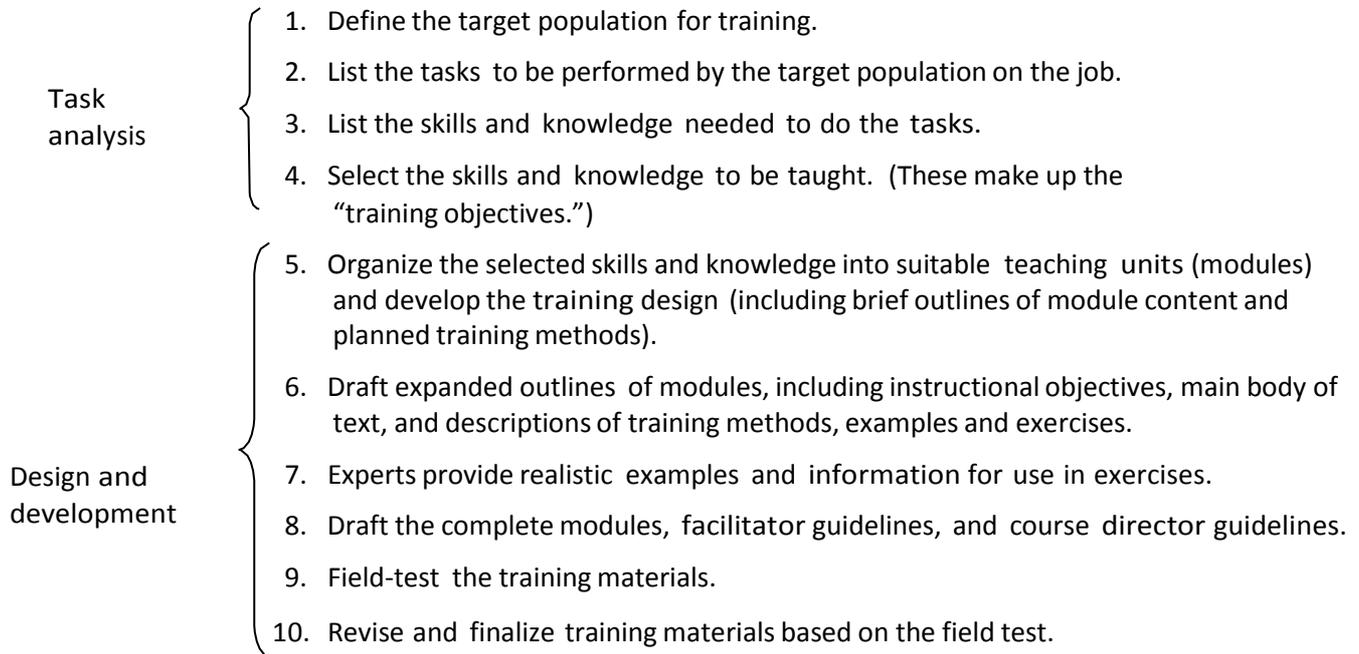## 1. The 10-step process for developing training courses

The process for developing performance-based training includes the following 10 steps. The first four steps constitute the task analysis that is necessary to design and develop relevant, useful training materials. Steps 5–10 constitute the design and development process.

Task analysis

1. Define the target population for training.
2. List the tasks to be performed by the target population on the job.
3. List the skills and knowledge needed to do the tasks.
4. Select the skills and knowledge to be taught. (These make up the "training objectives.")

Design and development

5. Organize the selected skills and knowledge into suitable teaching units (modules) and develop the training design (including brief outlines of module content and planned training methods).
6. Draft expanded outlines of modules, including instructional objectives, main body of text, and descriptions of training methods, examples and exercises.
7. Experts provide realistic examples and information for use in exercises.
8. Draft the complete modules, facilitator guidelines, and course director guidelines.
9. Field-test the training materials.
10. Revise and finalize training materials based on the field test.

1.1 Defining the target population

The target population is the group of learners for whom the training is intended. It is critical to define this group in order to design the training appropriately. For example, training for clinicians would be very different from training for new community health workers, even though they may do some of the same tasks. To define the target population, ask questions such as:

- What are the job titles of the intended participants in the training?
- How were they originally trained for their jobs?
- What are their educational and professional backgrounds?
- Are they still in school or already on the job?
- How are they accustomed to learning?
- What languages do they speak and read?
- What types of health facilities do they work in, and how are these facilities equipped?
- By who are they supervised?
- Is it possible for them to attend a training course away from their jobs?

1.2 Listing the tasks to be performed by the target population

To list the tasks to be performed by the target population, one must know what "good performance" is, in other words, what a good performer would do on the job. To find out, the training developers must have access to:

- technical experts who can accurately describe the job,
- good performers who can be observed doing the job, and/or
- documents and manuals that accurately describe the job.

Through discussion with experts, observations, and review of documents, the training developers develop a step-by-step task list.

1.3 Listing the skills and knowledge needed to do the tasks

For each task involved in a job, the training developers next list the skills and knowledge required to perform the task. **Skills** are generally actions such as measuring, mixing, recording, calculating, communicating, or making decisions. Required **knowledge** is the information needed to do a task correctly.

Example

One task involved in treating patients who have TB is to *Inform the patient and family about TB and directly observed treatment*. One skill required for this task is to *communicate clearly in a supportive way*. Required knowledge includes *the key facts that must be communicated about TB and its treatment*.

Making a list of required skills and knowledge often necessitates more questioning of experts to explore what is involved in each task. The final list of skills and knowledge can be very lengthy, and it becomes obvious that choices must be made about which skills and knowledge are most important to teach.

1.4 Selecting the skills and knowledge to be taught (training objectives)

Experts use a list of criteria to decide which skills and knowledge to include in the training. These will make up the training objectives for the course. The selection criteria may include such factors as the following. The first list below shows factors that would lead to inclusion in the course; the second list shows factors that would suggest that the skill or knowledge could be excluded (not taught) in the course. Some of the factors may be more or less relevant in different situations.

Possible criteria for inclusion

- Many members of the target population lack the skill or knowledge.
- Training (including practice and feedback) is required to learn the skill or knowledge because it is new or difficult.
- The task for which the skill or knowledge is needed is important to the patient's outcome.
- The skill or knowledge is needed frequently.
- It is practical to teach the skill or knowledge in the given training setting.

Possible criteria for exclusion

- The task, skill or knowledge cannot be described specifically and thoroughly enough to be a meaningful part of training. (This may be because of differences of opinion among technical experts, lack of authoritative evidence on how the task should best be done, etc.)
- Teaching the skill or knowledge is not practical in the time or with the resources available.
- Most members of the target population already have the skill or knowledge.
- The task, skill or knowledge is straightforward and could be done correctly after reading guidelines such as a checklist or manual. Practice and feedback are not required.
- The task is done or the skill/knowledge is used infrequently (e.g. it deals with a condition that is extremely rare).
- The task is done differently in different areas or health facilities (must be tailored to a unique setting).
- The task for which the skill or knowledge is needed is of low importance to the outcome of the patient.
- There are substantial obstacles to doing the task (such as lack of equipment, drugs or time) that would prevent health workers from doing the task even if they knew how. These obstacles would have to be overcome before the training could be useful.

- Another training course is available to teach the task/skill/knowledge.

Similar criteria can be used to decide which of the included tasks, skills and knowledge will receive more emphasis and practice in the training course.

Example

In determining skills and knowledge to be included in the *Management of tuberculosis* courses, most of the tasks, skills and knowledge listed for the health facility and district- level personnel were selected to be described in the text, but fewer were selected to be emphasized and practiced. For example, it was decided that the skills and knowledge to conduct special studies *(listed on pages 88–89)* could not practically be taught in the district-level course. In addition, it was not as important to teach these skills and knowledge because special studies are done infrequently at the district level. Some information and sample protocols for special studies were provided in an annex to *Module I: Develop the District Plan of Action for TB Control,* but the skills and knowledge did not receive emphasis in the course and were not practiced.

1.5 Designing and developing the training course

Steps 5–10 of the 10-step process *(page 3)* include designing the training and fully developing the course based on the task analysis.

As part of the design process, the training developers organize the selected skills and knowledge to be taught into logical teaching units called modules. The design for each module includes its training objectives and a brief outline of the information, examples and exercises that will provide opportunities for practice using the skills and knowledge.

Development of each module progresses from the brief design outline, to an expanded outline, to the complete module. Expanded outlines of the modules specify more completely the information and the types of examples and exercises to be provided. For example, examples might be given through pictures, live demonstrations or video. Exercises might include written exercises, group discussions, role plays or clinical practice. To develop realistic examples and exercises, the training developers rely on interviews with technical experts who are familiar with the target population, job setting, tasks and conditions.

Development of complete modules includes preparation of guidelines for the facilitators who will conduct the course. Guidelines for a course director may also be needed. Finally, the modules and associated guidelines are reviewed by technical experts and field-tested with the target population. The training materials are then revised and finalized based on reviews and results of the field test.