Journal of Substance Abuse Treatment 62 (2016) 28–37

Contents lists available at ScienceDirect

Journal of Substance Abuse Treatment

SBIRT-A: Adapting SBIRT to Maximize Developmental Fit for Adolescents in Primary Care

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ARTICLE INFO

Article history:
Received 20 July 2015
Received in revised form 5 October 2015
Accepted 22 October 2015

Keywords:
SBIRT
Adolescent
Substance use
Primary care

ABSTRACT

The *Screening, Brief Intervention and Referral to Treatment* (SBIRT) model is widely recommended as part of routine visits in pediatric primary care despite a dearth of evidence on its effectiveness, feasibility, and developmental appropriateness for adolescents in this setting. The purpose of this article is to explicate ways that SBIRT may be tailored to better serve adolescents in primary care under a set of recommended adaptations that we refer to collectively as *SBIRT-A* or *Screening, Brief Intervention, and Referral to Treatment for Adolescents*. Each component of the SBIRT-A framework incorporates recommendations to optimize developmental fit with adolescents based on extant empirical research, developmental theory, and well-documented barriers to service delivery in primary care. Commonalities across proposed adaptations include reliance upon proactive methods to identify and engage youth; innovation in service delivery aimed at improving the consistency and reach of interventions; and a family-focused approach to engagement, assessment, and intervention. Specific recommendations include taking advantage of every clinical encounter with the family to screen, involving caregivers in assessments and brief interventions, leveraging technology to administer brief interventions and booster sessions, and patient- and family-centered procedures for treatment referral and engagement. The adaptations proposed in this article have the potential to enhance the detection of adolescents with SU problems in primary care, the consistency of intervention provision, and engagement of this typically recalcitrant population into appropriate treatment.

1. Introduction

A perennial theme across research literatures pertaining to adolescent health is the magnitude of unmet need for treatment among adolescents with substance use disorders (SUDs) in the United States. Data from the 2013 National Survey on Drug Use and Health (Substance Abuse and Mental Health Services Administration [SAMHSA], 2014) indicates that among approximately 1.3 million adolescents who met diagnostic criteria for an SUD during the past year (5.2% of adolescents), only 9.1% received specialty SUD treatment. These service utilization figures have remained stubbornly persistent over the last decade and beyond and quantify the "treatment gap" for adolescent substance use (ASU; see Merikangas et al., 2011). The ASU treatment gap remains one of most serious public health issues in the U.S. given the propensity for untreated substance use (SU) problems during adolescence to persist into adulthood, thereby precipitating a cascade of health consequences and imparting enormous economic costs to society (CASA Columbia, 2011; National Drug Intelligence Center, 2011).

Perhaps the most widely endorsed and disseminated approach for addressing the ASU treatment gap is *Screening, Brief Intervention, and Referral to Treatment* (SBIRT; Babor et al., 2007; SAMHSA, 2013). SBIRT is both a public health model and a set of procedures for detecting individuals in the general population at risk of SUDs and administering appropriate prevention, early intervention, or treatment referral. The SBIRT model entails universal screening (S) of patients' level of risk for SUD and formulaic guidelines for brief intervention (BI) and/or referral to treatment (RT). Services are targeted toward individuals who have initiated SU in order to provide opportunities for early intervention prior to the need for more extensive or specialized treatment (SAMHSA, 2013). Implementation of SBIRT has recently been bolstered by the enactment of the Affordable Care Act (ACA), which mandates that commercial insurance plans as well as Medicaid/Medicare fully cover the costs of SU screening and brief behavioral counseling during routine primary care (PC) visits, thereby paving the way for new reimbursement mechanisms to fund SBIRT in PC and other medical settings (see American Medical Association, 2015; Levy & Kokotailo, 2011).

To date, SBIRT has been implemented predominantly with adult patients in PC and emergency rooms (SAMHSA, 2013). Empirical evaluations of the effectiveness of SBIRT for this population have yielded

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http://dx.doi.org/10.1016/j.jsat.2015.10.006
0740-5472/

promising though far from definitive results (Agerwala & McCance-Katz, 2012; Babor et al., 2007). The U.S. Preventive Services Task Force (USPSTF) has deemed the evidence in support of SBIRT sufficient to recommend its routine use to identify risky alcohol consumption among adults in PC (Moyer, 2013). Data on the utility of SBIRT for addressing relatively severe alcohol use or illicit drug use among adults in PC are less compelling, however (Roy-Byrne et al., 2014; Saitz et al., 2014).

The evidence base in support of SBIRT for adolescents in PC and other settings is more equivocal than that pertaining to adults. A recent review of the empirical literature on SBIRT with adolescent populations by Mitchell, Gryczynski, O'Grady, and Schwartz (2013) identified a total of seven randomized clinical trials (RCTs) conducted in emergency departments and seven conducted in schools settings, with the majority of studies in each setting finding little or inconclusive evidence of the benefits of SBIRT over control or comparison conditions (e.g., assessment only, brief informal advice, etc.; see also Patton et al., 2014).

At the current juncture, few randomized trials of SBIRT have been conducted with adolescents in PC. Existing evidence is inconclusive for gauging the model's effectiveness in reducing SU and facilitating treatment entry among teens at moderate to high levels of risk for SUD (Mitchell et al., 2013; Patnode et al., 2014; Yuma-Guerrero et al., 2012). Accordingly, SBIRT is not currently endorsed by the USPSTF as an empirically supported approach for addressing ASU in pediatric PC settings (Moyer, 2013). Nonetheless, reviews of SBIRT acknowledge the model's potential benefits for adolescents (see Levy & Knight, 2008; Mitchell et al., 2013), and it has been championed for use within this age group by virtually every major behavioral health organization including the American Academy of Pediatrics (AAP), American Medical Association (AMA) (2015), Levy & Kokotailo (2011), National Institute on Alcohol Abuse and Alcoholism (NIAAA) (2011), National Institute on Drug Abuse (2014) and SAMHSA (2013). In addition, the Addiction Technology Transfer Center Network offers an array of online training materials for implementing SBIRT with adolescents (see http://attcnetwork.org/national-focus-areas/?rc=sbirt); both the AAP (Levy & Kokotailo, 2011) and NIAAA (2011) have provided written guidance on SBIRT for physicians; and medical residency programs have begun to provide formal training in implementing SBIRT with adolescents in PC (Schram et al., 2014; Whittle, Buckelew, Satterfield, Lum, & O'Sullivan, 2014).

1.1. Adapting SBIRT for adolescents

Despite broad-based support for SBIRT in pediatric PC, questions persist regarding the model's effectiveness, feasibility, and developmental appropriateness for adolescents (Clark & Moss, 2010). Moreover, the aforementioned resources for physicians tend to focus primarily on implementing SU screening procedures in a developmentally sensitive manner with relatively less attention to engaging, intervening with, and referring youth to treatment. In order to address such concerns and resource gaps, this article recommends a set of adaptations to the traditional SBIRT model to more effectively serve adolescent populations. We refer to these adaptations collectively as *SBIRT-A*. The recommendations in this article stem from the current evidence base regarding the efficacy of SBIRT for adolescents, guidelines for clinical intervention with adolescents based on developmental theory and research, and well-documented barriers to the delivery of substance use screening and intervention services in PC settings. Primary themes across adaptations include: reliance upon proactive (versus reactive) methods to identify and engage youth; innovation in service delivery aimed at improving the consistency and reach of interventions; and a family-focused approach to engagement, assessment, and intervention.

Although the SBIRT-A framework may be generalized for implementation in a variety of gateway service settings in which adolescents and their caregivers are encountered (e.g., PC, school, child welfare, and juvenile justice), this article focuses on implementing SBIRT-A in pediatric PC clinics. It is estimated that approximately one-third of adolescents encountered during PC visits exhibits moderate to high probability of recent SU (Bohnert et al., 2014). Given that the majority of teens in the U. S. visit PC clinics at least once per year (Nordin, Solberg, & Parker, 2010), PC clinics provide rich opportunities to detect and intervene with adolescents at risk for SUD. It is widely recognized, however, that due to both general and adolescent-specific barriers such opportunities go largely unrecognized in pediatric PC (Sterling, Weisner, Hinman, & Parthasarathy, 2010; Van Hook et al., 2007). In light of this reality, this article introduces the SBIRT-A framework by describing optimal screening, brief intervention, and treatment referral procedures for adolescents in pediatric PC settings. Specifically, it highlights concerns with the SBIRT status quo for adolescents and proposes developmentally informed adaptations that may bolster the model's effectiveness in detecting adolescents at risk for SUD, administering appropriate BIs, and engaging this typically recalcitrant population into appropriate treatment.

Fig. 1 presents an overview of the recommended adaptations contained in the SBIRT-A framework. The recommendations are designed specifically for adolescents between ages 11 and 17 years for three reasons: (a) prevailing guidelines for PC physicians recommend universal SU screening for youth age 11 and older (AMA, 2015; Hagan, Shaw, & Duncan, 2008); (b) USPSTF guidelines for adolescents apply to youth under the age of 18 (Moyer, 2013); and (c) age 18 is the point at which youth typically transition from pediatric to adult PC. In the following sections, we identify developmental concerns with each component of the traditional SBIRT model and discuss how the proposed adaptations within SBIRT-A address adolescent-specific barriers in PC.

2. Screening

Screening is the first component of SBIRT-A and is the foundation upon which the other components depend. Historically, screening for ASU in PC has been recommended during annual preventive or well-child exams (see Elster, 1997). Such recommendations have been updated recently based on data indicating that adolescents are less likely to attend preventative visits than adults and younger children (Nordin et al., 2010; Rand et al., 2007), as well as data demonstrating that adolescents are more likely to screen positive for SU during acute care visits than well-child exams (Knight et al., 2007). As such, the most recent guidelines issued by the AAP prescribe universal SU screening for adolescents during both routine preventative appointments and non-preventative visits (Levy & Kokotailo, 2011).

Prevailing recommendations for universal SU screening include the use of time-efficient, developmentally appropriate, and well-validated screening tools that can be administered with minimal staff burden and that provide guidelines for steps to follow subsequent to screening (see Wissow et al., 2013). A number of screening tools for ASU exist, with briefer instruments generally being preferred due to the time constraints faced by PC practitioners and the desire to reserve more lengthy assessments for adolescents at elevated levels of risk (Levy & Kokotailo, 2011). The 2011 AAP guidelines recommend the routine use of the 6-item CRAFFT screener (Knight, Sherritt, Harris, Gates, & Chang, 2002). A recent study by Levy et al. (2014), however, found that a single screening question (i.e., "*How often have you used [specific drug] over the past year…*") is as effective as the full CRAFFT in triaging adolescents into four risk categories including: *no risk* (no history of use), *mild risk* (history of past year use), *moderate risk* (history of monthly use), and *severe risk* (history of weekly use). Such a brief screening strategy is consistent with the single-item screen promoted for adults (see Saitz et al., 2014) and with NIAAA's (2011) youth alcohol screening guide which recommends that patient SU risk level be triaged based on frequency of past-year alcohol use.

Despite broad dissemination of these guidelines, screening for SU among adolescents in PC remains far from universal (see AAP, 1998; Sterling et al., 2010). Surveys of PC physicians suggest that less than half routinely screen adolescents for SU (Millstein & Marcell, 2003),