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I. INTRODUCTION

A. OVERVIEW

Monitoring and evaluation (M&E) activities are critical for the effective and efficient implementation of HIV prevention interventions. Program evaluation is defined as “the systematic collection of information about the activities, characteristics, and outcomes of programs to make judgments about the program, improve program effectiveness, and/or inform decisions about future programming” (Patton, 1997). Patton’s definition encompasses both monitoring and evaluation. Monitoring is the systematic collection and review of program information, those participating in the program and the outcomes seen among the program participants; whereas evaluation involves reviewing process and outcome monitoring data and drawing conclusions about the program e.g., Which program process objectives were achieved? Which outcome objectives were achieved?) Consequently, M&E can help organizations make sure they reach the population(s) they intend to serve, and improve those services if needed. Evaluation helps to assess the extent to which implementation of an intervention is bringing about the desired outcomes among the individuals or communities served. This, in turn, can help organizations better understand what is going well, what aspects of the program might need attention, and where to focus resources for program improvement.

Organizations often evaluate programs because their funding agency requires them to do so. Funding agencies generally use this information to assess the activities of several organizations to make sure that, when combined, all of the funded programs allow the funding agency to meet its priorities and the objectives of the funding. However, the data collected for the funding agency may only be a subset of the information organizations need to make decisions about program planning and improvement. Therefore, it is important to design an evaluation to collect data that will help an organization make decisions about the interventions it implements and adhere to the reporting requirements of its funding agencies. This is described as utilization-focused evaluation.

Utilization-focused evaluation is described by Patton as “evaluation done for and with specific, intended primary users for specific, intended uses” (Patton, 1997) and is reflected in the Center for Disease Control and Prevention’s (CDC’s) Framework for Program Evaluation in Public
Health (see Appendix A). When the focus is on using data, the practice of evaluation will complement program management by gathering the information necessary to improve programs and to account for the outcomes of the programs. In addition, when it is ongoing and involves all program staff and other stakeholders, evaluation can be tied to service delivery activities.

### Why evaluate evidence-based interventions?

There are numerous reasons for community-based organizations to evaluate their implementation of an evidence-based intervention. Some of the most common reasons are to:

- Tailor the intervention message and activities to meet the needs of the targeted population or community
- Identify gaps in services or agency resources
- Determine if the target population is being served by the intervention
- Determine the extent to which the intervention is implemented with fidelity to the intervention plan
- Determine whether the components of the intervention are producing the desired effects among the targeted population(s)
- Learn how to improve the implementation of the intervention in the community
- Inform decisions for planning and implementing future iterations of the intervention
- Account for the use of funds
- Justify the need for further funding or support

Evidence-based interventions have been shown to be effective in changing HIV risk behaviors with certain populations and under certain conditions. Generally, this involves the use of research methods over time to determine if the outcomes or changes that occur in the population are a result of the activities of the intervention and not due to external factors. It is during the research process that core elements (i.e., components of an intervention believed to be responsible for the outcomes) are identified. Once an intervention demonstrates its effectiveness, it may be disseminated or marketed to other agencies for use. CDC supports the dissemination of evidence-based interventions through its Diffusion of Effective Behavioral Interventions (DEBI) program.

Organizations implementing one of these evidence-based interventions with fidelity to the design are not expected to conduct the same level of evaluation to prove that the outcomes are related to the activities of the intervention. However, it is important for organizations to monitor the implementation processes and outcomes to ensure implementation consistent with the design of the intervention and that the same outcomes are achieved. Agencies often implement evidence-based interventions with populations that vary somewhat from the original research population (e.g., rural setting, additional risk factors). Therefore, it is important to recognize that even when
implementing an intervention with fidelity to design, other factors may yield different or additional outcomes than expected. Findings from evaluating the process and monitoring outcomes will provide valuable information to improve the efficacy of implementation of the intervention.

B. Purpose of This Guide
The purpose of this document is to provide M&E guidance to managers, staff members, and volunteers of organizations implementing HIV prevention interventions, and therefore build the evaluation capacity of these organizations. This document provides information about designing an evaluation plan, and collecting, managing, analyzing, and using M&E data to enhance and guide the planning and implementation of evidence-based interventions. This guide is also designed to help organizations respond to CDC’s reporting requirements. This guide is not intended to be a comprehensive manual on evaluating community programs. It is intended to provide guidance to:

- Choose evaluation methods that are suitable to the particular circumstances of the organization and intervention
- Select and use evaluation tools suitable to the characteristics of the target population and the content of the various activities
- Identify strategies for organizing, processing, and using evaluation data

This guide is based on the premise that there is no one “best method” for community-based organizations to monitor and evaluate their interventions. The approach used to monitor and evaluate an intervention will be influenced by local contexts, which include, but are not limited to, organizational capacity, funding requirements, characteristics of the target population, and changes made to the intervention design.

C. Organization of This Guide
The guide is designed to allow organizations to select information from any of the sections, as needed, to inform evaluation planning and the facilitation of evaluation activities. It is organized into four main sections:
• **Getting Ready to Evaluate HIV Prevention Interventions** provides an overview of why it is important to evaluate the implementation of an intervention, how to assess an agency’s capacity and readiness for evaluation, and strategies for overcoming barriers to monitoring and evaluation.

• **Evaluation Planning** defines the different types of evaluation, with suggestions for determining the type of evaluation an organization may be ready for and guidelines for modifying intervention logic models, including how to incorporate local population characteristics into the agency’s implementation plan. This section also includes steps involved in drafting an evaluation plan for the intervention, such as information on developing and prioritizing evaluation questions, selecting appropriate data collection methods and data management systems, and developing plans for analyzing and reporting evaluation results.

• **Implementing the Evaluation Plan** outlines the steps for conducting the different types of monitoring and evaluation, from data collection through analysis and reporting.

• **Utilization of Data** provides guidance for interpreting and summarizing data gathered about the intervention, and recommendations for using evaluation data for program planning, improvement, and disseminating findings.

The appendices include materials such as worksheets, resources, and tools for monitoring and evaluation.
## D. Glossary of Icons

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<tr>
<th>Icon</th>
<th>Meaning</th>
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<tr>
<td><img src="brain.png" alt="Brain Icon" /></td>
<td>Issues for consideration</td>
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<td><img src="question.png" alt="Question Mark Icon" /></td>
<td>Ask the following questions</td>
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II. GETTING READY TO EVALUATE HIV PREVENTION INTERVENTION

WHAT IS IN THIS SECTION?
- Reasons for evaluating evidence-based interventions
- Assessing agency readiness for evaluation
- Strategies to address common evaluation issues within agencies

A. REASONS FOR MONITORING AND EVALUATING HIV PREVENTION INTERVENTIONS

Monitoring and evaluation may serve many purposes and can be used to answer the questions of a broad range of stakeholders. Stakeholders’ reasons for requesting evaluation, including those internal to an organization, fall into four broad categories:

- **Accountability**: M&E provides information to answer questions of accountability to funding agencies, staff, clients, and the community served.
- **Program Improvement**: M&E provides information to help improve implementation of the intervention.
- **Knowledge Development**: M&E provides information for understanding and documenting intervention implementation and future planning for HIV prevention programs.
- **Social Justice**: M&E provides information regarding the reach and effectiveness of an intervention among populations most vulnerable to acquiring or transmitting HIV.

M&E is important to both the agencies providing HIV prevention services and the organizations that fund them. Some of the reasons for evaluation may be more important to an agency, whereas others may be more important to CDC or other funding entities. Other reasons apply to both. Figure 1 lists some of the reasons for evaluation.
Table 1. Reasons for Evaluating Interventions

<table>
<thead>
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<th><strong>Accountability</strong></th>
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<tr>
<td>- Demonstrating the effectiveness of the intervention</td>
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<td>- Demonstrating cost-effectiveness of the intervention</td>
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<tr>
<td>- Enhancing the visibility and credibility of the intervention in the local community</td>
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<tr>
<td>- Demonstrating accountability to funding agencies and the general public</td>
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<th><strong>Program Improvement</strong></th>
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<tr>
<td>- Determining the need for improvement of the intervention operations (i.e., structure, activities) for maximum effectiveness</td>
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<tr>
<td>- Establishing safeguards to ensure program staff systematically examine what they are doing and why</td>
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<tr>
<td>- Identifying areas of the intervention in need of attention (e.g., staff/volunteer training, change in presentation of messages, locating role models, or peer advocates)</td>
</tr>
<tr>
<td>- Understanding factors that promote or limit success (e.g., social or political conditions in which the intervention is implemented)</td>
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<tr>
<th><strong>Knowledge Development</strong></th>
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<tr>
<td>- Disseminating knowledge about what works and what does not</td>
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<tr>
<td>- Disseminating knowledge and program models that will lead to the successful replication of HIV prevention efforts</td>
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<tr>
<td>- Developing information to input into future grants and proposals</td>
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<tr>
<th><strong>Social Justice</strong></th>
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<tr>
<td>- Determining if the intended audience was reached</td>
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<tr>
<td>- Providing pertinent data for decision making and helping set prevention priorities to address gaps in needed services</td>
</tr>
<tr>
<td>- Enlightening policymaking at various levels; influencing policymakers</td>
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B. **Assessing Evaluation Capacity and Readiness**

Before undertaking an evaluation, it is important to first assess agency capacity and readiness for conducting evaluation. This section discusses the issues for preparing agencies for evaluation. Also included in this section are common evaluation issues faced by community-based organizations (CBOs), and possible strategies for addressing these issues.

Evaluation capacity is an agency’s ability to conduct effective evaluation. An effective evaluation is not necessarily a large-scale outcome evaluation; it involves systematic monitoring of the process and, under some circumstances, monitoring outcomes. An effective evaluation is not measured by its complexity but by appropriate and correct use of data collection methods,
accurate analysis of the data, a solid design based on well-developed evaluation questions and available resources, and the use of data to guide decisions. Evaluation field guides, developed for the effective behavioral interventions (EBIs) of CDC’s Division of HIV/AIDS Prevention, include M&E tools and templates that can be modified to meet an organization’s information needs.

Assessing an organization’s readiness for evaluation should be done before beginning evaluation activities. This will help ensure that the agency’s resources and capacity are in place and appropriate for the level of evaluation. An assessment will help identify which evaluation activities staff may undertake (e.g., routine collection of participant data and intervention activities), and those for which an agency may need to seek outside assistance (e.g., data analysis, data reporting). If M&E are attempted before an agency is ready, limited funds, time, and other resources may be spent unnecessarily, and program staff may become frustrated and discouraged when conducting the evaluation.

Consider the following questions when assessing evaluation capacity:

- Does the agency have enough staff to conduct the type of evaluation required?
- Who are the stakeholders of the evaluation?
- What do stakeholders want to know about programs?
- Why do stakeholders want to know this information?
- What is the evaluation experience of staff members?
- How will data collection occur?
- How will client confidentiality be ensured?
- How will data be stored and managed?
- How will the data be analyzed?
- How will the findings and results be shared with stakeholders?
- How will the findings and results be used?
The following sections will help organizations prepare for evaluation and identify possible strategies to bolster their capacity and readiness to evaluate their intervention. An evaluation readiness checklist is provided in Appendix B.

Organizational readiness to conduct evaluation is influenced by several factors:

- Motivation to evaluate
- Organizational environment that supports evaluation activities and the use of evaluation data
- Access to workforce and professional development
- Resources and support
- Capacity and desire to learn from evaluation activities

1. **Motivation to Evaluate**

Consider the following questions to determine readiness to evaluate an intervention systematically:

- Do staff members view evaluation as beneficial?
- Are staff members self-motivated to evaluate?
- Does the CBO or funding agency have policies requiring evaluation?

Staff members’ willingness and cooperation are important for implementing evaluation activities. This is often driven by their views on evaluation. Perceptions of evaluation may vary among agencies and among staff within an agency. Evaluation may be interpreted as:

- Meeting an organization’s goals or deliverables
- Being compliant with a grant or funding agency
- Assessing whether the needs of the community or target population have been met
- Determining the effectiveness of the work being done
- Providing critical information to inform implementation of their HIV prevention interventions
● Determining the program’s strengths and weaknesses

● Monitoring staff performance and assisting with staffing concerns

● A mechanism with the potential to provide valuable information, including the number of individuals who receive services, client demographic and risk behavior information, impact of the intervention on clients, and client satisfaction with the program

An agency may find that some staff members have negative perceptions of evaluation because they believe that it will only identify poor aspects of their programs and interventions. It is important in these instances to highlight the objectives of an evaluation. As mentioned earlier in this guide, one reason to evaluate is accountability to the funder(s), agency staff, clients, and the community the program serves. An evaluation can identify program areas that need improvement, as well as highlight a program’s effectiveness and how to expand on what is going well. Evaluation allows organizations to find out how well approaches and strategies are working, and if target populations are being reached.

Consider the following:

● Do staff members understand evaluation?
  ❖ If no, consider these strategies:
    ● Identify available resources to help build the evaluation capacity of staff.
    ● Send staff to evaluation training.
    ● Work with an evaluation consultant (paid or volunteer) to help build the evaluation capacity of staff.

● Is evaluation valued at the agency?
  ❖ If no, consider these strategies:
    ● Supervisory staff can develop agency-wide communication about the benefits of evaluation; this may help staff gain a better understanding of evaluation.
    ● Explain to staff the crucial role they play in the process of improving and monitoring the programs and interventions their agency provides.
Involve all staff in evaluation communications.

Do staff members believe that evaluation will generate useful feedback about the intervention?

If no, consider these strategies:

- Involve staff in the development of the evaluation plan; in particular, allow them the opportunity to express their information needs and then guide them through the process of developing evaluation questions.
- Describe how evaluation data will provide useful feedback about participants and the target population.

**Understanding the Intervention and Implementation Process**

Defining and understanding the interventions is a critical step in evaluation and is the second step in the CDC Framework for Evaluation in Public Health (CDC, 1999). Whether the focus is a single intervention or several interventions that make up a program within the organization (e.g., Youth Program with Focus on Youth and SIHLE), descriptions of the interventions provide a frame of reference for evaluation activities. For an evaluation to run smoothly, describe and clearly define the programs and interventions. This allows agencies to target evaluation activities appropriately and make the best use of resources.

Having a clear and common understanding of an intervention’s major components and how they work together to bring about changes in behaviors can help staff members be more focused and efficient when implementing intervention activities. The interventions that organizations implement may not always be fully understood or may be misunderstood by agency staff members. It is important that staff clearly understand the intervention’s components and how to implement them. Knowledge of the intervention will help staff members understand the implementation and desired outcomes of the program model.
Assess staff understanding of the intervention:

- Do staff and managers have a clear understanding of the objectives?
  - If no, consider these strategies:
    - Use a logic model to show the relationship between activities and objectives.
    - Work as a team to define and write down the objectives of the intervention.

- Are staff and managers clear on the relationship between the core elements and the activities?
  - If no, consider these strategies:
    - Use a logic model to depict the relationship between the activities and core elements.
    - Host a discussion on how the core elements are implemented in relation to the activities of the intervention.

- Are staff and managers clear on how the intervention should be implemented?
  - If no, consider these strategies:
    - Review the intervention plan on a regular basis; use a logic model to show the inputs, activities, and expected outcomes.
    - Use process monitoring and evaluation data to show how closely to the plan the intervention was implemented.

2. Organizational Environment

A variety of staff can be involved in evaluation activities—from frontline staff (e.g., outreach workers, volunteers, group facilitators) to administrative staff (e.g., program coordinators and executive directors). The first of six steps in the CDC Framework for Evaluation is to engage stakeholders. Staff members of any organization are major stakeholders because they are critical to the success of program implementation and service delivery. Consequently, they have an investment in what will be learned from evaluation activities and how that information will be used in program planning and implementation.
Consider the following questions when assessing the organizational environment for evaluation activities.

- Is evaluation seen as a norm within the organization?
  - If no, consider these strategies:
    - Identify and share resources that promote the benefits and uses of evaluation.
    - Identify current activities that may not be considered evaluation; for example, using sign-in sheets to track participants’ attendance at sessions.
    - Identify uses or potential uses of current and future evaluation activities.
    - Collaborate with other nonprofit, HIV/AIDS-related organizations that do see evaluation as a norm.

- Is evaluation a valued job responsibility within the organization?
  - If no, consider these strategies:
    - Incorporate specific evaluation activities into job descriptions.
    - Allocate time for staff to engage in evaluation activities.
    - Explain to staff the crucial role they play in the process of improving and monitoring the programs and interventions their agency provides.
    - Inform staff when milestones are achieved (e.g., completion of a logic model or evaluation plan, availability of results).

- Is there agency leadership that advocates for evaluation?
  - If no, consider these strategies:
    - Identify and promote the benefits and uses of evaluation to the agency, such as:
      - Improving current services
      - Advocating for additional funding
      - Encourage leadership to attend evaluation training.
      - Encourage leadership to speak with other nonprofit, HIV/AIDS-related organizations that have reaped the benefits of evaluation.
● Is evaluation seen as a priority within the organization?
  ❖ If no, consider these strategies:
    ♦ Work with supervisory staff to develop agency-wide communication about the importance and benefits of evaluation.
    ♦ Incorporate specific evaluation activities into job descriptions and annual review processes.

● Does leadership support the use of evaluation to inform and improve interventions and programs?
  ❖ If no, consider these strategies:
    ♦ Work collaboratively with leadership and staff to review evaluation findings and discuss recommendations for improving programs and interventions.
    ♦ Show how collected data answer evaluation questions.

Agency staff may have a range of evaluation experience; some staff members may be experienced in evaluation, while others may have misconceptions about program evaluation. Some program staff members may also have experience in general data collection and computer skills. These skills may not necessarily be evaluation specific, but may play a critical role in M&E. If an organization lacks in-house evaluation expertise, it may work with evaluation consultants or volunteers. It can also partner with universities and other organizations to obtain expert advice in evaluation or hire new staff with evaluation expertise.

Consider the following regarding staff capacity:

● Which program staff will be involved in evaluation activities?
● What are the evaluation roles and responsibilities that each staff member will assume?
● This includes designating staff for data collection, data entry, quality control, and submission, and identifying who will be responsible for analyzing the data, generating reports, and sharing the evaluation findings with program staff and stakeholders.
• Will staff responsibilities overlap with their current job descriptions or will these activities extend beyond the scope of what they already do?

3. Access to Workforce and Professional Development
Assessing an organization’s capacity may yield a need for training or technical assistance to enhance staff members’ understanding and skills for evaluation. Consider the following questions to determine an organization’s access to workforce and professional development:

- Does the organization have staff with the technical skills to perform M&E?
- Have staff members received M&E training?
- Do staff members have access to evaluation-related training?
- Does the organization have access to individuals with evaluation expertise?

It is not always necessary to secure the services of external evaluation consultants to monitor and evaluate interventions or to meet the reporting requirements of CDC. Organizations that do not have staff with the evaluation expertise needed to organize, analyze, and use the data to guide planning and improvement may access evaluation technical assistance. Organizations receiving funding directly or indirectly from CDC to implement EBIs can access technical assistance at no cost to the organization. Capacity building assistance (CBA) is available through CDC’s CBA Program, the Behavioral and Social Science Volunteer (BSSV) Program, and intervention-specific behavioral scientists of the Science Application Team. Organizations may also choose to secure the services of an evaluation consultant. Both consultants and CBA providers can provide:

- Assistance with evaluation planning and implementation
- Expertise in evaluation that the agency may be lacking
- An objective point of view
- An opportunity for collaboration

Health departments and organizations directly funded by CDC can request CBA through the Capacity Building Branch’s (CBB) Web-based system, Capacity Request Information System (CRIS). This online system integrates CBB and CBA resources and information for the provision
of timely and efficient CBA. For more information about and to access CRIS, visit http://www.cdc.gov/hiv/cba.

Additional information about CBA providers and consultants in Appendix C includes a checklist of issues to consider when working with CBA providers and consultants. This appendix also includes the qualities and skills to look for in an evaluation consultant.

Agencies not using any CDC funds to implement an EBIs should contact their State or local health department for evaluation technical assistance. If an agency does not have the funds to hire an evaluation expert, there are other alternatives.

- Contact a local university or college for assistance. Professors may be willing to lend their evaluation expertise in exchange for the use of the data for their own research purposes. Students may be willing to volunteer their services as interns, or in exchange for school credit.
- The BSSV Program and other social science professional organizations can help identify consultants.
- Some organizations have used a combination of a consultant and assistance from a university to facilitate evaluation activities.

See Appendix C for a list of resources to help locate technical assistance providers and consultants, and additional information on technical support sponsored by CDC, including how to access that support.

4. Resources and Support

Before engaging in evaluation activities, an organization should determine what resources are available and what resources are needed. Agency resources include, but are not limited to, time, funds, staffing, and technology (e.g., computer software and hardware for data storage, management, and analysis). For example, funds for evaluation can be secured ahead of time by adding evaluation activities to budgets for grant applications.
Consider the resources an organization already has to support evaluation of an intervention.

- What funds are allocated for evaluation activities (e.g., data collection, analysis, report writing)?
- What tools are available to assist with evaluation activities (e.g., logic model, data collection instruments, data management and analysis systems)?
  - Does the organization use logic models for intervention planning?
  - Are the process and outcome objectives SMART (i.e., specific, measurable, appropriate, realistic, and time-based)?
- Does the organization have a plan to collect, manage, and analyze data?
- What types of training and technical assistance are needed to build staff’s evaluation capacity?
- How much time do staff members need to engage in evaluation activities?
- What facilities are available to support evaluation activities (e.g., computer hardware or software, secured file cabinets)?

Compare resources needed to implement evaluation activities to what is available to the organization and identify any gaps in resources. Identify possible strategies for filling the gaps between resources needed and resources available. As mentioned above, some resources may be available through technical assistance from CDC and its national partners.

5. **Capacity and Desire to Learn From Evaluation Activities**

Evaluation can help organizations pinpoint areas for programmatic improvement and decision making within the organization and even the broader community. To be most useful, organizations should have the capacity and desire to learn from evaluation activities.
Consider the following questions to assess an organization’s capacity and desire to learn from evaluation activities:

- Has the organization developed plans for how the evaluation data will be used?
  - If no, consider these strategies:
    - Involve all stakeholders in the development and prioritization of evaluation questions; discuss potential uses of data when prioritizing questions.
    - Map specific variables to the evaluation question(s) they will answer.
- Do staff members have prior experience using evaluation to improve their interventions?
  - If no, consider these strategies:
    - Identify resources to help staff members use evaluation data.
    - Seek outside evaluation assistance from a consultant or technical assistance provider.

Evaluations should be designed to answer evaluation questions that will provide stakeholders with the information they need to inform decision making and program improvement. To this end, agencies will want to know what information is needed and by whom. Understanding stakeholders’ prior experience and ability to use evaluation data will help guide prioritization of evaluation activities and the level of detail needed. Organizations may need help to summarize data in a way that is understandable and useful to each stakeholder.

Evaluation data can provide organizations with a lot of information about their intervention. Without proper planning, organizations may engage in evaluation activities that provide them with a lot of information, but do not address their most critical questions. This can become unwieldy and exceed the resources required to complete the evaluation. To this end, it is important for an agency to consider the reasons for evaluating the intervention (i.e., what is important to know and who needs to know that information), its capacity and resources to engage in the necessary evaluation activities, and to identify and implement strategies to secure resources or build capacity to complete its evaluation successfully.
This section provided reasons for monitoring and evaluating effective behavioral interventions (EBIs) and assessing capacity and readiness for M&E. Issues to consider when planning an evaluation and steps for M&E planning are detailed in the following section.
III. EVALUATION PLANNING

WHAT IS IN THIS SECTION?

- Conducting an analysis to help understand factors that influence the HIV risk behaviors of the target population
- Using and modifying the effective behavioral intervention (EBI) logic models
- Steps for developing an evaluation plan
- Methods to collect data

A. INTRODUCTION TO EVALUATION PLANNING

An evaluation plan is a written document that describes the overall purpose and approach the organization will use to guide the monitoring and evaluation of an intervention. The plan describes what will be done, how it will be done, who will do it, and why it is being done. CDC’s Framework for Program Evaluation in Public Health refers to this step as “Focusing the Evaluation Design.”

The intervention-specific evaluation plans that are provided by CDC suggest M&E activities for that intervention. The plans are designed so that organizations can modify them to meet the organization’s needs. Information in this section can be used to guide modifications to the intervention-specific evaluation plan or to create a new evaluation plan. The critical components of an evaluation are:

- A description or list of the information needed and how the information will be used (i.e., what will be measured)
- Data collection protocols for securing process and outcome data for objectives and program performance indicators (i.e., how and when they will be collected)
- A description of how data will be managed and stored
- Procedures for analyzing, interpreting, reporting, presenting, and using findings for planning, program management, and program improvement
- A description of how input from the funding agency will be used (e.g., CDC’s Prevention Program Branch’s technical reviews and site visit reports)
● Descriptions of policies and protocols to secure data and ensure the confidentiality of client/participant information

Before developing an evaluation plan, it is important for an organization to identify and prioritize the information needs of its stakeholders (e.g., administrative and intervention staff, funding agency, partnering agencies or businesses, board of directors/advisory boards, consumers).

In determining the evaluation information needs of the organization, community, and funding agency, consider the following questions:

● What information is needed about the people (e.g., age, race, ethnicity, gender, risk behavior) who participated in the small group sessions or who were contacted during outreach events?

● What information is needed about the types of discussions and activities that occurred during the sessions or events?

● What information is needed about when and where the intervention sessions or events took place?

● What information is needed about changes in knowledge, attitudes, beliefs, or behaviors of the individuals who participated in the intervention or community targeted by the intervention?

For each answer to the above questions, also ask:

● Who needs this information?

● Why is this information needed?

● How will the information be used?

In addition to considering an agency’s information needs, reflect on other factors as the evaluation plan is designed or modified. These factors may include:

● Phase of implementation (e.g., formative assessment versus conducting the intervention)
● Length of time the organization has been implementing the intervention

● Stage of development of the organization (i.e., is it a new organization or a more experienced and established organization)

● Human and financial resources of the organization (e.g., funding levels, personnel)

● Evaluation experience and access to evaluation expertise, if needed

An organization’s evaluation resources and capacity and information needs will partly determine the type(s) of evaluation in which they should engage. Provided below is a brief description of each type of evaluation, when to use it, the kind of information it yields, and why it is useful.

### Formative Evaluation

#### What is it?

Formative evaluation questions can be used to understand the needs of the population and/or community targeted by the intervention and to guide the development of your program plan. Formative evaluation questions address issues such as:

- What are community members’ attitudes about condom use?
- Where do members of the target population go to receive HIV prevention information?
- What factors influence the risk behaviors of the target population?

#### When to use it?

- When the intervention is being implemented for the first time
- When the implementation of the intervention is being modified
- If there are problems with the implementation and no obvious solutions
- When the intervention is implemented in a new setting, with a new population, or to target a new problem or behavior

#### What it shows?

- Whether the intervention messages are likely to reach, be understood by, and be accepted by the target population
- How the target population receives information
- To whom the target population responds
- Additional details about the proposed intervention (e.g., access to location, setting) or target population

#### Why it is useful?

- Revisions to the intervention protocol can be made before implementation begins
- Increases the likelihood that the program’s success is maximized
### Process Monitoring

**What is it?**

Process monitoring is a method that provides a picture of the activities implemented, populations served, services provided, or resources used. Process monitoring information can be used to inform program improvement and is the basis for process evaluation. Process monitoring information often answers questions such as:

- What are the characteristics of the population served?
- What intervention discussions and activities were implemented?
- What resources were used to deliver those activities?

**When to use it?**

- As soon as implementation of the intervention begins and throughout the course of the intervention

**What it shows?**

- Number and characteristics of the people served
- Number of sessions conducted
- Resources used to conduct the sessions
- Content covered and activities conducted during each of the sessions

**Why it is useful?**

- Identifies any problems that occur in reaching the target population early on in the process
- Allows program staff to evaluate how well the plans, procedures, activities, and materials are working and to make adjustments before logistical or administrative weaknesses become entrenched

### Process Evaluation

**What is it?**

Process evaluation involves an analysis of process data that facilitates comparison between what was planned and what actually occurred during implementation. Process evaluation allows an organization to determine if process objectives can be met and provides information that guides planning and improvement. Process evaluation questions address issues such as:

- Which components of the intervention were implemented as planned?
- Why the intervention activities may have been changed?
- Did the intervention reach the intended audience?
- What barriers were experienced by clients and staff during the course of the intervention?
### Process Evaluation (continued)

<table>
<thead>
<tr>
<th>When to use it?</th>
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<tbody>
<tr>
<td>• Periodically throughout the implementation of the intervention, and as needed to inform decisions to improve the intervention</td>
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</table>

<table>
<thead>
<tr>
<th>What it shows?</th>
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<tbody>
<tr>
<td>• If the number and characteristics of the individuals participating in the intervention were equivalent to those stated in the intervention plan</td>
</tr>
<tr>
<td>• If the types of discussions and activities were delivered</td>
</tr>
<tr>
<td>• If the number and types of discussions and/or activities were conducted as planned</td>
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<tr>
<td>• How and why modifications were made to the intervention sessions</td>
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<table>
<thead>
<tr>
<th>Why it is useful?</th>
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</thead>
<tbody>
<tr>
<td>• Allows for identification of problems that occur in reaching the target population early on in the process</td>
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<tr>
<td>• Allows program staff to evaluate how well the plans, procedures, activities, and materials are working and to make adjustments before logistical or administrative weaknesses become entrenched</td>
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### Outcome Monitoring

<table>
<thead>
<tr>
<th>What is it?</th>
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<tbody>
<tr>
<td>Outcome monitoring involves reviewing and assessing changes that occur after exposure to the intervention, such as changes in the knowledge, attitudes, behaviors, or access to services of individuals who participated in the intervention; or changes in community norms or structural factors. A baseline assessment must be conducted prior to the intervention in order to assess change. Answers to outcome monitoring questions help to determine if the outcome objectives were met. Outcomes include changes in knowledge, attitudes, skills, or behaviors. Outcome monitoring answers the question, “Did the expected outcomes occur?”</td>
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<table>
<thead>
<tr>
<th>When to use it?</th>
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<tbody>
<tr>
<td>• After implementation of the intervention is stabilized</td>
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<tr>
<td>• When the intervention is being implemented according to plan—either as written or as modified</td>
</tr>
<tr>
<td>• When the intervention is reaching a sufficient number of people as dictated by target numbers</td>
</tr>
<tr>
<td>• When the intervention is sustainable</td>
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<table>
<thead>
<tr>
<th>What it shows?</th>
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<tbody>
<tr>
<td>• Changes in the participants’ knowledge, attitudes, beliefs, skills, intentions, and/or behaviors</td>
</tr>
<tr>
<td>• Change in community members’ knowledge, attitudes, beliefs, skills, intentions, and/or behaviors</td>
</tr>
<tr>
<td>• Change in community norms and HIV prevention habits</td>
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</table>
**Outcome Monitoring (continued)**

<table>
<thead>
<tr>
<th>Why it is useful?</th>
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</thead>
<tbody>
<tr>
<td>• Identifies specific components of the intervention that are associated with the greatest change</td>
</tr>
<tr>
<td>• Allows management and program staff to modify materials or approaches to improve effectiveness of intervention</td>
</tr>
<tr>
<td>• Identifies subgroups of the target population for whom intervention may be more effective</td>
</tr>
<tr>
<td>• Allows organizations to learn from their successes and failures</td>
</tr>
</tbody>
</table>

**Outcome Evaluation**

*Note: Most organizations are expected to conduct formative evaluation, process monitoring, and process evaluation. Depending on the intervention or phase of implementation, outcome monitoring may be appropriate. CDC does not expect its grantees to conduct outcome evaluation or impact evaluation.*

### What is it?

Outcome evaluations measure whether the intervention had an effect on the behaviors, attitudes, skills, intentions, and beliefs of individuals who participated in the intervention or communities in which the intervention was implemented. A comparison group of individuals who did not participate in the intervention or communities that did not have a similar intervention and matched in characteristics to those that did is needed to show that the changes that occurred were because of the intervention and not just “by chance.”

### When to use it?

- When the intervention is stable and implemented as planned over time
- When there are a sufficient number of individuals participating in the intervention, or when a community is participating in the intervention
- When there is a group or community matching the characteristics of the intervention participants who is not participating in the intervention (i.e., a control or comparison group)
- When participation is consistent enough to collect pre-intervention and post-intervention data and at other scheduled intervals (such as follow-up)
- When there are sufficient and appropriate resources to collect data from both groups at the same intervals
- When there are sufficient and appropriate resources to analyze collected data

### What it shows?

- Changes in the participants’ or the community’s knowledge, attitudes, beliefs, skills, intentions, and/or behaviors that are attributable to the intervention activities

### Why it is useful?

- Provides evidence of the efficacy of the intervention
- Provides evidence of success to use in future requests for funding
## Impact Evaluation

### What is it?
Impact evaluation measures long-term change in a population over time. For example, impact evaluation can provide incidence data for HIV in a given population or sub-population. These data are also known as surveillance data.

### When to use it?
- Health departments (city, county, and State) and Federal public health agencies collect HIV testing data on an ongoing basis to monitor HIV rates.
- Community planning groups and organizations use surveillance data to determine which populations to target with HIV prevention services.

### What it shows?
- The incidence of HIV in a population or specific subpopulation

### Why it is useful?
- Provides evidence of the efficacy of the combined HIV prevention efforts in a community
- Provides evidence of success to use in future requests for funding
- Provides evidence of trends in HIV infection among populations and subpopulations

*Note: Most organizations are expected to conduct formative evaluation, process monitoring, and process evaluation. Depending on the intervention or phase of implementation, outcome monitoring may be appropriate. CDC does not expect its grantees to conduct outcome evaluation or impact evaluation.*

Evaluation should be thought of as a continuum with each type of evaluation, simultaneously building on and leading to the next. One way to think about types or stages of evaluation is to think of stacking blocks, with each new block supported by the one below it (see Figure 2).
Another way to think about the types of evaluation is to envision a continuous line with points along the way representing the stages of evaluation (see Figure 3).

Figure 3. Stages of Evaluation Continuum
For What Types of Evaluation Is the Organization Ready?
The statements below will help determine the type(s) of evaluation for which an organization is ready. Information about each evaluation type is provided in this and the next section, Implementing the Evaluation Plan.

- The organization is getting ready to implement an intervention and wants to know the best way to implement it.
- The organization began implementation and there have been some problems. Additional information is needed to know how to solve them.
- The organization just modified the intervention and wants to know whether the modifications will work.
- The organization is adapting the intervention to a new setting, population, problem, or target risk behavior.

If “Yes” to any of the above statements, begin a formative evaluation.

If “No” to all of the above statements, see the next question.

---

The organization is getting ready to implement an intervention and wants to know the best way to implement it.

A current or recent needs assessment has been completed, program activities are being conducted, and implementation of the intervention has begun.

Is information on any of the following available?

- Characteristics of individuals participating in the intervention
- Number of sessions or events conducted
- Number of and types of materials used and activities conducted
- Changes made to any of the activities and the reason for those changes
If “Yes” to all of the above statements, see the next question.

If “No” to any of the above statements, begin process monitoring and process evaluation.

The organization began implementation and there have been some problems. Additional information is needed to know how to solve them.

The organization completed at least one cycle of the intervention. Most of the kinks were worked out and the organization has a good feel for how the intervention should be implemented with the target population or community. It has had enough time to identify and address challenges and weaknesses to implementation.

---

**Intervention Cycles**

A cycle is the number of sessions in which a client must participate, or the amount of exposure to the intervention needed to yield the expected outcome. The number of sessions in one cycle of a group-level intervention is prescribed in the implementation manual. (For example, one cycle of Healthy Relationships is five sessions, whereas one session of VOICES/VOCES is one cycle.) For individual-level interventions, the provider will determine the number of sessions needed to achieve the client’s risk reduction goal; the number of sessions per cycle will vary by client. When considering community-level interventions, the intervention should be implemented for a few months.

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**ASK:**

- Are data available to answer the process evaluation questions?
- Were process data used to guide planning and decisions about the intervention or community?

If “Yes” to both questions, see the next question.

If “No,” review the process evaluation questions and determine what other data are needed. Compare implementation to the plan. See *Step 4. Determine the Appropriate Data Collection Methods* in this section for more information on identifying data sources to answer your evaluation questions.
The organization just modified the intervention and wants to know whether the modifications will work.

The agency used preliminary evaluation data to identify problems with its intervention and to modify its intervention plan. M&E data may be used to determine if the modifications addressed the challenges previously experienced.

ASK:

- If implementing a multisession intervention, are pre- and post-intervention data available to answer process M&E questions?

OR

- If implementing a community-level intervention, are data available to assess community norms and the protective behaviors of members before the intervention and at various intervals over time?

If “Yes” to both questions, see the next question.

If “No,” continue process M&E evaluation. An agency may choose to begin outcome monitoring. Implementation of the intervention should be stable and the number of participants or contacts/encounters should be consistent with the target population and targeted numbers. Organizations will also need to determine what outcomes are measurable.

The organization is adapting the intervention to a new setting, population, problem, or target risk behavior.

The agency has implemented several cycles of the intervention or, for a community-level intervention, the intervention has been implemented for at least 6 months. Process data were used to fine-tune the intervention for the target population.
Are any of the following statements regarding implementation of the intervention true?

- The intervention was modified or is being implemented with a population that is different from the original group with which the intervention was shown to be effective.
- The organization has implemented several cycles of the intervention without changing the design of the intervention.
- There are a sufficient number of participants from whom to collect outcome data to measure the effectiveness of the intervention in changing risk behaviors.
- The organization has a waiting list or access to individuals not participating in the intervention who can be matched in characteristics to those participating, or they have access to a community or section of the community that did not receive the intervention.
- The organization has the human and financial resources to collect data from intervention activities.
- The organization has access to evaluation expertise to collect, organize, manage, clean, and analyze the data.

If “Yes” to all of the statements, the organization may be ready for outcome evaluation.

If “No” to any of the statements, continue to monitor outcomes. If there is a desire to conduct an outcome evaluation, review the information in Section 3 to determine what is needed to prepare the organization for conducting an outcome evaluation. See Appendix C for technical assistance providers who are available to assist in facilitating an outcome evaluation.

**CDC Expectations**

The interventions funded through CDC’s Diffusion of Effective Behavioral Interventions project have demonstrated effectiveness. Unless an organization has significantly modified an intervention or is participating in a research project, CBOs seldom conduct outcome evaluation because they can be time consuming and costly. Nor do CBOs conduct impact evaluations because these are a function of the local or State health department.
Planning for Evaluation

Once an agency determines the stage or type of evaluation for which they are ready, then it is time to start planning the evaluation. This section describes the various steps for evaluation planning.

- Using and modifying the logic model
- Developing and prioritizing evaluation questions
- Deciding on methods to collect data
- Selecting and modifying the evaluation instruments
- Drafting an evaluation plan

B. USING AND MODIFYING THE LOGIC MODEL

Successful implementation of an intervention depends on understanding the core elements and activities and how these are related to the desired outcomes. It also depends on an overall commitment to maintaining the fidelity of implementation. This ensures that the implementation of the intervention will achieve HIV risk reduction outcomes similar to those realized when the evidence-based intervention was tested.

A basic element in the development and implementation of an evaluation plan for any program is the development of a logic model. A logic model can be viewed as a framework to guide an organization’s HIV prevention activities. It is a tool used to visually describe the main elements of an intervention and to illustrate the linkages among the components. These elements include the following:

- **Problem Statement:** A description of the problem behavior and the factors that put a population at risk, such as knowledge, attitudes, beliefs, behaviors, skills, access, policies, and environmental conditions.

- **Inputs:** Resources needed to implement an intervention, such as money, staff, curricula, and materials.

- **Activities:** Services that the intervention provides to accomplish its objectives, such as outreach, counseling sessions, discussion groups, workshops, materials distribution, community events, and training.
● **Outputs**: Direct products or deliverables of the intervention, such as the number of community businesses involved with the intervention, people reached, and materials distributed.

● **Immediate Outcomes**: Immediate results of the intervention, such as changes in knowledge, attitudes, beliefs, and skills.

● **Intermediate Outcomes**: Intervention results that occur some time after the intervention is completed, such as changes in behaviors, skills, access, and people reached.

● **Long-Term Outcomes**: Behavior change and the application of skills that are maintained over time, changes in community norms and practices of its residents or members, policies, and environmental conditions.

● **Impacts**: Long-term results of one or more interventions over time, such as changes in HIV infection, morbidity, and mortality.

A graphical representation of these components is presented in Figure 4 on the next page.
PROBLEM STATEMENT: A description of the problem behavior and the factors that put a population at risk, such as knowledge, attitudes, beliefs, behaviors, skills, access, policies, and environmental conditions.

INPUTS

Resources needed to implement an intervention, such as money, staff, curricula, and materials.

IMPLEMENTATION

Activities
- Services that the intervention provides to accomplish its objectives, such as outreach, counseling sessions, discussion groups, workshops, materials distribution, community events, and training.

Outputs
- Direct products or deliverables of the intervention, such as the number of community businesses involved with the intervention, people reached, and materials distributed.

OUTCOMES

Immediate
- Immediate results of the intervention, such as changes in knowledge, attitudes, beliefs, and skills.

Intermediate
- Intervention results that occur some time after the intervention is completed, such as changes in behaviors, skills, access, and people reached.

Long Term
- Behavior change and the application of skills that are maintained over time, changes in community norms and practices of its residents or members, policies, and environmental conditions.

ASSUMPTIONS

What is known about knowledge, attitude, belief, and behavior change based on behavioral and learning theories and past experience. (i.e., engaging in activity X is likely to cause a change in an individual’s or community’s knowledge, attitude, belief, or behavior).

EXTERNAL FACTORS

Issues, beyond the control of the organization, that would influence an individual’s or community’s knowledge, attitudes or beliefs, or the ability to change behavior (e.g., local politics, current events, lack of certain health or social services, family dynamics).
Logic models are useful in many ways. The process of modifying or developing a logic model can help facilitate a better understanding of the overall intervention as well as provide clarity on how the different activities relate to each other and work to reduce the risk of HIV/AIDS infection.

Once developed, a logic model helps remind staff and consultants of critical activities, necessary resources, and processes that result from the implementation intervention activities. It also illustrates the integrative nature of the intervention activities and how they relate to the outcomes, and reinforces the importance of implementing all of the activities to achieve success in risk reduction outcomes. Logic models also support the development of evaluation plans.

A logic model can help an organization begin to better understand planned versus actual implementation of an intervention. Once an agency has implemented its intervention activities, it can use its logic model to identify differences between the planned and actual implementation of the intervention (process monitoring). A logic model may also be used as a visual tool to clarify what those differences are and provide some clues about which aspects of implementation are working and which are not, and what additional information about what changes might be needed and why (process evaluation).

**Understanding and Modifying the Logic Model**

The evaluation field guide for each intervention includes a logic model as a reference that illustrates the relationship between the behaviors that put a target population at risk for HIV, the activities of the intervention, and the outcomes. These models are generic and may not reflect the specific attitudes and behaviors of populations the organization plans to target.

The field guides include a generic model that provides additional detail on activities that should be implemented, resources necessary for successful implementation, and more detail on outputs. This model also reflects activities designed to affect the behaviors and attitudes of members of targeted communities and illustrates the relationship of the program’s activities to expected outputs and outcomes.
It is important to modify the model to reflect an organization’s implementation of the intervention, specific characteristics of the target population, and any nuances that are specific to organizations and the communities the intervention serves.

Modifying Your Logic Model

If adapting an intervention, the logic model that is included in the field guide may be used as a starting point for developing a logic model of the planned adaptation; however, additional steps are necessary for a successful adaptation. If not approached systematically, an adapted intervention may not yield the expected outcomes.

When considering adaptation of an evidence-based intervention, carefully consider whether the planned adaptation is appropriate and gauge the potential success of implementation. Consider:

- How will a change in external factors affect the intervention?
- How will a change in inputs affect the activities?
- How will a change in the activities affect the outputs and outcomes (immediate and intermediate)?

Even when making minor changes to an evidence-based intervention and modifying the logic model, it is important to understand why changes are made and how those changes can best be streamlined to maintain the integrity of the intervention. The following questions are helpful when modifying the logic model for an intervention.

**Question 1: Who are the program participants?**

Understanding the characteristics of the target population is an important first step in determining how an intervention logic model should be modified. Consider the target population with which the intervention has been shown to be effective in changing HIV risk.

- How different is the population the agency plans to target (e.g., different gender, different race or ethnicity, different behaviors that place them at risk)?
- What do the proposed participants bring to the program in terms of previous experiences, exposure to similar programming, and current relevant behaviors, skills, knowledge, or attitudes?
- Are there environmental conditions, personal circumstances, or cultural nuances that affect the population somewhat differently (such as being located in a rural instead of an urban area, different drug of choice) than the tested population?
The logic model should be modified before implementing the intervention even if minimal changes are planned. When revising the intervention’s logic model, it is important to have a clearly articulated problem statement that is relevant to the members of the community or target population for which the intervention is planned. Each logic model begins with a generic problem statement that includes the target population for which the intervention was designed, and the risk behavior(s) addressed by the intervention.

The problem statement should be refined to thoroughly describe the factors that influence members of the target population to engage in the specified risk behavior. The problem statement includes the target population for the intervention, the behavior(s) in which the population is engaging that put them at high risk for HIV, and the factors that influence their behavior. This information is collected during the planning or preimplementation stage (see the intervention-specific evaluation field guides for data collection templates and guidelines). This process is commonly referred to as a “needs assessment” or “community discovery.”

<table>
<thead>
<tr>
<th>Problem Statements</th>
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<tbody>
<tr>
<td>Problem statements should be very specific and concise. For example: “HIV-positive adult women are engaging in unprotected sex with their male partners because they don’t have sufficient skills to manage stress and triggers around disclosure of their status with their partners, and they lack communication and condom negotiation skills.”</td>
</tr>
</tbody>
</table>

A risk analysis table can help to organize the information and guide agencies in understanding why their target population is engaging in behaviors that put them at high risk for acquiring and/or transmitting HIV. Figure 5 is a table that describes a population, the behaviors that put them at risk for HIV infection, and some of the factors that put them at risk.
Figure 5. Risk Analysis Table

<table>
<thead>
<tr>
<th>Target Population</th>
<th>Risk Behaviors</th>
<th>Why Do These Women Engage in These Behaviors?</th>
<th>Again, Ask Why?</th>
<th>And Again Ask Why?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women who have unprotected sex with multiple partners</td>
<td>Unprotected sex</td>
<td>Financial support</td>
<td>Fear of violating trust</td>
<td>Insufficient access to income/resources</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Emotional support</td>
<td>Fear of jeopardizing their relationship with their partner</td>
<td>Feel defined by their relationships and closely identify with them</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Self-validation</td>
<td></td>
<td>History of abuse or neglect</td>
</tr>
</tbody>
</table>

Although information regarding those factors that contribute to risk may not be included in the problem statement, information on what influences the risk behavior helps to guide activities and helps staff understand the relationship of the intervention activities to risk behavior. An understanding of these relationships facilitates good service delivery. A generic behavioral risk analysis table is also included in each evaluation field guide.

**Question 2: What are the anticipated outcomes and the accompanying outcome objectives?**

The outcomes for an agency’s individual- or group-level intervention should reflect a change in the behavior(s) and influencing factors defined in the problem statement for intervention. The outcomes for community-level or social network interventions should reflect changes that occur within the community or targeted social network. Consider the outcome objectives of the original intervention design.

- Does the problem statement identify behavioral risk determinants different from those described in the intervention’s implementation materials or evaluation field guide?
  - If yes, how do they differ?

Use the refined problem statement to revise the outcomes of the intervention’s logic model.
- Identify changes in knowledge, perceptions, or attitudes that are expected to change because of intervention activities (immediate outcomes).
- Identify behaviors that you expect the intervention to change (intermediate outcomes).
- Identify risk factors—sometimes referred to as behavioral risk determinants—that implementation will attempt to affect (intermediate outcomes).
- Identify changes in the target community or population that are expected from implementation of the intervention.

Use the identified outcomes to develop SMART outcome objectives. See step 1 of Drafting an Evaluation Plan for additional information on writing objectives.

**Question 3: What are the planned intervention activities and outputs?**

When implementing an evidence-based or effective behavioral intervention, the activities described in the intervention materials should be implemented as described. In some instances, there may be a need to make minor adjustments to respond to the needs of the target population (such as how some activities are implemented, the length of time needed, or specific materials distributed). These changes should be based upon the information gathered during the formative evaluation, and the changes should be closely related to the identified behavioral risk determinants and outcomes.

When modifying any activity, review all of the activities of the intervention and carefully consider the following questions:

- What activities should change and why?
- Are the planned changes supported by sound assumptions (e.g., science, experience-based, or based on characteristics of the target group)? Do the planned changes follow the logic of the intervention?
- Will the planned changes yield the anticipated outcomes?

Try to ensure that any changes to the intervention’s activities remain consistent with the theoretical framework of the program. For activities that are not consistent with the theoretical
framework, think through the assumptions and why you think this modification will yield the expected changes with this particular population. Outputs should be revised based upon the activities being conducted.

After implementing one or two cycles of the intervention, the logic model can be further modified to reflect what actually happened and lessons learned. As an organization continues to tweak its implementation of the intervention, determine whether the desired outcomes continue to be achieved and, if not, identify what adjustments need to be made to the implementation plan. Modify outputs to reflect activities conducted or those the agency plans to conduct.

**Question 4: What inputs are needed to achieve the outputs?**

Consider the activities of the intervention and identify what staff, materials, supplies, and resources will be needed to implement the intervention effectively. Determine the inputs that are available to the agency as well as any gaps, and develop a plan to obtain the additional and necessary inputs.

A logic model that accurately reflects the activities and expected outcomes is the foundation for the intervention and implementation plans. The logic model is also the foundation upon which an agency designs its evaluation plan.

Additional information and worksheets to help you develop or modify your logic model are included in Appendix D.

**Key Steps to Developing an Evaluation Plan**

1) Use the intervention logic model to develop SMART process and outcome objectives.

2) Use the intervention process and outcome objectives to generate and prioritize process and outcome evaluation questions. Questions beyond those implied by the logic model may also be asked.

3) Identify the data needed to answer or address:

   a. agency-identified evaluation questions
b. National HIV Prevention Program Monitoring and Evaluation (NHM&E) Data Set (DS) variable requirements for the intervention (specifically for agencies using CDC funds to implement EBI program models)

c. data requirements or requested information other than those for NHM&E

d. Determine the most appropriate methods to collect the needed data and who will be responsible for each data collection activity.

e. Develop plans for data management, analysis, and reporting.

f. For each data collection activity, identify or determine how, when, and by whom data will be recorded, managed, analyzed, and used.

The remainder of this document provides information and instruction for each of the steps listed above.

C. DRAFTING AN EVALUATION PLAN

In addition to an intervention implementation plan and logic model, organizations should have an evaluation plan. The purpose of writing an evaluation plan is to document the intent of the evaluation of the intervention. Ideally, the evaluation plan is incorporated into the implementation plan so that evaluation becomes a seamless part of the program. It should address all aspects of the intervention, from implementation through outcomes. With a detailed plan, organizations will have a record of each stage of the process that identifies which aspects work well and which need improvement for future efforts. An evaluation plan should include:

- **Process and outcome objectives**—What key program activities or tasks are required to achieve an outcome (process objective) and what measurable change is expected to be achieved in the target population as a result of an intervention in a given period of time (outcome objective).

- **Monitoring and evaluation questions**—What information is needed to determine if process and outcome objectives are achieved and why this information is important.

- **Schedules and protocols**—When evaluation activities should take place, who is responsible for each activity, and how evaluation activities will be executed.
● **Data management**—Which instruments will be used to collect data and how data collection activities will be tracked and monitored.

● **Data analysis plans and schedules**—How and when the data will be analyzed, and by whom.

● **Dissemination plans and schedules**—When reports, data analysis, and other deliverables will be disseminated to stakeholders.

● **Report development**—How and when reports will be developed and disseminated to stakeholders.

● **Use of data for program improvement**—How and when findings will be reviewed for decision making.

Each intervention-specific evaluation field guide includes examples of process and outcome objectives and evaluation questions, and provides data collection schedules and protocols for agencies to use in their evaluation plan. The evaluation field guide also includes a generic behavioral risk analysis and logic model. Most organizations should modify what is in the field guide to reflect changes made to the intervention and to capture their additional information needs. The agency should also develop plans for data management, analysis, and dissemination. The evaluation plan should be as specific as possible so that program staff can easily identify who is responsible for what, by when, and how, as well as how the information will be used.

Developing an evaluation plan is often a challenging process. However, the process is made easier by doing research, using the appropriate tools (e.g., a logic model reflective of the intervention and SMART objectives), and involving key organization leadership. This section outlines the process for developing an evaluation plan.

**Step 1: Writing SMART Process and Outcome Objectives**

The first step in developing an evaluation plan is using the intervention logic model to develop SMART process and outcome objectives for the intervention. The objectives will guide implementation of the intervention and serve as the focus for the evaluation. Use the agency’s revised intervention logic model as a guide to developing SMART objectives.
● **Process monitoring and evaluation objectives** are generated by the outputs described on the logic model.

● **Outcome monitoring objectives** are generated by the immediate, intermediate, and long-term outcomes described in the logic model.

Because most agencies do not have the resources for long-term follow-up with clients, there are few instances for which evaluation of long-term outcome objectives are required. Agencies should check with their project officer or contract monitor for M&E requirements.

**SMART Objectives**

The “SMART” approach to developing objectives is a framework used to determine whether objectives will be measurable and useful to program planning. A SMART objective is:

<table>
<thead>
<tr>
<th>Specific</th>
<th>Identifies concrete events or actions that will take place; answers the question, “Does the objective clearly specify what will be accomplished?”</th>
</tr>
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<tbody>
<tr>
<td>Measurable</td>
<td>Quantifies the amount of resources, activity, or change to be expended and achieved; answers the question, “Does the objective state how much is to be delivered or how much change is expected?”</td>
</tr>
<tr>
<td>Appropriate</td>
<td>Relates logically the overall problem statement and desired effects of the program; answers the question, “Does the objective make sense in terms of what the program is attempting to accomplish?”</td>
</tr>
<tr>
<td>Realistic</td>
<td>Provides a realistic dimension that can be achieved with the available resources and plans for implementation; answers the question, “Is the objective achievable given the available resources and experience?”</td>
</tr>
<tr>
<td>Time-based</td>
<td>Specifies the time within which the objective will be achieved; answers the question, “Does the objective specify when the desired results will be achieved?”</td>
</tr>
</tbody>
</table>
**Figure 6. Sample SMART Objectives**

<table>
<thead>
<tr>
<th>Inputs</th>
<th>Implementation Activities</th>
<th>Outputs</th>
<th>Immediate</th>
<th>Intermediate</th>
<th>Long Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training materials</td>
<td>Conduct Peer Outreach</td>
<td>Messages disseminated</td>
<td>HIV risk information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff and volunteer training</td>
<td>Establish Community Network</td>
<td>Condoms and barriers received</td>
<td>Safer sex information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff and volunteer time</td>
<td>Conclude Role Model stories</td>
<td>Stories disseminated</td>
<td>Increased access to condoms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational materials</td>
<td>Conduct HIV presentations</td>
<td>Presentations attended</td>
<td>Self perception of risk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Condoms and other safer sex supplies</td>
<td>Conduct Safer Sex Gatherings (SSG)</td>
<td>Participated in SSG</td>
<td>Positive perception of condom use</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role model volunteers</td>
<td>Conduct Stage-Based Encounters</td>
<td>Tailored messages received</td>
<td>Knowledge and skills to negotiate condom use</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Developed role model stories</td>
<td></td>
<td></td>
<td>Correct condom use knowledge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community access</td>
<td></td>
<td></td>
<td>Correct condom use skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sufficient budget</td>
<td></td>
<td></td>
<td>Condom negotiation skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>intentions to Condoms</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Process Objectives:**
Peer outreach workers will conduct 25 stage-based encounters per month.

**Process Questions:**
How many stage-based encounters were conducted?

**Outcome Objectives:**
By the end of the program period, 85% of participants will demonstrate correct condom use.

**Outcome Questions:**
What proportion of participants demonstrated correct condom use?
Coverage and Effect Size

When writing SMART process objectives it may be necessary to estimate how many people will be reached and how much change (or effect) the intervention will produce. These concepts are referred to as coverage and effect size.

**Effect size** addresses the question, “How much change will the intervention produce?” To estimate an effect size that is evidence-based, consider:

- The agency’s past experience with the intervention
- Other agencies’ past experience with the intervention
- Unpublished evaluation data (e.g., process monitoring data)
- Published literature
- Discussion with experts
- Cost per client relative to available resources (for coverage only)
- Discussion with peers

**Coverage** addresses the question, “How many people will be reached by an intervention?” To estimate the number of people the agency will reach with the intervention, consider:

- Intervention type
- Time required to conduct the intervention
- Availability of resources
- Cost per client relative to available resources
- Number of full-time staff dedicated to the intervention

It is important to note that if the initial design or format of an intervention is changed, these adjustments also have the potential to influence outcomes. For example, if an agency is unable to demonstrate condom use in certain settings, the participants’ change in self-efficacy may not be as strong as expected (i.e., the effect size may decrease). Alternately, an organization may decide to split one session into two so that all components of the intervention are adequately covered. By extending the intervention from 5 to 6 weeks, the number of people reached per year...
(coverage) may decrease; however, the effect size may increase. Agencies may use the worksheet in Appendix E to assist in developing SMART process and outcome objectives.

There are many different ways to organize this information; however, a tool that often works to organize information needed to complete a plan is a simple table like the one shown in Figure 7. Using this format, develop one table for each objective, with the objective noted at the top and details of the activities, resources, gaps, accountability, timing, and indicators listed below.

**Figure 7. Example Evaluation Planning Tables**

<table>
<thead>
<tr>
<th>DATA PLANNING MATRIX</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Output:</strong> Five SISTA group sessions facilitated</td>
</tr>
<tr>
<td><strong>Process Objective:</strong> During the first year of funding, conduct eight five-session cycles of SISTA with African American women at high risk for acquiring HIV</td>
</tr>
<tr>
<td><strong>Evaluation Question</strong></td>
</tr>
<tr>
<td><strong>Outcome:</strong> Increase in frequency of consistent condom use</td>
</tr>
<tr>
<td><strong>Outcome Objective:</strong> Within 3 months of completing the SISTA intervention, 80% of the women will report a 50% increase in frequency of condom use with their sexual partners</td>
</tr>
<tr>
<td><strong>Evaluation Question</strong></td>
</tr>
</tbody>
</table>

* Adapted from the First 5 California Informal Child Caregiver Support Project. Available at: http://www.ccfc.ca.gov/ffc/prog/needsAssess/stepThree.htm

**Step 2: Developing and Prioritizing Process and Outcome Evaluation Questions**

Evaluation questions specify what an agency wants to learn from its evaluation about the intervention. Specifically, the intervention’s process and outcome objectives are used to clearly identify what aspects of the intervention the evaluation will measure.

For instance, what does the agency need to know about its implementation processes?
● The number of persons served by the intervention
● The barriers that hindered activity implementation
● The activities that were actually conducted

Likewise, what information does it need to know about outcomes among participants?

● Change in knowledge
● Change in attitudes
● Change in number of participants receiving HIV counseling and testing

Keep in mind that evaluation questions will vary from one organization to another, even among those that are implementing the same effective behavioral intervention. This is because evaluation questions are based on a particular program’s goals and objectives, agency resources, and extent or timeframe of the evaluation.

**Importance of Developing Evaluation Questions**

Being clear about what questions the evaluation should answer is the key to designing and implementing an evaluation plan that meets the needs of the agency. Evaluation questions guide evaluation by articulating exactly what an organization wants to know about its intervention. They also help organizations begin to focus on the intent of their intervention, as well as how they intend to evaluate the success of that intervention. In other words, evaluation questions provide a mechanism to help assess the degree to which an agency is meeting its objectives, what barriers it faced in working toward those objectives, and what helped.

**Types of Evaluation Questions**

Similar to evaluation objectives, evaluation questions are derived from the outputs and outcomes specified in the organization’s logic model.

- **Process monitoring questions** address implementation or processes of the intervention. These questions are guided by the outputs identified in the logic model.
- **Process evaluation questions** facilitate comparisons between what was planned (process objectives) and what actually occurred during implementation (process monitoring data).
● **Outcome monitoring questions** pertain to the expected change in knowledge, attitudes, beliefs, behavior, and norms. The development of outcome monitoring questions is guided by the outcomes identified in the logic model and outcome objectives.

● **Outcome evaluation questions** aim to determine the extent to which the intervention activities are responsible for the changes.

Evaluation questions are the basis of any evaluation plan and it is important to develop these questions before an agency begins implementing its intervention. Review the evaluation questions in the evaluation field guide to determine if they are applicable or if they should be modified to reflect the implementation plan. Agencies may also choose to ask additional questions to meet its information needs of those of its stakeholders.

An agency and its stakeholders can have many questions they would like answered. However, resources may force agencies to limit the number of questions on which they focus as they monitor and evaluate their implementation of an intervention. The following process may help agencies develop and prioritize evaluation questions.

1. **Generate ideas for evaluation questions**

   Work with key staff and stakeholders in order to answer the following questions:

   ● What do you want to learn from the evaluation of the intervention?
   ● What do you want to know about the implementation process of the intervention?
   ● What do you want to know about the outcomes among intervention participants (or community)?
   ● What questions will provide answers that will help your agency improve its implementation of the intervention?
   ● What information/data are needed to establish whether your adaptation and implementation of the intervention was successful?
2. Identify recurring or central themes

It is important for organizations to prioritize their questions, because regardless of how staff generate potential evaluation questions the list is likely much longer and more extensive than is practical. The first step is to do a quick check for duplicate questions. Questions that are the same should be eliminated. The second step is a “rough sort” of ideas into general topic categories. Often questions that appear different may actually be targeting the same information. By putting them into categories, it is easier to both determine whether questions are truly distinct and identify the type of evaluation the organization is ready for (i.e., formative, process, evaluation).

3. Rank the questions in order of priority

Agencies should develop criteria to rank their questions. The two most common and important criteria are:

- **Utility**: Which questions will provide the most useful information?
- **Feasibility**: Which questions are the easiest to answer?
The goal is to develop a list of questions that best represent the focus of the agency’s evaluation. Just as evaluation questions will vary from other organizations (even those implementing the same intervention), the way organizations prioritize them will as well. Remember, evaluation is only worthwhile if the information gathered is used, so carefully develop and prioritize the questions that are relevant to the organization; this is a planning step that should not be undervalued.

4. **Refine questions**
Organizations should revise their questions to provide the most useful information (i.e., open-ended questions yield much richer information than do closed-ended questions). Consider the following two questions.

- Did the participants complete the intervention?
- What percentage of participants completed all five sessions?

The answer to the second question (e.g., 64% of participants completed the intervention sessions) provides an agency with more information than the “yes” or “no” response the first question would yield. Proportions and percentages allow agencies to compare what occurred with their objectives. The second question also defines completion of the intervention. Organizations can

---

**Prioritizing Evaluation Questions**

There are several ways to ask stakeholders to prioritize the evaluation questions. One simple method uses colored dots.

- Post the list of evaluation questions on a wall
- Assign each criterion a color
- Provide stakeholders with two to three dots of each color
- Ask stakeholders to place the dots next to the questions that best addresses each criterion (for example, if blue dots represent utility, the stakeholders will each place their blue dots next to the two or three questions they feel will provide the most useful information)
- Review the placement of the dots for questions that are both useful and feasible

Another method for ranking questions is to have each individual rate each evaluation question on a scale from 1 to 5, with “1” being not important or useful and “5” being very important or useful. The questions with the most “votes” should emerge as the ones to be considered for the evaluation.
use this information to monitor their progress and to make decisions for improving the intervention.

Agencies may begin to organize their questions into the data planning matrices (see Figure 8).

**Figure 8. Example Evaluation Planning Tables**

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<td>How many SISTA cycles were conducted?</td>
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<td>What proportion of participants were African American women at high risk?</td>
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<td><strong>Outcome:</strong> Increase in frequency of consistent condom use</td>
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<tr>
<td><strong>Outcome Objective:</strong> Within 3 months of completing the SISTA intervention, 80% of the women will report a 50% increase in frequency of condom use with their sexual partners</td>
</tr>
<tr>
<td><strong>Evaluation Question</strong></td>
</tr>
<tr>
<td>What changes in condom use occurred among participants?</td>
</tr>
</tbody>
</table>

**Step 3: Identify Data Needs**

Once evaluation questions are selected, consider what the organization needs to know to answer those questions. In addition to information that answers the evaluation questions, consider other information needs, such as reporting requirements of the funding entity. Please refer to the intervention-specific evaluation field guide or the *National Monitoring and Evaluation Guidance for HIV Prevention Programs* for information on the program planning and implementation variables required for each intervention.
As shown in the sample planning tables (see Figure 9), a part of the evaluation plan includes *measures*, which are specific, observable, and assessable items that show the extent to which a process or outcome objective has been achieved. These are not always the same as the output or outcome itself, just an indicator that the output or outcome has occurred. Measures can be quantitative (e.g., counts, proportions or percentages, Likert scale scores) or qualitative (i.e., narratives).

**Figure 9. Example Evaluation Planning Tables**

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</thead>
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</tr>
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<td></td>
</tr>
</tbody>
</table>
CDC Reporting Requirements

In addition to your information needs, organizations also need to collect data to meet their funding agency’s reporting requirements. CDC has undertaken significant efforts to ensure that the HIV prevention programs it funds are effective in preventing the spread of HIV (Thomas, Smith, & Wright-DeAgüero, 2006). One strategy used by CDC to strengthen HIV prevention is improving organizational capacity to monitor and evaluate prevention programs (CDC, 2007). The National HIV Prevention Monitoring and Evaluation Data System (NHM&E DS) is a major component of this strategy (CDC, 2008c).

The NHM&E DS is the complete set of CDC’s HIV prevention M&E variables, including required variables for reporting to CDC and optional variables specific to an intervention or for local M&E. Implementation of NHM&E DS makes it possible for CDC to answer critical national questions about the following:

- Demographics and risk behavior of clients being served by its grantees
- Services provided to clients
- Resources used to provide these services
- Effectiveness of these services in preventing HIV infection and transmission

All HIV prevention grantees funded by CDC are required to collect and report data using the NHM&E DS. CDC has provided various M&E resources to assist grantees in this effort, including the following:

- *National Monitoring and Evaluation Guidance for HIV Prevention Programs (NMEG)—* Describes how to use the NHM&E DS to improve programs, inform programmatic decisions, and answer local M&E questions (CDC, 2008a).

- *Program Evaluation and Monitoring System (PEMS) software—* An optional, secure, browser-based software that allows for data management and reporting. PEMS includes all required and optional NHM&E DS variables (CDC, 2008b).

- *Evaluation Field Guides—* Intervention-specific guides that provide tools and templates that an organization may adapt to monitor and evaluate its implementation of a particular intervention.
The information submitted is part of a national data set that will provide national stakeholders with a picture of HIV prevention services. By collecting standardized data about evidence-based interventions, CDC can gain a better understanding of prevention services across the country. These data will provide additional information about interventions that have a higher likelihood of reducing risk for HIV infections, promote national and community accountability, and facilitate the exchange of information among multiple stakeholders. In addition, CDC can use these data to provide additional guidance on implementing, monitoring, and evaluating evidence-based interventions at all levels. Information needed to provide this picture of HIV prevention services across the nation includes:

- Characteristics of planned and implemented HIV prevention interventions
- Characteristics of populations targeted and served by evidence-based interventions
- Extent to which planned prevention programs are reaching the targeted populations
- Extent to which prevention programs are being implemented as planned
- Characteristics of agencies delivering HIV/AIDS prevention services
- Baseline, target, and goal performance measures for required performance indicators
- Behavioral and service outcomes reported by individuals receiving HIV/AIDS prevention services
- Cost of providing HIV prevention services, and how the costs are distributed by programs, risk categories, and target populations

The NHM&E required variables may be a subset of the information that organizations need to monitor the implementation of their intervention and to make decisions about program planning and improvement.
While this document aims to assist with designing an evaluation plan inclusive of CDC reporting requirements, it is important to note that reporting requirements change. Furthermore, the required NHM&E variables may not be all of the data that organizations are required to report to CDC. If an organization is directly funded by CDC, the CDC Project Officer in the Prevention Program Branch and the Program and Grants Office can provide guidance on additional reporting requirements. If an organization is indirectly funded by CDC or using funds from another agency to supplement an intervention, consult with that agency for specific reporting requirements.

**Step 4: Determine the Appropriate Data Collection Methods**

For each of the agency’s data needs, determine how and from where the information will be obtained. One important issue to consider are the resources required to collect the necessary information. Another consideration is the organization’s ability to manage and analyze the data. Some considerations are agency-specific, while others may be based on the target population. Examples of issues to consider include the following:

**Agency/programmatic issues**

- Skills the staff possess to administer evaluation instruments (e.g., surveys, interview guides, focus group guides)
- Timeframe of the intervention cycle (e.g., one 45-minute session or five 2-hour sessions versus ongoing)
- Venue (e.g., school or correctional setting) may limit what an agency can ask of clients
Client-specific issues

- Amount of time clients will need to complete forms or participate in interviews or focus groups (e.g., interventions in schools or correctional settings may have time limitations)
- Reading level of the target population

Selecting Data Collection Methods

Many data collection methods may be used to assess pre-implementation activities, monitor progress, or evaluate implementation and effectiveness. It is important to determine the most appropriate methods of data collection that will allow the organization to obtain the most useful information in a practical and cost-effective way.

When making a decision about which data collection methods to use, it is important to consider the following questions (McNamara, 1998; Taylor-Powell & Steele, 1996):

1. What information is needed to make decisions about the intervention and future program improvement and planning efforts?

4) What information is needed to address accountability issues to the program’s funding agency, staff, clients, and target communities?

5) Of the necessary information, how much can be collected and analyzed in a low-cost and practical manner?

6) Given the advantages and disadvantages of the various data collection methods, which will provide the most accurate information?

7) Will the data collection methods selected get all of the needed information?

8) What other methods could or should be used if additional information is needed?

9) Will the information appear credible to decision makers (e.g., to funding agencies or top management)? Will the stakeholders want standardized quantitative information and/or descriptive, narrative information?
10) Where and how can the respondents (from whom the organization will collect the data) be reached best?

11) Will the respondents conform to the data collection methods (e.g., will they carefully fill out the questionnaires, engage in interviews or focus groups, let the organization examine their documentation)?

12) Are the data collection instruments and tools culturally appropriate for the target audience?

13) Are there staff members who can facilitate the data collection methods or is training in data collection required?

14) Is there a process for analyzing the information once the data are collected?

15) Will the information collected need to be standardized and representative of all intervention participants, or will you need to examine diversity in participant experiences?

16) Based on the advantages and disadvantages of each method, what are the most appropriate methods for the organization?

When deciding on the most appropriate methods of data collection, it is important to understand the purpose for collecting the data, the differences among methods, and the advantages and disadvantages of each method. Figure 10 summarizes some of the advantages and disadvantages of each data collection method to help organizations decide on the most appropriate and feasible methods.
### Figure 10. Advantages and Disadvantages of Data Collection Methods

<table>
<thead>
<tr>
<th>Method of Data Collection</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
</table>
| **Direct Observation**   | • Observers can view the intervention activities as they are occurring.  
                           | • Observers have a better understanding of the situation/context and can adapt to events as they occur (McNamara, 1998).  
                           | • Allows observers to provide direct information about the behavior of individuals and groups.  
                           | • Creates a good opportunity to discover unanticipated outcomes because it takes place in natural, unstructured, and flexible settings (Stevens, Lawrenz, & Sharp, 1993).  
                           | • Somewhat of an objective form of data collection because there is no direct interaction or conversation with community members, minimizing the chance of social desirability bias.  
                           | • Allows collection of information on the physical environment and interactions among community members within a community context.  
                           | • Can be easily combined with other data collection methods                                                                                                                                               | • There can be difficulty interpreting behaviors and categorizing observations (McNamara, 1998).  
                           | • Behaviors witnessed by the observers may be atypical.  
                           | • Observers also have little control over the environment.  
                           | • Observers can influence behaviors of program participants.  
                           | • Process is time consuming.  
                           | • Within a community setting, there is no personal contact with community members.  
                           | • Data are dependent on the specific locations selected, which can potentially create a bias.                                                                                                             |
| **Document Review**      | • Provides comprehensive and historical information about an organization.  
                           | • Process is inexpensive.  
                           | • Information already collected can be reviewed at convenient times.                                                                                                                                       | • If there are a large number of documents, the process can be time consuming.                                                                                                                                   |
## Figure 10. Advantages and Disadvantages of Data Collection Methods (continued)

<table>
<thead>
<tr>
<th>Method of Data Collection</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
</table>
| **Focus Groups**          | • In-depth, complex responses can be collected.  
                          • Participants may stimulate new thoughts for each other, which might not otherwise have occurred.  
                          • Provides quick, common impressions about the program model or intervention.  
                          • Creates a space to allow participants to discuss key information about the program (McNamara, 1998).  
                          • Facilitators can explore related but unanticipated topics during the discussion (American Statistical Association, 1999).  
                          • Process is time intensive.  
                          • Participants may feel hesitant about speaking openly.  
                          • Process is limited to the perspectives of those participating.  
                          • May require incentive for community member participation.  
                          • Focus group participants may not reflect a representative sample of the target population and thus limit generalization of findings to community or target population as a whole.  
                          • Quality of the information is related to the facilitation skills of the moderator.  
                          • May be difficult to schedule, especially among hard-to-reach populations. |
| **Community/Public Forum** | • Offers a good way to elicit opinions from a wide range of the population.  
                          • Provides an opportunity for citizens to actively participate in the needs assessment process.  
                          • Very inexpensive and simple to implement.  
                          • Can provide a quick “snapshot” picture of community needs.  
                          • Design is flexible (a variety of techniques may be incorporated).  
                          • Requires good leadership and advanced organization.  
                          • Opinions obtained are limited to those who attend—all viewpoints may not be heard.  
                          • Participants in the forums may actually represent a variety of “vested interest” groups.  
                          • Participants who tend to respond may represent extreme views.  
                          • Response is affected by the location and date of the forum.  
                          • Poor advanced planning and advertising may result in limited participation.  
                          • May generate more questions than answers, especially if there is a larger than expected turnout. |
### Figure 10. Advantages and Disadvantages of Data Collection Methods (continued)

<table>
<thead>
<tr>
<th>Method of Data Collection</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
</table>
| **Key Informant Interviews** | - Process is inexpensive.  
- Allows flexibility because the nature of the response is not limited (McNamara, 1998).  
- Allows for more complex and sensitive subject matter questions.  
- Provides an opportunity to build rapport with community member/respondents, thus obtaining an insider’s perspective and a better sense of attitudes.  
- Allows respondents to share their own viewpoints and answer in their own words.  
- Provides a depth of information around causes and/or reasons for community needs.  
- Permits continual clarification of ideas and information.  
- Can be combined effectively with other techniques.  
- Does not require high cost of printing and data analysis. | - Confidentiality may be an issue.  
- Requires staff with developed skills in conducting open-ended interviews.  
- Depends on the ability of respondents to express themselves, increasing the potential for interviewer bias.  
- Process is time consuming.  
- There may be reliability issues when comparing data from different respondents.  
- Because of a lack of standardization, answers can be difficult to analyze.  
- Few people can communicate all the needs and concerns of all people in a community—the perspectives of those who are less visible but more knowledgeable may be overlooked. |
| **Conversational or Spot Interviews** | - Process is highly individualized and relevant to the individual and is likely to produce information or insights that the interviewer could not anticipate.  
- Process is very brief and inexpensive.  
- Provides an opportunity to build rapport with community members.  
- Provides an opportunity to speak with many different community members.  
- Provides a potentially high response rate.  
- Easily combined with other data collection methods (Patton, 1987). | - Requires an interviewer who is very knowledgeable and experienced in program model content and possesses strong interpersonal skills.  
- Different information may be collected by different people and may not be systematic or comprehensive (Patton, 1987).  
- Few people can sense all the needs and concerns of all people in a community—the perspectives of those who are less visible but more knowledgeable may be overlooked.  
- Can be time intensive for the interviewer. |
Figure 10. Advantages and Disadvantages of Data Collection Methods (continued)

<table>
<thead>
<tr>
<th>Method of Data Collection</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surveys/Questionnaires</td>
<td>• Excellent at eliciting information from a broad range of individuals.</td>
<td>• May be costly, depending on development and dissemination fees.</td>
</tr>
<tr>
<td></td>
<td>• Can be completed anonymously.</td>
<td>• Results may not be valid and/or useful if the survey is not designed correctly.</td>
</tr>
<tr>
<td></td>
<td>• Data obtained is usually valid and reliable.</td>
<td>• Often requires significant time and expertise to develop, distribute, and collect the survey</td>
</tr>
<tr>
<td></td>
<td>• Specific technique (mail survey, telephone survey, personal interview) may be selected in relation to desired cost or response rate.</td>
<td>• Tendency for scope of data to be limited (i.e., omission of underlying reasons and actual behavioral patterns),</td>
</tr>
<tr>
<td></td>
<td>• Can be used to survey a large number of individuals in a population.</td>
<td>• Individuals may be hesitant to answer some questions or respond in a socially acceptable way</td>
</tr>
<tr>
<td></td>
<td>• Easily combined with other systematic needs assessment techniques.</td>
<td>• Individuals may not be resurveyed in the future, thus providing limited, cross-sectional information.</td>
</tr>
<tr>
<td></td>
<td>• Inexpensive to administer.</td>
<td>• Though it can be completed anonymously, there still may be confidentiality issues to consider.</td>
</tr>
<tr>
<td></td>
<td>• Easy to compare and analyze.</td>
<td>• Results may not be valid and/or useful if instruments are not designed correctly.</td>
</tr>
<tr>
<td></td>
<td>• Simple, short, self-administered questionnaires can be completed by many people.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• When they are interviewer administered, probes can be used to ensure questions are understood (Stevens, Lawrenz, &amp; Sharp, 1993).</td>
<td></td>
</tr>
</tbody>
</table>

In addition to understanding which methods are most appropriate for the kind of information needed, it is also important to assess what resources are available externally and within the organization. By combining various methods (i.e., triangulation), agencies can better understand different aspects of the intervention; they can validate their findings through cross-checks of the data. Triangulation helps build a more comprehensive and reliable evaluation. Figure 11 summarizes the types of data that organizations may collect to evaluate their implementation of an effective behavioral intervention and possible data collection methods.

Figure 11. Data Collection Summary Table
<table>
<thead>
<tr>
<th>Data</th>
<th>Type of Evaluation</th>
<th>Collection Method</th>
</tr>
</thead>
</table>
| • Characteristics of target population  
  • Needs of target population  
  • Conditions that influence or contribute to HIV risk  
  • Behaviors and habits of target population | Formative Evaluation | • Focus groups  
  • Direct observations  
  • Key informant interviews  
  • Spot interviews  
  • Community forums  
  • Document review of community assessment data |
| • Number of participants  
  • Number of sessions  
  • Characteristics of participants  
  • Materials used  
  • Activities implemented  
  • Number and type of staff involved in implementation  
  • Organizational expenditures | Process Monitoring | • Direct observation  
  • Document review  
  • Content analysis  
  • Intake forms  
  • Attendance sheets  
  • Timesheets  
  • Agency budget |
| • Process monitoring data  
  • Session respondent data  
  • Documentation of changes to intervention  
  • Facilitator comments and recommendations  
  • Participant comments and recommendations  
  • Intervention goals and objectives | Process Evaluation | • Document review  
  • Content analysis  
  • Fidelity forms or logs  
  • Key informant interviews  
  • Spot interviews  
  • Focus groups |
| • Process monitoring data  
  • Process evaluation data  
  • Pre-intervention knowledge, skills, attitudes, beliefs, behaviors  
  • Post-intervention knowledge, skills, attitudes, beliefs, behaviors | Outcome Monitoring | • Content analysis  
  • Spot interviews  
  • Pre/post-test surveys  
  • Direct observations of skill demonstrations |
| • Process monitoring data  
  • Process evaluation data  
  • Pre-intervention knowledge, skills, attitudes, beliefs, behaviors  
  • Post-intervention knowledge, skills, attitudes, beliefs, behaviors | Outcome Evaluation | • Content analysis  
  • Spot interviews  
  • Pre/post-test surveys  
  • Direct observations of skill demonstrations  
  • Key informant interviews  
  • Focus groups |
The selected data collection methods may be documented in the data planning matrices. Figure 12 uses the SISTA intervention to illustrate M&E planning. The data planning matrix is a systematic way of documenting evaluation questions, measures (i.e., data needed) for answering each question, the proposed method(s) for collecting those data, who will collect the data and when, and how the data will be analyzed.

**Figure 12. Example Evaluation Planning Tables**

<table>
<thead>
<tr>
<th>DATA PLANNING MATRIX</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Output:</strong> Five SISTA group sessions facilitated</td>
</tr>
<tr>
<td><strong>Process Objective:</strong> During the first year of funding, conduct eight five-session cycles of SISTA with African American women at high risk for acquiring HIV</td>
</tr>
<tr>
<td><strong>Evaluation Question</strong></td>
</tr>
<tr>
<td>How many SISTA cycles were conducted?</td>
</tr>
<tr>
<td>What proportion of participants were African American women at high risk?</td>
</tr>
<tr>
<td><strong>Outcome:</strong> Increase in frequency of consistent condom use</td>
</tr>
<tr>
<td><strong>Outcome Objective:</strong> Within 3 months of completing the SISTA intervention, 80% of the women will report a 50% increase in frequency of condom use with their sexual partners</td>
</tr>
<tr>
<td><strong>Evaluation Question</strong></td>
</tr>
<tr>
<td>What changes in condom use occurred among participants?</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Many of the measures an agency requires may be included in the data collection instruments and templates in the intervention-specific evaluation field guides. Review the data collection forms
and instruments and modify them as appropriate to reflect the organization’s information needs. Agencies may need to develop additional data collection instruments if the ones in the field guides are inappropriate for their target population. Additional information on data collection methods and using these methods are available in Appendix F.

**Step 5: Develop a Data Management and Analysis Plan**

Once an agency identifies the appropriate data collection methods, the next step is to determine how and by whom data will be recorded, managed, analyzed, and used.

Data management refers to the policies and procedures developed to ensure the proper storage, transportation, and disposal of data. Having appropriate policies and procedures in place is crucial to ensure the protection and security of confidential client information. Refer to the *National Monitoring and Evaluation Guidance for HIV Prevention Programs* (CDC, 2008a) for detailed information on developing data management protocols, data transport and storage, and data quality control.

**Data Management**

A data management protocol is a set of standard operating procedures and a code of conduct for the proper storage, transportation, disposal, and management of data before and after entry into PEMS, an electronic database, or other system. The goal of a data management protocol is high-quality data collection and maintenance that serves as a record of service provided and a reflection of the hard work that goes into HIV prevention programs every day. Having appropriate policies and procedures in place is crucial to ensure the protection and security of confidential client information.

If an agency is using PEMS, it will enter intervention planning and implementation data into the browser-based system to generate reports on the data entered into that system. Additionally, it will need to collect information to answer its evaluation questions that will not be submitted to CDC. Although the agency may have the option of creating and using local variables that it can enter into PEMS, it may need another system to store data outside of PEMS that allows it to analyze data. This system may be a manual or electronic system.
Development of a data management protocol that works for a particular agency is likely to require some testing and refinement over time. It should also involve input from managers and staff in order to develop mutually acceptable procedures for achieving the data collection goal. Protocol policies and procedures should reflect a shared responsibility of all staff members.

It is also important to ensure that data management protocols are compatible with—or integrated into—an organization’s confidentiality policies and protocols. Furthermore, because State and Federal laws often include provisions addressing the way in which HIV/AIDS data should be managed, including rules about data storage, transportation, and disposal, the agency’s policies, procedures, and protocols must reflect applicable State and Federal laws. In addition to the information on the following pages, see CDC’s *National Monitoring and Evaluation Guidance for HIV Prevention Programs* (CDC, 2008a) for more detailed information on developing data management protocols, data transport and storage, and data quality control.

Staff members should be aware of the protocol and have access to a written copy. All staff, particularly new staff, should receive training that includes orientation to the protocol.

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### Advantages of Establishing a Data Management Protocol

Carefully designing a data management system is a prerequisite for program evaluation because data management processes can facilitate easy retrieval of data for:

- tracking and providing services to clients over time,
- improving program and service delivery,
- complying with audits and legal obligations,
- meeting personal and professional expectations,
- monitoring staff in the handling of data and adherence to protocols.

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### Developing a data management protocol

The contents of an organization’s data management protocol will depend upon a variety of factors, including the organization’s size, structure, setting, interventions, staff, general practices, and, as mentioned above, State laws governing the management of HIV/AIDS data. While there is no single strategy for storing and managing data that will work for every agency or organization, a data management protocol should describe:

- Methods for recording, storing, transporting, and/or disposing of data
- Policies and procedures to ensure confidentiality
• Policies and procedures to ensure ongoing data quality and control

**Selecting and Developing a Data Management System**

Before developing a data management protocol, an agency must determine what type of system it will use to manage its data. Various electronic data management systems exist to facilitate data storage and processing. However, depending on the scope of the evaluation questions and the complexity of data collection and analysis, it may be advisable to seek the help of an experienced evaluator. (Refer to Appendix C for additional tips on working with technical assistance providers, and to Appendix G for information on readily available software programs, such as Epi Info, Microsoft Access, Microsoft Excel, and FileMaker Pro.)

Whether data will be collected using paper forms or electronic devices (e.g., personal digital assistants), having a database is crucial for analysis. If an agency decides to use an electronic database, it must determine which software or program (e.g., Microsoft Excel, SPSS) to use and the technological (i.e., computer specifications) and staff expertise required for the program. Users of PEMS will be able to enter data directly into the browser-based system. Depending on the type (e.g., qualitative) and complexity of data, agencies may opt to use another data system.

Data recording is the process of entering data from hard-copy forms into a data management system. Data management plans should document the process for data recording, including staff responsibilities and timelines. There are several important guidelines for recording and managing evaluation data:

• Data must be stored in a safe and protected place that will ensure that important information will not be destroyed in rare instances such as fires and floods.

• Participant information must be kept confidential at all times.

• To guarantee client confidentiality, sensitive information (e.g., HIV status) should be kept separate from identifying information, such as the client’s name and contact information. If codes are assigned to clients because of sensitive information, participant names and assigned codes should be placed in a hard-copy or electronic file separate from the actual M&E data to ensure confidentiality.
Data management also refers to quality checks and data cleaning. These processes involve periodic review of data to ensure the quality for analysis. A quality check may reveal incorrect or inconsistent data entry. For example, an agency implementing an intervention with young men, aged 16–24 years, finds several entries for females or individuals older than 30 years. The agency can then pull the hard-copy records of those individuals to verify if those entries are correct. A protocol for data quality assurance should be included in the data management plan.

**Staff expertise and skills for data management**

An important step in selecting and developing a data management system is to engage those who use the system (e.g., staff, primary stakeholders) in order to determine how data generated from the system might be used. Staff might consider the various ways individuals and agencies might use the data, strategies for promoting the use of data, and barriers to using the data and/or applying evaluation findings.

Possible issues to consider include the following:

- Identifying clearly the intended users of evaluation data
- Identifying the evaluation questions that are meaningful for the intended users
- Deciding how the data will be used before the evaluation (data collection) is conducted
- Presenting the data in a user-friendly format after they are collected and analyzed

The types of data collection methods selected for use will determine the specific skills and capacities needed by the staff members who are organizing and managing the data systems. For qualitative data, such as interview, focus group, and content analysis data, there is less of a focus on numbers and statistics and more on written text, interviews, observations, and other notes. This process requires staff to systematically review and code the information into different categories.

Agencies should also consider the technical skills and capacity needed to analyze qualitative data. Qualitative data analysis involves systematically identifying and synthesizing the patterns and relationships that emerge from the coded data.
Data storage, transportation, and disposal

An organization’s data management protocol should address how paper and electronic data will be stored, how the data will be transferred, and how and when data will be disposed.

- **Data storage** is the retention of information in a paper or electronic format. At the very least, completed paper forms or electronic files are stored in a locked file cabinet inside a locked room before and after data entry.

- **Data transport** involves the movement of paper or electronic data from one location to another. This includes from one geographic location to another (e.g., from a field site to the main office) as well as from one part of a facility to another.

- **Data disposal** is the final disposition of paper or electronic data and/or the hardware on which electronic data are stored.

Keep in mind that each data collection technique may require a slightly different data management protocol to address the details of the processes involved (see the *National Monitoring and Evaluation Guidance for HIV Prevention Programs* [CDC, 2008a]) for more specific information). For example:

- **Real-time, onsite data entry** reduces the potential for some types of security problems because there is no need to transport data, store paper forms, or dispose of paper forms.

- **Real-time offsite data entry** requires security procedures for transporting data but there is no need to store paper forms or dispose of paper forms.

- **Onsite data collection using paper forms** requires effective security procedures for the storage of paper forms before and after data entry as well as the secure disposal of those forms at a specified time after completion of the intervention.

- **Offsite data collection using paper forms** requires security procedures for transporting the forms to the location where data entry occurs, storing paper forms before and after data entry, and the secure disposal of those forms at a specified time after completion of the intervention.

When developing a data management protocol, it is important to think through the steps involved in current data transport, storage, and disposal practices, such as the following:
● Number of places where client names are stored
● Length of time that paper data are held by individuals collecting the data
● Methods used to transport data
● Number of persons who may have access to the data throughout the process

The specific steps and types of protections and policies adopted will depend in part on the practices and structure of the agency. In addition, any practices required by law or developed by the organization as a part of standard operating procedures must be addressed in the data management protocol.

Confidentiality

Confidentiality must be the cornerstone of collecting client-level data. At all phases of data collection, storage, transport, analysis, publication, reporting, and presentation, the need to document the effectiveness of interventions and to respond to reporting requirements must be balanced with every effort to ensure the safety and protection of the privacy of individuals. Protecting the privacy of those who use HIV prevention services is paramount, and the highest ethical standards must be upheld.

Confidentiality is based on a number of key principles, including the following:

● Respect for individual right to privacy
● Respect for human relationships in which personal information is shared
● Appreciation of the importance of confidentiality to both individuals and society
● Expectations that those who pledge to safeguard confidential information will do so

In applying these principles to everyday practice in the context of HIV prevention and data collection, there are many reasons to care about confidentiality:

● **Protecting clients**—It is critical to respect and safeguard individual privacy and protect individuals from harm, discrimination, or other negative implications of having sensitive personal information disclosed.

● **Protecting providers/agencies**—Confidentiality policies and procedures ensure that individuals, agencies, and organizations comply with State and Federal laws and regulations
regarding individual privacy protections. If individual providers fail to meet basic standards of conduct in protecting confidentiality and data security, or if agencies fail to add policies outlining such standards, corrective action may be warranted.

- **Ensuring successful program evaluation/monitoring**—The ability of local agencies to use client services data to plan and improve services depends upon the collection of complete and accurate information for program evaluation and monitoring.

- **Meeting public expectations**—The right to privacy is a fundamental value of all free societies. It is a right that is guarded and protected by the U.S. Constitution, State constitutions, Federal and State statutes, and common law judicial decisions. Those working in HIV prevention at all levels must strive to meet society’s expectations for a high standard of conduct in the protection of private and sensitive health information.

- **Meeting personal and professional expectations**—Respecting the principles of good public health practice, including ensuring that the data collected are used only for the purposes for which they were collected, creates a professional atmosphere for all working in HIV prevention.

Agencies should consider two facets regarding the security of their data management system. One is the security of the system and the second is the confidentiality of the data. Agencies should have procedures and policies in place to ensure both.

**Security** involves maintaining the integrity of the system to ensure the existence and confidentiality of data by taking measures to detect, document, and counter accidental data loss or damage or threats to the integrity of the system. Examples of security risks include:

- Acts of nature or disaster
- Human intruders or insiders
- Security intrusion or system breach
- System unavailability/maintenance

**Confidentiality** involves maintaining critical information in a confidential environment and preventing unauthorized access to sensitive data, such as:
- Autonomous intrusion (viruses/hackers)
- Unauthorized access to data
- Inappropriate release of data
- Corruption of data
- Loss of data

Another issue for consideration is terminology. Many providers have encountered clients who confuse the term “confidential” with other terms, such as “anonymous.” While confidential information is information that is “marked by intimacy or willingness to confide,” “private, secret,” or “entrusted with confidences,” anonymous information is simply “not named or identified” (Merriam-Webster’s Collegiate Dictionary, 10th ed.).

Providers often find that the clear definition of terms is critical to building a relationship of trust with clients. For example, if a client assumes that by holding his or her information confidential, the provider is ensuring that it is maintained as anonymous data, the client would likely be surprised and feel betrayed to learn that in some cases, many individuals may have access to medical records that include the client’s name and sensitive health information.

Confidentiality guidelines should include the following:

- The name of the individual responsible for ensuring confidentiality and data security at the organization.
- A description of the minimum level of conduct that staff at the organization must achieve in collecting, handling, or storing sensitive client information. This includes how each member of the staff with access to confidential client information will be individually responsible for protecting his or her workstation, laptop, or any other electronic devices and hardware or paper files used to store confidential client information or the use of assigned passwords and codes designed to protect access to confidential client information.
- A description of penalties that will result from a violation of the organization’s requirements and/or a breach in client confidentiality or security. If there is a breach or suspected breach of confidentiality in relation to client information, it must be reported to the individual responsible for ensuring confidentiality and data security within the organization. When
appropriate, actions may be taken to report the incident to CDC and, in some cases, to the relevant law enforcement agency.

- A breach of confidentiality is a disclosure to a third party, without client consent or court order, of private information that the provider has learned within the patient-provider relationship. Disclosure can be oral or written, shared in person or electronically, such as by e-mail.

- A statement of precautions the organization will take to protect against indirectly identifying clients through the publication or reporting. This includes publishing (e.g., in a journal or report) or reporting (e.g., at a conference) raw data or data tables that include populations with small denominators that inadvertently identify individuals within that population.

- A list of all individuals who are allowed to access private client information. In the event that access is determined to be necessary for staff outside of the organization, standard procedures for such access (e.g., who may access the information, and under what conditions) must be described in the confidentiality policy. The number of staff with access to a client’s sensitive health information should be restricted to the fewest number possible. In some cases, an organization may make an exception on a “need to know” basis; however, these expectations should be limited as much as possible.

All confidentiality policies must be readily accessible by any staff having access to confidential client information or data at the organization. Questions may arise for staff in the course of data collection or other activities regarding how to handle sensitive data, and therefore written policies detailing protocols must be posted or otherwise made available for quick reference and easy access.

Refer to the National Monitoring and Evaluation Guidance for HIV Prevention Programs (CDC, 2008a) and to the NHM&E Assurance of Confidentiality(CDC, 2010) for more specific information about the security of the system and confidentiality of the data. CDC Project Officers may also be able to answer questions regarding confidentiality or provide assistance in developing confidentiality guidelines.
Data quality and control

Quality control refers to a system for achieving a desired standard of quality in a product or process that is then maintained over time. Quality control procedures are usually performed continually and should be flexible, incorporating lessons learned to improve the product or process.

Data quality is important because it can affect the usefulness of the results. If data are incomplete or unreliable, their worth and value are compromised. As a result, the foundation for making sound programmatic decisions is also jeopardized. Sound data quality protocols and procedures:

- **Ensure proper collection and flow of data.** The processes by which data are gathered and managed greatly affect their quality and reliability.

- **Result in a more reliable and complete data set.** Since data are often used to make important program decisions, it is essential that the data set be complete and accurate.

- **Save money.** Collecting and managing unreliable or incomplete data, or information that will not ultimately be used, wastes valuable resources. Implementing quality control policies and procedures, however, can help ensure that processes for handling and using data are efficient and cost effective.

- **Provide a mechanism to monitor data collection staff.** As previously mentioned, data are only as useful as they are reliable and accurate. While there are many factors that may affect the quality of data collection, human error is a significant contribution.

Approaches to quality control

To ensure the quality of data and data management procedures, quality assurance checks should be continually conducted. In other words, quality control is an ongoing effort. While there is no “right” or “wrong” way to approach quality control, there are some guiding principles to consider when preparing a quality control protocol.

- **Be systematic**—The more systematic the approach, the more useful the quality control process.

- **Be consistent**—It is important to be consistent in the approach to identifying and reconciling data errors to ensure overall data quality.
• **Be flexible**—In practice, quality control processes and procedures must evolve based on experience and lessons learned.

**Quality control procedures**

Numerous procedures can help improve the quality of data. Information on some commonly used quality control techniques is provided below (refer to the *National Monitoring and Evaluation Guidance for HIV Prevention Programs* [CDC, 2008a] for more detailed information).

• **Training.** The most efficient mechanism to improve data quality is to prevent errors before they occur. One way to do this is through advanced staff training. Prepared and skilled staff are less likely to commit common errors.

• **Supervision.** Regular supervision is necessary for quality control of data collection and management. The more employees feel that their work is being monitored carefully and regularly, the more likely they will be to ensure the quality of their own work.

• **Checklists.** Many data errors may either be entirely avoided or easily identified if quality assurance checklists are designed and enforced. Checklists provide an organized and uniform mechanism for staff to review their processes and to identify and reconcile errors.

• **Data collection form design.** Many data collection and data entry issues can be avoided by carefully considering the structure and content of the data collection tool itself.

• **Data cleaning.** Data cleaning refers to the detection and removal of errors and inconsistencies from data in order to improve their quality. There are numerous techniques that will help identify data errors; however, the most commonly used data cleaning techniques are:
  
  o Double data entry/data verification
  
  o Visual examination, such as logical relationship checks (e.g., comparing assigned sex at birth to pregnancy status) or range checking (i.e., looking for values that fall outside an acceptable range)
Data management protocols can be considered “live documents” in that they should be responsive to the needs of the staff and organization, as well as applicable laws, and should be revised and updated accordingly. As discussed, the protocol will depend on the circumstances, interventions, setting, and staff of the organization as well as their own inventiveness and creative ideas for addressing problems or “trouble spots.”

Refer to CDC’s National Monitoring and Evaluation Guidance for HIV Prevention Programs (CDC, 2008a) for more information on developing data management protocols, data transport and storage, and data quality control.

**Data Analysis**

The data only have value if they are actually used to make decisions about the implementation of the intervention. Before data can be used, they must be analyzed to answer evaluation questions and identify trends. Analyzing data is an effort to:

- Answer the evaluation questions
- Identify trends (e.g., fewer people attend Session III; the average rating for a certain session is higher or lower than others; or greater or lesser skills improvement among a certain group)
- Identify limitations of the data
- Identify gaps in the data (e.g., data do not answer all of the questions, data were not collected for all activities)

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**Common Data Entry Errors**

While errors in data are inevitable, understanding some commonly experienced problems will better prepare agencies to detect and reconcile them. Common sources of data errors include:

- Missing data
- Routing (e.g., skip patterns were not followed during data entry)
- Copying or transcription (e.g., missing words, phrases, or misspelled words)
- Transposing numbers (e.g., age of 17 entered as 71)
- Incorrect coding of qualitative items
- Out of range (e.g., value options are 1–10, entry = 44)
- Inconsistency among items (e.g., gender = male, pregnancy status = yes)
- Duplication of records
Data Analysis

Important considerations for data analysis include the ability and availability of staff to manage the data collected and the availability of staff time required for organizing and classifying large amounts of written information. In some cases, especially when there are large volumes of data to be analyzed, it may be advisable to hire someone who is trained in computerized data processing and content analysis.

Methods

The data analysis method used is dependent upon several factors:

- Type of data (e.g., narratives, survey responses)
- How the data will be used
- Evaluation questions
- Sample size (number of people from whom information is collected)
- Software available to analyze data

Data collected to answer evaluation questions often include both quantitative and qualitative data. Some of the data consist of numbers (number of participants, number of counseling and testing referrals) and other data are narrative (e.g., observations about the target population or community, challenges experienced by group facilitators or peer advocates). There are many software packages to analyze data. Refer to the subsection, Selecting and Developing a Data Management System, for issues to consider when choosing the appropriate software for analysis and Appendix G, Resources, for more information about specific software packages.

Narrative Data (Qualitative Data)

Data in narrative form (qualitative data) include interview responses (formal and informal), notes taken during observations, focus group notes or transcripts, notes taken by facilitators to explain changes in the intervention, and notes taken during small group or community outreach activities. To ensure accurate data collection, recording and transcribing the focus groups or interviews is ideal; however, agencies may not have the resources for transcription services. In these instances, comprehensive notes may be used.
To analyze narrative responses to interview questions or focus groups:

- Make sure that when responses are recorded, they are recorded accurately and with as much detail as possible.
- Reconcile the notes. When two or more people are taking notes, those individuals should meet shortly after the interview or focus group to review and agree on what they heard (i.e., reconcile notes).
- Identify responses to each of the questions by theme or category of interest according to similarity of the responses. For example, the lack of public transportation or no money for parking may be classified as a transportation barrier to accessing services.
- Label responses according to identified themes. If there are no resources for a software analysis package, use different colored markers or tabs for each category or theme. Alternatively, copy and paste each theme from the notes into a spreadsheet.
- Use more than one person to compare agreement in coding and resolve disagreements.
- Count the number of times (frequency) that themes or categories of responses occur to determine respondents’ thoughts and ideas about the questions asked and topics discussed.
- Do not overgeneralize opinions and perceptions (i.e., cannot assume that a specific set of responses from one group accurately reflects the opinions and perceptions of everyone in that demographic).
- Categorize responses by other groupings, as appropriate (e.g., ages, demographic characteristics, sessions presented in a certain way). If there is information from more than one group (i.e., four focus groups conducted with four different segments), then categorize the responses by group characteristics of each segment (e.g., age, race, gender, location).
- Summarize the information by categorizing and reviewing the responses.
- Review and summarize data from these sources to guide planning, implementation, and modification decisions.
- Identify quotes that stand out and provide illustrative examples of categories.
Using computer software can sometimes facilitate analysis of qualitative data. It is helpful to organize the categorized data into tables using word processing software. Readily available software programs, such as Microsoft Access database, FoxPro database, and similar programs can be used to organize qualitative or narrative data. More sophisticated software programs, such as NUD*IST and ATLAS.ti (Barry, 1998), are especially useful for large sets of data, though these programs do require specialized training to use. AnSWR (CDC, 2007), a CDC-developed analysis software for Word-based products, can be downloaded from the Internet.

**Survey Data (Quantitative Data)**

Surveys yield data in the form of numbers or letters that represent certain responses, such as quantitative data.

To prepare survey data for analysis:

- Review and read through the data
- Organize the data
- Edit and correct errors
- Check for incomplete surveys or surveys completed incorrectly
- Carefully identify the variables of the quantitative data set
- Enter quantitative data into the software program

In addition to considering how the data will be used, the following factors must also be considered when deciding what methods to use to analyze the data:

- Evaluation questions
- Sample size (number of people from whom information is collected)
- Software available to analyze data
- Assumptions made about expected change within and between individuals, groups, communities, differences, factors that affect change, and so forth

Quantitative methods, including the use of quantitative software, such as SAS (http://www.sas.com) or SPSS (http://www.spss.com), can be used to analyze such data. It may sometimes be more efficient to assign numerical codes for qualitative data that occur in sufficient
frequency for ease of analysis and reporting. For example, assigning a numerical code (i.e., 1, 2, 3) to gender (1 = male, 2 = female, 3 = transgender).

A variety of statistical approaches can be used to answer evaluation questions; some are more complex than others. Data from demographic, medical history, behavioral risk, and participant response surveys can be analyzed with simple descriptive statistical analyses (e.g., frequencies [modes], averages [means], midpoints [medians]) and cross-tabulation procedures (i.e., comparison of a response or outcome of two or more subgroups). Figure 13 provides an example of cross-tabulation for 147 intervention participants.

**Figure 13. Example of Cross-Tabulation**

<table>
<thead>
<tr>
<th></th>
<th>Males</th>
<th></th>
<th>Females</th>
<th></th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Completed all five HR sessions</td>
<td>58</td>
<td>39.5</td>
<td>64</td>
<td>43.5</td>
<td>122</td>
<td>83.0</td>
</tr>
<tr>
<td>Did not complete all five HR sessions</td>
<td>11</td>
<td>7.5</td>
<td>14</td>
<td>9.5</td>
<td>25</td>
<td>17.0</td>
</tr>
<tr>
<td>Total</td>
<td>69</td>
<td>46.9</td>
<td>78</td>
<td>53.1</td>
<td>147</td>
<td>100</td>
</tr>
</tbody>
</table>

* Percentage of participants completing all five Healthy Relationship sessions by gender. \( N = 147 \).

Simple statistical analysis of survey data can be conducted using spreadsheet software as well as other statistical software packages.

As agencies develop their data analysis plan, brief statements about how data will be analyzed may be entered into the data planning matrices, as illustrated in Figure 14.

**Figure 14: Example Evaluation Planning Tables**

<table>
<thead>
<tr>
<th>DATA PLANNING MATRIX</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Output:</strong></td>
</tr>
<tr>
<td><strong>Process Objective:</strong></td>
</tr>
<tr>
<td>Evaluation Question</td>
</tr>
<tr>
<td>How many SISTA cycles were conducted?</td>
</tr>
</tbody>
</table>
Figure 14: Example Evaluation Planning Tables (continued)

<table>
<thead>
<tr>
<th>Evaluation Question</th>
<th>Measure(s)</th>
<th>Data Collection Method(s)</th>
<th>Who Will Collect the Data &amp; When?</th>
<th>Data Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>What proportion of participants were African American women at high risk?</td>
<td>Demographic characteristics and behavioral risks collected from participants</td>
<td>Pretest survey</td>
<td>SISTA facilitator or program administrator—at the beginning of each cycle</td>
<td>Divide the number of African American women at high risk by the number of women participating in the intervention</td>
</tr>
</tbody>
</table>

Outcome: Increase in frequency of consistent condom use

Outcome Objective: Within 3 months of completing the SISTA intervention, 80% of the women will report a 50% increase in frequency of condom use with their sexual partners

<table>
<thead>
<tr>
<th>Evaluation Question</th>
<th>Measure(s)</th>
<th>Data Collection Method(s)</th>
<th>Who Will Collect the Data &amp; When?</th>
<th>Data Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>What changes in condom use occurred among participants?</td>
<td>Number of sex partners in past 90 days</td>
<td>Pretest survey</td>
<td>SISTA facilitator, program manager, or program manager</td>
<td>Calculate average difference between number of sex partners with whom condoms were used from pretest survey and posttest survey</td>
</tr>
<tr>
<td></td>
<td>Number of sex partners with whom condoms were used in past 90 days</td>
<td>Posttest survey</td>
<td>3 months after the last SISTA session</td>
<td></td>
</tr>
</tbody>
</table>

Step 6: Determine Evaluation Activities and Schedules

As data collection methods and data analysis plans are determined, organizations should identify the steps and resources required to implement their evaluation plan—these are the evaluation activities. As evaluation activities are identified, develop a timeline and measures of success for each activity. Measures of success are indicators that specify when the activity is complete. It is important to determine these measures during the planning phase.

The matrix in Figure 15 is designed to help staff members organize and plan for evaluation activities. The matrix helps organizations determine the resources needed to engage in the evaluation activities, who is responsible for each activity, and when it should occur. The matrix is also a mechanism for identifying which of the resources needed are available to the organization and any gaps in resources they need to fill.
**Figure 15. Sample Evaluation Activities Matrix**

### Evaluation Activities Matrix

**Evaluation Activity:** Train facilitators in data collection and entry

<table>
<thead>
<tr>
<th>Resources Needed</th>
<th>Gaps</th>
<th>Accountability</th>
<th>Timeframe</th>
<th>Measure(s) of Success</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Evaluation forms</td>
<td>• No designated database for data entry</td>
<td>• Program manager</td>
<td>• Within 60 days of receiving funding</td>
<td>• All group facilitators complete training</td>
</tr>
<tr>
<td>• Designated database</td>
<td></td>
<td></td>
<td></td>
<td>• All group facilitators enter mock data</td>
</tr>
<tr>
<td>• Trainer for database</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Evaluation Activity:** Collect and record attendance data

<table>
<thead>
<tr>
<th>Resources Needed</th>
<th>Gaps</th>
<th>Accountability</th>
<th>Timeframe</th>
<th>Measure(s) of Success</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Attendance sheets</td>
<td>• No designated database for data entry</td>
<td>• Group facilitator</td>
<td>• Collect data at start of each session</td>
<td>• Number of participants in database matches number on attendance sheets</td>
</tr>
<tr>
<td>• Designated database</td>
<td></td>
<td></td>
<td>• Enter data within 48 hours of each session</td>
<td></td>
</tr>
</tbody>
</table>
IV. IMPLEMENTING THE EVALUATION PLAN

What is in this section?

● Steps for conducting formative evaluation, process monitoring and evaluation, and outcome monitoring and evaluation

● Developing a data management protocol

● Information on how to analyze your data

A. Conducting Formative Evaluation

Formative evaluation questions can be used to understand the needs of the population and/or community targeted by the intervention and to guide the development of your program plan. Formative evaluation questions address issues such as:

● What are community members’ attitudes about condom use?

● Where do members of the target population go to receive HIV prevention information?

● What factors influence the risk behaviors of the target population?

Formative evaluation involves collecting data that describe the population, their health service needs, and the personal, interpersonal, societal, and environmental factors that put them at risk for acquiring or transmitting HIV. It may also include testing program plans, messages, materials, strategies, or modifications for weaknesses and strengths before they are put into effect. Formative evaluation may also be used when an unanticipated problem occurs after beginning to implement the intervention. The data gathered during formative evaluation inform how you adapt and tailor your intervention.

Conducting a Community Assessment

A community assessment involves obtaining and analyzing information of a specific target group or community. Information from the target population and the individuals and organizations closely linked to the target population is collected using multiple data collection methods. The assessment is conducted to understand the attitudes, perceptions, and social norms of a particular population and to determine the type and extent of the unmet needs and available resources within that community.
There are many ways to identify local characteristics, needs, and resources, including observation, interviews, and focus groups. Each method involves listening to the members and/or closely observing activities of the target population or community. These methods help agencies gain a comprehensive and realistic view of their characteristics. Without this knowledge, program activities may be inappropriate or unsuitable for the particular population, thus decreasing or diminishing the effectiveness of the intervention.

Community assessments may be informal or formal, though a formal structure allows for a more systematic review and may provide more usable and generalizable data.

**Informal assessments** may involve conversations and personal interactions between program staff and colleagues, or program staff and clients. Colleagues may share information about similar situations, possible solutions to common problems, or other background knowledge that may be transferable to your organization. Clients may provide first-hand information to inform organizations about services they find useful or unsatisfactory.

**Formal assessments** involve a systematic collection and analysis of data about the client population. This process may uncover needs that may not be identified through an informal process. A formal needs assessment requires the program planner and team to conduct a variety of activities. A formal assessment process includes:

- Assessing the current community situation
- Identifying questions that need to be answered
- Determining how the information will be collected and from whom
- Identifying existing sources of data, if applicable
- Collecting or obtaining data
- Analyzing data
Using needs assessment data to guide program planning

Consider the following when conducting a community assessment.

1. Assess the current situation.

   - Determine the characteristics of the community.
     
     a. Who makes up the community? Include cultural, racial, or ethnic groups, or groups of people who share a common interest.
     
     b. How is the “community” defined? Include geographic boundaries. Identify stakeholders in the community. Identify cultural norms of the target group (e.g., perceptions of condom use among target population, triggers of stress, accessibility to condoms, perceptions of stigma toward people living with HIV/AIDS).

   What are the problems/issues of the community? Include information on contributing factors. (Group members often share similar points of view but express them differently, or they may have different opinions about the same issue. Find common ground so that an agenda can be developed.).

   - What is the current level of access to information, skills, services, and resources (e.g., condom accessibility, availability of medical and social support services)?
   
   - What aspects of the physical environment encourage or serve as barriers?

17) Identify questions that need to be answered.

   What was the central problem identified when assessing current situations?

   What are possible ways to address this problem?

   Have there been past attempts to address this problem?

   What succeeded and what failed in the previous approach? Why?

18) Determine how the information will be collected and from whom.
What are possible sources of information?

a. Needs assessment data can be secondary source data (existing information that is obtained and used, such as epidemiologic data) or primary source data (information collected by the grantee, planning body, or applicant through such methods as surveys, interviews, and focus groups).

b. Secondary and primary source data can be quantitative (numerical information, such as epidemiologic data) and/or qualitative (descriptive or narrative information, such as focus group input).

What data sources already exist?

What are secondary sources of data?

a. Ensure appropriateness of data

b. Determine availability/accessibility

19) Collect or obtain data.

Develop or choose one of the instruments provided in your intervention-specific evaluation plan to collect data.

You may also choose to collect additional data to meet your agency’s needs. Please see Appendix F for detailed information on how to implement the various data collection methods.

20) Analyze data.

See “Data Analysis” for additional, detailed information.

21) Use community assessment data to guide program planning.

It is imperative to gain a full understanding of the unmet needs and resources in the target community to inform implementation of the intervention as well as future initiatives.

a. Without assessing opinions, social norms, gaps in service delivery, information, and supplies, it is impossible to implement appropriate and efficacious activities and programs.
b. Identifying resources and needs should be done on an ongoing basis throughout the community assessment and implementation processes.

Community assessments can be conducted to achieve the following:

a. Define Program Purpose and Scope

   Information collected during community assessments is important for the organization, members of the target population, and the funding agency. It provides invaluable information about the target population, often underscoring the rationale for program design, content, and implementation. It also allows the organization’s leaders to make well-informed decisions about the scope of program activities. Learning the cultural and social nuances of a target population is crucial in determining how to adapt and tailor the intervention to suit that specific population’s needs.

b. Establish Appropriate Program Goals, Objectives, and Activities

   Community assessment data inform how program goals, objectives, and activities should be adapted (if necessary) to reflect the particular needs of a target population. This information can be provided by members of the target population and through community observation.

c. Identify Social/Behavioral Attitudes, Behaviors, and Perceptions of the Target Population to Inform Program Development and Implementation Strategy

   The intervention is more likely to be received by the target population if they perceive that the agency has thoughtfully considered their culture and behavioral norms. As much as possible, program activities and implementation should reflect the target population’s specific characteristics and needs.

   Collecting information about the target population leads to identifying specific norms, including cultural, social, and financial factors that influence the decisions and behaviors of that community. Identifying and understanding these local, sociocultural norms facilitates communication in a way that resonates with members of the target population. In addition, it allows these important cultural and social standards to be incorporated into the program activities (e.g., video clips, handouts).
Piloting Materials and Modifications

Organizations should pilot the implementation materials as is with the target population before modifying the intervention. Prior to implementation of the intervention, the program materials (e.g., clips and handouts) may be assessed or piloted through focus groups, spot interviews, and/or “mock” sessions. Agencies should also pilot modified program activities or processes to determine if the modifications are appropriate for the target population.

*Example questions:*

- Can you relate to the characters in the video clip?
- What do you like about it?
- What don’t you like about it?
- How do you feel about the information on the handout?
- Is anything confusing?
- What would you do to make it more understandable (e.g., change terminology)?
- What do you like about it (e.g., visual appearance, graphics, layout)?
- What do you not like about it?

When modifying activities or materials, agencies should again assess participants’ perceptions about the changes; this can be done with fewer members of the target population. As the agency begins implementing the intervention, additional revisions to the materials or activities may be needed.

After implementation of the intervention is stabilized, the agency must determine if its target population experiences outcomes at similar levels to those described in the intervention’s implementation manual. This is achieved through outcome monitoring (see p. 88).

**B. Conducting Process Monitoring and Evaluation**

Process monitoring provides information about the activities implemented, populations served, services provided, or resources used. This information can be used to inform program improvement and to conduct process evaluation. Process monitoring information often answers questions such as:
● What are the characteristics of the population served?
● What intervention activities were implemented?
● What resources were used to deliver those activities?

Process evaluation involves analyzing process monitoring data to facilitate comparison between what was planned and what actually occurred during implementation. Process evaluation allows you to determine if your process objectives can be met and provides information that guides planning and improvement. Process evaluation questions address issues such as:

● Was the intervention implemented as planned?
● Did the intervention reach the intended audience?
● What barriers were experienced by clients and staff during the course of the intervention?

When to Conduct Process Monitoring and Evaluation
Process monitoring and evaluation are conducted throughout the duration of a program and are used to document how well a program has been implemented.

How to Conduct Process Monitoring and Evaluation
Process monitoring and evaluation begin with an analysis of how a program currently operates (e.g., process monitoring), followed by an assessment of how it should operate (e.g., identify gaps in program content, inefficient program implementation, or other deficit).

Steps for Conducting Process Monitoring and Evaluation
1. Identify demographic information that is relevant to the target population.

Before the intervention is implemented, determine the demographic and behavioral profile of the target population. Without clearly and explicitly defining the information needed, it is impossible to evaluate how well goals and objectives were met. Carefully document how activities were conducted.
Where did the intervention activities take place? Who conducted or facilitated them? How often did they occur? How long did they last? Were incentives provided? What materials were developed and disseminated?

2. Carefully document the number of participants who were involved in implementing the intervention.
   How many individuals were reached? What was the target number?

3. Survey intervention participants to assess their reactions to each session and/or activity.
   It is valuable to receive feedback from intervention participants and adapt program processes and/or activities accordingly.

4. Compare participant data against goals and objectives; review participant feedback to guide changes to the activities, sessions, and recruitment efforts.
   In order to determine the efficiency and effectiveness of the implementation process, consider participant participation and the degree to which objectives and goals were reached. Gathering information about the program directly from participants also provides you with information that can inform improvements to the program and, if necessary, to the implementation process.

C. CONDUCTING OUTCOME MONITORING

Outcome monitoring is the review and assessment of changes that occurred after exposure to the intervention, such as changes in the knowledge, attitudes, behaviors, or service access of individuals who participated in the intervention; or changes in community norms or structural factors. Answers to outcome monitoring questions allow you to determine if your outcome objectives were met. Outcomes include changes in knowledge, attitudes, skills, or behaviors. Outcome monitoring answers the question, “Did the expected outcomes occur?” Changes can only be assessed if a baseline assessment is conducted prior to the intervention.

Although the methods for conducting outcome monitoring are similar to those for outcome evaluation, these changes cannot be attributed to the intervention.
**When to Conduct Outcome Monitoring**
Outcome monitoring is conducted when an organization needs to know if the intended outcomes of its intervention or program resulted in similar outcomes to those achieved in the original intervention study or evaluation.

**How to Conduct Outcome Monitoring**
Outcome monitoring involves logically thinking through the inputs, outputs, and outcomes of an intervention; developing and prioritizing evaluation questions; determining data collection methods; and analyzing data gathered to determine if the anticipated results were found among participants or community members. Outcome data are usually on the participant level but may be aggregated to show trends across entire groups.

![Steps for Conducting Outcome Monitoring](image)

1. **Designate personnel for data collection.**

   It is recommended that someone who is not directly involved in delivering the intervention be responsible for collecting the evaluation data. This eliminates any bias that could result from asking someone to collect data on the success of his or her own program.

2. **Schedule data collection.**

   In order to gather outcome data, information must be collected at the beginning and end of the intervention.

3. **Assign each participant a unique identifier.**

   A unique identifier is usually a unique number or code that distinguishes a participant from others and allows you to protect participants’ confidentiality. Keeping track of participants for the follow-up (or posttest) surveys can be difficult. Uniquely identifying each participant...
allows him or her to be contacted later. Incentives for participating in postintervention activities are often a useful strategy to increase the response rate.

4. Conduct the pretest among intervention participants.

Gathering pre-intervention information provides baseline data with which to compare post-intervention information.

5. Implement the intervention among participants in the program.

Conduct program activities, carefully recording data throughout.

6. Conduct the posttest among intervention participants.

Gathering post-intervention information provides comparison data with which to compare to pre-intervention information.

7. Create a data matrix.

Before entering your data, determine what software program you will use for analysis and into what form the data need to be manipulated—format data accordingly.

8. Enter data.

Usually a statistical software package is used to manage and analyze data. The specific program will depend on the intervention type and research questions.

9. Clean data.

Cleaning the data refers to removing the errors from the data set. To clean your data, check that each response in a given column fits within the range of values that provide answers to the relevant questions asked.
10. Analyze data.

Data analysis depends on the specific intervention variables and research questions. Data analysis plans may vary by intervention; organizations should tailor their plan to suit the intervention and their information needs.

11. Interpret data and share findings.

Findings, positive or negative, should be disseminated to community members and other organizations conducting similar work. It is valuable to share information that may help improve the processes of other organizations.

D. CONDUCTING OUTCOME EVALUATION

An outcome evaluation determines if the intervention caused the changes in the behaviors, attitudes, skills, intentions, and beliefs of individuals who participated in the intervention. A comparison group of individuals who did not participate in the intervention is needed to show that the changes that occurred were because of the intervention and not just “by chance.” The characteristics of the comparison group should be similar to the characteristics of the participants.

When to Conduct Outcome Evaluation

Outcome evaluation is conducted when an organization needs to know if the intended outcomes of an intervention or program were achieved as a direct result of the intervention. For evidence-based interventions, such as the EBIs, outcome evaluation may not be needed.

**Outcome Monitoring Versus Outcome Evaluation**

Outcome evaluation demonstrates that the intervention caused the changes in behaviors, attitudes, skills, intentions, and beliefs. Outcome evaluation is resource intensive and requires a high-level statistical analysis. On the other hand, outcome monitoring identifies whether or not an agency’s implementation of the intervention yields the same outcomes from the intervention’s original research. CDC’s evidence-based interventions were rigorously tested. When implementing these interventions as designed, outcome evaluation is not necessary.

How to Conduct Outcome Evaluation

Outcome evaluations involve logically thinking through the inputs, outputs, and outcomes of an intervention; developing and prioritizing evaluation questions; determining data collection
methods; and analyzing gathered data to determine if changes in behaviors, attitudes, skills, intentions, and beliefs of individuals were caused by their participation in the intervention. Outcome data are usually on the participant level but may be aggregated to show trends across entire groups.

Steps for Conducting Outcome Evaluation

1. Designate personnel for data collection.

   It is recommended that someone who is not directly involved in delivering the intervention be responsible for collecting the evaluation data. This eliminates any bias that could result from asking someone to collect data on the success of their own program.

2. Select a comparison group.

   A comparison group is a group of individuals with characteristics similar to those of the intervention community (e.g., demographics, socioeconomic status, health resources) that is not participating in the intervention. Obtaining data from a comparison group is crucial to the outcome evaluation process because it provides an opportunity to draw conclusions about the effectiveness of an intervention.

3. Schedule data collection.

   In order to gather outcome data, information must be collected at the beginning and end of the intervention. Program participants, as well as the comparison group members, should provide this information.

4. Assign each participant a unique identifier.

   A unique identifier is an exclusive number or code that distinguishes a participant from others and allows you to protect participants’ confidentiality.

   Keeping track of participants and comparison group members for the follow-up (or posttest) surveys can be difficult. Uniquely identifying each participant allows him or her to be
contacted later. Incentives for participating in post-intervention activities are often a useful strategy to increase the response rate.

5. Conduct the pretest among intervention participants and the comparison group.

Gathering pre-intervention information provides baseline data with which to compare post-intervention information.

6. Implement the intervention among participants in the program.

Conduct program activities, carefully recording data throughout.

7. Conduct the posttest among intervention participants and the comparison group.

Gathering post-intervention information provides comparison data with which to compare pre-intervention information. The data will show change, if any, that may be attributed to the program activities.

8. Create a data matrix.

Before entering your data, determine what software program you will use for analysis and into what form the data need to be manipulated and format data accordingly.

9. Enter data.

Usually a statistical software package is used to manage and analyze data. The specific program will depend on the intervention type and research questions.

10. Clean data.

Cleaning the data refers to removing the errors from the data set. To clean your data, check that each response in a given column fits within the range of values that provide answers to the relevant questions asked.
11. Analyze data.

Data analysis depends on the specific intervention variables and research questions. Data analysis plans may vary by intervention; organizations should tailor their plan to suit the intervention and their information needs.

12. Interpret data and share findings.

Findings, positive or negative, should be disseminated to community members and other organizations conducting similar work. It is valuable to share information that may help improve the processes of other organizations.

E. USING INTERVENTION-SPECIFIC INSTRUMENTS TO COLLECT DATA

The intervention-specific field guides are designed to help organizations collect and use data to monitor and evaluate their implementation of the intervention, and provide recommendations on how to use the data to enhance implementation. In addition, each intervention has specific NHM&E data collection and reporting requirements. The required NHM&E variables for each EBI are listed in Section 1 of most intervention-specific field guides. The instruments are designed to collect the data needed to monitor and evaluate your implementation of an EBI. This includes required NHM&E DS variables as well as the data needed to calculate the program performance indicators. The intervention evaluation plans also include tables that indicate which instruments and which items capture the NHM&E-required variables—not all instruments capture NHM&E-required variables. Updates and changes to reporting requirements and related revisions to instruments will be posted at http://team.cdc.gov.

Organizations should be familiar with the NHM&E DS requirements for their organization. For additional information, refer to CDC’s National Monitoring and Evaluation Guidance for HIV Prevention Programs (CDC, 2008a). In addition, organizations should be familiar with other reporting requirements and should communicate early and frequently with their Project Officer regarding their requirements and reporting schedules. All of the reporting requirements, in addition to organizational information needs, should be taken into consideration when developing or tailoring evaluation plans and instruments.
The instruments in the EBI-specific evaluation field guides draw on *qualitative* and *quantitative* methods of data collection. Your organization should carefully examine its particular evaluation needs to select appropriate methods and, as necessary, adapt existing intervention tools to suit the needs of the individuals in your targeted community. The EBI-specific evaluation field guides include instruments designed to answer process and outcome monitoring questions and to ensure the collection of data needed to calculate the performance indicators. Any of the intervention-specific evaluation plans may include more instruments than your organization may want or need to use. Tools are provided so that organizations can easily select ones that are consistent with their evaluation plan and appropriate for their target population. Organizations must carefully review the CDC data collection and reporting requirements for their intervention to ensure that the agency's evaluation plan includes collecting all required data. (See the EBI-specific evaluation field guide for M&E instruments and the *National Monitoring and Evaluation Guidance for HIV Prevention Programs* [CDC, 2008a] for detailed CDC requirements.)

In using the suggested intervention instruments, your organization should consider the following issues:

- **Evaluation Questions.** Your evaluation questions should yield data that address the information needs of your organization, funder, community, and consumers.

- **Characteristics of Target Population.** Instruments should fit the particular needs of the intended participants. Modifications to the types of words used may be needed so that terms are more understandable to a particular group.

- **Changes to Intervention.** If your intervention activities are modified, not all instruments may be applicable. Attention should be given to use instruments that are consistent with the specific components of the intervention being implemented.

- **Stage of Evaluation.** The stage of evaluation influences how you adapt your intervention instruments to your unique needs.
V. UTILIZATION OF DATA

WHAT IS IN THIS SECTION?
- Reviewing data to inform program improvement and planning
- Uses of evaluation data

A. REVIEWING YOUR DATA

Once you analyze your data, the next step is to summarize your findings. Data can be used to compile information at the program level and the individual client level. The table below depicts examples of the types of information you can surmise about the program or client(s) using qualitative and quantitative data.

<table>
<thead>
<tr>
<th>Themes from narrative (i.e., qualitative) data</th>
<th>Program Data</th>
<th>Client-Level Data</th>
</tr>
</thead>
</table>
| Themes from narrative (i.e., qualitative) data | • Changes to your EBI program’s protocol  
• Reported challenges and facilitators to implementing your EBI program  
• Staff observations  
• Participants’ comments or recommendations | • Personal risk reduction strategies |
| Quantitative data | • Number of participants reached during an event  
• Number of participants completing all sessions | • Demographic characteristics  
• Behavioral risk profile  
• Knowledge, attitudes, beliefs, and intention scores |

It is easy to get lost in quantitative data. To make the most efficient use of time and for data to have the greatest practical use, focus on answering the evaluation questions before spending time looking for other significant relationships between variables.

Your next step is to ask:
Once you have answers to your evaluation questions, compare the results of your findings to your evaluation questions and objectives.
Carefully review and think through the findings. If the evaluation activities were implemented according to plan, and the expected changes did not occur, the process M&E data should provide some insight into some of the reasons why. When reviewing the data, consider:

- Did the intervention include both phases of community assessment and community involvement in program activities?
- Did the implementation of your intervention include all of the core elements?
- What core elements were actually delivered and to whom?
- How well were all the elements implemented with the target population or community?
- Was something left out or changed from your intervention that made the intervention less effective than originally demonstrated?
- Were the activities appropriately tailored for the target population or community?

You and your staff should consider the implications of your evaluation findings and ask:

Do you have additional information needs?

If “YES,”

Determine your information needs and revise your evaluation plan accordingly.

If “NO,” ask:

Determine what, if any, changes need to be made to your intervention plan and why.
The process of reviewing the methods used to evaluate the implementation, challenges to implementing the evaluation plan, and the information that the evaluation yielded provide you with information to guide program improvements. Figure 16 depicts one way to help you organize your evaluation findings.

![Figure 16. Example of How to Organize Evaluation Findings](image)

<table>
<thead>
<tr>
<th>Evaluation Objective</th>
<th>Evaluation Question</th>
<th>Evaluation Findings</th>
<th>Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td>70% of participants will complete all 10 sessions within 4 months of attending their first session.</td>
<td>What proportion of participants completed all 10 Street Smart sessions?</td>
<td>76% of participants completed all 10 sessions within 4 months of attending their first session.</td>
<td><strong>Objective reached</strong> → What information is needed to know which processes or components of the intervention to keep the same?</td>
</tr>
<tr>
<td>~ Not applicable ~</td>
<td>How and why were program activities modified?</td>
<td>Not enough information. Fidelity forms were only completed for 35% of all sessions.</td>
<td><strong>Unknown</strong> → Conduct individual interviews with facilitators to understand why forms were not completed.</td>
</tr>
<tr>
<td>~ Not applicable ~</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**B. USES OF EVALUATION DATA**

An important aspect of evaluation is using the data for program planning and improvement. You can use the data collected to:

- Improve the implementation of your intervention and planning for future iterations of your intervention
- Guide modifications to expand your intervention’s reach to other populations or communities
- Build support for your intervention by sharing findings with external stakeholders (e.g., community partners, funding agencies)
● Build staff morale by sharing the results of their efforts and giving them information to improve facilitation and planning

**Using Monitoring and Evaluation Data for Program Planning and Improvement**

Generating recommendations from your evaluation findings can expand the understanding of the intervention and direct program planning and improvement. Review the findings of your analysis and identify what worked well (i.e., strengths) and areas for improvement regarding the various components of your intervention. Based on your findings, generate recommendations for improvement. Figure 17 is one example of how to organize the results and recommendations.

![Image](image.png)

**Figure 17. Recommendations for Program Planning and Improvement by Intervention Component**

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Areas for Improvement</th>
<th>Recommendations for Improvement</th>
</tr>
</thead>
</table>
| **Facilitators** | • Very good at engaging the participants  
• Follow the protocol with fidelity | • Time management—sessions 3 and 4 almost always run late | • Consider splitting sessions 3 and 4 into 3 sessions  
• Extend time for sessions |
| **Materials** | • Layout and graphics  
• Activities | • Video is outdated; participants do not relate  
• Handouts 5 and 8 are confusing | • Seek out or develop new video with input from clients  
• Request video options from CDC |
| **Time or location of service** | • None | • None | • None |
| **Client barriers** | • Not applicable | • Child care | • Offer stipend for child care  
• Offer onsite care |

Share your recommendations with staff and stakeholders and seek their input for additional recommendations. As a group, identify the programmatic and cost implications of each recommendation. At this time, you may identify a need for additional information; determine
how you might collect that information. Determine which recommendations to implement and identify the steps for implementing each recommendation, such as identifying a location at which participants are more comfortable or that is more accessible, providing assistance to get participants to the location, or developing materials that are more culturally specific. Incorporate the necessary changes into your intervention plan. When you do this, you will also need to review your evaluation plan and revise it accordingly.

**Use Monitoring and Evaluation Data to Generate Recommendations for Future Evaluation Activities**

The lessons learned during the evaluation of the implementation of your EBI program should be documented and used to improve and inform future evaluation activities. The challenges and successes can be reflected in the:

- Amount of community involvement
- Adaptation of materials for population(s) served
- Methods for storing and organizing data
- Methods for collecting respondent data
- Methods for analyzing data

**Sharing Monitoring and Evaluation Findings**

Disseminating findings is an important step in completing an evaluation. The lessons learned can inform others about various issues to consider when developing, implementing, or funding a program. Evaluation reports to funders, advisory boards, or boards of directors and other stakeholders should be both thorough and brief. A typical outline includes:

**Purpose of the Evaluation**

- Why was the evaluation being conducted?
- How will the findings be used?
- What evaluation questions drive the evaluation?

**Methods**

- What data were collected?
- How were the data collected?
● How were the data analyzed?

Findings/Results
● What themes emerged?
● What illustrative quotes are appropriate to highlight?
● What changed and by how much?

Discussion
● What were the strengths and limitations of the data?
● Which objectives were achieved?
● What were some of the external factors that influenced change?

Conclusions and Recommendations
● What changes or modifications will be made to future implementations of the intervention?
● What changes or modifications will be made to other components of the implementation (such as staffing and recruiting)?
● What lessons were learned about the evaluation?

Using Evaluation to Expand Funding
You can use your evaluation plan and findings to help your organization secure additional funds. Funding organizations want some assurance that what applicants propose has demonstrated success. Demonstrated use of evaluation data also shows appreciation of accountability to funding organizations and other stakeholders. In your next proposal, you could include:

- A modified logic model
- Agency-specific evaluation plan
- Lessons learned from analysis of data
- Discussion of how data were used to improve implementation and client services—showing something does not work is just as useful and provokes additional questions and answers

Dissemination of findings is not limited to written reports; however, most funders require some type of written evaluation report. The schedule for developing reports depends on the internal needs of the organization and the reporting requirements of funders. Other methods of disseminating findings include:
- Presentations at local, regional, and national conferences
- Electronic or hard-copy newsletter articles
- Workshops
- Local newspaper articles
- Web site summaries
REFERENCES


CDC. See Centers for Disease Control and Prevention.


GLOSSARY

ACCOUNTABILITY
Responsibility of program staff to provide evidence of conformity to program specifications and fiscal requirements to sponsors, boards, and the community, among others.

ATTITUDES
People’s biases, inclinations, or tendencies, which influence their behaviors and their response to situations, activities, people, or program goals.

COMMUNITY NEEDS ASSESSMENT
The process of obtaining and analyzing findings using multiple methods of data collection to determine the type and extent of the unmet needs and resources in a particular population or community. See also Needs Assessment.

COMMUNITY OBSERVATION
Systematically watching what is happening in the community (e.g., watching where the target population congregates, what and whom they respond to, with whom they associate). Observer(s) discreetly take notes.

CONTENT ANALYSIS
A review and analysis of documents such as agendas, outlines, intake and tracking forms, and other service records, financial records, and calendars, process logs and forms to obtain information that can be used for program evaluation and improvement.

CONTROL GROUP
A segment of the target population not receiving those services that are being evaluated, against which the effect of providing services to a separate group—intervention group—is compared. Also called a comparison group.

CORE ELEMENTS
Components that are critical features of an intervention’s intent and design and thought to be responsible for its effectiveness, which, consequently, must be maintained without alteration to ensure program effectiveness.
DATA MANAGEMENT
A plan for how the organization intends to collect information and track activities and the system and protocol for entering and organizing the information.

Efficacy
The capacity of a program to implement the intervention as planned to produce the desired effect or outcome.

Evaluation
The systematic collection of information about the activities, characteristics, and outcomes of programs to make judgments about the program, improve program effectiveness, and/or inform decisions about future programming.

Evaluation Capacity
The organization’s level of ability to conduct an effective evaluation and use the evaluation findings for program improvement.

Evaluation Plan
A detailed description of the evaluation activities (i.e., data collection, management, and analysis), including who will be responsible for each aspect; protocols for data collection, management, and analysis; when such activities will take place; and specifics on how the information will be synthesized and disseminated. The evaluation plan should be included as part of the implementation plan.

Evaluation Question
Statements of inquiry that help an organization assess the extent to which it implemented its programs as planned, the reasons or causes for the differences in the planned versus actual implementation of the programs, and the extent to which the programs achieved the desired outcomes to guide decision making regarding program improvement.
**FOCUS GROUP**
A structured discussion among a carefully selected small group of people to explore a specific topic. A trained moderator guides or facilitates the group using prepared questions (moderator guide) to generate discussion and reflection on the topic.

**FORMATIVE EVALUATION**
The process of gathering information about a target population or community to inform intervention design, or for testing program plans, messages, materials, strategies, or modifications for weaknesses and strengths before they are put into effect. It may also be used when an unanticipated problem occurs after beginning to implement the intervention.

**GOAL**
A broad statement of a desired, long-term outcome of the program. As such, goals express general program intentions and help guide the program’s development. Each goal has a set of related, more specific objectives that, if met, will collectively facilitate program staff in reaching the stated goal.

**IMPACTS**
The long-range, cumulative effects of programs on a population. Impacts are rarely, if ever, attributable to a single program; yet, a program may, with other programs, contribute to impacts on a population.

**INCIDENCE**
The number of new cases of a particular problem or condition, expressed as a rate of occurrence, that are identified or arise in a specified area during a specified period of time.

**INDICATOR**
A measure reflecting progress in program activity, which provides specific parameters for evaluation (e.g., measure access to information by counting the number of businesses that participate in/sponsor HIV prevention-related activities).
**INPUTS**
Resources used in an intervention, such as money, staff, curricula, and materials.

**INSTRUMENT**
A tool used to gather information on people’s knowledge, attitudes, beliefs, or behaviors.

**INTERVENTION**
Any planned activity designed to produce intended changes in a target population.

**ITEM**
One question or statement on an instrument used to measure knowledge, attitudes, beliefs, or behaviors.

**KEY CHARACTERISTICS**
Crucial activities and delivery methods for conducting an intervention, which may be tailored for different agencies and at-risk populations.

**LOGIC MODEL**
A model of logical connections showing the main elements of an intervention and how they work together. Usually depicted as a graphic, it shows the relationship and theory of action among the various components of a program or intervention. It articulates the relationships and linkages to ensure achievement of anticipated benefits.

**MEASURES**
The data needed to answer an evaluation question.

**MONITORING**
Assessment of whether or not a program is (1) operating in conformity with its design, (2) reaching its specific target population, and (3) achieving anticipated effects.

**MULTIPLE FUNDING STREAMS**
Refers to funding from a variety of funding sources; can be a combination of funding from Federal, State, local, nonprofit, and private agencies.
NEEDS ASSESSMENT
The systematic appraisal of type, depth, and scope of unmet resources or problems of the target population. See also Community Needs Assessment.

OBJECTIVE
Specific, time-phased, and measurable operational statements of desired accomplishments of the intervention program.

OPEN-ENDED INTERVIEW
Structured interviews conducted with individuals or groups using predetermined open-ended questions. Responses are in the participant’s own words based on personal experience. The method allows respondents to have questions clarified and give in-depth responses. Interviewers take notes or the interviews may be audiotaped.

OUTCOME EVALUATION
Collection of data about outcomes before and after the intervention for clients as well as a similar group that did not participate in the intervention being evaluated. Determines if the intervention resulted in the expected outcomes.

OUTCOME MONITORING
Collection and review of data about client outcomes before and after the intervention, such as knowledge, attitudes, skills, or behaviors. Determines if the anticipated change occurred.

OUTCOMES
The effects of programs on target audiences or populations. These outcomes include effects of the program activities that may focus on the knowledge, attitudes, and beliefs, skills, and behaviors of the intended audience.

OUTPUT
Direct products or deliverables of the intervention, such as intervention sessions completed, people reached, and materials distributed.
**PARTICIPANT OBSERVATION**
Systematically watching what is happening in the intervention sessions (e.g., watching how participants respond to information, activities, facilitators; and what they do during breaks). Observer(s) discreetly take notes.

**PILOT TEST**
A small-scale trial conducted before a full-scale program or administration begins to see if the planned methods, procedures, activities, materials, or questionnaire items will work.

**PLANNING**
The process of converting goals into objectives and activities, formulating specific interventions, and defining relevant target populations.

**PROBLEM STATEMENT**
Statement that describes the factors that put a population at risk or create some other problem to be addressed by a program. These factors may be related to knowledge, attitudes, beliefs, behaviors, skills, access to services and information, policies, or environmental conditions.

**PROCESS EVALUATION**
Collection of data about how the intervention was delivered, differences between the intended population and the population served, and access to the intervention.

**PROCESS MONITORING**
Collection and review of data describing the characteristics of the population served, the services provided, and the resources used to deliver those services.

**QUALITATIVE DATA**
Detailed descriptions of situations, events, people, interactions, and observed behaviors; direct quotations from people about their experiences, attitudes, beliefs, and thoughts; or excerpts or passages from documents, correspondence, records, and case histories. Qualitative data include open-ended interviews, focus groups, observation, document review, and questionnaires without predetermined, standardized categories.
QUALITY ASSURANCE
A program for the systematic monitoring and evaluation of the various aspects of a project, service, or facility to ensure that standards of quality are being met.

QUANTITATIVE DATA
Data represented by numbers that represent predetermined categories that can be treated as ordinal or interval data and subjected to statistical analysis. Quantitative data come from structured questionnaires, tests, standardized observation instruments, and program records.

QUANTITATIVE METHODS
Usually involve surveys or other types of questionnaires that gather respondent information that can be aggregated and analyzed.

QUESTIONNAIRE/SURVEY
A structured set of questions to assess participant characteristics, level of knowledge about HIV/AIDS and prevention strategies, attitudes and behavior, or participant satisfaction with the program. Responses should be confidential and the identity of respondents must be protected. They can be administered as an individual structured interview or participants can complete them by hand or electronically.

RATE
Occurrence or existence of a condition expressed as a proportion of units in the population (e.g., twice a year).

RELIABLE MEASURE
A measure by which scores are reproducible in repeated administrations, assuming relevant factors are the same.

SAMPLE
A subset of people in a particular population.
**SPOT INTERVIEW**

Very informal, unstructured, short interviews. These interviews have no predetermined format or structure to the questions asked and can take place in a social or program environment. Interviews are brief, notes are often taken during, and can be conducted before or after intervention sessions.

**TAILORING**

Customizing delivery of interventions to agency circumstances and ensuring that messages are appropriate for target populations without altering, deleting, or adding to the intervention core components.

**TARGET COMMUNITY/POPULATION**

The specific individuals, group, or community for whom a particular intervention or program is intended and is based upon certain risk factors. In the case of HIV, descriptors include behavioral risk and demographic characteristics, such as gender, race/ethnicity, geographic location, or socioeconomic status.

**VALID MEASURE**

A measure for which there is evidence or presumption that it reflects the concept it is intended to measure.

**VARIABLE**

The representation of a concept or construct, such as age, gender, level of knowledge, or attitude. Variables may be discrete (e.g., 1 = female, 2 = male) or continuous, such as a scale (e.g., height or weight).
APPENDIX A: FRAMEWORK FOR PROGRAM EVALUATION IN PUBLIC HEALTH

The CDC Framework for Program Evaluation in Public Health

- Engage stakeholders
- Describe the program
- Focus the evaluation design
- Gather credible evidence
- Justify conclusions
- Ensure use and share lessons learned
- Standards
  - Utility
  - Feasibility
  - Propriety
  - Accuracy
- Steps
APPENDIX B: EVALUATION READINESS CHECKLIST

☐ Is there a willingness to evaluate?

☐ Have the intended users of the evaluation been identified?

☐ Is there a logic model describing planned implementation and outcomes?

☐ Have evaluation questions been identified?

☐ Is there a desire to use the evaluation findings?

☐ Have data needs been determined?

☐ Are the necessary data available or feasible to collect?

☐ Have evaluation resources been secured?

☐ Have data collection, management, and analysis procedures been developed?

☐ Is there a strategy to disseminate and use the evaluation findings?
APPENDIX C: WORKING WITH EVALUATION CONSULTANTS AND TECHNICAL ASSISTANCE PROVIDERS

Before deciding to use a consultant to assist in evaluating the implementation of its EBI program model, an agency should first access technical support sponsored by the Centers for Disease Control and Prevention (CDC). Though the roles of technical assistance (TA) providers (e.g., capacity building assistance [CBA] providers) and evaluation consultants are quite similar, there are differences between the two. The role of a technical assistance provider is to bring an organization needed expertise and assistance and to build the capacity of organizations over time. Some agencies may decide that even with the availability of technical assistance, they would like to secure the services of an evaluation consultant. In these cases, it is important to have a clear understanding of what is desired from the consultant and the kinds of assistance the consultant can provide.

The following section provides guidelines on working with consultants, followed by recommendations on accessing and working with technical assistance providers.

WORKING WITH CONSULTANTS

An effective consultant should play three main roles:

1. A pair of hands: A consultant can do tasks that the organization itself could do but does not have enough staff available to do everything needed.

2. Expert: A consultant provides knowledge and skills that an organization does not have in house.

3. Collaborator: The consultant works as a partner with the organization, contributing process knowledge and leaving the rest to the organization—which has the task expertise and sufficient staff to accomplish the tasks once the approach has been determined.
Typically, a consultant is most helpful to community-based organizations (CBOs) when offering a combination of all three roles, with an emphasis on the collaborative role.

### Benefits of Working With Consultants

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Reduced burden on staff</td>
<td></td>
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<tr>
<td>- Technical expertise in data collection methodology, data analysis, and instrument development</td>
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<tr>
<td>- Ability to collect and analyze information efficiently during a specified time period</td>
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<tr>
<td>- Neutral perspective on potentially difficult issues</td>
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Organizations may choose to use volunteer or paid consultants. There are advantages and disadvantages to both.

### Volunteer Consultants

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Are often dedicated professionals who want to be part of their local community’s HIV prevention efforts.</td>
<td></td>
</tr>
<tr>
<td>- In many locations, volunteer professionals have experience working with community organizations.</td>
<td></td>
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<tr>
<td>- Can sometimes bring a new outlook, different perspective, and fresh approach.</td>
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<tr>
<td>- Are often energetic and want to make a difference.</td>
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<tr>
<td>- Graduate students are highly motivated to do a good job and gain experience.</td>
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<tr>
<td>- Retired persons bring a wealth of experience.</td>
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<tr>
<td>- Come at no cost or reduced cost to the agency and community.</td>
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<tr>
<td>- May have full-time or part-time jobs and limited availability. Some volunteers may be limited to evening hours for meetings.</td>
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<tr>
<td>- Consistency and reliability may sometimes be a problem.</td>
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<tr>
<td>- Graduate students may not always get the technical supervision that they need to successfully execute the tasks.</td>
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</tr>
<tr>
<td>- Though volunteers are not paid for their services, there is a cost in terms of time and energy on the part of the agency.</td>
<td></td>
</tr>
<tr>
<td>- Retired persons and graduate students may only be interested in one aspect of the work.</td>
<td></td>
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<tr>
<td>- Sometimes the enthusiasm of volunteers is greater than their technical expertise.</td>
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In using volunteers, remember the following:

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<tr>
<th>Do...</th>
<th>Do not...</th>
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<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>• make sure they are qualified to do the work</td>
<td>• just accept anyone who volunteers</td>
</tr>
<tr>
<td>• be clear on what is needed</td>
<td>• ask them what they want to do</td>
</tr>
<tr>
<td>• solicit their recommendations</td>
<td>• use them and burn them out</td>
</tr>
<tr>
<td>• keep your expectations reasonable</td>
<td>• ignore their suggestions</td>
</tr>
<tr>
<td>• let them know you appreciate their input and assistance</td>
<td>• let them starve for appreciation</td>
</tr>
</tbody>
</table>
**PAID CONSULTANTS**

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Generally have verifiable references, making it easier to verify skills and expertise.</td>
<td>• Hiring consultants can be expensive.</td>
</tr>
<tr>
<td>• Since they are being paid, they usually take the assignment seriously.</td>
<td>• Even though a consultant has the expertise, he/she may not be the right fit for your agency and your project.</td>
</tr>
<tr>
<td>• The scope of work is consistent with what they do for a living and the agency has more control in defining the scope of work.</td>
<td>• Depending on your location, a community-oriented consultant may not be easy to locate.</td>
</tr>
<tr>
<td>• Professional consultants are well trained and enjoy their work. Some developed expertise over a period of years before becoming consultants.</td>
<td>• Good consultants are often busy, thereby limiting their availability.</td>
</tr>
<tr>
<td>• Professional consultants often bring high levels of accountability.</td>
<td>• A professional consultant may lack sensitivity to the community and its issues and concerns.</td>
</tr>
<tr>
<td>• The agency has more flexibility in negotiating contracts and scope of work.</td>
<td>• A professional consultant may not be vested in the community with a focus only on the tasks involved in executing the terms of the contract.</td>
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</table>

Whether an agency decides to work with a volunteer or a paid consultant may depend upon the resources available to the agency and the availability of consultants in your area. In either case, it is important to have clear guidelines regarding the agency’s expectations, the scope of work, and the roles and responsibility of the evaluation consultant.

The agency needs to consider the following steps when selecting and using a consultant:

4. Agree on who will oversee the consultant and act as a liaison. The agency should identify a staff member(s) who can act as a liaison between the agency and the consultant. The liaison will be responsible for coordinating the evaluation with the evaluation consultant, which may include:

   - Overseeing consultant’s work
   - Reviewing the evaluation plan with the consultant
   - Developing a schedule to “check in” with the consultant
   - Meeting with the consultant periodically to answer questions, review data collection, and monitor evaluation progress
   - Reviewing consultant’s final evaluation report
5. Determine the specific role you want the consultant to play. Discuss the agency’s evaluation needs with staff and other appropriate stakeholders. Determine where the gaps are in the agency’s evaluation capacity. Decide whether you want the consultant to execute specific tasks or work collaboratively with staff to facilitate the evaluation of the intervention. Examples of tasks that a consultant may be responsible for include:

- Developing the evaluation plan
- Adapting your EBI program instruments (activity forms, templates)
- Collecting data for process and outcome evaluations
- Analyzing data
- Generating evaluation reports
- Presenting evaluation results

6. Determine available resources and be clear on the agency’s need for reduced cost or pro bono assistance. Review the agency’s financial resources and obligations and determine how much the organization can realistically afford to pay for a consultant. This should be done systematically and not through guesswork.

7. Prepare a statement of work that clearly specifies the work to be performed, timeframe, level of effort, skills requirements, and other necessary characteristics (e.g., community member). Define the scope of work to be completed by the evaluation consultant. The scope of work should include a description of the intervention to be evaluated, the identified tasks, and an estimate of funds available for the evaluation. It is recommended that agencies include staff members who implement your EBI program activities, as well as staff responsible for collecting data and writing reports in developing evaluation questions and drafting an evaluation plan.

8. Solicit candidates formally or informally.

The agency should compose a job description including the scope of work and an estimate of the funds available. The job description also should include instructions of how candidates can apply for the position, and what information and documentation must be provided to the liaison. The agency liaison should review at least one evaluation report written by the
applicant and speak with at least two references who received evaluation services from the applicant.

Consultants can be identified through networking with other community organizations and distributing announcements at local colleges and universities and professional organizations such as evaluation associations. Job descriptions can also be posted on the Internet. If consultants are selected from outside the local area, ensure that they are able to participate in regular meetings regarding the evaluation or have reliable communication systems.

9. Using the criteria agreed upon, interview and select a consultant. Agencies are encouraged to look for individuals or organizations that bring the following:

- Technical skills in program planning and evaluation
- Technical skills in collecting and analyzing community-related data
- Ability to quickly understand community-level issues
- Understanding and experience in community-based interventions and evaluation
- A good fit with the organization
- A good listener
- A willingness to speak honestly
- Recognition of the knowledge and skills of the staff
- Potential for the development of a good, trusting relationship

The following questions may be helpful in exploring relevant issues during the interviews:

- Does the candidate understand the difference between research and evaluation?
- Does the candidate understand the program to be evaluated?
- What is the candidate’s general approach to the evaluation?
- Does the candidate believe the evaluation can be conducted with the available funds?
- What is the candidate’s reaction to supervision by the evaluation liaison or committee?
- What is the candidate’s prior evaluation experience?
- How useful are the candidate’s previous evaluation reports?
- Does the candidate have good references?
Will the candidate’s existing commitments interfere with the planned evaluation?

What is your general reaction to the candidate?

What is your overall rating of the candidate?

10. Write and negotiate the contract.

A contract, memoranda of agreement (MOA) or memoranda of understanding (MOU) should be written for all consultants, whether paid or volunteer. The contract should include:

- A statement of the consultant’s responsibilities
- A detailed decision-making process and the authority of the liaison
- A listing of deliverables and a timetable
- A statement of who owns the data collected during the evaluation and who has the rights to publish the results of the evaluation study
- An outline of how paid consultants will bill for services rendered and a schedule of payment (generally, a percentage of the evaluator’s fee should be withheld until the evaluation liaison has accepted the final report)
- A statement of the liaison’s responsibilities to provide the consultant with timely guidance, to review and approve instruments and documents, and to assist the consultants in solving problems if they should arise

11. Interact closely with the consultant.

At the first meeting with the consultant, and at regular, subsequent meetings, the agency should communicate expectations for the evaluation, review materials for the evaluation, and monitor progress of the evaluation.

12. Prepare the final report and release of results.

Toward the end of the evaluation, a report format should be decided upon, and the evaluator and agency should agree upon a plan for release of results. As drafts of the report are prepared, the consultant should submit them to the liaison for review and comment. Significant changes to the findings, recommendations, or overall focus of the report should be discussed between the consultant and the agency.
13. Debrief with the consultant at the end of the contract period.

Resources for Locating Evaluation Consultants:

- Local university (e.g., psychology, sociology, education, public health, political science departments)
  - University professors and researchers
  - Graduate students
  - Graduate field placement departments
- The Behavioral and Social Science Volunteer Program (American Psychological Association and CDC Collaboration)
- Local United Way—Professional Volunteers Programs
- American Evaluation Association, including local chapters
- State health department
- State office of minority health
- National Minority AIDS Coalition
- Research institutions
- Centers for Disease Control and Prevention—Technical Assistance Program (contact Project Officer)
- Professional services consulting firms

**WORKING WITH TECHNICAL ASSISTANCE PROVIDERS**

CDC provides TA to grantees and community partners through its internal Capacity Building Branch (CBB) staff and partners (e.g., CBA providers). Available assistance involves the delivery of expert programmatic, scientific, and technical support to State and local health departments, CBOs, and community stakeholders. Technical assistance is made available to support organizations in the design, implementation, and evaluation of HIV prevention interventions and programs. Unlike a consultant, TA providers do not actually do the work. Instead, they work with agency staff to enable them to execute the needed tasks, thereby developing the agency’s internal capacity.
Who can receive assistance from CDC?

- CDC directly funded CBOs
- Health department-funded CBOs
- CDC directly funded health departments
- Community stakeholders
- CBA providers
- Unfunded CBOs

Who provides assistance?

- CBB staff
- External partners:
  - If no, consider these strategies:
  - National, regional, and local CBA providers
  - National TA Providers Network for HIV Prevention Community Planning
  - Institute of HIV Prevention Leadership
  - Association of Schools of Public Health
  - Behavioral and Social Science Volunteer Program (BSSV)
  - Contractors

- Prevention Training Centers (PTCs)
How can you access technical assistance services?

- Directly funded CBOs and health departments: Contact your CDC Project Officer to request assistance
- CBOs funded by health departments or other directly funded organizations: Contact the health department or the agency that funds your EBI program
- Unfunded CBOs and stakeholders: Contact the health department or a capacity building provider directly

Requesting and Using CDC-Sponsored Capacity Building Assistance

The following guidelines will facilitate the most efficient use of CDC-sponsored CBA support and afford the organization maximum benefit. Requests for CBA are made through the Capacity Building Request Information System (CRIS) (http://www.cdc.gov/hiv/cba).

1. When you determine that your organization needs technical assistance to evaluate the program model(s) you are implementing, think through your specific needs before submitting a request. If your organization is directly funded, you can consult with your Project Officer to help pinpoint your needs.

2. Specify your evaluation related needs in your request. Rather than simply state “we need help with evaluation,” indicate the kind of evaluation assistance you are in need of, such as:

   - Developing the evaluation plan
   - Adapting instruments (activity forms, templates)
   - Collecting data for process and outcome evaluations
   - Responding to CDC’s NHM&E reporting requirements
   - Analyzing data
   - Generating evaluation reports
   - Presenting evaluation results
3. Agree on who will serve as a TA liaison. The agency should identify a staff member(s) who can act as a liaison between the agency and the provider. The liaison will be responsible for coordinating the provision of technical assistance, which may include:

- Participating in conducting the TA needs assessment
- Participating in developing the TA work (action) plan
- Overseeing TA provider’s work
- Reviewing developed materials (e.g., forms and instruments, evaluation plans) with TA provider
- Developing a schedule to “check in” with the TA provider
- Meeting with the TA provider periodically to answer questions and review progress on areas where assistance is being provided
- Providing feedback to CDC on the quality of the assistance received by the organization, level of satisfaction with assistance received, and recommendations for improving CDC-sponsored TA services

4. When a TA provider has been identified, spend some time discussing both your needs and the qualifications of the assigned provider. In addition to having the expertise needed to provide you with assistance, you will also need to ensure that the identified provider is most appropriate for the culture of your organization. Agencies are encouraged to look for providers that bring the following:

- Technical skills in program planning and evaluation
- Technical skills in collecting and analyzing community-related data
- Ability to quickly understand community-level issues
- Understanding and experience in community-based interventions and evaluation
- Knowledge of the program model for which you need assistance
- A good fit with the organization
- A good listener
- A willingness to speak honestly
- Recognition of the knowledge and skills of the staff
• Potential for development of a good, trusting relationship

The following questions may be helpful in exploring relevant issues during initial discussions:

• Does the TA provider understand the program model to be evaluated?
• Does the TA provider understand CDC’s evaluation framework and reporting requirements?
• What is the TA provider’s response to working with the agency liaison?
• What is the TA provider’s prior evaluation experience?
• What is your general reaction to the TA provider?
• What is your overall rating of the TA provider?

5. Work collaboratively with the TA provider to identify and prioritize agency evaluation needs and to develop an appropriate and mutually agreed upon plan to address the prioritized needs.

6. Prepare a MOA or MOU that specifies the assistance that will be provided, how the assistance will be provided, timeframe, level of effort, skills requirements (e.g. evaluation expert), and other necessary requirements (e.g., available for telephone consultations). The MOU should include agency and staff responsibilities regarding the agreed upon scope of work.

7. Interact closely with the TA provider. Follow “Do’s” and “Don’ts” previously outlined for working with volunteers and TA providers.

8. Consult with your Project Officer regarding your comfort working with the TA provider and the services being provided. You can request a different provider if the fit between the organization and provider is not a good one or your organization is not receiving the agreed upon services.
APPENDIX D: BUILDING YOUR LOGIC MODEL

A logic model is a framework to guide your organization’s understanding of your EBI program’s activities and the relationships between those activities and expected outcomes. In other words, it is a tool used to visually describe the main elements of an intervention and illustrate the linkages between the components. Figure D-1 depicts the components of a logic model and the definition of each component.

**Figure D-1. Logic Model Components**

PROBLEM STATEMENT: A description of the problem behavior and the factors that put a population at risk, such as knowledge, attitudes, beliefs, behaviors, skills, access, policies, and environmental conditions.

*SITUATION PRIORITIES*

- **Inputs**: Resources needed to implement an intervention, such as money, staff, curricula, and materials.
- **Implementation**: Services that the intervention provides to accomplish its objectives, such as outreach, counseling sessions, discussion groups, workshops, materials distribution, community events, and training.
- **Outputs**: Direct products or deliverables of the intervention, such as the number of community businesses involved with the intervention, people reached, and materials distributed.
- **Immediate**: Immediate results of the intervention, such as changes in knowledge, attitudes, beliefs, and skills.
- **Intermediate**: Intervention results that occur some time after the intervention is completed, such as changes in behaviors, skills, access, and people reached.
- **Long Term**: Behavior change and the application of skills that are maintained over time, changes in community norms and practices of its residents or members, policies, and environmental conditions.
- **Assumptions**: What is known about knowledge, attitude, belief, and behavior change based on behavioral and learning theories and past experience. (i.e., engaging in activity X is likely to cause a change in an individual’s or community’s knowledge, attitude, belief, or behavior).
- **External Factors**: Issues, beyond the control of the organization, that would influence an individual’s or community’s knowledge, attitudes or beliefs, or the ability to change behavior (e.g., local politics, current events, lack of certain health or social services, family dynamics).

Logic models can serve your organization in many ways. The action of developing a logic model can help facilitate a better understanding of the intervention overall as well as provide clarity on how the different activities relate to each other and work to reduce risk of HIV/AIDS infection.
There are several steps for building your logic model:

1. Assess your target population or community
2. Develop a problem statement
3. Define your intervention

**STEP 1: CONDUCT AN ASSESSMENT OF THE COMMUNITY**

Logic models begin with problem statements. Before a problem statement can be developed, you need to understand what behaviors are putting your target community at risk for HIV and what factors influence members of that target group to engage in such behaviors. Your organization will need to assess the target group or community (hereafter referred to as community assessment) to better understand these influencing factors. A community assessment may be one of the core elements of your EBI program. Even if it is not a core element, conducting a community assessment is an essential first step to logic model development. There are several data collection methods for conducting community assessments (see Appendix F for more specific guidelines on conducting the various data collection methods).

**Document Review (also referred to as Content Analysis)**

Review case notes and documents from other interventions that the agency has implemented to obtain as much information as you can about the target population. Review documents for the following:

- What kinds of issues have come up in other programs?
- What recommendations were made from previous evaluations or participant response data?
- What additional needs, not addressed during previous efforts, were identified?
- What types of activities seem to get the best response?

Review data from epidemiological studies, police reports, and other public records. Request copies of data compiled by other providers that may provide insights on recruiting, planning, and retention strategies (including incentives).
Community/Participant Observation
Observe the behaviors of people in the communities that you plan to target. Questions to ask may include:

- Where do they congregate?
- What behaviors are they engaged in?
- What seems to motivate these behaviors?
- What seems to get their attention?
- How are they grouping themselves?
- How do they respond to each other, the opposite gender?

Interviews
Conduct informal interviews with members of the target population. Try to identify and understand the factors that influence risk behaviors, as well as the barriers to protective activities and behaviors that would reduce their risk for infection. Conduct interviews with other service providers, including non-HIV-related services, to explore the needs of the target population.

Focus Groups
Focus groups can be conducted with segments of the population or community that you intend to target. Explore the various issues they face, the concerns they have, and their reasons for what they do. Use the opportunity to solicit information regarding issues related to the content of core elements, including how best to structure attitude change segments and skill acquisition exercises.

STEP 2: DEFINE THE PROBLEM STATEMENT
Defining a problem statement helps your organization focus on the population you are targeting and why. This goes back to understanding the individual, interpersonal, social, and environmental factors that influence members of the target population or community to engage in particular high-risk behaviors. This process, also known as a situational risk analysis, involves
using the information learned during your assessment of the target group to help focus your intervention.

**STEP 2A: Problem Discovery**

First, think about the population you are targeting with your EBI program. Next, specify the behaviors that put members of that target population at risk for HIV infection. Examples may include:

<table>
<thead>
<tr>
<th>Who</th>
<th>Behavior/Risk</th>
</tr>
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<tbody>
<tr>
<td>Heterosexual African American women in Muscogee County</td>
<td>Unprotected sex with men who have sex with other men</td>
</tr>
<tr>
<td>Young gay men, aged 18–29 years, in Boston, MA</td>
<td>Unprotected sex with multiple partners</td>
</tr>
<tr>
<td>Homeless youth in Portland, OR</td>
<td>Substance abuse and unprotected sex with multiple partners</td>
</tr>
</tbody>
</table>

Briefly describe the problem you are attempting to address by implementing your EBI program.

**Example:** Homeless youth in Portland are at high risk for hepatitis C and HIV because they are engaging in high-risk injection and non-injection drug use practices, and engaging in unprotected sex with multiple partners.

**STEP 2B: Specify the Underlying Causes of the Problem**

Generate discussions with the stakeholders involved in planning your EBI program to identify the underlying causes of the risk behaviors identified among your target population.

Think back to the behaviors that your workgroup has identified. What might be some of the underlying causes or reasons for these behaviors? A way to do this is to ask, “But why?” each time the group identifies a reason for the problem (i.e., why is that happening). For example:

**Summary of problem:** Homeless youth in Portland are at high risk for hepatitis C and HIV because they are engaging in high-risk injection and non-injection drug use practices, and engaging in unprotected sex with multiple partners.
**But why?**  No access to clean needles

**But why?**  Purchase/possession of needles illegal

**But why?**  State/Federal and/or local laws

**But why?**  No money to purchase needles

**But why?**  Substance-using lifestyle compromises wage-earning activities

But why? …

**But why?**  Do not know how to clean needles

But why? …

**But why?**  Forced to engage in unprotected sex

**But why?**  Need money for drugs

**But why?**  Drug dependency

**But why?**  Desire to please partner

**But why?**  Fear of violence from partner

But why? …

**STEP 2C: Map the Problem**

To help you visualize the relationships between these causes or reasons for the problem, try making a diagram or “map.” You can use Post-it notes and newsprint to create a diagram of the situation.
STEP 2D: Focus Your Intervention

Generate discussions with your stakeholders or planning group to identify which of the contributing factors your intervention will target in order to create a situation and/or which will facilitate a reduction in the risk behavior. Your problem statement should include who you will be targeting, the risk behavior in which that group is engaging, and the influencing factors that will be addressed by your EBI program.

Example: Homeless youth in Portland are at high risk for hepatitis C and HIV because they are engaging in high-risk injection and noninjection drug use practices and engaging in unprotected sex with multiple partners. They are engaging in these behaviors because they do not have access to clean needles or condoms, do not know how to clean needles, and lack the skills to negotiate safer behaviors confidently with their sex and needle-sharing partners.
Recognize that a single EBI will not be able to address all of the influencing factors. Some factors may be beyond the control of your organization, while others are being addressed through other programs. It is the combined efforts of all HIV prevention programs that help reduce transmission rates. Efficient and effective implementation of an evidence-based intervention will contribute to these efforts.

**STEP 3: DRAFT YOUR EBI PROGRAM LOGIC MODEL**

Once your organization has defined its problem statement, work with your staff to draft your EBI program logic model. It may be helpful for your organization to update the logic model once implementation of your EBI program (or any other intervention or program) has begun to incorporate any changes in implementation. Once updated, your logic model will reflect the actual implementation of the intervention instead of the planned implementation.

While your logic model goes from inputs to long-term outcomes, we recommend working backward to help you think through how your EBI program will affect the factors described in your problem statement. The worksheet at the end of this section may help you describe the planned implementation of your EBI program and anticipated outcomes.

**Problem Statement**

Enter a description of the problem behavior and the factors that put the population at risk (e.g., knowledge, attitudes, beliefs, behaviors, skills, and environmental conditions). Enter only those that the intervention will attempt to affect.

**Long-Term Outcomes**

What are the expected long-term results (e.g., maintenance of protective behaviors, skills, access, policies, and/or environmental conditions) from this intervention? The long-term outcomes should reflect the problem statement.

**Intermediate Outcomes**

What results (e.g., changes in behavior and environmental conditions) are expected to occur sometime after the intervention is completed? What needs to happen in order for long-term outcomes to be realized?
**Immediate Outcomes**
What will be the immediate results (e.g., changes in knowledge, attitudes, beliefs, and skills) among participants at the conclusion of the intervention?

**Activities**
Based on what is known about the target population and the intervention, what are the activities that will most likely have the desired effect on outcomes? Describe the services that will be provided to accomplish the desired outcomes (e.g., materials distribution, outreach events, group sessions, referrals, peer facilitator training).

Review the behavioral theory that is the foundation of your EBI program. The constructs of the theory are the assumptions you should use to determine what activities would result in the desired outcomes.

**Inputs**
What resources (e.g., money, staff, curricula, space, and materials) are needed to implement the described activities or resources used in the intervention?

**Outputs**
What will be the direct products or deliverables of the intervention (e.g., number of community businesses involved, people reached, and materials distributed)?
## LOGIC MODEL WORKSHEET

<table>
<thead>
<tr>
<th>Problem Statement</th>
<th>OUTCOMES</th>
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<tbody>
<tr>
<td></td>
<td>Long-Term</td>
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<td>Intermediate</td>
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<th>Activities</th>
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</table>
**LOGIC MODEL WORKSHEET**

**PROBLEM STATEMENT:**

<table>
<thead>
<tr>
<th>SITUATION</th>
<th>PRIORITIES</th>
<th>INPUTS</th>
<th>IMPLEMENTATION</th>
<th>OUTCOMES</th>
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<td>Immediate</td>
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<td>Long-term</td>
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**ASSUMPTIONS**

**EXTERNAL FACTORS**
APPENDIX E: WRITING OBJECTIVES AND EVALUATION QUESTIONS

The worksheets on the following pages can be used to help your organization develop SMART objectives and evaluation questions for your EBI program.

SMART objectives will guide your agency’s implementation of the program and serve as the focus for the evaluation. Also, do not forget to consider coverage and effect size when developing your objectives. Use your agency’s revised EBI program logic model as a guide to develop your SMART objectives.

<table>
<thead>
<tr>
<th>SMART Objectives</th>
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<tr>
<td><strong>Specific:</strong></td>
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<tr>
<td><strong>Measurable:</strong></td>
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<td><strong>Appropriate:</strong></td>
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<tr>
<td><strong>Realistic:</strong></td>
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<tr>
<td><strong>Time-Based:</strong></td>
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Coverage and Effect Size

Coverage addresses the question, “How many people will be reached by an intervention?”

Effect size addresses the question, “How much change will the intervention produce?”

Evaluation questions specify what you want to learn from the evaluation of your EBI program. Specifically, they clearly identify what aspects of the program your evaluation will measure.

As you develop your program evaluation questions, consider how you will use the answers to your questions. Keep in mind that your agency’s evaluation questions will likely vary from those of other organizations because your evaluation questions will be based on your particular program’s goals and objectives, agency resources, and extent or timeframe of the evaluation.
**WRITING SMART OBJECTIVES**

**Instructions:** Work with the stakeholders or planning group to write SMART process and outcome objectives for the implementation of your EBI program. Refer to *Understanding and Modifying the Logic Model*, in the *Evaluation Planning* section for additional guidance on writing SMART objectives.

<table>
<thead>
<tr>
<th>What are three process objectives you could write about the EBI program at your organization?</th>
<th>Does each objective meet the SMART criteria?</th>
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</thead>
<tbody>
<tr>
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<td>☐ Time-based</td>
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~ Continued on the next page ~
### What are three outcome objectives you could write about the EBI program at your organization?

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<thead>
<tr>
<th>Does each objective meet the SMART criteria?</th>
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<td>- Realistic</td>
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<td>- Time-based</td>
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</table>
**WRITING YOUR EVALUATION QUESTIONS**

**Instructions:** Work with the stakeholder-planning group to write evaluation questions and describe how you would use the evaluation findings to improve the implementation of your EBI program. Review each question from the perspective of how useful the information will be to the agency and the likelihood of being able to collect and use the data easily. Refer to *Step 2: Developing and Prioritizing Process and Outcome Evaluation Questions*, in the *Evaluation Planning* section for additional guidance on writing evaluation questions.

<table>
<thead>
<tr>
<th>1. Write <strong>process</strong> evaluation questions.</th>
<th>List some ways you might use these evaluation findings to improve the implementation of your EBI program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prioritize and rank the questions.</td>
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</table>

<table>
<thead>
<tr>
<th>2. Write <strong>outcome</strong> evaluation questions.</th>
<th>List some ways you might use these evaluation findings to improve the implementation of your EBI program</th>
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<tbody>
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<td>Prioritize and rank the questions.</td>
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</table>
APPENDIX F: DATA COLLECTION METHODS

An organization should choose the most appropriate and feasible combination of methods for collecting information. The following tables below provide a brief description of commonly used data collection methods, including information about required resources for each method. Information on how to implement each method follows these tables.

### Direct Observation

<table>
<thead>
<tr>
<th>What is it?</th>
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<tbody>
<tr>
<td>Direct observation involves systematically watching what is happening within a particular setting. For example, if the setting is the community, the observer may watch where the target population congregates, what and whom they respond to, and with whom they associate. If the setting is an intervention session, the observer may watch how participants respond to information, activities, and facilitators, and what they do during breaks. Notes are unobtrusively taken by the observer(s) (e.g., project supervisors, managers, volunteers, and peer leaders). Observations are conducted at different times.</td>
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<table>
<thead>
<tr>
<th>How is it used?</th>
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<tr>
<td>During pre-implementation, observation of the target population’s habits and behaviors can help inform participant-recruiting efforts and guide planning for implementation of your intervention. During implementation, observations made during intervention sessions can generate information regarding the environment, responses to activities, and attitudes toward responses to facilitators that can be used to guide planning and modifications to the intervention.</td>
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<table>
<thead>
<tr>
<th>When is it used?</th>
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<tr>
<td>Observation is useful when you want to learn about many aspects of a particular setting. It provides an array of useful information and facilitates a more comprehensive understanding of the context in which your intervention will be implemented. It may provide more impartial data as information is gathered and documented without the participants’ knowledge, and includes a relatively objective account of the physical environment. In planning and implementing your intervention, observations provide a wealth of visual information, such as how people interact with each other and who talks to whom. Observations may provide information on where people congregate, and the time of the day or month they visit key venues where the intervention may be implemented. This information can guide the planning of intervention-related program activities.</td>
</tr>
</tbody>
</table>
Direct Observation (continued)

### Required Resources

**Human Resource Needs:**
- Any staff member or volunteer can serve as an observer
- Practice is recommended and consensus is needed regarding what, who, and when to observe
- In sessions with co-facilitators, one can observe participant reactions when not active

**Financial Resource Needs**
- Staff time is the only cost; the number and length of observations determine cost to the agency

**Time Commitment: Varied**
- Determined by the number of observations and the length of time spent during each observation
- Time is needed to practice and plan the observations
- Additional time (10–30 minutes) is needed to organize and analyze notes

### Document Review

**What is it?**
Document review makes use of all the information that is routinely collected during the implementation of the intervention. It may involve review and analysis of documents such as agendas, outlines, intake and tracking forms, and other service records, financial records, calendars, and process logs and forms.

**How is it used?**
Document review is useful to monitor and evaluate the process of implementing the intervention. This method is used when there is a need to analyze existing program records and other documents not gathered or developed specifically for the evaluation. Use of information collected through document review techniques, in combination with other information, provides insights into what activities are most effective with which subgroups, settings, and recruitment strategies.

**When is it used?**
Generally, this method is useful when there is a need to document implementation of a program/intervention. Document review techniques can be used when you need to analyze program recruitment and attendance records, budget, staff records, and/or progress reports. For example, it may be helpful to use this method when you need to collect data on participant or target community demographics, program/intervention characteristics, client participation (e.g., how often and for how long), and/or participant characteristics before and after the program/intervention.
**Document Review (continued)**

### Required Resources

**Human Resource Needs:**
- The easiest data collection method requires staff members who are involved in the routine collection of data to be more purposeful and systematic in organizing the data.
- The amount of time staff members will need depends on the number of documents and the depth of review.

**Financial Resource Needs:**
- No additional expense

**Time Commitment: Minimal**
- Time to organize and review information depending on the amount collected.

---

### Focus Groups

**What is it?**

A focus group is a structured discussion among a carefully selected group of 6–12 people to explore a specific topic. The groups are guided or facilitated by a trained moderator using prepared questions to generate discussion and reflection on the topic (i.e., moderator’s guide). Focus groups are used to gather formative, process, or outcome evaluation data about a particular program’s or intervention’s effectiveness.

**How is it used?**

Focus groups can be used to generate preliminary information quickly and are most suitable for topics that become clearer through group discussion. They work well when trying to get individuals to express widely held beliefs or practices or to assess how members of the target population react to others’ feelings and thoughts on a topic.

Focus groups may be used for formative evaluation, such as part of a community needs assessment, to gather information about the population or community you plan to target or to help refine your target group.

During implementation, focus groups can provide ongoing information to inform successful approaches and develop new materials such as questionnaires or flyers, formulate better questions, or get feedback on evaluation tools. Focus groups may also be used as a way to assess program effectiveness.
Focus Groups (continued)

When is it used?

Focus group members may explain not only what is going on within the target population, but also help to explain why.

For your intervention, focus groups may be helpful in providing information about general community or population characteristics, such as individual or organizational gatekeepers, formal and informal leaders, social and cultural norms, community/neighborhood layout, general information about where individuals congregate, or perceived gaps in community services, information, or supplies.

In addition, focus group members may explain not only what is going on in the community, but also help to explain why. For instance, focus group members may provide both information about social norms around risk behaviors and detailed explanations about community- or population-specific characteristics that foster these norms. Information about perceptions and attitudes may influence certain aspects of your intervention implementation.

Focus groups should be used in conjunction with other data collection methods. While they provide rich, in-depth information, these data often cannot be generalized to the community as a whole.

### Required Resources

**Human Resource Needs**
- Individuals with skills and training in moderating focus groups and developing moderator guides
- Staff and/or volunteers to recruit focus group participants
- Individuals with skills to organize and analyze focus group data; depending on the complexity of the topics, appropriate staff can be trained as moderators
- Staff to take notes during focus groups

**Financial Resource Needs**
- Training for staff members to develop guides and moderate groups or resources to hire a trained moderator
- Incentives for participants to encourage participation
- Staff time to recruit
- Securing a location to conduct focus groups may be an additional expense
- Either staff time to organize and analyze responses or funds to hire a consultant to assist
- Transcription services are optional, but often more thorough than note taking

**Time Commitment: Moderate**
- The greatest time commitment is recruiting participants and organizing and analyzing results; conducting the focus group takes about 2 hours per group
- Additional time is needed to set up and organize the setting
- Time is also needed to reconcile, organize, and analyze notes or transcripts
Community Forum

What is it?

Community forums are public meetings where information is exchanged and where everyone, within a prescribed process, is free to express his or her opinions. The main purpose is to gather data from a wide range of community residents regarding their concerns and perceived needs. Forums usually involve people who are all physically in the same place to focus on a single issue or single set of issues. With teleconferencing or videoconferencing technology, however, it is now possible to have forums that include people in different locations. It is also more common to have virtual forums via the Internet.

How is it used?

Community members are informed of the public meeting and invited to attend (should be an open invitation to encourage as many people as possible to attend). The meetings have a planned format and agenda. Goals and objectives are predefined and the meeting is facilitated by a single individual whose purpose is to keep the discussion on topic and ensure that those present have equal opportunities to participate in the discussion. Forums can be used to create opportunities for dialogue about issues and indicators of those issues, and to build a network of concerned citizens.

It is crucial to select a strategically located place for the meeting, both in terms of geographical location (e.g., is it accessible?) and social acceptability (e.g., does everyone feel comfortable to attend?). Otherwise, attendance may be negatively affected, increasing the likelihood of a disproportionate response from certain segments of the population.

When is it used?

Community forums are particularly useful when information from many segments of a community is desired.

Community forums may be helpful in providing information about general community characteristics, such as businesses or organizations in the community that may support your intervention activities, formal and informal community leaders, social and cultural norms of the community, community or neighborhood layout, general information about where community members congregate, or perceived gaps in community services, information, or supplies. Community forums are also important for assessing the level of community support, which may affect the implementation of your intervention.

Required Resources

Human Resources Needed
- Promotional materials developed and distributed to notify community members of the forum
- Knowledgeable and trained facilitators to lead discussion

Financial Resources Needed
- Setting to host community/public forum (strategically located, affordable, and available)
- Promotional materials produced
- Funding to train or hire a moderator
- Incentives to encourage attendance and participation of community members
- Staff time to organize and analyze responses.

Time Commitment: Moderate
- As many individuals meet in one central location for a specified amount of time, time investment is moderate; of course, the more forums held, the more time will be needed
### Key Informant Interviews

**What is it?**

Key informant interviews are conducted with individuals or groups using predetermined, open-ended questions. They are a cross between surveys and focus groups and are administered in a manner similar to a survey and collect information from key stakeholders and individuals who are uniquely positioned to know the needs of the target population, as well as members of the target population or community. Responses are in the participant's own words based on his or her personal experiences. The method allows respondents to have questions clarified and give in-depth responses. The structure of the interviews can vary, allowing for more open explanations by the respondent.

Examples of individuals who may be interviewed include community leaders, partnering businesses and organizations, policymakers, people with alternative lifestyles (e.g., drug dealers, homeless, sex workers), residents who have been in the particular community for a significant period of time, and members of the target population (e.g., adolescents and young adults, African American women), including participants in your EBI program.

**How is it used?**

Key informant interviews are used to gain knowledge about participants’ feelings, perspectives, and motivations. An interviewer conducts one or two unstructured interviews with selected key informants. Interviewers use probes and follow up on responses in order to obtain the desired information. Interviewers take notes or the interviews may be audiotaped.

**When should it be used?**

Key informant interviews are used when you need background information from the point of view of those who are intimately involved in the community. When you would like a more informed assessment of a situation than could be provided by someone in the general public, it is valuable to identify and interview key members of the community. Key informant interviews provide a true “insider’s” perspective. Key informants can usually provide invaluable first-hand knowledge about the community characteristics and members because they are tied closely with them and are in a position to observe unadulterated community activity, attitudes, norms, and so forth. Information that key informants provide can be used to inform the implementation of your EBI and help tailor activities to specific cultural norms and circumstances.

Key informant interviews are also used when you want to understand the program model or intervention, why it may be successful or unsuccessful, and how it can be improved. They are also helpful when you want to interpret outcomes. In addition, key informant interviews can provide information that may help determine whether a program model or intervention can be replicated. By using key informant interviews, you can identify unexpected outcomes (challenges and successes that were not part of the original objectives) and gain a better understanding of the outcomes that were not anticipated.
**Key Informant Interviews (continued)**

<table>
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<tr>
<th><strong>Required Resources</strong></th>
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<tbody>
<tr>
<td><strong>Human Resource Needs</strong></td>
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<tr>
<td>- Individuals skilled and trained to conduct interviews using prompts to solicit desired information and to maintain the focus of the interview</td>
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<tr>
<td>- Experience and skills to develop interview guides</td>
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<tr>
<td>- Experience and skills to organize and analyze respondent data</td>
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<tr>
<td><strong>Financial Resource Needs</strong></td>
</tr>
<tr>
<td>- Cost of time to develop interview guides and conduct interviews; if internal staff lack experience organizing and analyzing interview response data (see the Data Analysis in the Evaluation Planning section for tips), the cost of training internal staff or using an outside consultant to assist must be considered</td>
</tr>
<tr>
<td><strong>Time Commitment: Varied</strong></td>
</tr>
<tr>
<td>- The length of time will depend on the depth of the interview</td>
</tr>
<tr>
<td>- Interviews with individuals more knowledgeable about the target population (e.g., members of the target population, community service providers) may last between 1 ½ hours</td>
</tr>
<tr>
<td>- Interviews with those in peripheral positions (e.g., policymakers, business owners) should be no more than 10 to 15 minutes in length</td>
</tr>
<tr>
<td>- Individual interviews will consume more time than group interviews</td>
</tr>
<tr>
<td>- Time is needed to develop interview guides and a significant amount of time is needed to organize and analyze response data</td>
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<tr>
<td>- The number of individuals interviewed will also affect the amount of time needed to organize and analyze the data</td>
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</table>

**Conversational or Spot Interviews**

<table>
<thead>
<tr>
<th><strong>What is it?</strong></th>
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</thead>
<tbody>
<tr>
<td>Conversational or spot interviews are very informal, unstructured, short interviews that have no predetermined format or structure to the questions asked. Questions arise during free-flowing discussion that can take place in a social or program environment. Interviews are brief and notes are taken during the interviews. They can be conducted before or after intervention sessions.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>How is it used?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Conversational or spot interviews can be useful throughout implementation of an EBI. Information from spot interviews can be used to make informed decisions about the intervention to gauge the impact that the intervention activities are having on participants’ perceptions, skills, and knowledge. These interviews can be used for many different evaluation needs and can be used at any time to get quick input about the intervention and participants’ perceptions of and responses to the intervention.</td>
</tr>
</tbody>
</table>
### Conversational or Spot Interviews (continued)

#### When is it used?

Informal conversational interviews can be used to make informed decisions about program development and implementation, and gauge the impact particular program activities have on the community and its members’ perceptions, skills, and knowledge. Information gathered may be used to inform both the planning and implementation stages of your intervention.

In some interventions, outreach specialists and/or peer networkers conduct street-based spot interviews. In other instances individuals may provide information about the feasibility of implementing specific intervention activities (e.g., safer sex parties or M-groups), settings appropriate for community observation, or identification of key informants or community leaders. Group facilitators can informally collect information from participants regarding their thoughts about the format, concerns they may have, and so forth. Since questions are not predetermined before, staff may inquire about a wide range of issues relevant to a particular target population or community and how they might influence your intervention.

#### Required Resources

**Human Resource Needs**
- Can be conducted by staff and volunteers involved in the implementation; interviewers should be familiar with the intervention and anticipated outcomes
- Only one or two staff needed, depending on the planned use of the information and the number of interviews conducted
- Minimal skills needed to conduct short informal interviews; skills needed to organize and analyze responses

**Financial Resource Needs**
- Most significant cost is time needed to organize and analyze response data
- Additional staff time is minimal because the length of the interviews is brief

**Time Commitment: Minimal**
- The interviews should be no more than 10–15 minutes in length
- The number of individuals interviewed determines the amount of time needed to organize and analyze respondent data
- Time is needed to develop two or three questions to prompt discussion

### Questionnaires and Surveys

#### What is it?

Questionnaires, also called surveys, are a structured set of questions to assess participant characteristics, level of knowledge about HIV/AIDS and prevention strategies, attitudes and behaviors, and/or participant satisfaction with the program. Questionnaires and surveys should be confidential so that the identity of respondents is protected. They can be administered by a staff person, or participants may complete them by hand or electronically.
Questionnaires and Surveys (continued)

How is it used?

Questionnaires and surveys provide detailed information on intervention participants. Questionnaires and surveys can be used to collect information before and after the intervention to determine if there was change. They can be administered after each session to gauge participants’ impression of the sessions. Information can be used to determine whether and how many participants benefited from their participation in the intervention and to discover strengths and weaknesses of the implementation.

When to use it

This method is useful for obtaining information from program participants regarding feedback on program activities. Thoughtful, prepared questions allow important tailored information to be collected. They provide an easy way to obtain information from numerous individuals and may be completed anonymously, thus increasing the likelihood of truthful, candid responses.

Most commonly, pretest surveys are used to gather information about the participants, including their demographic characteristics, knowledge, attitudes, beliefs, and perceptions about HIV, as well as their risk behaviors. This information can inform the need for referrals and/or more intensive group or individual intervention activities and programs. The same information is often asked again on the posttest to ascertain changes that occurred since before the intervention.

Required Resources

**Human Resource Needs**
- Staff members are needed to collect and keep questionnaires organized
- Face-to-face surveys require skills in interviewing techniques
- Expertise and appropriate software are needed to analyze the results of some surveys, especially if results are compared
- Staff with the appropriate training can handle shorter surveys internally

**Financial Resource Needs**
- Participant incentive costs are needed for lengthy surveys
- If staff members do not have the skills to analyze the results and/or access to the appropriate software, the cost of using consultants must be considered

**Time Commitment: Moderate**
- Time to collect the data depending on the length of survey or questionnaire and number to be administered
- Time is needed to organize and enter the data
- Additional time is needed to clean and analyze the data
**HOW TO IMPLEMENT DATA COLLECTION METHODS**

Understanding how certain data collection methods are implemented will help you in selecting method(s) that:

4. are appropriate for the target population,
5. match your staff’s and/or consultant’s capacity, and
6. provide your agency with the information it needs.

The following pages provide some guidance on how to implement various data collection methods. There are many resources available that outline the various data collection processes; some of these are noted in Appendix G.

**Direct Observation Techniques**

Direct observation allows an evaluator the chance to document activities, behavior, and physical aspects related to the implementation of a program/intervention without having to depend on an individual’s ability or willingness to answer specific questions. The most important element of observation is describing what one is witnessing because of “seeing” and “listening” to an event.

Once you determine what you need to know and that observation is the most appropriate method for obtaining this information, there are several things to do to prepare for implementing direct observation techniques.

First, you will need to determine what to observe. Because everything, including people, behaviors, reactions, physical settings, environmental features, documentation processes and tools, cannot be observed at the same time, you will need to focus your observation efforts on a sample of program components. These components can include characteristics of intervention participants, interactions, nonverbal behavior, intervention leaders, implementers, physical surroundings, and program products (Taylor-Powell & Steele, 1996).

Next, you will need to decide whether you are looking for something, looking at something, observing what does not happen, or all three. When you want to look for something, you will need to use structured observation techniques. Direct observation is used when you want to standardize information, such as the number of people doing certain things—this requires knowing in advance the activities or things you want to capture. Structured observations, as a
result, will provide quantitative data that can be generated from frequency counts, rankings, and ratings. When you want to look at something, you will need to use an open-ended, unstructured observation technique, which can produce qualitative data. When it is important to observe what does not happen, you may need to combine both techniques, including the predetermined items that you want to look for, and create the guide for documenting unexpected or unique findings (Taylor-Powell & Steele, 1996).

The next step is to identify the observers and prepare for the session. An observer can be someone from your organization’s staff, a key stakeholder, a colleague from a collaborating agency, or a volunteer. Whomever the observer, it is important that he or she is oriented to the purpose of the evaluation, how the observations will be used, what is involved in collecting the data, and how to record observations. Observers should be provided with any necessary or additional training, depending on the complexity of the observations. Training is important if you want to standardize those data and compare them against other observational data collected at a different time. The observers will need to be provided with some kind of tool, such as an observation guide, checklist, or notebook, for documenting their observations and comments (Taylor-Powell & Steele, 1996).

As stated earlier, observation involves the use of active “seeing” and “listening” skills. Active seeing and listening require an observer to be able to capture detail, be discerning in examining all the detail in an observation, and be able to identify which is important for meeting your evaluation objectives. It is also important that observers take care in interpreting what they see and hear by cross-checking and validating what is being observed with others before coming to a conclusion. Recording observations on videotape may help with this (Taylor-Powell & Steele, 1996).

**Document Review Techniques**

Using document review techniques can help determine if the program/intervention components are well defined and can be implemented. It can also help determine whether objectives and outcomes are clearly specified and if clear relationships exist between the program model’s outcomes, goals, and objectives. Document review alone does not provide a comprehensive look at program/intervention components, and as a result should be used in combination with other
data collection methods. However, document review can supplement other data collection methods, such as direct observation and interviewing. As a supplemental data source, document review can provide valuable insights about what activities an evaluator cannot observe because they happened before the evaluation began, they were part of confidential exchanges in which the evaluator did not participate, or they reflect plans that have not been realized as a part of program/intervention implementation efforts.

Although there is not a standard way to conduct document reviews, it is important to create certain steps as part of your document review process to ensure the data gathered are useful. It is important to first identify what you are looking for (topic areas, themes, patterns, trends, or characteristics) as it relates to your specific evaluation questions. Identifying what you are looking for will help focus the review, which, in turn, will help identify the appropriate materials for review.

After you have determined what will be the focus of the review, it may be helpful to develop a set of criteria for determining what documents should be included in the review. It may also be helpful to create a document review guide based on the criteria you establish that helps standardize the review process. Next, you will need to develop a process for organizing the materials that you review once identified.

These materials can include administrative files, work plans, routine records on services and clients, logic models, intervention logs, facilitator and participant evaluations, and quarterly reports. For example, you could gather hard copies of documents that will be included in the review and group these documents accordingly in binders, folders, or other means of separating based on topic areas or themes.

If you have complex documents that address issues in several topic areas or are related to multiple themes you may want to make multiple copies and place tabs at the relevant pages where a specific topic or theme is being addressed. If electronic files of documents are provided rather than hard-copy versions, the reviewer should have access to a computer and printer in case he or she wishes to print a hard copy. However, make sure that printed copies of documents are available if they require extensive reading or scanning.
The next step would be to implement the document review session. The document review session ideally should take place at the location where the reviewers would have access to administrative and programmatic documents necessary for the review, which, in most cases, may be your organization’s administrative office. At the beginning of the session, a staff person should briefly orient the reviewer(s) to the organization of the documents. During the review session, a staff member who can respond to the reviewers’ questions should be available. The materials should remain available to the reviewer(s) throughout the review for reference purposes.

**Conducting Focus Groups**

Focus groups are a very useful method for gathering formative, process, and outcome evaluation data about a particular program or intervention’s effectiveness from key stakeholders because they allow multiple participants to be interviewed at the same time. Conducting a focus group may even help you demonstrate to key stakeholders your organization’s commitment to addressing HIV/AIDS prevention needs within the target community.

In order to prepare for a focus group session, there are several steps you need to take, such as:

- Identify the major objectives of the meeting
- Establish a timeline
- Identify and invite potential participants
- Develop focus group questions
- Develop a script for the focus group session
- Identify a facilitator or moderator
- Identify a location
- Conduct the session
- Analyze and report results
- Incorporate results into program implementation and evaluation plans
Step One: Develop Primary Objectives

First, it is important to identify the primary objectives for the session. For example, you may want to assess the feasibility of implementing an intervention within a particular community. So, in this case, the primary objectives may be to: (1) determine whether the intervention is right for the target community, (2) assess the community needs, and (3) get to know key stakeholders within the target community more intimately. After you have identified the major objectives for the session, you need to develop five to six questions carefully that help collect relevant feedback (McNamara, 1999a).

Keep in mind that you may only have 1–1.5 hours of a group’s time during a session (McNamara, 1999a). Therefore, it may be helpful to consider having at least two sessions with the same group of initial participants, if possible, which would help you collect both a wide range and depth of information about the intervention from key stakeholders affiliated with the target community. In addition, you do not want to try and cover many issues in a small amount of time, which could compromise the quality of the responses. Although many focus group guides suggest covering 6–10 issues per session, you may want to consider covering no more than 3 issues with possible sub-issues per session (Market Navigation, Inc., 2003).

Step Two: Establish a Timeline

It is important to understand that developing a focus group session takes time. According to Simon (1999), your organization should start planning the session, ideally 6–8 weeks and no less than 4 weeks in advance of the actual session. Much of this time will be spent identifying the participants, developing and testing the questions, identifying the location, inviting and following up with participants, and collecting the materials for the session. Below is a suggested timeline adapted from Simon (1999). The timeline includes the standard components needed to prepare for a focus group session.
<table>
<thead>
<tr>
<th>Component</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identify the major objectives of the meeting</td>
<td>6–8 weeks prior to the session date</td>
</tr>
<tr>
<td>2. Identify the prospective participants</td>
<td>6–8 weeks prior</td>
</tr>
<tr>
<td>3. Collect prospective participant contact information</td>
<td>6–8 weeks prior</td>
</tr>
<tr>
<td>4. Select focus group facilitator(s)/moderator(s)</td>
<td>4–5 weeks prior</td>
</tr>
<tr>
<td>5. Develop the set of questions for the session</td>
<td>4–5 weeks prior</td>
</tr>
<tr>
<td>6. Develop the facilitator(s)/moderator(s) script</td>
<td>4–5 weeks prior</td>
</tr>
<tr>
<td>7. Identify and secure session site</td>
<td>4 weeks prior</td>
</tr>
<tr>
<td>8. Send invitations to prospective participants</td>
<td>3–4 weeks prior</td>
</tr>
<tr>
<td>9. Follow up invitations with phone calls</td>
<td>2 weeks prior</td>
</tr>
<tr>
<td>10. Organize venue logistics (e.g., refreshments, seating, equipment)</td>
<td>1 week prior</td>
</tr>
<tr>
<td>11. Conduct reminder calls to prospective participants</td>
<td>2 days prior</td>
</tr>
<tr>
<td>12. Organize session materials</td>
<td>2 days prior</td>
</tr>
<tr>
<td>13. Conduct focus group</td>
<td>Session date</td>
</tr>
<tr>
<td>14. Send thank-you letters to participants</td>
<td>2 days post</td>
</tr>
<tr>
<td>15. Transcribe notes/tapes from the session</td>
<td>2 days post</td>
</tr>
<tr>
<td>16. Summarize focus group discussion and send to participants</td>
<td>1 week post</td>
</tr>
<tr>
<td>17. Analyze feedback and write report</td>
<td>When all information is gathered</td>
</tr>
</tbody>
</table>

Step Three: Identify and Invite Participants

In order to decide whom to invite to the focus group session it is important to consider several issues. First, you need to determine the number of participants you will need and how many to invite (Simon, 1999). It is important to keep in mind that the focus group size should not be too large. You may want to consider organizing groups of no more than 7–8 participants per session. It will help reduce the chances of individuals with divergent opinions being marginalized. It will also maximize the opportunity to go in-depth about particular issues (Market Navigation, Inc., 2003).
Second, you will need to review your primary objectives and develop a list of key characteristics you will want from participants (McNamara, 1999a). Next, using the list of key characteristics you developed, you will need to think about potential participants and categories of participants. After you have identified potential participants and categories of participants, you will need to refine your initial list of key characteristics by reviewing similar and different characteristics among potential participants. This will help you identify a pool of potential participants that will provide a more diverse sample. Once you have identified your pool of potential participants, you will need to finalize the list, obtain participant contact details, and send out the invitations (Simon, 1999).

**Step Four: Develop Focus Group Questions**

A focus group session should last no longer than 1 to 1.5 hours. This timeframe will reasonably allow five to six questions to be asked (McNamara, 1999a). Within this set of questions lay two types of questions: introductory or warm-up questions (often the first two questions) and issue-oriented questions, which will help generate responses necessary for meeting the session objectives. Since your last set of questions will need to be more issue-focused, they should be open-ended and organized sequentially from general to specific, easy to challenging, and positive to negative (Simon, 1999). If there is a need to ask additional questions of the same focus group participants, it may be wise to organize two focus group sessions with them. This will help prevent compromising the quality of the responses provided because of trying to do too much. As a general note, participants during the first session will typically focus on providing a breadth of information and during the second session providing more in-depth information (Market Navigation, Inc., 2003).

When developing the issue-oriented questions, always review the objectives and ask if the issue will be addressed by the information provided in the responses to the questions. After you have developed your questions, check to see which questions do or do not apply and if the questions listed are really important. Next, you need to review your list of prospective participants and determine which questions they would be able to answer. This process will help you eliminate extraneous questions and select priority ones. If a group is collectively deciding on what questions will be asked, they will need to come to some sort of consensus on the selection. You may also need to identify a good editor who can rewrite them (Simon, 1999).
Before using the questions in an actual focus group session, you need to test them to determine if the responses you potentially will get give you the information you need. Although questions may seem fine on paper, when implemented they may not generate the responses needed. You may want to review the questions yourself and try answering them as if you were in the focus group or organize staff members to participate in a practice focus group session. This will help you determine whether you can use them or need to revise them (Simon, 1999).

**Step Five: Develop a Script**

After you develop the session questions, you need to develop a detailed script for the focus group. Developing a good script can be beneficial in helping you verify that you have put the questions in the appropriate context. It is also beneficial because it will ensure that each focus group is conducted in a standardized and systematic way, which will lead to reliable results. In addition, a script helps the facilitator stay focused and on time and is useful when using an external facilitator/moderator not familiar with the program/intervention details.

Be sure to organize the script around the designated timeframe. Keep in mind that there may be some opening and closing remarks in addition to a minimum of two or three questions. Be sure not to exceed the allotted time. This will reduce the possibility of participants and facilitators losing interest, which will result in the discussion losing its relevance. Make sure to include an opening to welcome the group, an introduction of the purpose and context of the focus group, an explanation of what a focus group is and how it will flow, and time for making the introductions. Also, include a section with a list of the final questions (McNamara, 1999a). Lastly, the script will need to have a closing section that wraps up the focus group, which includes thanking the participants, providing them with an opportunity for further feedback, debriefing them on how the data will be used, and explaining the analysis and when the final report will be completed (Simon, 1999).

**Step Six: Select Focus Group Facilitator(s)/Moderator(s)**

Focus groups are unique from other forms of data collection, such as interviews or written questionnaires/surveys, in that they require a person to facilitate/moderate them. Specifically, it is important to have someone who understands group dynamics and possesses good meeting facilitation skills (Market Navigation, Inc., 2003). A focus group facilitator or moderator must be
able to deal diplomatically with more aggressive group members, keep the discussion going, and make sure all participants have a chance to participate actively. Based on your budget you can hire a professional facilitator or have a staff member or volunteer serve in this role. In addition to facilitators, it may also be helpful to have someone record the session. Keep in mind to select facilitators/moderators who will make participants feel comfortable. Participants may see a facilitator from outside the organization as more objective, which may prompt candid responses.

You may also want to have a select number of program staff who may be working on the intervention participate in the focus group meeting to help establish rapport between those implementing the intervention and those considered key stakeholders within the target community.

**Step Seven: Identify and Secure Session Site**

Participants should feel comfortable enough to express their opinions in whatever setting you select. Therefore, when selecting and securing a site, there are several issues you should consider. It is important to consider what type of message the setting will send prospective participants. It is also important to choose a setting that will encourage dialogue and will not bias responses given by session participants. In selecting an appropriate site consider the room size and setup and whether it can accommodate the anticipated number of participants and facilitators in a way where they can see each other (Simon, 1999). Also consider accessibility issues such as safety, transportation, parking, and individuals with disabilities.

It is important that participants feel that their experience in the focus group is positive. This would increase the likeliness that they would be willing to provide feedback on future program/intervention implementation or evaluation activities. Therefore, the most important thing is to choose a setting that would make participants feel comfortable. For example, if you are conducting a focus group with members of a mutual support group, you may want to hold the session at the support group’s regular meeting place. If you are conducting a focus group of service providers, it may be beneficial to hold the session at a local provider boardroom or alternative meeting space (Simon, 1999).
Step Eight: Conduct the Session

For the session, you will need the following materials and supplies: notepads and pencils, newsprint or easel paper, focus group script, list of participants, markers, masking tape, name tags, refreshments, and a watch or clock. The facilitator(s)/moderator(s) should arrive before the participants, set out the refreshments, and arrange the room so all participants can view one another using either U-shaped seating or one table with seating for every participant. As participants arrive, the facilitator/moderator should welcome and make them feel at ease, setting the tone for a comfortable, pleasant discussion. Once the session begins, it is important that the facilitator(s)/moderator(s) keep in mind that they need to use their skills to both run the meeting and manage group dynamics. In summary, facilitator(s)/moderator(s) need to:

- Set a tone where participants will enjoy and feel good about the session
- Make sure every participant is heard
- Get full answers to questions and ask participants to expound on their responses if necessary
- Monitor time closely
- Keep the session’s objectives in mind and the discussion on track
- Diffuse exchanges of opinion about individual discussion topics (Simon, 1999)

Step Nine: Analyze and Report Results

There are three steps to writing a report on your focus group findings. The first step is to review and summarize the session with another person in order to document facilitator impressions. If you use a tape recorder, it is important to spot-check the tape to ensure it captured the session (McNamara, 1999a). If some type of mechanical failure occurred, spot-checking will help to reconstruct the session. After spot-checking the tape, immediately have it and any notes taken during the session transcribed and summarized to avoid memory lapses (Simon, 1999).

The next step is to analyze the summary. In order to complete this step you will need to review the focus group summary to identify any trends and/or unexpected themes. It is important to note the context and tone in which comments may have been made. It is also important to note comments that may have been stated negatively, generated emotions, or sparked other comments that would be worth highlighting in the analysis. The last step is to write the final report, which
should include all information about the background and purpose of the focus group, details of the sessions, and the results and conclusions (Simon, 1999).

**Step 10: Incorporate Results Into Program Implementation and Evaluation Plans**

Once the final report is developed, it is very important to do two things:

- Follow up and share the results of the focus group with focus group participants
- Incorporate the results into program implementation, evaluation, and improvement efforts

Focus groups by design are intended to engage people in a topic. They may result in more individuals becoming invested in your prevention efforts. Therefore, it is important to continue to follow up with participants by initially sending them a thank-you letter and a brief summary of how the information will be or has been used (Simon, 1999). If they are interested, you can also provide them with information on how to keep abreast of your organization’s prevention activities.

Findings from focus group work are often not translated into action. Therefore, it is critical to plan a meeting with program staff and relevant key stakeholders to review the findings and discuss their implications for the program/intervention. During this meeting it is important to examine the focus group findings from the context of the primary objectives developed initially. You also may want to compare, contrast, and combine the focus group information with data gathered from other methods, which will help support your findings. Be sure to highlight the main themes, issues, problems, or questions that arose during the focus groups, and discuss and document how your organization plans to address these using your EBI program model. If the results indicate that there are many issues to consider, you may need to prioritize them and then make a decision as to what actions will be taken regarding the priority issues selected (Simon, 1999).
Conducting A Community/Public Forum

Step One: Develop a List of Discussion Questions

Just as with other data collection methods, the first step to implementing a community/public forum is to develop a list of discussion questions that will help guide the group’s discussion. You can include questions such as:

- What are the most important needs/issues of your community?
- Why are these needs/issues important?
- What has been done to help meet these needs or addresses these issues?
- What were some of the challenges in meeting these needs or addressing these issues?
- What furthermore can be done to meet these needs and/or address these issues?

It is important that the questions are specific to the issues and needs being addressed by an intervention, but broad enough for participants to feel they can respond easily (Carter & Beaulieu, 1992).

Step Two: Select Forum Location

When selecting a site to hold the forum, it is important to identify a strategically located venue. It is also important to consider a venue that will allow for open discussion and exchange of ideas.

Select a venue that is geographically and socially acceptable to all prospective participants (Carter & Beaulieu, 1992).

Step Three: Publicize the Event

When publicizing the event make sure all flyers, announcements, or other advertisements include information about the purpose, objectives, and place at which the forum will be held. It is important to encourage all members of the target community to attend. You may want to send special invitations to key stakeholders to ensure greater participation from this group (Carter & Beaulieu, 1992). You may also want to consider using the local health department, other AIDS service organizations, and other relevant key stakeholder agencies to help with getting information out about the event. It may be helpful to use the media, such as local newspapers and radio (Carter & Beaulieu, 1992).
Step Four: Conduct the Forum

When beginning the forum session, it may be helpful to have members of your organization’s staff facilitate the meeting. As part of introductory statements at the meeting, participants should be welcomed and thanked for attending the meeting. You will need to elect a meeting moderator who should follow the introductory comments with a review of the forum’s purpose and objectives. The moderator should also go over any ground rules established for the meeting, followed by a presentation of the questions developed earlier. It is important that the moderator encourage participants to feel free to openly discuss their perspectives and interchange related ideas. Make sure you identify someone to serve as the meeting’s recorder who should document any ideas, suggestions/recommendations, and future topics to consider, along with names and contact information of all meeting participants for follow-up activities (Carter & Beaulieu, 1992).

Step Five: Summarize Results and Follow Up and Report Back

After the forum, staff members should debrief immediately following the session. The debriefing meeting should include a review of the discussion notes and discussion about any initial observations or inferences made. Next, the discussion notes need to be summarized and follow-up thank-you correspondence should be sent out to participants along with a summary report of the results and your organization’s next steps.

Conducting Key Informant Interviews

Key informant interviews can be used during all phases of program planning, implementation, and evaluation and, therefore, can be a onetime event or a method your organization can use on a regular basis. Specifically, this method is useful when:

- Qualitative information is enough for decision making
- There is a need to understand the perspective of clients and key stakeholders
- The primary objective is to develop program improvement recommendations
- Quantitative data gathered using other methods need to be better understood
There are many ways to get information from a key informant, such as speaking with him or her informally; using formal techniques, such as written questionnaires, telephone, or personal or group interviews; or community forums/public hearings. No matter which way you choose, it is important to follow six steps in order to ensure that you can collect the information you will need.

**Step One: Develop Questions**

The first step is to develop your questions. These questions should be related to the focus of the evaluation and be open-ended and focused sequentially from the general to the specific (USAID Center for Development Information and Evaluation, 1996). It is important to avoid dichotomous questions that would elicit “yes” or “no” responses. Ask uncued questions first and cued questions second (University of Illinois Office of Program Planning and Assessment Extension, 2005). It is also important to keep in mind that open-ended questions tend to elicit general responses and may therefore require additional probing for either clarity or additional information if the response is incomplete. Examples of probes include statements such as “Would you explain further?”; “Would you give me an example?”; or “I do not understand” (University of Illinois Office of Program Planning and Assessment Extension, 2005).

**Step Two: Develop Interview Guide**

The second step is to develop your interview guide. Key informant interviews do not require structured questionnaires that may often limit dialogue. However, interviewers should have a brief guide that outlines the major topics or issues generated from the evaluation questions, which need to be covered during the session (USAID Center for Development Information and Evaluation, 1996). In developing this guide it is important to limit the number of items covered (no more than 12) so that more issues can be explored in depth. It is also important to note that different guides may be required for interviewing different groups of informants (USAID Center for Development Information and Evaluation, 1996).
**Step Three: Select Key Informants**

The third step is to select the key informants. The informant should be someone who not only understands the target community, but also has a stake in it. A good informant will be able to articulate his or her thoughts, opinions, and perspectives on issues related to the program/intervention. Key informants should be selected for their experience with and unique perspectives on a topic. In order to prevent getting information that may be biased or one-sided, it is important to interview a diverse set of informants who reflect various viewpoints, perspectives, and characteristics of your target population. It is also important to select the right number of informants. It is recommended that 25–35 informants be selected to be interviewed, depending on what information you need (USAID Center for Development Information and Evaluation, 1996).

Selecting an informant is a two-step process. First, you will need to identify groups and organizations from which key informants will be selected, such as local health departments, government agencies, project-implementing agencies, contractors, and beneficiaries. You need to include all key stakeholders so that different experiences and perspectives can be included. Second, you need to select a group of individuals from each category. You can use recommendations made by people familiar with the particular group or organization. You can also obtain referrals from prospective informants for additional informants who may be interviewed (USAID Center for Development Information and Evaluation, 1996).

**Step Four: Conduct the Interviews**

The fourth step is to conduct the interviews. To do this you will first need to establish rapport with the informant. Explain the purpose of the interview and the intended uses of the information. Make sure to review any confidentiality issues. It is important to avoid using language that may be unfamiliar to the informant unless you are interviewing technical experts. Next, begin the interview with questions based on fact followed by questions asking for the informant’s opinions and perspectives. It is recommended that the interview begin with questions on present issues and move to questions about the past or future. As mentioned earlier, pay attention to how questions are phrased so that informant responses provide as much detailed information as possible. If necessary, use open-ended questions and probing techniques.
Throughout the interview, it is important that the interviewer maintain an impartial attitude. The interviewer should be a thoughtful listener and use active listening techniques. It is also important that the interviewer make sure not to give a respondent the idea that he or she has strong beliefs about the topic or issue being discussed. This will minimize any chance the respondent will be influenced by the interviewer and say what he or she thinks the interviewer wants to hear. Lastly, if the interviewer anticipates any translation issues it may be wise to use translators who are not known to the informants to keep the interview as objective as possible. You will need to brief the translators on the purposes of the evaluation and key informant interview (USAID Center for Development Information and Evaluation, 1996).

**Step Five: Document Responses**

The fifth step is to document the responses by taking detailed notes. Taking notes will help the interviewer keep track of what was learned from the interview. Interviewers should take detailed notes during the session and review them after each interview to ensure they are correct. When taking notes, the interviewer may want to create subheadings for categorizing interview responses, which will help with the data analysis process. Tape recording should be done as a complement and not as a substitute for taking notes during the session because tape recorders can break down during the session.

**Step Six: Analyze and Summarize Findings**

The last step is to analyze and summarize your interview data. To help with this step you may want to develop one or two interview summary sheets, which can be completed at the end of each interview to help organize information into manageable themes, issues, and recommendations. Specifically, the summary sheet should include information about each key informant’s position, reason for inclusion in the list of informants, main points made, implications of observations, and any insights or ideas the interviewer had during the interview. When coding the data it may be helpful to use descriptive codes that capture key themes, concepts, questions, or ideas that can be later organized into categories and subcategories. To maximize time and ensure that appropriate categories are developed, it may be helpful to develop coding categories after 8–10 interviews are completed (USAID Center for Development Information and Evaluation, 1996).
Make sure your organization has a simple storage and retrieval system. This may involve the use of a computer program that sorts text into relevant codes. If a computer program of this sort is not available, you can simply prepare folders for each category, cut relevant comments from the interview, paste them onto index cards according to the coding scheme, and then file them in a corresponding folder. Each index card should be clearly marked so the comment can be identified with its source. Lastly, when presenting the findings, you may want to use narratives and visual displays such as tables, boxes, and figures, which can present information including underlying relationships and trends in a more comprehensive, concise, and clear way (USAID Center for Development Information and Evaluation, 1996).

**Conducting Standardized Open-Ended Interviews**

To prepare for this interview, the first step is to develop the questions that will be a part of the interviewer guide. Like the key informant interview, questions should be related to the focus of the evaluation and be open-ended and ordered sequentially from the general to the specific. It is important to avoid dichotomous questions that would elicit “yes” or “no” responses. The next step is to identify the prospective interviewees. Like a good key informant, interviewees participating in structured, open-ended interviews should be able to articulate their thoughts, opinions, and perspectives as they relate to the questions being asked. This is important, since a structured interview may limit the interviewer’s ability to probe and clarify responses to questions.

The next step is to conduct the interview. To do this you will first need to establish rapport. Have the interviewer introduce himself or herself and provide an explanation of the purpose of the interview, the intended uses of the information, and any necessary assurances of any confidentiality. It is important not to use language that may be unfamiliar to the interviewee unless you are interviewing technical experts.

Throughout the interview, it is important that the interviewer maintain an unbiased attitude. The interviewer should use active listening techniques. It is also important that he or she does not give the impression of having strong opinions about the topics/issues discussed. This will minimize any influence the interviewer will have on the respondent’s feedback.
Conducting Conversational or Spot Interviews

Informal conversational interviews are the most open-ended type of interviewing. Because these interviews occur spontaneously, they should be carried out in an unstructured way. The interviewer will not need to prepare a fixed list of questions. This will help keep the setting open and flexible to the interviewee’s temperament and predisposition. Because of the spontaneity of the interview, a respondent may not know that an “interview” is taking place. The interviewer will need to go with the flow. Questions may be generated from the immediate context and, as a result, related topics and the wording of questions will not be predetermined (Patton, 1990).

You do need to do some preparation before the actual interview. This will include determining who and how many people you will interview. You will also need to identify the target interview issues and list them by “theme” if possible. Furthermore, you will need to think about how the interviewer(s) will approach interviewees and conduct the interviews themselves. Although you will not need to produce an interview script, you will need to develop cues to help generate responses during the interview. The interviewer will need to ask open-ended questions and not questions that can be answered “yes” or “no.” They can also use probing techniques to clarify responses (McNamara, 1999c). Although the format is more free-flowing than other types of interviews, it is important that the interviewer be very knowledgeable and experienced with the target population and program/intervention. In addition, make sure that the interviewer(s) has strong interpersonal skills since he or she will have lots of liberty in directing course of the interview. The interviewer may also want to use an audiotape recorder if the interviewee is comfortable being recorded and then take notes from the tape later. This frees the interviewer up to participate more in the conversation. Conduct a test to ensure that interviewees are being recorded audibly (McNamara, 1999c). The interviewer may want to limit each interview to 1 hour to avoid losing the attention of the interviewee. Because data collected from informal conversation interviews can be difficult to organize and analyze, it may be helpful to use this technique in conjunction with observational data collection methods and analysis activities.

Developing Questionnaires and Surveys

The first step to developing a questionnaire or survey is to clearly spell out what key areas identified in the evaluation will be addressed using the information that will be gathered by the questions. It may be helpful to review the purpose of the evaluation and what you hope it to
accomplish. This will help you be clear about what information you need and, in the end, on what questions should be used (McNamara, 1999b). Once you have determined what information you will need, the next step is to determine whether the questionnaire/survey will be self-administered or interviewer-administered. In addition, you will need to determine how the instrument will be delivered (i.e., mail, fax, telephone, e-mail, or in person). This step is important because the delivery method will affect how questions and response options are developed. It is important to consider the overall questionnaire/survey length, complexity, and sensitivity as well as any resource constraints your organization may have when determining how the instrument will be delivered (American Statistical Association, 1999).

Before you can develop the actual questions, it is important to “operationalize” all variables that will be associated with the questionnaire/survey. It may be helpful to consider what topic areas or issues will need to be covered in the final evaluation report. The most important aspect of this is to communicate the same information to all respondents about what is wanted from the question so they can successfully provide a response from the given choices. This can be done either by using questions with close-ended response choices, where the response choices are mutually exclusive and cover the range of responses, or open-ended response choices. When developing the questions, it is critical that concepts are expressed simply and clearly. If there is language that may not be familiar to all prospective respondents, definitions must be included within the questionnaire or survey. It is also important to consider how an answer to a question will need to be analyzed (American Statistical Association, 1999).

The questionnaire/survey itself should be simple, clear, understandable, and easy to answer. It should include:

- A brief explanation of the purpose of the questionnaire
- A clear explanation of how to complete the questionnaire
- Directions about where to provide the completed questionnaire

An explanation of the conditions of confidentiality (i.e., who will have access to the information); this can be done by including an informed consent form (American Statistical Association, 1999)
As a part of the questionnaire/survey development, you will need to consider both the wording and order of questions. Regarding wording of questions, it is important to consider whether the respondent will understand the wording (i.e., use of slang, culturally specific, or technical words). Consider if there are any words that may influence the respondent to answer a certain way. You may want to avoid using “not” in your questions when they require an answer of “yes” or “no.” This can lead to double negatives and may cause confusion. Again, all responses should be mutually exclusive and express the complete range of responses, especially when there are multiple-choice questions. In addition, make sure that two or more answers do not appear to have the same meaning (McNamara, 1999b). When ordering the questions it is important to begin with factual questions and then move on to questions calling for a respondent’s opinion. For example, ask for demographic information first, then questions related to the respondent’s perspectives. Ordering questions in this way will help prepare the respondents for more challenging and reflective questions that ask for their opinions (McNamara, 1999b).
**SAMPLE DATA MANAGEMENT PLAN**

*Instructions:* This sample data management plan has been created for a fictitious agency. This plan MUST be adapted to fit your agency. Your data management plan may also include a plan for formative evaluation, qualitative data collection and analysis and/or client satisfaction data collection and analysis.

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**Data Collection and Data Entry**

*Data collection of process and outcome variables:* All clients will complete an intake form\(^1\) that will contain the client’s PEMS Client Unique Identifier (UID). The form will also contain demographic and risk behavior information required by the National HIV Prevention Program Monitoring and Evaluation Data Set (NHM&E DS). After the intake form is completed it will be entered into PEMS by data entry staff.

At the beginning of each session the facilitator will take attendance using an attendance form (not included in this Guide). After each session, clients will fill out a Session Evaluation Form (Tool 9). After each session, the facilitators will complete a Fidelity/Process Evaluation Form (Tool 8). If a referral is made, the facilitator will fill out a referral tracking form. Information from these forms will be entered into PEMS, the Fidelity/Process Evaluation Excel spreadsheet (Tool 13) and the Session Evaluation Excel spreadsheet (Tool 14) by data entry staff bi-weekly according to the agency’s data entry rules.

*Data collection of WILLOW quality assurance measures:* Each supervisor will complete a Facilitator Observation Form (Tool 10) following a scheduled observation. The date of each observation will be entered into the Facilitator Observation Schedule spreadsheet (Tool 15), to calculate the extent to which the observation protocol is followed.

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**Data Cleaning and Data Quality (QA) Measures**

*Data quality:* All administrative staff, facilitators and data entry staff will be trained on how to use all data collection forms. Intake staff will check the intake form for completeness and ask clients to complete any incomplete fields. Data entry staff will check the Fidelity/Process Evaluation Form for missing data and confer with the appropriate facilitator to complete the data. Monthly QA reports will be run using PEMS reports to identify incomplete required data variables in the database and every effort will be made to enter missing data from completed forms.

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\(^1\) Sample intake and referral tracking forms can be found on the PEMS Web site https://team.cdc.gov. The intake and referral tracking forms that your agency chooses to use should include all the required variables from the National HIV Prevention Program M&E Data Set (see Appendix B for a complete list of required variables).
APPENDIX G: RESOURCES

I. DATA MANAGEMENT RESOURCES

**EPI INFO 2002**
Software available FREE at: [http://www.cdc.gov/epiinfo/](http://www.cdc.gov/epiinfo/)


- Publisher: Toucan Ed; Book and CD-ROM (December 2002)
- To order: http://www.toucaned.com

**MICROSOFT ACCESS 2002**

*Microsoft Access Version 2002 Step by Step* by Online Training Solutions, Inc.

- Publisher: Microsoft Press; Book and CD-ROM edition (June 6, 2001)
- ISBN: 0735612994

*Microsoft Access 2002 for Dummies®* by John Kaufeld

- Publisher: John Wiley & Sons; 1st edition (January 15, 2001)
- ISBN: 0764508180

**MICROSOFT EXCEL 2002**

*Microsoft Excel Version 2002 Step by Step* by Curtis Frye

- Publisher: Microsoft Press; Book and CD-ROM edition (June 6, 2001)
- ISBN: 073561296X

*Excel 2002 for Dummies®* by Greg Harvey

- Publisher: John Wiley & Sons (June 2001)
- ISBN: 0764508229

**FILEMAKER PRO**

*Learn FileMaker Pro 6* by Jonathan Stars, Nonie Bernard
II. DATA COLLECTION RESOURCES


III. DATA ANALYSIS RESOURCES

QUALITATIVE DATA


- The Ethnograph: Qualitative data analysis tips and software by Qualis Research. Available at: http://www.qualisresearch.com/default.htm


- QSR International. Qualitative research information and software, including NVivo and XSight. Available at: http://www.qsrinternational.com/default.aspx


QUANTITATIVE DATA


IV. EVALUATION RESOURCES

EVALUATION WEB SITES

- **American Evaluation Association (AEA):** [http://www.eval.org](http://www.eval.org)
  
The AEA Web site has links to a multitude of evaluation-related Web sites and publications.

- **CDC Evaluation Working Group:** [http://www.cdc.gov/eval/resources.htm](http://www.cdc.gov/eval/resources.htm)
  
  This site offers links to many resources on evaluation, including CDC’s Framework for Program Evaluation in Public Health.

- **The Evaluation Center, Western Michigan University:** [http://www.wmich.edu/evalctr/](http://www.wmich.edu/evalctr/)
  
The Evaluation Center has evaluation information and links to other sites. The Center’s goal is “to provide national and international leadership for advancing the theory and practice of program, personnel, and student/constituent evaluation.”

- **Program Development and Evaluation, University of Wisconsin–Extension:** [http://www.uwex.edu/ces/pdande/resources/](http://www.uwex.edu/ces/pdande/resources/)
  
  This Web site includes Quick Tips, evaluation resources, and evaluation-focused publications, as well as information about logic models.

  
  This site contains an extensive list of evaluation research and methodology publications.

  
  This site has several evaluation publications, including their evaluation handbook, which is a widely used handbook that provides another perspective on evaluation as a relevant and useful program tool.

PUBLICATIONS


This MMWR report details CDC’s framework for program evaluation. It outlines a six-step process for public health programs to use in evaluating their interventions and operations and provides a systematic way for diverse programs to effectively and systematically conduct evaluations.


Comprehensive discussion on evaluating HIV prevention programs, including types of evaluation, importance of needs assessment, social and political context of evaluation, selecting evaluation design, quantitative and qualitative methods, coding and inter-rater reliability, barriers to evaluation and solutions, dissemination of evaluation results, and application of theory to HIV interventions.


V. OTHER USEFUL WEB SITES

