Barriers to the Adoption of SBIRT for Adolescents Among Primary Care Providers

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EXECUTIVE SUMMARY

Background

Alcohol and drug use often begins during adolescence. Substance misuse during adolescence can result in poorer health and increased risk of unintentional injury, homicide, and suicide.[1] Further, initiating substance use at a young age increases the likelihood that an individual later will develop a substance use disorder (SUD).[2,3] Researchers have identified a significant need for intervention services among adolescents and evidence that brief intervention in the primary care setting is effective at curbing alcohol use.[4,5]

Screening, Brief Intervention, and Referral to Treatment (SBIRT) is a clinical approach designed to identify and respond to nondependent substance abuse before it develops into a SUD. A previous study conducted by the authors determined that few primary care providers (PCPs)[6] bill for screening and brief intervention services.[7] The goal of this study was to explore three research questions: (1) Why do PCPs not bill for SBIRT services? (2) How do PCPs screen for SUDs? (3) Do PCPs feel equipped to provide brief intervention and referral to treatment for substance use disorders and what barriers impede the provision of SBIRT by PCPs?

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[1] Kulig JW, the Committee on Substance Abuse, Tobacco, Alcohol, and Other Drugs. The role of the pediatrician in prevention, identification, and the management of substance abuse. American Academy of Pediatrics Clinical Report. Pediatrics. 2005;115(3):816–21.

[2] Englund MM, Egeland B, Oliva EM, et al. Childhood and adolescent predictors of heavy drinking and alcohol use disorders in early adulthood: a longitudinal developmental analysis. Addiction. 2008;103(Suppl 1):23–5.

[3] Swift W, Coffey C, Carlin JB, et al. Adolescent cannabis users at 24 years: trajectories to regular weekly use and dependence in young adulthood. Addiction. 2008;103(8):1361–70.

[4] Kaner EF, Beyer F, Dickinson HO, et al. Effectiveness of brief alcohol interventions in primary care populations. Cochrane Database of Systematic Reviews. 2007;2:CD004148.

[5] Substance Abuse and Mental Health Services Administration. Results From the 2009 National Survey on Drug Use and Health: Mental Health Findings. NSDUH Series H-39, HHS Publication No. SMA 10-4609. Rockville, MD: Substance Abuse and Mental Health Services Administration, Office of Applied Studies; 2010.

[6] The term *PCP* is used throughout this study to reference primary care providers, which may include case managers and health educators also working in a primary care setting.

[7] Truven Health Analytics Inc. Changing the Adolescent Substance Use Prevention Infrastructure: Leveraging the Promise of the Affordable Care Act and Parity. Subtask 1: Provider Billing for Adolescent Substance Abuse Prevention Services. Examination of Commercial and Medicaid Claims Data. Funded by the Conrad N. Hilton Foundation. Unpublished report submitted to Legal Action Center on September 9, 2015.

Methods

We used a mixed-methods approach to gain information on current PCP practices related to the provision of SBIRT to adolescents (ages 12–18 years) and young adults (ages 18–21 years). First, we conducted key informant interviews with 12 researchers, practitioners, and representatives from one health plan who were identified by expert consultants at Treatment Research Institute or who were suggested by those originally identified. With feedback from key informant interviews, we developed and conducted a survey of PCPs to gather information on the current use of SBIRT, SBIRT training, and barriers to its use. We surveyed 75 PCPs, most of whom worked in small or medium-size group private practices in an urban setting. Among the 75 PCPs, 29 were pediatricians, 32 were other types of physicians, 25 were nurse practitioners, 7 were health educators, and 7 were case managers. Key informants and survey respondents both were asked questions about barriers to screening, brief intervention, and referral to treatment.

Results

Substance Use Disorder Screening

Despite not billing for screening and brief intervention services, 80–85% of respondents indicated a high likelihood that they would speak to an adolescent or young adult patient about alcohol use, getting in the car with someone under the influence of alcohol or drugs, and illicit drug use.

Seventy-seven percent of respondents reported using a tool for screening. Among the tools, the CAGE was reported to be the most frequently used (36%). Some survey respondents indicated a preference for approaching screening on a case-by-case basis, either administering a tool to only select patients or screening patients using a conversation-based approach, rather than using a standardized approach.

Key barriers to implementing screening cited by survey respondents were time and resource constraints, difficulty with "tenacious parents" who do not allow opportunities to consult with the adolescent or young adult confidentially, and sensitivity around whether and how to involve parents if a child is at risk. Reimbursement was cited as a barrier infrequently.

Brief Intervention

Sixty-nine percent of PCPs reported that they "always" or "very frequently" provided a brief intervention and/or consultation with adolescents or young adults who they think are engaging in risky behavior regarding their use of alcohol or illicit drugs. Additionally, 81% of respondents thought that brief intervention was effective at least sometimes.

Referral to Treatment

About half (53%) of PCPs indicated that they had a relationship with a SUD specialist to whom they could refer patients in cases in which a SUD was identified through screening. Nearly all survey respondents indicated that they perceived barriers to doing so effectively. Seventeen percent "always" perceived barriers, 51% "often" perceived barriers, and 29% "sometimes" perceived barriers. Patient ability to seek treatment and patient motivation to seek treatment most often were regarded as barriers (80% and 73% of survey respondents, respectively). Availability of high-quality substance abuse treatment was regarded as a barrier by 53% of survey respondents.

Discussion and Recommendations

Primary care settings are an ideal place for an adolescent or young adult to receive brief intervention services because many children already regularly receive care in a primary care setting and have a relationship with their PCP.

Most primary care physicians reported screening for alcohol and illicit drug use, in contrast to evidence from claims data. Screening may occur but go undocumented in claims data because providers devote too little time to request reimbursement, do not accompany screening with brief intervention, or do not believe the reimbursement level is high enough to bother submitting a claim.

A large subset of PCPs report not using formal screening tools consistently. A logical next step would be to demonstrate to PCPs the improved reliability, validity, and effectiveness of using formal, validated screening instruments as compared with nonstandard or ad hoc questions.

To increase the level of screening, an important next step is to improve providers' comfort level in speaking with patients and their parents about SUD risk and addressing with parents confidentiality issues that may prevent screening and brief intervention. Another way to increase screening rates could be to leverage technology—for example, by using a system that takes the adolescent through the screening process and then shows a score (level of risk).

Improving workflow, such as by leveraging technology and other staff members, also may increase PCPs' ability to provide brief interventions. For example, these systems may provide talking points to a physician to go over with their patient that are based on their risk score. Likewise, receptionists or medical assistants could triage patients according to their risk scores and refer them to health educators (1) for brief intervention or (2) to make referrals. Involving lower levels of staff in screening and behavioral health specialists in brief intervention is a potential facilitator to SBIRT.

PCPs perceive barriers to effective referral to treatment, including patient motivation and availability of high-quality substance abuse treatment that is known to them. They also may not hear back from their patients after treatment is received, leading them to believe that treatment was ineffective. PCPs may be able to circumvent some of these barriers by hiring staff with SUD-specific expertise who work in the clinic to provide screening, brief intervention, and treatment, or referral to treatment to those in need. This strategy is likely to work best in large, integrated practices with economies of scale. In smaller practices, PCPs and SUD providers may need to strengthen their relationships.

It is encouraging that key informants said that grants from private foundations (such as the Conrad N. Hilton Foundation) and the Substance Abuse and Mental Health Services Administration (SAMHSA) are driving the growth of available SBIRT trainings and helping to fill in training gaps for PCPs. In some states, such as Massachusetts, training providers on SBIRT has reached a level of priority that has allowed them to support an organization—Massachusetts Screening, Brief Intervention and Referral to Treatment – Training & Technical Assistance (MASBIRT TTA)—dedicated to providing ongoing training, technical assistance, implementation, and sustainability guidance for providers interested in SBIRT.

BACKGROUND

Alcohol and tobacco use often begins in adolescence. One study found that 47% of twelfth graders reported being drunk at least once in their life in 2014 and 48–50% reported using illicit drugs each year from 2011 to 2015.[8] Misuse of alcohol and drugs in adolescence can immediately result in poorer health for the adolescent, while also increasing risk of unintentional injury, homicide, and suicide, which together account for 76% of mortality in the 15- to 19-year age group.[9] Even the first use of alcohol or another drug can result in tragic consequences such as unintentional injury or death. Further, adolescence is a period of neurodevelopmental vulnerability for developing addictions; age at first use is inversely correlated with lifetime incidence of developing a substance use disorder (SUD).[10,11]

Screening, Brief Intervention, and Referral to Treatment (SBIRT) is an early intervention designed to identify and respond to nondependent substance abuse in order to circumvent the need for more extensive treatment later in life.[12] *Screening* refers to the identification of the risk level of individuals and assessment of the presence of a SUD. *Brief intervention* is a conversation following screening that focuses on encouraging a patient to make healthy choices and personal behavior changes regarding substance use."[13] And *referral to treatment* is the process of directing patients who need more evaluation or treatment to the appropriate resources.

A meta-analysis of randomized control trials of brief intervention in primary care settings found strong evidence of the effectiveness of brief intervention in the primary care setting to curb alcohol use.[14] Given this evidence base, the U.S. Preventive Health Task Force has recommended the use of SBIRT for adults and the American Academy of Pediatrics issued a statement in 2011 recommending "that pediatricians become knowledgeable about adolescent alcohol, cigarette and other drug use trends in their community, and screen all adolescents for

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[8] Johnston LD, O'Malley PM, Miech, RA, et al. Monitoring the Future: National Results on Drug Use, 1975-2015: Overview, Key Findings on Adolescent Drug Use. Ann Arbor, MI: Institute for Social Research, The University of Michigan.

[9] Kulig JW, the Committee on Substance Abuse, Tobacco, Alcohol, and Other Drugs: The role of the pediatrician in prevention, identification, and the management of substance abuse. American Academy of Pediatrics Clinical Report. Pediatrics. 2005;115(3):816–21.

[10] Englund MM, Egeland B, Oliva EM, et al. Childhood and adolescent predictors of heavy drinking and alcohol use disorders in early adulthood: a longitudinal developmental analysis. Addiction. 2008;103(Suppl 1):23–5.

[11] Swift W, Coffey C, Carlin JB, et al. Adolescent cannabis users at 24 years: trajectories to regular weekly use and dependence in young adulthood. Addiction. 2008;103(8):1361–70.

[12] Although it is designed for nondependent substance abuse, it can also be a mechanism for uncovering dependent substance abuse and referring those patients to treatment.

[13] Levy SJ, Kokotailo PK. Substance use Screening, Brief Intervention, and Referral to Treatment for pediatricians. Pediatrics. 2011;128(5):e1330–40.

[14] Kaner EF, Beyer F, Dickinson HO, et al. Effectiveness of brief alcohol interventions in primary care populations. Cochrane Database of Systematic Reviews. 2007;2:CD004148.

alcohol and drug use during all health supervision and appropriate acute care visits using developmentally appropriate screening tools and intervention strategies."[15]

Pediatricians and other primary care providers (PCPs) who often have regular contact with their adolescent patients in the context of annual checkup and sick visits may be ideally suited to identify adolescents at risk for a SUD and intervene.[16] However, an analysis of claims data revealed that few PCPs bill for screening and brief intervention (SBI) services.[17] Furthermore, researchers have identified a large unmet need for intervention services among adolescents.[18]

This mixed-method research, made up of semistructured qualitative interviews and a survey of PCPs, was conducted to gain a better understanding of three key research questions:

1. Why do PCPs not bill for SBI services?
2. Do PCPs screen adolescents for SUDs? If so, how?
3. Do PCPs feel equipped to provide brief intervention and referral to treatment for substance use disorders? What barriers impede PCPs from providing SBIRT?

METHODS

Approach

This research relied on key informant interviews and a survey of PCPs[19] to develop a better understanding of whether and how PCPs are providing SBIRT services to adolescents (ages 12–18 years) and young adults (ages 18–21 years). Key informants were asked about PCP familiarity with SBIRT and SBIRT screening instruments and barriers to and best practices for SBIRT. We incorporated their feedback into a survey, from which we received 75 responses from PCPs. The survey was intended to provide further information on the extent to which providers screen adolescents and young adults for SUDs, how they screen these populations, and what barriers inhibit the level and amount of screening. We also asked about their willingness to

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[15] American Academy of Pediatrics. AAP Recommends Substance Abuse Screening as Part of Routine Adolescent Care. 2011. https://www.aap.org/en-us/about-the-aap/aap-press-room/pages/AAP-Recommends-Substance-Abuse-Screening-as-Part-of-Routine-Adolescent-Care.aspx. Accessed May 2, 2016.

[16] Babor TF, McRee BG, Kassebaum PA, et al. Screening, Brief Intervention, and Referral to Treatment (SBIRT): toward a public health approach to the management of substance abuse. Substance Abuse. 2007;28(3):7–30.

[17] Truven Health Analytics. Changing the Adolescent Substance Use Prevention Infrastructure: Leveraging the Promise of the Affordable Care Act and Parity. Subtask 1: Provider Billing for Adolescent Substance Abuse Prevention Services. Examination of Commercial and Medicaid Claims Data. Funded by the Conrad N. Hilton Foundation. Unpublished report submitted to the Legal Action Center on September 9, 2015.

[18] Substance Abuse and Mental Health Services Administration. Results From the 2009 National Survey on Drug Use and Health: Mental Health Findings. NSDUH Series H-39, HHS Publication No. SMA 10-4609. Rockville, MD: Office of Applied Studies; 2010.

[19] The term *PCP* is used throughout this study to refer to primary care providers, which may include case managers and health educators also working in a primary care setting. To understand exactly who we refer to as PCPs, please see Table 1.

provide brief intervention, training on brief intervention, perceived effectiveness of brief intervention, referral relationships, and barriers to referral to treatment.

Interviews

We conducted 12 semistructured telephone interviews with researchers, practitioners, and representatives from one health plan. A comprehensive list of key informants is included as Appendix A. Most of these key informants were identified by the Treatment Research Institute (TRI), an independent, nonprofit research and development organization dedicated to science-driven reform of treatment and policy in substance use. Key informants were knowledgeable professionals on the topic of barriers that PCPs face in providing SBIRT services and spanned a wide range of roles as researchers, practitioners, trainers, and government officials. We identified a few additional informants by using a *snowball method*—key informants suggested other researchers and practitioners for additional interviews.

A two-person team—an interviewer and a note taker—conducted all interviews. During each interview, the note taker took detailed notes, which the interviewer carefully reviewed and revised. The interviewer then (1) populated notes from each interview into a template that was designed to allow for systematic analysis of information across all interviewees for each category discussed during the interview and (2) developed themes. To ensure against bias, the team discussed each theme to ensure consistency of interpretation. There were no areas of disagreement between the team members.

We conducted interviews between July and October 2015. During that time, the research team concurrently developed a PCP survey. We updated the survey throughout this period to incorporate feedback provided by key informants.

Survey

The PCP survey was an electronic survey with mostly closed-ended questions. We designed the survey to take no more than 15 minutes to complete to ease the burden on respondents and to ensure a high response rate. We contracted with M3 Global Research to obtain 75 survey responses from their panel of PCP providers using their survey platform. M3 Global Research terminated survey responses that were not consistent with providing a predetermined distribution of providers across provider type, practice type, practice size, and practice setting. Respondents who were permitted to continue with the survey following the prescreening process were asked 16 additional questions that focused on respondents' use of SBIRT and barriers and facilitators to use, including 6 questions specific to brief intervention and 3 questions specific to referral to treatment (see the survey in Appendix C)

Key attributes of survey respondents are summarized in Table 1. Most survey respondents were physicians or pediatricians, although nurse practitioners, health educators, and case managers also responded to the survey.[20] See Appendix D for survey responses broken out by provider

[20] Health educators and case managers operate in the primary care setting and may be responsible for providing health risk assessments and education, and linking patients to appropriate community resources needed for optimal

type. Most respondents worked in private practice, although some worked in community health centers or federally qualified health centers, school-based health clinics, or mental health clinics and community mental health centers. Most respondents came from small or medium-size group practices. Over two-thirds of the respondents' practices were located in an urban setting.

Table 1. Survey Respondent Characteristics (N = 75)

Characteristic	Respondents, %
Provider type	
Pediatrician	29
Nurse practitioner	25
Health educator	7
Case manager	7
Other physician	32
Practice type	
Private practice	70
CHC or FQHC	20
School-based health clinic	5
Mental health clinic or CMHC	5
Practice size	
Solo/two-physician practice	21
Small group (<5)	35
Medium-size group (6–19)	32
Large group (20+)	12
Practice setting	
Urban	69
Rural	31

Abbreviations: CHC, community health clinic; CMHC, community mental health clinic; FQHC, federally qualified health center.

RESULTS

High rates of positive response on survey questions (Tables 2 and 3) indicate that PCPs speak with adolescents and young adults about risky behavior associated with SUDs and are aware of the importance of having these conversations, but many are not using a validated tool to provide systematic screening to all of their patients. Key barriers to initiating SBIRT through screening cited by key informants and survey respondents were time constraints and challenges related to parental involvement. Furthermore, 47% of survey respondents reported that they had not received training on providing brief intervention for patients who display risk factors for SUD and 56%, said that they had not received training on providing positive reinforcement for those who do not engage in risky behavior. Sixty-eight percent of survey respondents indicated they felt that there were "always or usually" or "often" barriers to referral to treatment when a SUD was detected.

health. They were specifically included in the survey because they may have more time to provide SBIRT than a physician. Please see Appendix D to see how their responses compare with those of other types of providers.

Barriers to Initiating Screening and Brief Intervention

Tables 2 summarizes the results for the three questions that asked providers about their likelihood of discussing with their adolescent patients alcohol use, illicit drug use, and driving with someone who is intoxicated. Fifty-nine percent of providers indicated that they were "very likely" to speak to their adolescent patients about current or past use of alcohol. A similar percentage (60%) said that they were "very likely" to discuss illicit drug use with their adolescent patients. Forty-nine percent said that they were likely to discuss the risks of getting into a car with someone who was under the influence. No providers reported that they were unlikely to ask adolescents about past alcohol or drug use.

Table 2. Likelihood of Discussing Alcohol Use, Risks of Getting in a Car With Someone Driving Under the Influence, and Illicit Drug Use With Adolescent Patients Aged 12–17 Years (N = 75)

Response	Respondents, %		
	Current or Past Alcohol Use	Risks of Getting in Car with DUI	Illicit Drug Use
Very likely (5)	59	49	60
(4)	25	32	24
(3)	11	11	11
(2)	5	7	5
Not likely (1)	0	1	0

Abbreviation: DUI, driving under the influence.

Table 3 reports the same responses for young adult patients. Providers were slightly more likely to discuss alcohol use, getting in a car with someone under the influence, and illicit drug use with young adult patients than with adolescents.

Table 3. Likelihood of Discussing Alcohol Use, Risks of Getting in the Car With Someone Driving Under the Influence, and Illicit Drug Use with Young Adult Patients Aged 18–21 Years (N = 75)

Response	Respondents, %		
	Current or Past Alcohol Use	Risks of Getting in Car with DUI	Illicit Drug Use
Very Likely (5)	61	55	61
(4)	21	24	25
(3)	13	12	9
(2)	4	8	4
Not Likely (1)	0	1	0

Abbreviation: DUI, driving under the influence.

Providers who answered 3, 4, or 5 to any of questions reported above were then asked, "If you do speak with adolescents or young adults about their use of alcohol or illicit drugs, do you use any of the following tools? (Please mark all that apply)"

i. AUDIT (Alcohol Use Disorder Identification Test)

ii. POSIT (Problem Oriented Screening Instrument for Teenagers)
iii. CAGE (Acronym represents the four questions included in this screener)
iv. CRAFFT (Acronym represents the six questions included in this screener)
v. DAST (Drug Abuse Screening Test)
vi. A broader health risk assessment tool that asks about a variety of health risks including some SUD-related risks
vii. Other (Describe in a comment box)
viii. I do not use a tool

The responses to this question are shown in Table 4. Twenty-three percent of respondents reported that they do not use any kind of tool to screen patients for SUDs. The CAGE was reported to be the most frequently used by survey respondents (36%), followed by a broad health risk assessment tool that includes targeted questions pertaining to SUD risk (24%) and the CRAFFT (21%). One survey respondent noted in a comment that the less formal approach may be more effective. This respondent noted,

> Sometimes a structured tool may make adolescents defensive, and I find it helpful to just incorporate the questions in conversation, so they don't get a sense of being screened.
>
> —Primary Care Provider

Table 4. Percentage Responses to Question About Screening Tools (n = 72)

If you do speak with adolescents or young adults about their use of alcohol or illicit drugs, do you use any of the following tools?	
Tool	**Response, %**
AUDIT	15
POSIT	13
CAGE	36
CRAFFT	21
DAST	18
A broader health risk assessment tool, that asks about a variety of health risks including substance use disorder–related risk	24
I do not use a tool	23

Notes: Numbers sum to >100% because providers were permitted to choose all of the tools that they use. Sixty-two and a half percent survey respondents said that they use a standardized tool (AUDIT, POSIT, CAGE CRAFFT, DAST). Also, three people were not asked this question on the survey because they indicated in the screening questions that they were not screening for alcohol, getting in the car with someone under the influence of alcohol, or screening for illicit drug use by answering a "1" or "2" on all six screening questions.

Respondents who said that they used a structured tool were then asked whether they used a tool for all their adolescent patients. About 38% of survey respondents who used a standardized tool indicated that they use a decision-making process to determine whom they should screen using

the tool identified in Table 5, rather than screening all patients. The remaining 62% of those who used a standardized tool said that they used the tool to screen all adolescent patients.[21]

Table 5. Percentage Responses Indicating Who Is Screened (n = 55)

Do you use the tool identified to screen every adolescent patient. or do you use a decision-making process to determine which patients should be screened using the tool?	
Screening Target	**Response, %**
I use the tool to screen all adolescent patients	62
I use the tool to screen only those whom I deem to be at risk	38

These survey findings are consistent with information provided by key informants, who suggested that PCPs may prefer to approach screening on a case-by-case basis, rather than using a prescribed approach and administering a standardized tool for every patient. Below are two quotes from key informants:

> Pediatricians will tell you that they are screening. This is tricky . . . this might not be (with a screening tool).
>
> —Key Informant

> There are differences between asking about SUD and screening using a standardized tool. Providers feel it is their role to screen but don't feel it is necessary to use a standardized tool.
>
> —Key Informant

Barriers

All respondents were asked "In the event you do not universally screen for alcohol, illicit drug use, or misuse of prescription medications or synthetic drugs, why not (check all that apply)?"

a. Process is too time consuming
b. Need dedicated person or technology to screen patients
c. Uncomfortable talking with adolescents (12–18) about these issues
d. Uncomfortable talking with young adults (19–21) about these issues
e. Don't want to diagnose the adolescent or young adult as having SUD
f. Don't have an effective way to help patients who are at risk of SUD
g. Sensitivity around whether and how to involve parents if a child is at risk
h. Difficulty with "tenacious parents" who won't allow opportunities to consult with the adolescent or young adult confidentially
i. Screening for SUD specifically is not reimbursable
j. Billing is too complicated
k. Other reason (Describe in a comment box)

[21] About 30 of the 75 survey respondents.

The responses of the 41 providers who responded to this question are shown in Table 6. Respondents generally cited difficulties with parents and time and resources as most important, and reimbursement and their own discomfort and perceived effectiveness as less important barriers.

Table 6. Percentage of Responses Indicating Reasons for Not Screening (n = 41)

In the event you do not universally screen for alcohol, illicit drug use, or misuse of prescription medications or synthetic drugs, why not?		
Reason for Not Screening	**Category of Response**	**Response, %**
Difficulty with "tenacious parents" who won't allow opportunities to consult with the adolescent or young adult confidentially	Difficulties with parents	51
Process is too time-consuming	Time and resources	41
Sensitivity around whether and how to involve parents if a child is at risk	Difficulties with parents	22
Need dedicated person or technology to screen patients	Time and resources	17
Screening for SUD is not reimbursable	Reimbursement	12
Billing is too complicated	Reimbursement	7
Uncomfortable talking with adolescents (12–18) about these issues	Discomfort/ effectiveness	2
Uncomfortable talking with young adults (19–21) about these issues	Discomfort/ effectiveness	2
Don't have an effective way to help patients who are at risk of SUD	Discomfort/ effectiveness	2

Abbreviation: SUD, substance use disorder.

Key informant interviews echoed the survey responses in every category except discomfort and perceived efficacy, which key informants generally judged to be much more of a barrier than survey respondents did. A discussion of key informant findings as they relate to each of these categories of barriers and to the survey results follows.

Resource constraints. Survey respondents noted that time and resources were a key barrier to screening for PCPs (see Table 6). All key informants also noted that this was a barrier for PCPs and suggested strategies for mitigating the problem. For example, many brief screening tools are available:

- The CAGE assesses alcohol use in four questions and can be administered in just a few minutes.
- The CRAFFT is designed to assess alcohol and drug use specifically in adolescents and young adults, and the CRAFFT's six questions take less than 5 minutes to administer.

These brief instruments are particularly well suited for PCPs, whose patients typically schedule a visit for another reason and may not expect to focus on alcohol and drugs during their appointment. PCPs often have multiple goals for their office visits with patients, and assessing

SUD risk is just one small part of what they need to accomplish during their time with the patient.

> Adolescent visits are a money loser for the practice. Volume is the only way that pediatricians can stay in business. 2–3 minutes is usually what they can give to alcohol/tobacco/drug screening. We [offer pediatricians] a laminated card that has the CRAFFT screen on one side and a graph they can use as a brief intervention on the other.
>
> —Key Informant

Other key informants suggested that changes to a practice's workflow that would allow SBIRT to be initiated without taking much of a PCP's time would be instrumental. For example, screening can be conducted electronically, and receptionists or medical assistants could triage patients according to their risk scores and refer them to health educators for brief intervention or to make referrals. Key informants mentioned that involving lower levels of staff in screening and behavioral health specialists in brief intervention was a potential facilitator to SBIRT. PCPs may need this kind of ongoing support in order for SBIRT to be sustainable in their practice.

> The messaging has to be, "You're going to screen, get guidance, know one of three things you'll do based on results, and you can execute any of them within 5 minutes and feel good about it. If providers feel this way, they will want to do it."
>
> —Key Informant

However, one key informant noted that engaging a health educator or dedicated behavioral health/SBIRT person can be more challenging in smaller practices or in pediatric settings. In pediatric settings, a good portion of their patients may be too young to be considered suitable candidates for SBIRT; therefore, it may be more difficult to keep a dedicated person engaged with SBIRT full-time. Another key informant noted that having a person dedicated to the behavioral health needs of patients does nothing to promote the relationship between a PCP and an adolescent or young adult, and the respect that is often a part of that relationship is important to an effective brief intervention. Also, having a dedicated person is not as effective if the rest of the staff is not convinced of the importance of the issue.

> They need to delegate as much of this to other team members as possible and need to be able to do it very quickly, or there simply won't be time.
>
> —Key Informant

Parental involvement. Difficulties involving parents in the screening process also was identified as a top barrier among survey respondents (Table 6). Two key informants noted that family participation was particularly important for adolescents but that integrating family members in an environment that also is concerned about patient confidentiality can be challenging. Another key informant, who serves as a provider serving adolescents with SUD problems, noted that most adolescents whom she sees were identified by their parents.

> [As a provider,] I don't think I've ever seen anyone picked up by a screening. If the kid was identified as having a problem, it was likely caught by a parent, not a screening.
>
> —Key Informant

Some primary care providers may not be comfortable or skilled at handling parents while also preserving a patient's confidentiality.

> I think that pediatricians don't have the skill set to bring adolescents and parents together to talk about screening and what might come from screening.
>
> —Key Informant

> [Dealing with confidentiality and parents] is pretty uncomfortable until you've mastered it. Most pediatricians don't like these risk-behavior adolescent conversations.
>
> —Key Informant

Once the child is screened and a problem is identified, the question of how to maintain the patients' confidentiality while also appropriately including parents in the child's treatment becomes tricky for providers to navigate. Key informants noted provider reluctance to inform parents of a problem, which is critical to a successful referral to treatment. One way that some providers are able to get around that is by offering treatment within the practice.

> The most common intervention is to bring kids back to the office.
>
> —Key Informant

> Something missing in the training is how to uphold the confidentiality while simultaneously including families.
>
> —Key Informant

Reimbursement and billing. Few survey respondents identified reimbursement as a key barrier inhibiting PCPs from screening adolescent and young adult patients for SUD. Twelve percent of respondents said that the fact that screening was not reimbursable was an issue for them, and only 7% said that billing was too complicated. Key informants also felt that reimbursement and billing were not major barriers to initiating screening and brief intervention for PCPs. The explanation given by key informants is that PCPs are unlikely to bill to screening and brief intervention codes, even when they are available because of time constraints that make spending 15 minutes on screening and brief intervention implausible. Three key informants noted that, in

order to bill to screening and brief intervention, a physician would need to spend at least 15 minutes providing these services, and that is too much time to expect physicians to spend in the context of a wellness visit. Furthermore, a key informant noted that PCPs will need to choose between billing the time to a sick visit or to screening and brief intervention (they cannot bill to both for the same time spent), and it is likely that the focus of the visit will be on general wellness.

For these reasons, ensuring that state Medicaid programs reimburse for screening and brief intervention and that commercial plans also allow providers to bill for the service likely would have a marginal impact on provision of the service at best.

> Having state Medicaid plans that have turned the (screening and brief intervention) codes on will help, but . . . will not be the prime facilitator. Providers will ask, "Why am I doing this as opposed to the other things I could do to bill?"
>
> —Key Informant

> Billing codes have very little promise. [Screening is] already accounted for in their general visit cost. I've never had a PCP tell me that the reason they check blood pressure is because there is some specific code that they can bill to.
>
> —Key Informant

> Providers should only have to bill for one screen, which should include mental health and substance use disorder. If brief intervention is necessary, that should be billed separately.
>
> —Key Informant

Provider-type restrictions are another barrier to billing. Medicare restricts SBIRT reimbursement to physicians, physician assistants, nurse practitioners, clinical nurse specialists, and clinical psychologists, and state Medicaid programs are likely to establish similar guidelines. How the salaries of these different provider types relate to the payment that is offered for screening and brief intervention is a key consideration. For example, a key informant noted that reimbursement is unlikely to cover a physician's time, although it could support other practice changes that could improve workflow and make screening and brief intervention possible.

> The financial incentive is not big enough to have providers make a major change. [SBIRT reimbursement] might support a social worker, an IT installation, or a health educator. Not a doctor.
>
> —Key Informant

Perceived effectiveness. Only 2% of survey respondents described perceived effectiveness and discomfort speaking with adolescents and young adults about substance use issues as a barrier by. However, key informants noted that many pediatricians and PCPs understand the value of addressing moderate-to-high-risk substance abuse in the primary care setting but may feel that the current environment and infrastructure for addressing these problems are not effective. Key

informants felt that lack of SBIRT and brief intervention training at the PCP level may promote discomfort among PCPs as they broach these issues with patients. They said that perceived effectiveness of screening and brief intervention may be hampered by a perceived lack of patient motivation and lack of infrastructure to effectively handle adolescents and young adults at risk of a SUD. Tables 8, 9, 11, and 12 indicate that some PCPs do perceive barriers to the effectiveness of brief intervention and referral to treatment.

> There has to be a way of doing (SBIRT) that is more consistently compelling to the clinicians that they are getting some place.
>
> —Key Informant

> Providers don't have a lot of knowledge about what to say. This can be due to lack of training (there is very little of it in medical school—most do not have a SUD curriculum) or the fact that the training comes off as being too complicated. SBIRT has been "oversold" to some extent—the referral to treatment part. For example, a person may say that they went to treatment and it wasn't useful and a provider gets discouraged. We have to learn to dial back and perhaps view it as a population-based strategy: for every five people you refer to treatment, you will impact at least one.
>
> —Key Informant

Brief Intervention

Among survey respondents, 69% responded that they "always" or "very frequently" provided a brief intervention and/or consultation with adolescents or young adults who they think are engaging in risky behavior regarding their use of alcohol or illicit drugs (Table 7). Thirty-six percent of respondents noted that they "always" or "usually" found brief intervention to be effective, with 53% noting that it was "sometimes" effective and 11% saying it is "not at all" effective or that they were not sure whether it was effective (see Table 8).

Table 7. Responses Indicating Frequency of Brief Intervention (N = 75)

Do you provide a brief intervention and/or consultation with adolescents or young adults who you think may be engaging in risky behavior regarding their use of alcohol or illicit drugs?	
Provide Brief Intervention	**Response, %**
Always	44
Very frequently	25
Often	19
Sometimes	11
Not at all	1

Table 8. Responses Indicating Perceived Effectiveness of Brief Intervention (N = 75)

Do you perceive brief intervention to be effective at reducing risk for substance abuse?	
Brief Intervention Effectiveness	**Response, %**
Yes, always or usually	8
Yes, often	28
Yes, sometimes	53
No, not at all	3
Not sure	8

Forty-seven percent of survey respondents said that they had received no training on providing brief intervention to patients who display risk factors for a diagnosable SUD (Table 9).

Table 9. Responses Indicating Training on Brief Intervention (N = 75)

Have you ever received formal training on providing brief intervention to those patients who display risk factors for, but do not rise to the level of, a diagnosable SUD?	
Brief Intervention Training for At-Risk Patients	**Response, %**
Yes, I received formal training as part of my clinical education	29
Yes, I received targeted training as a practitioner	28
Yes, I received another type of training	1
No, I have not received formal training	47

Key informants said that brief intervention was easier to train providers on and took less time than motivational interviewing both for training and implementation. They reported that PCPs were more likely to offer an at-risk adolescent or young adult a brief intervention—an adaptation to motivational interviewing that can be accomplished during a single session—rather than a more extensive course of motivational interviewing.[22]

Key informants said that a downside of brief intervention from the provider perspective may be that it does not allow the provider to build a relationship with the patient in the same way that motivational interviewing does. When asked, "What are some of the reasons that brief intervention is sometimes not effective for reducing risk for substance abuse? (Describe in a comment box)," survey respondents also noted that brief intervention does not allow for enough time to build the relationship or rapport necessary to really effect change.

Regardless of whether brief intervention or motivational interviewing is used, the ultimate goal of intervention for at-risk adolescents should be behavioral change. Because providers often

[22] Brief intervention takes principles from motivational interviewing, but it is more specific and targeted. Brief intervention can take place in a single session, but motivational interviewing is directed more at helping patients find the tools that they need within themselves for behavior change and takes place over the course of multiple sessions.

have only a few minutes for brief intervention, this can be a difficult mandate to fulfill. Key informants gave a few suggestions to help providers deliver an effective brief intervention.

> There are two things that adolescents want to hear from their doctor, science and a story. They are thinking, "Give us the facts and don't tell us what to do but trust us to make the right decision. Then give us a true life story."
>
> —Key Informant

> An outcomes focus needs to be front and center, rather than the process of doing this.
>
> —Key Informant

Although primary care providers offer brief intervention instead of multiple sessions of motivational interviewing because of lack of time and lack of training, a few key informants suggested that a short intervention may be preferable to a longer motivational interview for adolescents in the primary care setting because it does not require consent to multiple sessions.

> People identified [at a primary care practice] are usually going for some other reason and don't expect to be identified as having unhealthy substance abuse. When they are identified, you might have a brief intervention, which is fine, but to get them to go to four sessions of motivational interviewing somewhere else might not happen.
>
> —Key Informant

Key informants noted that another way to reduce the amount of time that a PCP needs to spend on brief intervention and to improve its effectiveness would be to use technology. For example, one key informant had developed a system that takes the adolescent through the screening process and then shows a score (level of risk). It then provides the PCP with talking points to go over with the adolescent.

Referral to Treatment

About half (53%) of PCPs indicated that they had a relationship with a SUD specialist to whom they could refer patients in cases in which a SUD was identified through screening (Table 10). Nearly all survey respondents indicated that they perceived barriers to doing so effectively. Seventeen percent "always" perceived barriers, 51% "often" perceived barriers, and 29% "sometimes" perceived barriers (Table 11). Patient ability to seek treatment and patient motivation to seek treatment most often were regarded as a barrier (80% and 73% of survey respondents, respectively). Availability of high-quality substance abuse treatment was regarded as a barrier by 57% of survey respondents (Table 12).

Table 10. Responses Indicating Use of a Specialist for Referral to Treatment (N = 75)

Do you have a relationship with a specialist that you use in the event one of your patients requires a referral to treatment?	
Relationship With Specialist	**Response, %**
Yes	53
No	47

Table 11. Responses Indicating Barriers to Referral to Treatment (N = 75)

Do you perceive that there are barriers to effective referral to treatment for your patients? Examples of such barriers may include patient motivation or ability to seek treatment, the availability of high quality substance use treatment for your patient, etc.	
Perception of Frequency of Barriers	**Response, %**
Yes, always or usually	17
Yes, often	51
Yes, sometimes	29
No, not at all	0
Not sure	3

Table 12. Responses Indicating Specific Barriers to Treatment (N = 73)

If you do perceive that there are barriers to effective referral to treatment for your patients, what are those barriers?	
Barriers to Effective Referrals	**Response, %**
Patient motivation	73
Patient ability to seek treatment	80
Availability of high quality substance use treatment	57

These survey categories and questions were developed from key informant interviews. Key informants said that PCPs may see referral to treatment as ineffective for a variety of reasons:

- Patients and their family need to be motivated to seek treatment, and key informants stressed the need for parental and family involvement for adolescents in particular.
- Pediatricians and primary care providers do not know where to refer the patient.
- Some pediatricians and PCPs may perceive that alcohol and drug counselors will not offer their patients effective treatment.
- Unlike medical referrals, pediatricians and PCPs do not know what to expect from SUD referrals, and they may not hear anything back from the patient, leading them to believe that treatment was ineffective.

  When a doctor refers to a cardiologist, because of their medical training they know what to expect, what the report means. For SUD, they may not feel like they know anything.

—Key Informant

> Referral is usually ineffective. . . . Family involvement is key in referrals. People resist treatment.

—Key Informant

> The whole RT [referral to treatment] part of SBIRT we know little about. Except that almost anyone identified as having a severe problem in screening will not complete a referral.

—Key Informant

Key informants said that smaller practices often have fewer connections with SUD providers and may have the most difficult time successfully referring patients to treatment. Key informants noted the importance of strengthening relationships between PCPs and substance use providers to promote a "warm hand-off" for patients identified as having a problem to someone they already know who can treat the patient effectively. However, key informants felt that most physicians did not have strong relationships with substance abuse providers who could treat the adolescent or young adult effectively and may view some alcohol and drug counselors unfavorably. Key informants noted that one solution that has been explored is to bring PCPs together with SUD providers during SBIRT training. Another solution is for the health plan to help bridge these gaps.

> Alcohol and drug counselors are typically people in recovery, and they might not even have a degree. We're giving highly needy patients to these folks, and they aren't of the caliber that they need to be for us to really expect treatment to work. This is a stereotypical view of these counselors from a medical standpoint. . . . I can tell you that some of the counselors without degrees are very good, even better than those with master's degrees. . . . Also, drug counselors don't have a lot of confidence that doctors know what they're doing when they have an addicted patient. So, my trainings have really focused on bringing medical staff and alcohol and drug counselors together.

—Key Informant

Training

Key informants said private foundations (such as the Conrad N. Hilton Foundation) and Substance Abuse and Mental Health Services Administration (SAMHSA) grants are driving the growth of available SBIRT trainings and helping to fill in training gaps for PCPs. In some states, such as in Massachusetts, training providers on SBIRT has reached a level of priority that has allowed them to support an organization—Massachusetts Screening, Brief Intervention and Referral to Treatment – Training & Technical Assistance (MASBIRT TTA)—dedicated to providing ongoing training, technical assistance, implementation, and sustainability guidance for providers interested in SBIRT.

SAMHSA also has compiled a series of online trainings and other resources on their website[23] that are available to providers who want to learn more about SBIRT. Other governmental organizations are involved in the effort to educate pediatricians and PCPs on SBIRT. For example, the National Institute on Alcohol Abuse and Alcoholism has published a practitioner's guide to alcohol screening and brief intervention for youth.[24] It may be easy for untrained physicians who lack exposure to SBIRT to conduct the screening using structured assessment tools, but they may not know what to say if a patient is identified as at risk of a SUD and may not expect that their words will be effective (see section on Brief Intervention) or what to expect from a referral to treatment (see section on Referral to Treatment).

Several key informants noted that the most effective way of passing new knowledge on to a physician and circumventing doubts is for the physician to hear it from another physician or other provider who is currently successfully providing SBIRT services. This also was thought to be a way to increase provider buy-in of SBIRT services.

> If sites can hear from other sites that doing SBIRT doesn't add a burden, this is helpful.
>
> —Key Informant

A health plan informant found that actually showing physicians poor patient results is effective in motivating them to obtain SBIRT training and to provide SBIRT services more consistently. By showing providers data about patients who are seen in the emergency department for a SUD just a short time after being seen by their PCP, this health plan motivates physicians to obtain additional training, which they make available.

DISCUSSION

Primary care settings are an ideal place for an adolescent or young adult to receive brief intervention services because many children already receive care in a primary care setting and have a relationship with their PCP. However, an analysis of claims data showed that few PCPs were billing for these services. The 75 PCPs responding to our survey self-reported that they are addressing substance abuse issues with adolescents and young adults, although they are not always doing it in a way that is consistent across patients and may not be inclined to spend the 15 minutes necessary for billing. They indicated that they do address with patients issues related to alcohol, illicit drugs, and getting into a car with someone driving under the influence. Although self-reported information can be unreliable and 75 PCPs are not representative of all PCPs, the

[23] Substance Abuse and Mental Health Services Administration, HRSA Center for Integrated Health Solutions. SBIRT: Screening, Brief Intervention, and Referral to Treatment. http://www.integration.samhsa.gov/clinical-practice/sbirt#why. Accessed May 3, 2016.

[24] National Institute on Alcohol Abuse and Alcoholism. Alcohol Screening and Brief Intervention for Youth: A Practitioner's Guide. 2015. http://pubs.niaaa.nih.gov/publications/Practitioner/YouthGuide/YouthGuide.pdf. Accessed May 3, 2016.

high rates of positive response indicate that PCPs think that it is important to address risk of a SUD with their adolescent and young adult patients.

PCPs indicated a wide variety of approaches to screening patients for risk of SUD. Some PCPs use a standardized process and tool for screening, whereas others prefer to use their professional judgment to decide whom to screen and what questions to ask. Advantages of a standardized process and tool include less potential for bias and a risk score that can be consistently interpreted and applied across patients. A standardized approach also is easier to incorporate into a work flow that uses technology and to train another medical professional to use (both thought to be important for improving the rates of screening and brief intervention). This rigorous approach may have particular advantages for PCPs who are not yet comfortable interpreting SUD risk and providing brief intervention. More experienced PCPs may be better able to use their professional judgment to determine which patients to screen and how to intervene when SUD risk is identified.

Many survey respondents indicated that they have not been trained to provide a brief intervention, and some indicated that they do not perceive brief intervention to be effective. Increasing the exposure of PCPs to an effective method of brief intervention through training may help increase provider buy-in, and offering tools that can help guide them through the process of providing a brief intervention can ease the burden on untrained providers, ensuring that the intervention is provided efficiently and effectively. Similarly, improving PCP familiarity with SUD issues may help improve their comfort level in speaking with patients and their parents about SUD risk.

Payers interested in curbing substance abuse among their enrollees are well-positioned to improve the training of in-network PCPs. To design an effective training, payers and other interested parties may consider providing information such as the prevalence of SUD development among adolescents and young adults whom they serve and identifying particular adolescents and young adults whose SUD issues were not recognized by their PCPs and the consequences that they faced. They also may want to set expectations for providers regarding the effectiveness of brief intervention and what results to expect (e.g., they may want to teach PCPs to consider brief intervention as a population-based strategy that may be effective for only a proportion of patients).

Finally, training may be one opportunity to better familiarize PCPs with effective SUD treatment available in their local area. For example, a training may bring the two types of providers into closer contact and provide an opportunity for SUD providers to demonstrate to PCPs the depth of their expertise and knowledge. SUD providers also may be best positioned to offer useful strategies for engaging parents and dealing with confidentiality issues while also demonstrating the depth and quality of SUD treatment available in the local area. This type of engagement between PCPs and SUD providers also would help facilitate stronger referral relationships among SUD providers and PCPs treating adolescents and young adults.

Appendix A
Key Informants

Number	Name	Title	Organization
1	Mady Chalk	Senior Policy Advisor and Director	Treatment Research Institute
2	Adam Brooks	Senior Vice President of Research and Senior Scientist	
3	Michael Oyster	SBIRT Specialist	Oregon Health Authority/ Addictions and Mental Health
4	John Knight	Associate Professor of Pediatrics; Associate in Medicine	Harvard Medical School; Center for Adolescent Substance Abuse Research
5	Sharon Levy	Assistant Professor of Pediatrics; Medical Director	Harvard Medical School; Adolescent Substance Abuse Program
6	Rose Calhoun	Director of Quality and Outcomes Measurement	Texas Children's Health Plan
	Ekiria Collins	Manager of Social Case Management	
7	Dr. Rich Brown	Professor	Department of Family Medicine and Community Health, University of Wisconsin, School of Medicine and Public Health
8	Natalie Wood	Director, Policy and Development	Peer Assistance Services, Inc. SBIRT Colorado
	Carolyn Swenson	Manager of Training and Consultation	
9	Dr. Marc Fishman	Assistant Professor	Psychiatry and Behavioral Sciences, Johns Hopkins University School of Medicine
10	Dr. Brett Harris	Suicide Prevention Program Manager	New York State Office of Mental Health
11	Dr. Edward Bernstein	Professor and Vice Chair for Academic Affairs	Boston University School of Medicine
12	Dr. Richard Saitz	Chair and Professor of Community Health Sciences	Boston University School of Public Health and School of Medicine

Abbreviation: SBIRT, Screening, Brief Intervention, and Referral to Treatment

Appendix B
Semi-Structured Interview Protocol

My name is Ashley Palmer, and I am a Research Leader at Truven Health Analytics. I have reached out to you because you have been identified as an expert on SBIRT services by our colleagues at Treatment Research Institute. Truven Health, along with Treatment Research Institute and the Legal Action Center, have been tasked by the Conrad N. Hilton Foundation to investigate the use of and barriers that may be impeding physicians and other providers from providing SBIRT services to adolescents (under age 21). The information gleaned from experts like you will provide context for making policy recommendations to improve provider use of SBIRT services. We are particularly interested in the role that pediatricians and other general practitioners play in providing brief interventions and referrals to treatment. We appreciate the time you are taking to assist us in this research.

Two of my colleagues are also joining us on this call. Jenna Jones is leading this project, and Lauren Hughey will be taking notes during today's call.

(Instructions for Interviewers: Please conduct some light background research on the expert before you speak with them).

1. Please introduce yourself and tell me your organization and the role that you play.
2. Specifically, tell me about the work that you've done related to SBIRT.
3. Do you think that physicians who provide services to adolescents and young adults (those ages 12–21) are generally aware of SBIRT?
    a. If so, what are the primary mechanisms through which they've become aware (Probes: Federal or state-level education or marketing of SBIRT; other providers; provider organizations)?
4. Which screening tools are providers serving adolescents and young adults most familiar with? (AUDIT, POSIT, CAGE, CRAFFT)
5. Can you think of any reasons why a provider might approach SBIRT differently for adolescents ages 12–18 versus young people who are ages 19–21?
    a. Does effectiveness of SBIRT vary between the two age groups?
    b. IS SBIRT implemented differently by pediatricians versus providers who serve an older demographic?
6. What do you see as the primary barriers for physicians providing SBIRT screening services to adolescents and young adults?
    a. (Prompt) Financial barriers, such as reimbursement offered by the different payors?

b. (Prompt) The time or resource burden of offering SBIRT? (e.g., do physicians have the time and resources to provide SBIRT)
c. (Prompt) Other administrative barriers, such as providers knowing how to code and bill for the services?
d. (Prompt) Other workflow barriers, such as EMR tools or staffing structure?
e. (Prompt) Perception problems, such as not thinking that the patients served suffer from SUD problems?
f. (Prompt) Legal barriers or disincentives to diagnose a patient as SUD?
g. (Prompt) Other barriers?

7. What do you see as the primary barriers for physicians providing brief intervention, referral and/or treatment through SBIRT to adolescents and young adults?

a. (Prompt) Knowledge of available sources of care?
b. (Prompt) Relationships with other providers?
c. (Prompt) Information barriers, such as being able to share screening results?
d. (Prompt) Financial barriers, such as reimbursement offered by the different payors?
e. (Prompt) The time or resource burden of offering SBIRT? (e.g. do physicians have the time and resources to provide SBIRT?)
f. (Prompt) Other administrative barriers, such as providers knowing how to code and bill for the services?
g. (Prompt) Other workflow barriers, such as EMR tools or staffing structure?
h. (Prompt) Perception problems, such as not thinking that the patients served suffer from SUD problems?
i. (Prompt) Legal barriers or disincentives to diagnose a patient as SUD?
j. (Prompt) Other barriers?

8. What do you think are the "best practices" of SBIRT implementation for adolescents and young adults?

a. Screening and Brief Intervention

i. Are those models that successfully involve lower-level staff in screening for SBIRT more sustainable than models where primary care docs take on screening responsibility?
ii. Have you seen any examples of technology being used successfully to screen patients or otherwise lower the burden on primary care doctors?
iii. What do you think are some of the more successful models for brief intervention? (Probes: brief negotiated interviews, motivational interviewing, etc.)

b. Referrals and Treatment

    i. How do primary care doctors most commonly link adolescents and young adults to treatment?
    ii. How frequently do adolescents and young adults receive follow-up after they have been deemed to be at high risk of SUD?
    iii. What do you think is the most effective model for linking adolescents and young adults to treatment?
    iv. In what ways are primary care docs successfully partnering with outside institutions to provide treatment?

        1. Why do you think these models have been successful?

c. Is SBIRT being delivered successfully to adolescents and young adults outside of the primary care setting? (specialty, ED, hospital inpatient, outpatient)

    i. In what ways have these models been successful?

d. Any other best practices?

9. Is there anything else that you want to talk about regarding providers' use of SBIRT?

Appendix C
Survey Instrument

The Conrad N. Hilton Foundation, in collaboration with Truven Health Analytics, the Legal Action Center, and Treatment Research Institute, would like to learn more about primary care providers' opinions and experiences providing Screening, Brief Intervention, and Referral to Treatment (SBIRT) services. You have been selected to participate in a survey of providers about the use of SBIRT for substance use disorders in adolescents (ages 12–18) and young adults (ages 18–21). We would be most grateful if you could please take 15 minutes to complete and return this survey.

Your participation is critical both in identifying significant gaps that currently exist in prevention and early intervention services disorders for adolescents and young adults and in improving how substance use is managed in our society.

All survey responses are confidential, your responses will be combined with responses from other primary care providers across the United States, and reporting will be aggregated to reflect the experiences of primary care providers across the country.

We appreciate your time and contribution.

1. **How do you identify yourself as a provider?**
    a. Pediatrician
    b. Primary care physician (e.g. family medicine, internal medicine)
    c. Primary care practitioner, non-physician (e.g. nurse practitioner, physician assistant)
    d. Case manager or health educator
    e. Other (Describe in a comment box)

2. **Please indicate what type of practice you work in. (<u>Please choose all that apply</u>)**
    a. Private practice
    b. Community health center (CHC) or federally-qualified health center (FQHC)
    c. School-based health clinic
    d. Mental health clinic or CMHC
    e. Other (Describe in a comment box)

3. **Please indicate the size of your practice.**
    a. Solo/two-physician practice
    b. Small group (5 or fewer providers)
    c. Medium group (6–19 providers)
    d. Large group (≥20 providers)

Screening for Alcohol

1. How likely are you to speak with your adolescent patients (ages 12–17) about their current or past use of alcohol to assess their level of risk for dependency or other alcohol-related problems at their annual wellness visit?
    a. 5 – Very likely
    b. 4
    c. 3
    d. 2
    e. 1 – Not likely
2. How likely are you to speak with your young adult patients (ages 18–21) about their current or past use of alcohol to assess their level of risk for dependency or other alcohol-related problems at their annual wellness visit?
    a. 5 – Very likely
    b. 4
    c. 3
    d. 2
    e. 1 – Not likely

Screening for Danger Related to Alcohol

1. How likely are you to speak with your adolescent patients (ages 12–17) about the risks of getting into a car with someone driving under the influence of alcohol at their annual wellness visit?
    a. 5 – Very likely
    b. 4
    c. 3
    d. 2
    e. 1 – Not likely
2. How likely are you to speak with your young adult patients (ages 18–21) about the risks of getting into a car with someone driving under the influence of alcohol at their annual wellness visit?
    a. 5 – Very likely
    b. 4
    c. 3
    d. 2
    e. 1 – Not likely

Screening for Illicit Drugs, Misuse of Prescription Medication or Synthetic Drugs

1. How likely are you to speak with your adolescent patients (ages 12-17) about their current or past use of illicit drugs, misuse of prescription medication, or synthetic drugs at their annual wellness visit?
    a. 5 – Very likely
    b. 4
    c. 3
    d. 2
    e. 1 – Not likely
2. How likely are you to speak with your young adult patients (ages 18–21) about their current or past use of illicit drugs, misuse of prescription medication, or synthetic drugs at their annual wellness visit?
    a. 5 – Very likely
    b. 4
    c. 3
    d. 2
    e. 1 – Not likely

General Questions

1. (Ask this question if they answer 3, 4, or 5 to any of the screener questions in the above section titled "Screening for Alcohol," "Screening for Danger Related to Alcohol," or "Screening for Illicit Drugs Misuse of Prescription Medication or Synthetic Drugs.")
    a. If you do speak with adolescents or young adults about their use of alcohol or illicit drugs, do you use any of the following tools? (**Please mark all that apply**)
        i. AUDIT (Alcohol Use Disorder Identification Test)
        ii. POSIT (Problem Oriented Screening Instrument for Teenagers)
        iii. CAGE (Acronym represents the 4 questions included in this screener)
        iv. CRAFFT (Acronym represents the 6 questions included in this screener)
        v. DAST (Drug Abuse Screening Test)
        vi. A broader health risk assessment tool, that asks about a variety of health risks including some SUD related risks
        vii. Other (Describe in a comment box)
        viii. I do not use a tool

2. (Skip this question if they choose answer viii "I do not use a tool" to question 3 above.)
    a. Do you find that the screening tools you use are appropriate for both 12-year-olds and 21-year-olds?
        i. Yes
        ii. No
        iii. I don't know
3. Do you take a different approach to screening 12-year-olds than 21-year-olds?
    a. Yes
    b. No
    c. If yes, please describe how your approach differs for young adults and adolescents.
4. (Skip this question if they choose answer viii "I do not use a tool" to question 3 above)
    a. Do you use the tool identified in Question 3 to screen every adolescent patient or do you use a decision-making process to determine which patients should be screened using the tool?
        i. I use the tool to screen all adolescent patients
        ii. I use the tool to screen only those whom I deem to be at risk
            1. If so, how do you determine "risk"?
5. In the event you do not universally screen for alcohol, illicit drug use, or misuse of prescription medications or synthetic drugs, why not? (**Please check all that apply**)
    a. Process is too time-consuming
    b. Need dedicated person or technology to screen patients
    c. Uncomfortable talking with adolescents (12–18) about these issues
    d. Uncomfortable talking with young adults (19–21) about these issues
    e. Don't want to diagnose the adolescent or young adult as having SUD
    f. Don't have an effective way to help patients who are at risk of SUD
    g. Sensitivity around whether and how to involve parents if a child is at risk
    h. Difficulty with "tenacious parents" who won't allow opportunities to consult with the adolescent or young adult confidentially
    i. Screening for SUD specifically is not reimbursable
    j. Billing is too complicated
    k. Other reason (Describe in a comment box)

6. Please rank your choices in Question 5 , with 1 being *the most significant barrier* and 11 being *the least significant barrier* (Rank in order of importance)

7. Which of the following would be effective in helping you to increase the number of adolescents or young adults you screen for alcohol or illicit drug use?

    a. Staff to conduct screening
    b. Staff with specialty knowledge of substance use disorders
    c. Staff with specialty knowledge of adolescents and young adults
    d. Technology to conduct screening (e.g., tablets)
    e. Ability to bill for screening
    f. Increased reimbursement for screening
    g. Technology to help me understand next steps following screening
    h. Training to help me understand the next steps following screening
    i. Evidence showing the effectiveness of brief intervention

8. Please rank the choices in Question 7, with 1 being *most effective* and 9 being *least effective* in helping you to increase the number of adolescents or young adults you screen for alcohol or illicit drug use? (Rank in order of importance)

Brief Intervention and Referral to Treatment

9. Do you provide a brief intervention and/or consultation with adolescents or young adults whom you think may be engaging in risky behavior regarding their use of alcohol or illicit drugs?

    a. Always
    b. Very frequently
    c. Often
    d. Sometimes
    e. Not at all

10. After you screen a patient, is it clear when to provide brief intervention and/or consultation versus referral to treatment?

    a. Yes
    b. No
    c. Sometimes (Describe)

11. Have you ever received formal training on providing brief intervention **to those patients who display risk factors for**, but do not rise to the level of, a diagnosable SUD? (**Please check all that apply**)
    a. Yes, I received formal training as part of my clinical education
    b. Yes, I received targeted training as a practitioner
    c. Yes, I received another type of training (Describe)
    d. No, I have not received formal training

12. Have you ever received formal training on providing brief intervention for those patients who **do not** engage in risky behavior around alcohol and illicit drugs?
    a. Yes, I received formal training as part of my clinical education
    b. Yes, I received targeted training as a practitioner
    c. Yes, I received another type of training (Describe)
    d. No, I have not received formal training

13. Do you perceive brief intervention to be effective at reducing risk for substance use?
    a. Yes, always or usually
    b. Yes, often
    c. Yes, sometimes
    d. No, not at all
    e. Not sure

14. What are some of the reasons that brief intervention is sometimes not effective for reducing risk for substance abuse? (Describe in a comment box)

15. Do you have a relationship with a specialist that you use in the event one of your patients requires a referral to treatment?
    a. Yes
        i. If yes, can you further describe the type(s) of mental health or substance use professional that you refer you patients to?
    b. No

16. Do you perceive that there are barriers to effective referral to treatment for your patients? Examples of such barriers may include patient motivation or ability to seek treatment, the availability of high-quality substance use treatment for your patients, etc.

    a. Yes, always or usually
    b. Yes, often
    c. Yes, sometimes
    d. No, not at all
    e. Not sure

17. (Ask this question if they answer "Yes, always or usually," "Yes, often," or "Yes, sometimes" to number 16 above). If you do perceive that there are barriers to effective referral to treatment for your patients, what are those barriers?

    a. Patient motivation
    b. Patient ability to seek treatment
    c. Availability of high-quality substance use treatment
    d. Other (Please describe)

18. Do you use electronic health records to assist you with screening, brief intervention, and/or referral to treatment? (**Please choose all that apply**)

    a. Screening
    b. Brief intervention
    c. Referral to treatment
    d. None of the above
    e. Not sure

Appendix D
Survey Responses by Provider Type

Screener 1. Likelihood of Discussing Current or Past Use of Alcohol With Adolescent Patients (Ages 12–17 years), by Provider Type

Response	Total	Pediatrician	MD	Nurse Practitioner	Case Manager	Health Educator
No. of responses	75	22	24	19	5	5
Response, %						
Very likely (5)	59	59	46	84	80	0
(4)	25	18	38	16	20	40
(3)	11	18	8	0	0	40
(2)	5	5	8	0	0	20
Not likely (1)	0	0	0	0	0	0

Screener 2. Likelihood of Discussing Current or Past Use of Alcohol With Young Adult Patients (Ages 18–21), by Provider Type

Response	Total	Pediatrician	MD	Nurse Practitioner	Case Manager	Health Educator
No. of responses	75	22	24	19	5	5
Response, %						
Very likely (5)	61	64	54	79	80	0
(4)	21	9	29	21	20	40
(3)	13	23	13	0	0	40
(2)	4	5	4	0	0	20
Not likely (1)	0	0	0	0	0	0

Screener 3. Likelihood of Discussing Risks of Getting in the Car With Someone Driving Under the Influence With Adolescent Patients (Ages 12–17 Years), by Provider Type

Response	Total	Pediatrician	MD	Nurse Practitioner	Case Manager	Health Educator
No. of responses	75	22	24	19	5	5
Response, %						
Very likely (5)	49	55	33	74	60	0
(4)	32	32	46	11	40	40
(3)	11	9	8	16	0	20
(2)	7	5	8	0	0	40
Not likely (1)	1	0	0	0	0	0

Screener 4. Likelihood of Discussing Risks of Getting in the Car With Someone Driving Under the Influence (Ages 18–21 Years), by Provider Type

Response	Total	Pediatrician	MD	Nurse Practitioner	Case Manager	Health Educator
No. of responses	75	22	24	19	5	5
Response, %						
Very likely (5)	55	50	46	79	60	20
(4)	24	32	33	5	20	20
(3)	12	14	8	16	20	0
(2)	8	5	8	0	0	60
Not likely (1)	1	0	4	0	0	0

Screener 5. Likelihood of Discussing Illicit Drug Use With Adolescent Patients (Ages 12–17 Years), by Provider Type

Response	Total	Pediatrician	MD	Nurse Practitioner	Case Manager	Health Educator
No. of responses	75	22	24	19	5	5
Response, %						
Very likely (5)	60	59	42	84	80	40
(4)	24	32	33	11	0	20
(3)	11	5	17	5	20	20
(2)	5	5	8	0	0	20
Not likely (1)	0	0	0	0	0	0

Screener 6. Likelihood of Discussing Illicit Drug Use With Young Adult Patients (Ages 18–21 Years), by Provider Type

Response	Total	Pediatrician	MD	Nurse Practitioner	Case Manager	Health Educator
No. of responses	75	22	24	19	5	5
Response, %						
Very likely (5)	61	59	46	84	80	40
(4)	25	23	38	11	20	40
(3)	9	14	13	5	0	0
(2)	4	5	4	0	0	20
Not likely (1)	0	0	0	0	0	0

General Questions

Note that there is no summary table for question 14 because that question is open-ended.

1. **If you do speak with adolescents or young adults about their use of alcohol or illicit drugs, do you use any of the following tools?**

Response	Total	Pediatrician	MD	Nurse Practitioner	Case Manager	Health Educator
No. of responses	72	21	23	19	5	4
Response, %						
AUDIT	15	0	26	21	0	25
POSIT	13	0	13	11	60	25
CAGE	36	19	35	63	40	0
CRAFFT	21	29	13	21	40	0
DAST	18	5	17	21	40	50
A broader tool	24	33	9	32	0	50
I do not use a tool	24	29	35	11	20	0

Abbreviations: AUDIT, Alcohol Use Disorder Identification Test; CAGE (Acronym represents the four questions included in this screener—Cut-down, Annoyed, Guilt, and Eye-opener); CRAFFT, acronym represents the six questions included in this screener—Car, Relax, Alone, Forget, Friends, Trouble); DAST, Drug Abuse Screening Test; POSIT, Problem Oriented Screening Instrument for Teenagers.

2. **Do you find that the screening tools you use are appropriate for both 12-year-olds and 21-year-olds?**

Response	Total	Pediatrician	MD	Nurse Practitioner	Case Manager	Health Educator
No. of responses	55	15	15	17	4	4
Response, %						
Yes	69	67	73	65	75	75
No	24	27	13	29	25	25
I don’t know	7	7	13	6	0	0

3. **Do you take a different approach to screening 12-year-olds than 21-year-olds?**

Response	Total	Pediatrician	MD	Nurse Practitioner	Case Manager	Health Educator
No. of responses	75	22	24	19	5	5
Response, %						
Yes	75	77	67	89	80	40
No	25	23	33	11	20	60

4. **Do you use the tool identified to screen every adolescent patient or do you use a decision-making process to determine which patients should be screened using the tool?**

Response	Total	Pediatrician	MD	Nurse Practitioner	Case Manager	Health Educator
No. of responses	55	15	15	17	4	4
Response, %						
I use the tool to screen all adolescent patients	62	67	40	76	75	50
I use the tool to screen only those whom I deem to be at risk	38	33	60	24	25	50

5. **In the event you do not universally screen for alcohol, illicit drug use, or misuse of prescription medications or synthetic drugs, why not?**

Response	Total	Pediatrician	MD	Nurse Practitioner	Case Manager	Health Educator
No. of responses	41	17	14	4	3	3
Response, %						
Process is too time consuming	41	35	57	50	0	33
Need dedicated person or technology	17	12	21	25	0	33
Uncomfortable talking with adolescents (12–18) about these issues	2	0	7	0	0	0
Uncomfortable talking with young adults (19–21) about these issues	2	0	7	0	0	0
Don’t want to diagnose as having a SUD	2	6	0	0	0	0
Don’t have an effective way to help	2	0	7	0	0	0
Sensitivity around parents	22	6	29	25	33	67
Difficulty with “tenacious parents”	51	53	43	50	67	67
Screening is not reimbursable	12	12	7	25	33	0
Billing is too complicated	7	6	7	25	0	0

Abbreviation: SUD, substance use disorder.

6. **In the event you do not universally screen for alcohol, illicit drug use, or misuse of prescription medications or synthetic drugs, why not? (Rank responses 1–9, with 1 being most effective—note that not everyone ranked all responses)**

Response	Rank, %								
	1	2	3	4	5	6	7	8	9
Process is too time-consuming (n = 9)	44	44	11	0	0	0	0	0	0
Need dedicated person or technology (n = 5)	60	20	0	0	20	0	0	0	0
Uncomfortable talking with adolescents about these issues (n = 1)	100	0	0	0	0	0	0	0	0
Uncomfortable talking with young adults about these issues (n = 1)	0	0	0	100	0	0	0	0	0
Don't want to diagnose the adolescent or young adult as having SUD issues (n = 0)	0	0	0	0	0	0	0	0	0
Don't have an effective way to help patients who are at risk of SUD (n = 1)	100	0	0	0	0	0	0	0	0
Sensitivity about whether and how to involve parents if a child is at risk (n = 9)	0	67	22	11	0	0	0	0	0
Difficulty with "tenacious parents" who won't allow opportunities to consult with the adolescent or young adult confidentially (n = 15)	53	20	13	7	7	0	0	0	0
Screening for SUD specifically is not reimbursable (n = 5)	40	20	40	0	0	0	0	0	0
Billing is too complicated (n = 3)	0	67	33	0	0	0	0	0	0

Abbreviation: SUD, substance use disorder.

7. Which of the following would be effective in helping you to increase the number of adolescents or young adults you screen for alcohol and illicit drug use?

Response	Total	Pediatrician	MD	Nurse Practitioner	Case Manager	Health Educator
No. of responses	75	22	24	19	5	5
Response, %						
Staff to conduct screening	44	32	58	42	20	60
Staff with specialty knowledge of SUD	40	27	46	47	60	20
Staff with specialty knowledge of adolescents/young adults	33	18	29	42	80	40
Technology to conduct screening	47	50	46	58	0	40
Ability to bill for screening	52	55	42	79	20	20
Increased reimbursement for screening	51	45	50	58	80	20
Technology to help me understand next steps following screening	21	14	25	32	20	0
Training to help me understand next steps following screening	37	27	46	42	40	20
Evidence showing the effectiveness of brief intervention	41	45	46	32	40	40

Abbreviation: SUD, substance use disorder.

8. **Please rank the choices in Question 9, with 1 being most effective to least effective in helping you to increase the number of adolescents or young adults you screen for alcohol or illicit drug use? (Rank responses 1–9, with 1 being most effective)**

Response	Rank, %								
	1	2	3	4	5	6	7	8	9
Staff to conduct screening (n = 31)	42	26	6	10	13	3	0	0	0
Staff with specialty knowledge of SUD (n = 29)	34	21	21	10	3	7	0	0	3
Staff with specialty knowledge of adolescents and young adults (n = 23)	22	*35*	13	9	4	0	9	4	4
Technology to conduct screening (n= 34)	24	24	26	3	12	6	3	0	3
Ability to bill for screening (n = 38)	16	37	11	16	3	11	3	5	0
Increased reimbursement for screening (n = 36)	22	17	19	14	11	3	6	3	6
Technology to help me understand next steps following screening (n = 16)	6	19	6	19	6	25	6	13	0
Training to help me understand the next steps following screening (n = 28)	21	29	14	11	14	4	7	0	0
Evidence showing the effectiveness of brief intervention (n = 30)	27	13	27	17	0	0	7	7	3

Abbreviation: SUD, substance use disorder

9. **Do you provide a brief intervention and/or consultation with adolescents or young adults whom you think may be engaging in risky behavior regarding their use of alcohol or illicit drugs?**

Response	Total	Pediatrician	MD	Nurse Practitioner	Case Manager	Health Educator
No. of responses	75	22	24	19	5	5
Response, %						
Always	44	32	38	74	40	20
Very frequently	25	36	21	11	40	40
Often	19	18	21	16	20	20
Sometimes	11	14	21	0	0	0
Not at all	1	0	0	0	0	20

10. After you screen a patient, is it clear when to provide brief intervention and/ or consultation versus referral to treatment?

Response	Total	Pediatrician	MD	Nurse Practitioner	Case Manager	Health Educator
No. of responses	75	22	24	19	5	5
Response, %						
Yes	59	68	50	63	60	40
No	27	23	29	21	20	60
Sometimes	15	9	21	16	20	0

11. Have you ever received formal training on providing brief intervention to those patients who display risk factors for, but do not rise to the level of, a diagnosable SUD?

Response	Total	Pediatrician	MD	Nurse Practitioner	Case Manager	Health Educator
No. of responses	75	22	24	19	5	5
Response, %						
Yes, I received formal training as part of my clinical education	29	14	33	26	80	40
Yes, I received targeted training as a practitioner	28	23	17	47	20	40
Yes, I received another type of training	1	0	0	5	0	0
No, I have not received formal training	47	64	54	26	20	40

12. Have you ever received formal training on providing brief intervention for those patients who do not engage in risky behavior around drugs alcohol and illicit drugs?

Response	Total	Pediatrician	MD	Nurse Practitioner	Case Manager	Health Educator
No. of responses	75	22	24	19	5	5
Response, %						
Yes, I received formal training as part of my clinical education	20	18	25	0	60	40
Yes, I received targeted training as a practitioner	27	23	13	47	40	20
Yes, I received another type of training	1	0	0	5	0	0
No, I have not received formal training	56	59	67	47	40	40

13. Do you perceive brief intervention to be effective at reducing risk for substance abuse?

Response	Total	Pediatrician	MD	Nurse Practitioner	Case Manager	Health Educator
No. of responses	75	22	24	19	5	5
Response, %						
Yes, always or usually	8	0	8	16	0	20
Yes, often	28	14	25	37	40	60
Yes, sometimes	53	77	46	42	60	20
No, not at all	3	0	4	5	0	0
Not sure	8	9	17	0	0	0

15. Do you have a relationship with a specialist that you use in the event that one of your patients requires referral to treatment?

Response	Total	Pediatrician	MD	Nurse Practitioner	Case Manager	Health Educator
No. of responses	75	22	24	19	5	5
Response, %						
Yes, I have a relationship with a specialist	53	27	54	79	80	40
No, I do not have a relationship with a specialist	47	73	46	21	20	60

16. Do you perceive that there are barriers to effective referral to treatment for your patients? Examples of such barriers may include patient motivation or ability to seek treatment, the availability of high quality substance abuse treatment for your patients, etc.

Response	Total	Pediatrician	MD	Nurse Practitioner	Case Manager	Health Educator
No. of responses	75	22	24	19	5	5
Response, %						
Yes, always or usually	17	23	17	21	0	0
Yes, often	51	55	54	47	60	20
Yes, sometimes	29	23	25	32	40	60
No, not at all	0	0	0	0	0	0
Not sure	3	0	4	0	0	20

17. If you do perceive that there are barriers to effective referral to treatment for your patients, what are those barriers?

Response	Total	Pediatrician	MD	Nurse Practitioner	Case Manager	Health Educator
No. of responses	73	22	23	19	5	4
Response, %						
Patient motivation	73	75	70	—	100	50
Patient ability to seek treatment	80	88	60	—	100	100
Availability of high quality substance abuse treatment	57	63	60	—	50	0
Other (please describe)	10	6	10	—	50	0

18. Do you use electronic health records to assist you with screening, brief intervention, and/or referral to treatment?

Response	Total	Pediatrician	MD	Nurse Practitioner	Case Manager	Health Educator
No. of responses	75	22	24	19	5	5
Response, %						
Screening	60	45	46	79	100	80
Brief intervention	35	23	33	37	60	60
None of the Above	29	41	38	21	0	0