



National Center for Mental Health Promotion  
and Youth Violence Prevention

**Implementing Evidence-Based Interventions (EBIs) with Fidelity**  
**Thursday, March 22<sup>nd</sup>, 2007**  
**2:00 – 3:30 P.M. Eastern Time**

**ON THE CALL**

**Facilitator:** Anne Wang, Evaluation Specialist, National Center for Mental Health Promotion and Youth Violence Prevention

**Presenters:** Wayne Harding, Ed.M., Ph.D., Director of Projects for Social Science Research & Evaluation, Inc.; and Scott Formica, Research Associate for Social Science Research & Evaluation, Inc.

**Supporting National Center Staff:** Lauren Gilman, Technical Assistance Specialist and Teleconference Lead; and Ben Spooner, Team Assistant

**Grantee Participants:** June Bayha from WestEd in Los Alamitos, CA; Valerie Bostick from Evansville Vanderburgh School Corporation in Evansville, IN; Sue Brandon from Shelby County Schools in Memphis, TN; Eve Brooks from Mary McLeod Bethune Day Academy Public Charter School in Washington, DC; Nancy Fink from Springfield City School District in Springfield, OH; Meghan Flynn from the Westchester Jewish Community Center in White Plains, NY; Linda Gutierrez from Woodland Joint Unified School District in Woodland, CA; Tiffani Martin from Effective Educational Practices in Greeley, CO; Bill Otto from the Northeast Iowa YMCA in Postville, IA; Shannon Raper from Cherokee County Schools in Murphy, NC; Randi Taylor from Shelby County Schools in Memphis, TN; Jared Tonks from Madison School District 321 in Rexburg, ID; Tara Townsend from the Policy and Research Group in New Orleans, LA; Paul Wright from the Center for Research in Educational Policy in Memphis, TN.

**OVERVIEW OF TELECONFERENCE**

The National Center for Mental Health Promotion and Youth Violence Prevention hosted this event. Facilitator, Anne Wang, introduced all the participants and provided a brief overview of the topics to be covered. Guest presenter Wayne Harding defined fidelity and adaptation, provided guidelines for adaptation, and discussed ways to monitor fidelity across sites. This was accompanied by a PowerPoint presentation and examples of adaptation and evidence-based interventions from the field. Grantees on the call addressed questions to Wayne and Scott Formica regarding the successes and challenges of their work.

**HIGHLIGHTS FROM THE PRESENTATION**

## **Adaptation and Fidelity: A Closer Look: PowerPoint Presentation**

*Anne Wang:* Today's teleconference will cover implementing EBIs with fidelity. We have project directors and evaluators from ten different sites across the country participating on the call. The presentation follows the PowerPoint presentation from the teleconference website. Dr. Wayne Harding and Scott Formica will be presenting. Dr. Wayne Harding is the project director for Social Science & Evaluation, Inc. and has thirty years of research experience. Scott Formica is a research associate for Social Science & Evaluation and has experience designing, administrating, and managing multiple research projects and both have spoken on the topic of fidelity and adaptation before. We will provide opportunities for participants to ask questions following slide thirteen of the presentation and again at the conclusion.

*Dr. Wayne Harding:* I will start by defining fidelity and adaptation, and I will talk about some of the complications of the standard definitions in literature. We will discuss the differences between replication and adaptation, and why adaptation and fidelity have recently emerged as deserving of attention, and towards the end of the presentation I will give some guidelines for adapting programs, but there is a lot more research needed in this area. Most of the material deals with fidelity and adaptation for a single intervention, but I will close with an example of a fidelity instrument that was designed to assess fidelity across a number of programs.

What we know about fidelity and adaptation depends on the program. We know more about programs that fall in the treatment domain rather than the prevention domain. Today we will be focusing in the prevention domain and fidelity as it applies to the implementation of evidence-based interventions. An evidence-based intervention is an activity that produces the expected positive results with no secondary negative outcomes, and the results can be attributed to the intervention rather than to other factors. It is important to keep in mind that sometimes people may have improved even if not exposed to an intervention.

Why should we understand fidelity?

- It helps us cope with evaluation issues having to do with why a program fails or succeeds. We need to know whether it was implemented with fidelity and track any changes made to the program.
- It tells us about the intervention's potential to be widely disseminated. An intervention that works in one district may not work universally and adaptations may have to be made.

There is no generally accepted definition of fidelity or adaptation. The most common definition of fidelity is Thomas Backer's which states, "The degree of fit between developer-defined components of a program and its' actual implementation in a given organizational or community setting." The problem with this definition is there are two kinds of fidelity:

1. Fidelity to the original program or model program.
2. Fidelity to the proposed or planned program.

When you implement model programs you want to track fidelity to the original program. When you implement a program you've adapted you double your burden of tracking

fidelity. You need to document your adaptation to the original program, and document the extent to which your adaptation was implemented the way you intended to implement it.

There are some complications with the definition of adaptation as well.

- Adaptations can be accidental or planned. Unexpected circumstances force you to adapt. One example is we were trying to evaluate a classroom-based substance abuse prevention program. The program was intended to go ten sessions, but the last session was canceled due to snow. Unique material was covered in the last session, but no participants were exposed to the last session. If we didn't account for this in the evaluation it would've appeared the program was underperforming, which wasn't the case because the cancellation of the last class affected outcomes.
- Adaptations are complicated. They can involve addition, deletions, or modifications and can affect the content, delivery, target population, setting or the delivery agent.
- Adaptation may continue. In the literature it's often communicated as a one time event. In the real world people change programs as they unfold multiple times. This creates a burden for understanding the program's effectiveness.
- Adaptations to evaluation are very important. Even if one succeeded in replicating a program perfectly, and the evaluation method is changed as compared to the model program evaluation, one may get different results. Another example is that the odds of statistical significance are greater with larger sample sizes. The larger the sample size, the greater the odds of showing statistical significance. In the real world, many model programs became model programs because they had research funds and used large samples. However, if you're doing a program in one school, the sample is small, so the odds of showing statistical significance are smaller. You need to worry about tracking fidelity to evaluation as well fidelity to the implementation of the program.

Here are some keys to fidelity assessment:

- Assess fidelity to the original program, as well to the program that has been adapted by you.
- Assess fidelity at intervals over time because people often make changes as the program is implemented, not at the outset.
- Assess all aspects of the program's fidelity such as content, delivery methods, target population, etc.
- Assess adaptation to evaluation methods.
- Collect information on the rationale for adaptation to the program. This can help in interpreting the outcome data.

In the past six or seven years, fidelity and adaptation have emerged as important in recent literature, but historically there have been two opposing view points.

- The first is the conservative position. You shouldn't adapt. If you make adaptations you risk reducing the effectiveness, so replicate it as closely as possible to the original design.

- The opposing viewpoint is a more liberal position. Adaptation may make a program more responsive to a target population and improve outcomes by making it more culturally relevant (e.g. content, materials, language, age, learning styles). A classic example of this is Carol Comfer's study on adaptations to her strengthening families program. She compared the outcomes for five culturally adapted versions of her program. This included changing the content, graphics, stories, reading levels, etc. She compared the outcomes of the adapted programs to the original and found the original had slightly better outcomes, but the adapted versions were 41% better at retaining families in the program. She impacted more people by adapting her model program to the local environment.

What's happened in the field? The controversy between the opposing viewpoints has died down and resulted in "The Great Compromise", best defined by Thomas Backer who says, "Attention to both fidelity and adaptation are essential for successful implementation of science-based prevention programs." This still tells us nothing about where and when we adapt and leaves that argument open. The consensus in the field is that it's ok to adapt when you know you should.

### **Questions and answers with Wayne Harding and Scott Formica:**

*Paul Wright, Shelby County:* Is there a way we can access the reference articles electronically?

*Wayne Harding:* Just let Anne Wang know by email, [awang@edc.org](mailto:awang@edc.org), and she can send any of the reference articles listed at the end of the PowerPoint presentation to you.

*John Rosiak:* A lot of people figure out fidelity as they go along, with no real model. Although this is not recommended, if someone documents what they do and get results attributable, is that legit?

*Wayne Harding:* You should expect that you're going to have to make an adaptation, so you should figure out ahead of time how to record changes where and when they take place in the life of the program. People often make changes and don't tell the evaluator or their records are poor.

*Scott Formica:* Thorough documentation will help you if you implement multiple cycles of the program and identify beforehand issues that came up in previous cycles.

*June Bayha, Los Alamitos:* As far as tracking evaluation, could you talk more about tracking fidelity as far as evaluators go with regards to success of the program. What instruments should we use and are there instruments that the program may have already developed to track data?

*Wayne Harding:* Most EBIs come with some fidelity tool provided by the developer. Make use of that as it's been tested before, used in different settings, and they may have a scoring system. However, most tools provided by developers only collect data on one or two elements of the program, so you need tools to collect data about a variety of dimensions of fidelity.

*Scott Formica:* The lack of consensus handicaps the development of instrumentation. Some tools provided by the developer are too narrow, so with these, look at other areas where you can track fidelity. Some helpful references are the Dusenberry and Hanson

article at the end of the PowerPoint presentation where they take into account things like participant responsiveness and the willingness of the presenter.

*Wayne Harding:* As far as mechanisms for collecting data on fidelity there are two types; expensive and inexpensive. Observation of the delivery of the program provides excellent data, but is expensive. You can also have the person delivering the program answer questions as to how they implemented the program with fidelity. You can collect more data and it's less costly, but there are some obvious biases involved with having the delivery agent report. Bill Hanson recommends using a blend of these two approaches.

*June Bayha, Los Alamitos:* Do the tools come with checklists?

*Scott Formica:* Most do, but if they don't, contact the developer, and they should have a fidelity instrument in some way, shape or form.

*Paul Wright, Shelby County:* What do we do as far as training of the people who will be implementing the program?

*Wayne Harding:* Training can certainly promote fidelity and reduce the need for adaptation, and we will talk about this later in the presentation.

### **PowerPoint Presentation Continued**

Why is this an issue? If people just implemented the program as designed we wouldn't have to worry about this. This theory doesn't work in the real world for a few reasons:

1. Replication is hard and expensive. You need a detailed, comprehensive curriculum and possibly some training for those delivering the program. You need to monitor implementation on an ongoing basis to record any deviation from the plan. It's also not unusual to run into a bump in the road where you have to contact the developer and get advice on what to do which takes time.
2. We have a limited supply of EBIs currently. The smaller the supply of EBIs to choose from, the greater the chances you're going to have to adapt to local circumstances and the environment.
3. Adaptation is incredibly common, and we have a lot of data on the frequency of adaptation. It's difficult to understand what the rates of adaptation mean if you don't understand the conditions under which the program was delivered, and the extent to which the delivery agent permitted or prohibited adaptation. An example of this is, Scott and I were evaluating the implementation of EBIs in MassCall. The state took a conservative position on adaptation, and the state required approval for any adaptations made. There were twenty one sites and most said they were not going to adapt because the state would count it against them. We then collected data from the sites on the number and types of adaptations made. All twenty one programs made at least one adaptation, adaptations occurred for all types of programs and applied to all aspects, and came to a total of 83 adaptations with a conservative approach to adaptation.

### **Guidelines:**

1. Avoid adaptation by choosing programs with the best fit. People don't worry about this much and don't factor in the resources needed, target population, organizational climate, evaluability, and sustainability. People often select programs based on brand recognition rather than fit, and there's some evidence of this. Scott and I did a survey at a middle school where we were proving technical

- assistance in substance abuse prevention. The Department of Education gave them a list to choose from and the frequency distribution showed that about three programs (Life Skills, Project Alert, and Second Step) constituted all the programs implemented. The most heavily advertised or well known often get implemented even though they may not be the best fit for the local environment.
2. Select a program with the largest effect size. Effect size is a statistical measure of the amount of change a program produces, and it's independent of statistical significance. A program with a larger effect size provides more room to move when you adapt. If the program has a small effect size, a small change may impact outcomes negatively. One shortcoming is that it's complicated to find out what the effect size is. Your evaluator can often help with this.
  3. Change your capacity before you change the program. It's better to change the local conditions or capacity before you change the program.
  4. Consult with the program developer. Some developers track instances where their program was adapted in the field, and can give advice as to the potential impact on outcomes of the adaptation to the program. If you can't contact the developer, get in touch with others who have experience implementing the program. You can often get a list from the organization funding the program or from your technical assistance specialist.
  5. Retain core components of the program. You can find these from the developer and what they perceive as the most important components. The CSAT publication by Gardner, found in the list of references at the end of the presentation, identifies essential features that developers indicated as key. The SAMHSA Model Programs website has excerpts from the Across Ages Program and identifies aspects that shouldn't be changed. NREPP, the National Registry of Evidence-based Programs and Practices, has a thorough database of scored programs and for each they list the settings where the program was tested and the adaptations made to the program that didn't impair its' effectiveness. There are only twenty six programs on the site, but they'll be adding five to ten a month.
  6. Be consistent with science-based principles. The literature on meta-analysis looks at factors across all prevention efforts that were consistent with success. One example is that interventions that were successful made use of peers at one time or another during the program. If you're going to change something about this program, don't change the peer aspect.
  7. Add rather than subtract when adapting. It's usually safer to add to a program rather than to modify or subtract from it.

A helpful electronic tool is a Toolkit for Assessing Program Fidelity and Adaptation developed by EDC. It's a perfect tool for those involved in Safe Schools/Healthy Students. It has some key features:

- Designed to apply to any program; it isn't program specific.
- Designed to assess fidelity across a variety of programs.
- It treats adaptation as ongoing.
- Distinguishes between fidelity to the original program and fidelity to the adapted program.

- Addresses the range in types of adaptations (content, duration, delivery method, target population, delivery agent, etc.).
- Tracks changes to evaluation.
- Collects data about reasons for adaptation.

**Questions and comments with Wayne Harding and Scott Formica Continued:**

*Wayne Harding:* I can address the earlier question involving training. Training people in how to deliver the program minimizes the need for adaptation, but it's expensive. Ideally, you would want to train people throughout the program, not just at the outset. The longer people spend implementing a program, the greater the likelihood they'll adapt it. This is also known as implementation drift.

*John Rosiak:* As for the issue of limited EBIs, there are few, and there's a drive to use only EBIs. How are we going to get new programs if we only use existing EBIs?

*Scott Formica:* It depends on the funding mechanisms. SS/HS wants to use EBIs. In other funding areas there are moves to use more innovative programs. It comes down to what firm is being funded to do, and with SS/HS it's replication.

*Wayne Harding:* The Service to Science Initiative, funded by CSAP, recognizes programs of promise that didn't have the experience or resources needed to prove the program was effective. It's delivered by CAPT, and programs can apply for the technical assistance program where evaluators will work with them for at least a year to move along a continuum from the original model. It's open to everyone and will help programs progress towards being evidence-based. The technical assistance is free, and some programs are eligible for up to \$30,000 in funding to use on any aspect of their program.

*Scott Formica:* It's a pendulum. Right now it's swinging towards the use of EBIs, but over time we'll see it swing the other way and more funds will be available for innovative programs.

*Eve Brooks, Washington D.C.:* On the mental health side of things, it's tough to create tracking systems for mental health workers. Would we be eligible for funding and what's the next step to apply for that?

*Wayne Harding:* You would be eligible for no-cost technical assistance or up to \$30,000 in funding. We will email you the website and contact person to get in touch with. John Rosiak and Sue Brandon are interested too and we will send the contact information to them.

*Anne Wang:* Thank you all for participating. You'll be getting an evaluation in your email next week from Scott Formica, so please fill that out and send it back to us.