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Integrating monitoring and evaluation with quality improvement

Overview

Effective monitoring and evaluation (M&E) systems are critical elements to assess whether your programs are being implemented as planned and are achieving your goals and objectives. You will need to know how to make the data you collect usable and as useful as possible for decision-making within your organization.

This brief practical overview focuses on collecting high quality data, the first step to informing further practice and improving the quality of your services. If the data do not reflect reality, if they are incorrect or incomplete, you will be unlikely to identify service or program gaps, and also measure them. Once you have regular
data quality assurance processes in place, you can train frontline workers to engage other stakeholders on both the successes and challenges that the data provide.

**Data collection: working with high quality data**

To ensure data quality, PIH has been using one approach, the 4Cs, adapted from the International Rescue Committee:

- **Completeness.** Are all the data expected to be there, really there? Some examples: Are all the districts represented? All the facilities represented?

- **Correctness.** Are the data logically possible? Some examples: Are there pregnant men? Women whose deaths occur in the future?

- **Consistency.** Although the data may be technically possible, they are unlikely in the given context. Some examples: Are there dramatic spikes from one month to the next? Is there an implausible number of preferential end digits in the data (e.g. zeros and fives)?

- **Concordance.** Is there fidelity between the same programmatic data from different sources? In PIH, the data in the electronic medical record (EMR) system should match those on paper.

We have found that these Cs help staff gain confidence about the quality of data they are working with; if the data do not conform to the 4 Cs, they question the data and the validity of any analysis based on them.

**Budgeting for M & E**

Organizations vary in the amount of funds they devote to M&E activities, depending on their size and aspirations. In assessing the costs for these activities, it is helpful to distinguish between monitoring, little ‘e’ evaluation, and big ‘E’ Evaluation:

- **Active monitoring:** The routine integration of the collection and utilization of data that will help a program know if they are doing what they say they are doing.

- **Little ‘e’ evaluation:** Evidence that some things are happening, such as numbers of patients getting appropriate or quality care, or decreasing rates of a specific condition/disease. The aim here is not to assign attribution or reasons for certain occurrences. Rather, the evidence should show that things are going in the direction that is expected, and that the data will drive directly into quality improvement in clinical and non-clinical areas.

- **‘Big E’ Evaluation:** Evidence of the larger impact of the program, using tools such as random household surveys, etc.
When allocating funding to these activities, consider the variety of tasks for which staff will be needed: ensuring data quality, data analysis and interpretation, and communication. Without staff to carry out these tasks, it will be difficult to ensure that the data are both usable and are used for decision-making to improve quality.

**Utilizing data and feedback loops**

Many organizations collect a variety of data, but there is a danger of “paralysis by analysis”, when there are too many data and too many indicators at once. Then it is difficult to be an intelligent data consumer and decide what to act on. You can help your organization use the data better by:

- Developing data dashboards
- Training people on how to interpret and communicate data.

**Data dashboards**

A dashboard is a visual presentation of critical data in summary form, commonly associated with Excel spreadsheets. With a dashboard, the data come directly at the user and drive home key trends, such as increases in volumes or variations in coverage. For example, PIH developed a dashboard for cross site indicators for its HIV programs. It tracks the program from quarter to quarter, showing the total number of active patients in each country’s program, broken down by ART (antiretroviral therapy) and pre-ART patients. Another graph on the dashboard shows the coverage of services for those patients, such as recent visits and CD4 counts. The goal of the dashboard is to provide a quick look at how many people are being served, the volume of programmatic activity, and some metrics of how well the program is doing.

People can also use the dashboard to break out data at individual facilities. This enables them to see those health centers that are excelling and others that have challenges. It provides people with opportunities to learn from those health centers that are doing well and how they can help those who are having difficulties.

With a dashboard, no data is hidden. The dashboard can appear as the front page of an Excel workbook, but people can always dig deeper into the data. Sometimes when people are given a table, they get lost in numbers, but with a dashboard, people can focus on key takeaways from the data, making the data much more actionable.

**Training**

A big challenge for many organizations is ensuring that the data is fed back to the decision-makers who can affect change. People can create dashboards and highlight areas to focus on, but the concern is how to involve clinical and non-clinical staff to use the data to improve programs. At PIH, training takes place in two phases:
Phase 1: Training people in how to look at data, starting at a basic level with Excel and with dashboards. What do the data mean?

Phase 2: Training people in how to talk about the data. People need to practice how to look critically at data, interpret their messages and communicate them to different audiences.

Although it is possible to automate some tasks with dashboards and spreadsheet applications, people need more practice in thinking about how to communicate what the data mean. For example, during the training sessions, some questions you may want to ask participants include: What if the data is not complete? How do you implement the 4Cs? If the volume of case reporting has dropped, to whom do you deliver feedback? How do you talk about it with a clinician? How do you talk about it with an official from the Ministry of Health?

PIH uses role playing exercises in which participants are asked to give messages to different audiences about the data. Breaking bad news is particularly difficult for most people and it is worthwhile practicing scenarios with different audiences.

Challenges of staff interaction

Another big challenge for organizations is how to ensure that time is allocated for training and giving feedback to colleagues. An accountability structure is important for both those who give the feedback as well as those who should be acting upon it. Structuring both of these tasks into people’s job descriptions is critical for these processes to become matters of practice.

Building capacity through training and developing best practices of staff feedback require a sustainable plan that provides a cadre of people who can take on the task of training others. The model PIH uses in providing support to staff at the sites includes:

- **First year**: help people on the ground to carry out M&E activities
- **Second year**: train people to do it better, and build their capacity
- **Third year**: trained people train others, and build their capacity

Becoming a learning organization

Developing best practices around collecting and feeding back data for action provide learning opportunities, especially when the data show that certain interventions did not have successful outcomes. Learning from experience can help an organization transform itself into a learning organization. The medical community has been doing this for quite a while, encouraging people to share what did not work and to better understand how it can be done better. This is why M&E is always most effective when it is integrated under the umbrella of quality improvement.
TIPS

 ✓ Use the 4C approach to ensure your data is high quality:
   
   • **Completeness**: Are all the data expected to be there, really there? Some examples: Are all the districts represented? All the facilities represented?
   
   • **Correctness**: Are the data logically possible? Some examples: Are there pregnant men? Women whose deaths occur in the future?
   
   • **Consistency**: Although the data may be technically possible, they are unlikely in the given context. Some examples: Are there dramatic spikes from one month to the next? Is there an implausible number of preferential end digits in the data (e.g. zeros and fives)?
   
   • **Concordance**: Is there fidelity between the same programmatic data from different sources? In PIH, the data in the electronic medical record (EMR) system should match those on paper.

 ✓ Consider the variety of tasks for which staff will be needed: ensuring data quality, data analysis and interpretation, and communication.

 ✓ Role play exercises help people practice how to communicate messages about the data to different audiences. These tools can increase skills and confidence in giving feedback.

 ✓ M&E activities are most effective when they are integrated into quality improvement. Use the data to understand how your organization can improve services and programs and do better in the future.