

Getting Better Outcomes Through Evidence-Based Programs: The Importance of Quality Implementation

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Getting better outcomes for children and adolescents requires more than choosing an evidence-based program from a list. As it turns out, the quality of the implementation of an evidence-based program significantly impacts outcomes. Although this may seem obvious, quality implementation of these programs is quite challenging because it requires that the program is a good fit for the community and agency and that program delivery is implemented with fidelity and attention to its specific geographic and cultural context. Without careful attention to these issues, community-based agencies that deliver evidence-based programs are unlikely to deliver better outcomes. In other words,

evidence-based programs + quality implementation = improved outcomes.

Unfortunately, many community-based agencies do not have the clinical experience, staff resources, or external support needed to provide high-quality implementation of evidence-based programs. Even agencies with a solid understanding and commitment to evidence-based programs run into a number of challenges associated with implementation, including pressure (real or perceived) from other community agencies to serve a population that is not the best fit for a program, insufficient resources to provide program staff with consistent clinical supervision, and a lack of funding for critical functions, such as program evaluation. There are other reasons that evidence-based programs fail. "Starting an evidence-based program involves running into all kinds

of unexpected challenges. We've learned that it takes two to four years for a new program to work out all the kinks. They go through a version of birth, childhood, and adolescence before fully maturing," says Bud Lavery, executive director of Durham County Communities in Schools, an agency that is currently implementing 10 parenting groups of The Incredible Years, an evidence-based parent-training program. "It's like parenting," according to Lavery. "It has exasperating moments, but seeing the real change in families' lives is amazing."

Implementation Support Provided by Prevent Child Abuse North Carolina (PCANC)

PCANC is a statewide nonprofit organization dedicated to the prevention of child abuse and neglect in all its forms. PCANC advocates for effective prevention strategies, conducts public awareness campaigns, coordinates professional education opportunities, promotes social support for parents and caregivers, supports replication of evidence-based family-strengthening programs, and provides prevention information and resources to its membership of over 250 agencies and professionals across the state.

To help communities address these challenges, PCANC provides implementation support for evidence-based family-strengthening programs, including The Incredible Years and the Strengthening Families Program. PCANC staff provide several types of implementation support to more than 45 community-based agencies.

iors and outcomes and on crafting recommendations based on existing evidence or best practices. The purpose of this article is to describe the principles and approaches that the NCIOM task force used to assemble the evidence for its recommendations.

Evidence-Based Programs

Programs or strategies that have been subjected to rigorous scientific evaluation and have been shown to produce positive outcomes are considered to be evidence based. The best evidence comes from double-blind, randomized, controlled trials (RCTs). In RCTs, study participants are randomly assigned to a group with or a group without the intervention of interest (often referred to as the intervention group and the control group, respectively), and neither researchers nor participants know which group the participants are in. Because randomization reduces the probability that confounding factors are unevenly distributed across study groups, any difference in health status between the groups is likely attributable to the intervention. Although the

RCT is considered to be the gold-standard study design, it is usually expensive and time-consuming and, in real-world public health settings, impractical to perform.

Population-based adolescent health interventions often involve approaches that are not amenable to random assignment of individuals (or groups) to intervention or control arms. These interventions are often evaluated using quasi-experimental study designs. In such studies, participants who received an intervention are compared with participants who have similar characteristics and did not receive the intervention, without participants in either group having been first randomly assigned to one of the study groups.² For example, researchers may use a quasi-experimental study to compare intervention outcomes for students in one high school with outcomes for students in another high school who have characteristics similar to those of students in the first school but did not receive the intervention. This can be done as a post-test-only approach or, alternatively, through a pre-test and post-test approach in which behaviors or markers of health are measured in the intervention

Pre-implementation readiness support. PCANC staff help community-based agencies identify programs that are a good fit for the target population and agency, help assess the agency's capacity to deliver the programs with fidelity, identify strategies for improving "readiness" for implementation, and link community-based agencies with potential funding sources.

Training. Pre-service and in-service training are critical components of high-quality implementation. PCANC staff coordinate training opportunities to ensure that staff responsible for implementing programs acquire and maintain critical skills.

Observation and fidelity assessments. PCANC staff observe program implementation and assess fidelity in areas such as curriculum use, effective facilitation of groups, number of participants, and other critical program components.

On-site coaching and feedback. After observations and as needed by sites, PCANC staff provide reflective coaching and feedback to help practitioners strengthen new skills and competencies, address specific challenges that arise when working with children and parents, and brainstorm strategies to improve service delivery. This kind of technical assistance has been identified in the research literature as being critical to the model's fidelity.

Consultation days. PCANC staff coordinate consultation days in which staff from select evidence-based national programs work with North Carolina practitioners to review skills, support growth, and strengthen practice.

Peer-support calls. Regular conference calls for practitioners implementing evidence-based programs are facilitated by PCANC staff. During these meetings, local practitioners learn from each other, discuss solutions to common challenges, and support implementation with fidelity.

Practitioner listservs. Practitioners implementing each evidence-based program are invited to participate in a group listserv in which they can exchange documents, present ideas, and share information.

Our staff have found that, although community-based agencies are sometimes uncertain at first about using these types of implementation supports, over time they quickly grow to rely on them to ensure effective implementation of services. Indeed, as Bud Lavery points out, "Implementing evidence-based programs at a high-quality level is nearly impossible unless the infrastructure of technical support is already in place."

Conclusion

As North Carolina expands its use of evidence-based programs, public and private funders, policymakers, community-based practitioners, and local agencies will need to identify long-term, sustainable funding strategies for implementation-support efforts. This will require a tremendous change in our collective understanding of effective service delivery, affecting how and when we fund agencies to deliver evidence-based programs and what these agencies need to deliver high-quality programs. We can continue to do what we have always done, which will continue to yield the outcomes we have always gotten. Or we can develop the funding and policy strategies that support effective implementation and lead to better outcomes. The latter option is no doubt a challenge, but it is one well worth undertaking for a better North Carolina. **NCMJ**

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and control groups before intervention implementation and again after intervention completion. Although these studies are generally less expensive and easier to conduct, the findings are not as robust as those from RCTs because the evidence they generate is not considered to be as strong as evidence from a well-designed RCT. An even less robust approach is to restrict measurement of outcomes before intervention implementation and after intervention completion to participants in the intervention group. This approach is often used for "full-coverage" programs, such as mass media interventions, for which no obvious comparison group can be identified. For example, many strategies to address teen smoking attempt to alter the environment at the state or national level and assess the effects of these interventions on smoking rates among teens. According to a report from the Institute of Medicine of the National Academies, many nations implemented bans on tobacco promotion that were followed by declines in tobacco use by young people.³ Researchers showed that smoking declined in association with advertising bans, even if they could not identify indi-

vidual smokers or individuals who consciously noticed such bans. Well-designed RCTs, in contrast, would have been able to identify factors that were likely associated with quitting.

Building a Case From the Evidence

The literature is filled with guidance on how to scientifically evaluate the quality of research studies on the effectiveness of adolescent health programs. However, the greater challenge is to generate a recommendation based on relative effectiveness—that is, to build a case of evidence—from data yielded by multiple studies of varying quality. The Task Force on Community Preventive Services uses six criteria to achieve this goal.^{4,5} *Evidence of effectiveness*, the first criterion, focuses on whether the measures of effectiveness used by the study demonstrate that the intervention achieved the desired or hypothesized effect. *Execution* is the second criterion and specifies that findings from studies in which the intervention was effectively and consistently carried out should receive greater weight than those from pilot studies. The third criterion, *design suitability*, evaluates whether the