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## PILOT VALIDATION OF A BRIEF SCREEN TOOL FOR SUBSTANCE USE DETECTION IN EMERGENCY CARE

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□ Abstract—Background: Screening and brief intervention for substance use in health care systems is recommended to identify and intervene with patients who abuse alcohol and other substances. However, there is limited research on the utility of short, single-item questions to identify illicit substance users. Objective: Pilot validation of two single-item screening questions to detect illicit substance use, one for marijuana and one for other illicit drugs. The goal was to identify sensitive, time-efficient screening questions that can be easily integrated into busy health care settings. Methods: A cross-sectional design was used. At intake, along with questions for tobacco and alcohol, nurses administered two brief screen questions to adult patients seen in designated areas in a large urban medical center. After patients were triaged to rooms, health educators (blind to brief screen responses) administered the Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) as the reference standard. Results: On the ASSIST, 14% and 9% of participants reported risky marijuana and illicit (nonmarijuana) drug use, respectively. Sensitivity values for the marijuana and street drug questions were 72% (95% confidence interval [CI] 67% to 78%) and 40% (95% CI 32% to 48%), respectively. Specificity values for the marijuana and street drug questions were 96% (95% CI 95% to 97%) and 99% (95% CI 98% to 99%), respectively.

This research was supported by the Substance Abuse and Mental Health Services Administration grant 1U79-TI018302-01. Values differed minimally as a function of patient characteristics. Conclusions: It is important to use validated questions to identify substance misuse so that individuals are not missed in the screening process. It is the possible that administration protocols play a role in detection rates. Future research is needed to identify easy-to-administer drug use screening questions. © 2015 Elsevier Inc.

□ Keywords—screening for illicit drug use; brief screen; universal substance screening; SBIRT; screening and brief intervention; risky substance use; harm reduction

## **INTRODUCTION**

Screening, Brief Intervention and Referral to Treatment (SBIRT) is a public health approach to identifying patients who use alcohol and other drugs at risky levels, with the goal of reducing and preventing dependency and related health consequences and injuries. Metaanalyses of >30 randomized trials show that screening and brief intervention can effectively minimize the incidence of future injury, decrease the amount and frequency of alcohol and substance use, and reduce emergency department (ED) visits among at-risk users (1–7). Findings suggest that SBIRT should be systematically incorporated into health care systems as a preventative approach to identify and intervene with patients who

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abuse alcohol and other substances. However, barriers such as the extensive time necessary to screen and intervene with patients using existing validated tools prevent widespread implementation into routine care. Therefore, creating simpler, shorter brief screening questions is of interest in busy health care settings, particularly in EDs.

#### IMPORTANCE

Studies have validated single-item questions to detect unhealthy alcohol use in primary care and ED settings. However, there is limited research on the utility of short, single-item questions for illicit substance use (8-10). A recent study validated the following screening question for drug use in primary care, "How many times in the past year have you used an illegal drug or used a prescription medication for non-medical reasons?" A response of at least one time was considered a positive screen (11). As part of a larger, federally funded statewide SBIRT initiative, Denver Health implemented this question as one of five brief screening questions regarding tobacco, alcohol, and illicit drug use. However, our nursing staff reported that this particular question was long and felt awkward to ask patients. We were concerned that nurses were changing the wording of the question when administering to patients. They requested a simpler question and reported that the question about illicit drugs might be better understood and more readily answered with the term street drugs. Nurses were also concerned that patients may not feel comfortable admitting to substance use when it was referred to as illicit. The instrument was developed by surveying the nurses who performed the screening. We asked them what terminology they felt was clear and would be consistently administered across nursing staff.

In addition to screening broadly for illicit substance use, there is a need to specifically identify patients engaging in marijuana use. Approximately 37% of all ED admissions involving illicit substance use involved marijuana (12). During the past several years, states have moved toward legalizing medical and recreational marijuana, which has led to increased visibility and access to marijuana in many areas across the country. Greater accessibility may be linked to a decreased perception of harm related to marijuana use and a corresponding increase in abuse. Colorado recently legalized marijuana and currently ranks in the top fifth of states with the highest incidence and prevalence of marijuana use, and the lowest fifth of perceived risk of using marijuana once a month (13). Therefore, there is a great opportunity to conduct screening and brief interventions with patients engaging in marijuana use to identify those who are using marijuana and are unaware of its health risks.

#### **OBJECTIVE**

Our objective was to conduct a pilot study evaluating two brief screen questions to identify emergency care patients using marijuana and other illicit substances. The goal of the current study was to assess the degree to which these single-item screening questions detected risky substance use compared to a longer, validated screening tool. The ultimate aim of the study was to identify sensitive, time-efficient screening questions for illicit drugs and marijuana that can be integrated and sustained in a busy health care setting.

#### MATERIALS AND METHODS

#### Study Design and Setting

This study was conducted at a single urban safety-net hospital. It has an academic affiliation with the University of Colorado at Denver. The ED is a Level I trauma center with approximately 75,000 visits per year. The protocol was approved by the Colorado Multiple Institutional Review Board (COMIRB). This study was part of a Clinical Service Program that is sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA) to increase early universal screening for abuse of alcohol and other drugs as an effective strategy for reducing alcohol/drug abuse and the problems associated with such abuse.

This was a prospective convenience sample study of adult patients seen at the ED and Adult Urgent Care Clinic (AUCC) within the Denver Health Medical Center between August 25 and October 31, 2010. Patients were eligible to participate if they were 18 years old or older, conversant in English, and able to consent (not cognitively impaired).

Health Educators were on duty approximately 10 h per day, 6 days per week, mostly on day and early evening hours.

## DATA COLLECTION AND PROCESSING

### Measures and Procedures

Experienced nurses at Denver Health Medical Center developed the two-item brief screen based on clinical expertise, with the goal of creating brief, easy-toadminister questions. At intake, nurses verbally administered the following two brief screen questions to patients as part of a larger screening instrument that also included questions on tobacco and alcohol use. The study questions were: In the past 3 months, have you 1) used any street drugs and 2) used any marijuana; a "yes" response on either question indicated a positive screen. Responses were entered into a Medical Screening Examination electronic record system. This screening was done in a small triage patient room. Download English Version:

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