Journal of Substance Abuse Treatment 90 (2018) 38–46

Contents lists available at ScienceDirect

Journal of Substance Abuse Treatment

journal homepage: www.elsevier.com/locate/jsat

# Implementing SBIRT for adolescents within community mental health organizations: A mixed methods study

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ARTICLE INFO

*Keywords:*
Implementation
SBIRT
Integrated health
Adolescents
Brief intervention
Prevention

ABSTRACT

*Objective:* Many adolescents with substance use problems remain untreated, leading to increased risk for the development of substance use disorders. One response is Screening, Brief Intervention, and Referral to Treatment (SBIRT)—an evidence-based, early intervention that can be tailored for adolescents. This mixed methods study examined the implementation of SBIRT across 27 community mental health organizations (CMHOs) serving adolescents.

*Methods:* Organizations completed surveys on the adoption of SBIRT and implementation barriers during the study period. Quantitative data were analyzed to examine the frequency of screening, brief intervention, and referrals. Qualitative data were coded using an iterative process that focused on barriers categorized according to the Conceptual Framework for Implementation Research (CFIR) constructs.

*Results:* A total of 2873 adolescents were screened for alcohol and drug use with 1517 (52.8%) receiving a positive drug or alcohol screen. Positive screens that received brief intervention (BI)/referral to treatment (RT) had a significantly greater mean drug score and overall scores at baseline. The most salient implementation barriers were adaptability and complexity of SBIRT, policies related to funding and licensing, staff turnover, and implementation climate.

*Discussion:* Nearly half of the adolescents scored positive for problematic substance use demonstrating the unmet need among this population. Future implementation efforts should focus on coordinating program demands, securing funding, integrating SBIRT into clinical workflows, retaining staff, and improving referral to treatment processes.

## 1. Introduction

Substance use among adolescents is highly prevalent in the United States; in 2016, 56% of 12th graders reported past year alcohol use and 38% reported past year illicit drug use (Johnston et al., 2017). Despite this, substance use services continue to be underutilized. According to the 2015 National Survey of Drug Use and Health, only 6.3% of adolescents meeting criteria for a substance use disorder (SUD) during the past year received treatment (Center for Behavioral Health Statistics and Quality, 2016). Unaddressed substance use among adolescents is a serious public health problem associated with poor mental health, early pregnancy, sexually transmitted disease, and increased risk of injury (Hingson & Zha, 2009; Miller, Naimi, Brewer, & Jones, 2007; Odgers et al., 2008). Substance use during adolescence significantly increases the risk of developing an SUD in adulthood, indicating a need for preventive approaches (Substance Abuse & Mental Health Services Administration, 2014). Most childhood mental health disorders increase the risk of developing an SUD, further emphasizing the need for early identification and intervention for vulnerable youth (Groenman, Janssen, & Oosterlaan, 2017).

In response, the American Academy of Pediatrics (2016) recently published a policy brief that endorsed the use of Screening, Brief Intervention, and Referral to Treatment (SBIRT) with adolescents. SBIRT is an evidence-based approach to delivering early intervention services for individuals with problematic substance use or for those at risk of developing SUDs. The model targets all types of substance use and is based on the notion that use occurs along a continuum and that interventions should be calibrated according to severity. SBIRT begins with a universal screening (S) for risky drug or alcohol use through validated self-report questionnaires; a positive screen is followed by a brief intervention (BI) and/or referral to treatment (RT), depending on the severity of risk (Babor et al., 2007; Mitchell et al., 2016). BI is often based on behavioral change models such as motivational interviewing, a person-centered counseling style designed to increase motivation for

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https://doi.org/10.1016/j.jsat.2018.04.009
Received 6 September 2017; Received in revised form 17 April 2018; Accepted 18 April 2018

behavioral change (Yuma-Guerrero et al., 2012). RT occurs when severe use or dependence is detected, necessitating a higher level of care (Center for Integrated Health Solutions, n.d.b).

Among adults, studies show that SBIRT reduces health care costs, decreases the frequency and severity of substance use, reduces the risk of trauma, and increases the percentage of people who enter specialized substance use treatment (Bray et al., 2009; Estee, Wickizer, He, Shah, & Mancuso, 2010; Gentilello, Ebel, Wickizer, Salkever, & Rivara, 2005; Miller & Wilbourne, 2002). When adopted for adolescents, the evidence base is more limited. Tanner-Smith and Lipsey's (2015) meta-analysis of brief alcohol interventions delivered to adolescents and young adults found significant but modest effects for up to one year. A systematic review assessing the effectiveness of BI in reducing nonmedical drug use and associated harms found insufficient evidence to make conclusions about the effectiveness of SBIRT (Young et al., 2014). Mitchell, Gryczynski, O'Grady, and Schwartz' (2013) review of 13 randomized controlled trials of SBIRT services for adolescents found preliminary evidence to support its effectiveness but concluded more research is needed. Finally, Yuma-Guerrero et al.'s (2012) review of randomized controlled trials measuring the effectiveness of BI for alcohol use among adolescents in acute care settings also found inconclusive results.

Only a few studies have specifically evaluated the implementation process of SBIRT with adolescents (Mitchell et al., 2016; Sterling et al., 2015). Sterling et al.'s (2015) randomized trial compared the implementation of SBIRT among pediatricians, behavioral health care practitioners, and treatment as usual (TAU) in primary care settings. Adolescents receiving care in the pediatrician or TAU arms were more likely to be referred out for substance use problems than those in the behavioral health care arm, indicating that pediatricians may be less equipped than behavioral health care providers to address substance use problems. Preliminary research on SBIRT uptake has found that barriers may include differences in provider training and background, discomfort discussing stigmatizing topics, time constraints, and confidentiality policies specific to adolescents (Sterling, Kline-Simon, Wibbelsman, Wong, & Weisner, 2012). Clark and Moss (2010) point to the need for financial and administrative support, increased provider information about local treatment options for adolescents, and more feasible S and BI procedures. More research on SBIRT for adolescents is needed to assess the full SBIRT model and its implementation in a broad range of settings (Mitchell et al., 2013; Patton et al., 2013).

Researchers have been paying increasing attention to contextual factors that influence the translation of evidence-based practices. The field of implementation science has provided numerous conceptual frameworks to map the complex set of factors that occur at policy, organizational, and provider levels (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005; Greenhalgh, Robert, Macfarlane, Bate, & Kyriakidou, 2004; Proctor et al., 2009). One of the most commonly utilized frameworks is the Conceptual Framework for Implementation Research (CFIR), which categorizes implementation factors according to five domains: intervention characteristics, outer setting, inner setting, characteristics of the individuals involved, and the implementation process (Damschroder et al., 2009). Within those domains, 39 constructs have been found to influence the adoption of a new practice. To address these factors, strategies have been identified that can facilitate new implementation efforts (Powell et al., 2015).

As SBIRT is disseminated, more work is needed to understand the contextual factors that can impede and facilitate the implementation of SBIRT for adolescents, especially in settings that have yet to be fully evaluated. Such settings may target a vulnerable adolescent population in a context marked by unique funding and administrative challenges. One example is community mental health organizations (CMHOs), which are particularly subject to budget cuts during economic recessions (Crowley & Kirschner, 2015). In addition, the mental health system has a shortage of providers, especially in rural parts of the United States, and many states have strict confidentiality laws that limit the sharing of behavioral health information (Crowley & Kirschner, 2015). These funding and privacy challenges place considerable strain on organizations and impact the implementation of evidence-based practices like SBIRT.

This mixed methods study is one of the first to examine the implementation of SBIRT for adolescents within CMHOs. This study took place across multiple states and provided organizations with training and technical assistance (TA) via a learning community which is defined as a group of like-minded organizations committed to improving health outcomes through cooperation and information sharing (Center for Integrated Health Solutions, n.d.a). The aims of the study are to: 1) describe the implementation of SBIRT within CMHOs; and 2) understand the self-reported barriers to implementing SBIRT and when these barriers occurred in the implementation process.

## 2. Materials and methods

### 2.1. Study sample

The study sample was 27 CMHOs across six states. The organizations were selected to participate in the National Council for Behavioral Health's Reducing Adolescent Substance Abuse Initiative (RASAI), a learning community aimed at supporting the implementation of SBIRT. The National Council is a membership organization that represents > 2800 community behavioral health organizations, networks, states, counties, managed care companies, and advocacy associations across the country. To be eligible to participate, organizations must have been a member of the National Council. To recruit participants into the learning community, the National Council sent out a request for proposals to 2100 organizations, received 60 applications, and selected 27 participants based on organizational capacity, target population, service provision, and overall commitment to project goals and vision. Specifically, participants had to demonstrate understanding of need, commitment to participate in mandatory activities, ability to enact organizational change, and capacity to provide appropriate services to an adequate number of adolescents. This capacity included the ability to make referrals to specialty care by either maintaining an in-house license to provide comprehensive substance use treatment to adolescents or having an established relationship with an external specialty substance use treatment organization. All participants were public or private non-for-profit CMHOs that received the majority of their funding from Medicaid. The agencies were equally divided between urban and rural settings.

### 2.2. SBIRT implementation

All participating organizations were expected to implement SBIRT with adolescents aged 15 to 22. The SBIRT model involved screening adolescents with either CRAFFT or UNCOPE instruments and, based on the results, delivering a BI and/or an RT when appropriate. Fig. 1 depicts the SBIRT algorithm that organizations used to guide the screening process and determine youth at risk for an SUD. Organizations had flexibility in who conducted the initial screening but follow-up screenings, referrals, and brief interventions must have been conducted by the adolescent's primary counselor.

The National Council provided TA and support across the learning community. Each organization created a core team of six members who participated in learning community activities and took primary responsibility for integrating SBIRT into their existing care models. The core implementation teams consisted of one person from leadership, a project lead, a data lead, a clinical lead, and clinician(s) who were selected from case workers, counselors, social workers, program managers, and quality improvement staff. The project lead, data lead, and clinicians attended the majority of the learning activities.

The training began with each of the six represented states receiving one in-person full day training on the SBIRT model, the structure and goals of the learning community, and the submission of evaluation data.