Team will provide oversight to all aspects of the evaluation, including distributing consent forms and collecting the forms from each of the participants before beginning the evaluation. The M&E Team will also orient and train observers and collect the filled forms from them.

Data management and storage:

Here you can describe how the data that you collect will be managed and stored. Consider the ethical and practical issues regarding protection of confidential or sensitive data. It may be necessary to clarify whether paper-based data will be stored in locked cabinets, and if electronic data will be in password-protected files.

Data from all evaluation activities will be entered into Microsoft Excel, and transferred to SPSS v18.0 for analysis. Unique identifiers will be generated to ensure confidentiality for the trainees. These data will be managed in an electronic database with limited, password-protected access. The electronic database will be stored in password-protected data files on a password-protected computer at the OT office. Computer files containing the raw and the cleaned data, with no identifying information, will be kept for 6 years after project completion.

Ethical considerations:

Describe any ethical considerations that may require internal review board (IRB) review: Does the evaluation involve human subjects (directly, through records, or through other data or specimens)? Describe any additional review procedures that your project will need to go through. Consider: If data were made public and linked to participants, is it possible that this could cause harm to the individuals?

Protecting privacy/confidentiality: Confidentiality will be protected through securing computer files and de-identifying all data for analysis. The evaluation team will enter into a written agreement with the holder of the key to the code list which matches individual identities with their unique identification codes. The agreement prohibits the holder of the key to the code list from releasing the key to any member of the evaluation team under any circumstances.

Potential risks and benefits: No potential risks to the trainees whose data will be evaluated are anticipated, as the analysis and dissemination of results will be conducted on de-identified data. However, the unlikely possibility of accidental disclosure of information could result in harm to trainees in the form of negative professional or personal perceptions by others, and consequences of those perceptions. The general public may benefit indirectly from the information obtained

through the findings from this evaluation; recommendations regarding the training of health care workers in the new ART guidelines contribute to improved care.

Analysis and interpretation:

Describe how the data will be analyzed, any software to be used, and who will be involved with analysis and interpretation of data.

Multivariate analysis of variance (MANOVA) will be used to describe the outcomes for the 2 groups, across the 2 time points, and any interactions seen with regard to type of facility and cadre.

Dissemination plan:

Describe the audience for dissemination, which information will be shared with whom, and how and when findings will be shared with stakeholders

Upon completion of the evaluation, the findings will be written into a report and first shared with the MOH. In collaboration with the MOH, the report will then be presented in an organized formal gathering to different stakeholders: development partners, donors, and other relevant ministries. The report will also be printed and distributed upon request.

Appendices:

List references cited, if any. Include relevant examples of previous studies related to this evaluation. Attach data collection tools and other documents, such as consent forms, which will be used in the evaluation.

Conclusion

Now that Alia and her colleague have finished the six steps, they have a thorough understanding of the nature of their evaluation. When they next meet with the Amanga Ministry of Health and the Technical Working Group, they'll have a strong framework from which to answer questions. Together, the two will be able to plan an evaluation that contributes to the success of the national ART program and the health of Amanga's citizens.