ISSUE BRIEF
The Massachusetts Health Policy Forum

Reducing Risky Alcohol Use: What Health Care Systems Can Do

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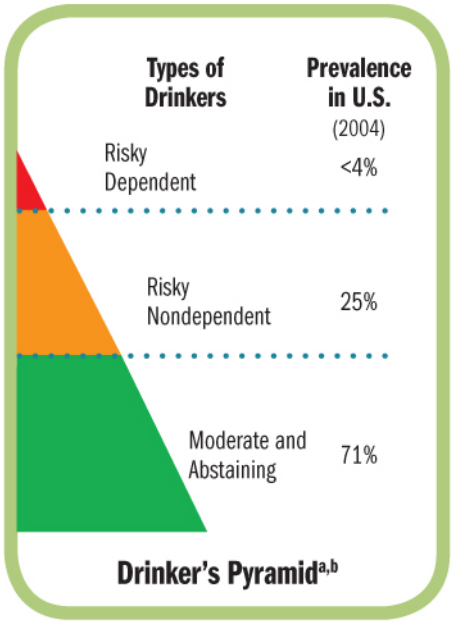
Executive Summary

Risky[1], non-dependent alcohol use is prevalent in the United States, affecting 25% of adults (Centers for Disease Control and Prevention, 2014b). Massachusetts has higher rates of alcohol use and binge drinking than most states (Substance Abuse and Mental Health Services Administration, 2015). Serious physical, social, and economic consequences result. Excessive alcohol use contributes to cancer, cardiovascular disease, sleep disorders, birth defects, motor vehicle injuries, and suicide, and it complicates management of chronic illnesses (Green, McKnight-Eily, Tan, Mejia, & Denny, 2016; Laramee et al., 2015; Mokdad, Marks, Stroup, & Gerberding, 2004; Rehm et al., 2009).



[a] (Grant et al., 2004)
[b] (Dawson, Grant, Stinson, & Chou, 2004)

Excessive alcohol use is one of the top causes of death, and over 240 alcohol-related deaths occur daily in the US (Mokdad et al., 2004; Stahre, Roeber, Kanny, Brewer, & Zhang, 2014). In comparison, 78 people die from an opioid overdose each day (Centers for Disease Control and Prevention, 2016). Excessive drinking is estimated to cost over $249 billion annually in the US and $5.6 billion in the Commonwealth (Sacks, Gonzales, Bouchery, Tomedi, & Brewer, 2015). This issue brief describes the scope of the risky drinking problem in the US and associated costs and consequences. The brief then examines the evidence base for tools to address risky drinking and outlines policy strategies that health care system stakeholders may employ to address further this critical public health issue.

Screening and brief intervention (SBI) is an evidence-based, cost-effective practice to address risky alcohol use, typically using a short validated screening tool followed by a brief counseling session if a patient screens positive. Research shows SBI conducted in primary care outpatient settings significantly reduces alcohol use (Bertholet, Daeppen, Wietlisbach, Fleming, & Burnand, 2005b; Bien, Miller, & Tonigan, 1993; Kaner et al., 2009; Saitz, 2010a), hospitalizations (Fleming, Barry, Manwell, Johnson, & London, 1997b) and mortality (Cuijpers, Riper, & Lemmers, 2004). Alcohol SBI saves an estimated $217.95 per person screened (Barbosa, Cowell, Bray, & Aldridge, 2015).

[1] Risky alcohol use is also referred to as alcohol misuse, or excessive, unhealthy, hazardous, or harmful drinking. You will see many of these terms used in this report.

However, alcohol use is not commonly addressed in primary care. Only one in six people report ever discussing alcohol with a health professional (McKnight-Eily et al., 2014). This is much lower than other preventive services, such as colorectal screening and flu vaccination, which have similar clinical preventable burdens and cost effectiveness (Maciosek et al., 2006). If alcohol SBI were conducted with all adult Massachusetts residents, the Commonwealth would save $1.17 billion.

> If all adults in Massachusetts were screened, it would save an estimated $1.17 billion.

Three key health care system stakeholders, 1) primary care practitioners, 2) provider organizations and delivery systems, and 3) payers and health plans, can play critical leadership roles making SBI the priority it needs to be to reduce risky drinking in the Commonwealth. Delivery system reforms including medical homes and integrated care models and new payment arrangements, such as accountable care organizations and pay-for-performance incentives, can align health plan and provider goals and provide motivation to address risky drinking. Providers and health plans focusing on improving population health and reducing costs may choose to address risky alcohol use because of the impact of alcohol use on physical and mental health and the increased health care costs associated with alcohol use. Technology may also be helpful to encourage use of SBI. The interface of SBI with EHRs is increasingly important to create supportive clinical structures for SBI implementation (Muench et al., 2013; Muench et al., 2015; Williams et al., 2016).

The aim of this brief is to provide education and motivation to reduce risky drinking in Massachusetts, and to encourage stakeholders to work together to develop and implement solutions. We recommend 50% of adult Massachusetts residents be screened annually for risky alcohol use by 2020 and that we work toward 75% by 2025. As part of this goal, brief interventions should be provided to 100% of those who are identified as risky, non-dependent drinkers. In order to meet this ambitious goal, providers, delivery systems, and payers all have roles to play to improve how we address risky drinking in Massachusetts. This issue brief presents challenges, opportunities, and example approaches. The overarching policy strategies are to:

- **Identify Promising Approaches to Adopt and Implement Alcohol SBI within Delivery Systems**

This brief provides examples of promising approaches to adopting and implementing alcohol SBI that are already underway in Massachusetts and around the country. The strategies fall into six categories:

1) educating health care system leaders and staff about risky alcohol use and its consequences;
2) identifying appropriate staff, workflow, and delivery models for effective implementation of SBI;
3) providing tailored training and coaching;
4) building site-specific referral networks for the most severe patients;

5) modifying EHRs to facilitate conducting and monitoring alcohol SBI; and
6) implementing telephonic and web-based SBI with feedback to providers.

- **Ensure Payment Methodologies Support Reduction of Risky Drinking**

As new payment models are developed and implemented, determining ways to incentivize alcohol SBI may be key to increasing the rates of screening in Massachusetts. Strategies to consider include pay-for-performance paid directly to staff, use of performance measures, and increased visit fees if screening and brief intervention are conducted.

- **Take Advantage of Performance Measures to Drive Practice Change**

Performance measures are an important tool to encourage and monitor medical practice. Tracking screening and brief intervention rates (i.e., using new alcohol screening measures), in order to establish baselines rates, give feedback to providers, and determine costs are important steps for providers and delivery systems to consider.

- **Hold a Follow-up Strategy Meeting with Health Plans, Delivery Systems and the CDC**

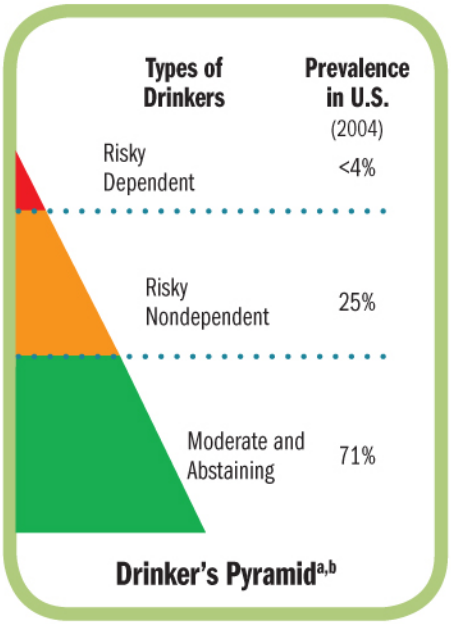
Health plans and delivery systems can play a critical role in driving system change through initiatives with members, providers and provider organizations. Brandeis University will convene a meeting with CDC staff, representatives from the National Association of Chronic Disease Directors (NACDD), and Massachusetts health plans and delivery systems. A meeting with health plans, other health care system stakeholders, and CDC and NACDD staff should be held to identify strategies to encourage alcohol SBI and to create a road map to improve alcohol screening and brief intervention rates. Increasing the rate of alcohol SBI in the Commonwealth can reduce health care costs and improve the health of our residents.

Defining the Issue

Risky alcohol use results in significant costs to health care systems, governments, employers, and individuals. Alcohol problems fall across a spectrum. Alcohol use disorders represent the least prevalent and most severe problems. But there is another pattern of unhealthy alcohol use that can have serious physical, social, and economic consequences, and is often overlooked: risky use (see Figure 1). Risky use can lead to health problems like cirrhosis and cancer; can complicate illnesses like hypertension, diabetes, and depression; and causes injuries, violence, and birth defects.

In addition to the less than 4% of Americans who are dependent on alcohol, twenty-five percent of the US adult population engages in risky alcohol use (Centers for Disease Control and Prevention, 2014b). That means that based on the 2014 US population, around 79.7 million adults in the US drink alcohol in a risky way. If we apply this to Massachusetts, approximately 1.34 million adults in Massachusetts drink alcohol at risky levels.

Figure 1



[a] (Grant et al., 2004)
[b] (Dawson et al., 2004)

Each year, approximately 88,000 people die because of excessive alcohol use (Stahre et al., 2014). That means there are over 240 alcohol-related deaths each day. In comparison, 78 people die from an opioid overdose each day (Centers for Disease Control and Prevention, 2016).

Nationally, excessive alcohol use costs over $249 billion annually based on 2010 data (Sacks et al., 2015). In Massachusetts, excessive alcohol use is estimated to cost over $5 billion each year (Sacks et al., 2015). That equates to $861 per capita. These costs are due to health care costs, lost productivity costs, and other costs — primarily criminal justice issues and motor vehicle crashes. Binge drinking accounts for about three-quarters of the total cost. Given the high costs to individuals and society, reducing risky drinking would provide many benefits (Dawson et al., 2004; Grant et al., 2004).

Identifying and addressing risky drinking among adults in primary care presents a significant opportunity to reduce the costs and consequences of risky drinking. Screening and brief intervention (SBI)[2] offers an

[2] The Centers for Disease Control and Prevention notes the distinction between SBI and SBIRT (screening, brief intervention, and referral to treatment) to emphasize that referral to treatment is only done for those few patients in need of a referral, rather than all patients who screen positive (Centers for Disease Control and Prevention, 2014b).

effective clinical service to address risky alcohol use in primary care. SBI combines both a prevention and early intervention perspective, with the intent of detecting risky use early and intervening appropriately to reduce current and future medical and other harms. SBI is also cost effective, providing a $217.95 mean net cost savings per patient (Barbosa et al., 2015), which includes screening and brief intervention costs and societal costs. If all adults in Massachusetts were screened, it would save an estimated $1.17 billion.

Yet, screening for alcohol problems is not common across the US or in Massachusetts. In the US, only one in six people report ever discussing alcohol with a health care provider (McKnight-Eily et al., 2014). A recent report indicates that primary care providers in Massachusetts ask patients about behavioral health problems only about half the time, but does not indicate how often providers ask about alcohol use specifically, how they ask about alcohol use, or how often providers follow-up after screening (MHQP, 2016). There are many barriers to implementing screening and brief intervention, including electronic health record design, billing policies, and provider understanding, comfort, willingness and training. Overcoming these barriers is important as SBI has the potential to improve health and productivity and reduce health care costs in Massachusetts.

Health care systems can play a critical role in encouraging the use of SBI and other ways of reducing risky drinking in the Commonwealth of Massachusetts. Three key health care system stakeholders that can play important roles are primary care practitioners; provider organizations and delivery systems; and payers and health plans. Provider organizations and delivery systems may consider redesigning electronic health records, including SBI in integration efforts, and training providers. Payers, including private and public health care plans and Medicaid may consider delivering SBI themselves and encouraging providers to deliver SBI through alternative payments models, including pay-for-performance incentives, global payments, and bundled payments. They could also participate in delivery system restructuring, such as with patient-centered medical homes and accountable care organizations.

This first section of this brief defines the scope, costs, and consequences of risky alcohol use in Massachusetts as well as the role of stakeholders in addressing risky use, including implementing SBI. Section two explains SBI and the research evidence supporting it. Section three discusses opportunities and challenges for health care systems in addressing risky drinking. Section four describes strategies health care systems have used to improve uptake of SBI. The final section outlines policy strategies for Massachusetts as we move forward together to address this public health issue.

Prevalence of Risky Alcohol Use Nationally and in Massachusetts

What is risky alcohol use?

Alcohol use occurs along a continuum that ranges from abstinence to alcohol dependence (Saitz, 2005). Risky drinking involves any level of alcohol consumption that increases the risk of harm to a person's health or well-being or that of others (Centers for Disease Control and Prevention, 2014b), and generally means that a person exceeds daily, weekly, or per occasion limits. Although a small proportion of risky drinkers are dependent on alcohol, most risky drinkers are not dependent. People who drink too much on a single occasion (binge drinkers) are at immediate risk of motor vehicle accidents, falls, intimate partner violence, alcohol poisoning, assaults and sexual assaults, and other problems. Those who drink too much over a longer period of time can experience longer-term health risks such as hypertension, cardiovascular disease, permanent liver damage, and fetal alcohol spectrum disorders (Centers for Disease Control and Prevention, 2014b). Figure 2 defines risky drinking and details specific levels of risky drinking for healthy men and women. For some people, such as those on medications or with chronic health conditions, use of even less alcohol is risky. And for others, such as pregnant women or those who might become pregnant or people with alcohol dependence, any drinking is risky (Centers for Disease Control and Prevention, 2014b).

What is the scope of the problem in Massachusetts and how does that compare to the US?

According to the 2014 Behavioral Risk Factor Surveillance System (BRFSS), 17.4% of adults (ages 18 and older) in the US population (51.0 million people) engaged in binge drinking on at least one occasion in the past month, and 5.9% (18.8 million people) reported heavy alcohol use[3] (Centers for Disease Control and Prevention,

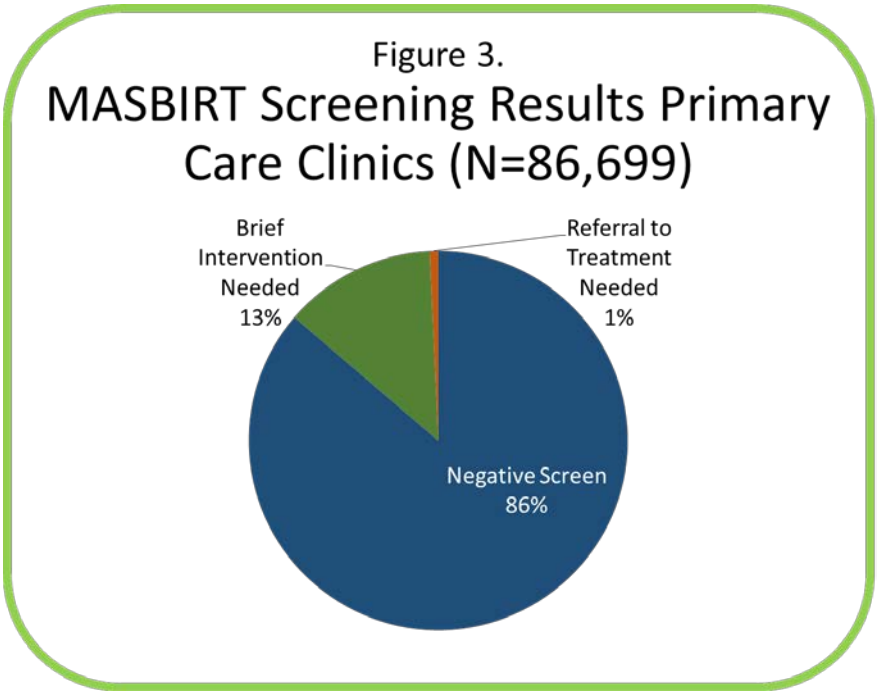
[3] For this study, binge drinking was defined as consumption of five or more drinks for men or four or more drinks for women on any one occasion in the past month. Heavy drinking was defined as consumption of more than 60 drinks in the past month for men and 30 drinks in the past month for women.

2014a). These data underscore the need for early identification and intervention to prevent risky use from developing into harmful and costly medical, social, and other problems.

Massachusetts residents ages 12 and older rank in the highest quintile across the nation for past month alcohol and binge alcohol use (Substance Abuse and Mental Health Services Administration, 2015). The BRFSS data for Massachusetts in 2014 show that 1.2 million adults (17.4%) binge drink and 472,179 (7.0%) have heavy alcohol use in the past month (Massachusetts Department of Public Health, 2015). Risky drinking occurs among every gender, age group, race-ethnicity, and socio-economic class. In Massachusetts, 23% of men and 12.4% of women reported binge drinking, while 17.8% of whites, 14.2% of blacks, 14.2% of Hispanics, and 10.4% of Asians did (Massachusetts Department of Public Health, 2015). Among adults in Massachusetts, 11.8% of those with less than a high school education and 19.3% of college graduates reported binge drinking (Massachusetts Department of Public Health, 2015). Additionally, 13.2% of adults in Massachusetts with an annual household income of less than $25,000 and 22.5% of those with an annual household income of $75,000 or higher reported binge drinking (Massachusetts Department of Public Health, 2015).

From 2006 to 2012, the Massachusetts Department of Public Health, Bureau of Substance Abuse Services contracted with Boston Medical Center to implement the Massachusetts Screening, Brief Intervention and Referral to Treatment Project (MASBIRT) with funding from the Substance Abuse and Mental Health Services Administration (SAMHSA). Over the five-year grant period, MASBIRT screened 86,699 patients in primary care clinics. Among these patients, 14% screened positive for risky alcohol use, with 13% needing a brief intervention and only 1% needing a referral to treatment (see Figure 3) (Brolin, 2012).

Figure 3.



Costs and Consequences

Numerous social and health-related costs and consequences are associated with risky or excessive drinking. Excessive alcohol consumption is a leading source of death in the US (Mokdad et al., 2004), and is

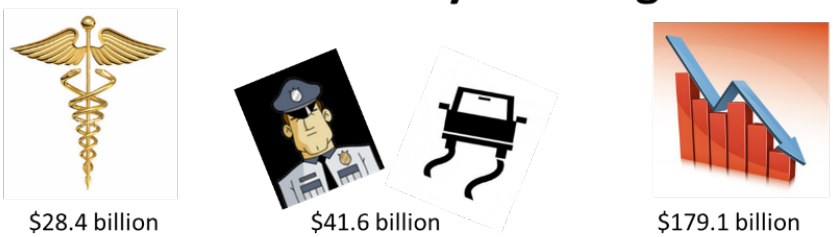
estimated to cause one in ten deaths among working-age adults (Stahre et al., 2014). Each year, approximately 88,000 people die because of excessive alcohol use (Stahre et al., 2014). This represents over 240 alcohol-related deaths each day, or the equivalent of 160 jumbo jets crashing each year. Risky drinking is also a major contributor to various cancers, cardiovascular disease, sleep disorders, birth defects, motor vehicle injuries, and suicide. Social costs of excessive alcohol use, like crime and violence, including violence-related trauma and injury, take their toll on families, schools and universities, communities, healthcare systems, and government entities.

> There are 240 alcohol-related deaths each day in the US, or the equivalent of 160 jumbo jets crashing each year.

The economic costs of risky drinking are staggering, and in 2010, excessive alcohol use cost the country over $249 billion (Sacks et al., 2015). These costs are due to health care costs ($28.4 billion), lost productivity costs ($179.1 billion), and other costs ($41.6 billion)—primarily criminal justice issues and motor vehicle crashes (see Figure 4). Binge drinking, which makes up the largest segment of excessive alcohol use costs, includes economic costs due to acute intoxication and resulting effects like motor vehicle crashes, crime, healthcare costs from injuries and acute conditions, and death. Over 70% of all costs associated with excessive alcohol use are due to binge drinking, with more than 40% of binge drinking-related costs paid by the government (Sacks et al., 2015).

Figure 4.

Costs of Risky Drinking



$28.4 billion
Health Care

$41.6 billion
Other Costs (primarily criminal justice and motor vehicle crashes)

$179.1 billion
Lost Productivity

Sacks, J. J., Gonzales, K. R., Bouchery, E. E., Tomedi, L. E., & Brewer, R. D. (2015). 2010 National and State Costs of Excessive Alcohol Consumption. *American Journal of Preventive Medicine, 49*(5), e73-e79. doi:http://dx.doi.org/10.1016/j.amepre.2015.05.031

Risky drinking also leads to high costs for states. In Massachusetts, costs associated with excessive alcohol consumption amounted to $5.6 billion in 2010, with over $2.2 billion of the costs paid by the state government (Sacks et al., 2015). Binge drinking accounted for 73.4% of total Massachusetts costs in 2010 (Sacks et al., 2015). The 2006 health care costs due to excessive alcohol consumption in Massachusetts were estimated to be $631.2 million (Sacks et al., 2013).

Excessive alcohol use is a major risk factor for disease and medical complications (Laramee et al., 2015; Mokdad et al., 2004; Rehm et al., 2009). Medical problems associated with risky drinking result from acute

intoxication due to binge drinking, like injuries or alcohol poisoning, but alcohol use also impacts health in other ways. While certain conditions like alcoholic cirrhosis of the liver are completely attributable to excessive alcohol consumption (Stahre et al., 2014), alcohol use is also associated with an increased risk of other medical conditions (e.g., cancer, cardiovascular disease, sexually transmitted infections) (National Institute of Alcohol Abuse and Alcoholism, 2000). Moreover, risky drinking may complicate and adversely impact other health conditions like diabetes, hypertension, stroke, and sleep disorders. For women who are pregnant, alcohol use during pregnancy may lead to medical and reproductive complications, or result in babies born with fetal alcohol spectrum disorders (FASDs) (Green et al., 2016). FASDs are preventable lifelong physical, behavioral, and intellectual disabilities caused by alcohol use during pregnancy, and are associated with many social and financial costs (e.g., medical problems, behavioral problems not often evident until school age, special education). Given the economic, social, and health-related consequences associated with risky drinking for Massachusetts, and the country, determining effective identification and prevention strategies will be important components moving forward.

Health Care System Approaches to Risky Drinking

Because of the contribution of risky alcohol use to poor health, social, and economic outcomes, it is critical for health care systems to respond. Addressing risky alcohol use in primary care could be a valuable strategy to improve health and reduce health care and societal costs. The issue of risky drinking is one that can best be addressed using a collaborative, united approach. There are many stakeholders in health care systems that play important roles in this effort. These stakeholders include primary care practitioners; provider organizations and delivery systems; and payers and health plans. Primary care practitioners, and the delivery systems in which they work, play key roles in disseminating and implementing alcohol screening and brief intervention programs and policies. Both public and private payers can play a significant role in encouraging patient and provider behavior. There are other stakeholders that are also important to invite into this conversation as we disseminate and implement strategies to address risky drinking. Employers are impacted because of the lost productivity associated with risky drinking, while state and local governments have a role making and supporting policies that can impact access to alcohol.

Screening and Brief Intervention in Primary Care: An Evidence-based Clinical Service to Address Risky Alcohol Use

What is Screening and Brief Intervention?

Screening and brief intervention (SBI) is an evidence-based practice to address risky alcohol use, typically using a short screening tool followed by a brief counseling session if a positive screen is identified (see Figure 5). There are a number of validated screening tools that may be used, such as the Alcohol Use Disorders Identification Test (AUDIT) or the single screening question recommended by the National Institute on Alcohol Abuse and Alcoholism (NIAAA). The U.S. Preventive Services Task Force (USPSTF) recommends using the AUDIT, AUDIT-C or single question screen (Moyer, 2013). A Centers for Disease Control and Prevention (CDC) guide provides an American version of the AUDIT and AUDIT-C that uses standard drink sizes for the US (Centers for Disease Control and Prevention, 2014b) (see figure 6). Brief intervention generally refers to a short conversation or motivational counseling session that provides feedback of screening results, brief medical advice, and discussion of options to motivate patient change (Centers for Disease Control and Prevention, 2014b; Saitz, 2005; SAMHSA-HRSA, 2012). Discussion may also relate the presenting health issue to excessive alcohol use when appropriate. Brief intervention can include one or two additional brief follow-up sessions.

SBI combines both a prevention and early intervention perspective, with the intent of detecting risky and problematic use early and intervening appropriately to prevent harmful and costly medical consequences. The SBI approach focuses patients who fall into the upper and middle portions of the Drinker's Pyramid (Figure 1), representing risky alcohol use (Centers for Disease Control and Prevention, 2014b). Since SBI aims to identify and address alcohol problems *before* severe consequences occur, primary care clinics provide ideal settings to conduct SBI.

Figure 5
SBI CONSISTS OF TWO MAJOR COMPONENTS:*

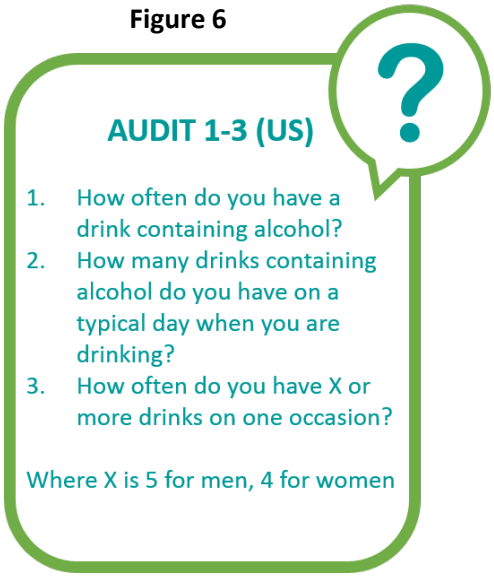
Screening — Asking a validated set of screening questions to identify patients' drinking patterns.

Brief Intervention — Having a short conversation about the harmful effects of risky drinking with patients who are drinking too much, including women who are (or could be) pregnant.

Referrals to specialty treatment are only made for those few patients with severe risk for alcohol dependence.

*Source: Centers for Disease Control and Prevention. (2014). *Planning and Implementing Screening and Brief Intervention for Risky Alcohol Use: A Step-by-Step Guide for Primary Care Practices.*

Figure 6



New methods of delivering screening and brief intervention may facilitate implementation. There has been research into conducting behavioral interventions that address multiple health risks simultaneously (Goldstein, Whitlock, & DePue, 2004). Computer-delivered screening and brief intervention has been validated (McNeely, Strauss, Rotrosen, Ramautar, & Gourevitch, 2016) and appears acceptable and appropriate to providers in rural areas (Mitchell, Monico, Gryczynski, O'Grady, & Schwartz, 2015). The Community Preventive Services Task Force recommends electronic screening and brief intervention (Guide to Community Preventive Services, 2015) along with other alcohol policy-related interventions.

Research Evidence

Research has demonstrated that SBI for risky alcohol use conducted in primary care outpatient settings significantly reduces alcohol consumption for adult patients who are not dependent (Bertholet, Daeppen, Wietlisbach, Fleming, & Burnand, 2005a; Bien et al., 1993; Kaner et al., 2007; Kaner et al., 2009; Moyer, 2013; O'Donnell, 2014; Saitz, 2010b). SBI reduces alcohol use and hospital utilization (Fleming, Barry, Manwell, Johnson, & London, 1997a), injuries (Gentilello et al., 1999), driving under the influence of alcohol (Schermer, Moyers, Miller, & Bloomfield, 2006), and mortality (Cuijpers et al., 2004).

While SBI has been shown to reduce alcohol use among primary care patient populations, it may not work as well with dependent patients and those whose drinking patterns are most severe. A systematic review of alcohol SBI randomized control trials (RCTs) found alcohol SBI was not efficacious for adult patients with very heavy use or dependence (Saitz, 2010a). Similarly, a study of the alcohol SBI at the Veterans Health Administration (VHA) found that after near universal screening, brief interventions with patients who reported heavier drinking patterns were not associated with resolution of unhealthy alcohol use (Williams et al., 2014). Evidence for drug SBI in primary care at this point is inconclusive (Gelberg et al., 2015; Roy-Byrne et al., 2014; Saitz et al., 2014).

U.S. Preventive Services Task Force and Other Recommendations for SBI

After two thorough reviews of all clinical trials, the USPSTF recommended that clinicians in primary care annually screen all 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 excessive alcohol use. This recommendation has a "B" rating and applies to all adult patients, including pregnant women, in primary care settings (U.S. Preventive Services Task Force, 2004, 2013). The "B" rating indicates that the USPSTF recommends this service and suggests practices provide the service. Many professional organizations, including the American Medical Association and American Society of Addiction Medicine, and government agencies, including the Centers for Disease Control and Prevention, promote routine screening for alcohol misuse (American Medical Association, 2012; American Society of Addiction Medicine, 2012; McKnight-Eily et al., 2014; National Institute on Alcohol Abuse and Alcoholism, 2005; U.S. Preventive Services Task Force, 2004; Willenbring, Massey, & Gardner, 2009). These organizations recommend that medical personnel include screening for unhealthy alcohol use as a standard part of adult patient interviews at least annually (McKnight-Eily et al., 2014; National Institute on Alcohol Abuse and Alcoholism, 2005; Willenbring et al., 2009). Further, they recommend universal screening, as opposed to targeted screening, since the signs of risky alcohol use are not easily observable.

The Substance Abuse and Mental Health Services Administration (SAMHSA) initiated a screening, brief intervention and referral to treatment (SBIRT) program in 2003. SBIRT adds referral to treatment as a third step in the SBI process, but only for those few patients likely to need specialized treatment. When making referrals, medical staff may provide contact information or may spend time helping the patient connect with a specialty care provider.

Under the Affordable Care Act, health plans are not allowed to require copayments from patients when primary care practitioners (PCPs) conduct preventive services having "A" or "B" recommendations from the USPSTF, including alcohol screening and counseling. Despite the evidence, recommendations, and supportive policies, the uptake of SBI remains low. Only one in six people report ever talking to a health professional about their drinking (McKnight-Eily et al., 2014).

The Cost and Cost Effectiveness of SBI

It is important for health care systems to understand the costs and savings of screening and brief intervention. This key information can guide the development and implementation of sustainable programs.

Alcohol screening and brief intervention is one of the most effective and cost-effective clinical preventive services; it ranks 4th in a list of 25 preventive services (Maciosek et al., 2006; Partnership for Prevention, 2016) (See Table 1).

Table 1. Rankings of Preventive Services for the US Population

Clinical Preventive Services	CPB	CE	Total
Discuss daily aspirin use—men 40+, women 50+	5	5	10
Childhood immunizations	5	5	
Smoking cessation advice and help to quit—adults	5	5	
Alcohol screening and brief counseling—adults	**4**	**5**	**9**
Colorectal cancer screening—adults 50+	4	4	8
Hypertension screening and treatment—adults 18+	5	3	
Influenza immunization—adults 50+	4	4	
Vision screening—adults 65+	3	5	
Cervical cancer screening—women	4	3	7
Cholesterol screening and treatment—men 35+, women 45+	5	2	
Pneumococcal immunizations—adults 65+	3	4	
Breast cancer screening—women 40+	4	2	6
Chlamydia screening—sexually active women under 25	2	4	
Discuss calcium supplementation—women	3	3	
Vision screening—preschool children	2	4	
Discuss folic acid use—women of childbearing age	2	3	5
Obesity screening—adults	3	2	
Depression screening—adults	3	1	4
Hearing screening—adults 65+	2	2	
Injury prevention counseling—parents of children ages 0-4	1	3	
Osteoporosis screening—women 65+	2	2	
Cholesterol screening—men < 35, women < 45 at high risk	1	1	2
Diabetes screening—adults at risk	1	1	
Diet counseling—adults at risk	1	1	
Tetanus-diphtheria booster—adults	1	1	

Note: CPB is clinically preventable burden, or the disease, injury and premature death that would be prevented if the service were delivered to all people in the target population. CE is cost effectiveness, which is a standard measure for comparing services' return on investment.

Source: (Maciosek et al., 2006; Partnership for Prevention, 2016)

How much does SBI cost?

The cost of SBI is an important factor for practitioners, provider organizations and delivery systems, payers and health plans, communities, and policy makers. Lack of resources has been identified as one of the major reasons for the lack of implementation (Johnson, Jackson, Guillaume, Meier, & Goyder, 2011).

A 2012 review of alcohol SBI literature reported on 17 studies with cost estimates (Bray, Zarkin, Hinde, & Mills, 2012). Bray and colleagues found that the median cost of a screening is approximately $4, and the median cost of a brief intervention is approximately $48. The cost estimates had a wide range ($0.51 to $601.50 per screening and $3.41 to $243.01 per brief intervention), however this is partially attributable to the cost estimate method used in the study (2012). Costs also vary by the type of provider delivering the service and the duration of the service (Bray et al., 2012). However, longer brief interventions do not significantly reduce alcohol consumption compared to shorter brief interventions (Kaner et al., 2009).

The lowest cost estimates reviewed by Bray and colleagues are from a 2003 study that aimed to make SBI as efficient as possible (Zarkin, Bray, Davis, Babor, & Higgins-Biddle, 2003). Zarkin and colleagues found screening administered by a receptionist took 2 minutes and cost $0.51 while a brief intervention delivered by a nurse or health educator took 4 minutes and cost $3.14 and a brief intervention delivered by a primary care provider (PCP), physician's assistant (PA), or nurse practitioner (NP) took 4 minutes and cost $4.16 (2003). This efficient implementation still produced statistically significant reductions in patient drinking (Babor et al., 2006).

The median cost estimates from Bray and colleagues can be used to approximate how much it would cost to deliver universal screening and brief interventions in Massachusetts. If we assume that every adult in Massachusetts (approximately 5.36 million) is screened and the screening costs $4, it would cost $21.42 million. If the estimated 1.34 million Massachusetts residents who drink at risky levels also received a brief intervention costing $48 each, it would cost an additional $64.27 million. If delivered as in Zarkin and colleagues' study, the screening could cost as little as $2.73 million and brief intervention could cost as little as $4.21 million if delivered by a nurse or health educator or $5.57 million if delivered by PCPs, PAs, or NPs

How much does SBI save?

Cost effectiveness can be useful for policymakers to consider strategies to disseminate and implement SBI along with health care reforms focusing on reducing costs (Barbosa et al., 2015). Compared to other preventive services, alcohol screening and brief counseling was found to be one of the most effective and cost-effective services (Solberg, Maciosek, & Edwards, 2008). Solberg and colleagues estimated a value score for SBI and other preventive services by estimating both the clinically preventable burden and cost effectiveness of SBI in primary care. SBI had a cost-effectiveness ratio of $1,755 per quality adjusted life year (QALY) from the health-system perspective, meaning there is a net gain of $1,755 in lifetime costs of delivering the service per QALY (Solberg et al., 2008). The value score for alcohol screening and counseling in primary care was similar to the value scores of screening for colorectal cancer, hypertension, and vision, and to influenza or pneumococcal immunization (Solberg et al., 2008).

Few studies have evaluated the economic impact of SBI (Kraemer, 2007; Latimer, Guillaume, Goyder, Chilcott, & Payne, 2008) and most of these had methodological limitations (Barbosa, Godfrey, & Parrott, 2010). A 2008 review of 28 alcohol SBI economic evaluations identified a number of studies done in emergency department (ED), hospital, and primary care settings, but very few included costs from provider and societal perspectives or measured health outcomes (Latimer et al., 2008). Latimer et al. concluded that SBI in primary care is cost effective and that evidence suggests it is cost effective in ED settings, but it is not clear if it is cost effective in inpatient settings. There is also research on the cost effectiveness of specific screening tools that indicates that the AUDIT is cost effective (Latimer et al., 2008) and suggests the AUDIT-C is cost-effective (Zur & Zaric, 2015). A more recent review of 22 studies that updated and expanded on Latimer et al., 2008 also concluded that alcohol SBI in primary care is cost effective and that length of time and type of staff do not appear to have a significant impact on cost effectiveness (Angus, Latimer, Preston, Li, & Purshouse, 2014). However, the cost of different implementation strategies may impact cost effectiveness, and these are important costs for policy makers to consider (Angus et al., 2014).

A recent study of the first seven SAMHSA-funded state SBIRT programs used statistical methods to simulate costs, incorporating societal costs and health-related quality of life measures. The study found that in primary care, SBIRT resulted in a $217.95 mean net cost savings per patient and led to an improvement in quality of life (Barbosa et al., 2015). The mean net cost savings includes the costs of delivering screenings, brief interventions, brief treatments, and referrals and societal cost change. We can use the net cost savings estimates from Barbosa and colleagues to approximate how much it would save to deliver screening and brief interventions in Massachusetts. If we assume that every adult in Massachusetts (approximately 5.36 million) is screened, it would save $1.17 billion, after accounting for the cost of the service.

Health Care Systems: Challenges and Opportunities to Address Risky Drinking

With proven results for alcohol screening and brief intervention in primary care settings, experts in prevention and evidence-based medicine have endorsed SBI for alcohol use. Despite the support and evidence, there has not been widespread adoption of alcohol SBI. Screening for alcohol problems is not common across the US or in Massachusetts. In the US, only one in six people report ever discussing alcohol with a health professional (McKnight-Eily et al., 2014). A recent report indicates PCPs in Massachusetts ask patients about behavioral health problems only about half the time, but does not specify how often patients are asked specifically about alcohol use and whether they are screened with a validated screening tool (MHQP, 2016).

Barriers at multiple levels have hampered adoption of alcohol SBI. There are many barriers to implementing screening and brief intervention, including electronic health record design, billing policies, and provider understanding, comfort, willingness, and training. Key health care system stakeholders can all play roles in improving how we address risky drinking in Massachusetts and across the country. This section describes challenges and opportunities to address risky drinking for primary care practitioners; provider organizations and delivery systems; and payers and health plans.

Primary Care Practitioners

Identifying and addressing risky drinking in primary care presents a significant opportunity to reduce the costs and consequences of risky drinking. Primary care is a key health care setting to improve overall health (Starfield, Shi, & Macinko, 2005) and is at the root of recent delivery system reforms that focus on delivering patient-centered care while simultaneously addressing population health (Rittenhouse, Shortell, & Fisher, 2009). Based on Medical Expenditure Panel Survey (MEPS) data, 462 million visits were made to primary care physicians in 2008 (Petterson et al., 2012). This represents 1.6 primary care physician visits per person annually, on average (Petterson et al., 2012).

Primary care faces a number of challenges. Primary care transformations are a fundamental part of health care reforms. PCPs have seen an increase in the number of their clients with Medicaid coverage since the implementation of the Affordable Care Act and many feel that the time they can spend with each patient has decreased while the time they spend on insurance administration issues has increased (The Kaiser Family Foundation and The Commonwealth Fund, June 2015). However, a large number of PCPs are still accepting new

patients (83% of physicians, 93% of mid-level clinicians) and about 50% report that their patients can get same- or next-day appointments (The Kaiser Family Foundation and The Commonwealth Fund, June 2015).

Most risky alcohol use goes undetected by physicians (Fiellin, Reid, & O'Connor, 2000; Friedmann, McCullough, Chin, & Saitz, 2000). Many health professionals do not ask their patients about their alcohol use (McKnight-Eily et al., 2014). Physicians report that they have limited time, training, and referral resources when implementing SBI for alcohol and other drug problems (Babor, 2008; Friedmann et al., 2000; Miller et al., 2006; Williams et al., 2016). Many medical personnel also find that alcohol and other drug use are difficult to discuss with patients due to social stigma and, at times, their own values and risky behaviors. Further, physicians have reported challenges in managing chronic diseases and bad experiences with individuals who misuse substances due to illness, denial and lies (Delbanco, 1992). Additionally, physicians have not been able to bill for SBI for alcohol until recently (Substance Abuse and Mental Health Services Administration, 2016).

Despite these constraints, alcohol screening and brief intervention is an effective and cost-effective preventive service and uptake in primary care needs to be improved. Educating health care system leaders and staff about the risks of excessive alcohol use and the value of SBI can help make addressing risky drinking a priority for health care system stakeholders. Delivery system and payer or health plan policies, including implementation of medical homes, integrated care, and pay-for-performance incentives, can change provider behavior to address risky drinking to improve health and health care. Improving certain patients' health may take additional efforts, including primary care case management, repeated brief interventions, and counseling to address treatment options (Saitz, 2015). Further, alcohol interactions with medications are responsible for one-quarter of all US emergency room visits (Substance Abuse and Mental Health Services Administration, 2013), so addressing risky alcohol use in primary care could reduce such expensive health care utilization.

Provider Organizations and Delivery Systems

Provider organizations and delivery systems are the scaffolding around many PCPs. Policies and programs of these organizations can impact how risky drinking is addressed by individual providers and by the systems as a whole. Many recent health care delivery and payment reforms and supporting structures, like electronic health records, present challenges and opportunities to address risky alcohol use. Developing organizational structures and cultures that are able to respond to risky drinking policies and programs is critical to actually changing the delivery system.

Opportunities for integration

Recent health care delivery and payment reforms aim to transform health care by improving population health, reducing costs, and delivering patient-centered care. In newer delivery models, like the patient-centered medical home and accountable care and related organizations, there is also a focus on care coordination and integrating behavioral health into primary and other medical care settings. The Office of National Drug Control Policy (ONDCP) and SAMHSA promote SBI as one strategy to better integrate substance use issues into medical care and into the broader health system to improve overall health outcomes for patients (Office of the National Drug Control Policy, 2012; SAMHSA-HRSA, 2012).

Many integrated care practice models are now in use, spanning a continuum of collaboration. SBI is an important service across this continuum. PCPs can deliver SBI in non-integrated settings, while SBI can be a key strategy in a delivery-systems-integration strategy to identify and treat risky alcohol use and alcohol use disorders.

The structure of these models and programs is important to consider. A recent study found a relationship between primary care team communication networks and alcohol-related care utilization and costs (Mundt, Zakletskaia, Shoham, Tuan, & Carayon, 2015). A different study found that if health educators delivered the SBI, the procedure was often not documented by a primary care clinician and concluded that a primary care team member delivering the SBI could improve the quality of care (Kim et al., 2013). Integrated care settings may also face unique SBI implementation issues (Rahm et al., 2015).

EHRs and decision-support software

Health IT infrastructure is an essential tool for many primary care processes, including care coordination, performance monitoring, and quality measurement. Electronic health records (EHRs) are now widely used in general health care. The interface of SBI with EHRs is increasingly important to creating supportive clinical structures for SBI implementation (Muench et al., 2013; Muench et al., 2015; Williams et al., 2016). Decision-support software with tracking, alerts, and clinical reminders may encourage SBI use in primary care settings (Williams et al., 2015), but much remains unknown regarding how best to use these structures with SBI.

Large health care systems like Kaiser Permanente and the VHA have had success with implementing clinical reminders and alerts into their EHRs to prompt clinical staff to screen or provide brief alcohol interventions (Mertens et al., 2015; Williams, Achtmeyer, et al., 2010; Williams et al., 2015; Williams, Lapham, et al., 2010). VHA studies have found that clinical reminders do effectively prompt clinical staff to conduct and document screening, but are limited in ensuring that the screening is done in a standardized or reproducible manner (Bradley et al., 2006; Williams et al., 2015). Research on clinical prompts for brief interventions in the

VHA are somewhat mixed, suggesting that more effort in educating and encouraging physicians during and beyond implementation will be important (Williams, Achtmeyer, et al., 2010; Williams, Lapham, et al., 2010).

EHRs and decision-support software are noted as both facilitators and barriers to SBI implementation as there is often considerable variation in their design, usability, and adaptability for different clinical settings and clinical care processes. EHRs can act as SBI facilitators through tracking patients, providing alerts and prompts, and establishing billing mechanisms for SBI services. Standard EHR software is not always configured with SBI in mind, however, and may need to be adapted for SBI and different practice settings. Clunky EHR interfaces with a limited ability to document, track, or bill for SBI electronically are noted as significant SBI implementation barriers (Muench et al., 2013; Muench et al., 2015). Overcoming the barriers associated with EHRs and decision-support software will be critical for addressing and ensuring the sustainability of SBI.

SBI implementation findings consistently suggest that when SBI processes are integrated and incorporated into the EHR (e.g., having the screening tool embedded in the EHR, clinical alerts or reminders, brief intervention prompts when clinically necessary, mechanisms for billing), the usability and provider/staff satisfaction surrounding SBI is likely to increase (Kaiser & Karuntzos, 2016; Mertens, Sterling, Weisner, & Pating, 2013; Muench et al., 2013; Muench et al., 2015; Zoorob, Gonzalez, Snell, O'Hara, & Sidani, 2015). When EHR systems are created with the SBI workflow in mind, they may facilitate more effective, routine use of SBI in general medical settings (Zoorob et al., 2015).

Alternative payment models

Current payment reforms are moving away from fee-for-service (FFS) to alternative payment models (APMs) that shift financial risk from payers to providers, educating and incentivizing providers to better manage patients' service utilization. Risky drinking contributes to expensive hospital admissions, readmissions, and emergency room visits, in addition to elevating the risk of patients with multiple, sometimes chronic, medical conditions. Reducing risky drinking could improve the health of patients and result in savings to provider organizations being paid under APMs.

APMs have expanded across Massachusetts in recent years. In the commercial insurance market, APM use grew from 32.8 percent in 2012 to 38.4 percent in 2014 (Center for Health Information and Analysis, 2016). This increase occurred predominately in health maintenance organizations (HMOs) (Center for Health Information and Analysis, 2016) and was driven by implementation of global payments (Center for Health Information and Analysis, 2015). Massachusetts APMs generally do not include behavioral health services, but they could cover SBI in medical settings (Burns & Bailit, 2015). Safety-net providers face many challenges under

APMs, particularly accepting downside risk and coordinating across multiple sites and providers (Burns & Bailit, 2015).

Under these payment models, providers are more responsible for patients' care management and costs. Providers are also encouraged to take a more population-health approach to care delivery, including the delivery of preventive health services and chronic disease management. Conducting alcohol SBI can benefit providers paid under APMs because SBI can improve health and prevent future health care utilization and corresponding costs. Further, including behavioral health care explicitly in APMs could also encourage providers to address alcohol problems in primary care and other health care settings because both preventing and treating alcohol and other behavioral problems could become more of the organizational culture.

Community health centers

Community health centers (CHCs) are critical safety net providers and can play an important role in preventing risky behaviors and chronic disease. The ACA expanded insurance coverage to many low-income people who are more likely than people with private insurance to receive primary care in community health centers (Hing & Uddin, 2010). In Massachusetts, one out of eight residents receive care at a community health center. Community health centers serve patients from 92% of the state's cities and towns. They provide 4.2 million medical, dental, mental health, substance abuse, eye care, and social service visits annually, support more than 14,000 jobs, and save more than $1 billion annually (Mass League, 2016).

Some community health centers are engaged in SBI; however, training in this area is frequently requested (Lardiere, Jones, & Perez, 2011). In a 2010 national survey of federally qualified community health centers, 38.8% of respondents reported routine screening for substance use (mostly annually or at every visit), 23.8% reported screening a select group of patients, and 37.4% reported not routinely screening (Lardiere et al., 2011). In a 2009 survey of CHCs in Massachusetts—as well as in California and Texas—90% provided alcohol screening and diagnostic services. Of those that provided services, 48% provided alcohol screening and diagnostic services on site (Gurewich, Sirkin, & Shepard, 2012).

Payers and Health Plans

A key provision of the Affordable Care Act (ACA) is the requirement that private insurance plans cover recommended preventive services without any patient cost-sharing; this includes alcohol screening and brief intervention. Payers and health plans have a number of options available to address risky drinking among their

beneficiaries and members. These approaches include addressing risky drinking directly with members through screening and risk assessments offered by the plan; reimbursing for alcohol screening conducted in primary care; incentivizing PCPs to address risky drinking; and using an alternative payment arrangement, for instance bundled or global payment.

Conducting screening and risk assessments

To keep members healthy and to lower health care costs, most health plans take a proactive approach to member health. Health risk assessments (HRA) and self-assessment tools are offered by the majority of health plans. These HRAs are questionnaires about a wide variety of health risk factors, such as substance use and body mass index (BMI). They are generally self-assessments so are commonly offered online, though may also be done over the phone or in person. In 2003, 31% of private health plans conducted their own screening for behavioral health problems through telephone, mail, or web-based surveys (Horgan, Garnick, Merrick, & Hoyt, 2007). By 2010, 92% of private health plans reported conducting their own screening (Horgan et al., 2014). The vast majority of health plan products offer a health risk assessment (HRA) (96%), online self-assessment tools (93%) and health coaching (99%). Alcohol use and drug use are frequently included in the HRAs (87% and 78% respectively) and self-assessments are nearly always available for alcohol use and drug use (98% and 85% respectively) (Reif et al., 2013). While the evidence for such self-assessments in reducing drinking is extremely limited, sharing HRA information with PCPs or direct follow-up from health plans to members may provide an opportunity to intervene with an individual exhibiting signs of risky drinking. Most health plans follow-up directly with members and do not share screening information with providers (Horgan et al., 2014), which prevents clinicians from using this important information in treating patients' medical needs.

Reimbursement of SBI

Under a fee-for-service payment system, health plans may reimburse providers for conducting alcohol screening and brief intervention. To support adoption of SBI for alcohol, federal, state and local policymakers advocated for SBI billing codes to provide reimbursement to medical staff conducting SBI. SBI for alcohol can now be billed to private insurance under CPT (Current Procedural Terminology) and public insurance under HCPCS (Healthcare Common Procedure Coding System) codes (see Table 2). Both CPT and HCPCS codes assure uniformity within services. Unlike private insurers, however, Medicare and Medicaid reimburse all medical practitioners within a geographic area the same amount for a particular code.

Within Medicaid, states must turn on the SBI codes. If the state's Medicaid or Children's Health Insurance Plan covers mental health or alcohol services, the state Medicaid agency can adopt any approved code for its SBI billing. Generally, Medicaid programs adopt the "H" codes, though some state Medicaid plans use CPT codes.

For all codes except the H0049, alcohol and/or drug screening for Medicaid, the codes contain a time component so that medical personnel must document the amount of time spent in the SBI process to appropriately bill the payer. The time includes both the screen and brief intervention. Screening itself is not considered reimbursable on its own (similar to weighing patients or getting blood pressure readings). Note, Massachusetts' Medicaid program has not turned on the SBI codes.

Table 2. SBI Billing Codes by Payer

Payer	Code	Description
Commercial Insurance	CPT 99408	Alcohol and/or substance abuse structured screening and brief intervention services; **15 to 30 minutes**
	CPT 99409	Alcohol and/or substance abuse structured screening and brief intervention services; **greater than 30 minutes**
Medicare	G0442	Annual Alcohol Misuse Screening; **15 minutes**
	G0443	Brief face-to face behavioral counseling for alcohol misuse; **15 minutes**
Medicaid	H0049	Alcohol and/or drug screening
	H0050	Alcohol and/or drug service, brief intervention, per 15 minutes

Source: (Substance Abuse and Mental Health Services Administration, 2016)

Even when screening codes are turned on, barriers to use remain. The 15-minute intervention time component required by the codes may discourage PCPs from conducting brief interventions if they do not have the time or, alternatively, the actual intervention takes less time than would be reported (Johnson & Seale, 2015). Additionally, if the medical facility receives a facility fee from Medicare or Medicaid (e.g. inpatient services, emergency department) and the SBI services are conducted by non-physician staff, the medical facility cannot bill separately for the SBI services. In such a facility, only physicians can bill separately for professional services and thus could bill under the SBI codes.

Most private health plans cover screening for alcohol misuse as a behavioral health prevention benefit (Garfield, Lave, & Donohue, 2010). Among private health plans, 72.6% of products surveyed reported reimbursing PCPs for SBI. Medicaid SBI codes and rates are listed for Massachusetts and many other states, but that does not mean that providers can be reimbursed for those codes (Fussell, Rieckmann, & Quick, 2011). Medicare covers one alcohol screening and up to four brief counseling sessions per year without coinsurance (Centers for Medicare and Medicaid Services, 2012; Substance Abuse and Mental Health Services Administration, 2016).

Provider payment and incentives

Recent federal and state legislation as well as private sector initiatives are changing the way health care is paid for and delivered. There have been continuing calls from the Institute of Medicine, Medicare and Medicaid to align payment incentives with performance. Pay-for-performance (P4P), or value-based purchasing, is being used and tested (Centers for Medicare and Medicaid Services, 2003, 2007; Felt-Lisk, Gimm, & Peterson, 2007; Kahn, Ault, Isenstein, Peotetz, & Van Gelder, 2006; Kuhmerker & Hartman, 2007; Rosenthal, Landon, Normand, Frank, & Epstein, 2006; Ryan, 2009) in order to improve quality of care and control costs (Sorian, 2006). Pay-for-performance programs aim to align providers' incentives with the purchasers' goals (Custers, Hurley, Klazinga, & Brown, 2008), whereas traditional payment systems, such as fee-for-service, lack incentives for delivery of high quality care (Robinson, 2001). Studies of effectiveness of pay-for-performance have shown mixed results with improvement on some measures and not others, and modest impact (Markovitz & Ryan, 2016; Van Herck et al., 2010).

There are few studies with rigorous designs that disentangle the effects of pay-for-performance from other, concurrently implemented, quality improvement initiatives (Van Herck et al., 2010). Randomized controlled trials of pay-for-performance in primary care are inconclusive as to whether incentives improve quality of preventive care, while observational studies have shown modest effects (Eijkenaar, Emmert, Scheppach, & Schöffski, 2013). Immunization and cholesterol screening rates (Kouides et al., 1998; Kouides et al., 1993; Morrow, Gooding, & Clark, 1995), smoking cessation (An et al., 2008; Coleman, Lewis, Hubbard, & Smith, 2007; Roski et al., 2003), diabetes care (Beaulieu & Horrigan, 2005; Campbell, Reeves, Kontopantelis, Sibbald, & Roland, 2009; Chung, Chernicoff, Nakao, Nickel, & Legorreta, 2003; Larsen, Cannon, & Towner, 2003; Pearson, Schneider, Kleinman, Coltin, & Singer, 2008; Tahrani et al., 2007), and appropriate use of antibiotics (Anell, Dietrichson, & Ellegård, 2015) have improved under P4P in primary care. Mixed effects were identified for breast and cervical cancer screening (Grady, Lemkau, Lee, & Caddell, 1997; Hillman et al., 1998; Pearson et al., 2008; Rosenthal et al., 2008; Rosenthal, Frank, Li, & Epstein, 2005) and no improvement was found for colorectal cancer screening (Hillman et al., 1998). Specific features of P4P programs are important. Programs directed to individuals and small teams, targeting measures with room for improvement and focusing on process or intermediate outcome measures may be more effective (Van Herck et al., 2010). A review of systematic reviews concludes that primary care pay-for-performance programs are modestly effective and may also be cost-effective (Eijkenaar et al., 2013).

There is some evidence that some health plans are using financial incentives to encourage delivery of SBI in primary care. A 2010 survey of private health plans found that 31.6% provided incentives for all screening activities and 19.2% specifically incentivize screening for alcohol problems (Horgan et al., 2014). The

effectiveness of incentives for SBI has not been studied. Results from a quasi-experiment suggest that using performance incentives in integrated medical and behavioral health care programs can improve care delivery and health outcomes (Unützer et al., 2012).

Performance measurement

Performance measures are an important tool to encourage and monitor use of many different medical practices. Tracking and measuring alcohol SBI can help improve uptake. An alcohol screening and brief intervention measure is under development by NCQA for inclusion in the Healthcare Effectiveness Data and Information Set (HEDIS) (Liu & Morden, 2016). HEDIS is the measurement tool used most widely by health plans. Testing is ongoing with the goal of the measure being included in HEDIS 2018 (Liu & Morden, 2016). This measure relies on electronic clinical information systems, and is adapted from the 2152 NQF measure.

The National Quality Forum (NQF) has endorsed three measures that include alcohol screening in primary care settings (NQF). In March 2014, NQF endorsed measure *2152: Preventative Care and Screening: Unhealthy Alcohol Use: Screening & Brief Counseling*. This measure assesses the percent of patients 18 years and older who were screened for unhealthy alcohol use at least once during the two-year measurement period using a systematic screening instrument and who received brief counseling if identified as an unhealthy alcohol user.

In March 2015, NQF endorsed two additional measures. Measure 2599: *Alcohol Screening and Follow-up for People with Mental Illness*, draws from the previously endorsed screening and brief counseling measure for the general population but applies it specifically to people with mental illness. This measure assesses the percentage of patients 18 years and older with a serious mental illness, who were screened for unhealthy alcohol use and received brief counseling or other follow-up care if identified as an unhealthy alcohol user. NQF approved measure 2597: *Substance Use Screening and Intervention Composite* as an e-measure approved for testing. This measure assesses the percent of patients aged 18 years and older who were screened at least once within the last 24 months for tobacco use, unhealthy alcohol use, nonmedical prescription drug use, and illicit drug use AND who received an intervention for all positive screening results. This composite measure is made up of two endorsed measures (Preventive Care & Screening: Tobacco Use: Screening & Cessation Intervention and Preventive Care and Screening: Unhealthy Alcohol Use: Screening & Brief Counseling) and one unendorsed measure (Substance Use Screening and Intervention Composite – Drug Use Component).

The National Quality Measures Clearinghouse (NQMC) is an initiative of the Agency for Healthcare Research and Quality (AHRQ) within the US Department of Health and Human Services. NQMC provides a database and web site for information on specific evidence-based health care quality measures and measure

sets. Through NQMC, AHRQ supports practitioners, health care providers, health plans, integrated delivery systems, and purchasers in using data on quality measures to inform health care decisions. NQMC includes measures related to clinical health care delivery and population health to assess the delivery of care. Measures within NQMC related to alcohol screening and brief intervention include:

- **Preventive services for adults:** percentage of patients age 18 years and older who are screened for risky/harmful alcohol use and/or abuse.
- **Preventive care and screening:** percentage of patients aged 18 years and older who were screened for unhealthy alcohol use at least once during the two-year measurement period using a systematic screening method.
- **Preventive care and screening:** percentage of patients aged 18 years and older who were screened for unhealthy alcohol use at least once during the two-year measurement period using a systematic screening method AND who received brief counseling if identified as an unhealthy alcohol user.
- **Bipolar disorder:** the percentage of patients with bipolar disorder who receive an initial assessment that considers alcohol and chemical substance use.
- **Depression:** the percentage of patients diagnosed with unipolar depression who receive an initial assessment that considers alcohol and chemical substance use.
- **Preventive screening and counseling on risky behaviors:** average proportion saying "yes" to ten items about whether provider(s) discussed/screened on smoking, alcohol use, helmet use, drunk driving, chewing tobacco, street drugs, steroid pills, sexual/physical abuse, violence, guns.

As part of the US Department of Health and Human Services' efforts to implement a National Quality Strategy in response to requirements under the Affordable Care Act, the Substance Abuse and Mental Health Services Administration (SAMHSA) has developed a National Behavioral Health Quality Framework. The Framework recommends key behavioral health quality measures within the areas of prevention, treatment, and recovery with a focus on the payer/system/plan, provider/practitioner, and patient/population levels. Related to screening and brief intervention, the NBHQF recommends (SAMHSA, 2013):

- Payers/Systems/Plans cover screening, brief intervention, and referral to treatment for alcohol misuse,
- Providers/Practitioners provide screening, brief intervention, and referral for treatment for alcohol misuse and/or substance abuse/misuse, and
- Patients/Populations report knowledge of appropriate alcohol consumption amounts.

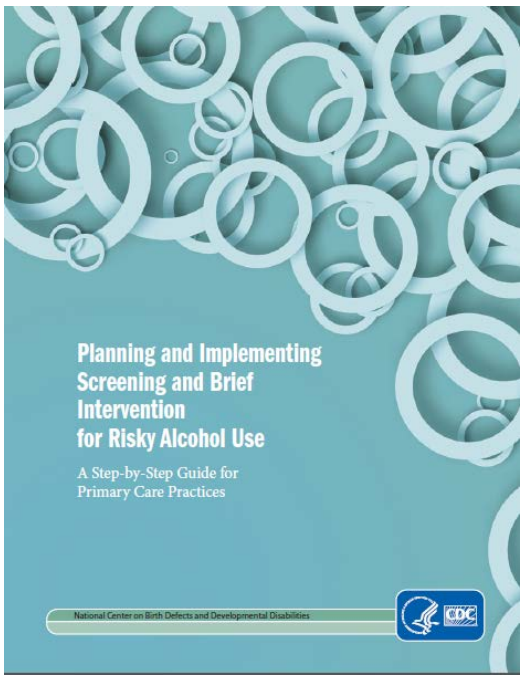
Finally, although not a performance measure per se, HRSA has included SBIRT in the Uniform Data Systems to track activity among Federally Qualified Health Center grantees related to substance use disorder screening.

Health Care System Approaches to Improve Uptake of Screening and Brief Intervention

Primary Care Practitioners

CDC's Planning and Implementing Screening and Brief Intervention for Risky Alcohol Use: A Step-by-Step Guide for Primary Care Practices

www.cdc.gov/ncbddd/fasd/documents/alcoholsbiimplementationguide.pdf



The CDC created a guide for PCPs to help them adapt alcohol SBI for their practice. It provides detailed steps and resources to help staff in any primary care practice implement alcohol SBI and also includes information on risky alcohol use, its effects on health, and how risky alcohol use can be addressed through alcohol SBI. The guide also helps PCPs design an alcohol SBI program by providing a section to record planning decisions that can be used as a framework for quality improvement. The guide goes through ten steps to plan, implement, and improve alcohol SBI as a routine element of practice. The ten steps are:

1. Familiarize the planning team with alcohol SBI— why it is an important medical service and how it works
2. Ensure that practice leaders are committed to implementing alcohol SBI
3. Plan screening procedures
4. Plan brief intervention procedures
5. Establish procedures to refer patients with severe problems
6. Train staff for their specific roles
7. Pilot test and refine your plan
8. Manage initial full implementation so it succeeds
9. Monitor and improve your alcohol SBI plan over time
10. Publicize your efforts so that others can learn from your experience

BSAS SBIRT Coordinator and MASBIRT Training and Technical Assistance Center

During the implementation of the MASBIRT project funded by SAMHSA from 2006 to 2012, the Massachusetts Bureau of Substance Abuse Services (BSAS) hired an SBIRT Coordinator. BSAS continues to fund this position to address its SBI-related strategy within its 2011-2016 strategic plan. Specifically, that strategy calls for BSAS to integrate substance use screening, and addiction services and skills into health care settings, including primary care, emergency departments, federally qualified health centers and medical homes. BSAS SBIRT Coordinator is the designated lead for this strategy. As part of these efforts, BSAS' SBIRT Coordinator oversees the MASBIRT Training and Technical Assistance (TTA) contract with Boston Medical Center (described below), works on primary care and behavioral health integration efforts with other state agencies and projects, and distributes a periodic SBIRT newsletter to keep the field informed of SBI efforts throughout the state.

Overview

When the MASBIRT project ended, BSAS saw an opportunity to apply all the information learned through MASBIRT's implementation to support providers throughout the Commonwealth in their own SBI implementation efforts. Toward that end, BSAS contracts with Boston Medical Center to run the MASBIRT TTA Center to further build capacity (http://www.masbirt.org/).

MASBIRT TTA trains medical providers, behavioral health providers, public health service providers, and healthcare support staff to conduct SBIRT services to address the spectrum of unhealthy substance use (i.e., alcohol, prescription drug, illicit drug, tobacco). MASBIRT TTA aims to establish SBIRT practice as a standard of care in diverse healthcare settings throughout Massachusetts by providing implementation and sustainability guidance, along with skills training and coaching for all levels of clinical and administrative personnel. MASBIRT TTA uses diverse teaching methods and provides ongoing technical assistance, troubleshooting, and coaching.

Implementation Process and Strategies

MASBIRT TTA provides three levels of support at the individual, organizational and state levels. Individual-level training includes:

- SBIRT overview sessions,
- Coaching on creating SBIRT organizational change agents,
- Skills training and coaching, and
- Train-the-trainers workshops.

Organizational-level training focuses on:

- Assisting organizations with building the clinical and business cases for SBIRT,

- Implementation training,
- Integrating SBIRT into EHRs and other information technology uses, and
- Technical assistance, coaching and quality assurance.

State-level work focuses on:

- Policy and advocacy assistance,
- Building public/private partnerships, and
- Promoting SBIRT community awareness.

Impact

To date, MASBIRT TTA has held more than 650 training events that involved 173 unique organizations and nearly 10,000 participants, although this may include some duplication if individuals attended more than one training. They've provided trainings to community health centers, hospitals, behavioral health organizations, human service organizations, payers and many other types of organizations. These trainings have included clinical staff, non-clinical staff, and administrators.

Boston University School of Medicine Clinical Addiction Research & Education (CARE) Unit

Boston, Massachusetts

www.bumc.bu.edu/care

Overview

The CARE Unit is an academic unit in the Section of General Internal Medicine at Boston University School of Medicine/Boston Medical Center. Its mission is to conduct research, educate health professionals, provide health care, and inform clinical and public health practice and policy to improve the lives of people with unhealthy alcohol and other drug use. They engage in clinical, research, and training projects related to SBI.

Implementation Process and Strategies

Clinical and Research Training. The CARE Unit mentors and trains physicians in addiction medicine and research, including alcohol screening and brief intervention. They have many research and training opportunities for scholars and fellows. The CARE Unit has also developed a free alcohol SBI curriculum available online (www.mdalcoholtraining.org) to teach generalist clinicians how to address unhealthy drinking in primary care settings. Supporting curricula on health disparities, cultural competence, and pharmacotherapy are also included.

Behavioral Health Integration. Over the past year, alcohol SBI has been implemented as a part of a behavioral health integration project in the Adult Primary Care and Family Medicine units at Boston Medical Center. The Adult Primary Care unit serves 40,000 patients each year. The goal is to screen each patient annually

for depression and alcohol and other drug use. Other elements of the integrated care model are embedded social workers, embedded psychiatrists and psychiatric Nurse Practitioners, referrals to Psychiatry (when patients need long-term care), and provider education.

A receptionist gives patients a paper screener that includes the Patient Health Questionnaire-2 (PHQ-2), a single item drug question, and a single item alcohol question. Patients fill these out in the waiting room. A medical assistant then reviews the responses and will follow up with an additional assessment tool when indicated by the shorter screen. If risky drinking is indicated by the single item question, the medical assistant will complete the AUDIT with the patient. If the AUDIT indicated risky drinking, the PCP will conduct a brief intervention. When drinking is beyond risky, patients are connected with a social worker and/or other recovery supports.

BMC has faced a number of challenges implementing alcohol SBI. The EHR as well as time constraints in the patient rooming process have made it challenging for information to be entered in real time, which means decisions support software cannot be used. The information is entered by medical assistants after the appointment. While the screening rates can be tracked, the brief intervention is only recorded in a note field that does not allow tracking. Staff have competing tasks, and providers have limited time with patients to address their complex needs. Their care model is not facilitated by the fee-for-service payment system. They do not bill for SBI because it is not billable by Medicaid, which is the primary payer at BMC. Key strategies they have used to facilitate implementation are (1) staff incentives to conduct screening, (2) staff coaching, (3) strong leadership, and (4) provider education (Pace, 2016; Samet, 2016).

Impact

The Clinical and Research training program has operated for the past fifteen years and trains about twenty physicians per year. This strategy of training physicians to train other physicians can have a big impact on physicians and patients (Samet, 2016).

The recent behavioral health integration project has led to approximately 75% of patients being screened at least annually. This number dramatically increased when staff incentives were offered. PCPs also reported that the screening process can be helpful because it identifies behavioral health issues that are affecting their patients who are already experiencing complex health and social issues (Pace, 2016).

Provider Organizations and Delivery Systems

SSTAR and the Family Health Care Center

Southeastern Massachusetts

http://www.sstar.org/

Overview

Stanley Street Treatment and Resources (SSTAR) is a non-profit health care and social service agency in Southeastern Massachusetts that provides primary care, mental health and substance use disorder treatment services. Its mission is to provide a quality continuum of care and support to all people, especially those affected by addiction, by responding to their mental, physical, emotional, and spiritual needs. SSTAR initially opened as a specialty treatment agency but, recognizing the needs of its patients, opened the Family Health Care Center at SSTAR, a federally qualified community health center, in the 1990's. The goal of the Family Health Care Center is to screen every patient for alcohol use.

Implementation Process and Strategies

SSTAR's integrated care and open access models facilitate alcohol SBI and, if necessary, referrals to treatment. Some overall strategies that facilitate client access are late operating hours, provision of services regardless of ability to pay, and bi-lingual staff. Easier access to care increases the likelihood that clients will get care they need and prevent future problems. SSTAR is always trying to improve care and has a process improvement strategy.

Integrated Care. SSTAR has been involved in integrated behavioral health and primary care initiatives for years. The Family Health Care Center at SSTAR operates on a family medicine model and provides primary health care, preventive medicine, education, and supportive services as well as specialized services, including HIV/AIDS and Hepatitis C treatment.

At the Family Health Care Center, medical assistants screen patients for alcohol and drug use with the CAGE as part of new patient visits and yearly physicals. If the CAGE or physical exam indicates alcohol may be an issue, the primary care provider does a warm handoff to a licensed social worker for a further assessment and brief intervention. Brief interventions last 10-15 minutes. In addition, all staff and providers are trained in brief interventions and motivational interviewing. This creates a culture of good communication and facilitates positive client relationships, which in turn helps motivates clients to open up and engage in their care. The Family Health Care Center does not bill for SBI. It occurs as part of an office visit, and most of their clients are on Medicaid.

In 2013, SSTAR launched a Health Integration Project within the substance use disorder treatment department to provide primary care, care management, and wellness services, including fitness, nutrition, peer support, transportation, and enrollment incentives.

SBI and these integration projects are supported by trust between staff. The staff at the Family Health Center and SSTAR have confidence and trust in each other, which helps build client trust. This trust has grown from three factors: (1) time, (2) SSTAR's culture, and (3) when providers see they are getting results from services like alcohol SBI for risky drinking and Vivitrol for alcohol use disorders, they are more likely to support the implementation of these services.

Currently the Family Health Center and SSTAR use different EHRs, but they are moving to one EHR platform over the summer of 2016. It is expected that this will help facilitate care transitions (Paull, 2016).

Open access. Recently SSTAR opened an Open Access Center in order to deliver timely, patient-centered care. From 7:30-11:30am every weekday, clients can come to the Center without an appointment and be assessed the same day.

Impact

SSTAR's integrated care and open access models have had a big impact on clients' well-being. A recent evaluation found that SSTAR's clients' depression and feelings of worthlessness and nervousness were significantly reduced after one year. SSTAR's clients experienced significantly greater reductions compared to other sites in the evaluation (Paull, 2016).

Cambridge Health Alliance

Cambridge, Massachusetts

Overview

Cambridge Health Alliance (CHA) is engaged in a variety of projects at the interface of primary care and behavioral health, with a focus on bringing mental health into primary care. These project are driven by two things: (1) the goal of delivering evidence-based clinical care (e.g., alcohol SBI) and (2) alternative payment arrangements with MassHealth at the federal and state levels, including pay for performance and primary care payment reform (Grossman, 2016).

Implementation Process and Strategies

Universal screening for alcohol, depression, and drug use for adults in primary care is one of CHA's key strategies in its integration efforts. Systematic universal screening was rolled out in six of CHA's 12 primary care clinics in April 2015 and in the other six in January 2016.

A screener that includes NIAAA's one alcohol question is self-administered in the waiting room. A medical assistant reviews the screener and conducts an AUDIT if risky use is indicated. A physician then reviews the AUDIT results.

If a brief intervention is indicated, a physician might conduct it. However, as behavioral health integration has been implemented and numbers of mental health staff have increased in primary care settings, these additional staff are more likely to conduct the brief intervention. These staff are (1) care partners, unlicensed providers with social work degrees who focus on care coordination, some brief intervention work, referral to treatment, and follow-up phone check-ins and (2) therapists, psychologists or licensed social workers who conduct brief interventions in primary care and may provide a few follow-up focused counseling sessions.

EHRs are used in three ways: (1) "smart phrases" are pre-populated notes that facilitate conducting and documenting SBI, (2) patient education materials, including healthy drinking education, strategies, and community resources that can be pulled into an "After Visit Summary", and (3) monitoring. The EHR can be used to track each step of the SBI process (e.g., the number of single questions administered, the number of AUDITs conducted, the numbers of brief interventions done, etc). EHR monitoring just started in February 2016, but the goal is to bring the results back to PCPs at regularly scheduled monthly implementation meetings.

Impact

At the sites that rolled out this initiative in April 2015, CHA has achieved substantial progress in key performance improvement indicators. In March 2016, 62.4% of patients were screened for alcohol use using the NIAAA one question instrument. This is a five-fold increase over their June 2015 baseline. Further, 208 brief counseling sessions were given to patients identified as unhealthy alcohol users through the AUDIT and DAST (for drug use) screening instruments. Brief counseling by mental health care partners has been well received by patients: one patient recently commented, "I like to come and see you because we do something about what is going on."

Massachusetts General Hospital

Boston, Massachusetts

The Massachusetts General Hospital (MGH) recently launched the Strategic Plan for Substance Use Disorders, a new effort to prevent and treat alcohol and drug addiction (Cahill, 2015). The plan grew from clients in community health centers identifying substance use as one of their biggest health problems and the potential to reduce health care costs by preventing repeat emergency department visits. From 2015-2018, MGH is dedicating $3.5 million to develop a new model of care that includes an addiction consult team, screening, community prevention efforts, recovery coaches, a post-discharge clinic, and enhanced health center treatment.

Screening is a key element of the plan. All patients admitted to the hospital will be screened, and outpatient clinics are also increasing screening efforts. A battery of four questions that address alcohol and other drug use is used and, if necessary, a member of the addiction consult team will provide a brief intervention or arrange for treatment (Kowalcyzk, 2014).

Veterans Health Administration

Overview

The Veterans Health Administration (VHA), the largest integrated healthcare system in the US, is a national leader in developing and expanding the reach of SBI. Demonstrating steady and consistent progress, VHA rates of documented SBI have improved over time, with recent national rates at well over 95% for screening and over 75% for brief interventions (Bradley, Johnson, & Williams, 2011). To implement and sustain SBI, as well as target specific quality improvement goals, the VHA employs a range of implementation tools (e.g., electronic reminders, performance measures).

Implementation Process and Strategies

The VHA utilizes a multi-pronged, coordinated implementation strategy to encourage SBI. This targeted approach includes performance and accountability measures, as well as alerts to remind clinical staff about SBI (Williams et al., 2016). Other supportive components of the VHA implementation strategy are positive leadership and system readiness (Moyer & Finney, 2010).

The VHA SBI implementation effort has gradually unfolded over time. Early screening efforts began in 1997, and were initially aimed at identifying patients with severe alcohol problems (Bradley et al., 2006). In 2004, with the implementation of a new performance measure, the VHA began to transition away from solely screening for heavy alcohol use to a national effort of identifying patients with milder use patterns (Bradley et al., 2006; Moyer & Finney, 2010). This prompted a switch from the CAGE questionnaire to the AUDIT-C (Bradley et al., 2006).

A major strength of the VHA SBI implementation strategy has been their use of health information technology (HIT) and decision support software to encourage SBI improvement. With each new focus area, the VHA was able to employ HIT supportive features to encourage progress. Capitalizing on their use of a centralized, nationwide EHR, the VHA has been able to embed the AUDIT-C screening tool into the EHR and use clinical alerts to prompt and remind clinical staff when to conduct SBI.

Despite success with SBI implementation in the VHA, a number of implementation challenges persist. Screening sensitivity remains low, potentially missing a substantial proportion of patients (Bradley, Lapham, et al., 2011). Performance and accountability measures do not fully address the quality of the brief interventions (Bradley, Johnson, et al., 2011), and the overall quality of SBI in the VHA may not be meeting the intended goals

(Williams et al., 2016). Finally, the VHA is a vast organization, comprised of numerous healthcare facilities and clinics around the country, and many of the implementation activities and strategies at a local-level remain unknown, which may provide valuable implementation insights (Williams et al., 2016).

Impact

Through its coordinated national implementation effort, the VHA has steadily improved its rates of documented SBI, in part, due to innovative implementation features like their use of performance measures and clinical alerts/decision software. The VHA's progress, which has occurred gradually, also supports the idea that SBI implementation requires time and a concerted implementation approach. Expanding implementation, quality improvement, and evaluation efforts to include a focus on patient report and frontline adopter experiences may offer additional implementation lessons moving forward (Williams et al., 2016).

Payers and Health Plans

MassHealth

In April 2016, MassHealth announced that it plans to change the payment and delivery structure of the program by widely implementing an accountable care model. Starting in October 2017, MassHealth will no longer pay providers predominately on a FFS basis. Instead, it will pay providers and hospitals set budgets to treat patients. This will ideally improve care coordination and quality while containing spending. Addressing risky drinking in this accountable care model could be an important strategy to reducing costs (McCluskey, 2016).

Kaiser Permanente

Northern California

Overview

Kaiser Permanente demonstrated initial success in implementing a comprehensive, integrated Screening, Brief Intervention, and Referral to Treatment (SBIRT) program into primary care settings. As the first private health care system to implement SBIRT, Kaiser's implementation efforts focus on adults and adolescents. Combining SBIRT implementation with effectiveness research, Kaiser is currently studying alternative implementation methods, identifying implementation barriers and solutions, and assessing SBIRT cost-effectiveness. The health system's implementation process also relies on the use and configuration of the health system's EHR for documenting and monitoring SBI in primary care.

Implementation Process and Strategies

Kaiser's SBIRT implementation activities center on a number of strategies, including providing training and technical support for clinical staff, encouraging leadership engagement, embedding their screening tool into the system's EHR, providing quality reports, and using incentives (Mertens et al., 2015). As routine alcohol screening was not part of the typical primary care workflow prior to SBIRT implementation, initial assistance was provided to implementation sites with the goal of helping integrate SBI into routine clinical operations (Mertens et al., 2015). A large-scale adult primary care implementation trial is currently evaluating SBIRT implementation effectiveness.

In 2010, Kaiser began the Alcohol Drinking as a Vital Sign (ADVISE) project, an implementation study funded by National Institute on Alcohol Abuse and Alcoholism. The primary goal of the implementation study is to investigate SBIRT implementation models for adult primary care clinics. The study is a clustered, randomized controlled trial of 54 adult primary care clinics in 11 Kaiser Permanente sites assigned to either a physician-delivered or non-physician-delivered (nurse practitioner or medical assistant) model (Mertens et al., 2015). The recommended screening questions were added to the Kaiser EHR. Screening rates were highest in the non-physician-delivered arm (Mertens et al., 2015).

Impact

While implementation activities are ongoing at Kaiser Permanente sites, initial findings point to a number of implementation lessons. Having an easy interface between the EHR and screening tool is important in the Kaiser strategy. Training both physicians and allied medical professionals may improve SBI implementation (Mertens et al., 2015; Sterling et al., 2015). Additionally, Kaiser's implementation work suggests that embedding behavioral health care professionals into primary care teams may be one clinically advantageous and cost effective strategy for implementing SBI (Sterling et al., 2015). SBI implementation success does not happen overnight, however, and Kaiser Permanente's process illustrates that longer time frames may be required for full integration of SBIRT into primary care (Mertens et al., 2015).

HealthPartners

Bloomington, Minnesota

Overview

HealthPartners is an integrated health care financing and care delivery organization with an interesting way of supporting primary care providers in addressing risky alcohol use (Lloyd, 2016). The health plan employs licensed alcohol and drug counselors (LADCs) who receive orders from primary care clinics to conduct between one and three telephonic SBIRT interventions with a patient when the PCP identifies a need. The LADCs document in the electronic medical record, so the referring physician and team have access to the AUDIT score,

the brief interpretation and the subjects discussed with the patient. When someone who may benefit from specialty substance use treatment is identified, the patient is connected with a LADC for face-to-face chemical dependency assessment.

Implementation Process and Strategies

The LADC is employed by the health plan. The cost of the LADC doing the telephonic SBIRT is considered a "centralized service" provided by the health plan to their own care delivery system. The LADC doing the telephonic SBIRT is "privileged" to use the name of the referring physician and the clinic and to refer to themselves as part of the extended care team.

Implementation was facilitated because behavioral health case management and disease management staff employed by the health plan were already calling members all day long so that adding SBIRT to their tasks was not difficult. The program is strengthened by working outside the traditional workday. Each LDAC works 4 hours per week of "non-traditional" time meaning after 5pm or on Saturday morning, making it easier to reach members when they are at home.

Impact

HealthPartners has been using this approach for about 5 years and finds it is very helpful to busy primary care physicians and supports patients in making more intentional lifestyle choices. There are no charges for the telephonic SBIRT so there is no cost to the member. The cost of implementing the SBIRT is born by the health plan, which also realizes benefits through improved member health.

Policy Strategies

In the US, only one in six people report ever discussing alcohol with a health professional (McKnight-Eily et al., 2014). This is much lower than other preventive services that have a similar clinical preventable burden and cost effectiveness. Our goal is for 50% of Massachusetts adults to be screened annually by 2020 and to work toward 75% by 2025. As part of this goal, brief interventions should be provided to 100% of those who are identified as risky, non-dependent drinkers. According to 2014 Census estimates, there are approximately 5.36 million adult Massachusetts residents. Screening 50% of adults would save an estimated $583.65 million, and screening 75% would save an estimated $875.5 million. If all adults were screened, it would save an estimated $1.17 billion. These cost estimates assume a $217.95 mean net cost savings per patient (Barbosa et al., 2015), which takes into account screening and brief intervention costs and both medical and societal cost savings.

> Our Goal:
> Screen 50% of adult Massachusetts residents for risky alcohol use by 2020

In order to meet this ambitious goal, providers, delivery systems, and payers all have roles to play to improve how we address risky drinking in Massachusetts. This issue brief illustrates that there are many stakeholders and strategies that can be implemented to address risky drinking. There are four overarching recommendations: (1) identify promising approaches to adopt and implement alcohol SBI within delivery systems, (2) ensure payment methodologies support reduction of risky drinking, (3) take advantage of performance measures to drive practice change, and (4) hold a follow-up strategy meeting with health plans and delivery systems.

Identify Promising Approaches to Adopt and Implement Alcohol SBI within Delivery Systems

There are many promising approaches to adopting and implementing alcohol SBI that are already underway in Massachusetts. Providers and delivery systems can consider approaches in this issue brief and how to adapt these approaches to their own context. Payers and health plans can engage in some of these approaches as well and encourage providers and delivery systems to adopt them through contracts, payment models, reputational incentives, and other strategies. The CDC implementation guide (Centers for Disease Control and Prevention, 2014b) guide provides a good framework for developing and implementing these approaches.

Some specific approaches to consider are:

- educating health care system leaders and staff about risky alcohol use and its consequences;
- identifying appropriate staff, workflow, and delivery models for effective implementation of SBI;
- providing tailored training and coaching;
- building site-specific referral networks for the most severe patients;
- modifying EHRs to facilitate conducting and monitoring alcohol SBI; and
- implementing telephonic and web-based SBI with feedback to providers.

Ensure Payment Methodologies Support Reduction of Risky Drinking

Many state, federal, and private sector initiatives are changing the way they pay for health care. These initiatives are moving health care payment away from fee-for-service toward payments for episodes of care and capitated payments for groups of patients with the goal of bending the health care cost curve. This is an important goal in Massachusetts, articulated in Massachusetts' groundbreaking cost control legislation Chapter 224. As these payment models are developed and implemented, determining how to incentivize alcohol SBI may be key to increasing the rates of screening in Massachusetts. Strategies to consider include pay-for-performance paid directly to staff, use of performance measures, and increased visit fees if screening and brief intervention are conducted.

If fee-for-service payment models continue to be used, the billing codes for alcohol SBI may be reconsidered. The time requirements for payment under the billing codes for screening and brief intervention may be too long, therefore billing codes may need to change. Providers have very limited time with patients, and longer brief interventions do not significantly reduce alcohol consumption compared to shorter brief interventions (Kaner et al., 2009).

Take Advantage of Performance Measures to Drive Practice Change

Performance measures are an important tool to encourage and monitor use of many different medical practices, including alcohol SBI. HEDIS is a tool used by nearly all health plans to measure and track performance. An alcohol screening and follow-up measure is under development by NCQA to become a HEDIS measure in 2018 (Liu & Morden, 2016). If approved, this alcohol screening and follow-up measure would be an

important tool to increase uptake of alcohol SBI. In addition to using the measure, monitoring its use and presenting feedback on screening and brief intervention rates to providers are also critical steps.

Considering experiences at the VHA, it will be important to think through the implementation of this and any related performance measures. Payers and health plans may need to support adoption and implementation of these measures. Delivery systems may need to make changes to EHRs and workflow in order to implement alcohol SBI and performance measurement. Tracking screening and brief intervention rates in order to establish baselines measures and cost analyses are important steps for providers and delivery systems to consider.

Hold a Follow-up Strategy Meeting with Health Plans and Delivery Systems

Alcohol SBI is an evidence-based and cost effective clinical preventive service. Yet it is not implemented widely. Providers, delivery systems, and payers need to take action to increase the rate of alcohol screening and brief intervention in Massachusetts. Health plans and delivery systems can play a critical role in driving system change through initiatives with beneficiaries and members and through initiatives with providers and provider organizations. Brandeis University will convene a meeting with CDC staff, representatives from the National Association of Chronic Disease Directors (NACDD) and Massachusetts health plans and delivery systems. A meeting with health plans, other health care system stakeholders and CDC and NACDD staff should be held to identify strategies to encourage alcohol SBI and to create a road map to improve alcohol screening and brief intervention rates. Increasing the rate of alcohol SBI in the Commonwealth can reduce health care costs and improve the health of our residents.

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