Data collection is a crucial step in the process of measuring program outcomes. By measuring outcomes, an organization can better recognize the effectiveness and value of its programs, and pinpoint where changes or improvements need to be made. Before collecting data, your organization should have a solid understanding of the purpose of the program you wish to evaluate. You should have a working logic model that identifies your desired outcomes, the resources and activities necessary to accomplish these outcomes, and a detailed list of the specific measures you will take to implement them. Once this piece is complete, you can begin gathering relevant data through surveys, interviews, focus groups, or other methods.

Valid and reliable data is the backbone of program analysis.  Collecting this data, however, is just one step in the greater process of measuring outcomes.  The five steps include:

1. Identify outcomes and develop performance measures.
2. Create and implement a data collection plan (discussed in this lesson).
3. Analyze the data.
4. Communicate the results.
5. Reflect, learn, and do it again.

**Data Collection Methods**

Your data collection process will include attention to all the elements of your logic model: what resources you had available, what activities you actually provided, how many of each output you delivered, and to what degree you accomplished your outcomes. In collecting indicator data, you are likely to use one or more of these four methods: surveys, interviews or focus groups, observations, and record or document review. In selecting the best method for data collection, you will need to consider the type of information you need; the method’s validity and reliability; the resources you have available, such as staff, time, and money; and cultural appropriateness, or how well the method fits the language, norms, and values of the individuals and groups from whom you are collecting data.

**Validity and Reliability**

Validity and reliability are two critical concepts in implementing effective outcome measurement systems. These concepts can be illustrated through the example of a bathroom scale. Let’s say Jennifer weighs herself every day and finds that the scale always reads 150 pounds. Assuming she is not losing or gaining weight and that she actually does weigh 150 pounds, then the scale is valid and reliable. It’s valid because it displays an accurate reading, and it’s reliable because it displays this reading each time it’s used. The scale could be reliable without being valid. For example, if Jennifer’s weight is displayed each day as 135 pounds, then the scale is not providing a valid reading because the number is not accurate. It doesn’t measure Jennifer’s true weight. If, however, the scale always reads 135 pounds, and she is not gaining or losing weight, then it is still reliable because it reflects a consistent reading.

**Validity is the accuracy of the information generated.**

The primary advantage of surveys is their cost in relation to the amount of data you can collect. Surveying generally is considered efficient because you can include large numbers of people at a relatively low cost. There are two key disadvantages: First, if the survey is conducted by mail, response rates can be very low, jeopardizing the validity of the data collected. There are mechanisms to increase response rates, but they will add to the cost of the survey. We will discuss tips for boosting response rates later in this lesson. Written surveys also don’t allow respondents to clarify a confusing question. Thorough survey pre-testing can reduce the likelihood that problems will arise.

**Reliability refers to consistency.**

Reliability can also be thought of as the extent to which data are reproducible. Do items or questions on a survey, for example, repeatedly produce the same response regardless of when the survey is administered or whether the respondents are men or women? Bias in the data collection instrument is a primary threat to reliability and can be reduced by repeated testing and revision of the instrument.

You cannot have a valid instrument if it is not reliable. However, you can have a reliable instrument that is not valid. Think of shooting arrows at a target. Reliability is getting the arrows to land in about the same place each time you shoot. You can do this without hitting the bull’s-eye. Validity is getting the arrow to land on the bull’s-eye. Lots of arrows landing in the bull’s-eye means you have both reliability and validity.