

# Prevention and Screening, Brief Intervention, and Referral to Treatment for Substance Use in Primary Care

Stephen Strobbe, PhD, RN, PMHCNS-BC, CARN-AP

## KEYWORDS

• Prevention • Screening • Brief intervention • SBIRT • Substance use • Primary care

## KEY POINTS

- Substance use and related disorders are a major public health concern in the United States, adding to increased health care costs and needless human suffering.
- Effective prevention and screening, brief intervention, and referral to treatment (SBIRT) can reduce the burdens of injury, illness, and premature death.
- The US Preventive Services Task Force periodically issues evidence-based recommendations for prevention and screening across a broad array of health conditions, including substance use and related disorders.
- Primary care clinicians are in prime positions to integrate prevention and SBIRT into their respective practices, thereby contributing to the improved health of patients, families, and communities.

## INTRODUCTION

More than a decade ago, a monograph prepared for the Robert Wood Johnson Foundation called the problematic use of alcohol, tobacco, and illicit substances “the nation’s number one health problem,” contributing to “the death and ill health of millions of Americans every year and to the high cost of health care.”<sup>1</sup> More recently, the National Center on Addiction and Substance Abuse (CASA) at Columbia University reported the total annual cost of substance use to federal, state, and local governments, based on data from 2005, was approaching half a trillion dollars.<sup>2</sup> In its landmark 2011 report titled “Adolescent Substance Use: America’s #1 Public Health Problem,” CASA reported that three-quarters of high school students (75.6%) in the

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Department of Psychiatry, University of Michigan School of Nursing, 400 North Ingalls Street, Ann Arbor, MI 48109-5482, USA

E-mail address: [strobbe@umich.edu](mailto:strobbe@umich.edu)

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United States have smoked cigarettes or used alcohol or another drug, and just less than half (46.1%) have smoked or used within the past 30 days.<sup>3</sup>

Historically, substance use disorders were treated almost exclusively from a tertiary care perspective, often among only the most acutely and chronically ill, long after serious negative consequences had accrued across physical, biopsychosocial, and spiritual domains. Now, in response to clinical research, evidence-based practices, and recommendations from professional organizations and governmental agencies, increased emphasis has been placed on prevention, screening, and early intervention. With this gradual shift in focus, primary care clinicians (including physicians, physician assistants, and nurse practitioners) are in prime positions to further contribute to the improved health of patients, families, and communities.

The purpose of this article is to provide primary care clinicians with the necessary information, recommendations, and resources to successfully integrate prevention and screening, brief intervention, and referral to treatment (SBIRT) for substance use and related disorders into clinical practice. Although the main focus of this issue of *Primary Care: Clinics in Office Practice* is on prevention and screening for various health concerns among adults, many of the formal recommendations specific to substance use also include brief intervention and referral to treatment, approaches consistent with the delivery of primary care. In addition, because risk factors and initial signs of substance use often emerge during childhood or adolescence, specific measures for these special populations are discussed. Although many of the prevention and SBIRT strategies may apply across multiple categories of substances, particular attention is paid here to tobacco, alcohol, cannabis, and the nonmedical use of prescription opioid medications.

## DSM-5: NOMENCLATURE, CLASSES OF SUBSTANCES, AND DIAGNOSTIC CRITERIA

Effective prevention and screening for substance use requires at least some familiarity with diagnostic criteria. The release of the *Diagnostic and Statistical Manual for Mental Disorders*, 5th Edition (DSM-5) in May 2013 brought changes to preferred nomenclature, classes of substances, and diagnostic criteria.<sup>4</sup> To begin, both the previous terms and formal diagnoses of substance abuse and substance dependence were eliminated in favor of the broader conceptualization of Substance Use Disorders.

Classes of substances have also been modified (**Box 1**), with amphetamine-like substances and cocaine now being listed under the broader category of Stimulants. Former diagnoses of nicotine abuse and nicotine dependence are now referred to as Tobacco Use Disorders, and include cigarettes and other forms of smoking tobacco, as well as smokeless tobacco.

Criteria from the 2 previous DSM-IV diagnostic sets of abuse and dependence were combined, with 2 notable changes: (1) the abuse criterion for recurrent substance-related legal problems was deleted, and (2) a new criterion was added to include the physiologic phenomenon of craving, or a strong desire or urge to use a specific substance (**Box 2**). Diagnoses remain substance specific, such as alcohol use disorder. However, for certain classes greater specificity is requested when known, such as alprazolam use disorder, rather than the previous and more generic sedative, hypnotic, or anxiolytic use disorder. In addition, any individual who has previously qualified for a diagnosis of a substance use disorder, now rated in severity as mild, moderate, or severe, must be free from any of these criteria, with the possible exception of craving, for a minimum of 3 months (rather than the previous 1 month) before the condition is considered to be in early remission. The required period to establish sustained remission remains 1 year, again with the caveat of possible craving.

**Box 1****Classes of substances**

- Alcohol
- Caffeine
- Cannabis
- Hallucinogens
  - Phencyclidine
  - Other hallucinogens
- Inhalants
- Opioids
- Sedatives, hypnotics, or anxiolytics
- Stimulants
  - Amphetamine-type substances
  - Cocaine
  - Other or unspecified stimulants
- Tobacco
- Other (or unknown)

*Adapted from* American Psychiatric Association (APA). Diagnostic and statistical manual for mental disorders. 5th edition. Arlington (VA): APA; 2013.

**Box 2****Abbreviated diagnostic criteria for substance use disorders**

A problematic pattern of substance use leading to clinically significant impairment or distress, manifested by at least 2 of the following in a 12-month period:

1. Taken in larger amounts or over a longer period than intended
2. Persistent desire or unsuccessful efforts to cut down or control use
3. Great deal of time spent obtaining, using, or recovering from effects
4. Craving, or strong desire or urge to use the substance
5. Recurrent use resulting in failure to fulfill major role obligations
6. Continued use despite related personal or interpersonal problems
7. Important activities given up or reduced because of use
8. Recurrent use in situations in which it is physically hazardous
9. Continued use despite related physiologic or psychological problems
10. Tolerance
11. Withdrawal

Severity: Mild (2–3 symptoms); Moderate (4–5 symptoms); Severe (6 or more symptoms).

Early remission: Criteria no longer met  $\geq 3$  months and  $< 12$  months, except possible craving.

Sustained remission: Criteria no longer met  $\geq 12$  months, except possible craving.

*Adapted from* American Psychiatric Association (APA). Diagnostic and statistical manual for mental disorders. 5th edition. Arlington (VA): APA; 2013.

## RISK FACTORS, PREVALENCE, AND CONSEQUENCES

Although an exhaustive review of risk factors, prevalence, and consequences related to substance use across each of the respective classes is beyond the scope of this offering, there are a few general principles with practical implications for primary practice that do apply. First, one of the most consistent predictors for substance use is family history. Addictions, in particular, are considered to be moderately to highly heritable, with genetics accounting for approximately half of the explained variance for such disorders, although rates differ across various classes of substances.<sup>5</sup> Second, earlier onset of substance use is associated with an increased risk for the development of a frank substance use disorder and related negative consequences. Third, personal history, or the presence of any current substance use disorder in a given individual, increases the risk for another substance use disorder.<sup>6</sup> Fourth, the presence of a mental health disorder, such as anxiety, bipolar disorder, depression, a personality disorder, or a trauma-related disorder, also increases the risk for a substance use disorder.<sup>7</sup>

Prevalence rates and representative consequences associated with the use of tobacco, alcohol, cannabis, and the nonmedical use of prescription opioid medications provide important information to support efforts toward prevention and SBIRT. According to the National Comorbidity Survey replication, lifetime prevalence for substance use disorders other than tobacco and alcohol was 10.9%, or approximately 1 in 9 individuals in the United States aged 18 years and older.<sup>8</sup> In addition to identified intrinsic factors (family history, earlier onset, personal history, presence of another mental health disorder), extrinsic factors play a role, including environmental considerations such as culture, social and family attitudes, and access to various substances.

In terms of serious consequences that cut across different classes of substances, it must be noted that DSM-5 specifically and repeatedly speaks to an increased risk for attempted and completed suicides in the context of substance use, intoxication, withdrawal, and certain substance use disorders. These substances include alcohol (intoxication, alcohol use disorder), hallucinogens (intoxication), inhalants (use, inhalant use disorder), opioids (intoxication, withdrawal, opioid use disorder), sedatives, hypnotics, or anxiolytics (intoxication), and stimulants (withdrawal).<sup>4</sup>

### ***Tobacco Use***

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Tobacco use, specifically cigarette smoking, remains the single greatest cause of preventable morbidity and mortality in the United States, resulting in more than 440,000 premature deaths annually from cardiovascular disease, respiratory disease, and cancer<sup>9</sup>; this includes the death of some 49,000 individuals from exposure to secondhand smoke.<sup>10</sup> Despite significant reductions in overall smoking rates in the United States over the past 5 decades, due in part to vigorous public health campaigns, 19.0% of adults were current cigarette smokers in 2011. Rates were higher among men (21.6%), those living below the federal poverty level (29.0%), American Indians and Alaskan Natives (31.5%), and those with a General Education Development diploma (45.3%).<sup>11</sup>

Unfortunately the ranks of cigarette smokers continue to be filled by youth, and tobacco use has now been termed a pediatric epidemic.<sup>12</sup> Each day nearly 4000 individuals under the age of 18 smoke their first cigarettes.<sup>12</sup> Among high school seniors in the United States, approximately 1 in 4 is a regular cigarette smoker,<sup>13</sup> and about 80% of these young people will continue to smoke into adulthood. Tobacco use among United States youth is not limited to cigarette smoking, as 1 in 5 white adolescent

males (aged 12–17 years) reportedly uses smokeless tobacco, which has also been linked to oral cancers.<sup>12</sup>

It was recently reported that smoking rates during pregnancy among women aged 15 to 44 years in the United States were 21.8% among whites, 14.2% among blacks, and 7.4% among Hispanics.<sup>14</sup> Smoking during pregnancy has been associated with several adverse outcomes, including spontaneous abortions, stillbirth, preterm birth, and fetal growth restriction.<sup>15</sup> Although most women may cease smoking early in pregnancy, many relapse following delivery.<sup>16</sup> Children who are subsequently exposed to secondhand smoke are also more likely to suffer from several health conditions, including increased rates of ear infections, asthma, and other respiratory illnesses.<sup>17</sup>

### Alcohol Use

More than 85,000 deaths per year are attributable to alcohol consumption, making it the third leading cause of preventable death in the United States after tobacco use and the combination of poor diet and physical inactivity.<sup>18</sup> In one epidemiologic study, lifetime prevalence of any alcohol use disorder in the United States was more than 30%.<sup>19</sup> Another survey, conducted across multiple primary care practices, revealed risky or hazardous alcohol use among 22.3% of adult patients during the previous 30 days.<sup>20</sup> Risky or hazardous drinking, that is, consuming alcohol in excess of established guidelines set forth by the National Institute on Alcohol Abuse and Alcoholism (NIAAA) (**Box 3**), has been associated with negative physical, emotional, and social consequences.<sup>21</sup>

Many adults who eventually develop alcohol use disorders establish patterns of problematic drinking during adolescence. In 2011, based on Monitoring the Future (MTF) data, a total of 70% of United States high school seniors reported some lifetime alcohol use, 51% reported having been drunk at least once, and 22% reported binge drinking (defined as  $\geq 5$  drinks in a row) during the last 2 weeks.<sup>22</sup>

More recently, the phenomenon of extreme binge drinking has been described, during which high school seniors reported episodes of alcohol consumption that

#### Box 3

##### National Institute on Alcohol Abuse and Alcoholism guidelines for alcohol use

- Healthy men younger than 65: consume no more than...
  - Fourteen standard drinks per week or
  - Four drinks per drinking occasion.
- Healthy, nonpregnant women and healthy adults older than 65: consume no more than...
  - Seven standard drinks per week or
  - Three drinks per drinking occasion.
- A standard drink is defined as
  - A 12-ounce glass of beer,
  - A 5-ounce glass of table wine, or
  - 1.5 ounces of 80-proof spirits.

*Adapted from* National Institute on Alcohol Abuse and Alcoholism (NIAAA). Helping patients who drink too much: a clinician's guide (NIH Publication No. 05-3769). Rockville (MD): NIAAA; 2005. Available at: [http://pubs.niaaa.nih.gov/publications/Practitioner/CliniciansGuide2005/clinicians\\_guide.htm](http://pubs.niaaa.nih.gov/publications/Practitioner/CliniciansGuide2005/clinicians_guide.htm). Accessed October 29, 2013.

surpassed traditional definitions of binge drinking. Between 2005 and 2011, a total of 20.2% of high school seniors reported drinking 5 or more standard drinks, 10.5% reported drinking 10 or more drinks, and 5.6% reported drinking 15 or more drinks in a row during the past 2 weeks. Extreme binge drinking, with subsequently elevated blood alcohol levels, places young people at still greater risk for accidents and injuries, including alcohol poisoning, respiratory depression, coma, and death. Consistent with most other categories of alcohol use, binge drinkers were more likely to be male. Other predictors for binge drinking included more days of skipping school, perceiving that more friends got drunk, spending more evenings out with friends, and use of cigarettes or marijuana during the last month.<sup>23</sup>

Concerns related to excessive alcohol use are not limited to boys or men. While overall rates of alcohol use may be lower among girls and women, the impact of associated consequences is not. Binge drinking is a risk factor for several health and social problems among women, including unintended pregnancy, sexually transmitted diseases, and breast cancer.<sup>24</sup> In 2004, NIAAA reduced criteria for what constituted risky or hazardous drinking for women (from >14 to >7 drinks per week), as well as binge drinking (from >4 to >3 drinks per drinking occasion), to better reflect physiologic differences between men and women that affect the absorption of alcohol.<sup>25</sup>

According to the 2011 national Youth Risk Behavior Survey, 45.4% of senior high school girls reported current (past month) alcohol use, and 27.0% reported current binge drinking (in this survey,  $\geq 5$  drinks). By comparison, based on results from the 2011 Behavioral Risk Factor Surveillance System (BRFSS) survey, binge drinking among women aged 18 to 44 years was most prevalent among those aged 18 to 24 years (24.2%), non-Hispanic whites (13.3%), and those with annual household incomes of US \$75,000 or more (16.0%).<sup>24</sup>

Heavy alcohol use during pregnancy is associated with adverse outcomes, including fetal alcohol syndrome and other fetal alcohol spectrum disorders (FASDs), and can result in neurodevelopmental deficits and lifelong disability.<sup>26</sup> FASDs are estimated to affect at least 1% of all births in the United States,<sup>27</sup> and have been associated with patterns of alcohol consumption that result in high blood alcohol concentrations, such as those seen in binge drinking.<sup>28</sup>

Based on BRFSS data from 2006 to 2010, an estimated 51.5% of nonpregnant women used alcohol and 15.0% engaged in binge drinking. Women who binge drink in the preconception period are also more likely than non-binge drinkers to continue using alcohol, even after becoming pregnant.<sup>25</sup> Among pregnant women, 7.6% used alcohol and 1.4% engaged in binge drinking. Prevalence rates for drinking during pregnancy were highest among women aged 35 to 44 years (14.3%), white (8.3%), college graduates (10.0%), and employed (9.6%).<sup>24</sup> In 2005, the Surgeon General issued an advisory urging women who are pregnant, or who may become pregnant, to abstain from alcohol.<sup>29</sup>

### ***Cannabis Use***

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Cannabis use continues to increase among residents of the United States aged 12 years and older. According the 2012 National Survey on Drug Use and Health (NSDUH), an estimated 31.5 million individuals reported having used marijuana in the past year, up from approximately 25 million each year from 2002 to 2008.<sup>30</sup>

Marijuana also remains the most widely used illicit substance among youth. Data from MTF 2012 indicated that among high school seniors, 36% had used marijuana during the past year and 23% during the past month, and 6.5% said they smoked daily, up from 5.1% in 2007. One explanation for increased use is a corresponding decrease in perceived risk. Contrary to this perception, a systematic review published

in the *Lancet* linked early cannabis use to an increased risk for the development of psychotic illness later in life.<sup>31</sup>

Continued controversy surrounding the use of cannabis has created a compelling clinical conundrum. On one extreme, federal law continues to classify cannabis as a Schedule I drug, “with no currently accepted medical use and a high potential for abuse. Schedule I drugs are the most dangerous drugs of all the drug schedules with potentially severe psychological or physical dependence.”<sup>32</sup> Other substances in this class include heroin, lysergic acid diethylamide (LSD), 3,4-methylenedioxymethamphetamine (ecstasy), methaqualone (Quaalude), and peyote.<sup>32</sup>

By contrast, and potential conflict, several local and state referenda have produced an inconsistent patchwork of varied legislation and law-enforcement efforts. Some of the more controversial initiatives include the wholesale legalization or decriminalization of cannabis, whereas others advocate for the use of “medical marijuana.” As a result, primary care clinicians may find themselves in the position of being asked to prescribe cannabis, or to provide documentation for the procurement of a medical marijuana card, and to care for individuals with chronic cannabis use. These eventualities may prompt the clinician to engage in clarification of personal and professional values, and to set and communicate practice parameters accordingly.

### ***Nonmedical Use of Prescription Opioid Medications***

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In a report released by the Executive Office of the President of the United States, nonmedical use of prescription medications was called “the nation’s fastest-growing drug problem.”<sup>33</sup> Although more specific typologies exist,<sup>34</sup> for the purposes of this article nonmedical use of prescription medications includes (1) taking a medication that has been prescribed for somebody else, (2) taking a drug in a higher quantity or in another manner than prescribed, or (3) taking a drug for another purpose than prescribed,<sup>35</sup> for example, changing one’s mood or getting high. Although this broader category of nonmedical prescription drug use also includes prescription stimulants, as well as sedatives, hypnotics, or anxiolytics, most attention thus far has focused on the misuse of prescription opioid medications.

Recent years have seen dramatic increases in the prescribing and nonmedical use of opioid pain relievers across the life span, with serious consequences from a public health perspective. From 1997 to 2007, the milligram-per-person use of prescription opioids in the United States escalated from 74 to 369 mg, an increase of 402%.<sup>36</sup> From 2000 to 2009, the number of prescriptions dispensed by retail pharmacies increased from 174 million to 257 million, or 48%.<sup>33</sup> Across multiple studies and regions, it has been noted that approximately 20% of all prescribers are responsible for 80% of the prescriptions written for opioid pain relievers.<sup>37</sup>

According to data from the 2010 NSDUH, in the United States 13.8% of residents aged 12 years and older, or 34.8 million people, reported lifetime nonmedical use of prescription opioid analgesics, such as hydrocodone (9.5%), codeine or propoxyphene (7.8%), and/or oxycodone (6.1%).<sup>38</sup> That same year, 5.1 million people reported current (past month) use, with the majority (60.1%) indicating they had obtained these medications from a friend or relative for free.<sup>39</sup> In 2011 more than 420,000 emergency department visits involved the nonmedical use of opioid analgesics.<sup>40</sup> In addition, a nationally representative study recently found a strong association between prior nonmedical use of opioid pain relievers and initiation of heroin use in the past year.<sup>41</sup> Of note, in addition to having devastating psychosocial consequences, heroin use is a contributing factor in other serious medical illnesses including hepatitis B and C, human immunodeficiency virus, and AIDS.

In 2008, opioid pain relievers were involved in 14,800 overdose deaths, or 73.8% of all overdose deaths involving prescription drugs.<sup>42</sup> While men remain more likely to die from drug overdoses, there has been an alarming increase in the number of opioid overdose deaths among women. Between 1999 and 2010, nearly 48,000 women died of such overdoses, representing an increase of more than 500% over the 12-year period. Women at greatest risk of dying from a prescription opioid overdose, including unintentional, suicide, and other deaths, were those aged 45 to 54 years, as well as non-Hispanic whites, American Indians, and Alaskan Natives.<sup>43</sup>

Among pregnant women, opioid use disorders also place infants at risk. Between 2000 and 2009, the number of neonates who experienced neonatal abstinence syndrome in the United States increased by nearly 300%.<sup>43</sup> At the other end of the life span, with the aging of the baby-boomer generation, it has been estimated that nonmedical use of prescription medications will increase dramatically among older adults.<sup>44,45</sup> With increasing age, a reduced physiologic capacity to metabolize medications places seniors at greater risk for injuries and potentially fatal drug-drug interactions including, most notably, combinations of central nervous system depressants such as alcohol; sedatives, hypnotics, or anxiolytics; and opioid analgesics.

## EVIDENCE THAT PREVENTION AND SBIRT WORK

### *Prevention*

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Prevention, in the context of substance use and related disorders, includes abstinence from potentially harmful substances or engaging in other behaviors, such as limited alcohol consumption, to reduce the risks of substance-related injury or illness. Earlier use of tobacco, alcohol, or other drugs is a predictor for the development of substance use disorders across virtually all classes of substances. Among youth aged 12 to 17, cigarette smoking before the age of 12 years has been associated with higher rates of alcohol (12.0% vs 9.6%), cannabis (4.8% vs 2.2%), and other illicit drug (5.8% vs 1.9%) use compared with those who began smoking at age 16 years or older.<sup>46</sup> Conversely, avoiding or delaying the use of substances during childhood, adolescence, and young adulthood—critical phases of neurodevelopment—has been associated with continued abstinence or nonproblematic use. For example, in one study adults who initiated alcohol use at age 21 years or older were 6 times less likely (2.5%) to have developed an alcohol use disorder later in life than those who had started drinking at age 14 years or younger (16.5%).<sup>47</sup>

The effectiveness of preventive measures extends beyond the individual to families, schools, and society at large. In one frequently cited study, teens who had dinner with their families 5 times a week or more were less likely to use tobacco, alcohol, or other drugs than those who had dinner with their families fewer than 3 times a week.<sup>48</sup> Youth aged 12 to 17 years who attended drug-free and gang-free schools were less likely to have ever tried tobacco, alcohol, or marijuana.<sup>49</sup> Increases in cigarette taxes at state and federal levels have been linked to reduced rates of youth smoking.<sup>50,51</sup> Each of these examples serves as a reminder of the potential benefits that can be realized by implementing an array of preventive strategies, across a variety of settings, and targeting children at younger ages. Specific to clinical practice and prevention, particularly in light of the relationship between cigarette smoking and other substance-related behaviors, the US Preventive Services Task Force (USPSTF) “found adequate evidence that behavioral counseling interventions, such as face-to-face or phone interaction with a health care provider, print materials, and computer applications, can reduce the risk of smoking initiation of school-aged children and adolescents.”<sup>52</sup>



### ***SBIRT as Defined by the Substance Abuse and Mental Health Services Administration (SAMHSA)***

SBIRT is a comprehensive, integrated public health approach to the delivery of early intervention and treatment services for people with substance use disorders as well as those who are at risk for developing these disorders. Primary care centers, ... office-based practices, and other community settings provide opportunities for early intervention with at-risk substance users before more serious consequences occur.

- Screening quickly assesses the severity of substance use and identifies the appropriate level of treatment.
- Brief intervention focuses on increasing insight and awareness regarding substance use and motivation toward behavioral change.
- Referral to treatment provides those identified as needing more extensive treatment with access to specialty care.<sup>53</sup>

SBIRT has its roots in the transtheoretical stages of change model<sup>54</sup> and motivational interviewing techniques<sup>55</sup> which, together, identify a patient's readiness to change and assist in continued movement toward healthy, adaptive responses related to substance use. A seminal review article published in 2007 described research on the components of SBIRT, including the development of screening tests, clinical trials of brief interventions, and implementation research. Evidence from this review clearly showed that SBIRT can improve individuals' health over the short term. Reviewers noted, however, that the long-term impact of SBIRT on population health has yet to be shown. Despite this limitation, reviewers cited optimism, as simulation models suggest the long-term benefits of SBIRT could be substantial.<sup>56</sup>

In an earlier review evaluating 32 controlled studies with a combined total of more than 6000 patients, Bien and colleagues<sup>57</sup> concluded that brief interventions directed toward alcohol use had a positive impact on outcomes when compared with no counseling, and were frequently as positive as more extensive treatments. In general, these brief interventions appeared to be equally effective when directed toward adolescents, adults, older adults, and pregnant women.<sup>56</sup> When provided by primary care clinicians, brief interventions have been found to lessen alcohol consumption,<sup>56</sup> reduce hospital days and health care costs,<sup>58</sup> and decrease mortality.<sup>59</sup>

Although initial research efforts were meant to provide an evidence base for alcohol screening and brief intervention in primary health care settings, they were followed by trials for other substances, including tobacco, illicit drugs, and the nonmedical use of prescription medications. Although results from the brief intervention portion of SBIRT have sometimes varied when applied to substances other than alcohol, universal screening still plays a role in helping to identify substance-related problems, and a successful referral to specialized treatment can be viewed as a positive outcome.

## **USPSTF AND OTHER RECOMMENDATIONS RELATED TO SUBSTANCE USE**

### ***USPSTF Recommendations***

The USPSTF is an independent panel of nonfederal experts in prevention and evidence-based medicine and is composed of primary care clinicians. It conducts scientific reviews of a broad range of clinical preventive health care services, and develops recommendations for primary care clinicians and health systems.<sup>60</sup> Recommendations are based and graded on current available evidence; it is suggested that clinicians offer or provide services that receive a letter grade of A or B.<sup>61</sup> Current USPSTF recommendations specific to substance use and related disorders are provided in **Box 4**.

**Box 4****United States Preventive Services Task Force (USPSTF) recommendations pertaining to substance use and related disorders***Tobacco*

The USPSTF recommends...

- Primary care clinicians provide interventions, including education or brief counseling, to prevent initiation of tobacco use in school-aged children and adolescents (Grade B Recommendation).<sup>52</sup>
- Clinicians ask all adults about tobacco use and provide tobacco cessation interventions for those who use tobacco products (Grade A Recommendation).<sup>62</sup>
- Clinicians ask all pregnant women about tobacco use and provide augmented, pregnancy-tailored counseling for those who smoke (Grade A Recommendation).<sup>62</sup>

*Alcohol*

The USPSTF recommends...

- Clinicians screen adults aged 18 years or older for alcohol misuse, and provide persons engaged in risky or hazardous drinking with brief behavioral counseling interventions to reduce alcohol misuse (Grade B Recommendation).<sup>63</sup>

*Screening for Hepatitis C Virus Infection in Adults*

The USPSTF recommends...

Screening for hepatitis C virus (HCV) infections in persons at high risk for infection (Grade B Recommendation). Note: "The most important risk factor for HCV infection is past or current injection drug use."<sup>64</sup>

Grade A Recommendation: High certainty that the net benefit is substantial; Grade B Recommendation: High certainty that the net benefit is moderate, or moderate certainty that the net benefit is moderate to substantial.<sup>61</sup>

In addition to graded recommendations, the USPSTF may also issue an I Statement, indicating that current evidence is insufficient to formulate recommendations either for or against a particular service. I statements indicate that evidence on the topic is lacking, of poor quality, or conflicting, and that additional research is needed to formulate a recommendation.<sup>61</sup> At the time of writing, such statements had been issued for the following 2 services: (1) screening and behavioral counseling interventions in primary care settings to reduce alcohol misuse in adolescents,<sup>63</sup> and (2) screening adolescents, adults, and pregnant women for illicit drug use.<sup>65</sup>

***Other Recommendations***

Whereas substance use recommendations from the American Academy of Family Physicians (AAFP) mirrored those of the USPSTF,<sup>66</sup> recommendations from other professional entities expand prevention and screening efforts. For example, the American Academy of Pediatrics recommends that pediatricians incorporate substance use prevention into daily practice, acquire the necessary skills to identify young people at risk for substance use, and provide or facilitate assessment, intervention, and treatment as necessary.<sup>67</sup> The American College of Obstetrics and Gynecology recommends direct questioning by clinicians of all patients about their use of drugs (in addition to tobacco and alcohol) as part of periodic assessments.<sup>68</sup> The American Lung Association's Lung Cancer Screening Committee issued interim recommendations for low-dose computed tomography screening for lung cancer among current

smokers aged 55 to 74 years with a smoking history of at least 30 pack-years and no history of lung cancer.<sup>69</sup>

## PREVENTION AND SBIRT: PUTTING IT INTO PRACTICE

One of the single most important things a primary care clinician can do to help promote healthy lifestyle patterns among patients and their families is to demonstrate a consistent willingness to raise and discuss issues pertaining to substance use in a clear, supportive, matter-of-fact, and nonjudgmental fashion.<sup>70</sup> The goal is to establish and sustain a positive professional relationship over time that will allow and encourage patients to raise and address inherently difficult topics related to substance use. Much of this work is educational and supportive in nature. From an SBIRT perspective, prevention of substance use and related disorders is an ongoing process that continues across the life span, and is integrated into the delivery of routine clinical care, including wellness visits. **Box 5** lists suggested topics for patient and family education in the prevention of substance use and related disorders.

A simple graphic model of the SBIRT process<sup>71</sup> is provided in **Fig. 1**. The essential elements of SBIRT also align with the 5 As approach to behavioral counseling as adopted by USPSTF. The 5 As stand for Assess, Advise, Agree, Assist, and Arrange (**Table 1**). These elements also serve as the basis for reimbursement for behavioral counseling, such as SBIRT, from the Centers for Medicare and Medicaid Services (CMS).<sup>72</sup>

### Screening

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The first step of SBIRT is the implementation of universal screening to help identify patients who may be at risk for, or are currently experiencing, problematic substance use. Many primary care clinicians ask about cigarette smoking and other tobacco use in the context of the patient's health, but fewer inquire about alcohol and other substance use. Examples of validated 1-item and 2-item screening tests for alcohol and/or other drug misuse are provided in **Box 6**.<sup>73–75</sup>

Screening negative on the 1- or 2-item screening test (ie, no alcohol or other drug misuse), in the absence of any evidence to the contrary, indicates that screening is complete; this affords the clinician an opportunity to provide positive verbal reinforcement to the patient for healthy behaviors related to substance use. It is generally recommended that screening be repeated on a routine basis at least annually, or earlier as changes in behavior, health status, or other personal circumstances warrant.

Screening positive for either alcohol or other drug misuse on the 1- or 2-item screening test leads to further screening using a valid and reliable scale. Perhaps foremost among these for alcohol use is the AUDIT-C (Alcohol Use Disorders Identification Test—Consumption).<sup>76</sup> See **Table 2** for the AUDIT-C questionnaire, and **Table 3** for this and other selected screening instruments for substance use.<sup>76–82</sup> Alternatively, clinicians could use the newly structured DSM-5 diagnostic criteria (see **Box 2**) as a checklist for potentially problematic substances, which would also provide an indication of severity.

### Brief Intervention

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Brief intervention is the cornerstone of SBIRT. The object of brief intervention is to help patients move along a continuum of cognitive and behavioral health, recognizing that progress is seldom linear, and that setbacks may occur. Brief interventions are short (5–15 minutes) semistructured discussions intended to raise awareness and increase motivation to avoid, reduce, or discontinue potentially problematic use of alcohol or other substances. Six elements critical to brief interventions are captured in the

**Box 5****Suggested topics for patient and family education in the prevention of substance use and related disorders across the life span**

## Children

- Decide now to be tobacco-free
- Avoid secondhand smoke
- Choose friends who do not use tobacco, alcohol, or other drugs
- Learn and use appropriate refusal skills for tobacco, alcohol, and other drugs
- Do not ride with drivers who have been drinking or using other drugs
- Only use medicines that are meant for you, and use them in accordance with the label or prescription

## Adolescents

- Continue to be tobacco-free and alcohol-free
- Understand and avoid the risks of cannabis and other substance use
- Spend time with peers who have similar goals and interests
- Only ride in cars with people who have not been drinking or getting high
- Do not take prescription medications that were not prescribed for you
- If prescribed a medication, take only as directed
- Do not give, lend, trade, or sell prescription medications

## Young Adults

- Continue to avoid tobacco in all forms, or obtain help to quit now
- If you have a strong family history of substance use, consider abstinence
- If you choose to use alcohol, observe recommended levels, avoid binge drinking (see [Box 3](#))
- Know the continued risks of cannabis and other substance use during young adulthood
- Use prescription medications only as directed
- Do not give, lend, trade, or sell prescription medications

## Women Who Are Pregnant, or Who May Become Pregnant

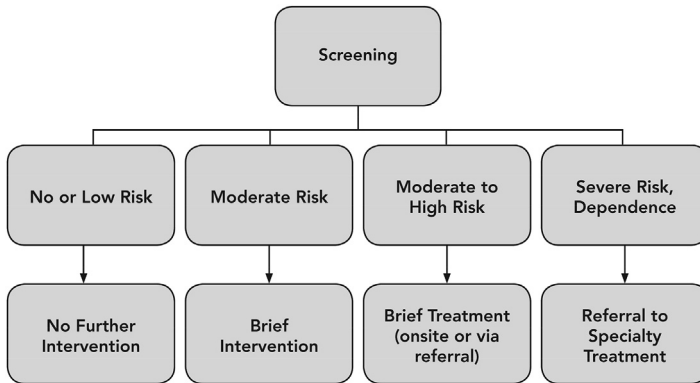
- Abstain from tobacco, alcohol, and other substances
- Seek professional help to quit smoking, drinking, or using other substances if needed

## Parents of Children, Adolescents, or Young Adults

- Model and encourage substance-free lifestyles for your children
- Teach and reinforce refusal skills for tobacco, alcohol, and other drugs
- If you choose to use alcohol, adhere to NIAAA guidelines (see [Box 3](#))
- Do not administer prescription medications to children other than as prescribed
- Always secure and dispose of prescription medications properly

## Older Adults

- Recognize a decreased capacity to metabolize alcohol and medications with age
- If you choose to use alcohol, adhere to NIAAA guidelines (see [Box 3](#))
- Avoid the use of alcohol with any medication, whether over-the-counter or prescription
- Always secure and dispose of prescription medications properly



**Fig. 1.** Graphic model of the screening, brief intervention, and referral to treatment (SBIRT) process. (From Substance Abuse and Mental Health Services Administration (SAMHSA). Systems-level implementation of screening, brief intervention and referral to treatment. Technical Assistance Publication (TAP) Series 33. HHS Publication No. (SMA) 13-4741. Rockville (MD): SAMHSA; 2013. Available at: <http://www.integration.samhsa.gov/sbirt/TAP33.pdf>. Accessed November 22, 2013.)

acronym FRAMES, which provides both a philosophic stance and a practical structure for the delivery of care:

- *Feedback* is given to the individual about personal risk or impairment.
- *Responsibility* for change is placed on the patient.
- *Advice* to change is given by the provider.
- *Menu* of options is offered for behavioral change, supports, and/or treatment options.
- *Empathic style* is used in counseling.
- *Self-efficacy* or optimistic empowerment is engendered in the patient.<sup>83</sup>

Table 1 The 5 As of behavioral counseling	
Assess	Ask about/assess behavioral health risk(s) and factors affecting choice of behavior change goals/methods
Advise	Give clear, specific, and personalized behavior-change advice, including information about personal health harms and benefits
Agree	Collaboratively select appropriate treatment goals and methods based on the patient's interest in and willingness to change behavior
Assist	Using behavior-change techniques (self-help and/or counseling), aid the patient in achieving agreed-upon goals by acquiring the skills, confidence, and social/environmental supports for behavior change, supplemented with adjunctive medical treatments when appropriate
Arrange	Schedule follow-up contacts (in person or by telephone) to provide ongoing assistance/support and to adjust the treatment plan as needed, including referral to more intensive or specialized treatment

From Centers for Medicare & Medicaid Services (CMS), Department of Health and Human Services (DHHS). Screening and behavioral counseling interventions in primary care to reduce alcohol misuse. Publication ICN 907798. CMS; 2013. Available at: <http://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/downloads/Reduce-Alcohol-Misuse-ICN907798.pdf>. Accessed November 22, 2013.

**Box 6****One-item and 2-item screening tests for alcohol and/or other drug misuse**

- Single-question screening test for unhealthy alcohol use
  - Question: "How many times in the past year have you had X or more drinks in a day?" (where X is 5 for men and 4 for women)
  - Response: A response of >1 is positive
  - Sensitivity 82%, specificity 79%<sup>73</sup>
- Single-question screening test for drug use
  - Question: "How many times in the past year have you used an illegal drug or used a prescription medication for nonmedical reasons?"
  - Response: A response of  $\geq 1$  is positive
  - Sensitivity 100%, specificity 73.5%<sup>74</sup>
- Two-item conjoint screen for alcohol and other drug problems
  - Questions:
    - "In the last year, have you ever drunk or used drugs more than you meant to?"
    - "Have you felt you wanted or needed to cut down on your drinking or drug use in the last year?"
  - Response: A response of  $\geq 1$  is positive for a current substance use disorder
  - Sensitivity 79%, specificity 78%<sup>75</sup>

**Table 2****AUDIT-C questionnaire**

Questions	Scoring					Score
	0	1	2	3	4	
How often do you have a drink containing alcohol?	Never	Monthly or less	2 to 4 times a month	2 to 3 times a week	4 or more times a week	
If score to first question is zero, Stop screening here						
How many drinks containing alcohol do you have on a typical day when you are drinking?	1 to 2 drinks	3 to 4 drinks	5 to 6 drinks	7 to 9 drinks	10 or more drinks	
How often do you have 5 or more drinks on one occasion?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
Total score						

The AUDIT-C is scored on a scale of 0–12 (scores of 0 reflect no alcohol use). In men, a score of 4 or more is considered positive; in women, a score of 3 or more is considered positive.

In general, the higher the AUDIT-C score, the more likely it is that the patient's drinking is affecting his or her health and safety.

From Babor TF, Higgins-Biddle JC, Saunders JB, et al. AUDIT: the alcohol use disorders identification test guidelines for use in primary care, second edition. Department of Mental Health and Substance Dependence, World Health Organization; 2011.

Substance	Instrument	Target Population	Description
Tobacco	Fagerström Test for Nicotine Dependence (FTND)	Adults	6-item screen measuring intensity of physical addiction to nicotine (cigarettes); level of severity assists in treatment planning <sup>77</sup>
Alcohol	Youth Guide	Children, adolescents	2-item screening tool for students in elementary school (aged 9–11 y), middle school (aged 11–14 y), and high school (aged 14–18 y); identifies risk factors for alcohol use <sup>78</sup>
	Alcohol Use Disorders Identification Test (AUDIT)	Adults	10-item screening tool, developed by the World Health Organization, to identify risky or hazardous alcohol use <sup>79</sup>
	Alcohol Use Disorders Identification Test—Consumption (AUDIT-C)	Adults	First 3 questions of AUDIT, focusing on alcohol consumption <sup>76</sup>
	TWEAK (Tolerance, Worried, Eye-opener, Amnesia, K/cut down)	Adults, pregnant women	5-item screening tool for risky drinking, with questions related to tolerance, worried, eye-opener, amnesia, and attempts to k/cut down <sup>80</sup>
Alcohol and other drugs	CRAFFT (Car, Relax, Alone, Forget, Family or Friends, Trouble)	Adolescents	6-item screening tool for alcohol and other drugs; targets situations relevant to adolescents: Car, Relax, Alone, Forget, Family or Friends, Trouble <sup>81</sup>
Other drugs	Drug Abuse Screening Test-20	Adolescents, adults	20-item screening tool to detect consequences related to drug use; includes prescribed or over-the-counter drugs, and any nonmedical use of drugs <sup>82</sup>

One set of resources, in particular, may be especially valuable to the primary care clinician striving to learn and integrate screening and brief intervention into their practice: the NIAAA publication *Helping Patients Who Drink Too Much: Clinician's Guide*,<sup>21</sup> which is available in both hardcopy and electronic versions (Box 7). An online training program has also been developed that includes step-by-step instructions for clinicians, handouts for patients, information regarding pharmacotherapy for alcohol use disorders, and video case presentations.<sup>84</sup> In addition, free continuing education credits are available for physicians and nurses when this course is taken through Medscape (see Box 7).

The number of sessions for screening and brief intervention may vary based on several factors, including (1) the patient's level of risk or severity related to substance use, (2) current medical conditions and/or other complicating factors, and (3) his or her response to screening and brief intervention. As one guideline states, "Medicare covers annual alcohol misuse screenings and, for those who screen positive, up to 4 brief face-to-face behavioral interventions in a 12-month period...for Medicare

**Box 7****Clinical resources for primary care clinicians***National Institute on Alcohol Abuse and Alcoholism (NIAAA)*

- Alcohol Screening and Brief Interventions for Youth: A Practitioner's Guide  
[www.niaaa.nih.gov/YouthGuide](http://www.niaaa.nih.gov/YouthGuide)
- Helping Patients Who Drink Too Much: A Clinician's Guide  
[http://pubs.niaaa.nih.gov/publications/Practitioner/CliniciansGuide2005/clinicians\\_guide.htm](http://pubs.niaaa.nih.gov/publications/Practitioner/CliniciansGuide2005/clinicians_guide.htm).
- Clinician's Guide Online Video  
[www.niaaa.nih.gov/publications/clinical-guides-and-manuals/niaaa-clinicians-guide-online-training](http://www.niaaa.nih.gov/publications/clinical-guides-and-manuals/niaaa-clinicians-guide-online-training)

*National Institute on Drug Abuse (NIDA)*

- NIDA Drug Use Screening Tool: Clinician's Screening Tool for Drug Use in General Medical Settings  
[www.drugabuse.gov/medical-health-professionals](http://www.drugabuse.gov/medical-health-professionals)
- Safe Prescribing for Pain CME/CE (Medscape online)  
<http://www.medscape.org/viewarticle/770687>
- Managing Pain Patients Who Abuse Prescription Drugs CME/CE (Medscape online)  
<http://www.medscape.org/viewarticle/770440>

*Substance Abuse and Mental Health Services Administration (SAMHSA)*

- Brief Interventions and Brief Therapies for Substance Abuse (TIP 34)  
<http://store.samhsa.gov/product/TIP-34-Brief-Interventions-and-Brief-Therapies-for-Substance-Abuse/SMA12-3952>
- A Guide to Substance Abuse Services for Primary Care Clinicians (TIP 24)  
<http://store.samhsa.gov/product/TIP-24-Guide-to-Substance-Abuse-Services-for-Primary-Care-Clinicians/SMA08-4075>
- Incorporating Alcohol Pharmacotherapies into Medical Practice (TIP 49)  
<http://store.samhsa.gov/product/TIP-49-Incorporating-Alcohol-Pharmacotherapies-Into-Medical-Practice/SMA13-4380>
- Substance Abuse Treatment Services Locator  
[www.findtreatment.samhsa.gov](http://www.findtreatment.samhsa.gov)
- SBIRT: Screening, Brief Intervention, and Referral to Treatment  
<http://www.integration.samhsa.gov/clinical-practice/sbirt>

*US Department of Justice, Drug Enforcement Agency (DEA)*

- State Prescription Drug Monitoring Programs, Frequently Asked Questions (FAQs)  
[http://www.deadiversion.usdoj.gov/faq/rx\\_monitor.htm](http://www.deadiversion.usdoj.gov/faq/rx_monitor.htm)

beneficiaries, including pregnant women.”<sup>72</sup> Some SBIRT models (see **Fig. 1**) describe brief treatment as an intermediate step between brief intervention and referral to treatment. This approach may involve more intensive counseling sessions, delivered by clinicians with additional qualifications or experience in counseling, addictions medicine,



addictions nursing, or other addictions specialist. The level of intervention should match the potential risk or severity of use (Fig. 2).

### Referral to Treatment

Patients identified as needing more help than brief interventions can successfully provide are referred to specialty treatment. In preparation for this eventuality, primary care clinicians are encouraged to identify, establish, and maintain collaborative relationships with clinicians and facilities that specialize in the treatment of substance use disorders. This approach may include consulting with colleagues, or contacting and visiting local treatment centers.

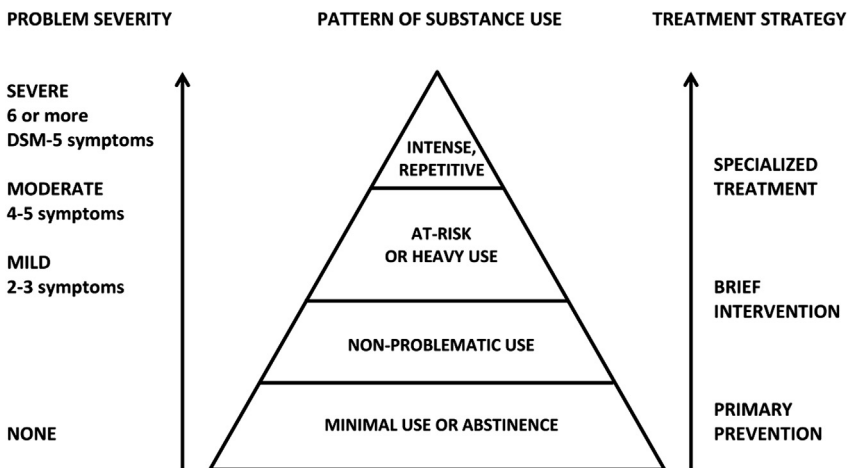
The SAMHSA Substance Abuse Treatment Services Locator lists and provides pertinent information about state-licensed substance use treatment facilities throughout the United States, which currently number more than 11,000. This information can be accessed electronically (see Box 7).<sup>85</sup>

Because most treatment for substance use disorders occurs on an outpatient basis, the primary care clinician will likely continue to provide routine medical care while the patient participates in substance use treatment, as well as after discharge. This interaction presents a unique opportunity to create a culture of collaboration between primary care clinicians and addiction treatment services, and to provide true continuity of care.

### Other Considerations

#### Mutual help groups

An essential part of treatment and recovery for many individuals with substance use disorders includes regular meeting attendance and affiliation with a mutual help group such as Alcoholics Anonymous ([www.aa.org](http://www.aa.org)), Women for Sobriety ([www.womenforsobriety.org](http://www.womenforsobriety.org)), Narcotics Anonymous ([www.na.org](http://www.na.org)), or SMART Recovery



**Fig. 2.** Pattern of substance use, problem severity, and treatment strategy. Primary prevention is advised for those who are abstinent, or with minimal or nonproblematic use. Brief intervention is appropriate for at-risk or heavy-drinking individuals. For moderate to severe use, refer the patient to specialized addictions treatment. The use of illegal substances is inherently problematic. (From Strobbe S. Addressing substance use in primary care. *Nurse Pract* 2013;38(10):45–54.)

([www.smartrecovery.org](http://www.smartrecovery.org)). Family members and friends of those with substance use disorders can also seek and obtain support in several parallel organizations such as Al-Anon ([www.al-anon.alateen.org](http://www.al-anon.alateen.org)) or Nar-Anon ([www.nar-anon.org](http://www.nar-anon.org)). Because mutual help group meetings play such a vital role in the treatment and recovery of individuals across the country and around the world, health care professionals, including primary care clinicians, are encouraged to familiarize themselves with these societies by attending 1 or more open meetings (ie, meetings open to the general public).<sup>86</sup>

### **Medications for substance use disorders**

Several medications have been approved by the US Food and Drug Administration for the treatment of substance use disorders (**Box 8**). These medications can assist some patients in the transition from physiologic dependence to abstinence, or with replacement therapy. It is generally recommended that pharmacotherapy for addictions be provided in conjunction with psychosocial rehabilitation, which could include mutual help group meeting attendance and/or formal substance use treatment. The SAMHSA

#### **Box 8**

#### **Pharmacotherapy for substance use disorders**

##### *Tobacco*

- Nicotine replacement therapy
  - Nicotine gum
  - Nicotine lozenges
  - Nicotine nasal spray
  - Nicotine transdermal patches
  - Nicotine inhalers
- Medications
  - Bupropion (Zyban)
  - Varenicline (Chantix)

##### *Alcohol*

- Acamprosate (Campral)
- Disulfiram (Antabuse)
- Naltrexone
  - Oral (ReVia)
  - Injectable (Vivitrol)

##### *Opioids*

- Antagonist therapy
  - Naltrexone
    - Oral (ReVia)
    - Injectable (Vivitrol)
- Replacement/maintenance therapy
  - Buprenorphine (Suboxone, Subutex)
  - Methadone

publication *Incorporating Alcohol Pharmacotherapies into Medical Practice (TIP 49)* (see **Box 7**) has more information on medications for substance use disorders.<sup>87</sup>

### **Prescribing practices**

When prescribing medications to patients with a history of problematic use of alcohol or other substances, clinicians are encouraged to avoid the use of agents that may place the patient at increased risk for misuse or relapse, particularly benzodiazepines or opioid medications. For specific procedures that require the use of such agents on a limited basis, additional education, monitoring, and support may be necessary. If questions arise regarding the possibility that a patient may be “doctor shopping” (eg, obtaining controlled substances from multiple prescribers), most states now have prescription drug monitoring programs (PDMPs) in place.<sup>88</sup> More information about PDMPs can be found through accessing the Web site of the US Department of Justice Drug Enforcement Administration’s Office of Diversion Control ([http://www.deadiversion.usdoj.gov/faq/rx\\_monitor.htm](http://www.deadiversion.usdoj.gov/faq/rx_monitor.htm)).

### **Pain management**

In 2012, the National Institute of Drug Abuse (NIDA) and the Office of National Drug Control Policy (ONDCP) launched a new online learning tool to provide training to health care professionals on proper prescribing and patient management practices for patients receiving opioid analgesics. Continuing Medical Education/Continuing Education (CME/CE) credits are available when these offerings are accessed through Medscape (see **Box 7** under the National Institute on Drug Abuse for *Safe Prescribing for Pain CME/CE*<sup>89</sup> and *Managing Pain Patients Who Abuse Prescription Drugs*<sup>90</sup>).

Principles and strategies related to pain management are also addressed in detail in a position statement issued by the American Society of Pain Management Nurses. In this position statement, clinical recommendations are delineated for patients at low, moderate, and high risk for addiction. Ethical tenets are discussed, including the notion that all patients have the proper high-quality assessment and pain management, including those with substance use disorders. Adherence monitoring procedures are also considered, including urine toxicology studies. Although such studies are not yet regarded as part of universal screening, they can in some situations play a constructive role.<sup>91</sup>

## **CURRENT PRACTICE PATTERNS**

### **Current Practice**

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Despite compelling evidence that prevention and SBIRT can be efficacious and cost-effective in addressing substance use and related disorders, primary care clinicians have been slow to adopt these practices.<sup>92</sup> Alcohol problems, in particular, are commonly not identified during the course of routine health care services.<sup>93</sup>

In a national sample of individuals aged 18 to 39 years, slightly fewer than half (49%) of those who had seen a doctor during the past year recalled having been asked about their alcohol consumption. Among those who exceeded NIAAA guidelines for per-day or per-week limits, only 14% recalled being advised about these limits, and fewer still (7%) were advised to cut down. Proportions were somewhat higher among those who exceeded both daily and weekly limits, with 24% having been advised about safe limits, and 21% advised to cut down.<sup>94</sup>

### **Barriers to Delivery**

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Commonly identified barriers for implementing screening and preventive services include: (1) a concern that the tools do not reflect the realities of practice (eg, they

take too much time, they are not tailored to the setting's demographics); (2) worry that screening will identify patients whose needs exceed available resources; (3) the clinician lacks the requisite expertise to successfully carry out the screening (or subsequent intervention); (4) a general lack of comfort in asking patients about their alcohol use (eg, fear of offending the patient, the clinician is him/herself an at-risk alcohol user); and (5) inadequate reimbursement from some insurance providers (and in some cases, no reimbursement at all).<sup>92,95</sup> Certain of these concerns may be reduced, if not eliminated, in the context of SBIRT and other recent developments in health care. As time remains a precious commodity in clinical services, brief interventions are intended to be just that, and the potential return on investment in relation to patient outcomes can be significant.

Until fairly recently, inadequate insurance reimbursement had the potential to negatively affect both primary care clinicians and addiction treatment facilities, ultimately leaving many patients without access to essential care. There was little incentive for clinicians in primary care to screen patients for substance use if there was insufficient payment for the services (screening, brief intervention, brief treatment) they provided, or inadequate coverage to facilitate a referral to treatment (if indicated).

Reimbursement for screening and brief intervention is now available through commercial insurance Current Procedural Terminology (CPT) codes, Medicare G codes, and Medicaid Healthcare Common Procedure Coding System (HCPCS) codes.<sup>96</sup> In addition, on January 1, 2010 the Mental Health Parity and Addiction Equity Act of 2008 went into effect, stipulating that group health plans that provided both medical and surgical benefits and mental health or substance use disorder benefits be similarly structured in terms of benefits and restrictions.<sup>97</sup>

Health care professionals continue to receive limited education on substance use and related disorders, particularly in comparison with the prevalence and impact that these conditions can have on individual and public health.<sup>98,99</sup> In response to a pressing sense of urgency to offset this deficiency, several high-quality educational and training opportunities have been developed and offered, often with CME/CE credits available free of charge, several of which have been described here.

### ***Characteristics of Organizations that Facilitate Best Practice***

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One group of researchers examined the Chronic Care Model as a framework for the prevention of risk behaviors, including tobacco use and risky drinking. These investigators found that primary care practices were more likely to offer recommended services such as health risk assessment, behavioral counseling, and referral to community-based programs if they were owned by a hospital health system that exhibited a culture of quality improvement, had a multispecialty staff, received support for decision making through point-of-care reminders and clinical staff meetings, and benefited from information systems such as an electronic health record (EHR).<sup>100</sup>

A team-based approach to SBIRT may also help to improve screening and related services (brief intervention, brief treatment, referral) within the primary care setting. A team-based approach to primary care capitalizes on the respective strengths of each team member in the provision of patient care. Through planning and clear delineation of roles, nonclinician team members can carry out some aspects of SBIRT, thus enabling clinicians to attend most closely to those patients with the highest severity. For example, nurses or social workers (and in some cases medical assistants) can administer screening instruments, provide patient education, answer patients' questions, and triage patients with a positive screen to the clinician or dedicated SBIRT provider. The clinician or dedicated SBIRT provider can then carry out SBIRT in accordance with the 6 elements as delineated by the FRAMES model. Leaders within the

primary care setting can champion SBIRT by establishing a culture that takes substance misuse seriously, and support staff and clinician training in SBIRT methods. Because team-based models for SBIRT remain on the cutting edge of care, there are insufficient data to assess its efficacy; however, emerging evidence suggests that this approach shows promise.<sup>101</sup>

## **IMPACT OF CHANGES WITHIN HEALTH CARE**

### ***Electronic Health Records***

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Although transitions to EHRs can be costly, disruptive, and stressful in the short term, the potential benefits of coordinated clinical care for patients with substance use and related disorders could prove to be transformative. Historically, because of stigma, shame, and discrimination, substance use and mental health disorders were frequently treated in isolation and secrecy, resulting in a predictable fragmentation and discontinuity of services, often to the detriment of the very patients whom these practices were presumably meant to protect.

While misunderstandings and prejudice persist, increasing numbers of professionals in the health care field have come to view addictions as chronic medical illnesses,<sup>102</sup> rooted in genetics and neurobiology,<sup>103</sup> with possibilities for full and sustained recovery. Some of the potential benefits of an EHR in the prevention and treatment of substance use disorders could include, but are not limited to:

- A single, comprehensive medical record, accessible across sites, providers, and services, over time
- The creation of mandatory fields for information related to tobacco, alcohol, and other substance use
- Ready access to patient-specific educational materials
- The potential to generate automated charges for provided services, such as prevention, screening, and brief intervention
- Prompts for follow-up care during subsequent visits
- The ability to track and graph laboratory values and other clinical activities
- Improved monitoring of prescription medications, including controlled substances

### ***Affordable Care Act***

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The Affordable Care Act (ACA) promises to enhance and expand efforts toward the prevention and treatment of substance use disorders. First, the ACA requires most health insurance plans to cover preventive services recommended by USPSTF,<sup>104</sup> including current measures related to tobacco (children and adolescents, adults, and pregnant women) and alcohol (adults), as well as persons at high risk for HCV infections, most notably those with past or current injection drug use (see **Box 4**). Second, the ACA “includes substance use disorders as one of the ten elements of essential health benefits,” meaning that “more health care providers can offer and be reimbursed for these services, resulting in more individuals having access to treatment.”<sup>105</sup> Third, benefits for substance use disorders are now more closely aligned with those for other chronic health conditions, with related prospects for more continual, rather than episodic, care.<sup>106</sup>

### ***Patient-Centered Medical Homes***

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The patient-centered medical home (PCMH) is described as a transformative model for primary care that encompasses 5 functions and attributes: comprehensive care, patient-centered care, coordinated care, accessible services, and quality and

safety.<sup>107</sup> Interestingly these are many of the same holistic values that have defined quality addictions treatment for decades. The Minnesota Model, which became the prevailing approach to abstinence-based 12-step treatment and recovery, embraces individualized treatment plans with active family involvement; an interprofessional collaborative team focused on comprehensive care; and integrated health in mind, body, and spirit.<sup>108</sup> The prospect of a true partnership with the medical community in the form of PCMHs bodes well for the future prevention and treatment of addictive disorders, and recovery from such disorders.

## SUMMARY

Alcohol and substance use disorders are a major public health concern, contributing to increased health care costs and needless human suffering. SBIRT can help to reduce these burdens by improving the health and well-being not only of individuals but also of families and communities. Primary care clinicians, including physicians, physician assistants, and nurse practitioners, are on the leading edge of transformative changes to the nation's health care system, including unprecedented access to alcohol and substance use screening and care. Although the full benefit of the ACA and the Mental Health Parity and Addiction Equity Act have yet to be realized, the outlook for a more humane, effective, and holistic future for alcohol and substance use prevention, screening, and treatment is hopeful.

## ACKNOWLEDGMENTS

This article is dedicated to the memory of Dr Patrick W. Gibbons (1954–2014), a tireless clinician, teacher, and advocate for those in need of addictions treatment.

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