



Building Effective Data Collection Plans

October 12, 2017



Welcome!



Thank you for joining today's session.

We will get started in just a few minutes.

Please be sure to call 800-369-1984 to hear the audio; the passcode is 4393512.

AmeriCorps | Senior Corps | Volunteer Generation Fund

Corporation for
NATIONAL &
COMMUNITY
SERVICE ★★ ★

Technology Check

- During the presentation, the phone line will be muted. We will unmute the line to take questions during the presentation.
- Please open the Conversation box in Skype. Click the icon in the lower left of the screen to open the feature. Let's test this by typing a short greeting to your colleagues.
- Today's presentation is being recorded and will be posted on the National Service Knowledge Network:
www.nationalservice.gov/resources

Today's Presenters

- Sarah Foster, Assistant Program Officer
- Rob Glazier, Senior Program Officer
- Jamie Welch, Program Officer
- Colin White, Program Officer
- Sarah Yue, Program Officer

AmeriCorps | Senior Corps | Volunteer Generation Fund

Corporation for
NATIONAL &
COMMUNITY
SERVICE ★★ ★

Welcome to today's presentation.

Session Goals

- Participants will learn how to develop data collection plans and systems that result in high-quality programmatic data
- Participants will gain insights about how to use data collected by their program to support continuous learning and program improvement



Corporation for
NATIONAL &
COMMUNITY
SERVICE

AmeriCorps | Senior Corps | Volunteer Generation Fund

At the end of today's training, our goal is to have you all walk away knowing how to develop effective data collection plans, as well as have a **deeper understanding** about how to use the data collected to not only improve your program but support continuous learning within your organization.

For those of you who have read the 2018 NOFO, you will notice that these elements are a key part of the Evidence Quality and Evaluation Capacity section of the NOFO.

A learning organization is an organization that creates, acquires, and transfers knowledge, and modifies its behavior to reflect new insights (data / information collected via performance measurement and evaluation).

Session Outline

- Purpose and importance of data collection
- Process/best practices for developing data collection plans
- Sample data collection plan development
- Resources to help with data collection plan development



Corporation for
NATIONAL &
COMMUNITY
SERVICE

AmeriCorps | Senior Corps | Volunteer Generation Fund

During today's session, we will review both the purpose and importance of data collection;

Dive into processes and best practices for developing data collection plans;

And walk through a sample data collection plan.

At the end we will share CNCS resources as well as provide a time for questions.

Data

- **Data: The raw material used to measure your performance**
 - Data collection occurs as a planned process that involves recording information in a consistent way
 - Data collection involves multiple steps that take place throughout the lifecycle of the grant. Data collection is not an end in itself



Corporation for
NATIONAL &
COMMUNITY
SERVICE

AmeriCorps | Senior Corps | Volunteer Generation Fund

What is Data?

Data is the raw material (numbers, pieces of information) used to measure your performance.

Collecting these various pieces of information should be part of a detailed plan rather than something the organization does on the fly.

Establishing plans and processes is key - as data collection involves a number steps that are going to take place at various points throughout the grant lifecycle (selecting the data you want, creating and administering instruments, analysis, who is responsible for initiating/completing action items, etc.).

Therefore it is essential that these steps and how they will be accomplished are planned in advance.

Goals of Data Collection

- Provide a sound basis for decision making
- Improve service quality and outcomes
- Increase accountability
- Tell your story in a more compelling way



Corporation for
NATIONAL &
COMMUNITY
SERVICE ★★ ★

AmeriCorps | Senior Corps | Volunteer Generation Fund

Some of the goals, or better yet, benefits that can come from collecting high-quality data are:

1. High-quality data provides a sound basis for making decisions about how to manage your program.
2. High-quality data can provide trustworthy and useful information about the effectiveness of program services and practices. This information can be used to modify the service delivery process in ways that are more likely to promote desired service outcomes.
3. You increase accountability when you report results that are based on high-quality data.
4. High-quality data can be used to showcase your program's achievements.

Steps in a Data Collection Plan

1. Select data to collect
2. Identify data types and sources
3. Select or develop instruments
4. Identify data collectors
5. Set a schedule for data collection
6. Set up systems for data storage
7. Train data collectors
8. Pilot-test data collection
9. Implement data collection
10. Analyze collected data
11. Use data to improve your program



Corporation for
NATIONAL &
COMMUNITY
SERVICE ★★ ★

AmeriCorps | Senior Corps | Volunteer Generation Fund

Here are the steps of creating a data collection plan that we will exploring today.

Select Data to Collect

- Based on program's Theory of Change
- Should tell effective story of program impact
- Must be measurable within the program year



AmeriCorps | Senior Corps | Volunteer Generation Fund

Corporation for
NATIONAL &
COMMUNITY
SERVICE

The first step is selecting the data you want to collect.

It is essential that the data you select be logically linked to program activities and desired outputs/outcomes. How do you determine what data you need to collect?

The first place to start would be to take a look at your logic model (a logic model is a visual representation of the applicant's theory of change) as it will identify a good portion of the data you need to collect—including data about outputs and outcomes.

Programs should not select “low hanging fruit” when choosing data to collect. You want to make sure the data you are collecting are those piece of information that tell the story of the program impact.

Another key step is to make sure that the outcome data is measurable within the program year.

Identify Data Sources

- **Data source:** The person, group, or organization that has information to answer measurement questions.
 - Must be appropriate for type of data to be collected
 - May be existing (secondary) data or new (primary) data
 - Consider pros and cons of different sources: accessibility, cost, staff time, ethics
 - *Note: some national performance measures have required data sources*



Corporation for
NATIONAL &
COMMUNITY
SERVICE ★★ ★

AmeriCorps | Senior Corps | Volunteer Generation Fund

Once you have identified that data you want to collect, the next step is to identify the sources of that information.

Data sources would include those individuals, organizations/agencies – schools, local/state govt. etc. - that are able to answer your measurement questions.

A great way to do this is to create a list of as many data sources as possible. As you go through this list, think about the pros and cons of each source, taking into account the quality and objectivity of the source as well as the type of change you are looking to measure.

For example:

Students could be a source of information regarding their knowledge increases, but so could a school. Which is going to provide you with a greater quality and objectivity?

If you opt into CNCS's National Performance Measures, you may find that we have designated a required data source.

Select or Develop Instruments

- Instrument considerations:
 - Must be suitable for type of change to be assessed
 - Should measure objective change: pre-post measurement is preferable to post-only
 - Should use simple and clear language that does not bias the response
 - Must be appropriate for the age, education, and language of the respondents
 - Should produce data that can be easily compiled and aggregated for reporting
 - *Note: some national performance measures have required instruments*



Corporation for
NATIONAL &
COMMUNITY
SERVICE

AmeriCorps | Senior Corps | Volunteer Generation Fund

Whether you select an existing tool or develop your own, here are some key considerations for reviewing and designing a tool:

- Make sure the tool is suitable for type of change to be assessed – **meaning if your program wants to measure changes in physical activity among program beneficiaries, a program satisfaction survey is not appropriate. This also includes making sure the set of questions covers relevant aspects of your outcome. For example, if your mentoring program seeks to change how students feel about school, doing homework, and interacting with teachers, then the instrument should include questions addressing each.**
- From CNCS's perspective, pre-post measurement is preferable.
- Instruments should use simple & clear language that does not bias the response – **for example the leading question, “Has the mentoring program improved how you feel about going to school?” introduces a subtle positive bias by framing the issue in terms of “improvement”.**
- Instruments are not always a one size fits all. **Make sure they appropriate for the age, education, and language of the respondents. This includes not using insider terminology/acronyms.**
- Instruments should produce data that can be easily compiled and aggregated for reporting

Instruments and Data Quality

- Validity: The data mean what they are supposed to mean
- Completeness: Everyone is reporting a full set of data
- Consistency: Everyone is using the same data collection methods
- Accuracy: The math is done right
- Verifiability: There is proof that the data is correct



Corporation for
NATIONAL &
COMMUNITY
SERVICE ★★ ★

AmeriCorps | Senior Corps | Volunteer Generation Fund

When selecting your instrument you want to keep in mind the elements of data quality.

CNCS has a number of presentations/resources regarding data quality, so we are not going to take a deep dive here reviewing these elements.

Types of Instruments

- For measuring outputs:
 - Tracking Sheet: Used to document service delivery or participation
- For measuring outcomes:
 - Survey: Written questionnaire completed by respondents
 - Interview: Interviewer poses questions and records responses; face-to-face or via telephone
 - Observation: Observer records behavior or conditions using via checklist or other form
 - Standardized Test: Used to assess knowledge



Corporation for
NATIONAL &
COMMUNITY
SERVICE

AmeriCorps | Senior Corps | Volunteer Generation Fund

There are various instruments programs can select from.

Typically for outputs you are counting amount of service (number of people served, products created, or programs developed), and thus tracking sheets/log are commonly utilized.

When you are trying to demonstrate change, different instruments are better suited to collect different types of information.

When looking measuring changes in knowledge, attitude, behavior and condition, surveys and interviews can be utilized.

Changes in behavior or condition can also be captured using observation tools.

Standardized tests are tools that are commonly used to measure changes in knowledge.

These are just a few examples of types of instruments; perhaps you are using others such as focus groups, participant journals, etc.

Surveys: can take a while to create a valid/reliable tool, but very easy to use and analyze

Interviews: Require trained, skilled personnel; can provide data that cannot be gathered through surveys

Creating New Instruments vs. Selecting Existing Instruments

- New instruments:
 - Pros: Can be tailored exactly to your intervention, beneficiaries, and outputs/outcomes
 - Cons: Creating a high-quality instrument can be expensive and time consuming
- Existing instruments:
 - Pros: No need to “reinvent the wheel”; validity and reliability may have already been verified
 - Cons: May cost money or be more difficult to access: may require modification to fit your program model



Corporation for
NATIONAL &
COMMUNITY
SERVICE

AmeriCorps | Senior Corps | Volunteer Generation Fund

Beyond some of the consideration addressed earlier, there are some additional benefits and limitations when it comes to using an existing instrument or creating a new one.

With new instruments you have the option of tailoring the tool to your program. However, creating a high quality tool from scratch can be time consuming and expensive. Depending on one’s financial resources this option may not be possible.

Existing instruments save you time from having to reinvent the wheel and going through the trial and error of creating a valid and reliable tool. **There are a lot of high-quality instruments out there that you can use.** Do your research to learn what these instruments are. Don’t assume that just because the tool exists its validity and reliability have been verified.

Creating or identifying valid and reliable instruments are essential: not only do you get strong data, but in many cases you can use the tool you created later on when conducting an evaluation.

Key Points

-  The benefits of collecting high-quality data include providing a sound basis for decision making, improving service quality and outcomes, increasing accountability, and telling your story in a more compelling way
-  Your Theory of Change, and the key measurement questions embedded in it, are essential guides
-  The type of data to be measured influences decisions about sources, methods, and instruments



Corporation for
NATIONAL &
COMMUNITY
SERVICE ★★ ★

AmeriCorps | Senior Corps | Volunteer Generation Fund

In review –

There are enormous benefits to collecting high-quality data – it provides a sound basis for decision making, improves service delivery, increases accountability, and provides for a more powerful / impactful story.

Your theory of change is going to serve as your road map throughout this process.

And the data that you need to collect will inform decisions about data sources, methods and instruments.

Activity



Data Collection Plan Outline

Instructions: For each data point collected by the program, fill in the requested information in the relevant column. Note that the "logic" of the document flows from top to bottom, so the information entered builds upon the data / information that was entered in the cell directly above.

	<i>Example data point</i>	Data point #1	Data point #2	Data point #3
Data to be collected	<p><i>Outcome: number of beneficiaries who demonstrate improved knowledge of [X]</i></p> <p><i>Improved knowledge: score increase of 10% or more from beginning to end of program</i></p>			
Source of data	<p><i>Beneficiaries: economically disadvantaged residents of community [Y]</i></p>			
Instrument type and description	<p><i>Pre-post-test: a 25-question multiple-choice assessment created and field-tested by researchers at ABC University that measures knowledge about [X]. The same instrument is used for both the pre- and post-test.</i></p>			

18

AmeriCorps | Senior Corps | Volunteer Generation Fund

NATIONAL & COMMUNITY SERVICE ★★★★★

We have developed a resource to accompany this webinar: it's an outline that you can use to develop a data collection plan for your own program. The slide shows a screenshot of this outline.

We will post the outline on the Knowledge Network alongside the recording of this webinar, and the outline is also available on the Grantee Symposium website under the Building Effective Data Collection Plans workshop session.

For now, we're going to use this tool to develop a data collection plan step-by-step for a sample (imaginary) program called Safer Cities AmeriCorps. While the focus and design of this sample program is likely to be different than your own program context, hopefully you can take some of the thought processes and considerations from this activity and apply it to the work that you do around data collection and program improvement.

Example Program Description

The Safer Cities AmeriCorps program is designed to help increase public safety and improve police officer-community relations in five medium-sized U.S. cities. During the ten-month program year, 20 half-time AmeriCorps members will develop activities to connect police officers with community members, including school presentations and informal sports events at neighborhood parks. Members will also work with local civic and community organizations to share information about home and car safety tips, setting up neighborhood watch programs, and other potential strategies to reduce local crime rates.

Guiding Questions, Part A

1. What performance measure output and outcome data would you recommend that the program collect?
2. What source(s) should the program use for these data?
3. What instrument(s) should the program use for data collection?

We will be developing the data collection plan for this sample program in three parts. For Part A, we will use as our guiding questions the first three topics covered in this webinar. These questions are shown on the slide.

Question 1: Output and Outcome Data

	Data point #1: Output	Data point #2: Outcome
Data to be collected		

Essential Considerations:

- At least one aligned PM connected to primary service activity
- Clearly connected to Theory of Change
- Tell compelling story of program impact
- Feasible in a single program year

The first guiding question asks about the data to be collected. Programs can, and should, collect a wide variety of data to inform their program: data about program implementation, output and outcome data, financial data, member experience and participant satisfaction data, etc. For the purpose of this activity, though, we will focus on the program's performance measure.

- AmeriCorps programs must have at least one aligned performance measure connected to primary service activity
- Output and outcome should be clearly connected to the program's theory of change as expressed in the logic model. (You should actually be able to see this output and outcome in the logic model itself.)
- Output and outcome should tell compelling story of the community impact of the program.
- Needs to be feasible to collect data on the output and outcome within a single program year, since the reporting commitments in your CNCS grant terms and conditions require this.

Question 1: Output and Outcome Data

	Data point #1: Output	Data point #2: Outcome
Data to be collected	Number of individuals who participate in at least one activity connecting police officers with community members	Number of individuals who report a more positive perception of police-community relations

For the purpose of our example program, this slide shows the output and outcome they came up with.

- Those of you who know the National Performance Measure Instructions well will notice that this is not a national performance measure; that is OK. The key is that it matches the program's Theory of Change.
- The measure does not include all program activity or all intended outcomes described in our program summary. That's OK too; CNCS doesn't require programs to capture all program activity in performance measures, and the quality of the performance measures is more important than quantity. However, program should have systems/plans to collect and analyze data for other activities outside of performance measures.
- This is not the only option for a performance measure; there is more than one "right answer." The important thing is that this performance measure meets our criteria: tells a compelling story and is feasible to measure in a single program year.

A couple of notes about key definitions within the output and outcome:

- The program's dosage (frequency/intensity/duration of intervention) is defined in the output as participation in at least one activity. Program should have set this dosage based on evidence that it will be sufficient to achieve intended outcomes. One of the things that our data collection should be able to tell us down the line is whether this dosage is actually effective in the context of our own program. More on that later!
- Program will also need to define "more positive perception" in the outcome. This will happen later in the data collection plan after the instrument is selected.

Question 2: Data Sources

	Data point #1: Output	Data point #2: Outcome
Source of data		

Essential Considerations:

- Type(s) of data needed
- Valid/authentic source of information
- Objectivity

Our second guiding question is about data sources. The essential considerations for this part of the data collection plan are:

- The type of data we need: in this case, data about participation (for the output) and data about attitudes (for the outcome)
- Considerations about who/what would be the most valid and authentic source of this particular type of information, and who/what can be the most objective (minimize slant or bias in the data)

Question 2: Data Sources

	Data point #1: Output	Data point #2: Outcome
Source of data	School staff (teachers) Beneficiaries (community members, police officers)	Beneficiaries (community members, police officers, students)

Here are some good sources of data for our sample program. Keep in mind that the portion of the program covered by this performance measure has three distinct beneficiary populations: students (for the school presentations), community members (for the informal sports events and other potential neighborhood activities), and police officers themselves, since improving police-community relationships has two sides. The best source of data for the output and outcome may be different depending on the population.

For the output, the school itself and school staff would be the best source of data on student participation, since they have established mechanisms for tracking and recording attendance in school settings, and they are also in the best position to be objective about reporting attendance (where students might not be, for a variety of reasons). For community members and police officers, it makes the most sense for them to self-report their participation, especially for activities that take place in informal settings. As a result, the beneficiaries themselves would be the source of the data.

For the outcome, the most valid and authentic source of data on attitudes is the beneficiaries themselves, since they are really the only ones who can speak to the feelings and perceptions they hold. Attitudes are inherently subjective, so complete objectivity may not be possible no matter what source is used here....but given the nature of the data to be collected, it makes the most sense to get it directly from the individuals who are served.

Question 3: Instruments

	Data point #1: Output	Data point #2: Outcome
Instrument type and description		

Essential Considerations (output):

- Ensure unduplicated count
- Track dosage

Guiding question 3 is about the instruments that will be used to measure the output and the outcome. There's a lot to consider here, so let's take it in pieces and talk about the output instrument first. Important considerations for the output are:

- Ensuring an unduplicated count – that is, that you are not counting the same beneficiaries more than once, even if they attend more than one event. To do this, you need an instrument that collects unique identifiers for individuals. This could be a first and last name or other personal information, or, if confidentiality is important, the unique identifier could be an assigned ID number.
- It's also important that the instrument collects information about the dosage of intervention that each individual receives, which in this case would be the number and type of activities they attended.

Question 3: Instruments

	Data point #1: Output	Data point #2: Outcome
Instrument type and description	For students: school attendance roster For other beneficiaries: sign-in sheets that record date of activity and first and last name	

Here are instruments that can accomplish those goals in the two different program activity settings captured under this performance measure. Some pros and cons about the school attendance roster: it is an existing high quality instrument that meets the essential considerations from the last slide, which makes it a good choice. However, it may be challenging for the program to access it due to student privacy laws. The program would need to put in place a written data sharing agreement with the school before program activities start.

Question 3: Instruments

	Data point #1: Output	Data point #2: Outcome
Instrument type and description	<p>For students: school attendance roster</p> <p>For other beneficiaries: sign-in sheets that record date of activity and first and last name</p>	

Essential Considerations (outcome):

- Valid for type of change
- Can assess before and after intervention
- Works for all categories of beneficiaries

Moving over to the outcome instrument, there are some other essential things to consider. The instrument needs to be a valid measure of attitude, which is the specific type of change being measured. It also needs to be able to measure change as a result of the intervention, which means assessing attitudes before and after participation in the activity. Finally, as we mentioned, there are multiple categories of beneficiaries for this program, so we need an instrument or instruments that will be effective for all of these populations.

Question 3: Instruments

	Data point #1: Output	Data point #2: Outcome
Instrument type and description	<p>For students: school attendance roster</p> <p>For other beneficiaries: sign-in sheets that record date of activity and first and last name</p>	<p>Pre-post survey that assesses attitudes about police-community relations. Must include some sort of unique identifier (first and last name or otherwise).</p>

An instrument that would meet all of our criteria would be a pre-post survey to measure attitudes about police-community relations.

- Given the informal drop-in nature of some of the activities, a pre-post assessment may not be feasible; if not, the program could potentially use a post-only survey. Either way, it would need to be relatively brief to reduce barriers to participation.
- It is essential that the survey include a unique identifier to allow pre-post assessments to be matched. If program feels strongly that anonymity is important, they can use a system other than names.
- Ideally the program would use the same instrument for all types of beneficiaries; however, given the differences in age and life experience between the different groups, the instrument may need to be tailored to each population in some way.
- The program should research whether surveys of this type already exist and have been tested/vetted for validity and reliability. If not, the program will need to develop their own. Either way, engaging experts in the field is highly recommended.
- Part of selecting and developing the instrument is figuring out what amount of improvement in score from pre- to post-survey will represent a meaningful and significant program impact (this is the definition of “more positive perception” we talked about under Question 1). Again, consulting an expert in the field will be important.

Questions for Reflection

- What data do you use to tell the story of your program?
- What source(s) of data do you use? What are the pros and cons of your data sources?
- What data collection instruments do you currently use? Would you consider them high-quality? Why or why not?



Corporation for
NATIONAL &
COMMUNITY
SERVICE ★★ ★

AmeriCorps | Senior Corps | Volunteer Generation Fund

As we wrap up the first part of this three-part activity, here are some questions for own reflection as you apply what you're hearing here back to your own program context.

Identify Data Collectors

- Potential data collectors: clients/beneficiaries, AmeriCorps members, program staff, host-site staff, other stakeholders
- Roles: data collection, aggregation, review/verification, analysis, reporting
- Considerations: time, access, objectivity, level of knowledge/training required, confidentiality



Corporation for
NATIONAL &
COMMUNITY
SERVICE

AmeriCorps | Senior Corps | Volunteer Generation Fund

The first part of this presentation covered some of the what and why of data collection plans. Now we'll spend some time on the who and the when. We'll also start on some of the how.

Regarding the "who," your program needs to identify who will be a part of ensuring you have the data your program needs. There are many different kinds of data collection plans, and, not surprisingly, many possible data collectors. They could be internal to your organization, or they could be external.

While this session focuses on data collection, it's important to also think through other staff (or volunteer, member, partner, etc.) roles and responsibilities related to data. In addition to data collection, data may need to be aggregated and must be reviewed and verified, analyzed, and reported in different formats.

When identifying data collectors, consider what other opportunities and constraints individuals or groups may have. Staff capacity or a desired process may drive decisions on who takes which role(s). For example, a key staff person may not have time to take on all data-related roles. Also, in many cases, it is desirable for the person collecting the data to be different than the person verifying it.

Set a Schedule for Data Collection

- Identify who will collect data, using which instrument, and when it will take place
- Share with the team to keep everyone informed
- Include key stakeholders in planning
- Include dates for both pre- and post- assessments
- Schedule time for collecting, analyzing, and reporting on the data



AmeriCorps | Senior Corps | Volunteer Generation Fund

Corporation for NATIONAL & COMMUNITY SERVICE

The timing for data collection will look a little different for each program. A data collection schedule needs to ensure data is available to meet program continuous improvement/assessment needs, funder requirements, and other stakeholder communication and reporting requirements. And, to have data available for all of those audiences, it means your data collection schedule needs to ensure data review and verification takes place as well.

Your program design will dictate much of your data collection schedule. Does your program conduct pre and post assessments with service beneficiaries? Pre assessments may logically happen at intake, the beginning of a class, when first taking on a case load, etc. Post assessment may be coordinated centrally, however. What timing will your program use to conduct post assessments? What about cases where the program is completing multiple projects for the same organization/service beneficiary? At what timing or interval will surveys, reports, assessments, be requested? All of the answers are relevant to ensure your schedule is feasible.

Think about how your organization uses, or could use, data during the program year. What schedule will allow you to assess performance during the year, as opposed to only at year end? Your data collection schedule can help you implement an early warning system if something isn't going as planned.

When your schedule is complete, share it with all involved so staff, partners, and other stakeholders will have the right information at the right time.

Set Up Systems for Data Storage

- Ensure data security and confidentiality
- Allow for data aggregation and analysis
- Set up appropriate permissions for data collectors
- Retain source documentation for all data



Corporation for
NATIONAL &
COMMUNITY
SERVICE

AmeriCorps | Senior Corps | Volunteer Generation Fund

While collecting your program's data, you will want to store your data securely. This requires all data users to know your program's data storage systems.

Programs don't have to purchase expensive customized systems; they can design their own systems using readily available tools as long as they meet the criteria described here: it ensures security and confidentiality, permits data to be analyzed easily, has special permission settings, and retains source documentation.

Depending on your program design it may also be necessary, or extremely helpful, to have a system that can identify and remove duplicate people or counts.

Organizations may want to discuss data storage systems with other like-focused programs to see what tools are working for other AmeriCorps programs.

Train Data Collectors

- Identify qualified trainers from inside or outside your organization
- Provide written instructions for collecting the data
- Explain the importance and value of data for the program
- Walk data collectors through the instrument
- Practice and/or role play data collection
- Review data collection schedule
- Explain how to return and store completed instruments



Corporation for
NATIONAL &
COMMUNITY
SERVICE

AmeriCorps | Senior Corps | Volunteer Generation Fund

Doing data collection correctly isn't always easy. To minimize problems in this process, staff, volunteers, members, partners – whomever will have a data collection role – need to be properly trained.

The training should be sufficiently formalized and should be supported by written instructions and procedures. The training and written guidance should be thorough and readily available to allow someone to step in to the role.

Effective training may include hands on use of collection tools, data storage systems, and source documentation. Further, training should cover the *why* in addition to the what and how. If collectors fully understand the role data and data collection plays in the organization, they may be more motivated to gather good data.

The data collection schedule should be clear and available in advance to allow for staff to plan their time accordingly.

Finally, collectors need to understand storage and security procedures. Source documentation needs to be maintained and data collection systems should be secure through password protection. Protecting personally identifiable information must be a priority.

Key Points

-  Steps to implement data collection include identifying the players involved, creating a data collection schedule, setting up data storage systems, and training data collectors
-  Everyone should understand the purpose of data collection and have access to the data collection schedule/procedures
-  It is crucial to invest time and resources in setting up high-quality systems for data storage, including source documentation

 
Corporation for
**NATIONAL &
COMMUNITY
SERVICE** ★★ ★

AmeriCorps | Senior Corps | Volunteer Generation Fund

To wrap-up this section, let's look at some key points.

Some important steps in setting up and implementing a data collection plan include identifying and training the key players, creating a data collection schedule that works for your program, and finding or creating an effective, secure data storage system.

Ensure that those involved in the data collection plan understand the purpose of their work. Keep everyone on the same page. Though they aren't necessarily part of the data collection plan, data users should be familiar with your data collection procedures. They will then understand what the data are, what they mean, and how they can be used. They will also understand its limitations.

Finally, though it may be more work up front, investing in a high quality data storage system will pay off for your program in both the near and long term. This investment could be money, staff time and expertise, or both – it isn't just a statement about financial investment.

Activity



Guiding Questions, Part B

4. Who would be the most appropriate individual(s) to collect the output and outcome data?
5. What data collection schedule should the program follow?
6. How should the data and source documentation be stored?
7. What training should the data collectors receive?

We're now going to tackle the second part of this sample program's data collection plan, covering the topics just discussed in the webinar. The guiding questions for Part B of the data collection plan are on this slide.

Question 4: Person(s) Responsible

	Data point #1: Output	Data point #2: Outcome
Person(s) responsible for data collection		

Essential Considerations:

- Access
- Training
- Objectivity

Let's start with the person or persons responsible for data collection. Essential things to consider are the person's access to the data sources and instruments you will be using; the amount of training the person already has in collecting this type of data, or the program's ability to directly provide the training the person will need in order to collect the data successfully; and the relative objectivity of the person – in other words, whether the person is likely to be able to collect the data without introducing any bias (conscious or subconscious) into the results.

Question 4: Person(s) Responsible

	Data point #1: Output	Data point #2: Outcome
Person(s) responsible for data collection	<p>Teachers record student attendance at each school presentation.</p> <p>AmeriCorps members ensure that all beneficiaries participating in the activity enter the required information on the sign-in sheet.</p>	<p>AmeriCorps members administer the pre-post surveys and collect responses from each beneficiary.</p>

For our example program's output, it makes the most sense for teachers to be responsible for collecting student attendance, since they have the best access to the instrument (school attendance roster) and are also in a good position to be objective. For the informal sports events and other community activities, it makes more sense for someone connected with the program to be responsible for data collection. This could be either program staff or AmeriCorps members; which one is preferable may depend on the specific context of the program or site. In this case, the example program has selected AmeriCorps members.

Similarly, AmeriCorps members will be tasked with administering the pre-post survey and collecting responses.

Remember that the program also needs to assign responsibilities for data aggregation, storage, and analysis, which may be better functions for program staff.

Question 5: Schedule

	Data point #1: Output	Data point #2: Outcome
Data collection schedule		

Essential Considerations:

- Response rate
- Meaningful results

Moving on to data collection schedule...an important consideration here is figuring out how to balance two important but competing goals: how to get the highest response rate possible for your data collection instrument while also getting the most meaningful results. Let's look at how to balance that for this example program.

Question 5: Schedule

	Data point #1: Output	Data point #2: Outcome
Data collection schedule	Data collected on-site as beneficiaries enter/join activity.	Pre-survey is administered to beneficiaries when they join the activity. Post-survey is administered upon exit from the activity.

For the output, an approach the program could take is to collect the participation data on-site when beneficiaries enter or join the activity. The advantages of this are that it is a consistent approach across different activity types and ensures that all individuals who participate in the activity will be counted. However, a disadvantage is that the duration of participation is not assessed - i.e., individuals may stay for just 10 minutes or for the whole activity. So it won't be possible to fully track the dosage that each participant is receiving. But it may not be logistically possible to have individuals sign out with a time stamp to track duration of participation, and it also could be that not all individuals would actually do it, which would lower the program's response rate and result in a less complete data set.

For the outcome, the program could administer the pre-survey when beneficiaries join the activity and the post survey immediately when they exit. The big advantage of this is that you can collect post-data without the need to track down participants afterwards, which would require gathering contact info and may result in a much lower response rate. Another advantage is that you minimize the introduction of other factors after the activity that may influence participant attitudes in ways that have nothing to do with the actual program intervention. However, the disadvantage is that doing an immediate post-survey measures only short-term or fleeting impacts rather than lasting change, so the results are probably less meaningful.

This is a hard trade-off, and there probably isn't a right or wrong answer for any program. Programs should talk with their stakeholders, and their CNCS program officer if they have one, about what will be most meaningful in the specific context of their program design and Theory of Change.

Question 6: Data Storage

	Data point #1: Output	Data point #2: Outcome
Data storage plan, including source documentation		

Essential Considerations:

- User-friendly format
- Verifiability
- Protecting sensitive information

Essential considerations for developing a plan for data storage:

- Ensure that data is stored in a format that allows for easy data aggregation/analysis;
- Ensure verifiability by retaining source documentation for the output and outcome data collected, which is required grant documentation just like receipts and other source documentation for financial transactions;
- Ensure that personally identifiable information (PII) and other sensitive beneficiary information is protected in the storage system.

Question 6: Data Storage

	Data point #1: Output	Data point #2: Outcome
Data storage plan, including source documentation	<ul style="list-style-type: none"> Beneficiary names or other unique identifiers are stored in a spreadsheet along with dates and activity descriptions Sign-in sheets and attendance lists provided by schools are stored electronically. Data server is password protected and only program staff have access. 	<ul style="list-style-type: none"> Raw scores for pre- and post-surveys are stored on the same spreadsheet as the beneficiary names/dates/activities. Individual pre- and post-surveys completed by each beneficiary are stored electronically Data server is password protected and only program staff have access.

AmeriCorps | Senior Corps | Volunteer Generation Fund

42
 Corporation for
**NATIONAL &
 COMMUNITY
 SERVICE** ★★ ★

This slide shows a system our sample program can use.

A couple of notes :

- The program can either keep paper copies of source documentation or store it electronically.
- Data collected on paper can be scanned to store it electronically. If data were actually collected electronically, the program should maintain the original electronic files.
- If paper copies are kept, they need to be under lock and key; electronic copies should be protected by features like passwords, encryption, etc.
- Databases and other advanced software tools can be helpful if the program has access to them, but more easily available tools (e.g. spreadsheets) can also be utilized.
- We mentioned that maintaining source documentation for performance measures is a grant requirement; the records retention requirements for performance measure-related source documentation are the same as for financial records (they are governed by the same regulations).

Question 7: Training

	Data point #1: Output	Data point #2: Outcome
Training for data collectors		

Essential Considerations:

- Process
- Quality
- Purpose

Training for data collectors is the last question in Part B of this activity.

The program needs to think about what the data collectors need to know in order to be effective in collecting high-quality data:

- Processes, timeline, expectations for data collection;
- How to ensure data is high quality (keep in mind the dimensions of data quality discussed in last section);
- The “why” – the purpose and importance of data collection to make sure that everyone is fully invested in the process.

Question 7: Training

	Data point #1: Output	Data point #2: Outcome
Training for data collectors	<ul style="list-style-type: none"> • <i>Purpose and importance of data collection</i> • Essential information that needs to be collected about each beneficiary (first and last name or other unique identifier; date(s) and nature of session(s) attended) • <i>How to ensure data quality</i> 	<ul style="list-style-type: none"> • When to administer the pre- and post-survey to beneficiaries • How to administer the surveys in a way that ensures complete information, optimizes response rates, and does not bias the results • <i>What to do with the collected data</i>

Here is a map of the training the program could provide to their data collectors, which, again, are teachers and AmeriCorps members for the output, and AmeriCorps members for the outcome.

Items in italics apply to both output and outcome data collection training.

A few notes:

- If possible, utilize experts from the field to train AmeriCorps members on how to administer the pre/post survey.
- Provide comprehensive written instructions for data collection and storage to accompany the training. Share these instructions with all data collectors and those responsible for data aggregation and analysis.

Questions for Reflection

- Who have been effective data collectors for your program, and why? What are the tradeoffs between having staff collect data vs. AmeriCorps members?
- Who in your organization is responsible for creating, disseminating, and enforcing your data collection schedule?
- What tools do you use to securely store data and source documentation?
- What challenges have you encountered training data collectors? What best practices can you share?



Corporation for
NATIONAL &
COMMUNITY
SERVICE ★★ ★

AmeriCorps | Senior Corps | Volunteer Generation Fund

Once again, here are some questions for reflection as you think about how to take this home to your own program context.

Pilot-test Data Collection

- Try out instruments with a small group similar to program participants
- Discuss instruments with the respondents and data collectors
- Analyze pilot test data to ensure the instrument yields the right information
- Make changes based on pilot test analysis:
 - Improve instrument
 - Strengthen the process
- Should be done before the start of the program year



Corporation for
NATIONAL &
COMMUNITY
SERVICE ★★ ★

AmeriCorps | Senior Corps | Volunteer Generation Fund

- A key element in any plan is to test instruments and methods. When pilot-testing instruments in your data collection plan, ensure that the test is conducted before the start of the program year and that the test is conducted on a group similar to program participants.
- You should discuss the instruments with both the respondents and data collectors in order to gather feedback.
- Make sure to analyze the data from the pilot-test to ensure that it gives you the right information.
- No plan is perfect. Once you have gathered the appropriate feedback from your pilot-test, feel free to enact changes that both improve the instruments and the process as a whole.

Implement Data Collection

- Perform periodic quality control checks
- Note elements that should be revised or improved in the following year



Corporation for
NATIONAL &
COMMUNITY
SERVICE ★★ ★

AmeriCorps | Senior Corps | Volunteer Generation Fund

- As you implement your collection method, perform periodic quality control checks on a quarterly or monthly basis.
- As it's best not to change the data collection plan in the middle of the program year, note elements that should be revised and improve them in the following year.

Analyze Collected Data

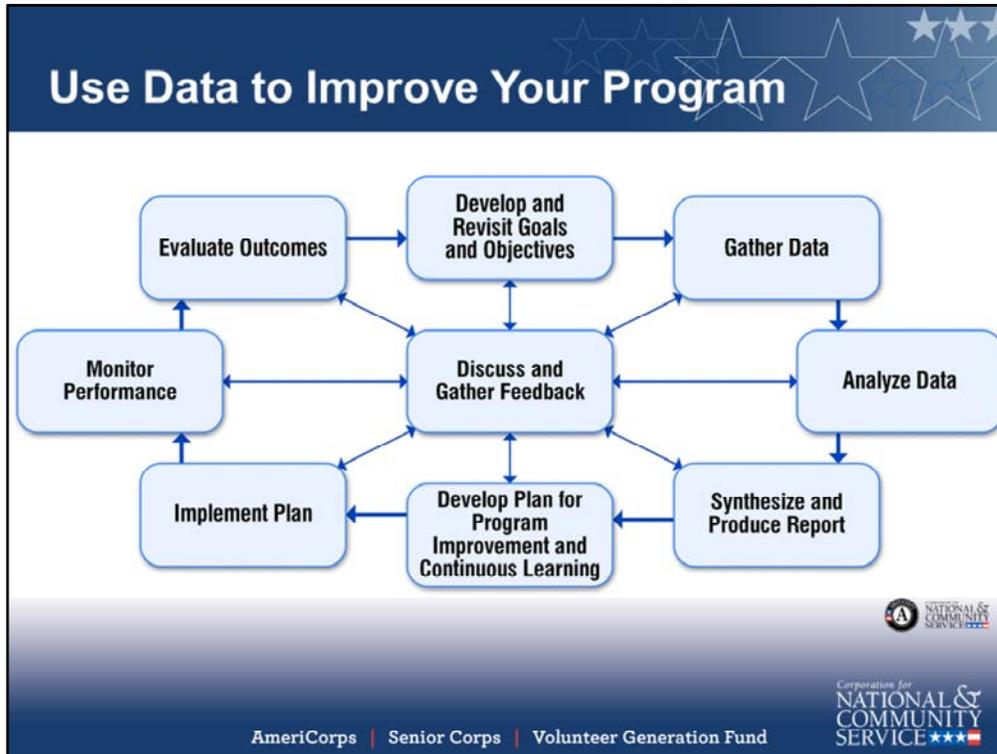
- Check data against the 5 data quality elements
- Compare to:
 - Current year targets
 - Previous year results
- Do basic statistical analysis where possible
- Compile key findings for decision-makers and stakeholders



Corporation for
NATIONAL &
COMMUNITY
SERVICE

AmeriCorps | Senior Corps | Volunteer Generation Fund

- As you analyze your data, check it against the 5 data quality elements (validity, completeness, consistency, accuracy, and verifiability).
- Compare it to both current year targets and previous year targets.
- Data that is not known, is not used. So after you analyze the data, compile and share your findings for decision-makers and key stakeholders.



- So how should we use our data to improve programs? The main elements are: gather data, analyze the data, synthesize and product a report/presentation, develop a plan for program improvement, implement that plan, monitor the performance, evaluate the outcomes, and develop and revisit the goals and objectives.
- This is a continuous cycle and each grantee may begin the process at a different place in the cycle. Once the cycle has been initiated, there is no longer a starting activity because the loop should remain continuous.
- The “Discuss & Gather Feedback” activity in the center of the cycle has arrows going back and forth through the cycle to emphasize the need to engage staff and stakeholders at each stage to ensure they are aware and informed, considering the data, and contributing to interpretations about the data.
- You should be gathering, analyzing, and synthesizing data on a regular basis.
- The cycle reinforces the idea that routine data collection efforts are embedded in the process for improving quality.

Use Data to Improve Your Program

Develop a culture of learning:

- Reflect on data with stakeholders and program staff at all levels
- Use data to ask questions, seek answers, and identify and solve problems
- Make data-informed adjustments to program activities
- Re-assess program goals and objectives based on analysis of collected data
- Use data as basis for long-term planning and decision making

AmeriCorps | Senior Corps | Volunteer Generation Fund

Corporation for
NATIONAL &
COMMUNITY
SERVICE ★★ ★ ★

- Compliance is a first step; a culture of learning and continuous improvement is a higher-level stage.
- When developing a culture of learning:
 - Reflect on the data with stakeholders and staff at all levels
 - Actively use the data to ask questions, seek answers, and identify and solve problems
 - Use the data to inform adjustments to program activities
 - As you collect and analyze the data, re-assess program goals and objectives
 - Use the data for long-term planning and decision making

Key Points

-  Pilot testing is a helpful way to ensure that the data you collect will give you the information you need
-  Data collection and analysis provide valuable opportunities to assess what is going well and what can be improved
-  The most fundamental goal of data collection is to help you improve your program



Corporation for
NATIONAL &
COMMUNITY
SERVICE ★★ ★

AmeriCorps | Senior Corps | Volunteer Generation Fund

In review...



Activity

Guiding Questions, Part C

8. How could the program pilot-test the data collection plan?
9. What analysis should the program do on the collected data?
10. How could the collected data be used to help improve the program?

Question 8: Pilot Testing

	Data point #1: Output	Data point #2: Outcome
Pilot-testing strategies		

Essential Considerations:

- Prior to program start
- Similar beneficiaries and settings

For pilot testing:

- The goal is to try out the data collection methodology and instruments ahead of time (before the program starts, if possible) to make sure they work as expected.
- Programs should use beneficiaries and settings that are similar enough to the actual intervention to make the test authentic.

Question 8: Pilot Testing

	Data point #1: Output	Data point #2: Outcome
Pilot-testing strategies	Try out the same or similar activities in summer schools or camps, or in local communities on a small scale. Have program staff test the data collection strategies in these settings to see if they yield the necessary information.	Administer the pre-post survey to AmeriCorps members during pre-service orientation so they can experience it from the "other side" and provide feedback on the process.

This slide shows some possible pilot-test approaches.

- Ideally, this should be done long enough before the program starts to allow for adjustments in tools/strategies ahead of time.
- Data collection plans are not static; they can also be improved during program implementation (preferably not mid-year to avoid data inconsistencies).

Question 9: Data Analysis

	Data point #1: Output	Data point #2: Outcome
Data analysis strategies		

Essential Considerations:

- Assessment of implementation
- Progress toward targets
- Effectiveness of activities
- Variation within program

Guiding question 9 gets us into the plan for data analysis. This is a really important part of the plan and should be pretty detailed. You will want to use data analysis to:

- Assess whether program implementation look like you expected it to, and if not, assess what is different;
- Figure out if you are on track to achieving your desired outputs and outcomes, and if possible pinpoint any factors that may be standing in the way of achieving those goals;
- Determine which program activities are working well and which activities are less successful;
- Dig into the fine points of the data, or disaggregate the results, to determine if there is variation within the program itself: if there are particular types of beneficiaries that are responding well, or less well, to the intervention, or particular geographic area(s) or dosage level(s) where the intervention is more, or less, effective.

Question 9: Data Analysis

	Data point #1: Output	Data point #2: Outcome
Data analysis strategies	<ul style="list-style-type: none"> • Screen data to combine duplicate entries • Compare actual with target value • Determine actual dosage for each beneficiary 	<ul style="list-style-type: none"> • Match pre- and post-surveys and calculate difference in score; compare against definition of “more positive perception” • Compare actual with target value • Compare results for different activity types, different beneficiary subgroups, different dosage levels, different geographic areas • Look at results for individual questions to see if there are area(s) that show more or less improvement.

57
 Corporation for
 NATIONAL
 COMMUNITY
 SERVICE

AmeriCorps | Senior Corps | Volunteer Generation Fund

This slide shows a relatively brief/high level summary of what our example program might do for data analysis.

The program will also want analyze the success of its data collection strategies themselves: were the data collected complete? Was the beneficiary response rate reasonable? Did the collected data make its way to the right people for aggregation and analysis? Is there any suspected bias in the responses (for example, post-survey results collected by one AmeriCorps member that are substantially more positive than results collected by other members)?

Question 10: Program Improvement

	Data point #1: Output	Data point #2: Outcome
How data will be used for program improvement		

Essential Considerations:

- Reach
- Effectiveness
- Evidence

This last question is the heart of what data collection and analysis is all about – fundamentally, this is what it is for.

In developing your plan to use data for program improvement, you should think about how you can use what you have learned from the data to:

- Improve program reach (meet community need);
- Make the program more effective in achieving outcomes you set out to accomplish, changing community for the better;
- Build the evidence base for your program

Question 10: Program Improvement

	Data point #1: Output	Data point #2: Outcome
How data will be used for program improvement	<ul style="list-style-type: none"> • Does program structure need to be modified to reach more beneficiaries? • <i>Do I need to provide more or different training to data collectors?</i> • <i>How can I improve my data collection strategies?</i> 	<ul style="list-style-type: none"> • Do I need to adjust the program dosage or nature of activities to improve outcomes? • Do resources need to be shifted toward aspect(s) of the program that are working better?

This slide shows questions our sample program should consider. Again, the ones in italics are relevant to both output and outcome data.

These are posed as questions, because they cannot and should not be answered without the actual data in hand.

The program should share the data and analysis with multiple stakeholders and engage them in developing solutions.

Questions for Reflection

- Have you ever changed your data collection instrument or protocol? If so, what prompted you to do so?
- Who in your organization is responsible for quality control of your data? What systems do you have in place to validate collected data?
- Who in your organization is responsible for data analysis? How does your organization use the analyzed data?
- Share an example of how you have used data you collected to change or improve your program



Corporation for
NATIONAL &
COMMUNITY
SERVICE ★★ ★

AmeriCorps | Senior Corps | Volunteer Generation Fund

Resources

Performance Measurement Core Curriculum:

<https://www.nationalservice.gov/resources/performance-measurement/training-resources>

- Collecting High Quality Outcome Data courses (Part 1 and Part 2)
- Data Collection and Instruments resources

Evaluation Core Curriculum:

<https://www.nationalservice.gov/resources/evaluation/all-evaluation-resources>

- Data Collection course
- Reporting and Using Evaluation Results course

Resources

Other Performance Measurement Resources:

<https://www.nationalservice.gov/resources/performance-measurement/other-ameri-corps-performance-measurement-resources>

- Data Quality Review Best Practices course

2017 National Performance Measure Instructions:

<https://www.nationalservice.gov/documents/main-menu/2016/2017-performance-measures-instructions>

- Lists required data sources and instruments for national performance measures

AmeriCorps | Senior Corps | Volunteer Generation Fund

Corporation for
NATIONAL &
COMMUNITY
SERVICE ★★ ★

Other resources you should take advantage of:

- Peers
- Your CNCS Grants Officer for financial data collection and analysis
- Leverage your CNCS Program Officer to help throughout the process

Q&A



AmeriCorps | Senior Corps | Volunteer Generation Fund



Thank you!



AmeriCorps | Senior Corps | Volunteer Generation Fund

Corporation for
**NATIONAL &
COMMUNITY
SERVICE** ★★ ★

Thank you for participating in today's webinar.