

Implementation: Making an Evidence- Based Program Work for You

A Guide to Selecting and Implementing a Program to Meet Your Needs

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Course Overview

This course provides guidance to facilitate selection and implementation of one of the many evidence-based programs related to prevention and treatment that are publicly available today. You will learn how to (1) select the program that best matches your organization's needs and (2) carry out the steps necessary to implement the program you choose.

Intended Audience

Individuals who may benefit from this course include members of an organization working collaboratively to identify and implement an evidence-based program. Whether you're looking for a program that addresses bullying, underage drinking, drug abuse, or treatment of a specific mental health disorder, the information here can help you in the selection and implementation of a suitable program. Those who may find the course useful are:

- Administrators, program directors, or clinicians charged with identifying, selecting, and implementing a program to meet the needs of their target population, funders, community, etc.
- Individuals interested in learning more about best practices and strategies for successful program selection and implementation

What to Expect

The course provides overall guidance for appropriately selecting and implementing the program of your choice. The focus is not on individuals choosing a program, but rather on an organization working collaboratively to select and implement a program to fit its needs. Experience has shown that organizational commitment, readiness, and flexibility are all critical to successful selection and implementation of an evidence-based program or practice.

This introductory course includes several components. A section on terminology will introduce you to some of the language you may encounter during your program selection and implementation tasks. A glossary is also available if you need it. Each page is supplemented with links to other resources that may prove helpful to your learning experience. The information presented here has been distilled from professional publications, and full references appear at the end.

Learning Objectives

This course will help you learn:

- Basic terms related to program selection and implementation
- How to identify your organization's needs
- Where to find available programs
- How to select the best program for your organization's needs, with a focus on implementation
- The five basic stages of program implementation

Introduction to Implementation Language

This section will introduce you to some of the terms used in the field of implementation science and research.

To begin, the general term **program**, as used in this course, refers to an intervention designed to bring about specific outcomes for specific purposes or populations. An example would be a program based on scientific principles designed to prevent drug abuse by children.

Implementation refers to putting the program—and the scientific principles—to work in a real setting, such as a school or community to bring benefits to a particular target audience.

Dissemination of programs refers to the targeted distribution of information and program materials to a specific public health or clinical practice audience. The intent is to spread knowledge about the programs and encourage their use.

Increasingly, the approach to prevention and treatment includes the use of evidence-based programs and practices. **Evidence-based** signifies that the approach is based in theory and has undergone scientific evaluation. This contrasts with approaches based on tradition, convention, belief, or anecdotal evidence. The shift to evidence-based programs seeks to enhance the potential for positive results. Today, many foundations, government agencies, and state legislatures encourage or require the use of evidence-based programs in service delivery plans. Evidence-based programs are designed by program developers such as researchers at universities, practitioners in the field, and businesses engaged in promoting and distributing social services programs.

Many evidence-based programs contain a defined set of **core components**, which are the essential parts of a program.

Some sample core components might be:

- There are five lessons of 30 minutes each that cover five specific themes.
- Sessions are conducted with a group of four to six elementary school students.
- The intervention is delivered in the home during home visits.
- The intervention is delivered in a specific sequence of stages.

In the above example, if you decide to change the length or frequency of the lessons, or you use the program with a group of 12 middle school students, or you conduct the program in a classroom instead of at home, or you change the order in which the core components are introduced to the target population, you have changed the core components, and you are no longer implementing the program with fidelity. As a result, you cannot expect the same outcomes the developer predicted.

So, the term **fidelity** refers to including all the core components of a program during implementation to help ensure successful outcomes. The term **adaptation** refers to the process of changing a program to meet specific needs. If you adapt a program for any reason, you must maintain the core components to ensure success. Adaptation will be discussed in more detail later.

Selecting a program for implementation in your setting involves careful planning, community and organizational involvement, and a comprehensive assessment of resources. Once this process is completed, you are ready to determine program fit. **Program fit** can be described as the (potential) match between your community's needs, resources, and capacity to implement a program—with the requirements of the program.

A critical piece of implementing any program or practice is the ability to measure the effect of the program on the population you are serving. It is important to use **outcome measures** (How is the system performing? What is the impact or result on what you are trying to change?) and **process measures** (Are the parts/steps in the system performing as planned?).

The Five Stages of Implementation

Successfully implementing a program that fits your organization’s needs is a process—not a single event—that occurs in multiple stages of planning, purposeful action, and evaluating.

It is not enough to simply select a proven evidence-based program and assume success will automatically follow. Good implementation strategies are essential.

The National Implementation Research Network (NIRN) reviewed more than 2,000 articles on the implementation of programs and identified five main stages of successful implementation (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005), which are all interrelated:

- Exploration
- Installation
- Initial Implementation
- Full Implementation
- Program Sustainability

Since the stages are connected, issues addressed (or not addressed) in one stage can affect another stage. Moreover, changes in your organization or community may require you to revisit a stage and address activities again to maintain the program.

“The use of effective interventions without implementation strategies is like serum without a syringe; the cure is available but the delivery system is not.”

—Fixsen, Blase, Duda, Naoom, & Van Dyke, 2010

Exploration Stage: Getting Started!

The goal of the Exploration Stage is to select the right evidence-based program. Your organization will strive to identify the best program fit, which is the match between needs and resources and the characteristics of the program. (This is discussed in greater detail later.) Three main activities are involved in this stage:

- Identify your community's needs to determine the type of program that will be most appropriate.
- Assess your organization's capacity including financial resources, organizational commitment, and community buy-in to determine your ability to implement a program with fidelity.
- Search program registries to select a program that matches your community needs, your organization's available resources, and available programs.
- Focusing on these activities to identify a good program fit is part of ensuring successful implementation

Identify Financial and Personnel Costs

Programs cost money. At the very least, you will likely need program-specific materials to implement the program (manuals, materials, etc.). However, implementing a new program may also require additional funds to hire new staff or purchase needed equipment or space.

It is helpful to contact the developer to discuss the program you are considering. The developer can clarify basic information such as costs, time needed, what to expect, etc. You also need to clearly identify your financial and staff and community resources. Do you have space available? Do you have the funding you need to fully implement the program?

How much will the program itself cost? The program developer often indicates in the program materials how much it will cost for staff training, materials, additional equipment, technical assistance support, and all other costs directly associated with the program. You can ask the program developer about these implementation costs as well as the cost of service delivery (how a program bills for the services it provides), if appropriate.

There may also be other less obvious costs to consider related to infrastructure. For example, if the program indicates the need for staff with specific skills (such as someone with a master's degree in social work), you will need to consider the skills of your current staff members and determine if you need to hire someone new or train a current staff person. If the program requires that all staff members have access to a computer program or an Internet connection, additional funds may be required to make such resources available. It is also important to pay attention to caseload standards as many evidence-based programs require a specific caseload that may be dramatically different from usual care. The overall size and scope of the chosen program will influence the potential associated costs of implementing it.

- Questions to Ask: Financial and Personnel Resources (PDF, 28KB)¹
- See **Resources and Tools**² for more information on needs assessment

Address Commitment and Buy-In

Your organization’s staff at all levels will need to be committed to the implementation process for the long term. It may take 1 to 4 years to implement a program and achieve positive outcomes, and the process will continue throughout the life of the program. Discussions—and commitments—are extremely important.

It is also important to understand that achieving buy-in is not a one-time event. Those in positions of leadership, who often make program decisions, and also the practitioners, support staff, and human resources staff, will need to stay committed to facilitating delivery of the program and eliminating barriers to success.

- Questions to Ask: Commitment and Buy-In (PDF, 90KB)³
- See **Resources and Tools**⁴ for more information on organizational capacity

Understand Program Fidelity and Program Adaptation

Two especially important concepts introduced earlier in the section on implementation language are program fidelity and program adaptation. It is common for an organization to decide to “adapt” a program at the time of selection (that is, change it to fit its needs), rather than plan to implement the program with fidelity (that is, as it was designed by the program developer). Typically, organizations want to change either (1) the program’s content for (2) the mode of delivery.

You may choose to adapt a program for a variety of reasons, such as any of the following:

- Differences in the target population: For example, your organization may be looking for a program suitable for a Latino population and find a good program that is not specifically targeted to Latinos. You might consider adjusting the program to serve that community
- Issues with complexity or ease of use: For example, a teacher may want to deliver a certain classroom-based program, but class time is not long enough
- Potential barriers to implementation such as time, money, resources, or accessing the target population
- Lack of perceived efficacy, relevance, or acceptance of the program
- Lack of understanding of what makes the program work

Please be cautioned that your adaptations may have implications that will affect the program’s results. Many believe adapting a program is the easier route for achieving desired outcomes, but the opposite is often true.

¹ Questions to Ask: Financial and Personnel, http://www.nrepp.samhsa.gov/pdfs/financial_personnel.pdf

² See Appendix I: Resources and Tools

³ Questions to Ask: Commitment and Buy-In, http://www.nrepp.samhsa.gov/pdfs/commitment_buyin.pdf

⁴ See Appendix I: Resources and Tools

Adapting an intervention so that it meets the needs of a certain target population requires a thorough understanding of the program theory and the components mentioned earlier.

Adapting a component of a program without understanding the underlying rationale may result in undesired or unintended program outcomes. Once adaptations have been made (without input from the program developer), you cannot expect to see the outcomes produced by the original.

Adapting a program may also require additional resources (personnel, time, and funds) to monitor the adaptation and evaluate the outcomes. Program adaptations may be necessary, but they will require additional planning and evaluation above and beyond implementation with fidelity.

- See **Resources and Tools**⁵ below for more information on Fidelity and Adaptation

Search Program Registries to Select the Right Program

Once you have a clear idea of your program needs and your organizational resources, you can search registries of programs to select a program that matches your needs. It is important to read and understand the criteria used to rate or classify programs as these will differ by source. Registries and other resources may also be specific to certain topics or service areas such as education, mental health, juvenile justice, etc.

The Center for Substance Abuse Prevention provides a checklist of questions (CSAP, 2009) you may ask to see how well your potential selection might fit your needs:

- Questions to Ask: CSAP's Checklist for Program Fit (PDF, 63KB)⁶
- See **Resources and Tools**⁷ for a list of Program Registries

⁵ See Appendix I: Resources and Tools

⁶ Questions to Ask: CSAP's Checklist for Program Fit, http://www.nrepp.samhsa.gov/pdfs/csap_checklist.pdf

⁷ See Appendix I: Resources and Tools

Installation Stage: Launching Your Program

Once a program has been selected and materials purchased, the process of installing a program begins. Installation refers to making the structural and instrumental changes necessary to implement the program within an organization.

Establishing an Implementation Team within your organization will be critical at this stage. The **Implementation Team** is a core set of individuals charged with providing guidance through full implementation of the program. This team helps ensure engagement of the stakeholders, creates readiness for implementation, ensures fidelity to the program, monitors outcomes, aligns systems, and removes barriers to implementation. An organization can choose to develop the Implementation Team during the Exploration Stage; however, the participants may change as you move into the Installation Stage.

The following are typical tasks to be conducted during this stage:

- Establish space in the organization for the program, including both physical space and process space.
- Develop easily accessible data systems to collect and measure the effects of the program and the process.
- Install and debug any needed equipment (e.g., software).
- Interview current staff to ensure a match with needed qualifications.
- Recruit, select, and hire additional staff as needed.
- Train staff to use the program and any new systems or equipment needed to implement the program.

Best Practices

- ✓ Establish an Implementation Team with:
 - A strong understanding of the program to be implemented
 - Knowledge of how to successfully implement the program with fidelity
 - An ability to become more effective and efficient over time through experience
- ✓ Identify and engage an individual or group of individuals to “champion” or promote your chosen program. Look for people within the organization and the community who are influential, respected, and committed to the program. These people must have the ability to identify problems that arise and to propose solutions to support and ensure the success of the program. These individuals should be active participants in the implementation process and involved with or be members of the Implementation Team.

- ✓ Budget for startup costs. Since installation occurs prior to the provision of the new service, funds will be expended that are not reimbursable or covered through other funding mechanisms.
- ✓ Recognize and address issues regarding readiness. Individuals do not adapt to change in the same way or along the same time line. Preparing for change and recognizing change occurs in stages leads to a supportive climate for implementation.

Potential Challenges

Keep in mind:

- The organization will be spending money before new services are being provided.
- The “status quo” or “business as usual” attitudes and behaviors will be challenged and can cause discomfort and disruption.
- A deeper understanding of the challenges of implementing the new program may surface as practitioners, staff, and leadership individuals are asked to change behaviors and processes.

The new program may cause disequilibrium in the system. For example, many agencies and partners will be affected as new services are provided, particularly with respect to referral procedures.

Initial Implementation Stage: Expect the Unexpected

During the initial implementation stage, individuals begin to put into practice all that has been planned for during exploration and installation. Practitioners and staff will be changing their behavior, using new skills for the first time, and incorporating new practices into their everyday routine.

This stage is often awkward because people are now expected to perform new skills and engage in new processes, which may lead them to perform in an uncoordinated or hesitant fashion. Practicing and implementing new skills with fidelity will take time.

Best Practices

- ✓ **Manage the Change Process.** One role for the Implementation Team will be to guide and manage the change process and help mitigate fear and resistance. As the team works to remove barriers, it can address issues that surface and help maintain the momentum of the initiative. The Implementation Team can help to set realistic goals and expectations regarding implementation progress, time lines, and the collection and use of the right data at the right time.
- ✓ **Accept Abundant Coaching.** Ongoing consistent coaching for line staff and practitioners is critical to implementation success. A coach can be trained by the program developer or have extensive experience implementing the program in a similar organizational environment. A coach can provide immediate feedback and support to practitioners and staff. Coaching minimizes resistance, increases positive perceptions of the program and implementation, and enhances skills development. Coaching also helps manage expectations and normalize the implementation. Coaches may be employed by the organization to support staff and assist with monitoring outcomes with ongoing technical assistance. Often coaching occurs on a contract basis.

Potential Challenges

It is helpful to understand some of the hurdles you may face during this stage:

- **Resistance to change:** Putting new and unfamiliar skills and processes to use can be uncomfortable.
- **Inertia:** Program implementation may get stalled on bumps and snags along the way, causing the initiative to lose momentum.
- **Program adaptations:** Discomfort and uncertainty can lead to changes to core intervention components.

Unrealistic expectations: Organizational leaders and funders may have unrealistic expectations regarding implementation progress or consumer outcomes during this stage.

Full Implementation Stage: The Program Is In Place!

Full implementation occurs when the program is integrated into the service, organization, and system settings. The processes and procedures to provide the selected program are now in place. For example, staffing is complete, caseloads are full, services are being more skillfully provided by staff, and funding streams are in place. It now becomes important to maintain and improve the program through excellent monitoring and purposeful improvement to avoid entering program drift (that is, edging toward a lack of fidelity). Your program or service is ready to be evaluated, with a focus on assessing program fidelity. Fidelity measures, which can be provided by the program developer, are commonly used at this point to determine if the program is being delivered as intended.

After a program has been implemented with fidelity, program modifications may be considered to help produce better outcomes. For example, if fidelity is high but outcomes are not as expected, this may require program adaptation, an adjustment to the program to fit the specific needs of the organization or its recipients. All adaptations should be carried out carefully and systematically with the help of the program developer and with attention to both process and outcome evaluations. Process evaluation determines if the program has been implemented as intended; for example, if you accomplished what you intended. Outcome evaluation refers to reviewing the results to determine if the program is working for the intended population and how this is measured.

Best Practices

- ✓ Maintain and improve service, linkages, support, and infrastructure.
- ✓ Maintain integrated, fully functioning core program components. If adaptations must be made, engage the program developer in the adaptation process.
- ✓ Monitor and evaluate fidelity to ensure the program is being skillfully delivered, using fidelity measures and indicators developed specifically for this purpose.

Potential Challenges

There are multiple reasons why programs are not implemented with fidelity, such as:

- Lack of training or failure to receive the full dosage of training intended
- Lack of required materials
- Use of some but not all of the required lessons and delivery strategies
- Failure to offer the program in the required sequence of stages
- Failure to plan for and manage staff turnover
- Lack of adequate referrals
- Lack of time to implement the entire program

- Miscellaneous difficulties or inconveniences, such as technology or equipment failures
- Day-to-day crises
- Failure to maintain the buy-in and support of staff, administrators, or others

Organizational issues may also contribute to this failure, such as:

- Lack of funding
- Inadequate infrastructure
- Lack of data-driven decisionmaking or autonomous decisionmaking, where frontline staff are not communicating decisions to leadership or management
- Lack of administrative support

Program Sustainability: Maintaining Your Program's Success

Sustainability is only possible when full implementation has been achieved. Sustaining change can be difficult. Your program is not frozen in time and must adapt continually to changes in the community, funding streams, and organizational priorities. Organizational culture, leadership, and staff need to be nurtured and maintained. The involvement of high-level administrators in a continuous feedback loop with the Implementation Team, providers, and recipients is critical. At this stage, an organization should institutionalize a quality assurance mechanism to evaluate use of data. This will facilitate assessing the effectiveness and quality of the program.

Most importantly, sustainability can and should be planned for early in the implementation process and examined at each stage.

Best Practices

Once full implementation has been reached and program fidelity maintained, you can focus on the following to ensure sustainability:

- ✓ Ensure continued funding for the program and the supporting infrastructure is built into organization's budget.
- ✓ Ensure fidelity to core program components.
- ✓ Develop and implement plans for quality improvement, including regular review of process and outcome measures and using results to improve the program.
- ✓ Evaluate data systems that support decisionmaking regarding the implementation of your program's outcomes.
- ✓ Develop new community partnerships while maintaining existing relationships.
- ✓ Share positive results with staff, community and others to maintain buy-in and support.
- ✓ Celebrate success with program recipients, staff, and community.

Potential Challenges

Obstacles and challenges to ongoing success can be many and varied. The best approach is to continue to monitor results and be alert to changes that might affect your program.

Changes that might occur include:

- Funding levels or sources of funding
- Staff turnover
- Organizational priorities
- Organizational leadership

“The bridge from science to service must be built, repaired, maintained, and improved.”
—*NIRN Brief, January 2009*

We wish you much success with your new program!

References

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- NCI (National Cancer Institute). (n.d.). Using what works: Adapting evidence-based programs to fit your needs. Module 4, Making the evidence-based program fit your needs: Adaptation and your program summary.

Appendix I: Resources and Tools

Community Needs Assessment

Tools

- CDC Evaluation Working Group: Framework for Program Evaluation
<http://www.cdc.gov/eval/framework/index.htm>
- Child Welfare Information Builder: Evaluation Toolkit and Logic Model Builder
<http://www.childwelfare.gov/preventing/developing/toolkit/>
- Community Toolbox: Implementing Best Process for Community Change and Improvement
<http://ctb.ku.edu/en/promisingapproach/>
- FRIENDS National Resource Center for Community-Based Child Abuse Prevention: Evaluation Toolkit
<http://www.friendsnrc.org/evaluation-toolkit>
- RE-AIM: Reach, Effectiveness, Adoption, Implementation and Maintenance Framework
<http://www.re-aim.org/>
- W.K. Kellogg Foundation: Evaluation Handbook
<http://www.wkcf.org/knowledge-center/resources/2010/W-K-Kellogg-Foundation-Evaluation-Handbook.aspx>
- W.K. Kellogg Foundation: Logic Model Development Guide
<http://www.wkcf.org/knowledge-center/resources/2006/02/WK-Kellogg-Foundation-Logic-Model-Development-Guide.aspx>

Further Reading

- Aarons, G. A., Wells, R. S., Zagursky, K., Fettes, D. L., & Palinkas, L. A. (2009). Implementing evidence-based practice in community mental health agencies: A multiple stakeholder analysis. *American Journal of Public Health* 99(11):2087-95.
- Understanding Evaluation: The way to better Prevention Programs
<http://ed.gov/PDFDocs/handbook.pdf> (PDF, 207KB)

Organizational Capacity

Tools

- NREPP's Questions to Ask Program Developers
http://www.nrepp.samhsa.gov/pdfs/Questions_To_Ask_Developers.pdf (PDF, 54KB)

- FRIENDS National Resource Center for Community-Based Child Abuse Prevention: Integrating Evidence-Based Practices into CBCAP Programs: A Tool for Critical Discussions--Appendix D-Implementation Plan Worksheet
http://friendsnrc.org/direct-download-menuitem/doc_download/46-introduction-and-getting-started (PDF, 156KB)
http://friendsnrc.org/direct-download-menuitem/doc_download/47-appendices (PDF, 99KB)

Further Reading

- Chinman, M., Imm, P., & Wandersman, A. (2004). *Getting to Outcomes™ 2004: Promoting accountability through methods and tools for planning, implementation, and evaluation*. No. TR-TR101. Santa Monica, CA: RAND Corporation. Available at <http://www.rand.org/publications/TR/TR101/>.
- Hall, G. E., Dirksen, D. J., & George, A. A. (2006). *Measuring implementation in schools: Levels of use*. Southwest Educational Development Laboratory.
- Wiseman, S., Chinman, M., Ebener, P., Hunter, S., Imm, P., & Wandersman, A. (2007). *Getting to outcomes: 10 steps for achieving results-based accountability*. No. TR-TR101/2. Santa Monica, CA: RAND Corporation. Available at http://www.rand.org/pubs/technical_reports/TR101.2/.

Fidelity and Adaptation

Tools

- California Healthy Kids Resource Center: Fidelity Guidelines and Checklists for Research-Validated Programs:
<http://www.californiahealthykids.org/c/@sDGcv3s0nPHWQ/Pages/fidelity.html>
- FRIENDS National Resource Center for Community-Based Child Abuse Prevention: Integrating Evidence-Based Practices into CBCAP Programs: A Tool for Critical Discussions
<http://www.friendsnrc.org/cbcap-priority-areas/evidence-base-practice-in-cbcap/integrating-evidence-based-practice-resources>
- The Chadwick Center for Children and Families: - Adaptation Guidelines for Serving Latino Children and Families Affected by Trauma
<http://www.chadwickcenter.org/WALS/wals.htm>
- The Hogg Foundation for Mental Health at University of Texas at Austin
http://www.hogg.utexas.edu/programs_cai_bib.html#poc_ca

Program Registries

- Blueprints for Violence Prevention: Center for the Study and Prevention of Violence
 - Model Programs: <http://www.colorado.edu/cspv/blueprints/modelprograms.html>
 - Promising Programs: <http://www.colorado.edu/cspv/blueprints/promisingprograms.html>
- California Evidence Based Clearinghouse for Child Welfare
<http://www.cebc4cw.org>
- California Healthy Kids Resource Center
<http://www.californiahealthykids.org/c/@sDGcv3s0nPHWQ/Pages/rvalidated.html#1>
- Campbell Collaboration (C2)
<http://www.campbellcollaboration.org/>
- Center for the Study of Social Policy: Exemplary Early Childhood Programs
http://www.strengtheningfamilies.net/index.php/program_tools/change/category/learning_from_exemplary_programs/
- Coalition for Evidence-Based Policy, Social Programs that Work
<http://evidencebasedprograms.org/wordpress/>
- Cochrane Collaboration
<http://www.cochrane.org/>
- National Association of County and City Health Officials: The Model Practice Database
<http://www.naccho.org/topics/modelpractices/database/index.cfm>
- National Registry of Evidence Based Programs and Practices (NREPP)
<http://www.nrepp.samhsa.gov>
- Office of Juvenile Justice and Delinquency: Model Programs Guide
http://www.dsgonline.com/mpg_non_flash/search.htm
- Promising Practices Network: Programs that Work
<http://www.promisingpractices.net/programs.asp>
- Public Health Agency of Canada: The Canadian Best Practices Portal
<http://cbpp-pcpe.phac-aspc.gc.ca/intervention/list>
- Sociometrics: Effective Programs
<http://www.socio.com/effectiveprograms.php>

Additional Resources

- CASEL, Safe and Sound: An Education Leader’s Guide to Evidence-Based Social and Emotional Learning (SEL) Programs
<http://www.edutopia.org/safe-and-sound-education-leaders-guide-evidence-based-social-and-emotional-learning-sel-p>
- Child Trends: Research to Improve Children’s Lives
<http://www.childtrends.org/portalcat.cfm?LID=C6CEDAFE-34FF-4DFD-9CD745899CE5D128>
- Children’s Services Council, Palm Beach County. Evidence-Based Programs
http://www.evidencebasedassociates.com/reports/research_review.pdf (PDF, 360KB)
- Department of Education’s Expert Panel on Safe, Disciplined and Drug-Free Schools Programs
<http://www.ed.gov/admins/lead/safety/exemplary01/index.html>
- Evidence for Policy and Practice Information and Co-ordinating Centre (EPPI-Centre), University of London
<http://eppi.ioe.ac.uk/cms/>
- FRIENDS: National Resource Center for Community-Based Child Abuse Prevention (CBCAP): Integrating Evidence-Based Resources
<http://friendsnrc.org/cbcap-priority-areas/evidence-base-practice-in-cbcap/integrating-evidence-based-practice-resources>
- Guide to Community Preventive Services (U.S. Centers for Disease Control and Prevention)
<http://www.thecommunityguide.org/index.html>
- NASMHPD Research Institute (NRI): Center for Mental Health Quality and Accountability: Synthesis of Reviews of Children’s Evidence-Based Practices. Prepared by Jacqueline Yannacci, M.P.P., and Jeanne C. Rivard, Ph.D., June 2005.
http://ebp.networkofcare.org/uploads/Synthesis_of_Reviews_of_the_Research_on_Evidence_Based_and_Promising_Practices_9592994.pdf (PDF, 1.6MB)
- Pew Partnership for Civic Change: Solutions for America (The Guide for Civic Problem Solving)
<http://www.solutionsforamerica.org/>

Appendix II: Supplemental Documents

The following resources to accompany this course are available for download from the NREPP Web site.

- Questions to Ask
 - Financial and Personnel Resources
 - Commitment and Buy-In
 - Center for Substance Abuse Prevention (CSAP)'s Checklist for Program Fit
- Questions to Ask Developers

Appendix III: Glossary

These definitions have been drawn from numerous sources and are tailored specifically for content on the NREPP Web site. The terms defined here may have slightly different meanings in other settings.

Adaptation	A modest to significant modification of an intervention to meet the needs of different people, situations, or settings.
Adverse effect	Any harmful or unwanted change in a study group resulting from the use of an intervention.
Attrition	The loss of study participants during the course of the study due to voluntary dropout or other reasons. Higher rates of attrition can potentially threaten the validity of studies. Attrition is one of the six NREPP criteria used to rate Quality of Research.
Baseline	The initial time point in a study just before the intervention or treatment begins. The information gathered at baseline is used to measure change in targeted outcomes over the course of the study.
Co-occurring disorders	In the context of NREPP, substance abuse and mental disorders that often occur in the same individual at the same time (e.g., alcohol dependence and depression); also known as comorbid disorders.
Comparative effectiveness research	<p>The Federal Coordinating Council on Comparative Effectiveness Research defines comparative effectiveness research, in part, as the conduct and synthesis of research comparing the benefits and harms of different interventions and strategies (e.g., medications, procedures, medical and assistive devices and technologies, diagnostic testing, behavioral change, and delivery system strategies) to prevent, diagnose, treat, and monitor health conditions in "real world" settings.</p> <p>(For the full definition, see the Federal Coordinating Council's June 30, 2009, Report to the President and the Congress on Comparative Effectiveness Research⁸).</p>

⁸ Download full report at <http://www.hhs.gov/recovery/programs/cer/cerannualrpt.pdf>.

Comparison group

A group of individuals that serves as the basis for comparison when assessing the effects of an intervention on a treatment group. A comparison group typically receives some treatment other than they would normally receive and is therefore distinguished from a control group, which often receives no treatment or "usual" treatment. To make the comparison valid, the composition and characteristics of the comparison group should resemble that of the treatment group as closely as possible. Some studies use a control group in addition to a comparison group.

Confounding variables

In an experiment, any characteristic that differs between the experimental group and the comparison group and is not the independent variable under study. These characteristics or variables "confound" the ability to explain the experimental results because they provide an alternative explanation for any observed differences in outcome. In assessing a classroom curriculum, for example, a confounding variable would exist if some students were taught by a highly experienced instructor while other students were taught by a less experienced instructor. The difference in the instructors' experience level makes it harder to determine if the differences in student outcomes (e.g., grades) were caused by the effects of the curriculum or by the variation in instructors. The likelihood that confounding variables might have affected the outcomes of a study is one of the six NREPP criteria used to rate Quality of Research.

Control group

A group of individuals that serves as the basis of comparison when assessing the effects of an intervention on a treatment group. Depending upon the study design, a control group may receive no treatment, a "usual" or "standard" treatment, or a placebo. The composition and characteristics of the control group should resemble that of the treatment group as closely as possible to make the comparison valid.

Core components

The most essential and indispensable components of an intervention (core intervention components) or the most essential and indispensable components of an implementation program (core *implementation* components).

Cultural appropriateness

In the context of public health, sensitivity to the differences among ethnic, racial, and/or linguistic groups and awareness of how people's cultural background, beliefs, traditions, socioeconomic status, history, and other factors affect their needs and how they respond to services. Generally used to describe interventions or practices.

Cultural competence	In the context of public health, the knowledge and sensitivity necessary to tailor interventions and services to reflect the norms and culture of the target population and avoid styles of behavior and communication that are inappropriate, marginalizing, or offensive to that population. Generally used to describe people or institutions. Because of the changing nature of people and cultures, cultural competence is seen as a continual and evolving process of adaptation and refinement.
Dissemination	The targeted distribution of program information and materials to a specific audience. The intent is to spread knowledge about the program and encourage its use.
DSM (Diagnostic and Statistical Manual of Mental Disorders)	The Diagnostic and Statistical Manual of Mental Disorders, or DSM, is the standard reference handbook used by mental health professionals in the United States to classify mental disorders. There have been five revisions of the DSM since it was first published by the American Psychiatric Association in 1952. The most recent version is the DSM-IV or Fourth Edition, published in 1994; a text revision (DSM-IV-TR) was published in 2000. Earlier editions that may be referenced in NREPP include the DSM-III (1980) and DSM-III-R (1987).
Effective Program	A few Effective Programs were re-reviewed for NREPP using updated criteria in 2006-2007 and can now be found by searching for the program on the Find an Intervention page.
Evidence-based	Approaches to prevention or treatment that are based in theory and have undergone scientific evaluation. "Evidence-based" stands in contrast to approaches that are based on tradition, convention, belief, or anecdotal evidence.
Experimental	A study design in which (1) the intervention is compared with one or more control or comparison conditions, (2) subjects are randomly assigned to study conditions, and (3) data are collected at both pretest and posttest or at posttest only. The experimental study design is considered the most rigorous of the three types of designs (experimental, quasi-experimental, and preexperimental).
Externalizing behaviors	Social behaviors and other external cues that reflect an individual's internal emotional or psychological conflicts. Examples include spontaneous weeping, "acting out," and uncharacteristic aggression. Reduction of externalizing behaviors is a frequently used measure of the success of treatment or intervention for mental or emotional disorders.

Fidelity	Fidelity of implementation occurs when implementers of a research-based program or intervention (e.g., teachers, clinicians, counselors) closely follow or adhere to the protocols and techniques that are defined as part of the intervention. For example, for a school-based prevention curriculum, fidelity could involve using the program for the proper grade levels and age groups, following the developer's recommendations for the number of sessions per week, sequencing multiple program components correctly, and conducting assessments and evaluations using the recommended or provided tools.
Generalizability	The extent to which a study's results can be expected to occur with other people, settings, or conditions beyond those represented in the study. Threats to generalizability include lack of randomization, effects of testing, multiple-treatment interference, selection-treatment interference, effects of experimental arrangements, experimenter effects, and specificity of variables.
Implementation	The use of a prevention or treatment intervention in a specific community-based or clinical practice setting with a particular target audience.
Implementation team	A core set of individuals charged with providing guidance through full implementation of the intervention. This team helps ensure engagement of the stakeholders, increases readiness for implementation, ensures fidelity to the intervention, monitors outcomes, and addresses barriers to implementation.
Indicated	One of the three categories (Universal, Selective, Indicated) developed by the Institute of Medicine to classify preventive interventions. Indicated prevention strategies focus on preventing the onset or development of problems in individuals who may be showing early signs but are not yet meeting diagnostic levels of a particular disorder.
Internal validity	The degree to which the intervention or experimental manipulation was the cause of any observed differences or changes in behavior.
Internalizing behaviors	Behaviors that reflect an individual's transfer of external social or situational stresses to emotional, psychological, or physical symptoms. One well-known internalizing behavior is a child's development of stomach cramps when the parents argue; another is insomnia during a high-stress situation at work. Reduction of internalizing behaviors is a frequently used measure of the success of treatment or intervention for mental or emotional disorders.

Intervention	A strategy or approach intended to prevent an undesirable outcome (preventive intervention), promote a desirable outcome (promotion intervention) or alter the course of an existing condition (treatment intervention).
Legacy Programs	<p>The label used by SAMHSA for all former Effective and Promising Programs, which were reviewed between 1997 and 2004 as part of the Center for Substance Abuse Prevention's Model Programs Initiative.</p> <p>Summaries for these Legacy Programs are listed in the Legacy Programs section at www.nrepp.samhsa.gov/ViewAllLegacy.aspx.</p>
Logic model	A tool that allows key stakeholders to develop a strategic plan to address an identified community problem.
Mental health promotion	Attempts to (a) encourage and increase protective factors and healthy behaviors that can help prevent the onset of a diagnosable mental disorder and (b) reduce risk factors that can lead to the development of a mental disorder.
Mental health treatment	Assistance to individuals for existing mental health conditions or disorders.
Missing data	Data or information that researchers intended to collect during a study that was not actually collected or was collected incompletely. Missing data may occur, for example, when survey respondents do not answer all questions in a survey, or when the researchers "throw out" or exclude survey questions because the responses do not meet validation checks. Missing data can threaten the validity and reliability of a study if steps are not taken to compensate for or "impute" (replace with calculated data) the missing information. Missing data are one of the six NREPP criteria used to rate Quality of Research.
Model Program	Most of the Model Programs were re-reviewed for NREPP using updated criteria in 2006-2007 and can now be found by searching for the program on the Find an Intervention page at www.nrepp.samhsa.gov/Search.aspx .
Outcome	A change in behavior, physiology, attitudes, or knowledge that can be quantified using standardized scales or assessment tools. In the context of NREPP, outcomes refer to measurable changes in the health of an individual or group of people that are attributable to the intervention.

Outcome evaluation	An evaluation to determine the extent to which an intervention affects its participants and the surrounding environments. Several important design issues must be considered, including how to best determine the results and how to best contrast what happens as a result of the intervention with what happens without the program.
Preexperimental	A study design in which (1) there are no control or comparison conditions and (2) data are collected at pretest or posttest only; includes simple observational or case studies. The preexperimental study design provides the most limited scientific rigor of the three types of designs (experimental, quasi-experimental, and preexperimental).
Process evaluation	An evaluation to determine whether an intervention has been implemented as intended.
Program drift	A threat to fidelity due to compromises made during implementation.
Program fit	The degree to which a program matches a community's needs, resources, and implementation capacity.
Promising Program	A few Promising Programs were re-reviewed for NREPP using updated criteria in 2006-2007 and can now be found by searching for the program on the Find an Intervention page at www.nrepp.samhsa.gov/Search.aspx .
Psychometrics	The construction of instruments and procedures for measurement.
Quality assurance	Activities and processes used to check fidelity and the quality of implementation.
Quality of Research	One of the two main categories of NREPP ratings. Quality of Research (QOR) is how NREPP quantifies the strength of evidence supporting the results or outcomes of the intervention. Each outcome is rated separately. This is because interventions may target multiple outcomes, and the evidence supporting the different outcomes may vary. These QOR ratings are followed by brief "Strengths and Weaknesses" statements where reviewers comment on the studies and materials they reviewed and explain what factors may have contributed to high or low ratings. For more information on the scientific reviewers who rate QOR and how ratings are derived, see the NREPP page on Review Process Quality of Research (www.nrepp.samhsa.gov/ReviewQOR.aspx).

Quasi-experimental	A study design in which (1) the intervention is compared with one or more control or comparison conditions, (2) subjects are not randomly assigned to study conditions, and (3) data are collected at pretest and posttest or at posttest only; includes time series studies, which have three pretest and three posttest data collection points. The quasi-experimental study design provides strong but more limited scientific rigor relative to an experimental design.
Ratings	NREPP provides two types of ratings for each intervention reviewed: Quality of Research and Readiness for Dissemination. Each intervention has multiple Quality of Research ratings (one per outcome) and one overall Readiness for Dissemination rating. QOR and RFD ratings are followed by brief "Strengths and Weaknesses" statements where reviewers comment on the studies and materials they reviewed and explain what factors may have contributed to high or low ratings.
Readiness for Dissemination	One of the two main categories of NREPP ratings. Readiness for Dissemination (RFD) is how NREPP quantifies and describes the quality and availability of an intervention's training and implementation materials. More generally, it describes how easily the intervention can be implemented with fidelity in a real-world application using the materials and services that are currently available to the public. For more information on the reviewers who rate RFD and how ratings are derived, see the NREPP page on Review Process Readiness for Dissemination.
Reliability of measure	The degree of variation attributable to inconsistencies and errors involved in measures or measurements. Key types include test-retest, interrater, and interitem. Reliability of measures is one of the six NREPP criteria used to rate Quality of Research.
Replication	The original investigator(s) or an independent party has used the same protocol with an identical or similar target population, and/or has used a slightly modified protocol with a slightly different population, where results are consistent with positive findings from the original evaluation.
Selective	One of the three categories (Universal, Selective, Indicated) developed by the Institute of Medicine to classify preventive interventions. Selective prevention strategies focus on specific groups viewed as being at higher risk for mental health disorders or substance abuse because of highly correlated factors (e.g., children of parents with substance abuse problems).
Substance abuse prevention	Attempts to stop substance abuse before it starts, either by increasing protective factors or by minimizing risk factors.

Substance abuse treatment

Assistance to individuals for existing substance abuse disorders.

Sustainability

The long-term survival and continued effectiveness of an intervention.

Symptomatology

The combined symptoms or signs of a disorder or disease.

Universal

One of the three categories (Universal, Selective, Indicated) developed by the Institute of Medicine to classify preventive interventions. Universal prevention strategies address the entire population (national, local community, school, neighborhood), with messages and programs to prevent or delay the use/abuse of alcohol, tobacco, and other drugs.

Validity of measure

The degree to which a measure accurately captures the meaning of a concept or construct. Key types include pragmatic/predictive, face, concurrent/criterion, and construct. Validity of measures is one of the six NREPP criteria used to rate Quality of Research.

SAMHSA's National Registry of Evidence-based Programs and Practices (NREPP)
www.nrepp.samhsa.gov