

Defense Centers of Excellence
for Psychological Health and
Traumatic Brain Injury

PROGRAM EVALUATION GUIDE

MODULE 3

Developing an Evaluation Strategy

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Overview of the Program Evaluation Guide

This Program Evaluation Guide (PEG) is developed and published by the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury (DCoE). Program evaluation is an important part of the DCoE mission and helps military program administrators and leadership assess and improve service quality and outcomes. By making program evaluation an inherent part of everyday program activities, we create a culture of effectiveness to better build a sustainable, efficient and well-integrated continuum of prevention and care services for military members, their families and veterans.

The first edition of the PEG, published in July 2012, provided a standardized approach to program evaluation for psychological health and traumatic brain injury (TBI) program leaders. This version of the PEG (2nd Edition) has been updated and revised to reflect the most current needs of psychological health and TBI programs. This edition of the PEG is organized as a series of modules containing content specifically designed for use by program administrators or other staff members tasked with internal program evaluations as part of their duties within Defense Department psychological health and TBI programs. This PEG is designed for those who have limited prior knowledge and experience with the conduct of program evaluation activities.

Purpose and Use of the PEG

This PEG is one part of a collection of trainings, toolkits and support services offered by DCoE to assist personnel at the program level in developing their capabilities to conduct internal program evaluation activities. The PEG is designed for use in coordination with other training materials, such as DCoE's program evaluation and improvement webinar series, references provided in the PEG and webinar series, consultation with experts and other resources that may be available to program personnel.

The modules in this PEG are not intended to serve as a substitute for formal coursework on evaluation methods, statistics or data management. In addition, because the PEG is intended for use by a wide variety of programs, it will not provide specific guidance to programs on best practices for clinical or non-clinical services. Finally, the PEG is not intended as a manual for how evaluators who are external to a program should conduct their activities. However, the information herein will generally be useful in helping program personnel become more familiar with the evaluation process and consequently more effective in responding to external evaluation initiatives.

- *Who is served or affected by the program?*
Include program participants and their family members as well as individuals from the community. Also consider personnel from other programs with which the program collaborates or to which the program commonly refers individuals.
- *Who are the decision makers who will use the evaluation results?*
Include individuals who set policy, conduct oversight activities and fund the program.

An example of stakeholder groups and their categories is provided in Table 1. A more detailed stakeholder example can be found in Appendix A.

Table 1: Example Stakeholder Groups and Categories

Example Stakeholders	Stakeholder Categories		
	Implementation Team	Participants and Community	Decision Makers
Policymakers			✓
Senior Leaders			✓
Managers/Supervisors	✓		
Program Staff	✓		
Participating Service Members		✓	
Family Members		✓	
Health Care System		✓	
External Programs		✓	
Community Organizations		✓	

Once stakeholder groups and the specific individuals that are likely to fit within each group have been identified, their roles in the evaluation process or with the program as a whole should be documented prior to initiating direct discussions with them. That is, consider how they will be involved, what type of information and communications they will want or need, and what types of feedback can be anticipated from them during and after the evaluation. A template to identify stakeholder groups, individual stakeholders and to collect information from the discussion with each stakeholder is provided in Template A.

Engage Stakeholders

Once the stakeholders have been identified, an in-person meeting should be scheduled to discuss with stakeholders their roles with respect to the program and their interests in the evaluation. Ideally, such discussions should be conducted in person, but if that is not possible, they can be conducted over the phone. Prior to these stakeholder discussions, be sure to list the questions to be addressed during the meeting. The questions can range from

what the stakeholder would like to receive or learn from the evaluation to why the individual is considered a stakeholder and their general interests in the program. Appendix B provides examples of important questions that may be helpful during stakeholder discussions and optional questions that may be of interest if time allows. Templates A and B provide a blank stakeholder matrix and interview guide, respectively, and can be used to collect and document information from discussions with each stakeholder. This information will be useful to ensure the questions identified by each stakeholder are addressed during the evaluation and that follow-up communications occur as planned.

During discussions with stakeholders, be sure to explain why each individual is considered a stakeholder. Similarly, appropriate expectations as to what the stakeholder should and should not expect to learn from an evaluation given the program's stage of maturity and current capabilities should be set. For example, if the program has only recently been implemented and a stakeholder wants to know whether the program is having an effect on program participants, the stakeholder should be informed that the program will need to be in existence for some time before such outcomes can be systematically assessed. However, information should be provided to the stakeholder on what can be assessed, such as its activities and outputs.

Once discussions with all stakeholders have been held and the information has been documented in the appropriate template, a better understanding of how the evaluation results will be used should emerge. Consequently, program personnel will be better prepared to choose evaluation questions and determine the appropriate methods to answer them.

Stages of Program Development

Every program goes through a maturing process and changes over time. The CDC (1999) has identified and broadly defined three stages of program development. Once program personnel have an understanding as to the program's stage of development, the evaluation questions and approach can be considered. The three stages of program development are defined below:

- **Planning:** Programs in the planning phase conduct program activities that are untested. The primary goal of an evaluation for programs in this stage should be to refine program plans.
- **Implementation:** Programs in the implementation stage actively provide services in operational settings, as opposed to research settings, in which program activities are being adapted to fit their environment. Evaluations of programs in this stage of development focus on how program activities function, and the goal is to improve operations.
- **Outcomes:** Programs in the outcomes or effects stage of development have existed for enough time that program effects should have emerged. Evaluations in this stage focus on whether the program is achieving its intended outcomes and whether any unintended effects have emerged.

Evaluation Designs

Evaluation designs guide the selection of evaluation questions, as will be discussed in the following section. When conducting an evaluation, it is generally best to use applicable components of an evaluation design rather than focusing on only one design to the exclusion of

all others. Using more than one evaluation design will allow program personnel to obtain more information and a more accurate understanding of the program, how well it is working and what should be improved to make for a more effective program.

For the purposes of the PEG, there is a distinction between three evaluation designs: formative, process and summative. Subcategories within each type of design are discussed below as relevant. Additional information can be found in the Selected Resources list at the end of this module.

Formative Evaluation

A formative evaluation is generally used in the planning stage of a program's development. Formative evaluations answer immediate questions, such as "Can the program be implemented as it was intended?" and "Will the program have an effect on participants?" (Windsor, Clark, Boyd & Goodman, 2004). A formative evaluation may be used to assess the level of community interest, to identify needed adaptations and to identify challenges and opportunities for a program. Formative evaluations are also used to assess what the program is currently doing relative to what it was supposed to do (University of Kansas, 2013). Subcategories of formative evaluations include needs assessments and evaluability assessments.

Needs assessment: A needs assessment is generally conducted to identify a problem or issue during program development and helps program personnel to design a plan for how to address it. Needs assessments often involve community members and other stakeholders to obtain support for the program, to get their input as to how to address the problem and to determine how program participants and the community can benefit from the implementation of the program. A needs assessment may also include consideration of external mandates that drove the creation of the program (e.g., directives from Congress, Surgeon General), the target population for which the program was designed and the specific issues or problems the program is trying to address.

Note: many programs have been established without a formal needs assessment.

Evaluability assessment: An evaluability assessment can help determine if a program has the necessary resources to undertake an evaluation; that is, whether the program has the necessary administrative structures and processes (e.g., staff, data collection, logic model, objectives, outcomes) to complete a thorough evaluation. In addition, evaluability assessments will help to determine which type of evaluation approach would be best for a given program. Such assessments will also help determine if the program design (e.g., as laid out in a program logic model) is in place and whether the design is sound (Office of Juvenile Justice and Delinquency Prevention, 2003). A sound program design ensures there are linkages between program mission, goals, objectives and program outputs and outcomes to meet the needs of participants and/or to solve a problem.

Process Evaluation

Process evaluations are used to determine what services are being delivered (e.g., education, clinical, outreach) and to whom (e.g., active-duty service members, families, veterans). They are also used to determine the extent to which the program was implemented as planned (known as *fidelity*), whether the program reaches the intended target population (known as *coverage*) and areas for potential program improvement (Windsor et al, 2004; CDC, 2011). Process evaluations are designed to understand how a program works—that is, how it produces the results that it does. These evaluations are most

appropriate for programs that are relatively young but which are past the implementation stages. Similarly, process evaluations are applicable to programs that are older but which have changed substantially over their lifespan (W.K. Kellogg Foundation, 2006). Finally, process evaluations may be useful when the program's target population reports dissatisfaction with the program or if service delivery is perceived to be inefficient. Process evaluations are often helpful for producing an accurate portrayal to outside parties regarding how a program truly operates (e.g., for replication elsewhere).

Summative Evaluation

Summative evaluations not only focus on how programs are implemented but also on the outcomes of the program over short- to long-term time frames (Van Marris & King, 2007). This evaluation type is ideal for relatively mature programs (e.g., has been in existence for five or more years). There are three types of summative evaluations: outcome, impact and cost evaluations, as described below (National Science Foundation, 2010):

Outcome evaluations: An outcome evaluation helps to determine if the program is conducting the right activities to bring about the changes defined by its mission statement and objectives, as well as whether the specific needs of the target population are being met (W.K. Kellogg Foundation, 2006). Outcomes are usually defined in terms of enhanced knowledge, skills or functioning (e.g., increased understanding, changes in attitudes, new skills) or decreases in maladaptive symptoms or behaviors (e.g., lower rates of depression, decreased substance use). Outcomes are changes that occur in participants or a broader target population. They are often confused with program outputs or units of service (e.g., number of participants who completed the program, number of trainings delivered; CDC, 2011).

Impact evaluations: Impact evaluations are used to test the effectiveness of the program including both intended and unintended effects that are evident after an extended period of time. Intended effects refer to outcomes the program planned to change or impact, while unintended effects are changes in participants or the community that the program did not plan to change or address. Additionally, impact evaluations address whether the program activities account for changes versus other, extraneous factors. As such, impact evaluations can be used to determine whether programs should continue to be funded, whether modifications need to be made or whether the program should be terminated. This type of evaluation will help to determine whether the program has shown desirable results in the target population.

Cost evaluations: Cost evaluations are appropriate for programs that possess cost information that can be linked to outcomes. Cost evaluations may include an assessment of the cost-benefit and/or cost-effectiveness of the program.

A cost-benefit evaluation includes an evaluation of program processes and outcomes in order to address the issue of economic *efficiency*. Economic efficiency refers to the benefits gained by applying resources to a particular program relative to the benefits of applying those resources to an alternative program. Cost-benefit analyses inform the question of whether or not a program is worth pursuing or continuing to fund.

A cost-effectiveness evaluation focuses on the cost of producing a particular outcome, which informs decisions about the most effective method for achieving a desired outcome. Cost-effectiveness ratios express program costs per health

outcome and can be used to compare alternative program interventions with similar outcomes or to assess the potential consequences of expanding an existing program. A program is considered more cost-effective when the ratio of its program costs to health outcomes is lower.

Choose Evaluation Questions

Now that an overview of the different types of evaluations that can be conducted has been provided, evaluation questions to help focus efforts must be developed. Program evaluation questions may focus on some or all components of a program, including the inputs, activities, outputs and short- to long-term outcomes. There is no single, optimal evaluation focus for a program; it will differ for each instance. However, evaluation questions should be tailored specifically to the program based on discussions with stakeholders and their interests, how the evaluation results will be used and the maturity of the program. Table 2 includes examples of evaluation questions for each of the three types of evaluation designs discussed above. Multiple questions should be selected when conducting an evaluation.

Table 2: Sample Questions by Evaluation Design

Formative Evaluation	Process Evaluation	Summative Evaluation
<ul style="list-style-type: none"> – Can the program be implemented? – Will the program have an effect on participants? – Has a target population for the program been identified? – Does the program address a specific need within the community and/or the target population? – Does the program have well-defined mission, goals and objectives? – Does the program have a well-thought-out design and is it in place? – Does the program have the structures (e.g., staff, funding, activities) in place to be evaluated? – Was the program created because of external mandates (e.g., Congress, Surgeon General)? 	<ul style="list-style-type: none"> – How similar are participants to the target population for which the program was designed (e.g., in terms of age, gender, or other characteristics)? – Was the program implemented with fidelity (e.g., as intended or planned)? – Are all participants receiving program activities as frequently and for as long as intended? – Is the program being implemented as scheduled? – How satisfied are participants with program services? – Are participants able to provide feedback on the program? – Are participants being followed during and upon conclusion of program services? 	<ul style="list-style-type: none"> – To what extent did the program achieve the desired outcomes? – What, if any, unexpected (positive) effects were observed as a result of program activities? – Were there any unintended (negative) outcomes? – What should be improved or changed in the program? – What is the cost per participant? – Did the program impact vary across different groups? – What outcomes are attributable to the program versus other influences? – Does the benefit of the program to its participants warrant its costs? – Were participant outcomes sustained following the conclusion of program services?

Evaluation Methods

Once a type of evaluation design has been chosen, the methods for evaluating the program need to be determined. An overview of two broad types of evaluation methods (i.e., qualitative and quantitative) is provided below, followed by a section that combines these types (i.e., mixed methods).

Qualitative Evaluation Methods

Qualitative methods involve the collection and analysis of non-numeric data obtained through techniques such as focus groups, interviews, observation and various other means. Qualitative methods can provide in-depth information about a program, how it operates and/or how individuals such as staff and participants experience the program. Qualitative data provide rich, contextual information (e.g., emotions, themes, motivation, rationales) about a program and its participants. The non-numeric nature of the data requires specialized analysis strategies designed to identify important patterns and themes. Qualitative data may be collected from small groups or individuals using semi-structured processes that allow for flexibility as new information is discovered that may warrant additional exploration. However, it is important to note that the highly detailed information gained through qualitative methods is often particular to a small, specific group of individuals, and as such, it often does not generalize to the large population. Strategies for collecting and analyzing qualitative data will be discussed in future PEG modules. Engaging stakeholders through planned discussions is one qualitative data collection method likely to be used while developing an evaluation strategy, as interviews conducted with stakeholders will help program personnel determine evaluation questions and provide insight into the type of evaluation design to be conducted.

Quantitative Evaluation Methods

Quantitative methods use numeric data that can often be generalized, or applied, to a large population or group. Statistical analyses are used to identify patterns in quantitative data and draw conclusions that go beyond the immediate context in which the data were collected. Information about populations can easily be obtained and displayed, including demographic information (e.g., age, race, ethnicity, sex), program performance (e.g., number of services provided) and outcomes (e.g., changes in attitudes, skills, symptoms). These methods are designed to quantify and compare large numbers of individuals using structured, systematic processes. Analyses of quantitative data generally require the use of statistical software and some knowledge of different statistical tests; however, this type of data analysis does not provide the rich, contextual information that can help explain what is occurring in the program or why it is occurring. Specific strategies for collecting and analyzing quantitative data will be discussed in subsequent modules.

Mixed Methods

It is rare, although not unheard of, for an evaluation to be conducted using only one of the two methods just described. In most cases, both qualitative and quantitative methods are incorporated into the evaluation design. Using both methods during the design and conduct of a program evaluation will help program personnel gain a greater understanding of the program, its processes, outcome and impact than if one method were used alone. A mixed-method approach draws on the strengths of both methods. When using a mixed-method approach, program personnel will be able to determine if a change in participants has occurred (quantitative approach). In addition, mixed-method approaches provide an opportunity to highlight the meaning that different groups or activities give to that change (qualitative approach). Furthermore, mixed-methods allow one approach (e.g., qualitative) to

inform the other approach (quantitative), which again can help you gain a deeper understanding of the program, its processes and what is or is not working and why. For example, a discussion with a small number of program participants (known as a focus group) may provide insight into what is not working well in the program which could lead to the development of a questionnaire for distribution to all participants to obtain their feedback.

Conclusion

At the conclusion of this module, Developing an Evaluation Strategy, program stakeholders should have been identified and a stakeholder worksheet created. In addition, stakeholders' level of interest in the program evaluation process and the questions they wish to see the evaluation address should have been determined. An appropriate evaluation design based on the program's maturity should also have been selected, as well as the development of evaluation questions and initial formulation of the evaluation methods (i.e., qualitative, quantitative or mixed methods) needed to answer the program's evaluation questions.

Key Takeaways

- Identify and engage program stakeholders to determine their interests and learn what questions they would like answered about the program.
- Choose an evaluation design that is tailored to your program and that can answer the evaluation questions.
- Determine which evaluation questions likely can be answered based on the maturity of the program.
- Choose one or more evaluation methods (i.e., qualitative, quantitative or mixed methods) that will best answer your chosen evaluation questions.

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Selected Resources for Additional Study

- Administration for Children and Families, Office of Planning, Research and Evaluation (2010). *The program manager's guide to evaluation* (2nd ed.). Retrieved from U.S. Department of Health and Human Services website: <http://www.acf.hhs.gov/programs/opre/resource/the-program-managers-guide-to-evaluation-second-edition>

Appendix A. Example Stakeholder Matrix

The template below provides examples of a completed stakeholder matrix. The information is provided in two separate ways to represent the relevant information. The rows appearing in light blue at the top of the table show the group level, while the white rows at the bottom of the table show specific individuals for illustrative purposes.

Stakeholder Group	Stakeholder Name/Title	Role in Relation to Program or Evaluation	Areas of Concern or Questions Identified by Stakeholder	Planned Follow-up Meetings and Communications
Implementation Team	Managers and Supervisors	Advocate, Educator, Collaborator, Facilitator, Organizer, Coordinator, Change Agent	Are there standard operating procedures?	<ul style="list-style-type: none"> ✓ Technical report ✓ Executive summary ✓ Staff meeting ✓ Program newsletter
	Program Staff			
Participants and Community	Program Participants and their Family Members	Advocate, Educator, Collaborator, Change Agent	What services does the program offer?	<ul style="list-style-type: none"> ✓ Town hall meeting ✓ Commander's call ✓ Stand down ✓ Print media ✓ Social media ✓ Radio and television interviews
	Community Organizations			
	External Programs			
Decision Makers	Policymakers	Advocate, Monitor, Planner, Change Agent	Is the program operating according to its mission?	<ul style="list-style-type: none"> ✓ Evaluation report ✓ Technical report ✓ Executive summary ✓ Mission impact statement ✓ Briefing
	Senior Leaders			
Implementation Team	Mr. John Doe, Family Advocacy Program Manager	Advocate, Collaborator	Is the program benefiting participants?	<ul style="list-style-type: none"> ✓ Staff meeting
Participants and Community	Ms. Jane Doe, Program Participant	Educator, Collaborator	Is this program helping me and/or my family?	<ul style="list-style-type: none"> ✓ Radio and television interviews
Decision Makers	Senior Executive Service (SES)/Flag Officer	Advocate, Change Agent	Is this program cost-effective?	<ul style="list-style-type: none"> ✓ Briefing

Appendix B. Example Stakeholder Interview Questions

The questions contained in this appendix are example questions an internal evaluator may ask the program's "Decision Maker" stakeholders.

Key Questions:

Whom do you represent and why are you interested in this program? What is important about this program to you?

Are you involved in the day-to-day program operations? If yes, describe your involvement. Does this include contribution of resources?

How much progress would you expect this program to have made in reaching its outcomes since the most recent update to the program mission, goals and/or objectives?

Do you know if the community is aware of your program? If so, what do you believe the community knows about the program, and how did they learn that information?

Are there any needs that the program is not meeting for its participants?

Do you believe your interests and concerns as a stakeholder have been heard by the program? How well has the program met your interests and/or needs?

Optional Questions (if time is available)

Do you know the program's mission, goals and objectives?

Is the program operating according to its mission?

Is the program benefiting participants?

Is the program cost-effective?

Template A. Stakeholder Matrix

Use the template below to identify stakeholders and their interests as they pertain to the program as a whole and/or program evaluation in particular. This form may be used to guide interviews with stakeholders.

Stakeholder Group	Stakeholder Name/Title	Role in Relation to Program or Evaluation	Areas of Concern or Questions Identified by Stakeholder	Follow-up Meeting and Communications Planned

Template B. Stakeholder Interview Guide

In the space under “Key Questions,” itemize questions necessary to obtain relevant information during the stakeholder interview in order of importance. Approximately three to six questions should be indicated for a one hour interview. Any remaining questions for which answers are desired but not necessary can be grouped together in the “Optional Questions” section and asked as time is available.

Key Questions:

Optional Questions (if time is available)