SUBSTANCE ABUSE
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Ten years of implementing screening, brief intervention, and referral to treatment (SBIRT): Lessons learned

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ABSTRACT

The US Surgeon General recently issued a comprehensive report indicating that substance use is a major public health concern that must be addressed using a number of strategies. Screening, brief intervention, and referral to treatment (SBIRT) is one such strategy. SBIRT Colorado, funded by the Substance Abuse and Mental Health Services Administration (SAMHSA), has implemented a statewide initiative for the past 10 years that has provided ample opportunities to identify key components for successful implementation. Successful implementation requires (1) strong clinical and management advocates; (2) full integration of services into practices' workflow utilizing technology whenever possible; (3) interprofessional team approaches; (4) appropriate options for the small proportion of patients screening positive for a possible substance use disorder; (5) cannabis screening that accounts for legalization, and interventions that acknowledge differences between alcohol and cannabis use; (6) incorporating SBIRT into standard health care professionals' training; and (7) addressing the significant issues regarding reimbursement through private and public payers for SBIRT services. Implementing and sustaining SBI as a standard of integrated care is essential to reduce the burden of substance use. Interdisciplinary approaches, technology, and training to increase practitioner confidence and skill are fundamental.

KEYWORDS

SBIRT: Screening; brief intervention, and referral to treatment; SBIRT implementation; substance use intervention

This commentary describes the key lessons learned in Colorado from 10 years implementing a statewide screening, brief intervention, and referral to treatment (SBIRT) initiative. SBIRT is a public health approach to identify and intervene with individuals misusing substances. It is designed to help individuals reduce risky substance use and thereby prevent addiction and reduce individual and societal consequences of harmful use. In the general US adult population, about 4% of individuals screened for risky alcohol use are alcohol dependent and approximately 25% engage in risky or harmful nondependent use.[1] The high percentage of individuals misusing substances is important because risky use is associated with societal costs such as motor vehicle accidents, violence, and loss of workplace productivity, as well as health consequences such as high blood pressure, increased cancer risk, anemia, and liver damage.[2,3] The issue is so important that the Surgeon General recently issued a comprehensive report on the topic, indicating that "substance misuse is a major public health challenge and a priority for our nation to address."[4]

Screening and brief intervention (SBI) provides a structured process to identify individuals engaged in risky use and provides appropriate interventions and support when needed. Once a person misusing substances is identified through validated screening methods, a health care professional provides a brief intervention using motivational interviewing techniques designed to increase awareness of the negative consequences of substance use and increase motivation to change patterns of use. Although a person misusing substances but not yet diagnosed with a substance use disorder is the primary target, SBIRT is comprehensive in its approach. The low-risk user or nonuser is praised for healthy choices, reinforcing positive behaviors; the person with nondependent risky use is provided a cost-effective brief intervention; and an individual with a possible substance use disorder is provided resources or referrals for additional services and a brief intervention to motivate the individual to seek additional assessment and more intensive, ongoing services to address higher-risk substance use.

A substantial body of research has assessed SBIRT's efficacy in various settings, and the evidence favoring alcohol SBI in primary care settings is robust.[5–7] Most studies find evidence that alcohol consumption or patterns of risky alcohol use (e.g., binge drinking) are reduced after receiving SBIRT services. Several influential organizations endorse SBI in health care. For example, the US Preventive Services Task Force, an independent expert panel in prevention and evidence-based medicine, currently recommends alcohol screening and behavioral counseling interventions in primary care settings for adults.[8,*] In addition, the American College of Surgeons Committee on Trauma requires that all Level I and Level II trauma centers screen patients for risky alcohol use and provide brief

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* As of 2008, the US Preventive Task Force Services found the evidence supporting screening for illicit drug use to be insufficient (https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/drug-use-illicit-screening).

interventions for those screening positive.[9] In 2012, The Joint Commission, which accredits and certifies more than 18,000 US health care organizations set performance measures for SBIRT and continues to update those measures.[10] Finally, Partnership for Prevention identified alcohol SBI as one of the top cost-effective preventive health services.[11]

Between 2006 and 2016, SBIRT Colorado implemented 2 consecutive Substance Abuse and Mental Health Services Administration (SAMHSA) SBIRT grants and has worked to integrate SBI as a standard of care. Through the SBIRT Colorado initiative, nearly 175,000 patients were screened in grant-funded sites across the state, including hospitals, primary care settings, an emergency department, urgent care clinics, and a dental office. Furthermore, the project reached more than 11,600 people throughout Colorado through trainings, presentations, and exhibits, and it developed clinical guidelines and practice tools to facilitate effective SBIRT implementation. The SBIRT Colorado evaluation included analysis of data collected from patients screened in grant-funded health care sites; formative evaluation efforts with health care staff and state and community leaders to examine successes and challenges at multiple levels; and several studies focusing on specific issues (e.g., trends in cannabis use detected through screening). Based on these efforts, this commentary describes the key lessons learned about successful implementation. We hope that these lessons will help other initiatives and health care settings implement SBI and further move toward integrating substance use screening into the standard of care. Before presenting the lessons learned, we provide a brief overview of Colorado's SBIRT implementation model.

SBIRT implementation in Colorado

Using grant funding, SBIRT Colorado partnered with health care sites to conduct SBI for alcohol and other substances and collect grant-required data. In most sites, nurses or medical assistants collected patient responses to 5 brief screen questions based on the Colorado clinical guidelines for alcohol and substance use screening.[12] When a patient provided a positive response to at least one brief screen question, a grant-funded health educator administered the World Health Organization's Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST), which has been validated in primary care settings and in multiple languages and cultures.[13] Patients were assigned a risk level based on self-reported use patterns of different substances assessed on the ASSIST (e.g., alcohol, cannabis, opioids, stimulants). Individuals identified as moderate risk or higher were provided a brief intervention, and the few screening at higher risk were provided a referral to wellness coaching for further assessment, or to treatment settings within the health care site or the community. Whether to have existing health care providers administer SBIRT was extensively debated during early implementation. The initiative used the health educator approach because the federal grant data collection requirements were too extensive for already overburdened health care providers. Health care sites were responsible for hiring grant-funded health educators, who, as employees, became part of the interdisciplinary team at the SBIRT data collection sites. To prepare health educators for integration into sites, the SBIRT Colorado management team coached them on how to share their expertise with other clinical staff; work with management to identify logistical solutions to providing SBIRT services in the clinic; explore effective approaches to communication and documentation that fit within clinic workflow; and play a role in ongoing coordination of services for patients with substance use concerns.

In addition to the full-time staff delivering SBIRT in grant-funded sites, the initiative also implemented SBI using other models that relied on existing staff to conduct screening, brief interventions, and referrals. For example, in the first 5-year grant, SBIRT Colorado collaborated with the Colorado Department of Public Health and Environment, utilizing Ryan White Part B funding, to expand SBIRT to clinics and acquired immunodeficiency syndrome (AIDS) service organizations. Six clinics serving human immunodeficiency virus (HIV)-positive individuals and 2 AIDS service organizations in Colorado integrated SBIRT into their service delivery models. In the second 5-year grant, the project pilot-tested a model wherein physicians in a small primary care clinic were trained to deliver brief interventions and medical assistants gathered screening data, using a single-item, validated alcohol question as the screening tool. These efforts allowed project staff to learn about implementation successes and challenges across multiple settings, using different service delivery models, and with different patient populations. Finally, interviews were conducted with 8 key SBIRT stakeholders (e.g., state officials, staff from the substance use intervention and prevention agency that implemented the program in Colorado, and staff from SBIRT-funded health care clinics) to help ascertain the most useful lessons for those considering, or who may be in the early stages of, implementing SBI. The following summarizes those lessons.

Lessons learned

A number of elements are key to successful SBIRT implementation and are discussed in detail in this section. However, 2 elements are essential: (1) presence of strong clinical and management advocates in a health care setting; and (2) full integration of services into practices' workflow, using simple protocols and technology whenever possible. Thus, we begin with a description of these areas, followed by other key considerations for successful implementation.

SBI requires strong clinical and management advocates. SBI requires strong clinical and management advocates to communicate clearly the value of and their commitment to implementing substance use SBI as a standard of care. Participating clinical staff have told SBIRT Colorado that buy-in at all levels of an organization is critical for success. Barriers to buy-in identified by SBIRT Colorado are similar to those reflected in the literature[14,15] and have typically been encountered when some staff members, providers, and upper-level management are not knowledgeable or supportive of SBIRT, and when an SBIRT champion is missing. Conducting more education, training, and outreach with providers, staff, management, and the broader community about the purpose, effectiveness, and evidence supporting the SBIRT approach can help increase staff buy-in. In addition, when initially skeptical staff members begin to see SBIRT's impact through their own experiences,

they often increase their sponsorship of SBIRT, suggesting that it may take time to build staff support.

Providers are more likely to support the practice when they clearly understand the negative health consequences, such as hypertension, diabetes, injuries, depression, and suicide risk that stem from risky alcohol and other substance use.[1,16] Explicitly making these associations underscores substance use screening's importance and relevance in health care settings. Key to the argument is the knowledge that (1) substance misuse, even in the absence of a substance use disorder, can have negative health impacts; and (2) brief conversations can help motivate individuals to reduce use. Health care providers that are educated about these associations and can link substance use to health outcomes, and understand that they can contribute to a person's motivation to change are more likely to support the practice.

Using simple protocols and technology whenever possible is key. Although SBIRT can be successfully implemented with fidelity using different models, it is critical that sites establish clear, simple protocols for integration into clinic flow. When first implementing SBIRT, staff often feel that they do not have time to conduct screening and assessment activities, that it does not fit neatly into existing clinic flow, and they worry that staff might not be available to provide adequate internal oversight to ensure a smooth process. Ultimately, each site must carefully review clinic protocols and patient flow to identify the most appropriate staff to involve and how best to implement SBIRT at the site. Creating concrete protocols around screening that utilize technology when possible, such as digital tablets, a computer kiosk, or other devices, to administer the screening tool, and integrating screening questions into electronic medical records (EMR) can help reduce staff burden. In addition, clearly allotting time for SBIRT in clinic flow and ensuring that all staff members are aware of the protocols and their specific roles will help eliminate confusion and increase chances of successful integration. Using brief, validated screening tools and having quick access to referral resources are also suggested. Regardless of the medium used to collect screening data, ensuring that SBI is fully integrated into a clinic's workflow and that the importance of the screening is understood by all staff is critical for success.

In addition to these 2 critical elements, the following were found to significantly improve successful SBIRT implementation: interprofessional team approaches, appropriate options for the small proportion of patients needing treatment, and cannabis screening that accounts for legalization (if sites choose to screen for substances other than alcohol). Each of these is discussed in turn.

Interprofessional team approaches are recommended. As previously mentioned, when staff at multiple levels actively engage in SBI and roles are clearly defined, the practice is more likely to take hold. The roles may include administering the screenings, documenting information in the EMR, conducting the brief interventions, or providing follow-up or referrals. The more each staff person's role is acknowledged and respected as an integral component, the more likely the intervention is to be seamlessly integrated into standard practices. Importantly, SBIRT Colorado, through site visits and intake and outcome data, also has learned that follow-up on positive screens (i.e., providing brief interventions) can be conducted effectively by a wide variety of staff. Individuals who are able to establish rapport with patients and are comfortable utilizing motivational interviewing techniques are most successful at administering SBI, regardless of professional training. For some clinics, using paraprofessionals rather than clinicians to successfully, but economically, provide SBI may be the best option.[17]

Appropriate options need to be available for the small proportion of patients screening positive for a possible substance use disorder. The individuals we interviewed often noted that the referral process was a barrier to SBIRT implementation. Health care providers have voiced concerns about limited availability of substance use treatment providers accepting referrals, limited treatment options, long waitlists for treatment services, and the generally low funding level in the state for substance use disorder treatment services. These concerns were especially noted in rural locations and in sites serving HIV-positive individuals. Health care providers have been hesitant to implement SBIRT when they believed that treatment services could not meet patients' needs. However, the data collected through SBIRT Colorado clearly indicate that a very low percentage of screened patients require a referral to treatment. The majority of patients screening positive will be moderate risk and will be the most likely to benefit from a brief intervention. Failing to screen for substance use is a disservice to the majority of patients who could benefit from a conversation with their health care providers about how their alcohol or other substance use may affect their overall health. Patients involved in the SBIRT program who completed a satisfaction survey indicated that just having the questions asked made them think more critically about their alcohol and other substance use. Therefore, screening itself may act as a type of intervention. Nevertheless, the following were identified as strategies to improve the referral process where treatment services and resources are notably lacking: (1) developing geographically specific resources (Web sites, brochures, etc.) with information about providers accepting referrals; (2) conducting more relationship-building outreach with treatment providers and other community resources to enhance their willingness to accept referrals; (3) identifying intermediary service providers that offer transitional support to clients while they wait for admission to treatment, such as a social worker who can address lifestyle changes or a mental health professional who can begin to address issues such as depression or anxiety; (4) developing or using Web-based systems that provide quick, easy, up-to-date resource and referral information; and (5) creating standard printable referral forms.

Cannabis screening that accounts for legalization and interventions that acknowledge differences between alcohol and cannabis use are needed. As of November 2016, 29 states and the District of Columbia have legalized cannabis in some form. Eight of those states, including Colorado, have legalized recreational cannabis. In states with legal medical or recreational cannabis, many health care providers feel ill-equipped to address legal cannabis use. Most available screening tools focus on alcohol and/or illicit drug use. Ideally, screening questions should identify potentially problematic legal cannabis use. In addition, data collected through SBIRT Colorado suggests significant differences on readiness to change factors and use patterns for

those that use alcohol versus cannabis, for instance, readiness to change was lower for those who use cannabis as compared to those who use alcohol,[18] indicating the need for interventions to take into account these differences.To address some of these concerns, SBIRT Colorado has developed cannabis-specific guidelines to help providers engage in conversations with patients who indicate frequent use or negative consequences. Although empirically established guidelines around what constitutes low-, moderate-, or high-risk cannabis use have not yet been established, and the debate regarding the efficacy of SBI in addressing drug use continues,[19–21] providers' understanding of patients' substance use patterns can play an important role in providing comprehensive health care.

Moving forward

Our interviews with those involved in SBIRT Colorado highlighted 2 additional recurring challenges to successful implementation: (1) incorporating SBIRT into standard health care professionals' training (e.g., doctors, nurses, social workers),[22,23] and (2) the significant issues regarding reimbursement through private and public payers for SBIRT services. An important development in Colorado has been the integration of SBIRT training into the standard curriculum of a large nursing program. Other medical schools across the country have also built SBIRT into their training programs, such as in Connecticut, Maryland, and Oregon. Graduates of these medical programs are likely to accept the practice as a preventive measure that is integral to quality health care delivery. However, to successfully apply what they have learned in their first employment setting, the health care site must also be engaged in providing SBI successfully.

The other significant challenge health care providers face when trying to implement SBIRT is reimbursement for the service. SBIRT is considered a preventive service (as defined in section 2713 of the Public Health Service Act, added by section 1001 of the Affordable Care Act), and it is part of essential health benefits (EHB) and should be fully covered as a preventive service. However, SBIRT is not always treated as a preventive service in all states or by all insurance carriers.[24] SBIRT Colorado worked with the state Medicaid program to activate reimbursable codes so that providers could bill for SBIRT services, but there are still significant hurdles. For example, total time requirements of a minimum of 15 to 30 minutes are often unrealistic. Effective SBI can occur in a very short period of time, and clinics do not typically have the capacity to provide 15- to 30-minute interventions, thus preventing them from billing for this service. Creating codes that allow providers to bill for shorter interventions (e.g., 5 to 10 minutes) could help alleviate the financial burden.

Ultimately, cost-benefit outcomes associated with implementing SBIRT may be most effective at persuading insurance carriers to cover SBIRT. SBIRT Colorado contracted with an actuarial consulting firm to produce an analysis using the Colorado All Payer Claims Database of total health care costs for patients served by SBIRT Colorado data collection sites.[25] The results show positive projected incremental cost savings within the first year following SBIRT and projected cumulative cost savings within the second year across all practices, although results likely vary between practices. Substance abuse costs could not be analyzed directly, as substance abuse claims data were not available; nonetheless, total health care costs appeared to decrease for individuals in practices that implemented SBIRT.

SBIRT Colorado has worked to sustain SBI and influence health policy throughout the last 10 years. SBIRT Colorado has contributed to the legislative process resulting in the allocation of marijuana tax revenue to a statewide public awareness campaign to increase help seeking and decrease stigma associated with substance use issues, as well as continued SBI training of Colorado Medicaid SBIRT providers. As a direct result of outreach and SBIRT-related training, several county health departments have adopted SBIRT in their programs, including maternal-child health, injury prevention, and child-welfare services. In addition, Colorado has implemented adolescent SBIRT as a protocol in school-based health centers and continues to support SBIRT service delivery within primary care centers. Implementing universal substance use SBI is an integral component of providing quality preventive health services. After 10 years of implementing a federally funded statewide SBIRT initiative, SBI has been successfully implemented into practice when health care staff and leaders are supportive of the practice; screening and intervention protocols are seamlessly integrated into clinic flow and health system technology; staff understand their roles and responsibilities to administer SBIRT; and referral resources are easily available when needed.

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Author contributions

All authors contributed to the original concept of the paper. Dr. Nunes and Dr. Richmond produced the original draft of the manuscript. The remaining coauthors reviewed and provided significant editorial feedback.

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