Training Best Practices:

TRAINING FOR PROBLEM SOLVING

Introduction

Immunization programs are a complex system of processes that interact with one another—disease and coverage data inform program planning that affects supply chain, social mobilization, and health workforce planning. Immunization programs face many challenges, and achieving goals requires a constant process of problem solving and improvement. Health workers at any level of the system will encounter problems that they are uniquely positioned to solve.

Training for problem solving not only provides new skills but should also help learners see that even the most complex problems can be broken down to manageable pieces. This approach will help encourage and motivate learners to try their new skills—i.e., they will need to behave differently as they implement a new process. Any learners trained in problem solving must have the motivation to go back to their organizations and implement problem-solving initiatives.

In order for learners not to feel overwhelmed by the complex problems they encounter on the job, they will need these behaviors. Learners will need to:

- Use a methodical approach to identify and prioritize problems
- Assemble an appropriate group of stakeholders and participants to work on a problem
- Use some of the specific analysis and brainstorming methods
- Think creatively about solutions
- Structure a systematic way to implement and collect data on solutions

The six effective, proven instructional strategies below will help trainers and managers teach technical staff to solve workplace problems in a methodical way.

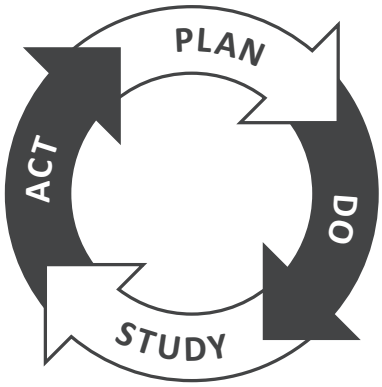
Note: Two other Best Practices guides, Performance Management and Needs Assessment, are also directly related to the strategies here. Performance Management offers excellent thoughts on achieving results, i.e., a “desired state,” within the context of ongoing, continuous learning and problem solving. Needs Assessment helps fine-tune the questions any organization should ask as it considers why certain gaps in performance and outcomes exist.

Strategy #1: Provide a Model to Solve Problems

No one individual or one team can solve all the problems of a complex immunization program. Health workers must learn how to break down a multifaceted problem into smaller components and approach that problem in a methodical way. They will have a much greater chance for success if they attempt a small quality improvement project in their own workplace rather than a large, complex problem that involves multiple levels of the system.

Introduce problem solving by using a model—an illustration of the steps that learners can take to address a problem. Then go through each of the steps in the model, allowing everyone a chance to practice each step. Each step should have an output.

A popular model is PDSA, Plan Do Study Act.



Step	Output
Plan	Improvement plan
Do	Improvement implementation
Study	Monitor results of improvement
Act	Act accordingly

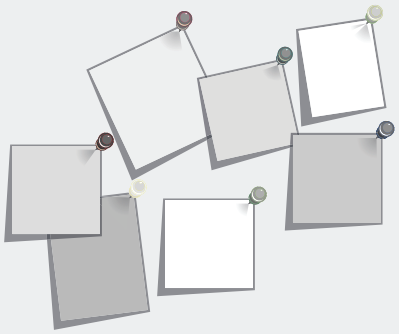
Developed by Associates in Process Improvement

Strategy #2: Make Training Interactive and Concrete

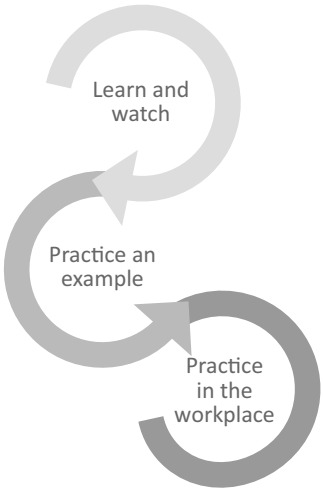
Design training to be highly interactive, focusing on practical examples and exercises. Whenever possible, have learners come in pairs or small teams from their workplace, so that they can work together on a real issue, both in class and when they return to the workplace.

Use lecture as little as possible. Instead, plan the classroom for working in small (4-8) groups or in pairs.

Use recognizable case studies, whenever possible, as a way to teach the steps and methods of problem solving. At each step in the initial learning experience, the facilitator should be able to say, "So, for example…" and show what a step or method looks like in that specific example. While a single case study can be used to introduce the steps and methods, learners will likely need to see multiple case studies to understand the complexities of problem solving.

Instead of:	Use this instead:
"Today will we start with an overview of the problem-solving efforts applied to improving coverage."	"Today we will start with clinic XYZ in the western region. Olivia, the head of the clinic, has looked at the latest coverage data, and she sees that coverage rates are getting worse. She decides that they need to address the problem before it gets any worse. We will work through all the steps in the problem-solving process as we look at Olivia's challenge."
"Here are the components of a typical immunization program."	Learners practice breaking down broad or complex statements ('coverage is low', 'vaccines are not getting to the health facilities timely') into smaller specific pieces and write a problem statement that is specific and actionable.
"Which of the following is NOT a key approach for implementation of the GVAP/RSPI? a) improving monitoring and data quality b) improving human and institutional capacities c) improving vaccine safety and regulation d) promoting implementation research and innovation e) reducing staff at larger sites"	"Here is the result of the brainstorming from Olivia's team. What key themes do you see here?" 
"Who are the stakeholders in an EPI?"	Based on their real-life problem, learners identify the relevant stakeholders, their role in addressing the problem, and brainstorm ways to engage them in solving the problem.

Strategy #3: Take Learners Through the Process Multiple Times



Because problem-solving is a skill, learners likely need more than one exposure to fully understand the whole process. Multiple examples and practice are necessary to communicate the more subtle aspect of problem solving in complex environments.

A progression of learning could be:

Phase	Purpose	Description	Example
1. Introduction (scenario)	Help learners see the whole problem-solving process in a simplified way so they can start building a mental frame of how problem solving works.	Introduce the model. Walk learners through a simple example that shows each step of the problem solving. It could be related to the learners' work context or something familiar but unrelated (e.g., Why does the coffee taste bad?). Then facilitate an exercise for the learners to practice, using fairly simple real-world example.	Facilitator uses the example of "long clinic wait times" to explain each of the steps of the model. Learners practice each step using a simple case such as "monthly reports are late."
2. Practice Case (own problem)	Now that learners are familiar with the model and steps, they can practice applying them to a situation from their own workplace. While it is often not practical to do a full version in a classroom environment, they can do parts of the activity and create plans for when they return to the workplace.	If learners come in teams with their own problems, have them work through the process as much as they can in class. While they might not be able to completely work through the problem in a workshop, they could get a start on the problem solving and continue working on it when back at their workplace. Facilitators can provide a sample case for those participants who did not bring a real world example.	Health facility teams bring a problem about high dropout rates for MCV2. Facilitator provides a fictional case about low community engagement for participants who did not bring a real life problem.

3. Practice in the Workplace	With mentoring and support, learners can be guided through an implementation of the problem-solving process in their workplace. They should be encouraged to pick a relatively simple problem, so they can focus on using the steps and method. Ideally, they should select something that is likely to produce a positive outcome.	Once learners have returned to the workplace, they can work through the problem-solving process with guidance on a fairly simple problem. This will give them the opportunity to practice all the steps in their own context, while keeping the complexity of the problem manageable. Learners may need support and encouragement to continue to use the problem-solving process on more complex challenges.	Trainer encourages the learners to address a relatively simple problem in their workplace, one which is under their control.

Strategy #4: Learners Do Prep Work Ahead of Time

In order for learners to work on their own problems during training, recommend that they do prep work ahead of time and bring their work to training with them. This also prepares them for the learning experience before they enter it. For example, you might have learners think about and complete a short set of questions in advance:

Fill out the following, and bring to class:		
 What potential problems could you address using the problem-solving method?	 Who would you need to involve from your workplace?	 What data sources would you need to use?

Strategy #5: How to Sustain Learning Over Time

Mastering the skills of identifying, prioritizing, and solving problems can be difficult for learners, and they may not have frequent opportunities to practice. (Remember also that in addition to the problem-solving model, they will learn about tools, e.g., fishbone analysis, that are used infrequently.)

Provide reference materials and tools

It is a best practice to provide reference materials, additional just-in-time learning, and/or peer support networks for learners to use for many months after the training has been completed. Many common analysis tools exist freely online, along with helpful explanations and support materials, so support materials can be curated rather than created.

Support managers on the job

In addition, learners may require support and coaching as they attempt to practice their new problem-solving skills. So be sure to provide tools that allow managers to support these learners. Managers may need to have materials that help them:

- Create a plan for when learners will attempt to use the problem-solving methodology.
- Clarify or explain any of the steps or methods used during problem solving.
- Assist in identifying stakeholders who should be involved in the improvement.
- Provide specific feedback using a checklist or rubric.

An excellent resource for assisting managers and supervisors is the Coaching and Mentoring Best Practices guide. It offers a variety of strategies, beyond materials, to help them encourage and support their learners.

Strategy #6: Use Skill-Based, Post-Course Surveys

Because training for problem solving is intended to provide practical skills for use on the job, choose an evaluation method that focuses on the application of skills. Instead of asking about learners' reactions to the material, ask about their level of confidence in implementing it. This can have better predictive validity and can help pinpoint areas where learner need additional practice or support.

Example question:

In regard to the course topics taught, HOW ABLE ARE YOU to put what you have learned into practice on the job?

- ☐ I am NOT AT ALL ABLE to put the concepts into practice.
- ☐ I have GENERAL AWARENESS of the concepts taught, but I will need more training/practice/guidance/ experience TO DO ACTUAL JOB TASKS using the concepts taught.
- ☐ I am ABLE TO WORK ON ACTUAL JOB TASKS, but I WILL NEED MORE HANDS-ON EXPERIENCE to be fully competent in using the concepts taught.
- ☐ I am ABLE TO PERFORM ACTUAL JOB TASKS at a FULLY COMPETENT LEVEL in using the concepts taught.
- ☐ I am ABLE TO PERFORM ACTUAL JOB TASKS at an EXPERT LEVEL in using the concepts taught.

Example from Will Thalheimer's smilesheets.org, used with permission

Annex 1: Resources

Explore these resources for more information about Training for Problem Solving.

Tips and Tools for Learning Improvement
USAID Assist Project
https://www.usaidassist.org/resources/tips-and-tools-improvement-series

7: Cycle of Expertise — Make them practice
John Martin, Karin Spader and Julie Johnson
https://wisc.pb.unizin.org/goodlearningprinciples/chapter/principle-7-the-cycle-of-expertise-van-asselt/

Universal Immunization through Improving Family Health Services—Resources
https://uifhs.jsi.com/resources/

"Tools and Techniques for Process Improvement"
www.businessballs.com/dtiresources/TQM_process_improvement_tools.pdf

Process Improvement Toolbox
www.niatx.net/Content/ContentPage.aspx?NID=18

The IHI Improvement Map
www.ihi.org/offerings/Initiatives/Improvemaphospitals/Pages/default.aspx

Six Sigma tools and templates
https://www.isixsigma.com/tools-templates/