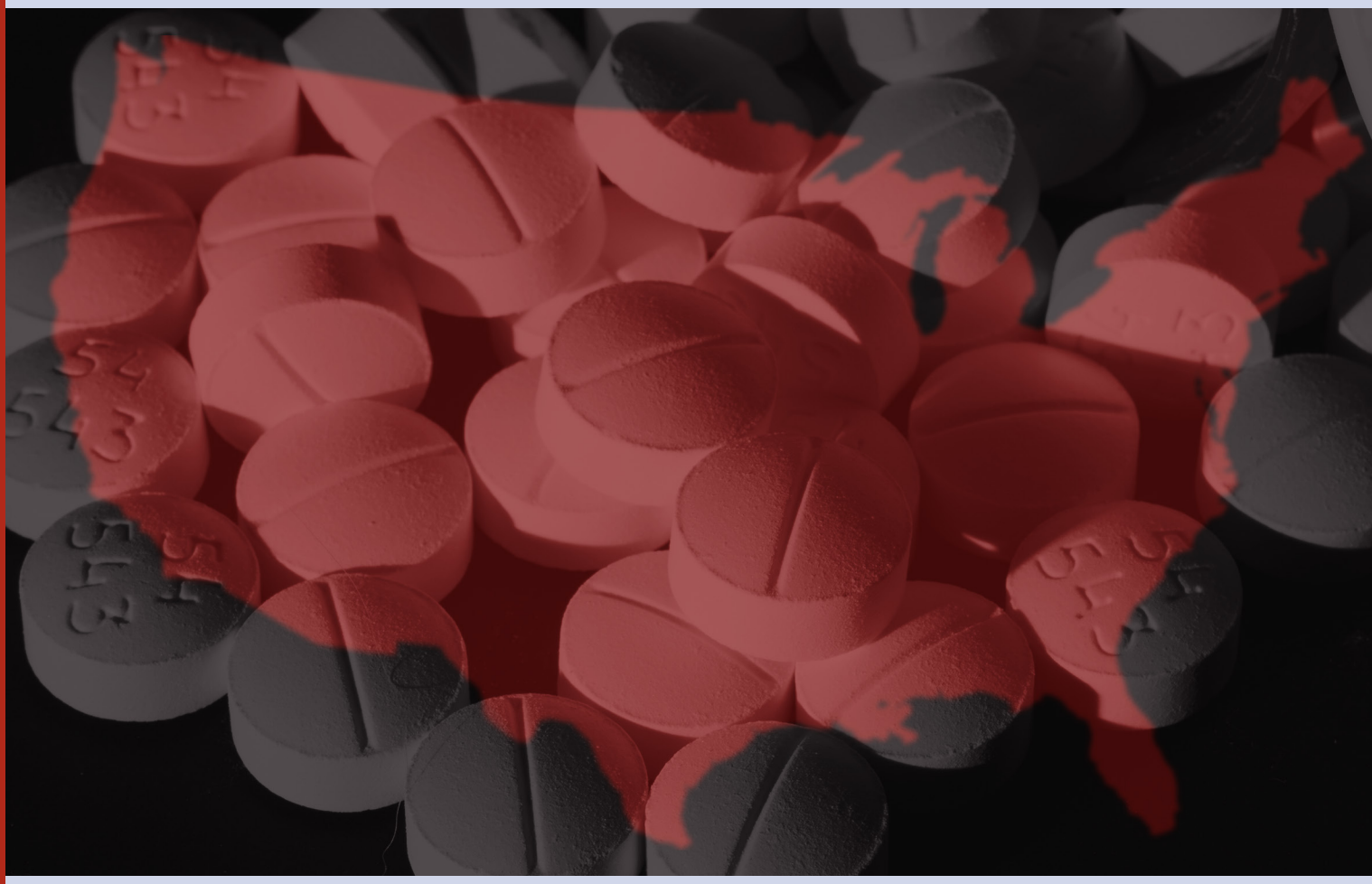
ISSUE BRIEF

PAIN IN THE NATION:
Building a National Resilience Strategy

Alcohol and Drug Misuse and Suicide and the Millennial Generation — a Devastating Impact



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Trust for America's Health (TFAH) is a nonprofit, nonpartisan public health policy, research, and advocacy organization that promotes optimal health for every person and community and makes the prevention of illness and injury a national priority.

Well Being Trust is a national foundation dedicated to advancing the mental, social, and spiritual health of the nation. Created to include participation from organizations across sectors and perspectives, Well Being Trust is committed to innovating and addressing the most critical mental health challenges facing America and to transforming individual and community well-being.

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Lead Author

Rhea K. Farberman, APR
Director of Strategic Communications and Policy Research
Trust for America's Health

Contributors

John Auerbach, MBA
President and CEO
Trust for America's Health

Molly Warren, S.M.
Senior Health Policy Researcher and Analyst
Trust for America's Health

Benjamin F. Miller, Psy.D.
Chief Strategy Officer
Well Being Trust

Albert Lang
Director of Communications
Well Being Trust

Introduction and Discussion

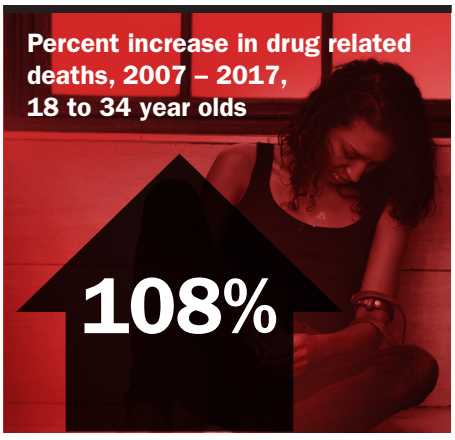
In 2017, more than 152,000 Americans died from alcohol- and drug-induced fatalities and suicide. That's the highest number ever recorded and more than twice as many as in 1999.[1] The largest number of these deaths, almost half, were the result of drug overdoses—more than the peak annual total from HIV, guns, or car crashes.[2] Trust for America's Health and Well Being Trust have called for immediate and sustained attention and investment in a National Resilience Strategy to address this rising death toll.[3]

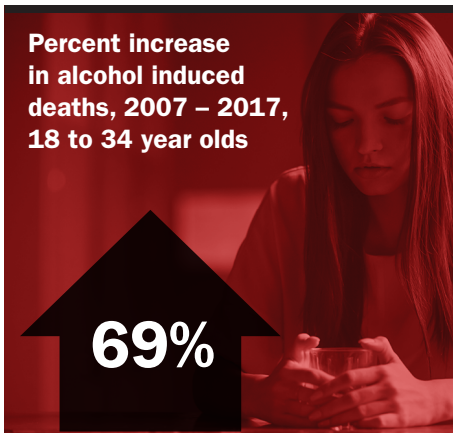
Increases in alcohol, drug, and suicide deaths have affected all age groups and all communities, but the impact on people in their 20s and early 30s has been especially pronounced. In particular, the number of drug deaths among young adults has increased by 400 percent during the last two decades, in large part fueled by the opioid crisis.[4] Drug deaths accounted for nearly seven deaths per 100,000 people nationally across all age groups in 1999. By 2017, that number increased to 22.7 deaths per 100,000 across all age groups.[5] But for young adults ages 18 to 34 in 2017, there were nearly 31 drug-overdose deaths per 100,000 people.[6] Meanwhile, alcohol death rates for young adults ages 18 to 34 went up 69 percent between 2007 and 2017, and suicide deaths for the same age group and same years went up 35 percent.[7]

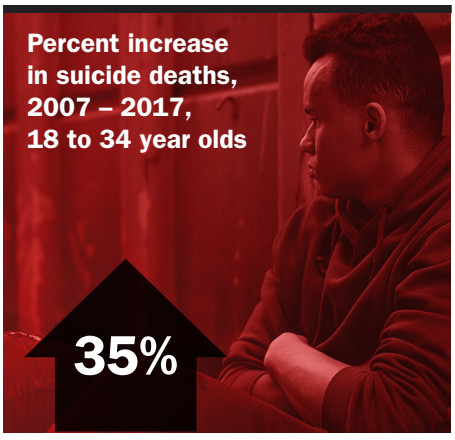
Research suggests that the United States urgently needs evidence-based policies and programs, including those that are community- or population-specific, to help stem the nation's tidal wave of deaths of despair. This issue brief is a continuation of Trust for America's Health (TFAH) and Well Being Trust's *Pain in the Nation: The Drug, Alcohol and Suicide Crises and the Need for a National Resilience Strategy* series. It focuses on young adults, ages 20 to 34, often called Millennials. The *Pain in the Nation* series helps inform and create a comprehensive National Resilience Strategy.

Millennials are generally thought of as people born between 1981 and 1996, making them ages 23 to 38 in 2019.[8] Millennials faced and continue to face a mix of challenges unique to their generation, many of which are discussed in this report, including the opioid crisis, the skyrocketing costs of education and housing, and entering the job market during the great recession.

Definitions of the Millennial generation are not always consistent across data sources and organizations. Often there are differences in age ranges or age groupings in data sets about Millennials. For this reason, multiple data sets, with varying age ranges, were used for this report. For example, data sets covering those 18–25 or 25–34 or 30–35 are included in this report, but the main theme is consistent: alcohol, drugs, and suicide are having a profoundly negative impact on many young adults and their families.





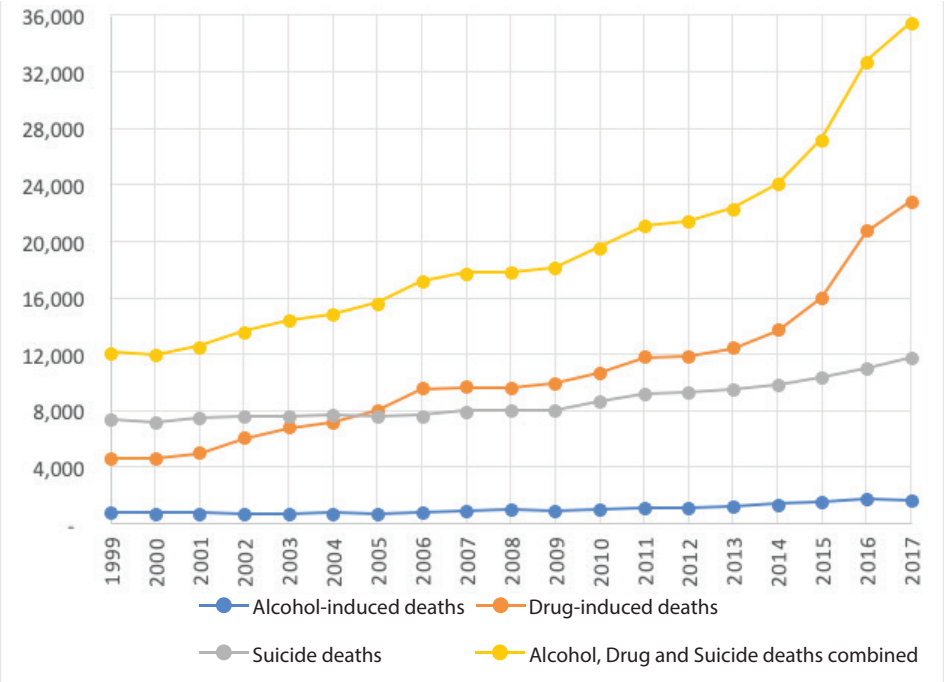


SOURCE: Trust for America's Health and Well Being Trust analysis of National Center for Health Statistics, CDC data

A LOOK AT THE DATA TELLS THE STORY.

Since the late 1990s, deaths from alcohol, drug misuse and suicide have been steadily on the rise for all age groups, including the Millennials.

Alcohol, Drug, and Suicide Deaths Among Young Adults: Ages 20–34, 1999–2017



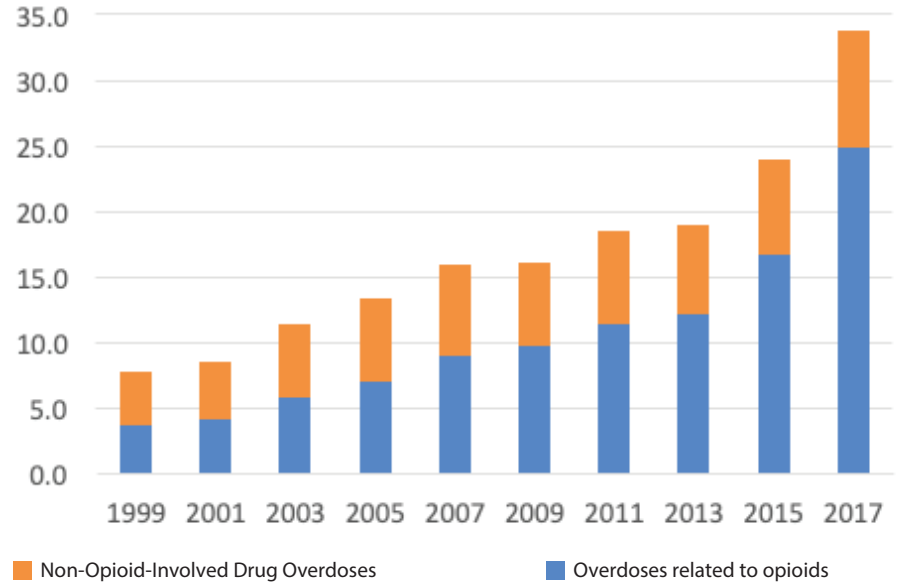
SOURCE: Trust for America's Health and Well Being Trust analysis of National Center for Health Statistics data, CDC.[9]

Huge increases in drug-related deaths, especially those involving synthetic opioids

Opioids and the lethality of synthetic opioids have had a deadly impact on 18- to 34-year-olds.[11] Between 1999 and 2017, opioid overdose death rates among 18- to 34-year-olds increased by more than 500 percent.[12] During the same period, the increase in synthetic opioid death rates among young adults increased by a staggering 6,000 percent.[13] The age group's overall increase in drug death rates between 1999 and 2017 was 329 percent.[14]

Even more alarming were the increases in the percentage of synthetic opioid deaths. Within a one-year period (2016–2017), double- and triple-digit percent increases in synthetic opioid deaths occurred for both sexes, all races and ethnicities, and in all regions of the country.[15]

Drug-Induced Deaths Per 100,000, by Opioid Involvement Among Young Adults, Ages 20-34, 1999-2017



SOURCE: Trust for America's Health and Well Being Trust analysis of National Center for Health Statistics, CDC data

Suicide rates also on the rise

Young adults experienced larger proportional increases in suicide deaths when compared with other age groups, except, alarmingly, children and adolescents. Between 2016 and 2017, suicide rates increased by 4 percent across all age categories, the largest annual increase since at least 1999, when the dataset begins.

Over the past decade, suicide increased in nearly every state, but there were substantial variations by demographic group.[16] For 18- to 34-year-olds, there was a 35 percent increase in suicide deaths over the past decade. For 35- to 54-year-olds during that same time frame, suicide rates increased by 14 percent; for 55- to 74-year-olds, it increased by 24 percent; and for people over 75, it increased by 14 percent.[17]

Between 2011 and 2016, suicide was the second leading cause of death for 15- to 24-year-olds and 25- to 34-year-olds, with the number of deaths from suicide in that combined age group increasing nearly 20 percent.[18,19]

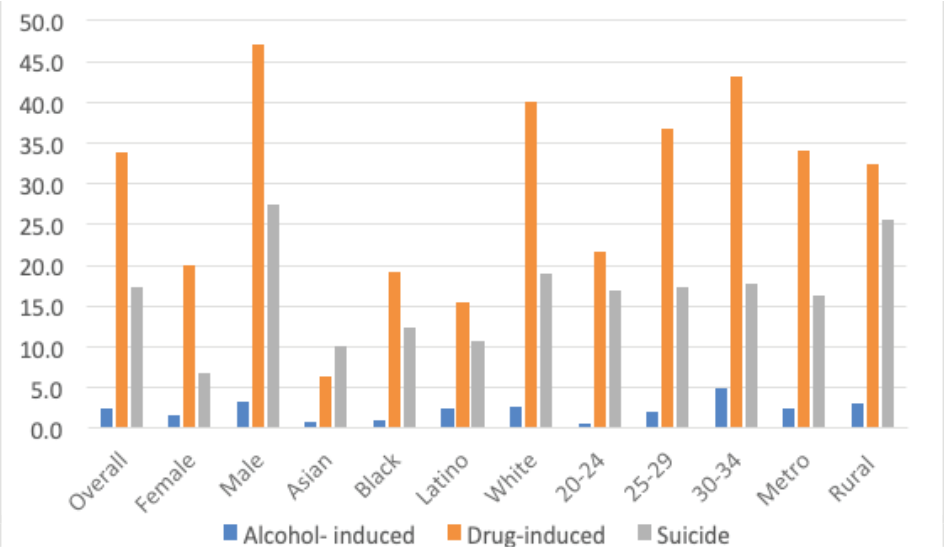
In 2017, suicide was one of the leading causes of death, second only to unintentional injury, for people ages 15 to 34. By comparison, suicide deaths were the fourth leading cause of death for 35- to 54-year-olds and the eighth leading cause of death for people ages 55 to 64.[20] Between 2000 and 2016, the most common means of suicide for men were firearms. A 2017 Pew Research Center survey found that 43 percent of 18- to 29-year-olds either personally owned a firearm or lived with someone who did.[21] For women, the most common method was poisoning or overdose.[22]

More males die by suicide than females. Between 2008 and 2017, the age-adjusted suicide death rate increased from 11.6 per 100,000 to 14 per 100,000. Among males, the increase was from 19 per 100,000 to

22.4 per 100,000. Among females, the rate increased from 4.8 per 100,000 in 2008 to 6.1 per 100,000 in 2017.[23] Suicides by men typically involve more lethal means than attempts by women.

According to a 2018 review of the National Survey of Drug Use and Health, serious psychological distress during the last month and suicide-related outcomes (including suicide ideation, plan, attempts, and deaths) are increasing sharply. Between 2008 and 2017, that distress increased by 71 percent among young adults ages 18 to 25. The survey found less consistent and weaker increases among adults ages 26 and over.[24]

Alcohol, Drug and Suicide Deaths per 100,000 by Select Demographics: Young Adults, Ages 20-34, 2017



SOURCE: Trust for America's Health and Well Being Trust analysis of National Center for Health Statistics (CDC) data.[10]

The impact of substance use disorders and suicide among young adults is at an all-time high, and young adults are dying at alarmingly high rates.

Alcohol-related deaths on the rise

During the last two decades, people in their 20s and 30s have experienced the largest proportional increases in alcohol-induced deaths compared with other age groups. The rate of alcohol-induced deaths doubled for 18- to 34-year-olds between 1999 and 2017.[25]

Between 2007 and 2017, there was a 69 percent increase in the number of alcohol deaths among people ages 18 to 34. During the same time period, the increase in alcohol deaths for people ages 35 to 54 was 22 percent, and for people 55 to 74, it was 45 percent.[26]

Among all age groups, about 88,000 people die of alcohol-attributable causes per year (including injury deaths, like car crashes, where excessive alcohol consumption is a contributing factor), making excessive alcohol consumption the third leading cause of preventable death in the United States today.[27]

THIS BRIEF FOCUSES ON THE MILLENNIAL GENERATION FOR SEVERAL REASONS:

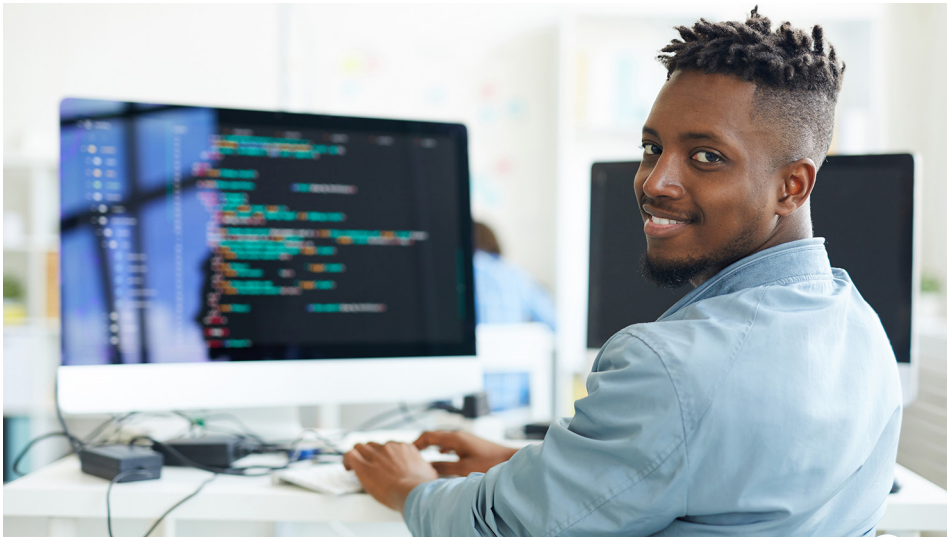
Young adults have a number of elevated risk factors. People in their 20s and 30s have certain risk factors that increase their vulnerability to alcohol, drugs, and suicide. Research shows that, typically, the frontal lobes of the brain, home to a number of key functions, such as impulse control, are not fully developed until the mid- to late-20s.[28]

Young adults often take more risks in sexual and drug-use behaviors compared with other adults.[29] Furthermore, there are disproportionate numbers of people in this age category who are involved in high-stress environments—for example, in correctional facilities. In 2016, 42 percent of the federal and state prison population were between ages 20 and 34.[31]

Millennials also make up the highest percentage of enlisted U.S. military personnel. In 2016, 80 percent of U.S. Army Servicemembers were between ages 20 and 34.[30]

In addition, today's Millennials faced the run-away costs of higher education. Many have large amounts of college debt, which creates financial strain and a reduced ability to purchase a home or afford other goods and services that might offer greater security, particularly compared with prior generations. Of households headed by someone younger than 35, 40 percent have outstanding student-loan debt.[32] Young people with college debt typically spend close to half of their income on loan payments.[33]

The costs of raising children can be additional stressors for Millennials. According to the U.S. Department of Agriculture, it costs $14,000 annually to raise a child until age 17; that's a total of nearly $240,000. Housing, child care, education, and food make up the majority of that spending.[34]



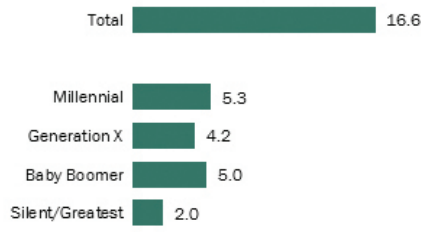
The costs of healthcare, and concerns about how much care will cost, are additional stressors for most Americans, including young adults, and can cause people not to seek care in a timely manner. A 2019 poll found that one in four people skipped a medical treatment due to the cost of treatment.[35]

Finally, Millennials hit the housing market at a difficult time. Between 2011 and 2017, home prices increased by 48 percent while incomes across all age groups grew by just 15 percent.[36]

Many Millennials lack the protective factors that other age groups typically had. Many Millennials are less likely to live in the kind of supportive circumstances that can help them recover from trauma and adversity compared with earlier generations. About six in 10 Millennials (57 percent) have never been married.[37] Intimate-partner violence most commonly first occurs between 18 and 24.[38] Many

More households headed by a Millennial are in poverty than other generations

U.S. households in poverty, in millions (2016)



Note: Households are categorized on the basis of the characteristics of the head of household. There are a relatively small number of households headed by a person younger than 18 that are not shown but are included in the total.
Source: Pew Research Center analysis of 2016 Current Population Survey Annual Social and Economic Supplement (IPUMS).

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Millennials begin their work lives with few financial safety nets. While more than one-third (35 percent) of the U.S. workforce are Millennials, they are less likely to have health insurance than older workers.[39] In 2017, 14 percent of 18- to 24-year-olds and 17.2 percent of 25- to 34-year-olds lacked health insurance. Young adults, ages 25 to 34 were almost twice as likely to lack health insurance compared with middle-age and older adults, ages 45 to 64.[40]

Millennials also had to cover or repay the costs of college tuition and finding jobs during an economic recession. More Millennial households live in poverty than those of other age groups, and they are less likely to own a home than previous generations were at the same age.[41] Millennials head the largest number of single-mother households in the United States.[42]

Many Millennials lack other forms of social capital that have historically assisted young generations, such as the sense of community offered in a place of worship. Compared with their grandparents' generation, Millennials are less likely to be connected to major societal institutions such as political parties or religion.[43,44]

There are few specialized preventive efforts targeting young adults. While there has been considerable research into the best, evidence-based practices for children and adolescents' well-being, there is limited attention devoted to Millennials' well-being. Several effective interventions for children take advantage of the access that schools offer. Similarly, for those in college, there are preventive interventions for behavioral health, such as alcohol-awareness and suicide-prevention programs. But, for those not in college or beyond college, the research and opportunities for interventions are sparse.

This issue brief focuses on four areas related to alcohol and drug use and suicide by people in their 20s and early 30s. Those areas of focus are:

1. **Risk and resilience factors;**
2. **Access to health insurance and quality mental health and substance use disorder care and services;**
3. **The multigenerational impact of alcohol, drugs, and suicide; and**
4. **The criminal justice system.**

"My family and I are among the millions of Americans affected by substance use disorders. My younger brother has struggled with this disease, which started with untreated depression leading to opioid pain reliever misuse. Like many with co-occurring mental health and substance use disorder conditions, my brother has cycled in and out of incarceration. I tell my family's story because far too many are facing the same worries for their loved ones. We all ask the same question: how can I contribute to ending the opioid crisis and helping those suffering with addiction?"[45]

Jerome M. Adams, M.D., MPH
Vice Admiral, U.S. Public Health Service, 20th Surgeon General of the United States

Recognize childhood risk and protective factors and emphasize prevention in the developmental years.

Research shows that many different life circumstances, often rooted in childhood trauma and early adversity, can lead to substance misuse and mental health problems .[46] Every child who has adverse childhood experiences will not necessarily have a substance use disorder as an adult; however, such experiences put children at increased risk of developing substance use disorders and suicidal ideation later in life.[47] For this reason, we are devoting a section of this report to the many ways that childhood experiences impact adult behaviors. It's also important to remember that the childhood experiences of today's Millennials not only impact them, but they also impact future generations—today's children. It is also worth noting that both risk and protective factors are malleable: experiences and interventions can shape them.[48]

Among the known risk factors for adolescent and young adult substance misuse are family conflict and family-management problems, a history of family substance misuse, poverty, inequity, family violence, mental health problems, low academic achievement and academic failure, high availability of alcohol, peer substance use, and permissive community norms and laws when it comes to substance use.[49]

An additional risk factor for young adult substance misuse is the fact that the brain is continuing to develop and mature through adolescence (which contributes to risk-taking behavior). In addition, the brain in adolescence and young adulthood is vulnerable to environmental stressors, which may lead to poor decision-making.[50]

Protective factors that help guard against substance use disorders and other types of mental health problems include emotional self-regulation, good coping skills, engagement and connections in multiple contexts (for example, school, peers, athletics, employment, religion, culture), strong family bonds, and opportunities for positive social involvement.[51]

Interventions designed to strengthen these protective factors have proved effective in preventing substance misuse.

CASE STUDY:

Guiding Good Choices teaches parents of middle schoolers to strengthen bonding in their families through age-appropriate opportunities for family interaction, to express positive feelings, and to adopt family conflict-management approaches. The program also guides parents in setting clear expectations and applying discipline, as well as teaching their children coping strategies. Research shows the program successfully inhibits alcohol and marijuana use among middle schoolers.[52]

Protective factors can also increase the likelihood that a child will stay in school and succeed in school, and they can lessen the risk that a child will become involved with the child welfare or criminal justice system.[53] According to the U.S. Department of Health and Human Services, Administration for Children and Families Children's Bureau, the programs that most effectively build resilience in children and adolescents both reduce risk factors and build protective factors.[54]

CASE STUDY:

The Life Skills Training Program, a three-year prevention curriculum for middle school students, teaches drug-resistance skills, self-management skills, and general social skills in addition to providing useful information. Over the past 20 years, evaluations have found the program reduces the prevalence of tobacco, alcohol, and illicit drug use by 50 to 87 percent, and when combined with booster sessions, it reduces long-term substance misuse by as much as 66 percent, with effects lasting beyond the high school years.[55]

Promote the important role for schools—from early childhood through college.

Children, teens, and some young adults spend about half of their waking hours in school, putting schools in a strong position to promote the well-being of students. Schools can be places that identify the early indications of risk and take steps to reduce the likelihood of negative health outcomes by assisting families and providing links to appropriate services. School, college, and university personnel should be well-trained to identify and address (typically through referrals) their students' mental health needs. All schools should be safe and supportive learning environments.[56] All children should have an equal opportunity to learn in an appropriate and inclusive school environment.

School-connectedness—students believing that the adults and peers at their schools care about them as individuals and are invested in their education—has been shown to be a strong protective factor, lowering the likelihood of chronic absenteeism, allowing students to experience less emotional distress, and reducing the likelihood of teen pregnancy and substance use.[57,58] The impact of these protective factors has been shown to last into early adulthood.[59,60]

One initiative that addresses school-connectedness, the Caring School Community Program, aims to strengthen elementary school students' "sense of community" at school. The program includes a set of mutually reinforcing approaches to classroom, school, and family involvement (for example, morning and closing circle activities, in which students practice social skills and get to know one another; weekly class meetings, in which students address common concerns and current issues; weekly home connection activities, in which students learn to talk to their families about the social-development topics covered in class). These activities target the development of social and emotional skills, and they promote positive peer, teacher-student, and home-school relationships.[61] Among the 40 schools that implemented the program in St. Louis, Missouri, there was a 54 percent improvement in math achievement and a 46 percent improvement in communication-arts achievement, as well as a reduction in the number of discipline referrals,

which were down by an average of 48 referrals per year (even as the number of referrals went up by an average of 88 per year in control schools).[62]

Punitive school policies, such as zero-tolerance policies that lead to suspensions and expulsions, contribute to increased risk factors for substance misuse.[63] Also, such policies have a differential impact on students of color, who are overrepresented in rates of school expulsions and suspensions.[64]

Schools are the ideal settings to provide behavioral health services,[65] and in fact they provide the majority of such care: 70 percent of all children receiving mental health services do so at school.[66,67] Yet of the 5 million students who need mental health treatment, it is estimated that 80 percent do not receive it.[68] Schools reach nearly all children and are increasingly providing on-site or linked mental health services.[69] School-based or linked services can improve access for those most at-risk, including children enrolled in Medicaid. Whereas previously schools could only receive Medicaid reimbursement for certain students, schools can now seek Medicaid reimbursement for all eligible students.[70] Top school alcohol- and drug-prevention programs show impressive results, including a $3.80 to $34 return for every $1 invested.[71]

By leveraging Medicaid reimbursement to bring mental health services to students, schools can free up funds for other activities (including extending services to other low-income children who do not qualify for Medicaid) and avoid more costly services in the future through prevention and early intervention.[72,73] For example, the Oakland Unified School District in California bills Medicaid for therapy and assistance provided by psychiatric social workers; the Los Angeles Unified School District uses Medicaid funds to help pay for screenings, equipment, and services at medical and mental health clinics; and the Lafourche Parish School District in Louisiana uses Medicaid funds to support many of the preventive services provided under Medicaid's Early and Periodic Screening, Diagnosis, and Treatment program, such as mental health screenings and treatment services.[74,75]

Ensure access to prevention and treatment services.

Substance use disorder is a brain disease that requires effective and sustained treatment.[76] Tragically, only an estimated one in 10 Americans with a substance use disorder receive appropriate treatment.[77] Young adults, ages 18 to 25, have the largest proportion of substance misuse of any age group, according to the Substance Abuse and Mental Health Services Administration (SAMHSA),[78] yet only 7.2 percent of them receive care for their disease at a specialty care facility.

Barriers to treatment for substance use disorders and mental illness include nonexistent or inadequate insurance coverage, gaps in the behavioral health workforce, and stigma surrounding mental health and substance use disorders.[79] According to a 2018 U.S. Government Accountability Office report, there are gaps in substance use services for young adults, including insufficient access to recovery services and a shortage of treatment providers.[80]

According to the U.S. Census Bureau, people ages 25 to 34 and 35 to 44 were the two largest groups of uninsured people in the United States in 2016. That year, about one in four uninsured people were 25- to 34-year-olds.[81] The Affordable Care Act (ACA) was a historic and pivotal point of progress. After it became law, the rates of uninsured people with mental illness and substance use disorders fell by more than 5 percent.[82] In addition, the ACA increased the number of insured young adults by allowing them to stay on their parents' policies until they turned 26.[83] This provision contributed to a 45 percent reduction in uninsured 18- to 25-year-olds between 2010 and 2015,[84] but the uninsured rate was highest for 26-year-olds in 2017, presumably due to young adults aging out of their parents' plans.[85]

And yet, even when people have health insurance and recognize a need for treatment, it isn't always available to them. The Mental Health Parity and Addiction Equity Act (MHPAEA) became law in 2008. It requires health insurers to cover mental health and substance misuse services at the same levels as physical healthcare services. While the MHPAEA did not require private insurers to include coverage for mental health services, it did require that, if plans did include mental health coverage, such coverage must be on par with physical health services. But a growing body of evidence suggests that such parity in coverage is not always available. A 2015 patient survey conducted by the National Alliance on Mental Illness found that patients with private insurance were denied coverage for mental health services twice as often as denial rates for other medical services.[86]

More recently, a 2019 court ruling, *Wit v. United Behavioral Healthcare (UBH)*, found that UBH, which manages behavioral health services for a number of large insurance providers, including United Healthcare, rejected tens of thousands of patients' treatment claims for mental health and substance use disorders based on defective medical review criteria.[87]

While cost barriers created by a lack of insurance coverage are significant, they are not the only barriers to care. Others include an undersupply of appropriately trained and credentialed mental and behavioral health professionals, including an undersupply of practitioners with specific training in substance use disorders treatment.[88] According to the U.S. Department of Health and Human Services, about 111 million Americans live in areas with a shortage of mental health professionals.[89]

Primary settings also need to better integrate behavioral health treatment with a whole-person approach to

care.[90,91,92,93] However, many regulatory and reimbursement policies create obstacles to the integration of such services, sometimes requiring separate waiting rooms, medical records, and contractual agreements among different agencies. Millennials are likely to be more comfortable than older patients accessing behavioral healthcare via telehealth services, but such an option is not widespread. This pattern of policies that make it more challenging to access behavioral health services prompted then–Representative Patrick Kennedy, in his recommendations to the President's Commission on Combating Drug Addiction and the Opioid Crisis, to make the following remark: "Until we treat brain diseases the same way we treat other diseases, our country will never stem the tide of these deaths of despair."[94]

Access and equity

While overall rates of mental disorders for most minority groups are largely similar to those for Whites, numerous studies have found that racial and ethnic minorities are less likely than Whites to seek mental health treatment.[95] Service cost or lack of insurance coverage was the most frequently cited reason for not using mental health services across all racial and ethnic groups.[96] Barriers that keep many young adults from being able to access treatment for substance use disorders or mental health problems are present in all communities, but racial and ethnic minorities can face unique barriers to care, including a fundamental mistrust of healthcare systems and providers, discrimination, a lack of culturally informed care, and in some cases limited English proficiency.[97]

Continuation of care can be another problem for communities of color. This care gap has serious consequences, particularly in the light of the fact that racial and ethnic minorities experience larger proportional increases in suicide deaths compared with other population groups.[98]

A 2013 study found that Blacks and Latinos were 3.5 to 8.1 percent less likely than Whites to complete substance use disorder treatment, possibly due to socioeconomic factors such as unemployment and housing instability.[99,100] Subsequent evidence has found that many people of color anticipate discrimination when seeking mental healthcare or treatment for substance use disorders, avoid care altogether, or experience discrimination in care, which leads them to withdraw. This, ultimately, leads to a poor initiation to and completion of treatment.[101,102,103] Overall, White Americans are significantly more likely to complete treatment for a substance use disorder compared with Blacks and Latinos, regardless of the substance used,[104] though these differences vary widely across metropolitan statistical areas.[105] These trends are not limited to Black and Latino communities; Asian American and Pacific Islanders had faster growth in the rate of admissions to substance use disorder treatment than other groups.[106]

All completion-rate data should be viewed within a "barriers" lens—including by asking, what are the specific barriers to treatment access, continuation, and completion that a population group faces, and what programs and policies need to be in place to help remove those barriers?

More evidence-based, culturally sensitive, and linguistically appropriate behavioral health and suicide-prevention programs are needed. A study published in *Health Affairs*[107] found that a more diverse mental health workforce, as well as improved provider and patient education, were important to eliminating mental health disparities. Such programs need to be tailored to the community or population and need to recognize the specific life events known to trigger addiction, relapse, and suicide.[108] Certain transition periods of particular relevance to Millennials are associated with higher rates of suicide. For example, a 2015 study found that the rate of suicide among deployed and non-deployed veterans who served between 2001 and 2007 was highest during the three years immediately after leaving military service.[109] Financial pressures, another stress point for many Millennials, are another factor known to increase suicide risk.

Address the multigenerational impact of substance misuse and suicide.

When alcohol and drug misuse or suicide touch young adults, the impact is often multigenerational.[110]

According to SAMHSA, between 2007 and 2012, on average about 21,000 pregnant women (ages 15 to 44) used opioids for non-medical purposes in the past month.[111] According to the Centers for Medicare and Medicaid Services, substance misuse–related illness and death particularly affects pregnant women, and substance misuse is now a leading cause of maternal death.[112]

Research shows that pregnant women who use opioids may deliver a newborn with neonatal abstinence syndrome (NAS).[113] NAS happens when a fetus becomes physically dependent on opioids or other drugs due to the mother's drug use while pregnant. When dealing with NAS, it is important to protect the infant's health while also ensuring that the mother receives adequate treatment for her opioid disorder.[114]

An infant with NAS may experience withdrawal symptoms, such as tremors, fever, seizures, and difficulty feeding.[115] A study of Medicaid-financed births found a 383 percent increase in the number of infants born with NAS between 2000 and 2012 across 26 states.[116] In 2014, the annual healthcare cost of NAS to society was estimated to be $462 million.[117]

Between 1999 and 2014, the rate of opioid use disorders identified during birth hospitalizations quadrupled from an estimated 1.5 per 1,000 delivery hospitalizations to 6.5 per 1,000,[118] and the number of newborns with NAS grew from 1.2 per 1,000 hospital births to 5.6 per 1,000 births in 2012.[119] Amphetamine-related deliveries are also increasing in some parts of the country—in some areas, at rates higher than opioid-involved deliveries.[120]

The effects of NAS vary. It can cause behavioral problems and challenges with self-regulation—factors predictive of academic failure.[121,122] Children born with NAS were more likely to have a developmental delay or a speech or language impairment in early childhood compared with children born without NAS.[123]

According to the National Association for Children of Addiction, children whose parents have substance misuse problems do not generally do as well in school—due to higher rates of absenteeism, truancy, and suspension—as students from families without such issues.[124]

What's the impact of a parent's substance use or suicide on their children?

In 2005, 2.5 million children lived with their grandparents, who provided for the child's care. By 2015, that number increased to 2.9 million children, according to child welfare officials, due in large measure to the opioid crisis.[125] Additionally, children of parents with substance use disorders are more likely to be placed in foster care, and foster care placements are growing.[126] According to the National Association for Children of Addiction, about one in four children in the United States lives in a family with a parent who is addicted to drugs or alcohol.[127] Of the 400,000 children in out-of-home foster care at

any time,[128] more than 60 percent of infants and 40 percent of children are from families with active alcohol and drug misuse.[129,130] Overall, the number of infants with NAS reported to child welfare services has increased steadily, most markedly between 2010 and 2014.[131] One study of county-level data found that substance misuse prevalence was a predictive factor for complex and severe cases of child maltreatment, though whether this always results in removing a child from his or her home varies from state to state.[132] There is also research showing that increasing access to opioid use disorder treatments for parents who need such treatment can have a positive impact on families in the child welfare system, including by increasing permanency.[133]

In addition to the trauma of being removed from home and family, parents' substance misuse can put children at high risk for abuse, neglect, exposure to criminal activity, and exposure to the chemicals involved in drug production.[134] Children whose parents misuse alcohol and other drugs are three times more likely to be abused and over four times more likely to be neglected than children of parents without substance use disorders.[135] Furthermore, when a child is subject to abuse or neglect, they are at risk for anxiety and personality disorders, which in turn put them at risk for later alcohol and drug misuse in their own lives[136] and can heavily influence the way they eventually parent their future children.[137]

Parents' alcohol use disorders can also have a heavily negative impact on children. Model programs have effectively helped mothers achieve sobriety and have reduced state custody placements of children.

CASE STUDY:

Sobriety Treatment and Recovery Teams (START) is a Kentucky-based program for families with parental substance use disorders and issues of child abuse and/or neglect that helps parents get sober and helps keep children with their parents when possible and safe. Mothers who participated in START achieved sobriety at nearly twice the rate of those not in START, and children in START families were half as likely to be placed in state custody. For every dollar spent on START, Kentucky avoided spending $2.22 on foster care.[138]

Improve substance use disorder treatment services within the criminal justice system and as people transition out of the system.

Any discussion of the linkage between substance use disorders, particularly the opioid crisis, and the justice system should first acknowledge that there are social determinants of drug use just as there are social determinants of health. Addressing those social determinants—access to quality education, safe housing, transportation, and employment opportunities among others—and applying public health responses rather than criminal justice responses to the crisis need to be central parts of the solution to the drug misuse epidemic.[139]

Until that happens, alcohol and drug use disorders will continue to be frequent gateways to unemployment and interactions with the criminal justice system.[140,141] The criminalization of mental health and substance misuse conditions often begins in the juvenile justice system. An estimated 65 to 70 percent of youth in the juvenile justice system have a mental health condition and are much more likely to have experienced traumatic victimization and adverse childhood experiences compared with the general population.[142] Incarcerating these young people rather than providing them with community-based behavioral health services increases the likelihood of adult incarceration and other adverse outcomes.[143]

According to the Bureau of Justice Statistics, as of 2016, 42 percent of those in state and federal prisons nationwide are ages 20 to 34 and make up the highest proportion of prisoners.[144] Nearly half the people in federal prisons, 47 percent, had been sentenced for drug offenses.[145] There is increasing evidence that incarcerated people are more likely to have mental health and substance use disorders—driven in part by trauma and adverse childhood experiences—than the population as a whole. Incarceration is often an impediment to receiving adequate mental health and substance use disorder care.[146,147]

The differential impact of the criminal justice system on minority groups is also salient. People of color are overrepresented in the criminal justice system. For example, Blacks represent 13.3 percent of the U.S. population but are 35.4 percent of the prison population. Similarly, Latinos are 17.6 percent of the U.S. population and 21.6 percent of the prison population.[148] Furthermore, data shows that racial status impacts sentencing, including evidence of racial discrimination in sentencing. Minorities, particularly young Black and Latino males, often receive longer sentences than do Whites.[149,150]

Unfortunately, criminal justice systems often don't leverage opportunities to address the nation's substance use problem through treatment programs.[151] SAMHSA reports that, for many people with a substance use disorder, contact with the criminal justice system is often their first opportunity for treatment.[152] Increasingly, the criminal justice system offers incentives for individuals convicted of crimes to avoid or reduce their sentences by entering and remaining in treatment, but the justice system should do more to leverage these treatment opportunities when appropriate.[153,154] A 2019 National Academies of Sciences, Engineering and Medicine report[155] found that, despite the large number of people entering or already in the criminal justice system who have an opioid use disorder, medications to treat these disorders are rarely available within the system. And, for those prisoners who do receive medication-based treatment while incarcerated, the treatment is often discontinued upon release, putting individuals who were formerly incarcerated at high risk for relapse and overdose. One solution is to increase the number of drug courts and mental health courts across the country. Drug courts divert people found guilty of less serious charges—often drug charges or nonviolent crimes committed by people with substance use disorders—into treatment programs instead of prison.[156] Similarly, mental health courts divert people who are convicted of a crime and who suffer from a mental illness into treatment and community-based services when possible. In mental health courts, a judge oversees the treatment and supervision process and facilitates collaboration among the court, mental health providers, and other community-based service providers.[157] Finally, communities should train police and other first-responders to recognize people with substance use disorders and then refer them for treatment.

Prisons' unique characteristics and environments present regulated opportunities to provide treatment for people with substance use disorders;

unfortunately, prisons also present barriers to such treatment. If more prisons made a range of treatment options available—including medication-based treatments, such as methadone, buprenorphine, or naltrexone—then more incarcerated individuals could receive treatment.

It is critical that recovery supports continue after release.[158] According to the National Institute on Drug Abuse, people convicted of crimes who complete a prison-based treatment program and who continue with treatment after release have the best outcomes: they are more likely learn to manage relapse risks and to develop a drug-free peer network.[159] People leaving correctional facilities without treatment and recovery supports face particularly high overdose risks. First, people recently released from prison often return to the same settings that triggered their drug use to begin with. Worse, their tolerance to drugs likely decreased while in prison.[160] Finally, once back in their communities after prison, the drugs available are often stronger than what they used before incarceration.[161,162,163]

According to SAMHSA, in-prison substance use disorder treatment, particularly when followed by community-based recovery supports, not only reduces relapse rates; it also prevents recidivism.[164] Post-release supports include a specific transition plan to community-based treatment programs; access to counseling, including in some cases medication services; and vocational and employment assistance. People leaving incarceration who have completed a prison-based treatment program and who continue with treatment in the community have the best outcomes.[165]

For all of these reasons, follow-up care for individuals who were formerly

incarcerated who received treatment in prison is critical. This care should include help enrolling in health insurance and transitioning to community-based treatment and recovery supports. Research shows that alternative models of probation that include substance misuse recovery supports and that address mental health issues can both improve outcomes and reduce costs.[166]

Employment post-treatment or incarceration is also an important element in helping young adults to overcome a substance use disorder. During an October 2018 news interview, U.S. Centers for Disease Control and Prevention (CDC) Director Dr. Robert Redfield talked about the importance of employment opportunities for people in recovery and called on the business community to help people in recovery benefit from the "dignity of a job." He said corporations can help celebrate the success of people who go into recovery and help to sustain that recovery by providing employment opportunities.[167] Research shows that employment leads to higher graduation rates from drug courts;[168,169] unfortunately, there is a persistent lack of employment resources for those seeking substance use disorder treatment.[170]

Recommendations

The following recommendations would establish programs and advance policies that address many of the root causes of substance use disorders and mental health issues for young adults. This includes policies that concentrate on creating the conditions and resources that help people avoid the problems of alcohol and drug misuse or suicidal ideation in the first place—that is, a focus on prevention as well as screening and treatment. Drug and alcohol misuse and suicide can create lasting harm for future generations; this means that effective solutions will have lasting benefits.

Assure patient access to evidence-based prevention, screening and treatment.

- Make screening for and treatment of mental health and substance use disorders part of routine healthcare; improve pain care coordination among providers; and educate patients about pain medications.
- Make behavioral healthcare, including screenings, a routine part of healthcare, including primary care, and offer it in a nonjudgmental manner.
- Routinely employ the many well-tested screening tools for mental health issues and substance use disorders.
- Widely implement healthcare system and provider education programs, like the Zero Suicide Initiative *(see case study below)*, to improve care for those who seek help and to prevent suicides.

CASE STUDY:

The Zero Suicide Initiative is a comprehensive approach focused on improving depression care in health systems by integrating suicide prevention into primary and behavioral healthcare. The model requires primary care doctors to screen every patient during every visit with two questions: (1) How often have you felt down in the past two weeks? (2) How often have you felt little pleasure in doing things? High scores lead to more questions about sleep disturbances, changes in appetite, and thoughts of hurting oneself. Providers must indicate that they completed the screening on each patient's medical record. And when providers recognize a mental health problem, they must assign patients to appropriate care, which includes cognitive behavioral therapy, medication, group counseling, or new care models, such as same-day psychiatric evaluations, drop-in group-therapy visits, and hospitalization if necessary. The Henry Ford Health System reports reduced suicide rates among its behavioral health patients by up to 89 percent thanks to the Zero Suicide model.[171] The National Institute of Mental Health is studying the efficacy of the model in a large study of approximately 170 outpatient behavioral clinics serving more than 80,000 patients in New York state.[172]

- Clinicians should refer their patients to appropriate mental, behavioral, and substance use disorder treatment services in the community as needed. Clinicians and trained personnel should also assist patients in making the necessary arrangements to access care.
- State and federal policymakers should eliminate the regulatory and legal obstacles to the integration of physical and behavioral care, including by streamlining the ability to share patient records. Payers and health systems should create reimbursement and financial incentives to prioritize the integration of care and wrap-around services for patients. Wrap-around services typically include job training or housing-assistance programs. When possible, physical and behavioral services should be co-located to ease care integration and patient access.
- States and health systems should invest in and expand Prescription Drug Monitoring Programs to track controlled substance prescriptions. States and health systems should create or expand drug-disposal programs to ensure that patients dispose of expired or unused medications properly and that someone other than the patient with the prescription does not use it.
- CDC's opioid prescribing guidelines, which have led to reduced opioid prescribing, should continue to be followed. Clinicians should take care to make prescribing decisions that are consistent with the guidelines, i.e. prescribing decisions that account for the patient's unique circumstances. For example, ones that address the pain control needs associated with cancer and surgical procedures.[132]

- Protect and expand access to evidence-based and culturally appropriate mental and behavioral substance misuse treatment. Fully enforce the 2008 MHPAEA. Create true parity between coverage for mental and behavioral health insurance and coverage for physical conditions. Coverage for mental and behavioral health must be available within Medicaid and private insurance coverage, including adequate in-network provider availability with reasonable wait times and out-of-pocket expenses.
- As mandated by the ACA, parents' health insurance policies should continue to cover young people up to age 26. Maintain additional critical ACA reforms, such as financial assistance within the marketplace system, to help students and young professionals afford health insurance. Create or reinstate programs that specifically target young adults, such as enrollment navigators, to help young people transition from their parents' health insurance to the marketplace options as needed. Consider tax credits and/or expanded Medicaid eligibility for people under 26 whose parents do not have health insurance. Monitor the elimination of the individual mandate (as of 2019) to assess the impact it has on the number of young adults without health insurance.
- Increase health insurance coverage for medication-based treatments, such as methadone, buprenorphine, and naltrexone. Increase evidence-based, behaviorally based, or multimodal interventions for substance use disorders for patients who need it. Medication Assisted Treatment (MAT) repeatedly shows better treatment outcomes than treatment programs that do not include MAT.[173,174]
- State governments should establish or strengthen licensing and oversight requirements and procedures to ensure that all substance misuse treatment programs and recovery facilities are using evidence-based interventions.
- Strengthen critical behavioral health infrastructure, like the National Suicide Prevention Lifeline, to ensure that calls are answered in a timely manner and that follow-up outreach is available to those at a high risk of self-harm. Suicide-prevention programs should be expanded to leverage text- and app-based services.

CASE STUDY:

The Jed Foundation's suicide prevention program empowers teenagers and young adults with the skills and support they need to navigate their transitions into adulthood and to thrive as adults. The program, based on a comprehensive public health approach to promoting mental health and preventing suicide, works with schools (at the high school and college level nationwide) to help them evaluate and strengthen their mental health, substance misuse, and suicide-prevention programs. It creates support systems for teens and young adults by building community-level partnerships and by educating students, families, and communities about how to recognize and support someone who is struggling with a mental health issue. In 2017, the foundation built on its comprehensive approach and, in partnership with the Steve Fund, developed the Equity in Mental Health Framework, which provides 10 recommendations and implementation strategies to help colleges and universities better support the mental health of students of color.[175]

- Address barriers to treatment—like the lack of providers in rural areas or the need for more residential treatment programs for pregnant and postpartum women—by growing the federally funded Behavioral Workforce Education and Training program, adopting the use of telemedicine, and increasing student loan repayment programs for practitioners working in underserved areas. A robust, diverse, well-trained, and accessible mental and behavioral health workforce is necessary to ensure that anyone who needs mental health or substance misuse treatment has access to it. Professional education, licensing, and credentialing bodies should create programs, appropriate trainings, and credentialing for such providers.
- Hospitals should ensure that individuals in crisis can connect to behavioral health services in a timely manner. Hospitals should expand the "spoke-and-hub" model of connecting those in emergency or intensive care for a substance use disorder to ongoing community-based treatment and services.

Use pricing strategies to limit consumption of alcohol by adolescents and young adults.

- Alcohol pricing strategies, such as increasing the cost of alcoholic beverages through taxes, are associated with decreased overall alcohol consumption, including young adult consumption.[176] States should consider imposing higher taxes on alcohol sales and should strictly enforce existing underage drinking laws by holding sellers and hosts liable for serving minors.

Reduce the multigenerational impact of substance use disorders.

- Expand innovative programs—like the new Center for Medicare and Medicaid Innovation Maternal Opioid Misuse model—that provide services to mothers with an opioid use or other substance use disorder and their children; this will both help more people and continue to build the evidence base.
- The federal and state governments should make it a priority to implement the recently enacted Family First Prevention Services Act, which supports prevention services for families in crisis to help reduce foster care placements and includes support for relatives caring for children who are candidates for foster care.
- Hospitals and birthing centers should screen new mothers for substance use disorders and mental health issues at delivery.

CASE STUDY:

Nurse-Family Partnership (NFP) works with young, low-income, first-time pregnant women who are not ready to take care of a child. NFP establishes a trusted relationship with these women by providing home visits with a public health nurse, who meets with the mother from pregnancy until the child turns two years old. Home visits connect first-time mothers with the care and support they need to ensure a healthy pregnancy and birth. The model has dramatic benefits for society. For instance, when Medicaid pays for NFP services, the federal government gets a 54 percent return on its investment through lower enrollment rates in future Medicaid and nutrition support programs.[179]

Invest more in research on and education about non-opioid and non-drug pain treatments.

- The federal government and the pharmaceutical industry should invest in and advance research on nonaddictive pain-control medications and research on non-pharmacological interventions for pain control. Healthcare providers should educate their patients about the dangers of addictive medications and about non-drug treatment options. Research should specifically look at the question of best treatment approaches for young adults. Additional research gaps include how to stop the progression of substance misuse into a disorder and how, to best leverage technology and social media to end the substance misuse epidemic.

Provide evidence-based substance misuse treatment within the criminal justice system and ensure that treatment continues and that employment opportunities exist after release.

- Create drug courts in all states and federal district courts. When appropriate, people with substance use disorders should receive mandatory treatment as part of their incarceration or other form of punishment. Connect people who received substance misuse treatment while in prison to recovery support programs in their communities upon release.

CASE STUDY:

A novel Rhode Island Department of Corrections program helps inmates overcome their substance use disorders and avoid relapse once released. The initiative is rooted in the knowledge that a return to the environment that led to a substance use disorder in the first place is a potential trigger for relapse. The program provides a range of medication-based treatment options—methadone, buprenorphine, and naltrexone—and drug counseling to inmates who have an opioid use disorder. Approximately 275 inmates received program treatment in 2018. While officials caution that the program is small, and more data are necessary, the intervention seems to be having a positive effect. In a February 2018 study, researchers reported that the total number of opioid deaths in the state among the recently incarcerated dropped from 26 to nine from 2016 to 2017. Importantly, inmates who enrolled in the program while in prison remained in the treatment program through community-based services once they completed their sentences or were paroled. Community-based services include residential treatment programs and methadone treatment programs.[180]

- To disrupt the cycle of incarceration for young people with substance use and mental health disorders, reform juvenile justice so that children with behavioral health conditions can go to community-based treatment, rather than correctional facilities.
- Train first-responders, particularly law enforcement officers, to recognize substance use and mental health disorders. Increase the availability of naloxone for use by first-responders.

CASE STUDY:

North Carolina is a leader in passing state laws that increase access to naloxone and other harm-reduction strategies. Since its creation in 2013, the North Carolina Harm Reduction Coalition's Overdose Prevention Project has distributed more than 101,000 overdose rescue kits and has confirmed 13,394 overdose reversals within the state. The coalition also works with North Carolina law enforcement agencies to equip officers in 164 police agencies with reversal kits. As of August 1, 2015, seeking medical assistance for a drug overdose in North Carolina cannot be considered a violation of parole, probation, or post-release, even if the person seeking help was arrested. The victim is also protected. In 2016, the state passed the Naloxone Standing Order Law, which enables pharmacies in the state to provide naloxone without a prescription.[181]

- States should adopt "ban-the-box" laws that prevent employers from requiring job candidates to report convictions on a job application. This law allows employers to consider a job candidate's qualifications first—without the stigma of a conviction or arrest record. Such policies do not prohibit employers from conducting full background checks; instead they require employers to do such checks later in the hiring process.
- Incarcerated individuals who received care for a substance use disorder or mental illness prior to arrest should not have their treatment protocol largely altered or changed without consultation from their doctor.

Create substance misuse and suicide prevention programs that address the crisis in multiple settings and in novel ways, including by meeting young adults where they are.

- Provide behavioral health screening and assistance or referral services to young adults at colleges and technical training facilities.[182] Provide behavioral health screening and referral services to reproductive health clinics. Bring services, including outreach workers, to social and recreational facilities frequented by young people, such as music venues.
- Increase funding for the Garrett Lee Smith Suicide Prevention Program, which focuses on campus and tribal youth. The program implements early interventions in education and community institutions that serve youth and young adults, and it establishes a dedicated line of funding for CDC focused on comprehensive suicide-prevention data, research, and programs.
- Develop social media approaches that bring behavioral health messages and information about services and availability to young adults (for example, ads on popular social media sites, including dating sites). Include messages that attempt to reduce the stigma associated with seeking treatment for behavioral health or substance use problems. All youth organizations that host social media platforms should have protocols in place for dealing with substance use disorders and suicide prevention.
- Help reduce the financial pressures Millennials face from student loans with consolidation or forgiveness programs in return for public-sector careers.
- Increase funding for community and two-year colleges to make higher education more affordable.
- Create cross-sector partnerships to engage community partners in preventing substance misuse and suicide. Partnerships should include young adult leaders, community health organizations, educational agencies, civic leaders, and faith leaders. Include young adult leaders in all program design decisions.
- Create assistance programs that focus on people transitioning out of the military.

CASE STUDY:

The Massachusetts Department of Veterans' Services Statewide Advocacy for Veterans' Empowerment (SAVE) program[183] prevents suicide and other mental health issues among veterans returning to the state after activity duty or deployment. The program proactively provides peer counseling, hosts veterans' resources fairs, and helps veterans navigate state agencies for needed benefits and services as they transition back to civilian life. In 2018, an estimated 365,000 veterans resided in the state. Of that number, about 24,000 received SNAP (the Supplemental Nutrition Assistance Program) benefits. A study published in Public Health Nutrition[184] found that about one in four Iraq and Afghanistan veterans reported problems with food security. SNAP provides benefits to low-income individuals and families for eligible food purchases.

Report Methodology

This report focuses on Millennials, people ages 23 to 38 in 2019. In some instances, this meant including the most recently available data sets—typically from 2016 or 2017—which may have looked at 18- to 25-year-olds. A 20-year-old in 2016 is a 23-year-old in 2019.

Unless otherwise referenced, data used in this report are from the National Center for Health Statistics' Multiple Cause of Death Files (1999–2017) and were accessed via the CDC WONDER Online Database.[185] (http://wonder.cdc.gov/mcd-icd10.html).

For alcohol and drug deaths, TFAH used CDC's categories, Drug/Alcohol Induced Causes, as the underlying causes of death, and for suicide deaths used the Injury Intent category of suicide. Since a small number of deaths are categorized as being alcohol or drug-induced as well as a suicide, TFAH removed duplicates (ICD-10 underlying causes of death codes X60-65) when determining combined death totals.

For deaths related to specific drugs, TFAH used ICD-10 codes as follows:

- **All opioid deaths:** X40-44, X60-64, X85, and Y10-14, codes for underlying causes of death; plus T40.0-40.4 and T40.6, codes for multiple causes of death.
- **Synthetic opioid deaths:** X40-44, X6064, X85, and Y10-14, codes for underlying causes of death; plus T40.4, code for multiple causes of death.
- **Heroin deaths:** X40-44, X60-64, X85, and Y10-14, codes for underlying causes of death; plus T40.1, code for multiple causes of death.
- **Common prescription opioid deaths:** X40-44, X60-64, X85, and Y10-14, codes for underlying causes of death; plus T40.2, code for multiple causes of death.

CDC and other analyses of drug deaths may use a slightly narrower drug overdose category compared with the Drug Induced Cause category used in this brief.

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1730 M Street, NW, Suite 900
Washington, DC 20036
(t) 202-223-9870
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