

An Interprofessional Model for Teaching Medical Students to Provide Screening, Brief Intervention, and Referral for Treatment for Substance Misuse

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ABSTRACT

BACKGROUND: Screening, Brief Intervention, and Referral to Treatment (SBIRT) is an evidence-based method to identify, reduce, and prevent the harmful use of alcohol and illicit substances. However, SBIRT remains underused by physicians and other healthcare providers. Integrating interprofessional SBIRT training in medical curricula may better prepare future providers to care for patients with substance use disorders.

METHODS: The authors report the development and outcomes of a longitudinal, interprofessional SBIRT curriculum organized in partnership with health professions' schools in nursing, pharmacy, and social work.

PRIMARY RESULTS: From October 2015 to April 2017, 1,327 students were trained in SBIRT, resulting in the screening of 4,520 individuals and interventions in 897 individuals. 553 (42%) trainees were medical students, providing 3,330 (74%) screenings and 412 (46%) interventions.

PRINCIPAL CONCLUSIONS: These initial data demonstrate the feasibility of including SBIRT in undergraduate medical curricula. Broadly implemented, SBIRT training offers potential to normalize its practice as part of standard, evidenced-based patient care.

KEYWORDS: medical education, interprofessional education, substance use disorders

INTRODUCTION

The epidemic of opioid overdose deaths is unprecedented, and is now the leading cause of mortality for people under 50 years of age in the United States. In 2015, Rhode Island (RI) had the highest rate of illicit drug use, third highest rate of alcohol poisoning deaths, and fifth highest rate of opioid overdose deaths among all states.¹ In RI, excessive drinking results in 294 deaths and 7,618 years of potential life lost each year.¹ In RI, 336 people in 2016 and 323 people in 2017 lost their lives to accidental drug-related overdose.² These data indicate a large unmet need for individuals with substance use disorders in RI.

Screening, Brief Intervention, and Referral to Treatment (SBIRT) is recommended by the United States Preventive

Services Task Force (USPSTF) and the Substance Abuse and Mental Health Administration (SAMHSA) to identify, reduce, and prevent the harmful use and dependence of alcohol and illicit substances.³ SBIRT involves assessing substance misuse with validated, standardized screening tools, providing brief interventions using motivational interviewing, and referring to behavioral and/or medical treatment if necessary. Yet, despite the evidence, healthcare providers do not routinely ask patients about alcohol or drug use.⁴

Engaging all trained healthcare providers is critical for realizing universal screening. Studies demonstrate that physician and non-physician providers with proper training are well-positioned to conduct SBIRT with patients.³ However, key differences in attitudes, perceptions, and SBIRT practice between physician and non-physician providers have been identified, such as role responsibility, time constraints, and adherence to validated screening tools.⁴ There appears to be a critical need for improved SBIRT training, particularly in interprofessional contexts.

At the level of undergraduate medical education, nearly all medical schools include some instruction on "substance abuse," but the depth of instruction on SBIRT in these programs is not known.⁵ There is a notable paucity of literature on approaches to teaching SBIRT to medical students. A review of the literature on studies of undergraduate medical curricula reveals one stand-alone second-year course,⁶ incorporation of a video supplement within a longitudinal standardized patient curriculum,⁷ and interactive online modules.⁸

In this report, we describe the development of a longitudinal, interprofessional model for teaching medical students SBIRT. We share our process and early lessons learned to fill this gap in the literature.

METHODS

The Warren Alpert Medical School of Brown University (AMS) partnered with Rhode Island College Schools of Nursing and Social Work, and the University of Rhode Island College of Pharmacy to develop an interprofessional SBIRT curriculum. In 2015, with AMS as the lead, these institutions were awarded a Medical Professional Training grant from the Substance Abuse and Mental Health Services Administration (SAMHSA) to develop and implement SBIRT training in each individual program and allowed healthcare

students from various disciplines to learn in partnership.

SBIRT training is incorporated into each individual schools' curriculum, with subsequent practice and reinforcement in interprofessional workshops. The curriculum model for delivering SBIRT training is a longitudinal integrated program. Early professional students receive training in each component of SBIRT including motivational interviewing, while more advanced professional students then use these skills in their clinical settings. All students must demonstrate competence in delivering SBIRT as measured by faculty/supervisors/preceptors with simulation using standardized patients and in clinical settings. All medical, nursing, pharmacy, and social work students perform at least five screenings per year for substance misuse and provide a simple, brief intervention and referral to treatment for all individuals that screen positive.

At AMS, SBIRT is integrated into specific aspects of the pre-clerkship and clinical curriculum for medical students. SBIRT education begins in the 1st and 2nd year required Doctoring (clinical skills) course. Students first learn SBIRT and motivational interviewing techniques in small group sessions from an interprofessional faculty team comprised of both a physician and a behavioral health specialist. Students also practice SBIRT with simulated patients and later perform screenings and brief interventions at their mentor sites as part of the Doctoring course. In the 3rd year, SBIRT is integrated into the 6-week rotation in Family Medicine and 12-week rotation in Internal Medicine. During these two rotations, students provide screenings and brief interventions as appropriate in routine patient encounters under the supervision of preceptors. The curriculum culminates in an SBIRT case as part of the 4th year Objective Structured Clinical Examination (OSCE) requirement. In addition, knowledge around substance (and particularly opioid) misuse is integrated into the basic science and clinical curriculum, in a series of lectures, small groups and workshop sessions.

The training that students receive in their individual schools is reinforced in an interprofessional education workshop that focuses on SBIRT, detailed elsewhere.⁹ In this four-hour annual workshop, small inter-professional teams of four to five students are formed with students from medicine, nursing, pharmacy, and social work. As a team, students participate in a series of activities intended to provide training and to simulate realistic multidisciplinary treatment environments. The workshops consist of four distinct curricular elements: patient panel session, patient case study in small group, naloxone administration training, and standardized patient simulation as a multidisciplinary team. All students are assessed by both faculty and standardized patients on their ability to deliver SBIRT. These elements are intended to highlight specific aspects of substance misuse along with what each profession contributes to the care of patients with substance use disorder.

At AMS, the longitudinal SBIRT curriculum is a core

component of a novel curriculum on substance use disorders that qualifies medical graduates for the Drug Abuse Treatment Act of 2000 (DATA 2000) waiver to prescribe medication-assisted treatment (MAT) for opioid dependency after licensing.¹⁰ There is a large gap between the number of individuals in need of treatment and the availability of community outpatient behavioral therapy and MAT. Less than half of all providers who have obtained the DATA 2000 waiver offer MAT to patients.¹⁰ Recognizing the challenge of MAT accessibility as part our curricular initiative, we formed a partnership with the RI Department of Health and RI Board of Medical Licensure and Discipline to enable medical students after successful completion of curriculum to qualify for the DATA 2000 waiver after licensing. Medical students complete 24 hours of training over four years specific to the assessment and treatment of substance misuse, which is greater than the 8 hours required by the DATA 2000. The longitudinal SBIRT training described above comprises 12.5 hours of the 24-hour curriculum. Medical student graduates must still complete residency to obtain a full medical license and receive DEA registration for prescribing controlled substances before independently providing MAT. Presently, this program only applies to physicians practicing in Rhode Island.

In addition to the curricular programs described, students and faculty from all schools are invited to attend an annual opioid symposium hosted at AMS. The symposium aims to educate a broad range of healthcare providers, many of whom are clinical preceptors for these students, around opioid use disorder locally and nationally.¹¹

RESULTS

Evaluation has been built into all aspects of this initiative. Qualitative data show that there has been a high level of satisfaction with all aspects, including the curriculum, workshops, and symposium, detailed in prior publications.^{9,11} The strongest evidence of impact, however, is the number of screenings and interventions that have occurred through this program (**Table 1**).

From October 2015 to April 2017, 1,327 students across medicine, nursing, pharmacy, and social work were trained

Table 1. Student Screenings and Interventions from October 2015 through April 2017

Health Professions	Trained Students	Screenings	Interventions
Medical students	553	3330	412
Nursing students	443	4	3
Pharmacy students	118	538	161
Social Work students	213	648	321
Total	1327	4520	897

in SBIRT, resulting in the screening of 4,520 individuals and interventions in 897 individuals. 553 (42%) trainees were medical students, providing 3,330 (74%) screenings and 412 (46%) interventions. These data are self-reported by students in real-world patient encounters under the supervision of preceptors.

DISCUSSION

We believe this SBIRT curriculum adds to the existing body of scholarship in several important ways. First, the integration across four health professional schools, including medical students, is noteworthy as it promotes a team-based approach to the care of individuals with substance use disorder. Our curriculum brings together students from medical, nursing, pharmacy, and social work schools that are located on separate campuses and across public and private institutions to train in a simulated setting. While the students are not in “real-life” clinical situations, it is our hope these sessions provide a foundation for future collaborative work.

Second, while medical students only comprised 42% of trainees, they provided 74% of all screenings. Of interest though, social work and pharmacy students provided one intervention for every two ($648/321 = 2.0$) and three ($538/161 = 3.3$) screenings, respectively, whereas as medical students provided one intervention for every eight ($3330/412 = 8.1$) screenings. Based on these data, medical students are screening patients at a much greater rate compared to their colleagues in the other health professions. In contrast, social work and pharmacy students are much more likely than medical students to see patients that screen positive and to then provide brief interventions. It may be possible that medical students see a higher volume of patients that are less likely to present with substance misuse or that when identified they expect other healthcare professionals to provide the appropriate interventions. Another alternate hypothesis is that patients may feel more comfortable talking about their substance use with the other health professions' students than with medical students. The differences noted may also reflect differences in curricula in clinical time and placements across the health professions' schools. While these findings are only preliminary, they suggest that an interdisciplinary approach may be key to identifying and treating substance misuse.

In addition, one very novel aspect of this initiative is the assessment of the implementation of student-initiated SBIRT in the community. Despite historic evidence of the effectiveness of SBIRT, the implementation of SBIRT in undergraduate medical curricula has largely been absent given the dearth of studies in the literature. In the first iteration of this program, students across the health professions had an appreciable number of patient interactions that screened positive for substance use leading to brief interventions. This finding alone highlights the importance of evidence-based training

in caring for patients with substance use disorders. Mobilizing the thousands of health professions' students nationally to learn and provide SBIRT may better prepare healthcare providers of the future to reduce the public health harms of substance use by incorporating SBIRT as part of standard, evidence-based practice.

There are notable limitations to the study of this initiative to date. Each school used their own data collection system. This provides challenges for comparing data across institutions and implementing new data collection efforts. For example, the number of screenings and interventions reported by nursing students was low despite accounting for 33% of trainees. This finding is maybe more reflective of known local challenges with data collection than of nursing students' ability to provide SBIRT. An additional limitation is the lack of more granular data on SBIRT patient encounters. At this time, it is not possible to provide greater context to the screenings and brief interventions that students conducted with patients. Finally, while it is our hope these screenings and brief interventions impacted patient substance use, it is beyond the scope of this medical education evaluation to examine this.

Moving forward, we aim for all medical students to provide a minimum of five screenings per academic year for at least the next three years, totaling approximately 8,640 additional screenings. We plan to explore options to better assess the fidelity of student-initiated SBIRT and to gather additional granular data, such as patient demographics, healthcare setting, substance(s) counseled on, and referral provider. Additionally, we hope to collaborate with health professions' schools in other states to share curricular innovations and develop best practices to grow students' involvement in identifying and treating substance misuse.

CONCLUSION

To date, we have established a longitudinal, interprofessional SBIRT program within the undergraduate medical curriculum. Incorporating SBIRT training in undergraduate medical education offers potential to normalize its practice as part of standard, evidenced-based patient care. It is feasible to integrate SBIRT training into medical student curricula, have an interprofessional component with other healthcare trainees, and also implement student-initiated SBIRT in the community. Our SBIRT curriculum may provide a model for interprofessional collaboration, particularly in the setting of coordinating across multiple campuses and public and private institutions.

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