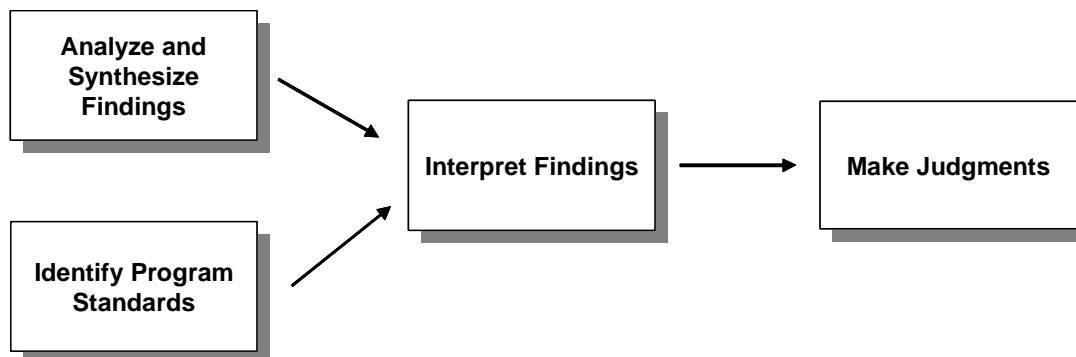


Step 5: Justify Conclusions

Whether your evaluation is conducted to show program effectiveness, help improve the program, or demonstrate accountability, you will need to analyze and interpret the evidence gathered in Step 4. Step 5 encompasses analyzing the evidence, making claims about the program based on the analysis, and justifying the claims by comparing the evidence against stakeholder values.

Why is it Important to Justify Conclusions?

Why isn't this step called "analyze the data"? Because as central as data analysis is to evaluation, evaluators know that the evidence gathered for an evaluation does not necessarily speak for itself. As the figure below notes, conclusions become justified when analyzed and synthesized findings ("the evidence") are interpreted through the "prism" of values ("standards") that stakeholders bring, and then judged accordingly. Justification of conclusions is fundamental to utilization-focused evaluation. When agencies, communities, and other stakeholders agree that the conclusions are justified, they will be more inclined to use the evaluation results for program improvement.



The complicating factor, of course, is that different stakeholders may bring different and even contradictory standards and values to the table. As the old adage states, "where you stand depends on where you sit." Fortunately for those using the CDC Framework, the work of Step 5 benefits from the efforts of the previous steps: Differences in values and standards will have been identified during stakeholder engagement in Step 1. Those stakeholder perspectives will also have been reflected in the program description and evaluation focus.

Analyzing and Synthesizing the Findings

Data analysis is the process of organizing and classifying the information you have collected, tabulating it, summarizing it, comparing the results with other appropriate information, and presenting the results in an easily understandable manner. The five steps in data analysis and synthesis are straightforward:

- Enter the data into a database and check for errors. If you are using a surveillance system

such as BRFSS or PRAMS, the data have already been checked, entered, and tabulated by those conducting the survey. If you are collecting data with your own instrument, you will need to select the computer program you will use to enter and analyze the data, and determine who will enter, check, tabulate, and analyze the data.

- Tabulate the data. The data need to be tabulated to provide information (such as a number or %) for each indicator. Some basic calculations include determining
 - The number of participants
 - The number of participants achieving the desired outcome
 - The percentage of participants achieving the desired outcome.
- Analyze and stratify your data by various demographic variables of interest, such as participants' race, sex, age, income level, or geographic location.
- Make comparisons. When examination of your program includes research as well as evaluation studies, use statistical tests to show differences between comparison and intervention groups, between geographic areas, or between the pre-intervention and post-intervention status of the target population.
- Present your data in a clear and understandable form. To interpret your findings and make your recommendations, you must ensure that your results are easy to understand and clearly presented. Data can be presented in tables, bar charts, pie charts, line graphs, and maps.

In evaluations that use multiple methods, patterns in evidence are detected by isolating important findings (analysis) and combining different sources of information to reach a larger understanding (synthesis).

Setting Program Standards for Performance

“Program standards” as the term is used here—and not to be confused with the four evaluation standards discussed throughout this document—are the “benchmarks” that will be used to judge program performance. They reflect stakeholders’ values about the program and are fundamental to sound evaluation. The program and its stakeholders must articulate and negotiate the values that will be used to consider a program “successful,” “adequate,” or “unsuccessful.” Possible standards that might be used in determining these benchmarks:

- Needs of participants
- Community values, expectations, and norms
- Program mission and objectives
- Program protocols and procedures
- Performance by similar programs
- Performance by a control or comparison group
- Resource efficiency
- Mandates, policies, regulations, and laws
- Judgments of participants, experts, and funders
- Institutional goals
- Social equity

- Human rights.

When stakeholders disagree about standards/values, it may reflect differences in which outcomes are deemed most important. Or, stakeholders may agree on outcomes but disagree on the *amount* of progress on an outcome necessary to judge the program a success. This threshold for each indicator, sometimes called a “benchmark” or “performance indicator,” is often based on an expected change from a known baseline. For example, all CLPP stakeholders may agree that reduction in EBLL for program participants and provider participation in screening are key outcomes to judge the program a success. But, do they agree on how *much* of an EBLL decrease must be achieved for the program to be successful, or how *many* providers need to undertake screening of children for the program to be successful? In Step 5, you will negotiate consensus on these standards and compare your results with these performance indicators to justify your conclusions about the program. Performance indicators should be achievable but challenging, and should consider the program’s stage of development, the logic model, and the stakeholders’ expectations. Identifying and addressing differences in stakeholder values/standards early in the evaluation is helpful. If definition of performance standards is done *while* data are being collected or analyzed, the process can become acrimonious and adversarial.

Interpreting the Findings and Making Judgments

Judgments are statements about a program’s merit, worth, or significance. They are formed when findings are compared against one or more selected program standards. In forming judgments about a program:

- Multiple program standards can be applied.
- Stakeholders may reach different or even conflicting judgments.

Conflicting claims about a program’s quality, value, or importance often indicate that stakeholders are using different program standards or values in making their judgments. This type of disagreement can prompt stakeholders to clarify their values and reach consensus on how the program should be judged.

Tips To Remember When Interpreting Your Findings

- Interpret evaluation results with the goals of your program in mind.
- Keep your audience in mind when preparing the report. What do they need and want to know?
- Consider the limitations of the evaluation:
 - Possible biases
 - Validity of results
 - Reliability of results
- Are there alternative explanations for your results?
- How do your results compare with those of similar programs?
- Have the different data collection methods used to measure your progress shown similar results?
- Are your results consistent with theories supported by previous research?
- Are your results similar to what you expected? If not, why do you think they may be different?

Source: US Department of Health and Human Services. Introduction to program evaluation for comprehensive tobacco control programs. Atlanta, GA: US Department of Health and Human Services, Centers for Disease Control and Prevention, Office on Smoking and Health, November 2001.

Illustrations from Cases

Let's use the affordable housing program to illustrate the main points of this chapter about the sources of stakeholder disagreements and how they may influence an evaluation. For example, the various stakeholders may disagree about the key outcomes for success. Maybe the organization's staff, and even the family, deem the completion and sale of the house as most important. By contrast, the civic and community associations that sponsor houses and supply volunteers or the foundations that fund the organization's infrastructure may demand that home ownership produce improvement in life outcomes, such as better jobs or academic performance. Even when stakeholders agree on the outcomes, they may disagree about the amount of progress that needs to be made on these outcomes. For example, while churches may want to see improved life outcomes just for the individual families they sponsor, some foundations may be attracted to the program by the chance to change communities as a whole by changing the mix of renters and homeowners. As emphasized earlier in the chapter, it is important to identify these values and disagreements about values early in the evaluation so that consensus can be negotiated and so that program description and evaluation design and focus reflect the needs of the stakeholders who need and will use the data.

Standards for Step 5 Justify Conclusions

Standard	Questions
Utility	Have you carefully described the perspectives, procedures, and rationale used to interpret the findings? Have stakeholders considered different approaches for interpreting the findings?
Feasibility	Is the approach to analysis and interpretation appropriate to the level of expertise and resources?
Propriety	Have the standards and values of those less powerful or those most affected by the program been taken into account in determining standards for success?
Accuracy	Can you explicitly justify your conclusions? Are the conclusions fully understandable to stakeholders?

Checklist for Justifying Your Conclusions

- Analyze data using appropriate techniques.
- Check data for errors.
- Consider issues of context when interpreting data.
- Assess results against available literature and results of similar programs.
- If multiple methods have been employed, compare different methods for consistency in findings.
- Consider alternative explanations.
- Use existing standards (e.g., *Healthy People 2010* objectives) as a starting point for comparisons.
- Compare program outcomes with those of previous years.
- Compare actual with intended outcomes.
- Document potential biases.
- Examine the limitations of the evaluation.

Worksheet 5 Justify Conclusions

Question		Response
1	Who will analyze the data (and who will coordinate this effort)?	
2	How will data be analyzed and displayed?	
3	Against what “standards” will you compare your interpretations in forming your judgments?	
4	Who will be involved in making interpretations and judgments and what process will be employed?	
5	How will you deal with conflicting interpretations and judgments?	
6	Are your results similar to what you expected? If not, why do you think they are different?	
7	Are there alternative explanations for your results?	
8	How do your results compare with those of similar programs?	
9	What are the limitations of your data analysis and interpretation process (e.g., potential biases, generalizability of results, reliability, validity)?	
10	If you used multiple indicators to answer the same evaluation question, did you get similar results?	
11	Will others interpret the findings in an appropriate manner?	

EVALUATING APPROPRIATE ANTIBIOTIC USE PROGRAMS

Step 5: Justify Conclusions

The next step of program evaluation is the analysis and interpretation of your findings. As discussed earlier, stakeholders can be involved in many aspects of program evaluation, and they are more likely to accept and use evaluation findings if they have been actively engaged in the evaluation from its inception. Furthermore, because stakeholders will define program success in different ways, it is important to understand the various viewpoints that stakeholders bring to an evaluation.