Defense Centers of Excellence
for Psychological Health and
Traumatic Brain Injury

PROGRAM EVALUATION GUIDE

MODULE 10
Acting on Findings

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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 the DCoE 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.

Acting on Findings

Purpose and Use of this Module

Once program evaluation findings are available and reporting is complete, the program is ready to move on to the final step of the evaluation process, Acting on Findings.

This module provides guidance on implementing and monitoring program improvement based on evaluation results. This includes identifying opportunities for improvement, selecting areas to target for improvement efforts, implementing appropriate action plans and establishing metrics for monitoring improvements.

Because programs vary widely in their purposes and the populations they serve, this module provides broadly applicable guidance on acting on findings to make improvements to a program based on evaluation results.

Identifying Opportunities for Improvement

The program evaluation process involves collection, analysis and interpretation of data, which generates results that are used to identify program strengths and identify opportunities for improvement. These are indeed opportunities, rather than weaknesses per se, in that a program can make data-informed decisions to make programs better, which is in the interest of program staff, participants and decision makers accountable to the public. For example, programs may need to grow in size or scope in order to meet the changing needs of their target population, or services may need to be refined to increase effectiveness or new outreach efforts may be needed to draw potential participants toward the program. All programs benefit from feedback on quality and effectiveness, and any given evaluation effort will result in multiple recommendations for improvement. The big questions for program administrators are which improvements should be prioritized, how should they be implemented and how should their success be assessed?

Three Types of Program Evaluation

The availability of information for making recommendations and selecting areas for improvement depends upon a program's stage of maturity and its evaluability; that is, whether the program has the necessary administrative structures and processes to complete a thorough evaluation (see Wholey, 2010). Collectively, these factors drive decisions on evaluation design from among three broad types as described by the Centers for Disease Control and Prevention (CDC, 1999, 2011) and Frechtling (2002):

- **Formative evaluations** are conducted for new programs or those in the planning stages and focus on refining plans. For example, a formative evaluation might focus on whether the program has the necessary resources needed to stand the program up. Formative evaluations require that a program have detailed plans for how its

activities will be carried out in addition to information about available and needed inputs, or resources, required to carry out planned activities.

- **Process evaluations** are conducted for operational programs in the implementation stage and focus on refining and improving operations. For example, a process evaluation could focus on waitlist times, referral procedures and diagnostic coding accuracy to determine whether the program is being carried out as planned (CDC, 2011; Windsor, Clark, Boyd & Goodman, 2004). Process evaluations require that a program produce information about its inputs, activities and the measured outputs of those activities.

- **Summative evaluations** are conducted for programs in the outcomes stage in which programs should be able to produce desired outcomes and show that those outcomes are being achieved (Van Marris & King, 2007). The focus of summative evaluations is on determining how well a program has achieved its intended outcomes and also whether any unintended outcomes have occurred. For example, a training program might focus on whether it increased knowledge and skills related to resilience. Summative evaluations require information about short-, medium- and long-term outcomes that can be linked to inputs, activities and outputs.

The divisions between these broad types of evaluation are not always clear-cut, and there are more specific subtypes of evaluation as described in prior modules. In addition, different aspects of a program may be in different stages, such as when implementing a new practice within a mature program. During a program's lifespan, it may move through these stages multiple times as a program's services and activities are adapted in response to changes in the needs of the population, funding availability and the environment in which it operates.

Common Areas for Improvement

Within each broad type of evaluation, there are a number of common areas for improvement, which are provided by evaluators in the form of recommendations. Table 1 provides examples of common evaluation questions and recommendations for improvement within each type of evaluation. Formative evaluation recommendations may include population needs and operational resources needed to sustain the program. An evaluability assessment can be conducted to assess program evaluation readiness. Process evaluations often focus on fidelity, which is the degree to which a program operates as intended. Another area of interest in process evaluations is the degree to which the program reaches its target population. Summative evaluations focus on overall results of the program in terms of accomplishing its mission, goals and objectives. Outcome evaluations focus on assessing the program's achievement of effecting change in participants. Also of interest is linking program activities to participant outcomes and demonstrating cost-effective benefits. This type of evaluation is appropriate for mature programs with stable operations and established outcome data.

Table 1: Evaluation Types, Example Questions and Example Recommendations

Evaluation Type	Example Questions	Example Recommendations
Formative Evaluation	- Can the program be implemented? - 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?	- Document and analyze available resources (e.g., staff, funding, activities) to determine if the program can operate - Conduct a needs assessment of the target population and/or community - Build a preliminary logic model and develop SMART objectives
Process Evaluation	- Is the program operating with fidelity to its planned activities or best practices? - How similar are participants to the target population for which the program was designed? - Are participants being followed during and upon conclusion of program services?	- Establish procedures for monitoring fidelity, and provide training and oversight to support adherence to procedures and plans - Compare the participants demographics with the target population demographics to determine if the program is operating as intended - Examine the program's resources for adequacy to track participant outcomes and service utilization
Summative Evaluation	- To what extent did the program achieve its desired outcomes? - Does the benefit of the program to its participants warrant its costs?	- Evaluate data collected to determine the extent and areas for improvement - Ensure costs and outcomes measures are captured

Adapted from: CDC, 2011; Windsor et al., 2004

Selecting and Implementing Improvements

Any given evaluation effort could produce a large number of recommendations. However, program administrators and their leadership should be realistic and focused when selecting and implementing program improvements given time and resource limitations. The selection of areas for improvement considers factors such as the compatibility of specific improvements with the program's intent, maturity level, resource availability, best practices and stakeholder interests. The most adoptable recommendations are those that address the identified problem and improve service quality, participant and staff satisfaction, efficiency and accomplishment of intended outcomes. Once areas for improvement are selected, implementing improvements will require a structured plan and clear benchmarks for success.

The process of selecting and implementing program improvements to maximize program benefits and determine feasibility within the constraints of current program resources consists of four steps**:**

1. Analyze program evaluation results
2. Identify available and potential resources
3. Prioritize and plan improvement efforts
4. Implement improvement efforts and assess success

Analyze Program Evaluation Results

Analyzing results requires micro-level approaches to understand data in order to answer evaluation questions. For example, consider a behavioral health treatment program for military family members. The program staff noticed a pattern in which participants attended only a few sessions and then dropped out before treatment was complete. As part of their ongoing efforts to evaluate their program, they included a few extra items in their online patient satisfaction questionnaire as part of ongoing quality improvement efforts. Figure 1 shows a Pareto chart documenting the top reasons why participants stated they dropped out of treatment. Pareto charts can be easily generated using available software (e.g., Microsoft Excel ®) and are used to analyze frequency counts associated with potential problem areas and help to rank order the various contributions to the problem as collected in the tracking data. The top three reasons documented were transportation, scheduling issues and financial issues, which accounted for roughly 85 percent of the top reasons reported for dropout. It is also important to note that very few participants reported that they dropped out because treatment was not helping them. Based on this information, the program can target specific areas for improvement.
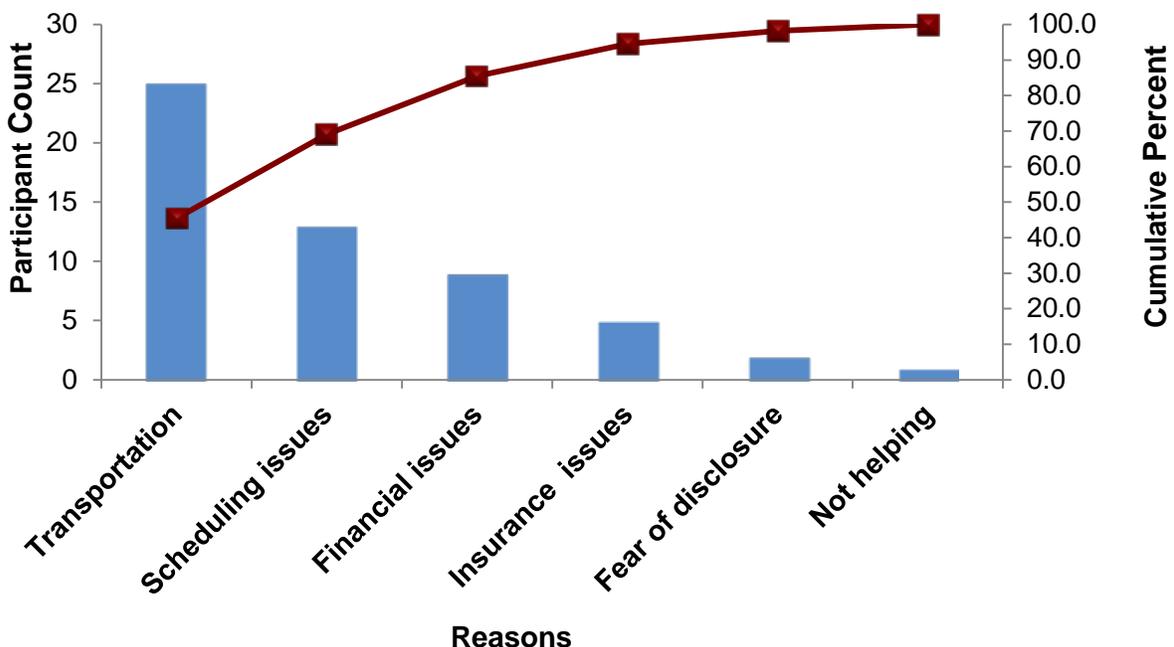

Figure 1: Top Reasons for Participant Dropout

Identify Available and Potential Resources

Matching resource allocation to identified needs for improvement is an ongoing process. Program administrators should carefully examine existing and potentially available resources to implement changes while maintaining close communication with chain of command and partner organizations to align resources such as funding, personnel and materials. In addition, potential barriers to implementation must be considered. Common barriers to implementing improvements include:

- **Policy:** Policies need to be created or modified to support program improvement initiatives.

- **Inadequate funding:** Dedicated funding streams for improvement initiatives may not be immediately available or may require substantial justification.

- **Stakeholder resistance:** Stakeholders may need to be engaged in the improvement process through targeted communications regarding improvement initiatives.

- **Follow-up difficulties:** Outcome measurement procedures may need to be modified through incentives and/or by making means of data collection more accessible due to participants' availability.

- **Inadequate staff training:** Additional time and effort may be required to enhance staff skills in support of implementing program activities effectively.

- **Insufficient staff resources:** Staffing may need to be adjusted to carry out improvements through additional hires and/or replacing existing staff members to match skillsets to program needs.

Continuing the behavioral health treatment program example from above, the program sought to learn what resources could be available to address the top three areas identified as contributing to dropout. To address transportation, they determined that they would need to directly assess potential dropout factors during the standard intake phone call and then work with the local social work unit to provide transportation and/or provide bus pass vouchers. This would require only minimal resources, such as adding questions to the intake form and having administrative staff work with existing community resources. To address scheduling hours, the program determined they would need to hold evening clinic hours three days per week so that families could attend around work and school hours. To address financial issues, the program determined they would need to use a sliding scale to reduce copays not covered by insurance. Through conversations with program leadership and partner organizations, the program learned that the resources needed to address transportation and scheduling issues could be accomplished realistically beginning within the next three months while placing minimal burden on existing program resources. Because the resources needed to address financial issues were more substantial (i.e., would pose an undue burden on program sustainability), the program determined that additional exploration with local and national charitable organizations was needed to determine availability of funding support.

Prioritize and Plan Improvement Efforts

Selecting the most appropriate areas for improvement to implement is a challenging task because prioritization requires analysis of multiple competing factors to inform decisions.

Figure 2 below illustrates one approach example using stakeholder interests and resource unit costs as a scale for ranking each program improvement initiative. Improvement initiatives with the highest stakeholder interest and lowest resource cost have the highest priority. Improvement initiatives with the lowest stakeholder interest and the highest resource cost will have the lowest priority. In prioritizing improvement initiatives, administrators may consider if the cost of the improvement initiative is worth the long-term program benefit in terms of participant outcomes, stakeholder support and program sustainability.
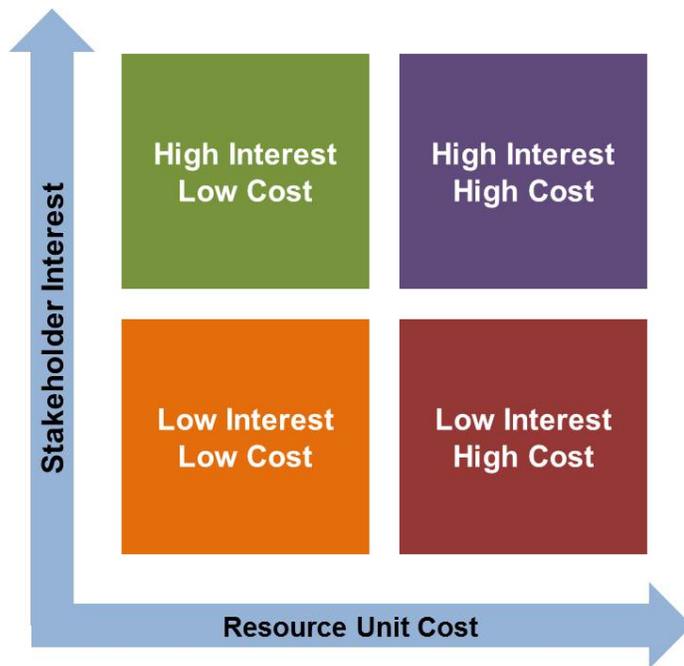
Figure 2: Decision Matrix for Implementing Improvements

Planning is critical to the success of any improvement effort. Program administrators and their leadership can work together to direct resources toward a given program, such as hiring staff, conducting additional training, spending time aligning objectives with program goals and mission, or seeking additional funding, among other possibilities. However, it is generally not possible to accomplish all improvements all at once as most programs do not have unlimited resources.

As such, an action plan is recommended with an action item for each targeted improvement. In general, it is best to prioritize no more than five areas for improvement as higher numbers are likely to strain resources and thereby make it less likely that action items are accomplished. Table 2 provides an example action item plan based on the behavioral health family treatment program's effort to address scheduling issues. Action items help organize quality improvement efforts so that they are carried out in a systematic fashion. There are two more action item plan examples in Appendix A. The template of a blank action item table is provided in Template A.

Table 2: Behavioral Health Family Treatment Program Action Item Table Example

Action Item: Minimize Scheduling Barriers to Participant Treatment Attendance	
Timeframe to Achieve Objective	Initiate within three months; progress review at three and six months after implementation
Objective	Provide three additional clinic hours Tuesday through Thursday
Steps to Achieve Objective	1. Assess scheduling concerns during intake phone call and prioritize evening appointment slots based on family availability 2. Set schedule in which each therapist, administrative staff member and supervisory staff member has one late arrival/evening hour day per week 3. Track dropout reasons using satisfaction questionnaire 4. Conduct systematic review of progress at three and six months after implementation
Measure of Success	Reduction in the number of participants reporting scheduling issues to below 5 percent within six months of implementation
Potential Obstacles	1. Staff availability during evening hours 2. Therapist and supervisor preference to maintain daytime hours 3. Adjustments to office cleaning schedule
Strategies to Overcome Obstacles	1. Discuss need for improvement during staff meetings 2. Allow for individual circumstances in which some staff members are not able to participate in evening hours 3. Contact cleaning contractor for scheduling adjustment

A key part of the planning process is determining how to assess the success of a quality improvement effort. As such, each action item should contain clear timeframes, objectives, steps for accomplishment and detailed metrics aligned with SMART (specific, measurable, achievable, relevant, time-bound) criteria as discussed in prior modules. Likewise, it is useful to anticipate likely barriers and means by which they will be addressed.

Implement Improvement Efforts and Assess Success

After program administrators and their leadership identify available resources and potential barriers and have subsequently developed a prioritized list of program improvements and action plans for achieving them, they can work together to implement improvements and assess success. The program will need to establish an evidence base for the implemented change and justify using limited program resources. Consider what data may need to be collected and the metric by which to assess them. The goal is to develop an evaluation infrastructure that allows for ongoing data collection that is an integral, built-in part of program operations. Knowing *what* was implemented and *why* makes it possible to assert that the modification was effective.

To gather credible evidence identify indicators of success for processes and outcomes and clearly define them. Regarding process indicators, specify how these concepts will be observed and measured. What does it mean, exactly, to "establish a good coalition"? What constitutes "quality training"? Regarding outcomes indicators, specify intensity and duration.

Track all modifications that are made in order to:

- Achieve insight into how and why improvement objectives were accomplished

- Provide documentation for funders about the progress of a project

- Support and maintain the project over the long term

- Increase the power and relevance of the modification

To sustain changes establish processes for integrating them into existing program structures. For example, use a continuity book that serves as a living document or reference guide for incoming personnel providing such information as points of contact, activities, duties and responsibilities, and other important program information to reduce the amount of time needed for comprehending and effectively applying the information collected and lessons learned by program predecessors.

Keep the continuity book where it will be accessible for daily use, either out in the open or on a shared drive. Maintaining a good and useful continuity book can create additional knowledge about your changes among staff and increase involvement, thus enhancing improvement efforts. It is critical to re-evaluate the impact of the changes as part of a program's ongoing evaluation efforts and continuous quality improvement.

Conclusion

At the conclusion of this module, Acting on Findings, program personnel should be able to implement and monitor program improvement initiatives using evaluation results. Personnel should be able to identify opportunities for improvement, select and implement an improvement approach, and establish metrics for improvement monitoring. Additionally, this module may increase knowledge in selecting and planning achievable program improvements, identifying improvement resources, incorporating ongoing evaluation into program operations, and implementing improvement strategies.

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Key Takeaways

➢ Targeted improvement areas need to be compatible with the program's intent, maturity level, resource availability, best practices and stakeholder interest

➢ The most adoptable recommendations are those that address the identified problem and improve service quality, participant and staff satisfaction, efficiency and accomplishment of intended outcomes

➢ Successful implementation of program improvements should be carried out in a systematic manner according to a detailed action plan

➢ High-quality evaluation efforts will ensure progress toward improvement objectives and provide concrete information for stakeholders about the success of quality improvement efforts

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Frechtling, J. (2002). *The 2002 User- Friendly Handbook for Project Evaluation.* Directorate for Education and Human Resources, Division of Research, Evaluation and Communication, National Science Foundation. Retrieved from: http://www.nsf.gov/pubs/2002/nsf02057/nsf02057.pdf

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Selected Resources for Additional Study

Agency for Healthcare Research and Quality (2015). *QI Improvement Steps.* Retrieved from: https://cahps.ahrq.gov/quality-improvement/improvement-guide/qi-steps/QI_Improvement-Steps/index.html

Centers for Disease Control and Prevention: http://www.cdc.gov/eval/index.htm

DCoE Program Evaluation Guide: http://www.dcoe.mil/About_DCoE/Program_Evaluation/2015_Resources_and_Training.aspx

Deployment Health Clinical Center: http://www.pdhealth.mil/

Defense and Veterans Brain Injury Center: http://dvbic.dcoe.mil/

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Institute for Healthcare Improvement:
http://www.ihi.org

Michigan Public Health Training Center:
http://miphtcdev.web.itd.umich.edu/trainings

Minnesota Department of Health:
http://www.health.state.mn.us/divs/opi/qi/toolbox

National Center for Telehealth and Technology:
http://www.t2.health.mil/

National Network of Libraries of Medicine:
http://nnlm.gov/evaluation/guides.html

Patton, M.Q. (2014). *Qualitative research and evaluation methods: Integrating theory and practice* (4th ed.) Thousand Oaks, CA: SAGE.

Substance Abuse and Mental Health Services Administration:
http://captus.samhsa.gov/access-resources/reporting-your-evaluation-results

The Community Tool Box, University of Kansas:
http://ctb.ku.edu/en

W.K. Kellogg Foundation (2006). Logic model development guide. Retrieved from:
http://www.wkkf.org/resource-directory/resource/2006/02/wk-kellogg-foundation-logic-model-development-guide

Appendix A. Action Item Examples

An action plan is recommended with an action item for each targeted improvement. Action items help organize quality improvement efforts so that they are carried out in a systematic fashion.

Behavioral Health Family Treatment Program Action Item Table Example 1

Action Item: Decrease Transportation Barriers to Participant Attendance	
Timeframe to Achieve Objective	Initiate within three months; progress review at three and six months after implementation
Objective	Provide limited transportation services to the clinic from specific locations within the community.
Steps to Achieve Objective	1. Assess transportation concerns during intake phone call and prioritize scheduling based on transportation needs 2. Assess the population location and set pick up and drop off sites to match participants' location 3. Track dropout reasons using satisfaction questionnaire, including transportation needs in the questionnaire 4. Conduct systematic review of progress at three and six months after implementation
Measure of Success	Reduction in the number of participants reporting transportation issues to below 5 percent within six months of implementation
Potential Obstacles	1. Participant reluctance to use transportation services 2. Funding availability to implement transportation service
Strategies to Overcome Obstacles	1. Provide clean, safe transportation option 2. Assess community resources that could provide transportation services 3. Evaluate overall budget and utilize any financial overages in other areas to implement transportation program

Behavioral Health Family Treatment Program Action Item Table Example 2

Action Item: Decrease Financial Barriers to Participant Treatment Attendance	
Timeframe to Achieve Objective	Initiate within three months; progress review at three and six months after implementation
Objective	Implement a fee schedule based on participants' income
Steps to Achieve Objective	1. Assess financial concerns during intake phone call and incorporate income data in the assessment process 2. Incorporate fee payment schedule into the program process 3. Track dropout reasons using satisfaction questionnaire 4. Conduct systematic review of progress at three and six months after implementation
Measure of Success	Reduction in the number of participants reporting financial issues as reasons for drop out to below 5 percent within six months of implementation
Potential Obstacles	1. Reduction in generated funds due to fee reduction impacting overall program functioning 2. Collecting fees if payment schedule is implemented
Strategies to Overcome Obstacles	1. Explore alternate income sources to offset reduction of fee income 2. Implement a fee collection process

Template A. Action Item Template

An action plan is recommended with an action item for each targeted improvement. Action items help organize quality improvement efforts so that they are carried out in a systematic fashion.

Action Item: [Action Item Name]	
Timeframe to Achieve Objective	
Objective	
Steps to Achieve Objective	
Measure of Success	
Potential Obstacles	
Strategies to Overcome Obstacles	