

# Simulation Technology Gives Nursing Students Practice to Talk with Adolescents About Substance Use

## CASE STUDY

To equip the next generation of nurses, the University of Michigan is providing interactive, online curriculum to effectively build knowledge and skills around evidence-based SBIRT techniques.

## BACKGROUND

### Substance use in adolescence can lead to use in adulthood

Every day, over 10,000 young people between the ages of 12 and 17 are trying alcohol, marijuana, or misusing prescription pain relievers for the first time.<sup>1</sup> From early to late adolescence, alcohol, tobacco, and other drug use increases rapidly, peaking in the transition to young adulthood.<sup>2</sup> The American Academy of Pediatrics recommends screening for substance use in children starting at age nine.<sup>3</sup>

What might seem like an “experimentation phase” can be a launching pad for misuse: Those who use substances in adolescence have a higher risk of use later in life.<sup>2</sup> **Substance use causes more deaths, illnesses, and disabilities than any other preventable**

**health condition, and 65 million Americans will experience a mental health or substance use disorder in their lifetime.<sup>1,4</sup>**

Although substance use disorders are treatable, 946,000 adolescents ages 12 to 17 are in need of substance use treatment, yet only one in six are receiving the help they need.<sup>1</sup> Identifying and intervening in substance use as early as possible is critical, and can help those at risk make a change before leading to negative consequences on physical and mental health, relationships, careers, financial opportunities, legal situations, and more.

**65 million Americans will experience a mental health or substance use disorder in their lifetime.**

## CLIENT



**MARKET**  
Healthcare  
Higher Education

**SIMULATION**  
SBI for Adolescents

## CHALLENGE

### SBIRT is effective yet widely unknown in schools of health professions

The evidence-based practice of **Screening, Brief Intervention, and Referral to Treatment (SBIRT)** can be used by healthcare providers in a variety of settings to help combat the substance use epidemic. By identifying at-risk patients earlier and intervening appropriately through this public health approach, health professionals can reach at-risk adolescents before substance use escalates.

Today, 57% of healthcare providers do not feel adequately prepared to screen patients for substance use or mental health disorders, or to provide their patients with information about the impact of substance use and mental health.<sup>5</sup> This means that the behavioral health needs of many at-risk adolescents will not be identified by health professionals. There is especially opportunity to use SBIRT in primary care settings, yet fewer than half of patients receiving treatment reported that their primary care physician addressed their substance use.<sup>6</sup>

The issue does not reflect a lack of will on the part of healthcare providers, but rather an absence of training. Stephen Strobbe, PhD, RN, PMHCNS-BC, CARN-AP, FIAAN, FAAN, Clinical Professor at the University of Michigan School of Nursing, has been working in

## SBIRT

### Screening

Assesses the severity of substance use and identifies the appropriate level of treatment.

### Brief Intervention

A patient-centered conversation using Motivational Interviewing to increase awareness about substance use and motivation toward change.

### Referral to Treatment

Provides access to specialty care for those with substance use disorders.

The historical lack of training may be attributed to the gradual building of evidence supporting the SBIRT model. Similar rapid screening tools emerged in the 1980s for alcohol and smoking cessation, translated for illicit drugs and prescription drugs in

employ SBIRT. Nurses in particular are often the healthcare providers that have the most frequent and prolonged patient interactions. “Nurses are consistently the most highly trusted professionals in our country. That puts us in a unique position to be able to initiate conversations and to monitor and provide prevention, identification, early intervention, treatment, and recovery throughout a patient’s lifespan,” Dr. Strobbe says. “The earlier we’re able to identify and intervene, the more likely that a positive outcome can be obtained.”

## 57% of healthcare providers do not feel adequately prepared to screen patients for substance use or mental health disorders.

mental health for 40 years and is an advocate for SBIRT training in academia. “Regrettably, the amount of substance use content in the curriculum for schools of nursing as well as medicine is tragically low, particularly when one considers the burden of substance use and substance-related disorders,” he says. The time in the classroom devoted specifically to substance use and addictions can be, according to Dr. Strobbe, “measured in hours in single digits.”

the 1990s. Many more studies propelled SBIRT to become an evidence-based model that can address rising rates of substance use. Research continues to support that brief interventions improve health outcomes and can result in cost-savings.<sup>7</sup>

Healthcare providers in every area of practice will encounter patients and families with substance use disorders or concerns, and there is a great opportunity to equip these professionals with the knowledge and skills required to

## SOLUTION

### *SBIRT with Adolescents* adopted as clinical content

The University of Michigan School of Nursing (UMSN), is one of the top ten nursing schools in the country, offering BSN, MSN, DNP, and PhD degrees. UMSN adopted Kognito’s *SBIRT with Adolescents*, an online interactive simulation,



## About the NORC Partnership

Supported by funding from the Conrad N. Hilton Foundation, NORC at the University of Chicago, the Council on Social Work Education (CSWE), the Center for Clinical Social Work (CCSW), the American Association of Colleges and Nursing (AACN), Institute for Research, Education, and Training in Addictions (IRETA), and Kognito joined forces in 2018 to address adolescent substance use. The coalition works with over 60 schools of social work and nursing to integrate SBI with Adolescents into undergraduate and graduate curricula in order to prepare future health professionals to assess adolescents and provide brief early intervention.

More than 5,500 individuals trained with Kognito's SBI with Adolescents simulation in the first phase of the partnership. Now in its second phase, the project aims to train 12,000 students using the immersive online simulation.

to prepare its nursing students to effectively screen and engage in brief intervention conversations with young patients. UMSN was one of over 60 academic institutions to implement the curriculum as a result of a partnership between NORC at the University of Chicago, Kognito, and other partners.

UMSN converted a portion of its clinical content to simulation training. By interacting with virtual adolescent patients in the

A third conversation challenge is an assessment. Based on their performance, students earn a score that assesses their motivational style and engagement level, as well as skills like building rapport and negotiating on an action plan.

According to Dr. Strobbe, giving students the opportunity to practice having these conversations provides insights that can be extremely valuable as they prepare to enter the workforce. "One of the most

***“Nurses are consistently the most highly trusted professionals in our country. That puts us in a unique position to be able to initiate conversations and to monitor and provide prevention.”***

— **Stephen Strobbe**, PhD, RN, PMHCNS-BC, CARN-AP, FIAAN, FAAN  
Clinical Professor at the University of Michigan School of Nursing

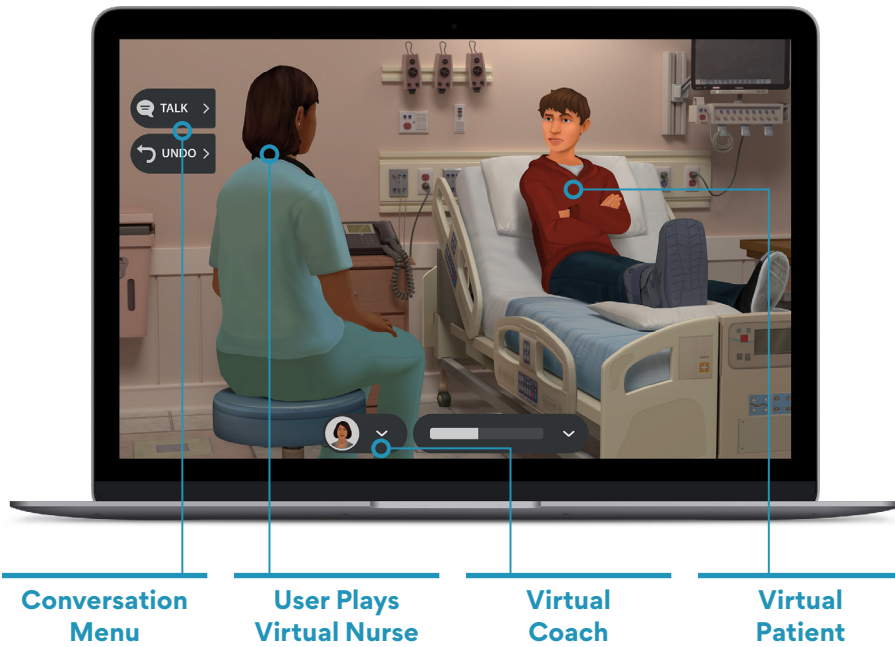
simulation, students get valuable practice using tactics such as motivational interviewing. Through this hands-on approach, *SBI with Adolescents* aims to prepare healthcare students to gain the confidence, knowledge, and skills to effectively:

- Screen patients using evidence-based tools
- Conduct brief interventions using motivational interviewing techniques
- Make collaborative action plans with patients
- Coordinate referrals to treatment or follow-up care

Throughout two virtual challenges, students get to practice conversations guided by a virtual coach who introduces each topic and provides advice.

important aspects of this simulation is to help students find their voice. This can be difficult content, so giving students an opportunity to practice this, to get some feedback, to see what works for them or what they might want to modify to be more effective has been a really productive endeavor," Dr. Strobbe says.

*SBI with Adolescents* is offered to students every semester. Four hours are devoted exclusively to adolescent SBIRT. Students are given time to complete the 60-minute *SBI with Adolescents* simulation to receive clinical credit. The remaining time is dedicated to a face-to-face clinical simulation where interactive role-plays are performed in group settings.



Conversation Menu

User Plays Virtual Nurse

Virtual Coach

Virtual Patient

## RESULTS

### Students gain competence, confidence, and readiness to deliver SBIRT

To date, over 650 UMSN students have activated Kognito’s simulation. To measure its effectiveness, surveys to assess preparedness and confidence are conducted before and after students complete the training. The results have been extremely positive: UMSN has measured improvement in overall student competence, confidence, and readiness to deliver SBIRT as a result of implementing Kognito’s simulation.

Kognito’s simulation has proven to be an effective learning experience for UMSN students and is a requirement in an undergraduate behavioral health course taught by Dr. Strobbe. “*SBI with Adolescents* is a viable, efficient, and effective

way to introduce nursing students at virtually all levels of prospective practice on the importance of being able to engage in screening and brief intervention for substance use,” Dr. Strobbe shares. And he has evidence behind this claim, having analyzed quantitative and qualitative data from *SBI with Adolescents*. A study published in the *Journal of Pediatric Nursing* revealed statistically significant improvements in “overall student competence, confidence, and readiness to deliver SBIRT.”<sup>8</sup>

Not only has the simulation been an effective addition to the curriculum to build clinical skills, but nursing students themselves have provided positive feedback about the experience. “I really enjoyed being able to learn the material in different environments,” one student shared. “Each step reinforced the previous and seemed to really maximize memory and content retention. I’ll remember the SBIRT course for a long time.”

“One of the most important aspects of this simulation is to help students find their voice. This can be difficult content, so giving students an opportunity to practice this, to get some feedback, to see what works for them or what they might want to modify to be more effective has been a really productive endeavor.

— Dr. Stephen Strobbe

### Nursing Student Feedback

94%

of UMSN students reported that they were confident in their ability to screen adolescents for substance use after completing the simulation

92%

of students would rate the simulation as very good or excellent

97%

of students would recommend this simulation to another student

## Change in Competence, Confidence, and Readiness to Deliver SBIRT after Completing *SBI with Adolescents*<sup>8</sup>

*p*<.001 for all measures

<b>Competence</b>	<b># + Change % + Change</b>
Asking adolescents about their alcohol and drug use	70 / 120 58%
Assessing adolescent's readiness to change regarding their alcohol and drug use behavior	98 / 121 81%
Discussing/advising adolescents to reduce or halt their drinking and drug use behavior	88 / 120 73%
Helping adolescents identify benefits of cutting back or stopping use of alcohol and drugs	61 / 121 50%
Helping adolescents identify challenges/barriers in cutting back or stopping use of alcohol and drugs	64 / 121 53%
Helping adolescents develop a personal plan for cutting back or stopping alcohol; or drug use	93 / 121 77%
Arranging follow-up to help adolescents cut down or stop using alcohol or drugs	92 / 119 77%
<b>Confidence</b>	<b># + Change % + Change</b>
Using information gathered about the adolescent's substance use to provide feedback	87 / 122 71%
Helping an adolescent to agree to cut back or accept referral	95 / 122 78%
Intervening with adolescents who misuse prescription medication	90 / 120 75%
Expressing empathy and reflecting an adolescent's emotions during a brief intervention for substance use	80 / 120 66%
<b>Readiness</b>	<b># + Change % + Change</b>
To screen all adolescents for alcohol use	90 / 121 80%
To provide brief interventions for adolescents who screen positively for alcohol use	91 / 122 74%
To screen all adolescents for illicit drug use or prescription drug misuse	87 / 122 75%
To provide brief interventions for adolescents who screen positively for illicit drug use or prescription drug use	89 / 121 74%

1 [SAMHSA Key substance use and mental health indicators in the United States: Results from the 2018 National Survey on Drug Use and Health \(2019\)](#)

2 Griffin KW, Botvin GJ. Evidence-based interventions for preventing substance use disorders in adolescents. *Child Adolesc Psychiatr Clin N Am*. 2010;19(3):505–526.

3 [CDC Teen Substance Use & Risks \(2020\)](#)

4 [NIDA Health Consequences of Drug Misuse \(2017\)](#)

5 [Kognito Are Healthcare Professionals Ready to Address Patients' Substance Use and Mental Health Disorders? A National Survey of Physicians, Nurses, and Nurse Practitioners \(2019\)](#)

6 Polydorou S, Gunderson EW, Levin FR. Training physicians to treat substance use disorders. *Curr Psychiatry Rep*. 2008;10(5):399–404.

7 Agerwala, S. M., & McCance-Katz, E. F. (2012). Integrating screening, brief intervention, and referral to treatment (SBIRT) into clinical practice settings: a brief review. *Journal of psychoactive drugs*, 44(4), 307–317.

8 Burmester, K. A., Ahluwalia, J. P., Ploutz-Snyder, R. J., & Strobbe, S. (2019). Interactive computer simulation for adolescent screening, brief intervention, and referral to treatment (SBIRT) for substance use in an undergraduate nursing program. *Journal of pediatric nursing*, 49, 31-36.