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# CHAPTER 7.

## VISION FOR THE FUTURE: A PUBLIC HEALTH APPROACH



Substance misuse and substance use disorders directly affect millions of Americans every year, causing motor vehicle crashes, crimes, injuries, reduced quality of life, impaired health, and far too many deaths. Throughout this *Report*, we have summarized the research demonstrating that:

- The problems caused by substance misuse are not limited to substance use disorders, but include many other possible health and safety problems that can result from substance misuse even in the absence of a disorder;
- Substance use has complex biological and social determinants, and substance use disorders are medical conditions involving disruption of key brain circuits;
- Prevention programs and policies that are based on sound evidence-based principles have been shown to reduce substance misuse and related harms significantly;
- Evidence-based behavioral and medication-assisted treatments (MAT) applied using a chronic-illness-management approach have been shown to facilitate recovery from substance use disorders, prevent relapse, and improve other outcomes, such as reducing criminal behavior and the spread of infectious diseases;
- A chronic-illness-management approach may be needed to treat the most severe substance use disorders; and
- Access to recovery support services can help former substance users achieve and sustain long-term wellness.

Embedding prevention, treatment, and recovery services into the larger health care system will increase access to care, improve quality of services, and produce improved outcomes for countless Americans.

## Time for a Change

It is time to change how we as a society address alcohol and drug misuse and substance use disorders. A national opioid overdose epidemic has captured the attention of the public as well as federal, state, local, and tribal leaders across the country. Ongoing efforts to reform health care and criminal justice systems are creating new opportunities to increase access to prevention and treatment services. Health care reform and parity laws are providing significant opportunities and incentives to address substance misuse and related disorders more effectively in diverse health care settings. At the same time, many states are making changes to drug policies, ranging from mandating use of prescription drug monitoring programs (PDMPs) to eliminating mandatory minimum drug sentences. These changes represent new opportunities to create policies and practices that are more evidence-informed to address health and social problems related to substance misuse.

The moral obligation to address substance misuse and substance use disorders effectively for all Americans also aligns with a strong economic imperative. Substance misuse and substance use disorders are estimated to cost society \$442 billion each year in health care costs, lost productivity, and criminal justice costs.<sup>1,2</sup> However, numerous evidence-based prevention and treatment policies and programs can be implemented to reduce these costs while improving health and wellness. More than 10 million full-time workers in our nation have a substance use disorder—a leading cause of disability<sup>3</sup>—and studies have demonstrated that prevention and treatment programs for employees with substance use disorders are cost effective in improving worker productivity.<sup>4,5</sup> Prevention and treatment also reduce criminal justice-related costs, and they are much less expensive than alternatives such as incarceration. Implementation of evidence-based interventions (EBIs) can have a benefit of more than \$58 for every dollar spent; and studies show that every dollar spent on substance use disorder treatment saves \$4 in health care costs and \$7 in criminal justice costs.<sup>6</sup> Yet, effective prevention interventions are highly underused. For example, only 8 to 10 percent of school administrators report using EBIs to prevent substance misuse,<sup>7,8</sup> and only about 11 percent of youth (aged 12 to 17) report participating in a substance use prevention program outside of school.<sup>9</sup> Further, only 10.4 percent of individuals with a substance use disorder receive treatment,<sup>9</sup> and only about a third of those individuals receives treatment that meets minimal standards of care.<sup>10</sup>

The public health-based approach called for in this *Report* aims to address the broad individual, environmental, and societal factors that influence substance misuse and its consequences, to improve the health, safety, and well-being of the entire population. It aims to understand and address the wide range of interacting factors that influence substance misuse and substance use disorders in different communities and coordinates efforts across diverse stakeholders to achieve reductions in both.

The following five general messages described within the *Report* have important implications for policy and practice. These are followed by specific evidence-based suggestions for the roles individuals, families, organizations, and communities can play in more effectively addressing this major health issue.



### FOR MORE ON THIS TOPIC

See the side bar on “A Public Health Model for Addressing Substance Misuse and Related Consequences” in Chapter 1 - Introduction and Overview.

## 1. Both substance misuse and substance use disorders harm the health and well-being of individuals and communities. Addressing them requires implementation of effective strategies.

Substance misuse is the use of alcohol or illicit or prescription drugs in a manner that may cause harm to users or to those around them. Harms can include overdoses, interpersonal violence, motor vehicle crashes, as well as injuries, homicides, and suicides—the leading causes of death in adolescents and young adults (aged 12 to 25).<sup>11</sup> In 2015, 47.7 million Americans used an illicit drug or misused a prescription medication in the past year, 66.7 million binge drank in the past month, and 27.9 million self-reported driving under the influence (DUI) in the past year.<sup>9</sup>

Substance use disorders are medical illnesses that develop in some individuals who misuse substances—more than 20 million individuals in 2015.<sup>9</sup> These disorders involve impaired control over substance use that results from disruption of specific brain circuits. Substance use disorders occur along a continuum from mild to severe; severe substance use disorders are also called *addictions*. Because substances have particularly powerful effects on the developing adolescent brain, young adults who misuse substances are at increased risk of developing a substance use disorder at some point in their lives.

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FOR MORE ON THIS TOPIC

See Chapter 2 - *The Neurobiology of Substance Use, Misuse, and Addiction*.

### *Implications for Policy and Practice*

Expanding access to effective, evidence-based treatments for those with addiction and also less severe substance use disorders is critical, but broader prevention programs and policies are also essential to reduce substance misuse and the pervasive health and social problems caused by it. Although they cannot address the chronic, severe impairments common among individuals with substance use disorders, education, regular monitoring, and even modest legal sanctions may significantly reduce substance misuse in the wider population. Additionally, these measures are cost-effective. Many policies at the federal, state, local, and tribal levels that aim to reduce the harms associated with substance use have proven very effective in preventing and reducing alcohol misuse (e.g., binge drinking) and its consequences. More than 300,000 deaths have been avoided over the past decade simply from the implementation and enforcement of effective policies to reduce underage drinking and DUI.<sup>12</sup> Needle/syringe exchange programs also represent effective and cost-effective prevention strategies that have been shown to reduce the transmission of HIV in communities implementing them, without increasing rates of injection drug use. These programs also provide the opportunity to engage people who inject drugs in treatment. These types of effective prevention policies can and should be adapted and extended to reduce the injuries, disabilities, and deaths caused by substance misuse.<sup>13</sup>

## 2. Highly effective community-based prevention programs and policies exist and should be widely implemented.

This *Report* describes the significant advances in prevention science over the past two decades, including the identification of major risk and protective factors and the development of more than four dozen research-tested prevention interventions that can be delivered in households, schools, clinical settings, and community centers. Three key findings from the *Report* are especially important in this regard. First, science has shown that adolescence and young adulthood are major “at risk” periods for substance misuse and related harms. Second, most of the major genetic, social, and environmental risk factors that predict substance misuse also predict many other serious adverse outcomes and risks. Third, several community-delivered prevention programs and policies have been shown to significantly reduce rates of substance-use initiation and misuse-related harms.

Prevention programs and interventions can have a strong impact and be cost-effective, but only if evidence-based components are used and if those components are delivered in a coordinated and consistent fashion throughout the at-risk period. Parents, schools, health care systems, faith communities, and social service organizations should be involved in delivering comprehensive, evidence-based community prevention programs that are sustained over time.

Additionally, research has demonstrated that policies and environmental strategies are highly effective in reducing alcohol-related problems by focusing on the social, political, and economic contexts in which these problems occur. These evidence-based policies include regulating alcohol outlet density, restricting hours and days of sale, and policies to increase the price of alcohol at the federal, state, or local level.

### *Implications for Policy and Practice*

To be effective, prevention programs and policies should be designed to address the common risk and protective factors that influence the most common health threats affecting young people. They should be tested through research and should be delivered continuously throughout the entire at-risk period by those who have been properly trained and supervised to use them. Federal and state funding incentives could increase the number of properly organized community coalitions using effective prevention practices that adhere to commonly defined standards. The research reviewed in this *Report* suggests that such coordinated efforts could significantly improve the impact of existing prevention funding, programs, and policies, enhancing quality of life for American families and communities.

## 3. Full integration of the continuum of services for substance use disorders with the rest of health care could significantly improve the quality, effectiveness, and safety of all health care.

Individuals with substance use disorders at all levels of severity can benefit from treatment, and research shows that integrating substance use disorder treatment into mainstream health care can improve the quality of treatment services. Historically, however, only individuals with the most severe substance use disorders have received treatment, and only in independent “addiction treatment programs” that were originally designed in the early 1960s to treat addictions as personality or character disorders. Moreover, although 45 percent of patients seeking treatment for substance use disorders have a co-

occurring mental disorder,<sup>14</sup> most specialty substance use disorder treatment programs are not part of, or even affiliated with, mental or physical health care organizations. Similarly, most general health care organizations—even teaching hospitals—do not provide screening, diagnosis, or treatment for substance use disorders.

This separation of substance use disorder treatment from the rest of health care has contributed to the lack of understanding of the medical nature of these conditions, lack of awareness among affected individuals that they have a significant health problem, and slow adoption of scientifically supported medical treatments by addiction treatment providers. Additionally, mainstream health care has been inadequately prepared to address the prevalent substance misuse–related problems of patients in many clinical settings. This has contributed to incorrect diagnoses, inappropriate treatment plans, poor adherence to treatment plans by patients, and high rates of emergency department and hospital admissions.

The goals of substance use disorder treatment are very similar to the treatment goals for other chronic illnesses: to eliminate or reduce the primary symptoms (substance use), improve general health and function, and increase the motivation and skills of patients and their families to manage threats of relapse. Even serious substance use disorders can be treated effectively, with recurrence rates equivalent to those of other chronic illnesses such as diabetes, asthma, or hypertension.<sup>15</sup> With comprehensive continuing care, recovery is an achievable outcome: More than 25 million individuals with a previous substance use disorder are estimated to be in remission.<sup>16</sup> Integrated treatment can dramatically improve patient health and quality of life, reduce fatalities, address health disparities, and reduce societal costs that result from unrecognized, unaddressed substance use disorders among patients in the general health care system. However, most existing substance use disorder treatment programs lack the needed training, personnel, and infrastructure to provide treatment for co-occurring physical and mental illnesses. Similarly, most physicians, nurses, and other health care professionals working in general health care settings have not received training in screening, diagnosing, or addressing substance use disorders.

### *Implications for Policy and Practice*

Policy changes, particularly at the state level, are needed to better integrate care for substance use disorders with the rest of health care. States have substantial power to shape the nature of care within these programs. State licensing and financing policies should be designed to better incentivize programs that offer the full continuum of care (residential, outpatient, continuing care, and recovery supports); offer a full range of evidence-based behavioral treatments and medications; and maintain working affiliations with general and mental health care professionals to integrate care. Within general health care, federal and state grants and development programs should make eligibility contingent on integrating care for mental and substance use disorders or provide incentives for organizations that support this type of integration.

But integration of mental health and substance use disorder care into general health care will not be possible without a workforce that is competently cross-educated and trained in all these areas. Currently, only 8 percent of American medical schools offer a separate, required course on addiction medicine and 36 percent have an elective course; minimal or no professional education on substance use disorders is available for other health professionals.<sup>17-19</sup> Federal and state policies should require or incentivize medical, nursing, dental, pharmacy, and other clinical professional schools to provide

mandatory courses to properly equip young health care professionals to address substance misuse and related health consequences. Similarly, associations of clinical professionals should continue to provide continuing education and training courses for those already in practice.

#### 4. Coordination and implementation of recent health reform and parity laws will help ensure increased access to services for people with substance use disorders.

The Paul Wellstone and Pete Domenici Mental Health Parity and Addiction Equity Act of 2008 (MHPAEA) and the 2010 Affordable Care Act increased access to coverage for mental health and substance use disorder treatment services for more than 161 million Americans. Even so, just 10.4 percent of people with substance use disorders who need treatment are accessing care.<sup>9</sup> These pieces of legislation, besides promoting equity, make good long-term economic sense: Research reviewed in [Chapter 6 - Health Care Systems and Substance Use Disorders](#) highlights the extraordinary costs to society from unaddressed substance misuse and from untreated or inappropriately treated substance use disorders—more than \$422 billion annually (including more than \$120 billion in health care costs). However, there remains great uncertainty on the part of affected individuals and their families, as well as among many health care professionals, about the nature and range of health care benefits and covered services available for prevention, early intervention, and treatment of substance use disorders.

##### *Implications for Policy and Practice*

Enhanced federal communication will help increase public understanding about individuals' rights to appropriate care and services for substance use disorders. This communication could help eliminate confusion among patients, providers, and insurers. But, more will be needed to extend the reach of treatment and thereby reduce the prevalence, severity, and costs associated with substance use disorders. Within health care organizations, active screening for substance misuse and substance use disorders combined with effective communication around the availability of treatment programs could do much to engage untreated individuals in care. Screening and treatment must incorporate brief interventions for mildly affected individuals as well as the full range of evidence-based behavioral therapies and medications for more severe disorders, and must be provided by a fully trained complement of health care professionals.

#### 5. A large body of research has clarified the biological, psychological, and social underpinnings of substance misuse and related disorders and described effective prevention, treatment, and recovery support services. Future research is needed to guide the new public health approach to substance misuse and substance use disorders.

Five decades ago, basic, pharmacological, epidemiological, clinical, and implementation research played important roles in informing a skeptical public about the harms of cigarette smoking and creating new and better prevention and treatment options. Similarly, research reviewed in this *Report* should eliminate many

of the long-held, but incorrect, stereotypes about substance misuse and substance use disorders, such as that alcohol and drug problems are the product of faulty character or willful rejection of social norms.

Thanks to scientific research over the past two decades, we know far more about alcohol and drugs and their effects on health than we knew about the effects of smoking when the first *Surgeon General's Report on Smoking and Health* was released in 1964. For instance, we now know that repeated substance misuse carries the greatest threat of developing into a substance use disorder when substance use begins in adolescence. We also know that substance use disorders involve persistent changes in specific brain circuits that control the perceived value of a substance as well as reward, stress, and executive functions, like decision making and self-control.

However, although this body of knowledge provides a firm foundation for developing effective prevention, early intervention, treatment, and recovery strategies, achieving the vision of this *Report* will require redoubled research efforts. We still do not fully understand how the brain changes involved in substance use disorders occur, how individual biological and environmental risk factors contribute to those changes, or the extent to which these brain changes reverse after long periods of abstinence from alcohol or drug use.

### *Implications for Policy and Practice*

Future research should build upon our existing knowledge base to inform the development of prevention and treatment strategies that more directly target brain circuit abnormalities that underlie substance use disorders; identify which prevention and treatment interventions are most effective for which patients (personalizing medicine); clarify how the brain and body regain function and recover after chronic drug exposure; and inform the development of evidence-based strategies for supporting recovery. Also critically needed are long-term prospective studies of youth (particularly those deemed most at risk) that will concurrently study changes in personal and environmental risks; the nature, amount, and frequency of substance use; and changes in brain structure and function.

To guide the important system-wide changes recommended in this *Report*, research to optimize strategies for broadly and sustainably implementing evidence-based prevention, treatment, and recovery interventions across the community is necessary. Within traditional substance use disorder treatment programs, research is needed on how to use new insurance benefits and financing models to enhance service delivery most effectively, how to form working alliances with general physical and mental health providers, and how to integrate new technologies and information systems to enhance care without compromising patient confidentiality.

## Specific Suggestions for Key Stakeholders

Current health reform efforts and recent advances in technology are playing a crucial role in moving toward an effective public health-based model for addressing substance misuse and its consequences. But the health care system cannot address all of the major determinants of health related to substance misuse without the help of the wider community. This *Report* calls on a range of stakeholder groups to do their part to change the culture, attitudes, and practices around substance use and to keep the conversation going until this goal is met. Prejudice and discrimination have created many of the challenges that plague

the substance use disorder treatment field. These factors can have a profound influence on individuals' willingness to talk to their health care professional about their substance use concerns; to seek or access treatment services; and to be open with friends, family, and coworkers about their treatment and recovery needs. Changing the culture is an essential piece of lasting reforms, creating a society in which:

- People who need help feel comfortable seeking it;
- There is “no wrong door” for accessing health services;
- Communities are willing to invest in prevention services, knowing that such investment pays off over the long term, with wide-ranging benefits for everyone;
- Health care professionals treat substance use disorders with the same level of compassion and care as they would any other chronic disease, such as diabetes or heart disease;
- People are celebrated for their efforts to get well and for their steps in recovery; and
- Everyone knows that their care and support can make a meaningful difference in someone's recovery.

In addition to facilitating such a mindset, community leaders can work together to mobilize the capacities of health care organizations, social service organizations, educational systems, community-based organizations, government health agencies, religious institutions, law enforcement, local businesses, researchers, and other public, private, and voluntary entities that impact public health.

*Everyone has a role to play in addressing substance misuse and substance use disorders and in changing the conversation around substance use, to improve the health, safety, and well-being of individuals and communities across our nation.*

## Individuals and Families

*Reach out, if you think you have a problem.*

In the past, many individuals and families have kept silent about substance-related issues because of shame, guilt, or fear of exposure or recrimination. Breaking the silence and isolation around such issues is crucial, so that individuals and families confronting substance misuse and its consequences know that they are not alone and can openly seek treatment. As with other chronic illnesses, the earlier treatment begins, the better the outcomes are likely to be.

*Be supportive (not judgmental) if a loved one has a problem.*

Recognizing that substance use disorders are medical conditions and not moral failings can help remove negative attitudes and promote open and healthy discussion between individuals with substance use disorders and their loved ones, as well as with their health care professionals. Overcoming the powerful drive to continue substance use can be difficult, and making the lifestyle changes necessary for successful treatment—such as changing relationships, jobs, or living environments—can be daunting. Providing sensitivity and support can ease this transition.

This can be challenging for partners, parents, siblings, and other loved ones of people with substance use disorders; many of the behaviors associated with substance misuse can be damaging to relationships. Being



compassionate and caring does not mean that you do not hold the person accountable for their actions. It means that you see the person's behaviors in the light of a medical illness. Love and support can be offered while maintaining the boundaries that are important for your health and the health of everyone around you.

*Show support toward people in recovery.*

As a community, we typically show empathy when someone we know is ill, and we celebrate when people we know overcome an illness. Extending these kindnesses to people with substance use disorders and those in recovery can provide added encouragement to help them realize and maintain their recovery. It also will encourage others to seek out treatment when they need it.

*Advocate for the changes needed in your community.*

As discussed throughout this *Report*, many challenges need to be addressed to support a public health-based approach to substance misuse and related disorders. Everyone can play an important role in advocating for their needs, the needs of their loved ones, and the needs of their community. It is important that all voices are heard as we come together to address these challenges.

*Parents, talk to your children about alcohol and drugs.*

Parents have more influence over their children's behavior, including substance use, than they often think. For instance, according to one study, young adults who reported that their parents monitored their behavior and showed concern about them were less likely to report misusing substances.<sup>20</sup> Talking to your children about alcohol and drug use is not always easy, but it is crucial. Become informed, from reliable sources, about substances to which your children could be exposed, and about substance use disorders, and talk openly with your children about the risks. Some tips to keep in mind:

- Be a good listener;
- Set clear expectations about alcohol and drug use, including real consequences for not following family rules;
- Help your child deal with peer pressure;
- Get to know your child's friends and their parents;
- Talk to your child early and often; and
- Support your school district's efforts to implement evidence-based prevention interventions and treatment and recovery support.

## Educators and Academic Institutions

*Implement evidence-based prevention interventions.*

Schools represent one of the most effective channels for influencing youth substance use. Many highly effective evidence-based programs are available that provide a strong return on investment, both in the well-being of the children they reach and in reducing long-term societal costs. Prevention programs for adolescents should target improving academic as well as social and emotional learning to address risk factors for substance misuse, such as early aggression, academic failure, and school dropout.

When combined with family-based and community programs that present consistent messages, these programs are even more powerful. Interventions that target youth who have already initiated use of alcohol or drugs should also be implemented to prevent escalation of use. Colleges, too, should implement EBIs to reduce student alcohol misuse.

*Provide treatment and recovery supports.*

Many students lack regular access to the health care system. For students with substance use problems, schools—ranging from primary school through university—can provide an entry into treatment and support for ongoing recovery. School counselors and school health care programs can provide enrolled students with screening, brief counseling, and referral to more comprehensive treatment services. Schools can also help create a supportive environment that fosters recovery. Many institutions of higher learning incorporate collegiate recovery programs that can make a profound difference for young people trying to maintain recovery in an environment with high rates of substance misuse.

*Teach accurate, up-to-date scientific information about alcohol and drugs and about substance use disorders as medical conditions.*

Teachers, professors, and school counselors play an obvious and central role as youth influencers, teaching students about the health consequences of substance use and misuse and about substance use disorders as medical conditions, as well as facilitating open dialogue. They can also play an active role in educating parents and community members on these topics and the role they can play in preventing youth substance use. For example, they can educate businesses near schools about the positive impact of strong enforcement of underage drinking laws and about the potential harms of synthetic drugs (such as K2 and bath salts), to discourage their sale. They can also promote non-shaming language that underscores the medical nature of addiction—for instance avoiding terms like “abuser” or “addict” when describing people with substance use disorders.<sup>21</sup>

*Enhance training of health care professionals.*

As substance use treatment becomes more integrated with the health care delivery system, there is a need for advanced education and training for providers in all health care roles and disciplines, including primary care doctors, nurses, specialty treatment providers, and prevention and recovery specialists. It is essential that professional schools of social work, psychology, public health, nursing, medicine, dentistry, and pharmacy incorporate curricula that reflect the current science of prevention, treatment, and recovery. Health care professionals must also be alert for the possibility of adverse drug reactions (e.g., co-prescribing of drugs with similar effects, drug overdoses), and co-occurring psychiatric conditions and infectious diseases, and should be trained on how to address these issues. These topics should also be covered in formal post-graduate training programs (e.g., physician residencies and psychology internships) as well as in board certification and continuing education requirements for professionals in these fields. Continuing education should include not only subject matter knowledge but the professional skills necessary to provide integrated care within cross-disciplinary health care teams that address substance-related health issues.

## Health Care Professionals and Professional Associations

*Address substance use-related health issues with the same sensitivity and care as any other chronic health condition.*

All health care professionals—including physicians, physician assistants, nurses, nurse practitioners, dentists, social workers, therapists, and pharmacists—can play a role in addressing substance misuse and substance use disorders, not only by directly providing health care services, but also by promoting prevention strategies and supporting the infrastructure changes needed to better integrate care for substance use disorders into general health care and other treatment settings.

*Support high-quality care for substance use disorders.*

Professional associations can be instrumental in setting workforce guidelines, advocating for curriculum changes in professional schools, promoting professional continuing education training, and developing evidence-based guidelines that outline best practices for prevention, screening and assessment, brief interventions, diagnosis, and treatment of substance-related health issues. For example, to help address the current prescription opioid crisis and overdose epidemic, associations should raise awareness of the most recent guidelines for opioid prescribing and commend the use of PDMPs by providers. Associations also should raise awareness of the benefits of making naloxone more readily available without a prescription and providing legal protection to physician-prescribers and bystanders (“Good Samaritans”) who administer naloxone when encountering an overdose situation.



### FOR MORE ON THIS TOPIC

See the section on *Enhancing training of health care professionals* earlier in this chapter.

## Health Care Systems

*Promote primary prevention.*

Health care systems can help prevent prescription drug misuse and related substance use disorders by holding staff accountable for safe prescribing of controlled substances, training staff on alternative ways of managing pain and anxiety, and increasing use of PDMPs by pharmacists, physicians, and other providers.

*Promote use of evidence-based treatments.*

Substance use disorders cannot be effectively addressed without much wider adoption and implementation of scientifically tested and proven effective behavioral and pharmacological treatments. The full spectrum of evidence-based treatments should be available across all contexts of care, and treatment plans should be tailored to meet the specific needs of individual patients. Health care systems should take every step to educate health care professionals and the public about the value of MAT for alcohol and opioid use disorders, correcting misconceptions that have barred their wider adoption in the past.

*Promote effective integration of prevention and treatment services.*

Effective integration of behavioral health and general health care is essential for identifying patients in need of treatment, engaging them in the appropriate level of care, and ensuring ongoing monitoring of patients with substance use disorders to reduce their risk of relapse. Implementation of systems to support this type of integration requires care and foresight and should include educating and training the relevant workforces; developing new workflows to support universal screening, appropriate follow-up, coordination of care across providers, and ongoing recovery management; and linking patients and families to available support services. Quality measurement and improvement processes should also be incorporated to ensure that the services provided are effectively addressing the needs of the patient population and improving outcomes.

*Work with payors to develop and implement comprehensive billing models.*

Consideration of how payors can develop and implement comprehensive billing models is crucial to enabling health care systems to sustainably implement integrated services to address substance use disorders. Coverage policies will need to be updated to support implementation of prevention measures, screening, brief counseling, and recovery support services within the general health care system, and to support coordination of care between specialty substance use disorder treatment programs, mental health organizations, and the general health care system.

*Implement health information technologies to promote efficiency and high-quality care.*

Health information technology—ranging from electronic health records to patient registries, computer-based educational systems, and mobile applications—has the power to increase efficiency, improve clinical decision making, supplement patient services, extend the reach of the workforce, improve quality measurement, and support a “learning health care system.” Health care systems should explore how these and other technologies can be used to support substance use disorder prevention, treatment, and recovery.

**FOR MORE ON THIS TOPIC**

See the definition of “Learning Health Care System” in Chapter 6 - Health Care Systems and Substance Use Disorders.

## Communities

*Build awareness of substance use as a public health problem.*

Civic and advocacy groups, neighborhood associations, and community-based organizations can all play a major role in communication, education, and advocacy efforts that seek to address substance use-related health issues. These organizations provide community leadership and communicate urgent and emerging issues to specific audiences and constituencies. Communication vehicles such as newsletters, blogs, op-ed articles, and storytelling can be used to raise awareness and underscore the importance of placing substance use-related health issues in a public health framework. Community groups and organizations can host community forums, town hall meetings, listening sessions, and education and awareness days. These events foster public discourse, create venues in which diverse voices can be heard, and provide opportunities to educate the community. In addition, they can promote an awareness of the medical nature of addiction, to encourage acceptance of opioid treatment programs

and other substance use disorder treatment services embedded in the community. Communities also can sponsor prevention and recovery campaigns, health fairs, marches, and rallies that emphasize wellness activities that bring attention to substance use-related health issues.

*Invest in evidence-based prevention interventions and recovery supports.*

Prevention research has developed effective community-based prevention programs that reduce substance use and delinquent behavior among youth. Although the process of getting these programs implemented in communities has been slow, resources are available to help individual communities identify the risk factors for future substance use among youth that are most prevalent within their community and choose evidence-based prevention strategies to address them. Research shows that for each dollar invested in research-based prevention programs, up to \$10 is saved in treatment for alcohol or other substance misuse-related costs.<sup>22-25</sup>

*Implement interventions to reduce harms associated with alcohol and drug misuse.*

An essential part of a comprehensive public health approach to addressing substance misuse is wider use of strategies to reduce individual and societal harms, such as overdoses, motor vehicle crashes, and the spread of infectious diseases. Communities across the country are implementing programs to distribute naloxone to first responders, opioid users, and potential bystanders, preventing thousands of deaths.<sup>26</sup> Others have implemented needle/syringe exchange programs, successfully reducing the spread of HIV and Hepatitis C without seeing an increase in injection drug use. These and other evidence-based strategies can have a profound impact on the overall health and well-being of the community.

## Private Sector: Industry and Commerce

*Promote only responsible, safe use of legal substances, by adults.*

Companies that manufacture and sell alcohol and legal drugs, as well as products related to use of these substances, can demonstrate social responsibility by taking measures to discourage and prevent the misuse of their products. Companies can take steps to ensure that the public is aware of the risks associated with substance use, including the use of medications with addictive potential alone and in combination with alcohol or other drugs.

*Support youth substance use prevention.*

Manufacturers and sellers of alcohol, legal drugs, and related products have a role in reducing and preventing youth substance use. They can discourage the sale and promotion of alcohol and other substances to minors and support evidence based programs to prevent and reduce youth substance use.

*Continue to collaborate with the federal initiative to reduce prescription opioid- and heroin-related overdose, death, and dependence.*

Pharmaceutical companies and pharmacies can continue to collaborate with the U.S. Department of Health and Human Services to identify and implement evidence-informed solutions to the current opioid crisis. This collaboration may include examining and revising product labeling, funding continuing medical education for providers on the appropriate use of opioid medications, developing

abuse-deterrent formulations of opioids, prioritizing development of non-opioid alternatives for pain relief, and conducting studies to determine the appropriate dosing of opioids in children and safe prescribing practices for both children and adults.<sup>27</sup>

## Federal, State, Local, and Tribal Governments

*Provide leadership, guidance, and vision in supporting a science-based approach to addressing substance use-related health issues.*

Coordinated federal, state, local, and tribal efforts are needed to promote a public health approach to addressing substance use, misuse, and related disorders. As discussed throughout this *Report*, widespread cultural and systemic issues need to be addressed to reduce the prevalence of substance misuse and related public health consequences. Government agencies have a major role to play in:

- Improving public education and awareness;
- Conducting research and evaluations;
- Monitoring public health trends;
- Providing incentives, funding, and assistance to promote implementation of effective prevention, treatment, and recovery practices, policies, and programs;
- Addressing legislative and regulatory barriers;
- Improving coordination between health care, criminal justice, and social service organizations; and
- Fostering collaborative initiatives with the private sector.

For example, federal and state agencies can implement policies to integrate current best practices—such as the Centers for Disease Control and Prevention (CDC) *Guideline for Prescribing Opioids for Chronic Pain*<sup>29</sup> or mandatory use of PDMPs—among federal and state supported service providers.

*Improve coordination between social service systems and the health care system to address the social and environmental factors that contribute to the risk for substance use disorders.*

Social service systems serve individuals, families, and communities in a variety of capacities, often in tandem with the health care system. Social workers can play a significant role in helping patients with substance use disorders with the wrap-around services that are vital for successful treatment, including finding stable housing, obtaining job training or employment opportunities, and accessing recovery supports and other resources available in the community. In addition, they can coordinate care across providers, offer support for families, and help implement prevention programs. Child and family welfare systems also should implement trauma-informed, recovery-oriented, and public health approaches for parents who are misusing substances, while maintaining a strong focus on the safety and welfare of children.

*Implement criminal justice reforms to transition to a less punitive and more health-focused approach.*

The criminal justice and juvenile justice systems can play pivotal roles in addressing substance use-related health issues across the community. These systems are engaged with a population at high-risk

for substance use disorders and often at a teachable moment—when individuals are more open to prevention messaging or to accepting the need for treatment. Less punitive, health-focused initiatives can have a critical impact on long-term outcomes. Sheriff’s offices, police departments, and county jails should work closely with citizens’ groups, prevention initiatives, treatment agencies, and recovery community organizations to create alternatives to arrest and lockup for nonviolent and substance use-related offenses. For example, drug courts have been a very successful model for diverting people with substance use disorders away from incarceration and into treatment.<sup>30</sup> It is essential that these programs promote the delivery of evidence-based treatment services, including MAT.

Many prisoners have access to regular health care services only when they are incarcerated. Significant research supports the value of integrating prevention and treatment into criminal justice settings.<sup>31,32</sup> In addition, community re-entry is a particularly high-risk time for relapse and overdose. Criminal justice systems can reduce these risks and reduce recidivism by coordinating with community health settings to ensure that patients with substance use disorders have continuing access to care upon release.

### *Facilitate research on Schedule I substances*

Some researchers indicate that the process for conducting studies on Schedule I substances, such as marijuana, can be burdensome and act as disincentives. It is clear that more research is needed to understand how use of these substances affect the brain and body in order to help inform effective treatments for overdose, withdrawal management, and addiction, as well as explore potential therapeutic uses. To help ease administrative burdens, federal agencies should continue to enhance efforts and partnerships to facilitate research. Some of these efforts have already borne positive outcomes. For example, a recent policy change will foster research by expanding the number of U.S. Drug Enforcement Administration (DEA) registered marijuana growers. Making marijuana available from new sources could both speed the pace of research and afford medication developers and researchers more options for formulating marijuana-derived investigational products.

## Researchers

*Conduct research that focuses on implementable, sustainable solutions to address high-priority substance use issues.*

Scientific research should be informed by ongoing public health needs. This includes research on the basic genetic and epigenetic contributors to substance use disorders and the environmental and social factors that influence risk; basic neuroscience research on substance use-related effects and brain recovery; studies adapting existing prevention programs to different populations and audiences; and trials of new and improved treatment approaches. Focused research is also needed to help address the significant research-to-practice gap in the implementation of evidence-based prevention and treatment interventions. Closing the gap between research discovery and clinical and community practice is both a complex challenge and an absolute necessity if we are to ensure that all populations benefit from the nation’s investments in scientific discoveries. Research is needed to better understand the barriers to successful and sustainable implementation of evidence-based interventions and to develop implementation strategies that effectively overcome these barriers.

Researchers should collaborate with health care professionals, payors, educators, people in treatment and recovery, community coalitions, and others to ensure that real-world barriers, such as workforce issues and billing limitations, are taken into consideration. These collaborations should also help researchers prioritize efforts to address critical ongoing barriers to effective prevention and treatment of substance use disorders.

*Consider how scientific research can inform public policy.*

Effective communication is critical for ensuring that the policies and programs that are implemented reflect the state of the science and have the greatest chance for improving outcomes. Scientific findings are often misrepresented in public policy debates. Scientific experts have a significant role to play in ensuring that the science is accurately represented in policies and program.

*Promote rigorous evaluation of programs and policies.*

Many programs and policies are often implemented without a sufficient evidence base or with limited fidelity to the evidence base; this may have unintended consequences when they are broadly implemented. Rigorous evaluation is needed to determine whether programs and policies are having their intended effect and to guide necessary changes when they are not.

## Conclusion

This *Report* is a call to all Americans to change the way we address substance misuse and substance use disorders in our society. Past approaches to these issues have been rooted in misconceptions and prejudice and have resulted in a lack of preventive care; diagnoses that are made too late or never; and poor access to treatment and recovery support services, which exacerbated health disparities and deprived countless individuals, families, and communities of healthy outcomes and quality of life. Now is the time to acknowledge that these disorders must be addressed with compassion and as preventable and treatable medical conditions.

By adopting an evidence-based public health approach, we have the opportunity as a nation to take effective steps to prevent and treat substance use-related issues. Such an approach can prevent the initiation of substance use or escalation from use to a disorder, and thus it can reduce the number of people affected by these conditions; it can shorten the duration of illness for individuals who already have a disorder; and it can reduce the number of substance use-related deaths. A public health approach will also reduce collateral damage created by substance misuse, such as infectious disease transmission and motor vehicle crashes. Thus, promoting much wider adoption of appropriate evidence-based prevention, treatment, and recovery strategies needs to be a top public health priority.

Making this change will require a major cultural shift in the way Americans think about, talk about, look at, and act toward people with substance use disorders. Negative public attitudes about substance misuse and use disorders can be entrenched, but it is possible to change social viewpoints. This has been done many times in the past: For example, cancer and HIV used to be surrounded by fear and judgment, but they are now regarded by most Americans as medical conditions like many others. This



has helped to make people comfortable talking about their concerns with their health care professionals, widening access to prevention and treatment. We can similarly change our attitudes toward substance use disorders if we come together as a society with the resolve to do so. With the moral case so strongly aligned with the economic case, and supported by all the available science, now is the time to make this change for the health and well-being of all Americans.

## References

1. 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.
2. National Drug Intelligence Center. (2011). *National drug threat assessment*. Washington, DC: U.S. Department of Justice.
3. National Council for Behavioral Health. (2014). The business case for effective substance use disorder treatment. Retrieved from [http://www.thenationalcouncil.org/wp-content/uploads/2015/01/14\\_Business-Case\\_Substance-Use.pdf](http://www.thenationalcouncil.org/wp-content/uploads/2015/01/14_Business-Case_Substance-Use.pdf). Accessed on June 27, 2016.
4. Jordan, N., Grissom, G., Alonzo, G., Dietzen, L., & Sangsland, S. (2008). Economic benefit of chemical dependency treatment to employers. *Journal of Substance Abuse Treatment, 34*(3), 311-319.
5. Slaymaker, V. J., & Owen, P. L. (2006). Employed men and women substance abusers: Job troubles and treatment outcomes. *Journal of Substance Abuse Treatment, 31*(4), 347-354.
6. Ettner, S. L., Huang, D., Evans, E., Ash, D. R., Hardy, M., Jourabchi, M., & Hser, Y. I. (2006). Benefit-cost in the California treatment outcome project: Does substance abuse treatment “pay for itself”? *Health Services Research, 41*(1), 192-213.
7. Ringwalt, C., Hanley, S., Vincus, A. A., Ennett, S. T., Rohrbach, L. A., & Bowling, J. M. (2008). The prevalence of effective substance use prevention curricula in the Nation’s high schools. *The Journal of Primary Prevention, 29*(6), 479-488.
8. Crosse, S., Williams, B., Hagen, C. A., Harmon, M., Ristow, L., DiGaetano, R., . . . Derzon, J. H. (2011). *Prevalence and implementation fidelity of research-based prevention programs in public schools: Final report*. Washington, DC: U.S. Department of Education, Office of Planning, Evaluation and Policy Development, Policy and Program Studies Service.
9. Center for Behavioral Health Statistics and Quality. (2016). *Results from the 2015 National Survey on Drug Use and Health: Detailed tables*. Rockville, MD: Substance Abuse and Mental Health Services Administration.
10. Substance Abuse and Mental Health Services Administration. (2013). *Behavioral health, United States, 2012*. (HHS Publication No. (SMA) 13-4797). Rockville, MD: Substance Abuse and Mental Health Services Administration.
11. Blum, R. W., & Qureshi, F. (2011). *Morbidity and mortality among adolescents and young adults in the United States*. AstraZeneca Fact Sheet 2011. Baltimore, MD: Johns Hopkins Bloomberg School of Public Health, Department of Population, Family and Reproductive Health.
12. Fell, J. C., & Voas, R. B. (2006). Mothers Against Drunk Driving (MADD): The first 25 years. *Traffic Injury Prevention, 7*(3), 195-212.
13. Aspinall, E. J., Nambiar, D., Goldberg, D. J., Hickman, M., Weir, A., Van Velzen, E., . . . Hutchinson, S. J. (2014). Are needle and syringe programmes associated with a reduction in HIV transmission among people who inject drugs: A systematic review and meta-analysis. *International Journal of Epidemiology, 43*(1), 235-248.
14. Substance Abuse and Mental Health Services Administration. (2015). Behavioral health treatments and services. Retrieved from <http://www.samhsa.gov/treatment>. Accessed on January 25, 2016.

15. McLellan, A. T., Lewis, D. C., O'Brien, C. P., & Kleber, H. D. (2000). Drug dependence, a chronic medical illness: Implications for treatment, insurance, and outcomes evaluation. *JAMA*, *284*(13), 1689-1695.
16. White, W. L. (2012). *Recovery/remission from substance use disorders: An analysis of reported outcomes in 415 scientific reports, 1868-2011*. Philadelphia, PA: Philadelphia Department of Behavioral Health and Intellectual Disability Services.
17. Institute of Medicine, & Committee on Crossing the Quality Chasm. (2006). *Improving the quality of health care for mental and substance-use conditions*. Washington, DC: National Academies Press.
18. Haack, M. R., & Adger, J. H. (Eds.). (2002). *Strategic plan for interdisciplinary faculty development: Arming the nation's health professional workforce for a new approach to substance use disorders*. Providence, RI: Association for Medical Education and Research in Substance Abuse (AMERSA).
19. Parish, C. L., Pereyra, M. R., Pollack, H. A., Cardenas, G., Castellon, P. C., Abel, S. N., . . . Metsch, L. R. (2015). Screening for substance misuse in the dental care setting: Findings from a nationally representative survey of dentists. *Addiction*, *110*(9), 1516-1523.
20. MetLife Foundation, & The Partnership at Drugfree.org. (2013). *2012 Partnership attitude tracking study: Teens and parents*. Retrieved from: <http://www.drugfree.org/wp-content/uploads/2013/04/PATS-2012-FULL-REPORT2.pdf>. Accessed on July 28, 2016.
21. Kelly, J. F., Saitz, R., & Wakeman, S. (2016). Language, substance use disorders, and policy: The need to reach consensus on an “addiction-ary”. *Alcoholism Treatment Quarterly*, *34*(1), 116-123.
22. Hawkins, J. D., Catalano, R. F., Kosterman, R., Abbott, R., & Hill, K. G. (1999). Preventing adolescent health-risk behaviors by strengthening protection during childhood. *Archives of Pediatrics and Adolescent Medicine*, *153*(3), 226-234.
23. Spoth, R. L., Redmond, C., Trudeau, L., & Shin, C. (2002). Longitudinal substance initiation outcomes for a universal preventive intervention combining family and school programs. *Psychology of Addictive Behaviors*, *16*(2), 129-134.
24. Aos, S., Phipps, P., Barnoski, R., & Lieb, R. (2001). *The comparative costs and benefits of programs to reduce crime. Version 4.0*. Olympia, WA: Washington State Institute for Public Policy.
25. Pentz, M. A. (1998). Costs, benefits, and cost-effectiveness of comprehensive drug abuse prevention. In W. J. Bukoski & R. I. Evans (Eds.), *Cost-benefit/cost-effectiveness research of drug abuse prevention: Implications for programming and policy*. NIDA Research Monograph No. 176. (pp. 111-129). Washington, DC: U.S. Government Printing Office.
26. Wheeler, E., Davidson, P. J., Jones, T. S., & Irwin, K. S. (2012). Community-based opioid overdose prevention programs providing naloxone—United States, 2010. *MMWR*, *61*(6), 101-105.
27. Califf, R. M., Woodcock, J., & Ostroff, S. (2016). A proactive response to prescription opioid abuse. *New England Journal of Medicine*, *374*(15), 1480-1485.
28. Evans, J. M., Krainsky, E., Fentonmiller, K., Brady, C., Yoeli, E., & Jaroszewicz, A. (2014). *Self-regulation in the alcohol industry: Report of the Federal Trade Commission*. Washington, DC: U.S. Federal Trade Commission.

29. Substance Abuse and Mental Health Services Administration. (2015). *Federal guidelines for opioid treatment programs*. (HHS Publication No. (SMA) PEP15-FEDGUIDEOTP). Rockville, MD: Substance Abuse and Mental Health Services Administration.
30. Wilson, D. B., Mitchell, O., & MacKenzie, D. L. (2006). A systematic review of drug court effects on recidivism. *Journal of Experimental Criminology*, 2(4), 459-487.
31. Belenko, S., Hiller, M., & Hamilton, L. (2013). Treating substance use disorders in the criminal justice system. *Current Psychiatry Reports*, 15(11), 1-11.
32. Fletcher, B. W., & Wexler, H. K. (2005). *National Criminal Justice Drug Abuse Treatment Studies (CJ-DATS): Update and progress*. Justice Research and Statistics Association Forum.