

Setting Up a Data System

Practical tips for AmeriCorps grantees

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May 22,
2018

Virginia Volunteerism
and Service Conference

Richmond, VA



Elements of a Strong Data Collection System

A strong data collection system should document how you will obtain, store, and use data. You should consider:

- *What* data will be collected
- *What* are your sources of data
- *Who* will collect data
- *When* data will be collected
- *What* data collection instruments and techniques you will use
- *How* data will be cleaned and checked for consistency and accuracy
- *How* data will be stored and protected
- *How* data will be analyzed and used for program improvement



What Data Will Be Collected

It is useful to break down data into “**indicators**,” which are the specific, observable data you collect based on your logic model. Indicators can be quantitative or qualitative.

- **Quantitative data** are used to answer “counting” questions. These data can be mathematically analyzed.
- **Qualitative data** are used to answer “how” or “why” questions.

What Data Will Be Collected

Choosing indicators for inputs, activities, and outputs

Can you think of some examples of **quantitative** indicators for inputs, activities, and/or outputs of your program?



What Data Will Be Collected

Can you think of some examples of **quantitative** indicators for inputs, activities, or outputs?

Input Indicator: The number of community partners providing space for your program

Activity Indicator The number of financial education seminars led by AmeriCorps members

Output Indicator: The number of students who completed tutoring sessions.



What Data Will Be Collected

Choosing indicators for inputs, activities, and outputs

Can you think of some examples of **qualitative** indicators for your inputs, activities, or outputs?



What Data Will Be Collected

Can you think of some examples of **qualitative** indicators for inputs, activities, or outputs?

Input Indicator: Community partners' reasons for participating your program.

Activity Indicator: Participants' perceptions about components of seminars they found most useful

Output Indicator: Attributes of students with good attendance compared to those who dropped out of your program



What Data Will Be Collected

Choosing indicators for short-, medium-, and long-term outcomes

Indicators for outcomes usually measure changes in *knowledge, attitudes, behavior, or conditions*

Can you think of some examples of **quantitative** indicators for outcomes?



What Data Will Be Collected

Can you think of some examples of **quantitative** indicators for outcomes?

- Students reading skills before and after they complete a year of tutoring
- Household savings before, immediately after, and one year after participating in a seminar on budgeting.

What Data Will Be Collected

Do you think **qualitative** indicators can be used for outcomes? Why or why not?



What Data Will Be Collected

Do you think **qualitative** indicators can be used for outcomes? Why or why not?

Yes, you can use qualitative indicators to measure outcomes. Even though you cannot show statistical differences across time with qualitative indicators, you can still *learn* about changes in outcomes using qualitative indicators.

Examples:

- Students reflections about *how or why* their knowledge and skills have changed after they participate in tutoring
- Families perceptions about *how or why* they manage their household finances differently after participating in a seminar on budgeting

What Are Your Sources of Data

We've already talked about some potential sources of data when we talked about indicators. Can you think of some potential **data sources** for learning about AmeriCorps programs?



What Are Your Sources of Data

We've already talked about some potential sources of data when we talked about indicators. Can you think of some potential **data sources** for learning about AmeriCorps programs?

- Community partners
- AmeriCorps members
- Program beneficiaries

In your evaluation plan, be sure to specify your source of data for every indicator.



Who will collect data

You should specify who is responsible for collecting data

- You may have different individuals collect different data. Consider whether the person collecting data may introduce bias (or perception of bias) while collecting data.
 - For example, AmeriCorps members may collect sign-in sheets or administer pre/post tests, while an external evaluator may carry out observations and/or facilitate focus groups

You also should describe how data collectors will be trained, such as:

- An overview of what data to be collected and the data collection schedule
- A description of the data collection instruments
- Practice with data collection instruments
- Instructions for submitting data and protecting personally identifiable information



When Data Will Be Collected

You should specify what points in time, including the date, when you will gather data. You may want to collect data:

- **Before your intervention**

- You can collect baseline data before your intervention so you have a comparison point.

- **During your intervention**

- Some data are easier to collect during an intervention, such as sign-in sheets or observations.

- **Immediately after your intervention**

- Collecting data immediately after your intervention can help you measure the short-term effects of your intervention, such as changes in knowledge.

- **After a period of time has elapsed after your intervention**

- The medium and long-term outcomes in your logic model may not manifest immediately after your intervention.
- You may also be interested in whether short-term outcomes persist over time.



What Data Collection Instruments To Use

Your should specify what *instruments* you will use to collect data, e.g., a survey, an assessment, or an interview protocol.

- **Look to see if there are existing, validated instruments you can use. You may be able to make slight modifications to an existing instrument to fit your program model.**
 - Look on the CNCS Evidence Exchange to see if there are evaluation reports in your focus area that used an instrument that would be relevant to you.
- **If you cannot find an existing instrument, then you can create a new instrument.**
 - If you are using a new instrument, consider pilot testing it with a subset of participants. A pilot test can help you determine whether participants understand the instrument (e.g., the language or terminology), how long it takes to administer, and whether the data it yields are useful.

How data will be cleaned and checked

Describe a systematic process for ensuring high quality data.

Check for:

- **Completeness**—Surveys are completely filled out, sites have provided all their data, etc
- **Consistency**—Sites and/or data collectors are using the same instruments and methods to collect data. For example, if you are administering pre/post tests, make sure everybody has the same amount of time to complete the tests.
- **Accuracy**—There are no typos or illogical answers. For example, if a survey asks respondents to use a 1-5 point scale, check that nobody accidentally entered 6.
- **Verifiability**—Describe how you will be able to confirm data, for example, by maintaining a paper copy of surveys.

How Data Will Be Stored and Protected

You should specify how you will store and protect data.

- If you are collecting data in hard copy (e.g., paper surveys), note how you will transfer to electronic form.
- If you are collecting data from multiple sources, then you should describe how you will merge data.
- If you are collecting personally identifiable information (PII), then make a note how you plan to protect these data, such as by using password protected files.
- You should also note how long you intend to store data, and when and how you plan to destroy data after your evaluation is complete.

How Data Will Be Analyzed And Used For Program Improvement

Common types of data analysis include:

- Comparing output data to your targets
- Measuring changes in knowledge, attitude, or behavior at different points in time and/or among different subsets of participants
- Identifying themes or patterns among stakeholders' perceptions about program components.

Next, we'll discuss how you could use these data for program improvement.



How Data Will Be Analyzed And Used For Program Improvement

Suppose your attendance data show that your housing services is not reaching as many people as planned? How could you use these data?



How Data Will Be Analyzed And Used For Program Improvement

Suppose your attendance data show that your housing services is not reaching as many people as planned? How could you use these data?

- Change your recruitment strategy
- Hire more outreach coordinators
- Loosen eligibility restrictions



How Data Will Be Analyzed And Used For Program Improvement

Suppose you surveyed AmeriCorps members and they did not feel prepared to implement your tutoring intervention? What could you do?



How Data Will Be Analyzed And Used For Program Improvement

Suppose you surveyed AmeriCorps members and they did not feel prepared to implement your tutoring intervention? What could you do?

- Increase the duration of training AmeriCorps members receive
- Change the way members are trained
- Adjust recruitment strategies for AmeriCorps members



How Data Will Be Analyzed And Used For Program Improvement

Suppose you found that your financial literacy intervention did not improve participants knowledge about budgeting as much as you hoped. What could you do?

How Data Will Be Analyzed And Used For Program Improvement

Suppose you found that your financial literacy intervention did not improve participants knowledge about budgeting as much as you hoped. What could you do?

- Change the topics covered by your intervention
- Provide additional training to AmeriCorps members who deliver the intervention
- Add activities and examples to your intervention.