Increasing skilled adoption of SBIRT through media-rich, theory-driven, web-based training

Richard C. Goldsworthy, MSEd, PhD, Academic Edge, Inc., Bloomington, IN • Peter C. Honebein, PhD, Academic Edge, Inc., Bloomington, IN

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An estimated 25% of primary care patients have a substance use disorder. SBIRT is a potential solution. Our objective was to develop a theoretically grounded and scientifically valid web-based course that increases SBIRT awareness and adoption among primary care providers (PCP).

SBIRT is Screening, Brief Intervention, and Referral to Treatment for substance abuse.

SBIRT is a clinical practice for rapidly identifying, intervening with, and referring patients with or at-risk for substance abuse. Originally implemented in emergency rooms, SBIRT has received attention by federal, state, and local entities as a potentially useful primary care provider (PCP) tool for increasing early, effective identification of substance abuse.

Issue

Despite its potential, SBIRT is not commonly implemented in PCP settings. PCP SBIRT adoption involves buy-in among all care team members, including receptionists, medical assistants, and physicians. To encourage SBIRT adoption, PCPs need accessible, engaging, replicable, and relevant training and performance support that addresses the knowledge, attitudes, and beliefs of all primary care team members. Currently, there exist no standardized, readily-accessible, SBIRT training programs, although various training and training development research efforts are underway. Web-deliverable interactive courses, as part of provider adoption kits, offer many potential benefits and may usefully augment SBIRT dissemination efforts. Our research investigates this potential.

Method

The effort followed a well-established iterative instructional development methodology. The primary pedagogical foundation is social learning theory: authentic video-based modeling and reflection segments illustrate team roles, processes, and patient interactions. The course addresses all three key adoption variables: awareness, skills, and attitudes/beliefs. Expository lessons and interactive case-based practice explore specific knowledge and skills. All materials were continually reviewed by three highly-respected subject matter experts. End-users were engaged in single-subject usability sessions and the prototype online SBIRT course was evaluated in a summative field trial.

Practice-Wide Case Study	The first element specifically targeted increasing willingness to engage in SBIRT. We depict a day at the North Shore Family Health clinic in Pittsburgh, PA, one of the early adopters of SBIRT for primary care. Learners explore the roles of the various team members and learn the processes used to screen, briefly intervene, and refer and treat patients.	
Individual Patient Cases	The second element follows the stories of five patients as they experience SBIRT at the North Shore Family Health clinic. Everything about the patient cases, including the messaging of the various team members, speaks to the ease of using SBIRT in primary care settings and models accepted screening, brief intervention, and referral practices.	
The third element consists of three text-based lessons: overview, screening tools and use.		
Lesson 1 Introducing SBIRT	The first lesson, Introducing SBIRT, provides a big-picture overview of the overall SBIRT process and the reasons a primary care clinic should adopt SBIRT. Background information, illustrations, the metaphor of the SBIRT puzzle, and reinforcement is provided.	
Lesson 2 Screening Tools	The second lesson, Screening Tools, provides direct instruction on how to use, score, and interpret evidence-based screening and assessment tools. Based upon guidance from our SMEs this lesson focused on the three simplest, easiest-to-use tools: AUDIT-C screening, and AUDIT and DAST assessments.	
Lesson 3 Screening Patients	The third lesson, Screening Patients, provides direct instruction regarding the process and principles of screening and assessment; that is, how to interact with the patient. This lesson steps through the best practices of how to effectively screen and assess the patient, using video interviews of experts discussing and demonstrating practices.	

Table 1: SBIRT Course Components

Results

Course Development. The effort produced engaging web-based interactive lessons, multiple simulated patient cases, and rich, navigable video documentaries (See Table 1). Subject-matter experts found the course accurate, appropriate, and useful. In formative evaluation, end-users rated the course extremely highly (avg.9.25/10).

Summative Evaluation. In a pre-post evaluation of the online course among primary care providers (n=27), there was significant growth in provider knowledge of key SBIRT-related information and skills (See Figure 1).

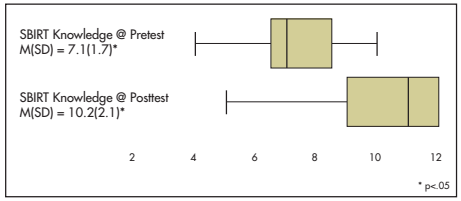

FIGURE 1: Change in Provider Knowledge

Similarly, the course had a statistically and practically (effect size) significant impact on provider's perceived SBIRT self-efficacy and upon their stage of readiness in relation to practicing SBIRT. For example, at intake, 90% (24 of 27) providers indicated they had never heard of SBIRT. At follow up, all providers had obviously heard of SBIRT; however, more importantly, 48% now indicated that they wanted to take steps to integrate SBIRT within their practice, 40% were undecided, and only 3.7% (1 participant) had decided s/he did not want to use SBIRT.

Course Usability. The providers found the course usable and useful and would recommend it to colleagues (see Figure 2).

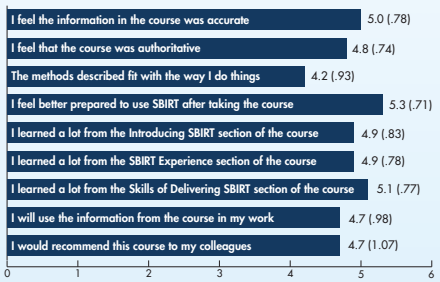

FIGURE 2: Provider Course Ratings

Open-ended Feedback. In response to several qualitative questions, the most common themes (see Table 2) that emerged for positive aspects of the course were interactivity, quality and content of the video components, and simply the presence of the course itself, i.e. that the providers were 'learning something' specific about SBIRT, especially about the screening tools. The most common negative theme was in fact "none or nothing," followed by the videos about non-provider specific issues (there are videos targeting how *all* members of the care team interact with patients regarding SBIRT and our sample in this study was limited to doctors, who appeared to have found those segments 'superfluous.') Finally, the most commonly suggested change was to shorten some video segments and to include more diverse cases and more practice opportunity.

Strongest Parts	Weakest Parts	Things to Change
Interactive and video case studies	Non-relevance of portions	Add/Develop the not yet developed course components
The interactive quiz	Watching the videos of people discussing the questionnaires	Streamline the course
Information on conducting and scoring screening	The videos about how it works in certain clinics	More practice questions
Skills modeling	The office staff segments were the least useful	Include more diverse cases
Seeing how providers seamlessly wove the screening tool into the visit	Site navigation	Add more assessment tools
How to get to questions even when the patient is not being direct	Perceived redundancy	Tailor for provider
How to get patients to open up	Content suggestions	More emphasis on referral and follow-up
Ability to review and download the forms	Perceptions of SBIRT itself	
	Takes up too much office/patient, time consuming, tedious	

Table 2: Frequent Themes from Provider Feedback

Conclusion

Our research strongly suggests that primary care providers do not know about SBIRT; in fact 90% of our admittedly small, but random, sample, had never heard of it. Clearly there is an opportunity for increasing awareness and understanding. **Our prototype course demonstrates the potential for using media-rich web-based courses for improving awareness, adoption, and implementation of SBIRT counseling in primary care.** Our research was limited to the SBIRT screening component (the "S"), and additional SBIRT skills (the "BI" and "RT") and cases should be incorporated and other web-based technologies, including social media, investigated. The work should be extended to further address adoption by all primary care team members rather than focus solely on the primary care provider. A kit to facilitate adoption and implementation also appears worthwhile and would be a valuable future effort. A robust, controlled field trial, with ecologically valid measures gathered in real world settings should also be conducted.

For More Information

Academic Edge, Inc. is a media research and development company specializing in state-of-the-art learning tools for children and adults. We target health related issues ranging from STD and conflict prevention among teens and tweens, to FASD, ADHD, and other disorder education for lay care providers, to disease prevention and medical assessment training for healthcare providers. We particularly focus on the social aspects of health care: why do people do the things they do and how can we help them live healthier, happier, or more productive lives? For more information about Academic Edge, including our many other public health related research efforts, visit **www.academicedge.com**.

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