ISSUE BRIEF

PROMOTING POSITIVE ADOLESCENT HEALTH BEHAVIORS AND OUTCOMES

Thriving in the 21st Century

Adolescence is a period of immense growth, learning, exploration, and opportunity during which youth develop the knowledge, attitudes, and skills that will help them thrive throughout life. While most youth traverse adolescence without incident, some need additional support to promote their optimal health. Sometimes such support comes in the form of prevention or intervention programs designed to encourage healthy behaviors that will follow the adolescent through adulthood.

In this report from the National Academies of Sciences, Engineering, and Medicine, the expert committee uses an optimal health framework to (1) identify core components of risk-behavior prevention programs that can be used to improve a variety of adolescent health outcomes, and (2) develop evidence-based recommendations for research and the effective implementation of federal programming initiatives focused on adolescent health.

Core Components Approaches to Adolescent Health Behavior Programs and Interventions

Identification of the core components of evidence-based practices (EBPs) is a relatively new, yet promising approach in the field of implementation science. To identify core components, clinicians and researchers have begun undertaking clinical trials that deconstruct EBPs into their "active ingredients," and thus broaden understanding of the effectiveness, relevance, and availability of these evidence-based treatments.[1]

This brief focuses on core components of EBPs and provides examples of how core components approaches have been used to identify the active ingredients of existing EBPs. It also summarizes how the committee identified the core components of adolescent health behavior programs and explains their recommendation for core components research.

What are EBPs?

Evidence-based practices (EBPs) are distinct model programs that have demonstrated positive results. These model programs usually have a brand name (e.g., Reducing the Risk, Positive Action, Be Proud! Be Responsible!), are generally accompanied by a program manual, and sometimes offer training or certification by the program developer. Programs typically receive the "evidence-based" designation as a result of at least one experimental or quasi-experimental study that demonstrates a statistically significant positive impact on an outcome of interest, such as substance misuse or unintended pregnancy.

Registries such as Blueprints for Healthy Youth Development review the research on candidate programs and provide listings of those that meet their evidence standards. More recently, some federal grants have begun mandating or incentivizing grantees to use programs that meet such evidence standards. For example, federal programs such as the Teen Pregnancy Prevention Program use a "tiered evidence" grant model to link the size or type of grant award to the strength of the evidence described in the application.[2]

What are core components?

Core components of a program or intervention are discrete, reliably identifiable techniques, strategies, or practices that are intended to influence the behavior, outcomes, or well-being of a service recipient.[1] Core components may reflect different aspects of programs and interventions, including:

- **Content**: specific knowledge or actions thought to influence behavior (e.g., communication skills);
- **Processes**: methods or techniques through which service providers deliver content and support the behavior change process (e.g., modeling);
- **Locations** and **formats**: where and how the program or intervention takes place; and
- **Implementation strategies**: strategies used to facilitate intervention delivery (e.g., provider training, availability of manuals).

Other terms that have been used to refer to core components include *common elements*, *kernels*, and *core practice elements*. In general, these approaches are all based on the idea that interventions comprise discrete components that can be identified, organized, and combined in different ways to achieve the intended results.

How are core components identified?

Three main methods are used to identify core components of programs:

1. The **distillation and matching method**, which identifies key practices from program manuals and then matches those practices to particular client needs.[3]
2. The **Delphi technique**, which involves convening focus groups of experts to reach consensus on the most effective components of a set of treatments.[4]

3. **Meta-analysis** and **meta-regression**, which applies quantitative methods to analyze the relative effectiveness of program components.[5]

Other approaches to identifying core components involve systematic reviews of evidence or reviews of systematic reviews or meta-analyses. More recently, adaptive research designs, which allow researchers to continuously review and adapt the research methods while conducting a clinical trial, can provide another analytic strategy for identifying core components.[6]

Importantly, while all of these methods can help identify common components of effective programs, not all are designed to test their *effectiveness*. To address this issue, several efforts have focused on implementing core components in practice and evaluating whether their use improves outcomes. Examples from children's mental health,[7] after-school programs,[8] and juvenile delinquency[9] have shown promise for core components approaches, but these examples are usually focused on only one behavior or outcome at a time. Less research has considered the effectiveness of the same core components (e.g., communication skills) across multiple adolescent behaviors and outcomes (e.g., both substance misuse and unintended pregnancy).

If EBPs are based on the best evidence, why change to core components?

Core components approaches have emerged as a complement to EBPs. While the evidence backing EBPs is high quality, the focus on EBPs has several drawbacks. First, often only one or, at best, a few studies of an EBP have assessed its impact, leaving open the question of how widely the results can be generalized. Second, the EBP approach requires that the program be implemented with complete fidelity to the original model, which often requires significant training of facilitators and inhibits what might be effective local adaptations. Finally, most programs already in operation are likely to be reluctant to abandon their current practice to adopt a totally new approach because of cost, resistance to change, contractual obligations, local support for the current program, or other factors.[1]

Core components approaches can address some of these drawbacks. First, because core components approaches unpack EBPs into discrete aspects of programs, they afford more flexibility or creativity in what and how services are delivered. In an environment of limited resources and competing priorities, such flexibility may promote more widespread adoption of effective practices. Second, because aspects of adolescent health overlap and are interrelated, core components approaches also offer an efficient strategy for supporting multiple aspects of youth development. For example, if communication skills represent an effective core component for reducing both substance misuse and unintended pregnancy, then focusing programmatic efforts on this and other common skills may require less time and/or fewer resources than implementing separate programs focused on each individual behavior or outcome.

What are some examples of how core components approaches have been used for adolescent health?

One of the most commonly cited examples comes from studies of cognitive-behavioral therapy (CBT), which is among the most widely used and effective interventions for mental health problems. Core components research on CBT has shown that exposure to a fear or stressor may be the most important component of this therapy for anxiety and traumatic stress, while relaxation training may have less

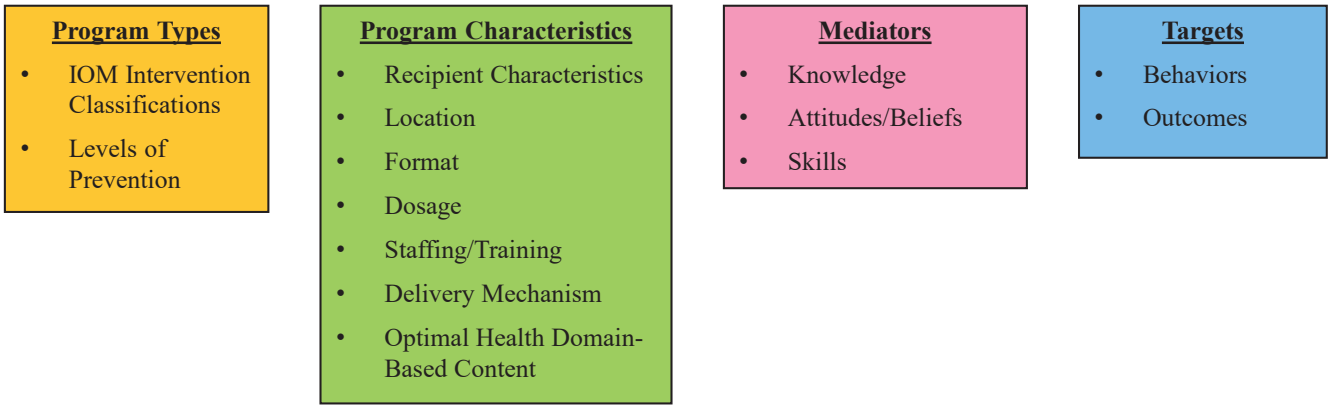
impact.[10]

The utility of the core components approach has also been shown for opioid use disorder (OUD) and youth program management and quality improvement. For example, researchers at the Center on Addiction have been able to identify 21 core techniques focused on family psychoeducation, medication options, and shared decision making that are most effective for youth in OUD treatment.[11]

With regard to program management and quality improvement, a team at the David P. Weikart Center for Youth Program Quality conducted a systematic review and meta-analysis to identify high-quality practices that could be used by youth workers to promote positive outcomes among youth in after-school programs. Applying the results of this research, they created the Youth Program Quality Assessment, which can be used to measure program quality and identify staff training needs that will improve program management.[8,11]

How did the committee identify core components of adolescent health behavior programs and interventions, and what did they find?

The committee conducted a systematic review of systematic reviews and meta-analyses that focused on programs and interventions designed to promote positive health behaviors and outcomes among adolescents. First, they identified the types of information and common features of programs and interventions that could be considered core components. They then organized these into the framework shown below. This framework was then used to guide the in-depth review of each study that met the



criteria for inclusion in their systematic review.

The committee found that while current research can identify the *common* components of adolescent health behavior programs and interventions, this research is not designed to identify which components are most *effective*. However, the committee did identify the following as the most promising of these common components based on their review and expertise:

- **Universal programs**, which are provided to all members of the population, regardless of their level of risk;
- A focus on **social-emotional learning** and **positive youth development**, which build a foundation of self-regulation, good decision-making, social awareness, and relationship skills;

- Programs that **begin in early childhood and continue throughout adolescence**, since the positive effects of these programs vary by developmental stage;
- Programs that are **developed and implemented with input and support from the communities they serve**, as their insights will help identify the most pressing needs for their respective youth populations;
- **Supportive and inclusive environments** for all youth; and
- **Theory-based approaches**, such as a social competence or social influence approach.

What did the committee recommend for future research?

In their report, the committee recommended further research to identify the components of effective programs that promote adolescent health and to test whether those components do in fact result in better health outcomes. Once identified, these components could be used to develop shorter and more focused interventions that would be (1) less costly and require less facilitator training, which could lead to greater program fidelity, and (2) more accessible to diverse populations.

For further detail on the committee's organizing framework and systematic review of adolescent health behavior programs and interventions, see Chapter 4 of the report.

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