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Disclosure of adolescent substance use in primary care: Comparison of routine clinical screening and anonymous research interviews

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Abstract

Background: The American Academy of Pediatrics recommends substance use screening in adolescent primary care. Many studies of substance use prevalence and screening tool validation are conducted under research protocols that differ from routine clinical screening in context, consequences, and privacy implications.

Methods: This study is a secondary analysis drawing from two projects focused on adolescent primary care patients ages 12-17, conducted nearly contemporaneously in a Federally Qualified Health Center (FQHC) system. The first project conducted anonymous research interviews with patients ($N=525$), while the other tracked routine clinical screening as part of a larger service implementation project ($N=5,971$). Both projects assessed substance use with the CRAFFT screening tool.

Results: Rates of substance use disclosure and substance use problems were over 3 and 4 times higher, respectively, in the anonymous research interview sample compared to rates found in routine clinical screening ($ps<.001$).

Conclusions: Routine clinical screening may underestimate substance use among adolescents.

The American Academy of Pediatrics recommends that providers screen adolescents for substance use, and provide appropriate interventions and referrals [1]. Several validated screening tools are available, including the Screening-to-Brief Intervention (S2BI) [2], Brief Screener for Tobacco, Alcohol, and Drugs (BSTAD) [3], and CRAFFT, a mnemonic of its screening items (Car, Relax, Alone, Forget, Friends, Trouble) [4, 5].

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Screening tools have been employed in clinical practice and research protocols, but are administered differently in these contexts. Research studies typically involve asking youth questions about their behaviors in a private office, usually with explicit assurances that reports will remain confidential and will not be disclosed to parents or providers (with certain exceptions for safety and immediate risk). Research studies often include confidentiality protections that are specified in informed consent/assent documents or verbal scripts. These can include collecting data anonymously or replacing identifiers with unique codes, and protecting records with a Certificate of Confidentiality. It is possible that disclosure of substance use can vary depending on the context and constraints under which screening questions are asked.

The current study compares rates of substance use disclosure among adolescent primary care patients found during routine clinical screening, to rates found during anonymous research interviews.

Methods

This secondary analysis draws from two research projects conducted nearly contemporaneously in the same Federally Qualified Health Center (FQHC) network. Friends Research Institute's IRB approved both studies.

Data Sources

Routine Clinical Screening.—Data on routine clinical screening were collected as part of a cluster-randomized trial focused on implementing screening, brief intervention, and referral to treatment (SBIRT) in the FQHC system [6]. Seven clinics were randomly assigned to either generalist or specialist models of delivering brief interventions. However, the screening protocol was uniform across all clinics. Screening was conducted by medical assistants, and results were revisited by the provider during the medical visit. Providers re-screened patients privately if a checkbox in the electronic health record (EHR) indicated parental presence during initial screening. Data were abstracted from the EHR for patients ages 12-17 seen during the study period (5/2013-12/2014), in which substance use screening results were recorded for 5,971 encounters.

Anonymous Research Interview.—Data on substance use disclosed during anonymous research interview conditions were drawn from a screening tool validation study [3], conducted 6/2012-2/2013 at three primary care clinics of the same FQHC system ($N=525$ patients ages 12-17). An experienced research interviewer approached youth awaiting appointments and invited them to complete an anonymous health interview. The IRB waived the requirement for written consent/assent. If present, parents were given an information sheet about the study, but interviews were conducted in a private office without the parent. Participants were assured that information would not be shared with parents or healthcare providers.

Measures

Both studies assessed substance use via the widely-used CRAFFT screener [4,5,7]. The CRAFFT includes three pre-screening questions querying past year use of alcohol, marijuana, or other drugs, followed by 6 yes/no questions about risky substance use behaviors. A score of 2 or higher is considered a positive screen for a substance use problem.

Analysis

Routine clinical screening was compared with anonymous research interviewing on (a) rates of disclosing substance use on the CRAFFT prescreen, and (b) rates of screening positive for a substance use problem (CRAFFT scores ≥ 2). Differences were tested using two-sample tests of proportions.

Results

Table 1 shows rates of substance use disclosure and positive CRAFFT screen obtained in routine clinical screening and anonymous research interviewing. Rates of disclosing alcohol or drug use were over 3 times higher in the anonymous interviewing sample than in routine clinical screening (10.0% vs. 30.1%, $p < .001$). Rates of screening positive for a substance use problem were over 4 times higher in the anonymous interviewing sample than in routine clinical screening (4.1% vs. 17.5%, $p < .001$). The anonymous interviewing and clinical screening samples were similar in age breakdown (50.1% and 54.6% under 15, respectively).

Discussion

This study found considerably lower rates of substance use disclosure and problems in routine clinical screening compared to anonymous research interviewing. These findings suggest that rates obtained under anonymous or confidential research conditions may not readily translate to rates seen in real-world clinical care. In routine clinical practice, screening may be subject to a number of external influences not seen in research protocols, leading to less consistency in screening practices. For example, although the clinical screening protocol required providers to re-administer the CRAFFT if parents were present during the initial screening with medical assistants, the consistency of this practice is unknown. The presence or proximity of parents, uncertainty about privacy, lack of interest in discussing substance use with providers, less time to build rapport, perceived stigma, provider comfort with the subject matter and how it is signaled to patients, and fear of disapproval/consequences from parents or providers could all potentially reduce the likelihood of disclosure in routine clinical screening relative to anonymous research interviewing. More broadly, the efficacy of screening can be affected by many factors, including choice of screening tool, which staff introduces the screening, administration format, and how screening fits with workflow.

Findings are limited to how clinical screening was conducted in this FQHC system. It is possible that different approaches could have elicited greater disclosure. A recent study found that adolescents self-reported higher comfort and honesty with electronic self-

administration compared to paper self-administration or provider interview [8], suggesting that clinics should consider screening electronically when possible. Unknown differences could exist between the clinical screening and research interviewing samples. However, these samples should be comparable. They were drawn from the same FQHC system and had a similar mix of younger and older adolescents. Nevertheless, even if some unmeasured differences exist, they are unlikely to explain such a dramatic discrepancy in disclosure.

Primary care teams should be aware of potentially significant underreporting of substance use in clinical practice. More research is needed on effective strategies to maximize disclosure of substance use and other sensitive behaviors in clinical screening. Each case of non-disclosure closes off an opportunity for intervention, and likely reduces the public health impact of screening.

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Implications and Contributions

Among adolescent primary care patients ages 12-17, rates of substance use disclosure were significantly higher during anonymous interviews than during routine clinical screening. This study highlights the need for effective strategies to facilitate disclosure of substance use and other sensitive health-risking behaviors in real-world clinical screening.

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Table 1.

Rates of substance use disclosure and positive CRAFFT screening results in routine clinical screening and anonymous research interview among adolescent primary care patients ages 12-17.

	Routine Clinical Screening (N= 5,971)	Anonymous Research Interviewing (N= 525)	p
	n (%)	n (%)	
Reported past year alcohol, marijuana, or other drug use on the CRAFFT pre-screen	598 (10.0%)	158 (30.1%)	<.001
Screened positive for a substance use problem (CRAFFT score ≥ 2)	246 (4.1%)	92(17.5%)	<.001

Note: Differences between routine clinical screening and anonymous research interviewing are tested using two-sample tests of proportions. Rates of substance use disclosure within clinic sites ranged from 6.1%-15.1% in the routine clinical screening sample, and 28.7%-30.9% in the anonymous research interviewing sample. Rates of positive CRAFFT screens within clinic sites range from 2.7%-6.7% in the routine clinical screening sample, and 17.0%-18.0% in the anonymous research interviewing sample.