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Review article

Payment and Financing for Substance Use Screening and Brief Intervention for Adolescents and Adults in Health, School, and Community Settings

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A B S T R A C T

Screening and brief intervention (SBI) is an evidence-based, cost-effective practice to address unhealthy substance use. With SBI services expanding beyond healthcare settings (e.g., schools, community organizations) and reaching younger populations, sustainability efforts must consider payment and financing. This narrative review incorporated rapid scoping review methods and a search of the gray literature to determine payment and financing approaches for SBI with adolescents and to describe related barriers and facilitators for its sustainability. We sought information relevant to adolescents and settings in which they receive SBI, but also reviewed sources with an adult focus. Few peer-reviewed articles met inclusion criteria, and those mostly highlighted healthcare settings. School-based settings were better described in the gray literature; little was found about community settings. SBI is mostly paid through grant funding and public and commercial insurance; school-based settings use a range of approaches including grants, public insurance, and other public funding. We call upon researchers and providers to describe the payment and financing of SBI, to inform how the uptake of SBI may be practicable and sustainable. The increasing activation and use of insurance billing codes, and the expansion of SBI beyond healthcare, is encouraging to address unhealthy substance use by adolescents.

IMPLICATIONS AND CONTRIBUTION

Payment approaches are essential to encourage the uptake of screening and brief intervention (SBI) as practicable and sustainable. This review aimed to learn how SBI is paid for, within healthcare or other settings. Most SBI is paid for through grants and insurance; school settings also use other public funds.

Screening and brief intervention (SBI) provides an evidence-based [1,2] and cost-effective [3,4] practice to address unhealthy alcohol and drug use. It typically occurs in healthcare settings but also may be incorporated in schools and community settings. Screening uses a short, validated screening tool followed by a brief counseling session for positive screens. Brief intervention refers to a short conversation or motivational counseling session that provides feedback of screening results, brief advice, and options to motivate change; brief follow-up sessions may be provided [5,6]. A broader concept, screening, brief intervention, and referral to treatment (SBIRT), includes referral to specialty substance use treatment if warranted.

SBI conducted in primary care outpatient settings significantly reduces alcohol use [1,7–9]. For drug SBI, systematic reviews found that screenings appropriately identified people with unhealthy drug use and brief interventions increased abstinence

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and reduced days of drug use, although most studies were for treatment-seeking populations [2,10]. The U.S. Preventive Services Task Force (USPSTF) recommends alcohol SBI and drug screening for adults [11,12]. However, few studies existed on alcohol or drug screening or its outcomes for adolescents, thus the USPTF found insufficient evidence to justify a recommendation for universal adolescent screenings [11,13,14]. Despite this assessment, research on SBI for alcohol and drug use among youth and young adults in medical and school-based settings has shown reduced use and longer term health benefits [15–19], including new research reported in this supplemental issue of the *Journal of Adolescent Health.*

Organizations such as the American Academy of Pediatrics, the American Medical Association, the American Society of Addiction Medicine, and the National Institutes of Health promote routine SBI for unhealthy alcohol and drug use, in every patient interview [20–25], including for adolescents [20,21,24]. They explicitly support SBI to prevent progression to addiction or to intervene early to promote treatment and recovery from addiction. SBI may be appropriately used in clinical practice as a diagnostic tool or to inform patients about risks, even if not universally applied [14].

Lack of or inadequate reimbursement and related challenges are frequently cited as barriers to consistent adoption and implementation of SBI [26]. SBI may be paid for through public and commercial insurance, although this generally is not applicable when delivered in nonhealthcare settings. With SBI services reaching younger populations, and accordingly being expanded beyond healthcare to settings such as schools and community organizations, sustainability efforts must consider financing approaches beyond grant funding.

Given the evidence and recommendations for SBI, and its increasing use with adolescent populations and outside of healthcare settings through programs described below and elsewhere in this issue, our goals for this narrative review were the following: (1) review the literature to identify where SBI is being paid, under what conditions (e.g., setting, provider, length of intervention), for whom, and for what substances; (2) identify potential models for paying for SBI in schools and community settings and (3) discuss how to move financing (i.e., funding source) or payment strategies (e.g., fee-for-service, bundled payments, global payments) and sustainability of SBIRT forward. We had interest in SBI for adolescent populations, yet also aimed to learn from adult populations.

Methods

To understand how SBI services are paid for, we took a multipronged approach to identifying and reviewing the literature that was then synthesized in this narrative review. A narrative, or integrative, review is a synthesis process to summarize and uncovers gaps in knowledge [27]. To achieve these goals, we used systematic search methods, often referred to as a scoping review, that facilitated a thorough and complete search of the existing literature; a rapid scoping review limits the bounds of this systematic search to facilitate more rapid sharing of information. It is appropriate with nascent literature and with descriptive topics that do not warrant additional analytic techniques [27]. Our approach therefore included the following steps.

First, we summarized current insurance-based payment approaches that allow for healthcare settings to bill for SBI services. Second, we identified major grant funding mechanisms, through which many SBI interventions are supported. Third, we conducted a rapid scoping review of the peer-reviewed literature, described briefly below and more fully in Appendix A1. Fourth, stemming from the scoping review, we examined costs and cost-effectiveness of SBI, to address a major concern for SBI implementation. Finally, we searched for gray literature, primarily web sites and reports, described briefly below and more fully in Appendix A1, to identify additional payment and financing approaches.

Rapid scoping review

We conducted a rapid scoping review of the literature from 2001 through May 2021, using PRISMA-ScR methodology. Our protocol, developed with the support of Brandeis University research librarians, was registered with the Open Science Framework (DOI: 10.17605/OSF.IO/TQB48). Search details are available in Appendix A1 and described briefly here.

We sought to capture all peer-reviewed articles that include screening and/or brief intervention for substance use, misuse, or disorders and that focused on financing or payment strategies. It quickly became clear that few articles were specific to adolescents, thus we did not restrict the search by this population, although “adult” frequently includes young adults (i.e., 18–21). Inclusion required SBI for alcohol or drug use as a focus and any description of payment or financing, including considerations of sustainability. We required studies to be US based since financing, especially in healthcare, is often country-specific. We had interest in healthcare, schools, and community or social service settings in which adolescents may be engaged. We excluded criminal justice settings, since financing is typically different; specialty substance use treatment, since it is a more advanced stage of intervention than SBI generally entails; tobacco and medication use; SBI for other concerns (e.g., depression, HIV risk); SBI payment and financing solely in the context of research (e.g., stipend or coverage for a staff position) which did not reflect standard operations; and studies that focused solely on workforce development or policy.

The scoping review search resulted in 578 unique articles. Titles and abstracts were screened by two authors (T.M.B., N.D.), with a third (S.R.) serving as a tie-breaker; 494 articles were excluded at screening. Of the remaining 84 articles, 78 were retrieved for full-text review. Most articles excluded at this stage did not relate to payment or financing beyond a simple mention (e.g., as a barrier). Nineteen articles [28–46] met inclusion criteria and were abstracted by the same authors for details about payment and financing. Only three articles specified adolescents as the focus of SBI [31,32,43], out of only eight articles that specified the population at all [31,32,35,38,40,42,43,46]. Fourteen reported on SBI in healthcare settings [28–31,33,35–39,41–43,46], of which two included a Federally Qualified Health Center [35,36] and one was a community mental health center [43]. Three were in school settings [32,36,46], one in a community setting [30], and one in homes, senior centers, and elsewhere in the community [33]. Seven focused solely on payment or financing of SBI services [28,29,33,34,37,44,45].

Gray literature

To supplement the rapid scoping review, we extended our search to include selected governmental web sites, as well as examination of references in the included scoping review

articles, and internet searches of search terms that met inclusion criteria, with additional examination of newly identified relevant terms or references. In particular, this expansion allowed a focus on school-based settings. Details are described in Appendix A1.

Results are presented in narrative review form, to incorporate themes across these approaches. Where specified, we highlight adolescent populations; otherwise, we highlight potential lessons learned for payment and financing of SBI with adolescent populations.

Results

To understand the issues related to payment and financing of SBI, it is important to first understand the cost and cost-effectiveness of SBI, which may be key for implementation decisions. We describe approaches to payment and financing under insurance mechanisms, grant funding and in other ways. We discuss relevant barriers and facilitators that link with payment and financing approaches, and other considerations for implementation and sustainability.

Screening and brief intervention costs, cost-effectiveness, and cost-offsets

SBI is generally a low-cost service. In 2015, on average in medical settings and with nonphysician SBI providers, a full screening was reported to cost only $5.53 and a brief intervention $8.56, with additional costs for extended brief treatment ($26.06) and referral to treatment ($7.83); these amounts included service delivery, support services (e.g., supervisors or clerical staff), materials, and space [47]. Cost estimates, however, vary widely and inconsistently by the type of provider (e.g., physician, nurse, healthcare worker, receptionist) delivering the SBI, duration, and setting [48–50]. Although insurance reimbursement rates may cover direct costs [48], the cost per SBI may far exceed the reimbursable amount once training and start-up costs are included [51]. Furthermore, and as with any medical service, significant provider time is spent on related activities (e.g., case notes and documentation) which may be equivalent to the service time spent and are not reimbursable [47,52]. Reimbursement rates for SBI are thus unlikely to fully cover the costs of providing care [26], except in some settings [53].

Cost-effectiveness examines the costs of a service to achieve a defined outcome, in comparison to an alternative service or no intervention (status quo). For adults, alcohol SBIRT is cost-effective, with associated cost savings estimated in 2015 at $218 per person screened in outpatient settings and $532 per person screened in emergency departments [54], with a recent review suggesting that annual savings from SBI in emergency rooms could be much higher [4]. Cost-offsets also have been examined, in part to meet requirements for Medicaid state plan amendments. Cost-offsets specifically identify other areas in which savings are recouped after a successful intervention, such as SBI. An early study of disabled adults with Medicaid found significant savings for individuals who received SBI, with treatment referrals for those who needed specialty substance use care, and costs accordingly offset by fewer alcohol-related injuries [55]. Other Medicaid studies found that SBI costs were offset by reducing inpatient and emergency care [56,57]. These studies relied on paraprofessionals and the offsets might not hold up if SBIs were conducted by more expensive providers. Cost-effectiveness and offsets have not yet been assessed for adolescents.

In most cases, demonstrated cost-effectiveness is a minimum requirement for the adoption of an intervention. Cost-effectiveness may provide a rationale for funding through grants or insurance mechanisms, based on demonstrated net savings and improved outcomes. That is, the benefit to the patient—and to the healthcare system and payers—exceeds the cost of providing the service. Yet, as described later, sustainability requires attention to many other factors [58]. The limited literature on cost-effectiveness of SBI suggests that it passes that first requirement for adoption and implementation of SBI in practice.

Private and public insurance payment mechanisms for screening and brief intervention

The Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) benefit mandates periodic health screenings, including for substance use disorder, for young people (<21 years old) who are enrolled in Medicaid and the Children's Health Insurance Program; screenings must be paid for and states must provide follow-up services when issues are identified [59]. Additionally, the USPSTF recommendations paved the way for inclusion of SBI in the Essential Health Benefits that must be provided by Medicaid and commercial insurers under the Affordable Care Act.

SBI can be billed, in fee-for-service payment structures, to commercial insurance under Current Procedural Terminology (CPT) codes and public insurance under HCPCS (Healthcare Common Procedure Coding System) codes (Table 1) [59,60]. Most codes include both screening and brief intervention; screening alone usually is not considered reimbursable (similar to blood pressure readings). In some states, Medicaid providers can conduct SBI during telehealth visits. For most codes, providers must document the amount of time spent in the SBI process. Until recently there was a 15-minute minimum, and if the SBI required less time providers could not bill. In 2019, a new HCPCS code was added to allow for billing SBI of 5–14 minutes. Within Medicaid, states must choose to "activate" the SBI codes by amending the state plan, which 25 had done as of 2017 [61]. Currently, Medicare only reimburses for SBI when deemed medically reasonable and necessary, and when it meets the requirement of diagnosis or treatment of illness or injury [59]. Screening may be conducted in the context of standard Evaluation and Management (E&M) codes, without separate payment, yet this does not account for the costs of providing the SBI intervention which includes a discussion of results and brief intervention if warranted.

Major grant funding mechanisms for screening and brief intervention

Federal and foundation grants have been a major source of funding for SBI activities in a wide range of settings. The Substance Abuse and Mental Health Services Administration (SAMHSA) and the Health Resources and Services Administration (HRSA) have worked together to promote the establishment of SBIRT programs by funding State Cooperative Agreements for implementing SBIRT at the state level and by funding Medical Residency Cooperative Agreements to incorporate SBIRT knowledge and skills into the curriculum for medical residents [62]. More recently, SAMHSA has funded SBIRT programs for community-based healthcare providers

Table 1
Reimbursement for screening and brief intervention

Code	Description	Example fee schedule
99408 (CPT)	Alcohol and/or substance abuse—structured screening and brief intervention services, 15–30 minutes	$33.41 (commercial, 2020)[a]
99409 (CPT)	Alcohol and/or substance abuse—structured screening and brief intervention services, >30 minutes	$65.51 (commercial, 2020)[a]
G2011 (HCPCS)	Alcohol and/or substance abuse—structured assessment and brief intervention, 5–14 minutes	$17.32 (Medicare, 2020)[b]
G0396 (HCPCS)	Alcohol and/or substance abuse—structured screening and brief intervention services, 15–30 minutes	$29.42 (Medicare, 2020)[a]
G0397 (HCPCS)	Alcohol and/or substance abuse—structured screening and brief intervention services, >30 minutes	$57.69 (Medicare, 2020)[a]
G0442 (HCPCS)	Annual alcohol misuse screening, 15 minutes	$18.41 (Medicare, 2020)[b]
G0443 (HCPCS)	Brief face-to-face behavioral counseling for alcohol misuse, 15 minutes	$26.71 (Medicare, 2020)[b]
H0049 (HCPCS)	Alcohol and/or drug screening	$24.00 (Medicaid, 2020)[a]
H0050 (HCPCS)	Alcohol and/or drug screening, brief intervention, per 15 minutes	$48.00 (Medicaid, 2020)[a]

CPT = Current Procedural Terminology; HCPCS = Healthcare Common Procedure Coding System; SAMHSA = Substance Abuse and Mental Health Services Administration.
[a] Fee schedule obtained from SAMHSA (https://www.samhsa.gov/sbirt/coding-reimbursement).
[b] Fee schedule obtained from AAPC Coder (https://www.aapc.com/codes/).
Sources: Centers for Medicare and Medicaid Services, 2021 (https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/downloads/SBIRT_Factsheet_ICN904084.pdf) and Substance Abuse and Mental Health Services Administration, 2020 (https://www.samhsa.gov/sbirt/coding-reimbursement).

[62]. From 2013 to 2021, the Conrad N. Hilton Foundation funded an initiative to assess the feasibility and outcomes of SBIRT for youth and young adults in primary care, school, community mental health centers, juvenile justice programs, and community-based programs focused on youth [63].

Use of screening and brief intervention payment and financing approaches

Payment for SBI in the peer-reviewed literature was generally in the context of grants [30,33,37–39,41,45,46] and insurance (Medicaid, Medicare, and commercial insurance) [28,29,32–35,39,41–45] and this finding is echoed in the gray literature [26,64–66]. Other payment approaches in the peer-reviewed literature included state and local government [40,41,43,45], foundations [41], and other approaches. An SBI program in a college health center, initially funded by SAMHSA, partnered with the psychology department to have graduate students conduct SBI as part of their fieldwork, enabling sustainment without additional funding [46]. SBI in community settings, outside of healthcare or schools, was rarely described in terms of payment and financing in either the peer-reviewed or gray literature. In one example, an SBI program for older adults in community settings was funded by billing the state's substance use program housed within its department of child and family services [40].

For adolescents, a major SBI setting is schools, which generally are funded by state departments of education and/or localities through taxes, and sometimes through tuition. These mechanisms generally do not allow for service-specific billing. Schools sometimes obtain grants for innovations (e.g., through the US Department of Education or local communities) or may build budgets that include school nurses or substance use prevention programs, which may include specific services such as SBI [67]. In addition, schools may house "school-based health centers" which provide primary care services to students and often community members; they may also provide behavioral health services [68].

In some cases, schools can access Medicaid funding [32,67,69–71], and may bill Medicaid for SBI services if allowed by their state [66,68] or under EPSDT requirements [72]. Issues that must be considered, beyond availability of SBI billing codes within that state, include the age range for which the SBI codes apply, whether the state allows schools as a service setting, if different procedures and fee schedules apply, the types of providers that may bill, whether administrative costs are covered, and if there are any additional requirements or limitations [66,70].

The potential for billing Medicaid is important, but may not be sufficient to support sustainable SBI implementation within schools. For instance, billing Medicaid (or other insurers) for youth services requires parental consent [71]. A program set in two schools (grades 6–12) was initially funded by a substance use treatment program with the intent of billing students' Medicaid or commercial insurance, as allowed in that state [32]. The authors found this approach was not feasible: although parents gave blanket permission to access insurance, only 40% of parents provided specific approval when requested and the pilot program had to cover those costs [32]. Innovative approaches to obtaining consent may have potential to reduce the impact of this barrier [71].

School-based health centers are often funded and administered separately from schools themselves [68]. In addition to Medicaid or insurance billing, school-based health centers may be supported through other types of funding [66], such as from HRSA's Maternal and Child Block Grant (Title V) that includes health promotion activities [73], the Department of Education's Every Student Succeeds Act, or SAMHSA's Substance Abuse Prevention and Treatment Block Grants. These funding streams might allow SBI to be covered without direct billing or might support training and other associated activities [66]. Similarly, schools may include SBI as a line item in their budgets to their local and state departments of education [66]. Some programs are supported directly by tax revenue (e.g., King County, Washington) [74] or through legislation (e.g., Massachusetts) [75,76]. Financial sustainability is noted by stakeholders as an ongoing concern for school-based SBI programs [26].

Other settings generally are not allowed to access insurance payments for services such as SBI, and social service and community settings are more varied in terms of funding streams. Many are governmental (e.g., departments of child and family services) or receive governmental funding (e.g., housing programs). Some bill directly for services provided, some receive grant funding from their states or localities, federal agencies, or other funders. These

Table 2
Barriers and facilitators for sustainable reimbursement of SBI

Barrier/Facilitator	Description
Barriers	
SBI billing codes not activated in all state Medicaid plans or by all insurers [29,33–35,38,39,43,44]	Medicaid billing codes may not be activated or are restricted due to state budget limitations or competing budget priorities or state policy [33,35,44] "State Plan Amendments" to allow Medicaid billing codes follow a complex process and require that new services will be effective, cost-effective, and lead to measurable cost-offsets [33] Federal SBI grants (e.g., SAMHSA) may provide disincentive for states to fund through Medicaid or other funding sources [44] Choice of which billing codes to activate (e.g., CPT or HCPCS) has implications for which types of providers may bill for SBI [34] and specific codes often are inconsistent across insurers [43]
Billing code activation is insufficient [34]	Concerns about low reimbursement rates may lead to providers who do not conduct or bill for SBI [34]
Minimum time for billing is longer than most brief interventions [28,29,33,39]	BI can be effective when very brief (5–10 minutes) but billing requires minimum of 15 minutes [29,33,39] Fee-for-service reimbursement rates may not cover full cost of BI [33]
Unable to bill for multiple services in same visit or same day [29,31,38,43,64,77]	SBI is often done in context of another visit (e.g., primary care or a problem-oriented visit) [31,38,43,64] or by visits to different providers on the same day [29,77]
Inconsistent reimbursement even when insurers are billed [42]	Lack of provider reimbursement even when insurer is billed
Capitated systems may limit the amount of services a patient can access or provider revenue to cover services provided [37,41]	Limits based on overall service expectations do not allow for additional services if needed, or priorities for services may not encourage SBI, since revenue is capped [37,41]
Licensing/credentialing required for billing [29,43,46]	Limits who may bill for SBI, and likely means SBI provision by more expensive providers, making SBI service provision less efficient from both time and cost perspectives [29] Some health professionals are not allowed to bill for SBI, even though SBI has often been tested with nonlicensed providers [29] Mental health practitioners may only be licensed for mental health services, so cannot bill for SBI [43]
Requirement for specific SBI instruments [43]	Billing may be denied if SBI did not use an approved screening instrument
Insurers will not pay for services in nontraditional settings such as schools and communities [43]	Requires noninsurance financing to offer SBI in schools and community settings
Parental consent for using insurance for youth/young adults [32]	Services require parental permission to bill; not feasible to obtain specific approval in school setting [32]
Billing records may break confidentiality about substance use issues [32,41]	Use of parental insurance or school-based programs may disclose use of SBI with their children, potentially breaking trust and confidentiality asserted when SBI is provided [32,45,78] Providers and patient concerns about confidentiality when SBI is documented through billing records [41,43]
Facilitators	
Include SBI in global or bundled payment structure [28,45,79]	Provider payments may be based on "per member per month" rates rather than fee-for-service; including SBI in the calculation of global or bundled payment rates increases the likelihood that it would be used (i.e., if it were an unpaid service, it would be skipped)
Fund-specific SBI staff or programs internally or as part of other programs [36,38,41]	Limits reliance on individual billing and reduces barriers related to provider time and billable services
Adapt/redesign SBI after initial grant funding [36,41]	Adaptations beyond funding are important for sustainability (e.g., aligning with practice flow) [36,41]
Multiple funding sources [30,41]	Limits impact of challenges for any single funding source
Integrate SBI into EHR [36]	Documenting in EHR increases accuracy and likelihood of billing [36]
Performance metrics for insurers [28,45,80]	Required reporting of quality indicators may increase the likelihood that insurers will pay for SBI services and encourage providers to offer SBI

CPT = Current Procedural Terminology; EHR = electronic health record; HCPCS = Healthcare Common Procedure Coding System; SAMHSA = Substance Abuse and Mental Health Services Administration; SBI = screening and brief intervention.

programs are more likely to need to negotiate inclusion of specific services such as SBI as part of their funded activities.

Barriers and facilitators for sustainability of screening and brief intervention

Strategies to move payment/financing and sustainability of SBI services forward must consider barriers and facilitators beyond the availability of funding streams (Table 2). Some barriers apply across types of behavioral health treatment (e.g., lack of payment for care collaboration or disallowing same-day billing for medical and behavioral care) [29,31,38,43,77]. In some instances, screening may not be billed on the same day as any other assessment or treatment service [31,38,43,64], removing efficiencies for both patients and providers.

Billing codes. One payment barrier is the still limited activation of billing codes by Medicaid. One article suggested that codes were not activated because of the presence of extensive grant programs that fund SBI [44]; competing priorities or budget limitations are additional explanations [33,35,44]. Requirements associated with specific billing codes and across insurers can be confusing [26]. Some billing codes limit who can provide SBI [29,43], such as requiring licensed professionals, despite evidence of successful SBI implementation by a wide range of individuals. If a medical facility fee is received from Medicare or Medicaid (e.g., inpatient, emergency department), only physicians are eligible to bill under the SBI codes [59].

Presence of billing codes alone is insufficient for their use by providers conducting SBI; for example, a 2019 study of four health plans found documented screening for only 40%–46% of

members [81]. The 15-minute minimum for most SBI codes is of concern, since shorter brief interventions are evidence-based. Furthermore, engaging for 15 minutes may not be feasible in busy practices with many competing priorities, nor do some providers have capacity or interest to spend even 15 minutes [28,45]. Billing codes for shorter BI thus were recommended to increase SBI uptake [39]. The 2019 HCPCS change to add a 5- to 14-minute SBI code addresses this issue, but may not be available to or known by all providers. With these limitations, actual use of billing codes is unlikely to be reflective of the prevalence of SBI services.

Paying healthcare providers. Increasingly, healthcare providers are paid under alternative payment mechanisms outside of traditional fee-for-service (i.e., billing for individual services). Broadly, these arrangements shift financial risk to providers [82], so providers have greater incentives to reduce total healthcare costs through preventive services like SBI, by holding them accountable for cost and quality outcomes. Alternative payment arrangements can promote SBI, for instance, by including SBI explicitly in contracts. Some suggest that alternative payment approaches are likely to support SBI provision given their population health focus [26,28].

Shared savings approaches, where the provider benefits from any cost savings they demonstrate for their patient population—which are generally related to provision of preventive services such as SBI—may strengthen provider willingness to consistently implement SBI [83]. This might be most likely in Accountable Care Organizations or similar mechanisms related to major payers such as Medicaid where savings across sectors can be measured [84].

Financial incentives may more directly support SBI if payment is tied to specific outcomes [85], although this may be less feasible for addressing alcohol and drug problems [86]. Within alternative payment models, specific incentives for offering SBI could provide additional encouragement [87], as Medicaid in Oregon [88] is piloting. The state's "Coordinated Care Organizations"—essentially community-based Accountable Care Organizations for Medicaid enrollees—will be eligible to receive payments that are tied to their performance. The state sets benchmarks, such as screening 68% of the covered population, that must be met or exceeded for the incentive payment to be made.

Separate from alternative payment models, performance metrics focused on quality and outcomes of care may support providing SBI [28,87], as this approach is expected to improve the health of the provider's population, but such approaches rely on providers to prioritize the service. Health plans widely use performance measures developed by the National Committee for Quality Assurance that include alcohol SBI for adults 18 and older [80]. However, and unexpectedly, two articles suggested that specific services such as SBI might be limited under capitated payment systems, and capped revenue affects priority setting for service provision [36,41]. This may be an issue especially if capitated rates are low.

Additional barriers. Some barriers are less specific to payment mechanisms, but arise from them. If licensing is required for billing, this may require staffing changes to broadly implement SBI, which may not be feasible or desired by providers. Also, SBI presumes some assurance of confidentiality especially for youth; as soon as reimbursement is requested through the parent's insurance coverage, that confidentiality may be broken [32]. Similar concerns arise for adults in terms of having the SBI noted in their insurance records [41,43]. Furthermore, some school-based programs require that parents/guardians are notified of positive screening results [78].

Facilitators. Several facilitators related to payment and financing were highlighted. For instance, when insurers include SBI in rate calculations for capitated payments or, alternatively, allow for separate billing outside of the capitation rate, this incentivizes conducting SBI and may increase uptake [28,79]. Including SBI in the electronic health record may facilitate billing and the documentation required for it [36], and built-in decision support software may facilitate the screening itself [89]. Another approach to support SBI is identifying internal funding or other sources to pay for staff who can conduct SBI [35,36,40,41]. This allows SBI to continue outside of time-limited grants or an insurance billing structure [26]. Programs that were sustained after grant funding often revised the SBI approach to fit within their workflow [30,41,56], yet this effort also requires funding to implement changes [90]. Diversification of funding for SBI is considered to promote stability and thus sustainability [26,30,41]. Furthermore, sufficiency of funding (e.g., enough reimbursement to cover ongoing costs, funding streams that are not time-limited) is essential for sustainability, even when effectiveness and cost-effectiveness have been demonstrated.

Additional considerations

Staffing for screening and brief intervention. Who provides the SBI is directly related to the ability to receive reimbursement for it. Organizations that are funded for SBI through grants or that use internal funds may pay for a dedicated staff person [36,38,41], regardless of specific clinical training, or may bill the grant per SBI conducted. However, insurers generally require credentialed staff, such as physicians or nurse practitioners [43,56]. Using other types of providers to deliver SBI is important for both capacity and cost-effectiveness reasons [29]. One suggestion is training paraprofessionals to meet credentialing requirements, to allow them to bill and release higher level providers from the time needed for SBI [56]. The ability of provider organizations to receive reimbursement when noncredentialed staff conduct SBI is key [91].

Follow-up for positive screening. In addition, the "what next" concern is not insignificant. Many providers indicate concerns with the support and follow-up aspects of individuals who screen positive or need something more than the brief intervention [37]. This concern may relate to a lack of knowledge, training, or comfort in this role; lack of time to engage at more than a cursory level [92]; or limited referral options for specialty treatment [37]. Identification of referral networks and colleagues to call on for consultations, or integration of behavioral health providers within general health settings, may help to address this concern.

Sustainability of screening and brief intervention. Organizations that sustain SBI generally have transitioned from grant funding to insurance billing [30,53] or identified other funding sources such as new grants [38,41]. One study found that 70% of participating organizations sustained at least some SBIRT services after SAMHSA funding and attributed this to having a

champion, creating systemic change, and identifying new funding sources such as insurance or foundation grants [41]. However, many organizations do not sustain SBI, a common problem with innovations. Low uptake of novel interventions in behavioral health can be attributed in part to low reimbursement rates [93]. SAMHSA describes additional considerations for sustainability in its SBIRT Technical Assistance Publication [65].

Furthermore, a recent commentary on sustainability suggests that the fragmented nature of financing contributes to a "wrong pocket" problem, in which the provider who invests in the service usually does not financially benefit (e.g., through cost-offsets) [93]. Although this is not the primary driver for conducting SBI, it is important for business models of service provision. Shared savings models, described above, may help to address this concern.

Sustainability may also be affected by issues specific to adolescents. Parental consent may be a barrier to billing for SBI [32]. Performance measures are often geared to drive focus to specific activities, but for SBI they are currently used with adults. Some providers serve only adults or only youth and adolescents (e.g., pediatricians), thus youth providers may not report SBI performance metrics, and may have less incentive to ensure SBI is provided. Alternatively, measuring performance on SBI could create spillover effects where, because SBI is recommended and measured for adults, organizations that also serve youth implement systematic changes whereby youth also receive SBI.

Alternative screening and brief intervention approaches. One emerging solution is the use of digital or telehealth approaches to SBI [94–97]. These address concerns about provider time and commitment, and generally are proposed as low-cost options. They may have startup costs that are not tied to individuals who receive SBI. College screening programs often happen through such technologies [97], and are paid for through university student services [38]. Lessons may be learned for healthcare settings that have global budgets without fee-for-service payment of SBI. Incorporation of SBI in electronic health records or within a battery of prevention-oriented screening (e.g., depression, tobacco, seat belt use) during a primary care visit, for instance, may also increase uptake of SBI. Other alternatives include SBI that occurs outside of healthcare providers, such as through insurer-based patient portals, with results reported to the providers.

Strengths and limitations

This review relied on rigorous scoping review methodology supplemented by searches of the gray literature. Although our goal was to focus on adolescents and expand beyond healthcare settings, this information was limited in both peer-reviewed and gray literature. However, providers of SBI for adolescents and in community settings could learn from the approaches to payment and financing of SBI for adults and in healthcare and school settings.

Despite a systematic search, in which many potential articles were identified, financing and payment information was minimally available, a limitation of the literature itself. This was true especially in articles that focused on implementation or effectiveness. Furthermore, some articles were older and healthcare funding has changed significantly. For example, some referred to upcoming Medicaid changes to allow billing for SBI, which happened in 2007, and some referred to whether their states had "turned on" or activated the SBI billing codes to allow reimbursement, which half had done by 2017 [61]. Despite the limited literature, identifying strategies to expand and pay for evidence-based SBI services for adolescents and adults is needed to address an urgent substance use problem in the United States.

Conclusion

SBI for substance use is an effective strategy to reduce substance use and improve health for adolescents and adults. Efforts to provide and pay for SBI services are urgently needed particularly in response to increased substance use during the COVID-19 pandemic. Research literature on payment for SBI targeted to adolescents and on SBI in settings beyond healthcare is limited. Perhaps lessons can be learned from other types of identification and early intervention activities, such as depression or HIV screening and suicide prevention.

Based on this review, after more than 15 years of SBI being promoted as an important tool in the identification and prevention of unhealthy substance use, SBI is mostly paid for by grant funding and, in healthcare settings, through public and commercial insurance. Furthermore, few studies were specific to paying for SBI for adolescents, beyond school settings, and thus we largely were unable to determine if there were unique aspects for this population. We anticipated identifying ways to finance SBI services in settings beyond healthcare but, with several exceptions, that did not arise from our review.

The limited findings here about payment and financing do not mean that SBI is not happening in the real world. It is a USPSTF-approved service for adults, is included in the National Committee for Quality Assurance performance measure set for insurers, and is part of the essential health benefits under the Affordable Care Act. However, a range of barriers to universal SBI implementation exist. If payment and financing approaches are used effectively, providers and organizations may be encouraged to address these other barriers, such as training. Furthermore, advocacy may be required to reduce the barriers to efficient and sufficient financing and payment for SBI [67,98].

We call upon researchers conducting implementation and effectiveness studies, especially in real-world settings, to describe the payment and financing of SBI services. Without this knowledge, it will be very difficult to encourage the uptake of SBI as practicable beyond research studies and sustainable, even with the evidence base behind it. Payment for SBI serves as one incentive to conduct the service, whereas lack of payment is a distinct disincentive. The increasing activation and use of billing codes within insurance, and the expansion of SBI to settings beyond healthcare, is encouraging for the prevention and early intervention of substance use, misuse, and disorders among adolescents. With additional focus on systems that encourage uptake and sustainability, such as available and ongoing payment mechanisms, SBI can continue to be used and expanded to reduce risk of substance use problems among both adults and adolescents.

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Supplementary Data

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