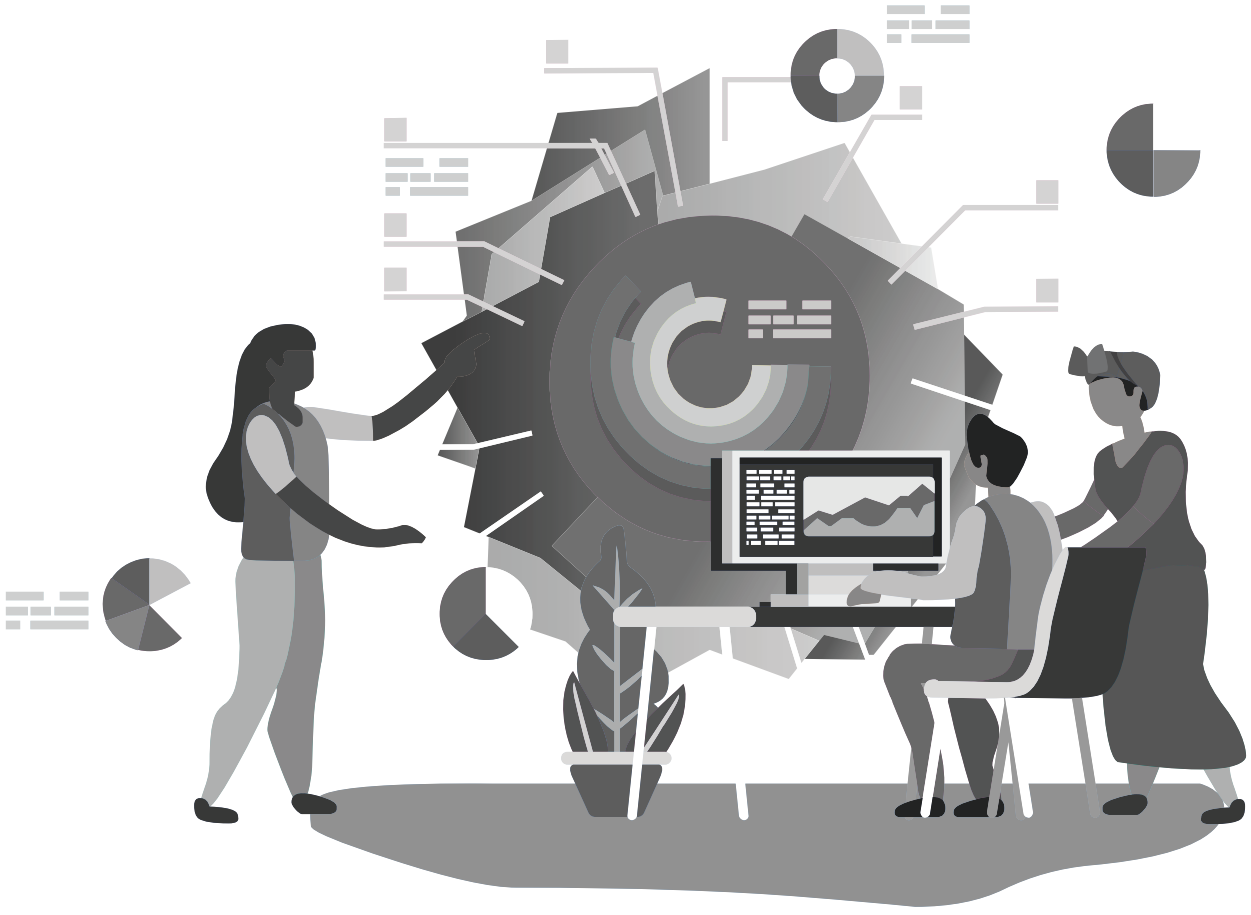
Training Best Practices:

# TRAINING FOR DATA QUALITY AND USE



# Introduction

Without timely, complete, accurate and consistent data (typically submitted through monthly reports), EPI professionals cannot identify performance issues or make informed decisions about how the program can improve. And everyone on an EPI team, not just managers and supervisors, needs this information—high-quality data shows all participants in the immunization system how well the program is working.

However, training staff members to accurately collect, analyze, and use data can be a challenge. Here are some of the issues trainers might face:

- **Lack of motivation:** Staff members might not see the connection or importance of data quality to their own work and program performance.
- **Lack of knowledge:** Staff members might not know what quality data looks like, or they might think their facility data is acceptable as is.
- **Lack of skills:** Staff members might not have the skills to translate their knowledge into the workplace, particularly under the pressures of the EPI program.
- **Lack of appropriate data collection tools:** Staff members might not be supplied with adequate or correct instrumentation.
- **Lack of feedback mechanisms:** Data collectors do not receive feedback on their data reports.
- **Low utilization of data collected due to little or no incentives to use data**

If these issues are not addressed, learners will not engage with the training, and they will return to the workplace without the skills they need to improve data quality. Their monthly reports will be incomplete or inaccurate. As a result, staff members throughout the immunization program will not have the information they need to identify and manage performance issues.

This article will provide instructional strategies for training on data quality and use improvement. In particular, we will focus on four primary objectives that should structure any training on data quality.

- **Learning Objective 1:** Recognize How Data Quality Affects Program Performance
- **Learning Objective 2:** Recognize Quality Data
- **Learning Objective 3:** Analyze Data to Identify Areas for Improvement
- **Learning Objective 4:** Develop Strategies for Addressing Common Problems

Next, we will examine how training can address each objective.

# Learning Objective #1: Recognize How Data Quality Affects Program Performance

**Why?**

Learners first need to understand the value of quality data to the immunization program. Because producing and analyzing quality data can be difficult, some learners will view this as a tedious part of their work day. However, if learners appreciate how the data is used to assess and improve the immunization program—and their own role in the process—they will become more motivated to learn and more able to absorb the training.

**How?**

1. Personalize the process. Provide opportunities for learners to consider and share the impact of quality data, as well as the consequences of poor data. In particular, they should have a clear view of what role they play and how their data impacts their ability to make good decisions. Be sure to read the "Meet the Learners Where They Are" section of the Classroom Delivery Best Practices guide—it offers specific ideas on making learners feel like partners in the process.

2. Provide exercises that put learners in the shoes of their supervisors or staff working at higher levels. Be sure to use detailed, realistic examples of data that will be meaningful to learners. Then give them an opportunity to experience:

    - How their supervisor uses the data to identify problems and how this can benefit people in the learners' position.
    - How their supervisor compiles data into a higher-level report (such as a district or regional report).
    - The amount of data their supervisor receives from the various facilities or districts and the time it takes to check data.
    - The consequences of receiving poor data – and the difficulty of making good decisions without it.

If learners can recognize how data quality impacts program performance and connect this directly to their role, they will be more motivated and likely to improve the data they collect.

**SAMPLE TRAINING ACTIVITIES:**

- **Individual data analysis activity:** Give learners realistic examples of typical data they collect in their roles. Depending on the staff member's level, that might include tally sheets, registers, line lists, stock reports, or monthly reports from facilities. Make sure some of the data is incomplete, then provide a challenge that asks learners to gather and/or analyze the data. Finally, ask them to share their experience with the larger group. What was the impact of poor data?
- **Small group activity:** Assign each group an area of an EPI program (vaccine delivery, cold chain, monitoring, etc.). Have each group name one common problem, then discuss how data would help identify and solve that problem. Each group will then share their situations and data with the larger group.
- **Individual reflection activity:** What would be the possible consequences in your district if data were not required? What would be the possible consequences if every level of EPI collected complete and accurate data?
- **Role-play:** Role-play talking with a health care worker or supervisors, explaining why improving quality data is important.

# Learning Objective #2: Recognize Quality Data

Before learners can produce quality data, they must be able to recognize what it looks like. That means training should not simply define what quality data is—it should help them distinguish between quality data and inaccurate or incomplete data.

**How?**

1. Provide plenty of opportunities for learners to compare high-quality and poor-quality data side by side, using sample data that is typical of their facility or district.

2. It is important that learners identify examples of high-quality and poor-quality data—and explain what makes high-quality data—rather than telling them directly. If they can identify the differences on their own, they are much more likely to translate that skill back on the job.

3. Provide activities for learners to evaluate their own data and come up with ways it can improve.

**SAMPLE TRAINING ACTIVITIES:**

- **Compare:** Show examples of high-quality and poor-quality data. Have learners identify these examples and the strengths and weaknesses of each.
- **Identify:** Based on what they have observed, have learners discuss and list important attributes of quality data. For example, they should quickly determine that quality data is accurate and complete. Learners could develop their own checklist or rubric.
- **Evaluate:** Have learners evaluate their own data. They may use the checklist or rubric they developed on their own to evaluate and record notes to identify areas for improvement. (This checklist could be a valuable job aid to take back to the workplace.)

# Learning Objective #3: Analyze Data to Identify Areas for Improvement

Quality data has little value unless it is used to improve an immunization program. Quality data can identify various types of issues—such as low coverage rates, high dropout rates, or damaged equipment—that helps EPI managers decide where to dedicate time and resources. A key part of training is to help learners understand how to use data for decision-making. That way, they will see that quality data does not end with collection—it also needs to be analyzed and put to use.

**How?**

1. Show examples that illustrate how data can be used to identify and address issues.

2. Once learners understand how they can use data to solve problems, give them many opportunities to practice. Provide a diverse range of case studies that tie back to situations they will encounter in their role.

**Note:**
It can be challenging to craft realistic, meaningful case studies that help learners apply data use, but these exercises are a key element of the training. It may be tempting to simply explain the importance of data use, but unless learners get the chance to practice, they are less likely to build their analytical skills and use them back in the workplace.

**SAMPLE TRAINING ACTIVITIES:**

- **Identify uses:** Have learners identify some of the different ways that data is used to improve program performance.
- **Select appropriate data:** Provide sample questions (training, planning, etc.), and ask learners where they would find the data to guide/support their decision.
- **Suggest ways to improve data collection tools and system:** Ask learners to work in a small group and identify ways that they would improve data-collection tools and systems, in order to better capture good data.
- **Practice:** Provide case studies with sample data (or have learners use their own data) and ask analysis questions, such as:
    - What areas should be prioritized for micro-planning?
    - What are some gaps to be addressed in training?

# Learning Objective #4: Develop Strategies for Addressing Common Problems

Even under normal conditions, producing constistently high-quality data can be difficult. Learners often face additional pressures within the EPI program, such as limited resources and staff turnover, so it is likely they will run into challenges when working with data. Training should help them understand and apply principles for addressing these common problems.

**How?**

1. Invite learners to share the challenges they face when collecting and using quality data. This will help motivate learners and ensure that training focuses on strategies that are relevant and applicable to them.

2. Encourage learners to come up with and share their own solutions for addressing these issues, partnering with a facilitator who can provide guidance. Providing examples for handling problems that they will likely encounter in the workplace is particularly helpful.

3. Let learners practice. Provide plenty of opportunities for learners to demonstrate the strategies they came up with. For situations that involve interpersonal skills, role-playing with difficult situations can help learners practice their strategies.

**Note:**
If training simply lists common problems and solutions, without opportunities for practice and feedback, learners will not develop the skills they need to solve issues on their own. And yet, it can be difficult to simulate the processes and day-to-day challenges of collecting and recording quality data. Taking time to design activities that cover a range of realistic scenarios and encourage interactivity will be absolutely crucial to the success of this training, and indeed to your team's use of data. Consider reviewing the Best Practices documents on "Motivation," "Coaching and Mentoring," and "Learning Transfer" for specific tips on how to effectively design/reach learners where they are now, when they enter training.

**SAMPLE TRAINING ACTIVITIES:**

- **Identify challenges:** Have learners identify some of the different challenges they might face related to data quality (e.g., changing staff attitudes, improving data in low-resource settings, recording/reporting quality data when supervisor is anxious about targets).
- **Develop strategies:** Using the challenges above, have learners write their own solutions. Break them into small groups to discuss and develop a strategy for each challenge, which they'll share with the larger group.
- **Role-play:** For difficult interpersonal strategies, pair off learners and have them role play the situations. Encourage them to write down and share key "talking points" for handling these situations.

# Annex 1: Resources

Explore these resources for more information.

**Immunization Academy Videos on Data Quality**
https://immunizationacademy.com/en/learn

Visit Immunization Academy for short video lessons on data quality, including:

- Assessing Data Quality
- Which Data Should You Check for Quality
- How Well Are You Monitoring?
- Checking the Quality of Monthly Immunization Reports
- How to Evaluate the Quality of Coverage Data
- How to Assess Denominator Data

**Data quality self-assessment (DQS) tool (WHO)**
**http://www.who.int/immunization/monitoring_surveillance/routine/coverage/DQS_tool.pdf**

A toolbox of methods to evaluate the accuracy and quality of immunization monitoring system at district and health unit (HU) levels. This document is intended to guide staff at national and regional levels in adapting the toolbox for diagnosing problems and making improvements in "collecting and using immunization data at the national, provincial, or district levels."