How to Develop the Right Research Questions for Program Evaluation
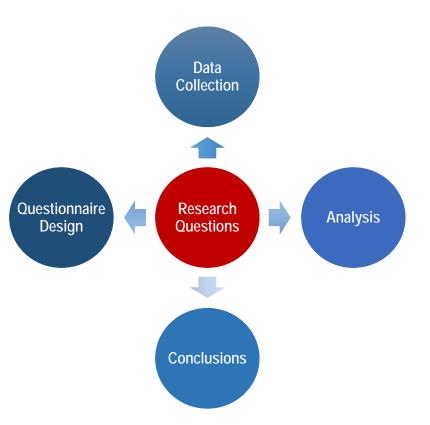
Learning objectives

By the end of this presentation, you will be able to:

- Understand the importance of research questions

- Understand the four basic steps for developing research questions

- Write research questions for different types of evaluation designs (i.e., process evaluation and outcome evaluation)

Why are research questions important?

- Foundation of a successful evaluation
- Define the topics the evaluation will investigate
- Guide the evaluation planning process
- Provide structure to evaluation activities

Data Collection

Questionnaire Design

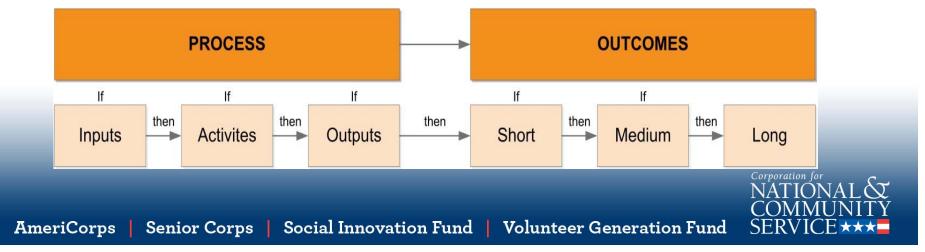Research Questions

Analysis

Conclusions

Steps for developing research questions

- Step 1: Develop a logic model to clarify program design and theory of change

- Step 2: Define the evaluation's purpose and scope

- Step 3: Determine the type of evaluation design: process or outcome

- Step 4: Draft and finalize evaluation's research questions

Step 1: Develop a logic model to clarify the program design

- A logic model is a graphic "snapshot" of how a program works (its theory of change); it communicates the intended relationships among program components.

  - Inputs, activities, and outputs on the left side of the logic model depict a program's processes/implementation

  - Changes that are expected to result from these processes are called outcomes and are depicted on the right side of the logic model

- Research questions should test some aspect of the program's theory of change as depicted in a logic model.

Example logic model for health literacy program

INPUTS	ACTIVITIES	OUTPUTS	Outcomes		
			Short-Term	**Medium-Term**	**Long-Term**
What we invest	What we do	Direct products from program activities	Changes in knowledge, skills, attitudes, opinions	Changes in behavior or action that result from participants' new knowledge	Meaningful changes, often in their condition or status in life
Funding

4 FT staff

100 AmeriCorps members serve as health care advisors

10 partnerships with community-based organizations

Member training | Develop and disseminate accurate, accessible, and actionable health and safety information

Conduct health literacy workshops

Provide individualized health literacy sessions | 500 health and safety education materials disseminated

4 half-day workshop sessions (at least 20 residents per session; 80 total)

100 individual and small group health literacy sessions (60 mins each) serving 300 people | Increase in residents' understanding of prevention and self-management of conditions

Increase in residents' motivation to adopt good health practices

Increase in residents ability to search for and use health information | Increase in residents' adoption of healthy behaviors and recommendations of the program (such as getting necessary medical tests) | Improved health and wellness status and quality of life for residents in the area |

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Step 2: Define the evaluation's purpose and scope

As you define the evaluation's purpose and scope, the following questions should be considered:

- Why is the evaluation being done? What information do stakeholders need or hope to gain from the evaluation?

- What requirements does the evaluation need to fulfill?

- Which components of the program are the strongest candidates for evaluation?

- How does the evaluation align with the long-term research agenda for your program?

- What resources (budget, staff, time) are available for the evaluation?

Step 2: Define the evaluation's purpose and scope

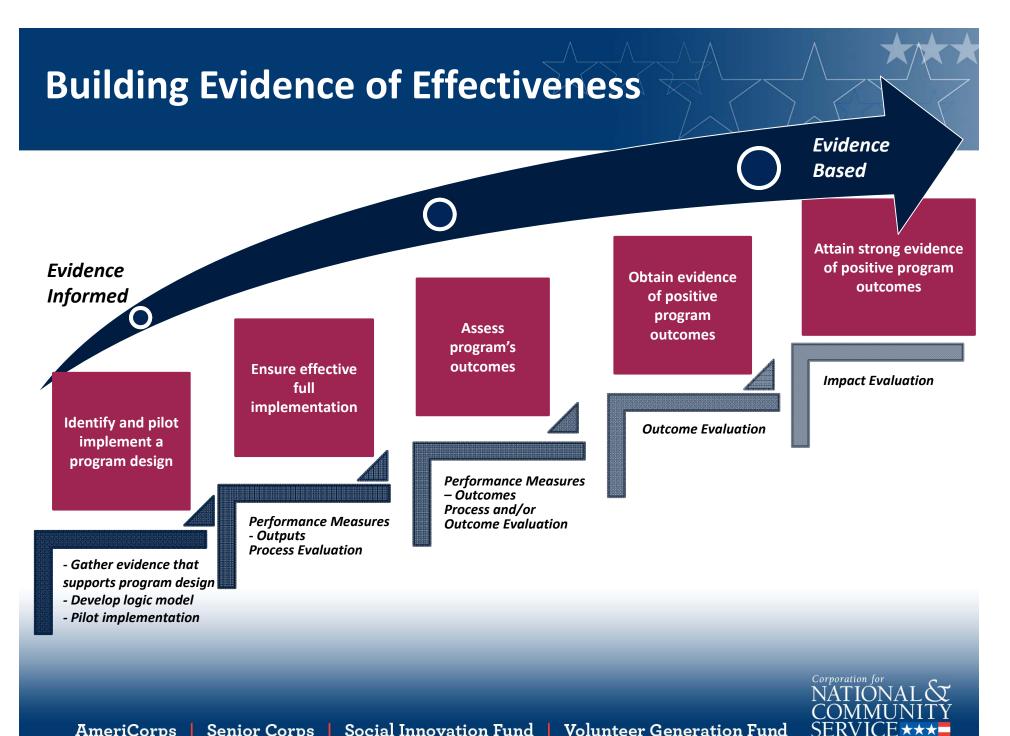- Why is the evaluation being done? What information do stakeholders need or hope to gain from the evaluation?

  – Each evaluation should have a primary purpose

- What requirements does the evaluation need to fulfill?

  – Funders may have specific expectations

- Which components of the program are the strongest candidates for evaluation?

  – You do not need to evaluate your whole program at once

Step 2: Define the evaluation's purpose and scope

- How does the evaluation align with the long-term research agenda for your program?

  – What do you want to know in 5 or 10 years?

- What resources (budget, staff, time) are available for the evaluation?

  – Evaluation's scope should align with resources

Building Evidence of Effectiveness

Evidence Based

Evidence Informed

Attain strong evidence of positive program outcomes

Impact Evaluation

Obtain evidence of positive program outcomes

Outcome Evaluation

Assess program's outcomes

Performance Measures – Outcomes Process and/or Outcome Evaluation

Ensure effective full implementation

Performance Measures - Outputs Process Evaluation

Identify and pilot implement a program design

- Gather evidence that supports program design
- Develop logic model
- Pilot implementation

Step 3: Determine type of evaluation: process or outcome

Process Evaluation	Outcome Evaluation
• Goal is generally to inform changes or improvements in the program's operations • Documents what the program is doing and to what extent and how consistently the program has been implemented as intended • Does not require a comparison group • Includes qualitative and quantitative data collection	• Goal is to identify the results or effects of a program • Measures program beneficiaries' changes in knowledge, attitude(s), behavior(s) and/or condition(s) that result from a program • May include a comparison group (impact evaluation) • Typically require quantitative data and advanced statistical methods

Step 4: Draft and finalize evaluation's research questions

Research questions are a list of questions to be answered at the end of the evaluation.
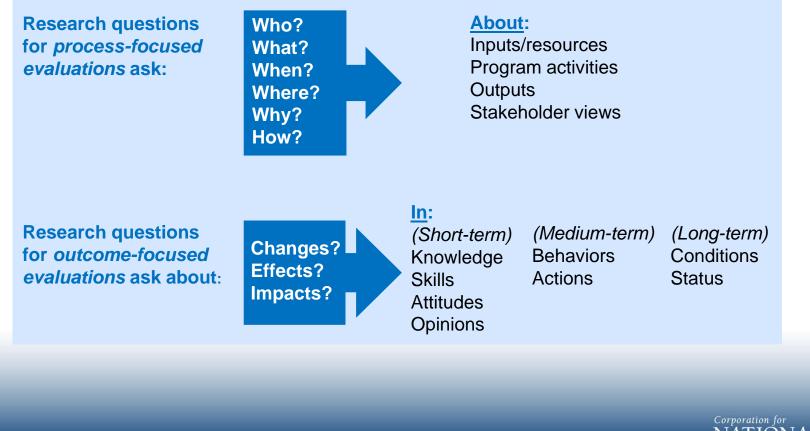
Research questions should be:

- Clear, specific, and well-defined
- Focus on a program or program component
- Measureable by the evaluation
- Aligned with your logic model

Basic principles in designing research questions

Differences in research questions for process and outcome evaluations

Research questions for *process-focused evaluations* ask:

Who?
What?
When?
Where?
Why?
How?

→

<u>**About**</u>**:**
Inputs/resources
Program activities
Outputs
Stakeholder views

Research questions for *outcome-focused evaluations* ask about:

Changes?
Effects?
Impacts?

→

<u>**In**</u>**:**

(Short-term)	*(Medium-term)*	*(Long-term)*
Knowledge	Behaviors	Conditions
Skills	Actions	Status
Attitudes		
Opinions		

Basic principles in designing research questions for a process evaluation

Research questions for a process evaluation should:

– Focus on the program or a program component

– Ask who, what, where, when, why, or how?

– Use exploratory verbs, such as report, describe, discover, seek, or explore

Template for developing general research questions: process evaluation

[Who, what, where, when, why, how] is the **[program, model, component]** for **[evaluation purpose]**?

Examples:

- How is the program being implemented?

- How do program beneficiaries describe their program experiences?

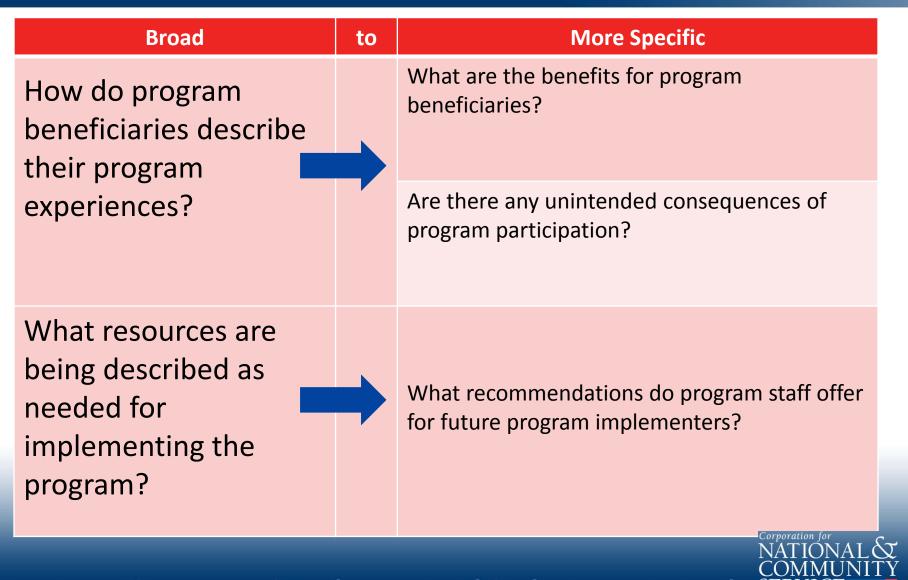- What resources are being described as needed for implementing the program?

Examples of research questions for a process evaluation

Broad	to	More Specific
How is the program being implemented?	→	Are staff implementing the program within the same timeframe?
		Are staff implementing the program with the same intended target population?
		What variations in implementation, if any, occur by site? Why are variations occurring? Are they likely to effect program outcomes?
		Are there unique challenges to implementing the program by site?

Examples of research questions for a process evaluation

Broad	to	More Specific
How do program beneficiaries describe their program experiences?	→	What are the benefits for program beneficiaries?
		Are there any unintended consequences of program participation?
What resources are being described as needed for implementing the program?	→	What recommendations do program staff offer for future program implementers?

Research Questions Checklist

✓ Clear, specific, and well-defined

✓ Focus on a program or program component

✓ Measurable by the evaluation

✓ Aligned with your logic model

Exercise #1: Assessing potential research questions for a process evaluation

General research question: Is the program being implemented as intended?

Assess whether each of the following is a good sub-question for the process evaluation:

- Are all AmeriCorps members engaged in delivering health literacy activities?

- To what extent are AmeriCorps members receiving the required training and supervision?

- Are program participants more likely to adopt preventive health practices than non-participants?

- To what extent are community partners faithfully replicating the program in other states?

Exercise #1: Suggested answers

- Are all AmeriCorps members engaged in delivering health literacy activities?
  - Too vague
  - Better: To what extent are AmeriCorps members consistently implementing the program with the same target population across all sites?
- To what extent are AmeriCorps members receiving the required training and supervision?
  - Good question, assuming required training and supervision are defined
- Are program participants more likely to adopt preventive health practices than non-participants?
  - This is not appropriate for a process evaluation
- To what extent are community partners faithfully replicating the program in other states?
  - Not aligned with program logic model
  - Better: What variations in community partners' participation, if any, occur by site?

Basic principles in designing research questions for an outcome evaluation

Research questions for an outcome evaluation should:

- Be direct and specific as to the theory or assumption being tested (i.e., program effectiveness or impact)

- Examine changes, effects, or impacts

- Specify the outcome(s) to be measured

Template for developing research questions: outcome evaluation

Did **[model, program, program component]** have a **[change, effect]** on **[outcome(s)]** for **[individuals, groups, or organizations]?**

Examples:

- Did program beneficiaries change their (knowledge, attitude, behavior, or condition) after program completion?

- Did all types of program beneficiaries benefit from the program or only specific subgroups?

Template for developing research questions: impact evaluation

Did **[model, program, program component]** have an **[impact]** on **[outcome(s)]** for **[individuals, groups, or organizations]** relative to a comparison group?

Example:

- Are there differences in outcomes for program participants compared to those not in the program?

	Pre-test	Treatment	Posttest
Intervention Group	0	X	0
Comparison Group	0		0

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Exercise #2: Developing research questions for an outcome or impact evaluation

For this exercise, use the program's logic model to identify which outcome(s) to include in the evaluation.

Consider the following:

- Which outcome(s) can be achieved within the timeframe of the evaluation (covering at least one year of program activities)?

- Which outcomes are feasible to measure?

- What data are already available?

Exercise #2: Developing research questions for an outcome or impact evaluation

Outcome evaluation:

Did **[model, program, program component]** have a **[change, effect]** on **[outcome(s)]** for **[individuals, groups, or organizations]**?

Impact evaluation:

Did **[model, program, program component]** have an **[impact]** on **[outcome(s)]** for **[individuals, groups, or organizations]** relative to a comparison group?

Research Questions Checklist

✓ Clear, specific, and well-defined

✓ Focus on a program or program component

✓ Measurable by the evaluation

✓ Aligned with your logic model

Exercise #2: Suggested answers

For outcome evaluations that do not include a comparison group:

- Did program participants increase their understanding of prevention after program completion?

- Did program participants feel more confident in the self-management of their pre-existing conditions after program completion?

- Did program participants improve their skills in searching for and using health information after program completion?

- Were program participants more likely to search for and use health information on their own after program completion?

For impact evaluations that include a comparison group:

- Are program participants more likely to adopt healthy behaviors compared to similar individuals who did not participate in the program?

- Are program participants more likely to obtain medical tests and procedures compared to similar individuals who did not participate in the program?

- Does the impact of the program vary by program participants' age, gender, or pre-existing medical condition?

Step 4: Draft and finalize evaluation's research questions

Consider the following:

- Do the research question(s) fit with the goals for the evaluation?

- Do the research question(s) align with the program's logic model and the components of the program that will be evaluated?

- Are these questions aligned with your funder's requirements?

- What kinds of constraints (costs, time, personnel, etc.) are likely to be encountered in addressing these research question(s)?

- Do the research questions fit into the program's long-term research agenda?

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Important points to remember

- Research questions are the keystone in an evaluation from which all other activities evolve

- Research questions vary depending on whether you will conduct a process vs an outcome evaluation

- Prior to developing research questions, define the evaluation's purpose and scope and decide the type of evaluation design – process or outcome.

- Research questions should be clear, specific, and well-defined

- Research questions should be developed in consideration of your long-term research agenda

Resources

- **CNCS's Knowledge Network**
  - http://www.nationalservice.gov/resources/americorps/evaluation-resources-americorps-state-national-grantees
- **The American Evaluation Association**
  - http://www.eval.org
- **The Evaluation Center**
  - http://www.wmich.edu/evalctr/
- **The Community Tool Box**
  - http://ctb.ku.edu/en/table-of-contents/evaluate/evaluate-community-interventions/choose-evaluation-questions/main
- **Choosing the Right Research Questions**
  - http://www.wcasa.org/file_open.php?id=1045

Questions and Answers