ISSUE REPORT

Trust for America's Health
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WELL BEING TRUST

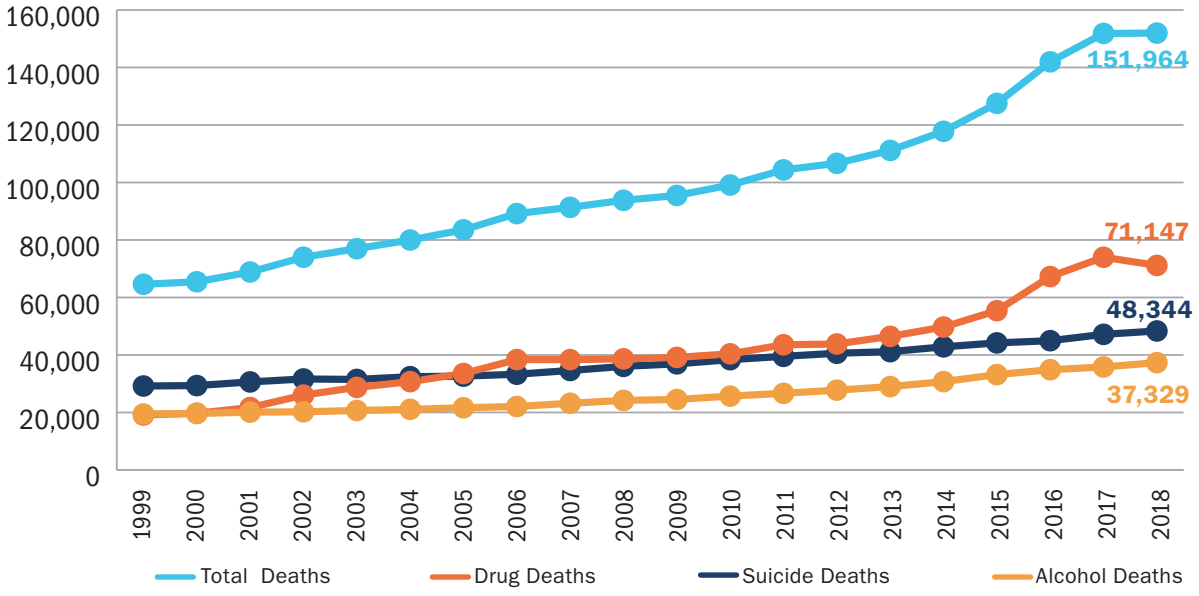
Pain in the Nation Update:

ALCOHOL, DRUG, AND SUICIDE DEATHS IN 2018

Mixed Trends in 2018 as Overall Opioid Overdose Deaths Decline, But Deaths Involving Alcohol, Suicide, Synthetic Opioids, and Psychostimulants Continue to Rise

In 2018, more than 150,000 Americans died from alcohol, drugs, and suicide combined.[1] The 2018 death rate—46.4 deaths per 100,000—is level with the 2017 rate of 46.6 per 100,000. This is the first time since 1999, when the current data began, that there hasn't been an annual increase in the combined figure and the first time in years that there hasn't been a sizable increase.

Annual Deaths from Alcohol, Drugs, and Suicide in the United States, 1999–2018



Source: TFAH and WBT analysis of National Center for Health Statistics data

MAY 2020

However, the stabilization of alcohol, drug, and suicide deaths was not uniform. Some causes, places, and populations had positive or stable trends, many had a decline in the magnitude of the increases, and others are continuing to rise quickly. Two major takeaways from 2018 are:

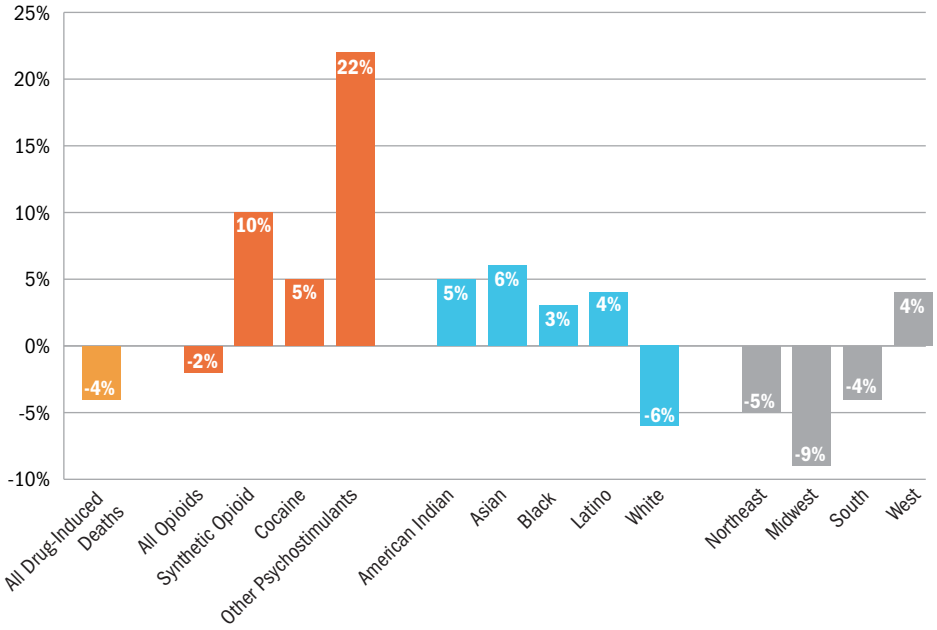
1. **Drug-induced deaths declined,** driven by reductions in overdoses involving prescription opioids and to a lesser extent heroin-related overdose deaths. A number of other drug types—namely synthetic opioids, cocaine, and other psychostimulants (e.g., methamphetamine)—continued to increase, albeit mostly at a slower pace than in prior years. Likewise, certain populations did not see the same reductions or stabilization in drug-induced deaths. For example, the rates of deaths of racial/ethnic minorities, older adults, and those living in the West increased.

2. **Alcohol-induced deaths and suicide deaths continued to rise in 2018,** as they have for several years. Alcohol deaths were up 4 percent in 2018, more than the previous year's 2 percent rise. Conversely, suicide was up 2 percent, a smaller increase than the 4 percent in 2017.

However, these trends may all change when researchers look back at 2020. With major disasters often come an increase in mental health and substance use disorders, as well as domestic violence and child abuse.[2] The pandemic of the novel coronavirus (the virus that causes the disease COVID-19) has been and is continuing to cause a massive amount of additional stress and trauma across the population, an increase in social isolation, an unprecedented loss of employment and income, disruption of mental health and substance use services, and diversion of funding and resources to meet emergent needs.[3] All of which have negative effects on mental health, substance use, and well-being in the immediate and, possibly long term.[4] Some of this is evident already: the number of March 2020 calls to the national mental health crisis hotline was 891 percent higher than in March 2019.[5] Additionally, certain coping mechanisms and reactions—like higher rates of alcohol and drug consumption, and increased firearm sales—may increase rates of future substance use disorders, drug overdoses, alcohol-induced deaths, and suicides.[6,7] This means the policy responses to COVID-19 should include provisions and resources to support the mental and behavioral health of all Americans, should reduce access to lethal suicide means, and should ensure that social supports and health care are available to all.

This brief, the latest in the *Pain in the Nation* series from Trust for America's Health and Well Being Trust, includes the most up-to-date data on alcohol, drug, and suicide deaths by demographics and geography; it also includes further analysis of the shifting drug overdose epidemic and the rise of overdose deaths involving synthetic opioids, as well as overdose deaths involving cocaine and other psychostimulants, often in combination with opioids. This brief also highlights promising policies, programs, and research to reduce the number of alcohol, drug, and suicide deaths, prevent substance use disorders, and promote good mental health and well-being. The brief concludes with recommendations for policymakers.

Percent Change in Drug-Induced Mortality Rates by Select Drug Type, Demographics, and Geography, 2017-2018



Source: TFAH and WBT analysis of National Center for Health Statistics data

WHAT ARE OPIOIDS AND PSYCHOSTIMULANTS?

Opioids are a class of drug that have chemical structures similar to opium poppies and interact with nerve cells to reduce pain and produce feelings of euphoria.[8] Natural opioids are sourced from opium poppies, semisynthetic opioids are synthesized from naturally occurring opium, and synthetic opioids are made entirely in a lab.[9]

Regular opioid use can lead to physical dependence, and misuse can lead to addiction and overdose.[10] Common prescription opioid drugs, due to increased prescribing, were the primary drivers of the opioid epidemic when it began a couple of decades ago. In 2009, however, the crisis moved toward more potent and illicit opioids: first heroin and then, starting around 2010, synthetic opioids.

The most common types of opioids include:

- **Natural/semisynthetic opioids.** The most common prescription opioids, like codeine, hydrocodone (including Vicodin), oxycodone (including OxyContin and Percocet), and morphine.
- **Heroin.** An illicit semisynthetic opioid that is twice as potent as morphine.
- **Synthetic opioids.** Extremely potent opioids, including fentanyl and carfentanil. Fentanyl is a medication that is 50 to 100 times as potent as morphine and most frequently used in anesthesia. Carfentanil is 10,000 times as potent as morphine and is used as a tranquilizer for large animals (e.g., elephants). Fentanyl and carfentanil, as well as their analogs, are also produced illicitly for nonmedical purposes and are extremely dangerous, proving deadly in just miniscule amounts.[11,12]
- **Methadone.** A medication used for pain management and to treat individuals with opioid use disorders; it reduces withdrawal symptoms and cravings, and blocks highs from other opioids. Methadone is a type of synthetic opioid, but it is typically grouped separately from other synthetic opioids (including in this report) because it is an effective treatment for opioid use order.

Psychostimulants include a wide variety of substances that stimulate the central nervous system, and elevate mood and alertness. Psychostimulants can be addictive, some have important medicinal uses (e.g., attention deficit hyperactivity disorder), and some have potential for misuse and serious health effects, including overdose death.[13] The psychostimulants most often involved in overdose deaths are **cocaine** (which has its own category) and a combined category called other *psychostimulants with abuse potential,* referred to in this report as ***other psychostimulants***. They include methamphetamine, ecstasy, amphetamine, and prescription stimulants.[14]

DATA LIMITATIONS: WHAT DOESN'T THIS DATA TELL US ABOUT DRUG OVERDOSES?

This brief focuses on mortality from alcohol, drugs, and suicide in 2018 and other recent trends. It doesn't capture local trends, what's happened in 2019 or 2020 (as data from those years were not available at the time of the report issuance), nor the full burden of these epidemics beyond mortality, such as nonfatal overdoses and substance use disorders. Other factors to consider when looking at overdose data are:

- A reduction in fatal overdoses may indicate a successful harm-reduction strategy (e.g., naloxone is reversing more overdoses) but not an improvement in underlying issues.
- Mortality reporting policies and capacity, particularly regarding identifying drug type in overdoses, vary by state and could artificially lower mortality rates for synthetic opioids and other specific drug types.
- One or more outbreaks from a particularly lethal or adulterated batch of illicit drugs may drive overdose rates, chiefly in low-population states. For example, roughly half of the synthetic-opioid overdose deaths in Alaska in 2017 occurred in Anchorage over a three-week period.[15]

Key 2018 Mortality Trends

Drug Overdose Epidemic Continued to Shift to New Substances and Populations

In 2018, drug-induced deaths declined for the first time since 2007. These declines were not universal. Deaths from certain types of drugs decreased, while deaths from other drugs increased. And the trends differed by populations as well. Most conspicuous is the divergence in trends by race/ethnicity. Whites were the only racial/ethnic group that saw a decline in drug-induced deaths in 2018. The death rates for American Indians, Asians, Blacks, and Latinos all were worse than 2017. As policymakers consider new initiatives and allocate resources, it is imperative to understand these trends and to ensure that policies help all Americans, regardless of their race/ethnicity.

Rates of overdose deaths involving natural and semisynthetic opioids and heroin were lower in 2018, while rates of overdose deaths involving synthetic opioids, cocaine, and other psychostimulants were higher. Overdoses involving synthetic opioids, cocaine, and other psychostimulants were responsible for 14.0 deaths per 100,000 in 2018—up from 3.5 deaths per 100,000 in 2013.

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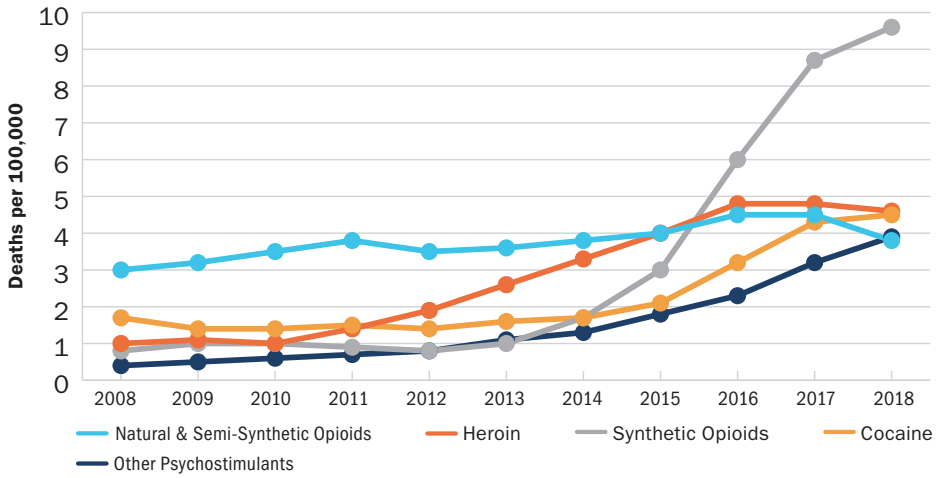
By population, a few groups saw moderately lower (young adults ages 18 to 34, Whites, and people living in the Midwest) or slightly lower (adults ages 35 to 54, and people living in the Northeast and the South) drug-induced death rates in 2018. Many other groups continued to experience increases (American Indians, Asians, Blacks, Latinos, older adults, and people living in the West). Groups with the largest decreases between 2017 and 2018 were young adults ages 18 to 34 and those living in the Midwest, while the largest absolute increases were among Blacks and American Indians. Blacks now have higher overdose rates involving synthetic opioids (10.7 per 100,000) and cocaine (8.8 per 100,000), and nearly the same overall drug-induced death rate (21.8 per 100,000), as Whites (10.2, 4.1, and 23.3 per 100,000 for synthetic-opioid, cocaine, and drug-induced deaths, respectively) after decades of substantially lower overdose rates.

The rest of this section details the trends in synthetic opioids, cocaine, and other psychostimulants in United States in 2018. For additional data by demographics and state, see appendices A and B on pages 21 and 22.

Annual Mortality Rate from Overdoses by Drug Type, 2008–2018



Source: TFAH and WBT analysis of National Center for Health Statistics data

Synthetic Opioids

- In 2018, 31,335 Americans died from overdoses involving synthetic opioids, and 108,690 died over the past decade (2009–2018).
- The rate of American overdose deaths involving synthetic opioids was 10 percent higher in 2018 compared with 2017, increasing from 8.7 to 9.6 deaths per 100,000. It was the sixth year in a row of rising synthetic-opioid-involved overdoses, with particularly large increases over the last five years. In total, the synthetic-opioid-involved overdose death rate has increased by nearly 10-fold since 2013.
- Synthetic-opioid-involved overdose death rates in 2018 were highest among those living in the Northeast (18.4 per 100,000), adults ages 35 to 54 (17.1 per 100,000), young adults ages 18 to 34 (15.9 per 100,000), males (14.0 per 100,000), Blacks (10.7 per 100,000), Whites (10.2 per 100,000), and those living in metro areas (10.1 per 100,000).
- All groups had higher rates of synthetic-opioid overdose deaths in 2018 compared with 2017, except for a couple groups (youth ages 0 to 17 and rural areas) that held steady.

Cocaine

- In 2018, 14,666 Americans died from cocaine-involved overdoses, and 73,744 died over the past decade (2009–2018).
- The rate of cocaine-involved overdose deaths was 5 percent higher in 2018 compared with 2017, increasing from 4.3 to 4.5 deaths per 100,000. It was the sixth year in a row of rising cocaine overdoses, with particularly large increases between 2014 and 2017. In total, the cocaine overdose death rate increased by 187 percent since 2013. Note: the majority of cocaine-involved overdose deaths also involve opioids, mostly synthetic opioids, and the increase in recent years is tied to these rising combined cocaine and opioid overdoses.
- Cocaine overdose rates in 2018 were highest among Blacks (8.8 per 100,000), adults ages 35 to 54 (8.4 per 100,000), those living in the Northeast (8.1 per 100,000), males (6.5 per 100,000), and those living in metro areas (4.9 deaths per 100,000).
- Most groups had higher rates of overdoses involving cocaine in 2018 compared with 2017—though some held steady, including youth ages 0 to 17, older Americans ages 75 and up, Asians, and those living in the South and rural areas.

Other Psychostimulants

- In 2018, 12,676 Americans died from overdoses involving other psychostimulants, and 52,279 died over the past decade (2009–2018).
- The rate of death from psychostimulant overdoses was 22 percent higher in 2018 compared with 2017, increasing from 3.2 to 3.9 deaths per 100,000. It was the 10th year in a row of rising psychostimulant overdoses, and, in total, the psychostimulant death rate increased by 238 percent since 2013. Note: the majority of psychostimulant-involved overdose deaths also involve opioids, and the increase in recent years is tied to the rise of combined overdoses.
- Psychostimulant overdose death rates in 2018 were highest among adults ages 35 to 54 (7.5 per 100,000), those living in the West (6.5 per 100,000), American Indians/Alaska Natives (6.4 per 100,000), males (5.5 per 100,000), those living in rural areas (4.7 per 100,000), and Whites (4.4 per 100,000).
- All groups had higher rates of psychostimulant overdose deaths in 2018 compared with 2017, except for youth ages 0 to 17 and older Americans ages 75 and up.

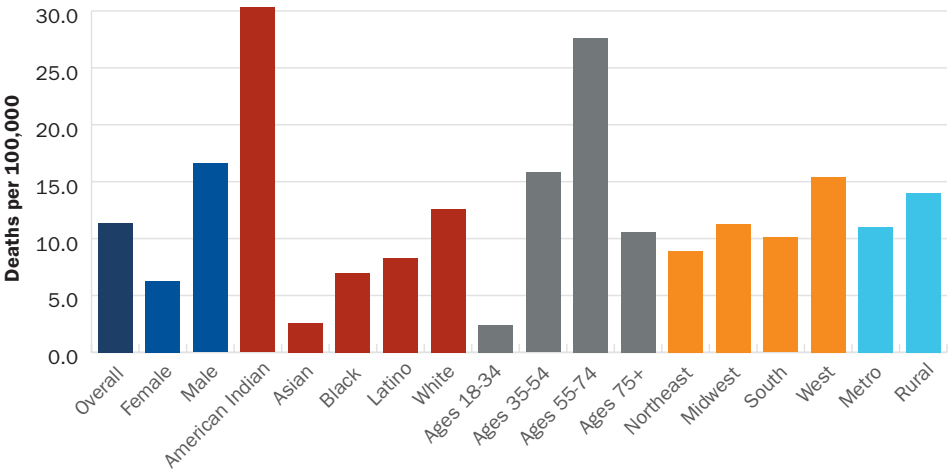
Overall National Data and Trends

There were 151,964 alcohol-induced, drug-induced, and suicide deaths—or 46.4 per 100,000—in the United States in 2018; this is level with 2017 and a 51 percent increase over 2008. Separate trends in deaths from alcohol, drugs, and suicide are detailed below (followed by a state-by-state analysis) and additional data are in Appendix A on page 21.

Trends in Alcohol-Induced Deaths

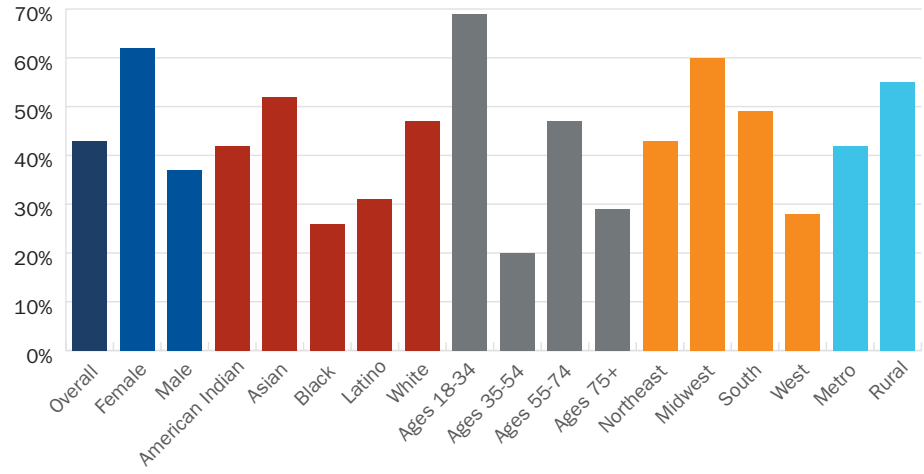
- In 2018, 37,329 Americans died from alcohol-induced causes, and 305,537 Americans died from alcohol-induced causes over the past decade (2009–2018). Note: Alcohol-induced deaths include alcohol poisoning, liver diseases, and other diseases; it does not include alcohol-attributable deaths, such as alcohol-related violence, accidental, or vehicle fatalities. In this report, alcohol deaths include alcohol-induced causes only.
- The rate of American deaths from alcohol-induced causes was 4 percent higher in 2018 compared with 2017, increasing from 11.0 to 11.4 deaths per 100,000. It was the ninth year in a row of growth, and, in total, the alcohol death rate increased by 43 percent since 2008.
- Alcohol death rates in 2018 were highest among American Indians (30.0 per 100,000), adults ages 55 to 74 (27.6 per 100,000), males (16.6 per 100,000), those living in the West (15.4 per 100,000) and in rural areas (14.0 per 100,000), and Whites (12.6 per 100,000).
- All groups had higher rates of alcohol deaths in 2018 compared with 2017, except for youth ages 0 to 17, who held steady.

Alcohol-Induced Mortality Rate Overall and by Select Demographics and Region, 2018



TFAH and WBT analysis of National Center for Health Statistics data

Percent Change in Alcohol-Induced Mortality Rates by Select Demographics and Region, 2008–2018



TFAH and WBT analysis of National Center for Health Statistics data

RESEARCH ROUNDUP: NEW INSIGHTS AND ANALYSIS

New research continues to illuminate our understanding of the causes and consequences of the alcohol, drug, and suicide epidemic and how programs and policy can have an impact.

- **Suicide Rates and State Minimum Wage.** Researchers at Emory University analyzed the relationship between minimum wage and suicide rates at the state level between 1990 and 2015. They found that minimum-wage increases are associated with a statistically significant decrease in suicide rates: 3.4 to 5.9 percent among individuals with a high school education or less. They also found higher minimum wages associated with lower disparities between socioeconomic groups, and the wage/suicide association is strongest when there's high unemployment.[16]

- **Adverse Childhood Experiences (ACEs) and Suicidal Behaviors as Adults.** Researchers analyzed responses from more than 9,000 individuals from the National Longitudinal Study of Adolescent Health over a 13-year period to determine whether there was an association between eight ACEs—specifically, (1) physical abuse, (2) sexual abuse, (3) emotional abuse, (4) neglect, (5) parental death, (6) incarceration, (7) alcoholism, and (8) family suicidality—and suicide ideation and suicide attempts in adulthood, after controlling for a number of demographic and behavioral factors. They found that five types of ACEs — (1) physical abuse, (2) sexual abuse, (3) emotional abuse, (4) parental incarceration, and (5) family history of suicidality — significantly increased the risk for suicidal ideation and suicide attempts in adulthood (ranging from 1.4 to 2.7 times the risk) and that having multiple ACEs was associated with increased odds of both suicide ideation and attempts (having three or more ACEs is associated with more than three times the risk for suicidal ideation or a suicide attempt).[17]

- **Understanding Methamphetamine Use in the United States.** A Center for Disease Control and Prevention report estimates the rate of methamphetamine use in the last year and ever among all adults and by demographic group in the United States using data from the National Surveys on Drug Use and Health for 2015 to 2018. The researchers found an estimated rate of past-year methamphetamine use at 6.6 per 1,000 adults, or 1.6 million Americans, and lifetime methamphetamine use at 59.7 per 1,000 adults, or 14.7 million Americans. They also looked at the frequency of methamphetamine use, the use of other substances, and methamphetamine use disorder among adults with past-year methamphetamine use.[18]

- **Buprenorphine Prescribing Trends and the Comprehensive Addiction and Recovery Act of 2016 (CARA).** CARA included a provision that expanded the kind of healthcare providers authorized to prescribe buprenorphine—a medication used to treat patients with opioid use disorder—to include nurse practitioners (NPs) and physician assistants (PAs) until 2021. Researchers examined pharmacy claims data between July 2017 and June 2018 to understand the effect of this change on prescribing practices and whether it met its intent to expand buprenorphine treatment to more Americans with opioid use disorder. A few key findings:
  - The number of NPs and PAs prescribing buprenorphine grew over the year—and NPs and PAs made up 18 percent of all prescribers by June 2018.
  - Over the year, 12 percent of buprenorphine patients received at least one prescription from an NP or PA. (Most also received a prescription from a physician.)
  - The number of patients receiving buprenorphine prescriptions overall increased by 6 percent over the year—including increases from NPs at 182 percent, PAs at 242 percent, and physicians at 2 percent.
  - Medicaid patients had higher rates of buprenorphine prescriptions from NPs and PAs than Medicare or commercially insured patients.
  - States that allowed NPs to prescribe buprenorphine independently had more nonphysician prescribers than in states that required physician oversight.[19]

- **Medical Outcomes of Young Children With Opioid Exposure in Utero:** Researchers examined administrative health data for more than 80,000 children and their mothers enrolled in Medicaid in Pennsylvania from 2008 to 2011. They found that children born to women with opioid use disorder in pregnancy had similar rates of pediatric complex chronic conditions[20] and a lower probability of completing well-child visits than other children in Pennsylvania with Medicaid. Children diagnosed with Neonatal Abstinence Syndrome, a subset of the children born to women with opioid use disorder during pregnancy, did have higher probabilities of pediatric complex chronic conditions, stemming primarily from neonatal conditions.[21]

- **Systematic Review of the Efficacy of the Alcoholics Anonymous (AA) Program Versus Other Treatment:** Researchers analyzed 27 studies (including 21 randomized, controlled trials/quasi-randomized, controlled trials) comparing AA with other common treatments for alcohol use disorder. They found that AA had equivalent or better outcomes than the other treatment programs, including more participants who abstained from alcohol for 12, 24, and 36 months and had fewer drinks per day after 12 months.[22]

Trends in Drug-Induced Deaths

- In 2017, 71,147 Americans died from drug-induced causes, and 530,893 Americans died from drug-induced causes over the past decade (2009–2018).
- The rate that Americans died from drug-induced causes was 4 percent lower in 2018 compared with 2017, from 22.7 to 21.7 deaths per 100,000. This was the first time that there was not an increase since 2012, and it is particularly noteworthy because the last few years have seen extremely large increases. Since 2008, the drug death rate has increased by over 70 percent.
- Drug death rates in 2018 were highest among adults ages 35 to 54 (38.6 per 100,000), males (29.4 per 100,000), those living in the Northeast (28.9 per 100,000), young adults ages 18 to 34 (28.1 per 100,000), Whites (23.3 per 100,000), and Blacks (21.8 per 100,000).
- Trends between 2017 and 2018 were mixed depending on group. *(See prior section for additional analysis.)*

FEDERAL OPIOID RESPONSE SINCE 2016

Since 2016, federal policymakers have taken several steps to respond to the opioid epidemic, including by passing the Comprehensive Addiction and Recovery Act (CARA), signed into law in July 2016; the 21st Century Cures Act, signed into law in December 2016; and the Substance Use-Disorder Prevention that Promotes Opioid Recovery and Treatment (SUPPORT) for Patients and Communities Act, signed into law in October 2018.[23,24,25]

- **CARA** was the first piece of legislation to address the opioid epidemic directly and authorized $181 million in 2016 for a range of response activities—including funding for overdose-reversal medications, substance use disorder treatment and recovery, medical research, law enforcement efforts, and criminal justice reform—administered through the U.S. Department of Health and Human Services and the U.S. Department of Justice. It also changed federal policies to help boost states' capacity to provide treatment for substance use disorder, including removing restrictions and expanding the types of providers who could prescribe buprenorphine for medication-assisted treatment of opioid use disorder.[26,27] In fiscal year (FY) 2020, CARA funding reached $658 million.[28]

- **The 21st Century Cures Act** was primarily a medical innovation bill, but it also included provisions to establish an assistant secretary for mental health and substance use, requirements for federal guidance on mental health parity compliance, and the authorization of $1 billion in grants administered by the Substance Abuse and Mental Health Services Administration (SAMHSA) for states to respond to the opioid epidemic.[29]

- **The SUPPORT for Patients and Communities Act** included provisions to increase access to substance use disorder screening, treatment, and care (including medication-assisted treatment) by changing Medicaid, the Children's Health Insurance Program, and Medicare provisions, and by increasing the substance use disorder workforce. It also authorized $9 million to improve medical school curricula and addiction medicine, among other substance use-related provisions.[30]

As of 2018, there were 57 federal programs and $7.4 billion in annual funding in place to respond to the opioid epidemic across five federal agencies: the U.S. Department of Health and Human Services (HHS), the Office of National Drug Control Policy, the U.S. Department of Justice, the U.S. Department of Veterans Affairs, the U.S. Department of Homeland Security, and the U.S. Department of Labor.[31] All HHS agencies follow a "5-Point Strategy":[32]

1. **Access:** Better Prevention, Treatment, and Recovery Services.
2. **Data:** Better Data on the Epidemic.
3. **Pain:** Better Pain Management.
4. **Overdoses:** Better Targeting of Overdose-Reversing Drugs.
5. **Research:** Better Research on Pain and Addiction.

Examples of a few of the HHS-funded programs for opioid response, include:

- **Centers for Disease Control and Prevention (CDC): Overdose Data to Action.** CDC merged their previously separate grants into a single three-year cooperative agreement that provides support to state, territorial, county, and city health departments. In 2019, this grant program provided $301 million to 47 states, 16 localities, the District of Columbia, and two territories. To improve local prevention and response, CDC directly funds some localities and requires state recipients to award no less than 20 percent of prevention funds to local communities. In FY 2020, Congress appropriated $475 million for CDC's overdose prevention work.[33]

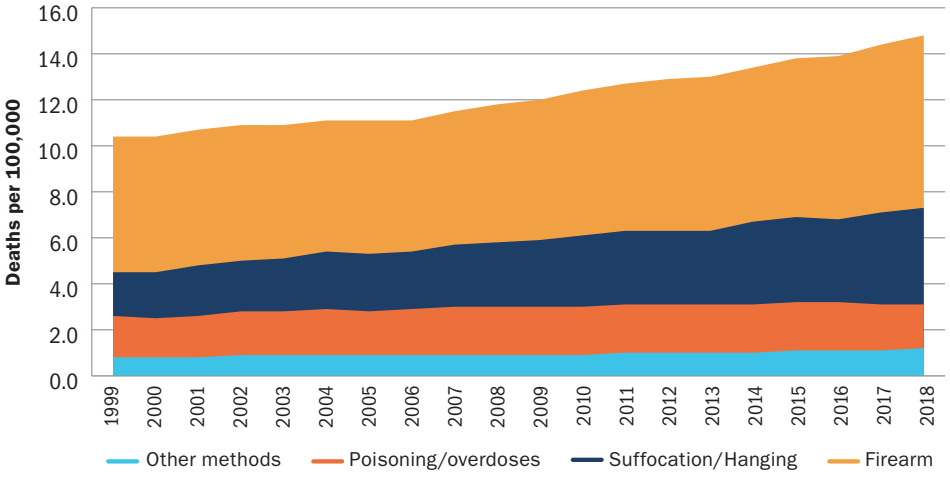
- **SAMHSA: State Opioid Response Grants.** State Opioid Response grants increase access to treatment and reduce opioid-related deaths through prevention, treatment, and recovery from substance use disorders. Since its inception, this grant program has connected 28,749 patients with care, including 21,650 with medication-assisted treatment, and it has distributed 256,978 naloxone kits to 57 states and territories. In FY 2020, Congress appropriated $1.5 billion for this program.[34]

- **Health Resources and Services Administration: Rural Communities Opioid Response Program (RCORP).** This initiative provides funding and technical assistance to multi-sector consortia so they can identify and address prevention, treatment, and recovery needs in their communities. The program consists of three grant programs: (1) RCORP-Planning, which provides one year of support to rural communities to identify and address workforce and service-delivery needs (the Health Resources and Services Administration has distributed 265 awards since FY 2018); (2) RCORP-Implementation, which provides multi-year support to established rural consortia to implement core prevention, treatment, and recovery services; and (3) RCORP-Medication-Assisted Treatment Expansion, which provides multiyear support for establishing or expanding medication-assisted treatment in rural settings (in FY 2020, Congress appropriated $110 million for the RCORP program.[35]

Trends in Deaths by Suicide

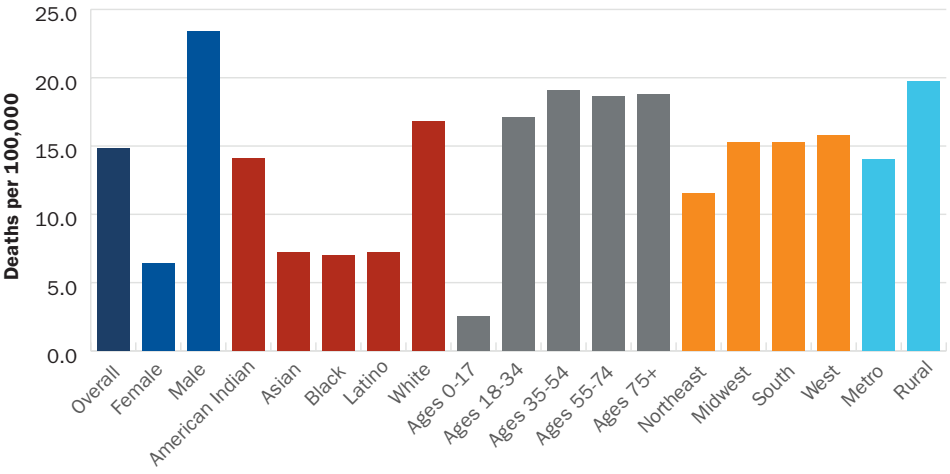
- In 2018, 48,344 Americans died as a result of suicide, and 424,041 Americans died from suicide over the past decade (2009–2018).
- Suicide rates were 2 percent higher in 2018 compared with 2017, and rates in 2018 were 25 percent higher than 2008. Suicide rates in 2018 increased almost universally across all demographics. The major exception is that the suicide rates for adults ages 18 to 35 and 35 to 54 were stable.
- Racial/ethnic minority groups all saw larger proportional changes in suicide rates than Whites in both one-year and 10-year trends—including 5 percent increases among Asians and Blacks, and an 8 percent increase among Latinos between 2017 and 2018. For more on rising suicide among Black youth, see the interview with Dr. Michael A. Lindsey on page 12.
- Another key trend is in the method of suicide. Suicide by gun and suffocation/hanging have both increased substantially. All other methods, including poisoning/overdose have remained stable for the past decade. Between 2017 and 2018, gun suicides increased 2 percent and suffocation/hanging suicides increased 5 percent, and between 2008 and 2018, gun suicides increased 25 percent and suffocation/hanging increased 50 percent. This suggests that policies that reduce access to firearms, and additional focus and research on ways to reduce firearm and suffocation/hanging suicides are urgently needed.
- Deaths by suicide in 2018 were highest among males (23.4 per 100,000), those living in rural areas (19.7 per 100,000), Whites (16.8 per 100,000), and American Indians/Alaska Natives (14.1 per 100,000). In 2018, 51 percent of suicides were by firearm, 29 percent were by suffocation/hanging, 13 percent were by poisoning/overdose, and 8 percent were by other methods.

Annual Suicide Rate By Suicide Method, 1999–2018



Source: TFAH and WBT analysis of National Center for Health Statistics data

Suicide Mortality Rate Overall and by Select Demographics and Region, 2018



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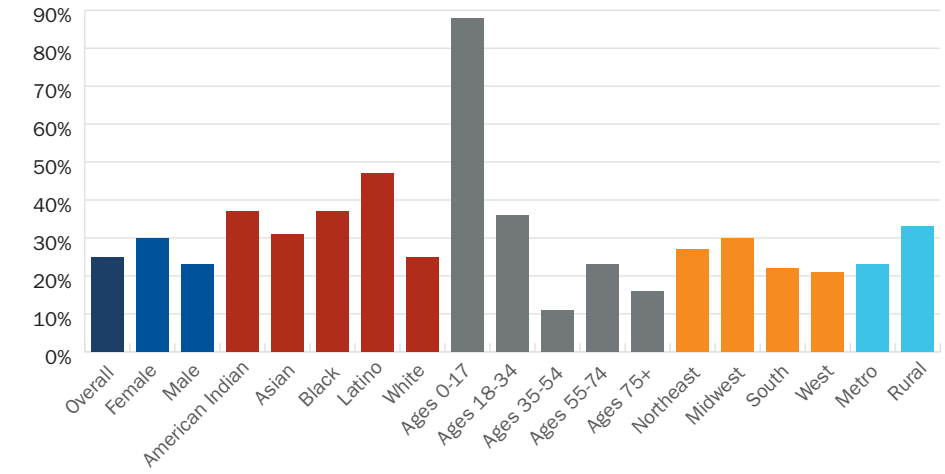
Percent Change in Suicide Mortality Rates by Select Demographics and Region, 2008–2018



TFAH and WBT analysis of National Center for Health Statistics data

Interview with Michael A. Lindsey, Ph.D., MSW, MPH

Dr. Lindsey is the executive director of the McSilver Institute for Poverty Policy and Research at New York University. He also leads the working group of experts supporting the Congressional Black Caucus Emergency Task Force on Black Youth Suicide and Mental Health. The Task Force report, Ring the Alarm: The Crisis of Black Youth Suicide, released in December 2019, is a comprehensive examination of the alarming rise in suicide rates for Black youth over the past generation; a survey of available data and evidence; and a call for policymakers and communities to take action to better understand and to reverse this emergent trend.[36]

TFAH: Please describe your work at the McSilver Institute.

Dr. Lindsey: We focus on the social determinants of mental health, as well as trauma and treatment disparities, all of which intersect with intergenerational poverty. If you are experiencing inequality related to, for example, food insecurity or underemployment, that has a psychological impact. We are looking for ways to break that cycle. We are committed to studying intergenerational poverty, not only to understand its consequences, but to also do something about it.

TFAH: Where does your passion for your work come from?

Dr. Lindsey: I've always been interested in mental health treatment disparities, particularly the lack of treatment access for serious mental health issues among Black people. I know the consequences of lack of mental health treatment. My passion derives from growing up in the Southeast section of Washington, D.C., where I saw the effects of drug use and undiagnosed, untreated addiction and mental health issues. I want to bridge that gap to make sure kids and families are connected to treatment in meaningful ways.

TFAH: If you could recommend to policymakers one or two actions that would make a real difference on the social determinants of mental health, what would they be?

Dr. Lindsey: Let's focus that a bit. And that's a key point. Whatever we design as an intervention has to speak to the unique issues that are experienced by a specific group. For example, looking at the rising rates of suicide among Black youth. We need to have mental health professionals in schools, proportionate to the number of kids in that school. We can't have one provider trying to serve 500 kids or even 100 kids; that's too many. We also need to see more federal research dollars, specifically, for studying the increasing rate of Black youth suicide. The data are clearly telling us that Black youth are at high risk.

TFAH: Does the research you are calling for need to be population-focused?

Dr. Lindsey: No question, it does. The research also needs to be gender sensitive and culturally appropriate. We need to understand how families of color, in this case Black families, resolve mental health challenges. For example, do we need to involve clergy in the intervention programs? Do we need services in nontraditional settings? Do we need to provide services in places other than those that the community believes are where "crazy people" go? Setting up services from the consumer perspective will help us establish services that are going to be meaningful.

TFAH: What's the impact of the school environment on the lives of Black children? Are you concerned about school disciplinary policies that have unintended consequences for students who end up in trouble with the juvenile justice system?

Dr. Lindsey: This is something I'm particularly concerned about. For students of color, there's implicit bias in how their behaviors are interpreted. If you have a White kid and a Black kid and a Latino kid—if the Black or Latino kid aggresses toward someone, the reaction is that kid is a bad kid, one who should be removed from school. But if a White kid acts up, he is perceived as having emotional challenges. The White kid is not suspended, he's offered mental health services. It happens a lot.

When Black kids are suspended from school, they can be wayward in the community, they're not engaged, their behavior comes to the attention of law enforcement—it's a vicious cycle. It's also tough for those same kids who are suspended from school to return to school because those school communities often don't want them back. The largest number of students who have this lack of school engagement tend to be Black and Brown.

If we had intervened on those behaviors early on and gotten those kids to mental health treatment and associated services, we could have averted that later suspension from school. It's a matter of how we interpret the behavioral presentations of kids. It happens to be that Black and Brown students are the ones who are not getting the requisite services surrounding their mental health.

TFAH: What has been the impact of zero-tolerance policies in schools on students of color?

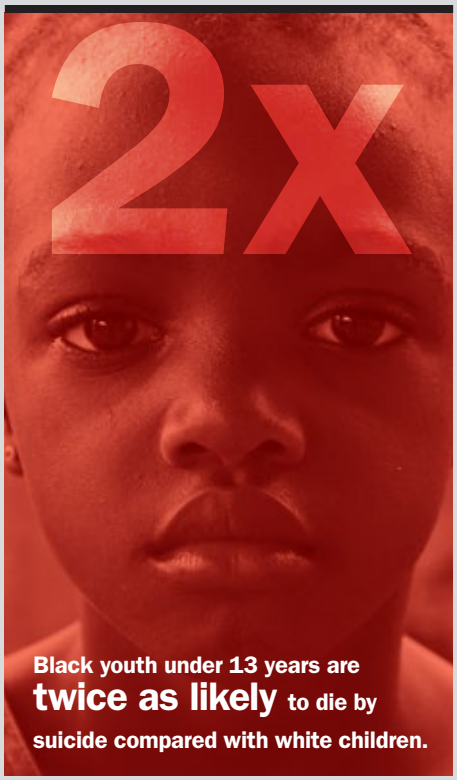
Dr. Lindsey: Zero-tolerance has had a big impact on what I would call school persistence and staying connected to school among Black and Brown kids. Zero-tolerance policies do not work, and they disadvantage low-income kids and kids of color.

TFAH: McSilver's Step Up program is established in two New York City high schools. Can you tell us more about it?

Dr. Lindsey: Step Up is focused on positive youth development. What we do is take students who are at risk for truancy or school dropout, and we wrap around services to support them. It includes peer support—so a lot of peer-based mentoring—as well as professionally led activities to help kids stay on a positive course. The program has an 85 percent graduation rate; that's about 10 percent higher than the general graduation rate in New York City. Programs like Step Up or school mental health services that can be offered to kids who are struggling can be very important to ensuring that these kids stay connected.

TFAH: You led the expert working group that helped inform the work of the Congressional Black Caucus Emergency Task Force on Black Youth Suicide and Mental Health. What did the task force find and what did it recommend?

Dr. Lindsey: Black youth suicide and suicide behaviors are rising. Black boys (ages 5 to 12 years old) are twice as likely to die by suicide as compared with their White peers. We led a study at the McSilver Institute that found that the self-reported suicide attempt rate for Black youth increased by 73 percent between 1991 and 2017; meanwhile, self-reported suicide attempt rates fell for White and Latino kids and for Asian and American Indian/Alaska Native kids during the same period.



Source: Congressional Black Caucus Emergency Task Force on Black Youth Suicide and Mental Health

What needs to be done is many of things we've talked about. We're calling for mental health professionals in every school and for more National Institutes of Health funding. We're calling for Mental Health First Aid to be widely implemented in schools. All the professionals in schools should be well-versed in the presentation of mental health issues, the signs that a student may be having trouble and how to get that student connected to supportive treatment.

We are also calling for more demonstration projects, programs that would implement evidence-based and best practices for clinicians and teachers and anyone who interacts with Black youth. We are calling for investment in demonstration projects to identify exemplars and then implement those programs at scale.

TFAH: What is required to scale up promising programs?

Dr. Lindsey: We have a program called Making Connections. In this program, we are targeting kids who have depression. The program works to reduce stigma. It is designed to help families understand what mental health treatment is all about and to address any concerns they might have about it. It's a promising program I'd like to see delivered at scale. In order to do that, we are going to have to invest dollars in understanding how this program works. We are currently funded by NIMH [National Institute of Mental Health], but we are going to need increased funding to be able to do this in other places. If we are going to deliver these programs at scale, we are going to have to engage in the research to take them to scale. That means establishing the efficacy of programs like Making Connections, but also determining how best to implement programs like it at scale.

TFAH: Anything else you want to share?

Dr. Lindsey: I'm reminded of the power of storytelling. We need to demonstrate how implicit bias is impacting Black and Brown kids, bias that is potentially an underlying feature of why we are seeing the rising suicide trends. We need to tell the story of implicit bias in compelling ways. I believe that will challenge folks to action. It's also important to recognize the role that stigma and mistrust play in the disconnection from services. They play a huge role in terms of the disconnection from mental health treatment. We need to work on bridging those gaps between need and use of treatment.

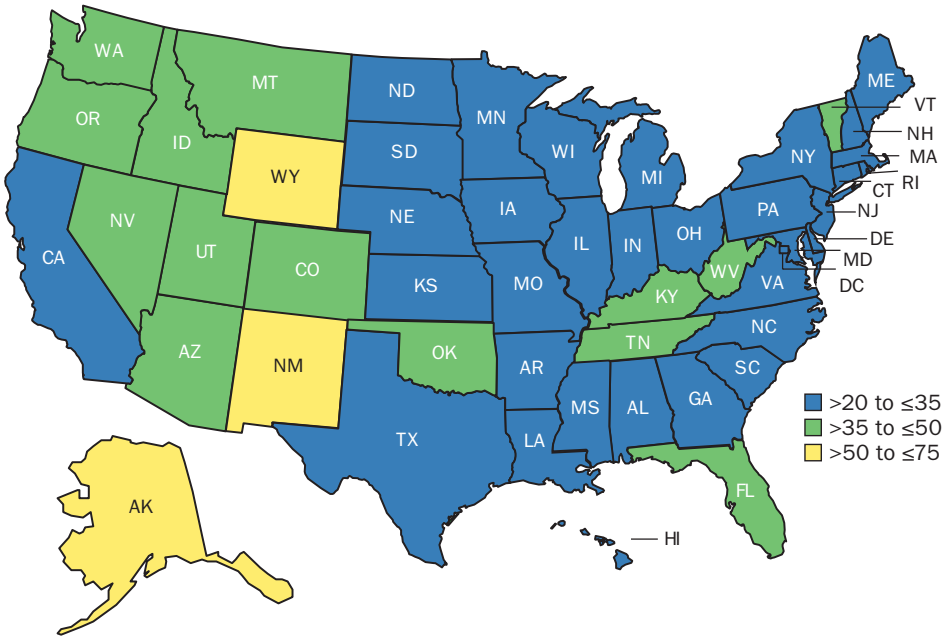
State Analysis

The rates and trends for deaths caused by alcohol, drugs, and suicide vary substantially across regions and states. A state-level analysis follows, and charts on page 22 in Appendix B have state-level data on alcohol, drug, suicide, opioid, and synthetic-opioid deaths and death rates.

- **Deaths from alcohol, drugs, and suicides.** From 2017 to 2018, 27 states saw higher rates of death from alcohol, drug, and suicide, most with increases of less than 5 percent; 23 states and the District of Columbia had lower rates. Between 2008 and 2018, four states (Maryland, Massachusetts, New Hampshire, and New Jersey) saw their alcohol, drug, and suicide death rates more than double.
  - States with the highest death rates from alcohol, drug, and suicide in 2018 were West Virginia (84.9 per 100,000), New Mexico (82.8 per 100,000), New Hampshire (68.2 per 100,000), and Alaska (67.8 per 100,000).
  - States with the lowest death rates from alcohol, drug, and suicide in 2018 were Texas (31.7 per 100,000), Mississippi (31.7 per 100,000), and Hawaii (34.6 per 100,000).
- **Alcohol-induced deaths.** Between 2017 and 2018, 37 states and the District of Columbia had higher alcohol death rates. Between 2008 and 2018, two states (Indiana and Maine) saw their alcohol-induced death rates more than double.
  - States with the highest alcohol death rates in 2018 were New Mexico (33.9 per 100,000), Alaska (27.5 per 100,000), and Wyoming (25.8 per 100,000).
  - States with the lowest alcohol death rates in 2018 were Hawaii (6.5 per 100,000), Maryland (6.8 per 100,000), and Mississippi (6.9 per 100,000).
- **Drug-induced deaths.** Between 2017 and 2018, 28 states plus the District of Columbia had lower drug death rates, 21 states had higher rates, and one stayed the same. North Carolina, Ohio, and Pennsylvania). Between 2008 and 2018, 13 states and the District of Columbia saw their drug-induced death rates more than double, including three states (Maryland, New Hampshire, and New Jersey) where the rates tripled.
  - States with the highest drug death rates in 2018 were West Virginia (51.3 per 100,000), Delaware (42.3 per 100,000), and Maryland (39.5 per 100,000).
  - States with the lowest drug death rates in 2018 were South Dakota (6.7 per 100,000), Nebraska (8.9 per 100,000), and Iowa (9.6 per 100,000).
- **Opioid overdose deaths.** Between 2017 and 2018, 20 states had higher rates of opioid overdose deaths, and 30 states and the District of Columbia saw lower rates. There were five states with increases of more than 15 percent (Arizona, Delaware, Missouri, Montana, and New Hampshire).
  - States with the highest opioid overdose rates in 2018 were West Virginia (38.9 per 100,000), Delaware (36.7 per 100,000), and Maryland (34.5 per 100,000).
  - States with the lowest opioid overdose rates were South Dakota (3.2 per 100,000), Nebraska (3.3 per 100,000), and Hawaii (4.2 per 100,000).
- **Synthetic-opioid overdose deaths.** Between 2017 and 2018, 31 states saw higher rates of synthetic-opioid overdose deaths, and 15 states plus the District of Columbia had lower rates. (Montana, North Dakota, and Wyoming did not have sufficient data to report.) Nineteen states had increases of more than 15 percent, including six states with increases of more than 50 percent.
  - States with the highest synthetic-opioid overdose rates were Delaware (30.6 per 100,000), West Virginia (30.5 per 100,000), and Maryland (30.2 per 100,000).
  - States with the lowest synthetic-opioid overdose rates were Hawaii (1.0 per 100,000), Montana (1.0 per 100,000), and Texas (1.2 per 100,000).
- **Cocaine overdose deaths.** Between 2017 and 2018, 27 states saw higher rates of cocaine overdose deaths, 17 states and the District of Columbia had lower rates, and one state (Missouri) was flat. (Six states did not have sufficient data to report.) Thirteen states had increases of more than 15 percent, including one state (New Jersey) with an increase over 50 percent.
  - States with the highest cocaine overdose rates were Delaware (14.7 per 100,000) and Rhode Island (12.7 per 100,000), plus the District of Columbia (14.5 per 100,000).
  - States with the lowest cocaine overdose rates were Iowa (0.4 per 100,000), Arkansas (0.9 per 100,000), and Hawaii (0.9 per 100,000).

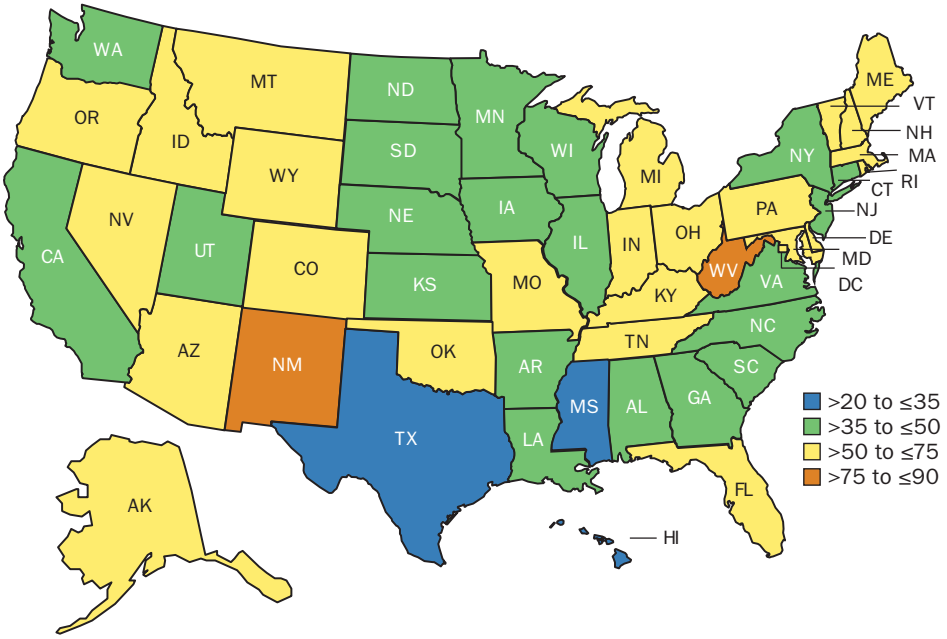
- **Other psychostimulant overdose deaths.** Between 2017 and 2018, 39 states saw higher rates of psychostimulant overdose deaths, eight states had lower rates, and one state (Maryland) was flat. (Delaware, the District of Columbia, and Vermont did not have sufficient data to report.) Thirty-one states had increases of more than 15 percent, including four states (Connecticut, Idaho, New Jersey, and Pennsylvania) with increases over 50 percent.
  - States with the highest psychostimulant overdose death rates were West Virginia (17.3 per 100,000), Hawaii (10.4 per 100,000), Nevada (10.2 per 100,000), and New Mexico (10.1 per 100,000).
  - States with the lowest psychostimulant overdose death rates were New York (0.9 per 100,000), Massachusetts (1.1 per 100,000), and Maryland (1.1 per 100,000).
- **Deaths by suicide.** Between 2017 and 2018, 28 states plus the District of Columbia had higher suicide rates, and 22 states had lower suicide rates. Between 2008 and 2018, four states (Kansas, Missouri, New Hampshire, and West Virginia) had their suicide rates increase by 50 percent.
  - States with the highest suicide rates in 2017 were New Mexico (25.6 per 100,000), Wyoming (25.4 per 100,000), Alaska (25.0 per 100,000), and Montana (24.9 per 100,000).
  - States with the lowest suicide rates in 2017 were New Jersey (8.7 per 100,000), New York (8.8 per 100,000), and the District of Columbia (7.7 per 100,000).

Annual Deaths from Alcohol, Drugs, and Suicide in the U.S. per 100,000, 2008



Source: National Center for Health Statistics, CDC

Annual Deaths from Alcohol, Drugs, and Suicide in the U.S. per 100,000, 2018



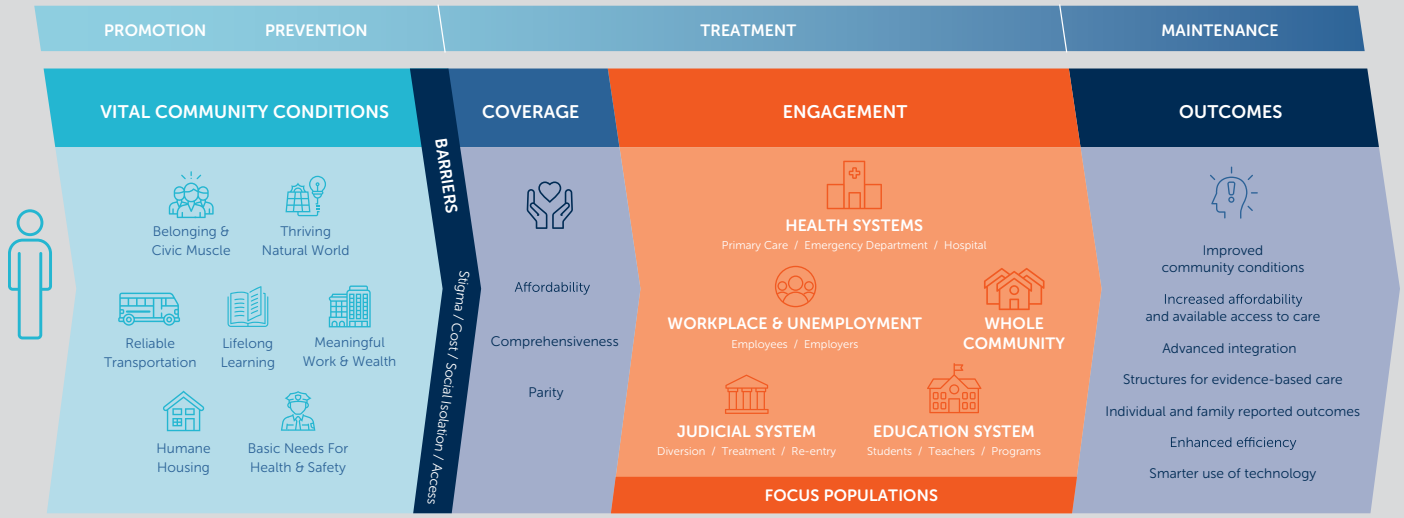
Source: National Center for Health Statistics, CDC

CASE STUDY

HEALING THE NATION POLICY FRAMEWORK

In January 2020, Well Being Trust released a policy framework for improving mental health and well-being in the United States that recognized the impact of increasing economic disparities; declines in social connectivity; increased discrimination based on race, gender, gender identity, country of origin, and more; and the ever-challenging cost of healthcare coverage and access. The framework focuses on actionable solutions and looks at opportunities for improvement in the health, education, and judicial systems; at the community level; and for employers and unemployment support. It also highlights the distinct needs of certain subpopulations, including individuals with intellectual and development disabilities, pregnant and postpartum women, unhoused individuals, Native Americans, veterans, LGBTQ people, and immigrants.

Framework for excellence in mental health and well-being



Source: Well Being Trust

CASE STUDY

LESSONS FROM A CRISIS WITH INTERACT FOR HEALTH 2008–2018

Interact for Health is a nonprofit serving 20 counties surrounding Cincinnati, Ohio, with the mission of "improv[ing] health by promoting health equity through community engagement, grants, research, education, and policy."[37] Addressing the opioid epidemic has been one of their priorities since 2008 after identifying opioid misuse and opioid overdose deaths as an emerging local health crisis. Over the last decade, they convened partners, provided subject-matter expertise, distributed local grants, and supported harm-reduction programs. Interact for Health awarded community grants that were tailored for a comprehensive response (prevention, treatment, harm reduction, advocacy, and supply reduction) and also for more targeted harm-reduction grants (including rescue medication, syringe services, and medication-assisted treatment). Over their decade of experience, Interact for Health found that: (1) community engagement, planning, and coordination were essential to creating strong and sustainable partnerships, building local leadership and power, and addressing community-specific needs in a culturally appropriate way; (2) their role as a convener and subject-matter expert was essential in sharing best practices across communities and sectors for better-informed policy and programs; (3) gaining political support was a major challenge in the harm-reduction programs, and it took time for community education and changes; and (4) program evaluation and funding flexibility were crucial to understanding what worked in a new and developing space and to ensure communities were able to use funds to meet their specific needs.

CASE STUDY

MULTI-SECTOR COLLABORATION AND GATHERING EVIDENCE TO GUIDE POLICIES TO PREVENT GUN SUICIDES IN UTAH

Half of Utah's suicides are by firearm, and firearm suicides account for 85 percent of the state's firearm deaths. In the past few years, the state legislature has taken several steps to reduce these deaths.[38] Building on the 2014 Firearm Safety Amendments law—which created new education materials for gun-storage safety for individuals at risk for suicide and established the cross-sector Utah Firearm Workgroup to develop a voluntary suicide course for concealed-carry applicants—the state legislature, again working with multi-sector stakeholders including local firearm owners, passed legislation in 2016 to fund the Utah Division of Substance Abuse and Mental Health and the Harvard Injury Control Research Center to study patterns in firearm suicides in the state. The study looked at gun access, circumstances of the suicides, and history of mental illness of individuals who died by firearm suicide to better understand firearm suicides. The 2018 report had four major findings, and resulted in state policy responses:

1. **Ninety-two percent of people who died by firearm suicide could have passed a background check on the day they died.** State policy response: In 2019, the state legislature established an educational program on the importance of safely storing guns funded through a public-private match. Intermountain Healthcare, Utah's largest health care provider, the Church of Jesus Christ of Latter-Day Saints, the state's largest religious group, and the Utah Shooting Sports Council all donated funds.
2. **Twenty-three percent of males who died from firearm suicide had a concealed firearm permit.** State policy response: New Utah law requires state agencies to supply educational materials on firearm suicide prevention to concealed firearm permit applicants, and all individuals renewing their permits are required to watch a video on firearm suicide prevention.
3. **Twenty-five percent of firearm suicide victims were diagnosed with mental health issues at a hospital prior to death.** State policy response: Boost education of healthcare providers on how to identify at-risk patients and conduct lethal-means counseling. Additionally, Intermountain Healthcare in coordination with the Harvard Injury Control Research Center developed a Utah-specific, free, online lethal-means training course for healthcare providers.
4. **Among rural youth younger than 21 who died from firearm suicides, 62 percent used a rifle or shotgun they owned.** State policy response action: New law requiring retailers to distribute locking devices with all rifle and shotgun sales, and state grants were also given to seven rural communities to expand outreach on suicide prevention.

Recommendations

The reduction in certain opioid deaths suggests that the policies and programs targeting the opioid epidemic may be taking hold in some populations—but progress is uneven and many racial and ethnic groups are not seeing the same progress as Whites. The nation should build on this small positive step and bring the same focus to the wider issue of drug overdoses and to the populations who are at increasing risk, especially Blacks, Latinos, and American Indians. The ramifications of the COVID-19 pandemic on mental health, substance use, suicide, and overall well-being also likely increase the need to expand existing programs and to develop new ones. Trust for America's Health and Well Being Trust continue to call for a multipronged policy approach to stem the alcohol, drug, and suicide epidemics, including implementation of the following key recommendations:

Invest in Prevention

- **Address upstream factors that harm the vital conditions needed for positive outcomes.** Numerous factors contribute to well-being. Intergenerational poverty, systemic racism, ethnic discrimination, and homophobia/transphobia are among the social, economic, and environmental factors that elevate risk. Government agencies at all levels should take steps to promote racial equity and combat racism and discrimination. An essential component of these efforts must be meaningful and authentic engagement of members of the affected communities to ensure equitable participation and community-led solutions.
- **Reduce risk factors and promote resilience in children, families, and communities.** Support equitable policies and programs that reduce traumatic and adverse experiences—such as exposure to violence, unstable housing, racial and ethnic discrimination, and implicit bias—which have profound long-term impacts on later substance use and mental health. CDC and SAMHSA need more funding through existing grants and the establishment of new programs for primary prevention activities that address these risk factors. An example of one such program is CDC's forthcoming Preventing Adverse Childhood Experiences (ACEs): Data to Action funding program to state and local jurisdictions.
- **Expand substance misuse prevention and mental health programs in the education system.** Increase the number of schools with the training and support to screen for, and respond to, childhood trauma. In addition, support schools in scaling up evidence-based life- and coping-skills programs, like the Good Behavior Game; and increase the availability of culturally and linguistically appropriate mental health and other services. Scale up federal programs that support programs in schools to promote protective factors and reduce risk behaviors, including CDC's Division of Adolescent and School Health, SAMHSA's Project AWARE, and the U.S. Department of Education's School Climate Transformation Grant.
- **Limit access to lethal means of suicide.** Promote safe storage of medications and firearms by providing public education; restricting access to firearms for children and individuals in crisis or at risk of suicide; and creating protocols for health care providers, counselors, and first responders on how to interact with and counsel patients and families to create safe environments. Implement universal background checks for gun purchases and extreme-risk protection orders nationwide, and expand programs to engage stakeholders—like the Gun Shop Project, which educates gun stores on suicide prevention.
- **Invest in novel efforts to identify population-based strategies.** Measure, promote, and improve emotional well-being and mitigate the long-term effects of trauma and adverse childhood experiences (ACEs), including by supporting state- and local-level partnerships to directly identify and improve emotional well-being. Continue to explore the connection among ACEs, trauma, and later outcomes to inform existing prevention, treatment, and recovery programs for substance use disorders. Increase the CDC's ACEs

line item and expand grants to support comprehensive prevention programs in communities.

- **Reduce availability of illicit opioids and inappropriate prescriptions.** Ensure responsible opioid prescribing practices (such as compliance with CDC's *Guideline for Prescribing Opioids for Chronic Pain* and support for high-functioning Prescription Drug Monitoring Programs); engage in public education about misuse and safe disposal of unused drugs; and participate in "hotspot" monitoring, intervention and anti-trafficking strategies focused on heroin, fentanyl, and other illicit drugs. Continue the National Institutes of Health's research on alternatives to opioid pain medications. Insurers and providers should use the CDC guidelines for their intended purpose, to ensure patients have access to safer, more effective pain treatment while reducing the number of people who misuse or overdose from these drugs.

- **Expand crisis intervention and support for all populations.** Increase crisis-intervention services and hotlines with ready linkages to services. The National Suicide Prevention Lifeline should receive sufficient funding. The proposed transition to a three-digit number should be done expeditiously to ensure access for all callers. Support innovative proposals leveraging data to develop proactive suicide-prevention programs. This lifeline, as well as other national suicide and mental health hotlines, should implement culturally and linguistically appropriate services to effectively meet the needs of diverse populations. Increase funding for CDC's National Center for Injury Prevention and Control suicide-prevention programs and SAMHSA's Garrett Lee Smith Programs.

Address the Shifting Epidemic

- **Lower excessive alcohol use through evidence-based policies.** Increase alcohol pricing, limit the hours and density of stores that sell alcohol, enforce underage drinking laws, and hold sellers and hosts liable for serving minors. For example, a 10 percent increase in the price of alcoholic beverages can reduce consumption by 7.7 percent.[39]

- **Promote harm reduction and treatment for individuals with substance use disorders.** Expand access to overdose-prevention medications—such as naloxone—to first responders and to those at high risk for overdose and their families and friends; expand medication-assisted treatment in new and innovative ways, like at syringe services or safe disposal programs (such as safe stations); and promote clean syringe access initiatives through syringe services programs and over-the-counter sales in pharmacies.

- **Expand prevention and treatment for emerging threats.** The increase in stimulant use requires a complementary approach to opioid-focused interventions, including increased access to behavioral therapies, such as cognitive behavioral therapy and contingency management interventions that provide tangible incentives in exchange for treatment and maintaining abstinence. Expand and provide resources to existing grant programs like CDC's National Center for Injury Prevention and Control's *Overdose Data to Action* so they have sufficient flexibility to address emerging threats such as cocaine and methamphetamine. Increase funding for efforts to expand the workforce, with an emphasis on increasing the pipeline and diversity of the workforce, through the Health Resources and Services Administration's Behavioral Health Workforce Development Programs and SAMHSA's Minority Health Fellowship.

- **Address the impact of the substance use epidemic on children.** The increasing number of children and families affected by the prolonged epidemic highlights the need for a multigenerational response that includes substance use disorder treatment for parents and wrap-around services for children and families, including grandparents and other relatives who help care for children, and governments must expand support for the foster care system. States should bolster and implement the Family First Prevention Services Act, which directs federal funds to provide prevention services to keep children safely with their families and out of foster care.

- **Improve data accuracy and timeliness through additional funding for local and state health agencies.** Make investments to increase the capacity for medical examinations and toxicological services, improve reporting of nonfatal overdoses and suicide attempts, and modernize and standardize data systems. CDC should receive additional funding for data support and analyses at the national level and in support of local and state programs.

Integrate, Increase Access, and Improve Healthcare

- **Expand efforts to combat stigma and improve social attitudes toward mental illness and substance use disorders.** The federal government should incorporate funding to support displays of messaging around mental health screening and treatment across a variety of federal funding programs that are likely to reach underserved populations. Certain stressful professions, like those in the medical or legal fields, should take the extra step of encouraging mental health care and should reexamine any policies that would discourage seeking care.

- **Engage all sectors of society in addressing mental health and substance use disorders.** Schools, workplaces, community centers, libraries, and public-facing programs should all incorporate ways to improve mental health and addictions issues to the maximum extent possible—from boosting awareness and reducing stigma, to providing crisis intervention training and facilitating referrals, and even integrating healthcare into their programming where possible.

- **Increase access to healthcare for mental health and substance use disorders.** Implement full enforcement of the Mental Health Parity and Addiction Equity Act. The federal government should require health plans to conduct parity compliance analyses on their own non-qualitative treatment limitations. They should also expand parity provisions to Medicare, Medicaid fee-for-service, and TRICARE.

- **Modernize and increase access to mental health care and substance use services.** Align healthcare provider reimbursement, quality measures, and training toward clinical models focused on the "whole health" of individuals, and prioritize integrated delivery models. Expand comprehensive health insurance to all Americans, and ensure parity in covered mental health and substance use services and provider networks—vital to addressing health disparities. Pay special attention to address equitable access where treatment options and providers are not readily available, such as in rural areas and communities of color. Sustain programs like the Health Resources and Services Administration's National Health Service Corps, and expand tele-health services to help alleviate provider shortages.

- **Expand mental health care and substance use services for justice-involved individuals, and ensure continuation of care after release.** The federal government should ensure access to screening, treatment, and recovery support throughout the justice system continuum. Providing Medicaid coverage to those eligible prior to release can aid states in providing effective care, coordination, and treatment. Additionally, efforts to reform correctional health care to ensure effective care and coordination should be redoubled.

- **Ensure equitable access to health care.** The federal government should ensure that incentives in federally funded mental health care and substance use access programs for underserved populations include provider training programs, consider the unique needs of each community, and consider what qualifies as underserved.

Appendix A: Demographic Data

DEATHS, DEATH RATES, AND ONE-YEAR PERCENT CHANGE IN DEATH RATE BY SELECT DEMOGRAPHICS, 2018

	Combined Alcohol, Drug, and Suicide			Alcohol-Induced			Drug-Induced			Suicide		
	2018 Deaths	Deaths per 100,000	Change 2017 to 2018	2018 Deaths	Deaths per 100,000	Change 2017 to 2018	2018 Deaths	Deaths per 100,000	Change 2017 to 2018	2018 Deaths	Deaths per 100,000	Change 2017 to 2018
Overall	151,964	46.4	0%	37,329	11.4	4%	71,147	21.7	-4%	48,344	14.8	2%
Female	42,126	25.4	-1%	10,509	6.3	6%	23,809	14.3	-5%	10,583	6.4	1%
Male	109,838	68.2	0%	26,820	16.6	3%	47,338	29.4	-4%	37,761	23.4	2%
American Indian	2,904	61.3	7%	1,437	30.3	11%	847	17.9	5%	669	14.1	3%
Asian	2,890	13.4	5%	560	2.6	6%	911	4.2	6%	1,546	7.2	5%
Black	16,322	35.3	4%	3,245	7.0	5%	10,066	21.8	3%	3,254	7.0	5%
Latino	15,644	26.1	4%	4,969	8.3	2%	6,663	11.1	4%	4,313	7.2	8%
White	129,848	51.0	-1%	32,087	12.6	3%	59,323	23.3	-6%	42,875	16.8	2%
0-17	2,097	2.9	4%	n/a	<0.1	–	333	0.5	-1%	1,834	2.5	4%
18-34	35,348	46.4	-5%	1,795	2.4	7%	21,369	28.1	-9%	13,002	17.1	0%
35-54	59,132	71.3	-2%	13,139	15.8	1%	32,011	38.6	-4%	15,866	19.1	0%
55-74	48,138	66.2	4%	20,069	27.6	5%	16,347	22.5	2%	13,514	18.6	6%
75+	7,233	33.0	3%	2,315	10.6	5%	1,073	4.9	4%	4,128	18.8	1%
Northeast	26,911	48.0	-1%	4,996	8.9	5%	16,240	28.9	-5%	6,454	11.5	2%
Midwest	33,088	48.4	-3%	7,725	11.3	5%	15,932	23.3	-9%	10,441	15.3	1%
South	55,572	44.5	0%	12,599	10.1	4%	25,600	20.5	-4%	19,095	15.3	2%
West	36,393	46.7	3%	12,009	15.4	2%	13,375	17.1	4%	12,354	15.8	2%
Metro	128,412	45.7	-1%	30,884	11.0	3%	62,413	22.2	-4%	39,241	14.0	2%
Rural	23,552	51.1	1%	6,445	14.0	7%	8,734	18.9	-4%	9,103	19.7	2%

	Opioid Overdose			Synthetic Opioid Overdose			Cocaine Overdose			Other Psychostimulants Overdose		
	2018 Deaths	Deaths per 100,000	Change 2017 to 2018	2018 Deaths	Deaths per 100,000	Change 2017 to 2018	2018 Deaths	Deaths per 100,000	Change 2017 to 2018	2018 Deaths	Deaths per 100,000	Change 2017 to 2018
Overall	46,802	14.3	-2%	31,335	9.6	10%	14,666	4.5	5%	12,676	3.9	22%
Female	14,724	8.9	-4%	8,807	5.3	10%	4,228	2.5	7%	3,775	2.3	22%
Male	32,078	19.9	-1%	22,528	14.0	9%	10,438	6.5	4%	8,901	5.5	22%
American Indian	425	9.0	-6%	218	4.6	19%	101	2.1	39%	305	6.4	23%
Asian	380	1.8	0%	227	1.1	9%	137	0.6	-3%	316	1.5	33%
Black	6,276	13.6	10%	4,930	10.7	24%	4,075	8.8	11%	939	2.0	35%
Latino	4,370	7.3	9%	2,766	4.6	27%	1,712	2.9	17%	1,418	2.4	24%
White	39,721	15.6	-4%	25,960	10.2	7%	10,353	4.1	2%	11,116	4.4	21%
0-17	190	0.3	8%	101	0.1	–	n/a	<0.1	–	44	0.1	–
18-34	16,332	21.4	-5%	12,136	15.9	6%	4,409	5.8	1%	3,824	5.0	14%
35-54	20,979	25.3	-1%	14,202	17.1	11%	6,992	8.4	4%	6,205	7.5	24%
55-74	9,008	12.4	3%	4,809	6.6	17%	3,200	4.4	15%	2,576	3.5	33%
75+	282	1.3	-3%	80	0.4	35%	n/a	0.1	–	n/a	0.1	–
Northeast	12,467	22.2	6%	10,351	18.4	18%	4,560	8.1	19%	860	1.5	34%
Midwest	11,268	16.5	-10%	8,348	12.2	1%	3,416	5.0	-8%	2,268	3.3	16%
South	16,413	13.2	-4%	10,443	8.4	4%	5,418	4.3	0%	4,488	3.6	27%
West	6,654	8.5	4%	2,193	2.8	49%	1,272	1.6	25%	5,060	6.5	19%
Metro	41,950	14.9	-1%	28,475	10.1	11%	13,694	4.9	5%	10,513	3.7	21%
Rural	4,852	10.5	-10%	2,860	6.2	1%	972	2.1	-3%	2,163	4.7	30%

Source: TFAH and WBT analysis of NCHS data

Appendix B: State Data

DEATHS, DEATH RATES, AND ONE-YEAR CHANGE IN DEATH RATE BY STATE, 2018

	Alcohol, Drug, & Suicide Combined			Alcohol			Drug			Suicide		
	2018 Deaths	Deaths per 100,000	Change 2017 to 2018	2018 Deaths	Deaths per 100,000	Change 2017 to 2018	2018 Deaths	Deaths per 100,000	Change 2017 to 2018	2018 Deaths	Deaths per 100,000	Change 2017 to 2018
Overall	151,964	46.4	0%	37,329	11.4	**4%**	71,147	21.7	-4%	48,344	14.8	**2%**
Alabama	2,076	42.5	-3%	413	8.4	**6%**	895	18.3	-7%	823	16.8	-2%
Alaska	500	67.8	0%	203	27.5	**28%**	119	16.1	-24%	184	25.0	-8%
Arizona	4,261	59.4	**3%**	1,194	16.6	-5%	1,784	24.9	**7%**	1,438	20.1	**6%**
Arkansas	1,301	43.2	-1%	329	10.9	**26%**	475	15.8	-2%	554	18.4	-12%
California	14,940	37.8	**5%**	5,179	13.1	**2%**	5,771	14.6	**9%**	4,491	11.4	**4%**
Colorado	3,232	56.7	**3%**	1,052	18.5	**2%**	1,038	18.2	-3%	1,282	22.5	**7%**
Connecticut	1,784	49.9	0%	327	9.2	-7%	1,105	30.9	**1%**	419	11.7	**4%**
Delaware	608	62.9	**10%**	88	9.1	-16%	409	42.3	19%	113	11.7	0%
DC	391	55.7	-9%	77	11.0	21%	266	37.9	-18%	54	7.7	**14%**
Florida	10,940	51.4	0%	2,861	13.4	**8%**	4,928	23.1	-9%	3,567	16.7	**9%**
Georgia	3,848	36.6	0%	913	8.7	**7%**	1,500	14.3	-9%	1,569	14.9	**7%**
Hawaii	492	34.6	-4%	93	6.5	-2%	237	16.7	**8%**	176	12.4	-22%
Idaho	927	52.8	**8%**	271	15.4	**20%**	274	15.6	**2%**	417	23.8	**4%**
Illinois	5,219	41.0	0%	1,134	8.9	**2%**	2,770	21.7	-1%	1,488	11.7	**1%**
Indiana	3,464	51.8	-6%	793	11.9	**9%**	1,684	25.2	-13%	1,079	16.1	-2%
Iowa	1,128	35.7	-5%	388	12.3	-4%	304	9.6	-15%	490	15.5	**2%**
Kansas	1,229	42.2	**5%**	358	12.3	14%	371	12.7	**3%**	556	19.1	**1%**
Kentucky	2,653	59.4	-7%	483	10.8	-1%	1,407	31.5	-16%	800	17.9	**4%**
Louisiana	2,203	47.3	**3%**	348	7.5	**3%**	1,186	25.5	**5%**	720	15.5	**1%**
Maine	814	60.8	-6%	211	15.8	**9%**	364	27.2	-18%	270	20.2	-2%
Maryland	3,365	55.7	**4%**	410	6.8	**4%**	2,385	39.5	**4%**	650	10.8	**3%**
Massachusetts	3,760	54.5	**4%**	721	10.4	**5%**	2,391	34.6	**2%**	740	10.7	**8%**
Michigan	5,320	53.2	-1%	1,080	10.8	**3%**	2,840	28.4	-7%	1,548	15.5	**6%**
Minnesota	2,171	38.7	0%	762	13.6	**18%**	736	13.1	-11%	739	13.2	-6%
Mississippi	948	31.7	-7%	206	6.9	-4%	334	11.2	-14%	421	14.1	-5%
Missouri	3,373	55.1	**11%**	598	9.8	**7%**	1,660	27.1	**16%**	1,230	20.1	**7%**
Montana	558	52.5	-18%	181	17.0	-28%	138	13.0	**3%**	265	24.9	-16%
Nebraska	685	35.5	**3%**	263	13.6	**7%**	171	8.9	**4%**	271	14.0	-2%
Nevada	1,831	60.3	**4%**	553	18.2	**7%**	712	23.5	**1%**	657	21.7	**4%**
New Hampshire	925	68.2	**3%**	205	15.1	**15%**	472	34.8	-2%	279	20.6	**4%**
New Jersey	4,337	48.7	**8%**	678	7.6	**6%**	2,980	33.5	**9%**	778	8.7	-1%
New Mexico	1,736	82.8	**8%**	710	33.9	**7%**	562	26.8	**9%**	536	25.6	**9%**
New York	7,079	36.2	0%	1,668	8.5	**7%**	3,904	20.0	-4%	1,723	8.8	**3%**
North Carolina	4,772	46.0	-3%	1,109	10.7	**8%**	2,340	22.5	-8%	1,494	14.4	-3%
North Dakota	347	45.7	**4%**	137	18.0	**23%**	76	10.0	**3%**	147	19.3	-5%
Ohio	7,053	60.3	-13%	1,220	10.4	0%	4,153	35.5	-22%	1,838	15.7	**5%**
Oklahoma	2,081	52.8	-1%	608	15.4	0%	739	18.7	-8%	790	20.0	**4%**
Oregon	2,367	56.5	**2%**	932	22.2	**5%**	678	16.2	-1%	844	20.1	**1%**
Pennsylvania	7,258	56.7	-12%	931	7.3	0%	4,535	35.4	-17%	2,014	15.7	-1%
Rhode Island	574	54.3	**4%**	154	14.6	**25%**	328	31.0	**2%**	106	10.0	-18%
South Carolina	2,524	49.6	**2%**	583	11.5	-9%	1,195	23.5	**12%**	811	16.0	-4%
South Dakota	422	47.8	-4%	206	23.3	**12%**	59	6.7	-28%	167	18.9	-14%
Tennessee	3,921	57.9	**3%**	909	13.4	**12%**	1,950	28.8	**2%**	1,161	17.1	-1%
Texas	9,107	31.7	**1%**	2,325	8.1	-1%	3,163	11.0	0%	3,930	13.7	**3%**
Utah	1,574	49.8	**3%**	313	9.9	**19%**	676	21.4	-4%	665	21.0	-2%
Vermont	380	60.7	**13%**	101	16.1	**7%**	161	25.7	**11%**	125	20.0	**11%**
Virginia	3,307	38.8	0%	694	8.1	-1%	1,502	17.6	-4%	1,243	14.6	**5%**
Washington	3,620	48.0	-2%	1,179	15.6	1%	1,319	17.5	-1%	1,252	16.6	-5%
West Virginia	1,533	84.9	-7%	243	13.5	-7%	926	51.3	-9%	395	21.9	**1%**
Wisconsin	2,677	46.0	-5%	786	13.5	0%	1,108	19.1	-8%	888	15.3	-4%
Wyoming	335	58.0	-5%	149	25.8	**11%**	67	11.6	-7%	147	25.4	-6%

Source: TFAH and WBT analysis of NCHS data

DEATHS, DEATH RATES, AND ONE-YEAR CHANGE IN DEATH RATE OVERALL AND BY STATE, 2018

	Opioid Overdose			Synthetic Opioid Overdose			Cocaine Overdose			Other Psychostimulants Overdose		
	2018 Deaths	Deaths per 100,000	Change 2017 to 2018	2018 Deaths	Deaths per 100,000	Change 2017 to 2018	2018 Deaths	Deaths per 100,000	Change 2017 to 2018	2018 Deaths	Deaths per 100,000	Change 2017 to 2018
Overall	46,802	14.3	-2%	31,335	9.6	**10%**	14,666	4.5	**5%**	12,676	3.9	**22%**
Alabama	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Alaska	68	9.2	-33%	18	2.4	-51%	10	1.4	-41%	52	7.1	-21%
Arizona	1,106	15.4	**17%**	522	7.3	**91%**	170	2.4	**22%**	577	8.0	-1%
Arkansas	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
California	2,410	6.1	**10%**	865	2.2	**61%**	608	1.5	**40%**	2,404	6.1	**25%**
Colorado	564	9.9	-4%	134	2.4	**18%**	134	2.4	**37%**	326	5.7	**7%**
Connecticut	948	26.5	0%	767	21.5	**12%**	311	8.7	**10%**	70	2.0	**80%**
Delaware	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DC	191	27.2	-23%	162	23.1	-12%	102	14.5	-17%	n/a	1.6	--
Florida	3,189	15.0	-3%	2,091	9.8	-3%	1,221	5.7	-10%	592	2.8	**38%**
Georgia	866	8.2	-15%	349	3.3	-17%	281	2.7	**8%**	392	3.7	**7%**
Hawaii	59	4.2	**12%**	14	1.0	--	13	0.9	**31%**	148	10.4	**40%**
Idaho	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Illinois	2,169	17.0	-1%	1,568	12.3	**26%**	771	6.1	**4%**	255	2.0	**50%**
Indiana	1,104	16.5	-6%	713	10.7	**9%**	254	3.8	**2%**	381	5.7	**31%**
Iowa	143	4.5	-31%	80	2.5	-13%	13	0.4	-32%	97	3.1	**4%**
Kansas	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Kentucky	989	22.1	-15%	744	16.7	-5%	133	3.0	-28%	362	8.1	**9%**
Louisiana	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Maine	282	21.1	-22%	229	17.1	-18%	92	6.9	-2%	40	3.0	-9%
Maryland	2,087	34.5	**5%**	1,825	30.2	**19%**	708	11.7	**33%**	65	1.1	0%
Massachusetts	1,991	28.8	**3%**	1,806	26.2	**9%**	716	10.4	**4%**	73	1.1	**13%**
Michigan	2,011	20.1	-1%	1,531	15.3	**12%**	768	7.7	**19%**	172	1.7	**18%**
Minnesota	343	6.1	-19%	202	3.6	**9%**	54	1.0	-21%	167	3.0	**3%**
Mississippi	173	5.8	-7%	72	2.4	-11%	33	1.1	-13%	95	3.2	**48%**
Missouri	1,132	18.5	**19%**	868	14.2	**40%**	132	2.2	0%	367	6.0	**48%**
Montana	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Nebraska	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Nevada	372	12.3	-11%	85	2.8	**27%**	47	1.5	-7%	309	10.2	**19%**
New Hampshire	412	30.4	-4%	386	28.5	**2%**	68	5.0	**32%**	32	2.4	**22%**
New Jersey	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
New Mexico	338	16.1	**1%**	105	5.0	**40%**	54	2.6	-6%	212	10.1	**34%**
New York	2,991	15.3	-6%	2,195	11.2	0%	1,276	6.5	-1%	180	0.9	-4%
North Carolina	1,783	17.2	-10%	1,272	12.3	-2%	711	6.8	-1%	258	2.5	**45%**
North Dakota	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Ohio	3,237	27.7	-25%	2,783	23.8	-21%	1,105	9.5	-29%	577	4.9	4%
Oklahoma	308	7.8	-21%	79	2.0	-23%	46	1.2	**2%**	327	8.3	**19%**
Oregon	339	8.1	-3%	97	2.3	**13%**	45	1.1	**14%**	216	5.2	**26%**
Pennsylvania	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Rhode Island	267	25.3	-3%	213	20.1	**6%**	134	12.7	**21%**	n/a	1.4	**25%**
South Carolina	835	16.4	**10%**	510	10.0	**25%**	267	5.3	**13%**	249	4.9	**30%**
South Dakota	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Tennessee	1,307	19.3	**2%**	827	12.2	**39%**	252	3.7	-18%	463	6.8	**44%**
Texas	1,402	4.9	-5%	358	1.2	**1%**	741	2.6	**5%**	802	2.8	**21%**
Utah	437	13.8	-6%	83	2.6	-11%	51	1.6	**6%**	228	7.2	**13%**
Vermont	127	20.3	**11%**	106	16.9	**37%**	51	8.1	**34%**	n/a	n/a	--
Virginia	1,193	14.0	-4%	852	10.0	**2%**	409	4.8	**16%**	135	1.6	**19%**
Washington	737	9.8	-2%	221	2.9	**52%**	128	1.7	**13%**	466	6.2	**17%**
West Virginia	702	38.9	-15%	551	30.5	-10%	141	7.8	-26%	313	17.3	**42%**
Wisconsin	846	14.6	-9%	506	8.7	**8%**	279	4.8	5%	116	2.0	-10%
Wyoming	40	6.9	-15%	10	1.7	-41%	n/a	n/a	--	n/a	3.8	**47%**

Note: Some data unavailable due to insufficent reporting of type of drug involved in overdose or for privacy reasons.

Appendix C: Data Methodology

Unless otherwise referenced, data used in this report are from the National Center for Health Statistics' Multiple Cause of Death Files, 1999–2018, and were accessed via the CDC Wide-ranging ONline Data for Epidemiologic Research (WONDER) Database (http://wonder.cdc.gov/mcd-icd10.html).

For alcohol and drug deaths, TFAH used the CDC's underlying cause-of-death categories, "Drug/Alcohol Induced Causes," and, for deaths by suicide, the "Injury Intent and Mechanisms" category. Because a small number of deaths are categorized as both alcohol- or drug-induced and 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 "underlying causes of death" codes plus T40.0–40.4 and T40.6 "multiple causes of death" codes.
- Synthetic-opioid deaths: X40–44, X60–64, X85, and Y10–14 "underlying causes of death" codes plus T40.4 "multiple causes of death" code.
- Heroin deaths: X40–44, X60–64, X85, and Y10–14 "underlying causes of death" codes plus T40.1 "multiple causes of death" code.
- Common prescription opioid deaths: X40–44, X60–64, X85, and Y10–14 "underlying causes of death" codes plus T40.2 "multiple causes of death" code.
- Cocaine deaths: X40–44, X60–64, X85, and Y10–14 "underlying causes of death" codes plus T40.5 "multiple causes of death" code.
- Other psychostimulant deaths: X40–44, X60–64, X85, and Y10–14 "underlying causes of death" codes plus T43.6 "multiple causes of death" code.

Note: 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.

Endnotes

1 "CDC WONDER." In: *Centers for Disease Control and Prevention,* April 29, 2020. https://wonder.cdc.gov/ (accessed April 30, 2020).

2 Galea S, Merchant RM, Lurie N. "The Mental Health Consequences of COVID-19 and Physical Distancing: The Need for Prevention and Early Intervention." *JAMA Internal Medicine,* April 10, 2020. https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2764404#ivp200009r1 (accessed April 30, 2020).

3 Insinger A. "Methadone Clinic Lines and Packed Waiting Rooms Leave Clients Vulnerable to the Coronavirus." *STAT,* April 9, 2020. https://www.statnews.com/2020/04/09/methadone-clinics-leave-clients-vulnerable-to-coronavirus/ (accessed April 30, 2020).

4 Kirzinger A, Kearney A, Hamel L, and Brodie M. KFF *Health Tracking Poll—Early April 2020: The Impact of Coronavirus on Life in America.* Menlo Park, CA: Kaiser Family Foundation, April 2, 2020. https://www.kff.org/health-reform/report/kff-health-tracking-poll-early-april-2020/ (accessed April 30, 2020).

5 Levine M. "Calls to US Helpline Jump 891%, as White House Is Warned Of Mental Health Crisis." *ABC News,* April 7, 2020. https://abcnews.go.com/Politics/calls-us-helpline-jump-891-white-house-warned/story?id=70010113 (accessed April 30, 2020).

6 Collins K and Yaffe-Bellany D. "About 2 Million Guns Were Sold in the U.S. as Virus Fears Spread." *The New York Times,* April 1, 2020. https://www.nytimes.com/interactive/2020/04/01/business/coronavirus-gun-sales.html (accessed April 30, 2020).

7 "Firearm Access is a Risk Factor for Suicide." In: *T.H. Chan School of Public Health, Harvard University.* https://www.hsph.harvard.edu/means-matter/means-matter/risk/ (accessed April 30, 2020).

8 "Opioids." In: *Substance Abuse and Mental Health Services Administration,* April 23, 2020. https://www.samhsa.gov/atod/opioids (accessed April 30, 2020).

9 "Narcotics (Opioids)." In: *U.S. Drug Enforcement Administration,* September 16, 2019. https://www.dea.gov/taxonomy/term/331 (accessed April 30, 2020).

10 "Opioids." In: *National Institute on Drug Abuse,* April 2020. https://www.drugabuse.gov/drugs-abuse/opioids (accessed April 30, 2020).

11 U.S. Drug Enforcement Administration. "DEA Issues Carfentanil Warning to Police and Public." Press Release, September 22, 2016. https://www.dea.gov/divisions/hq/2016/hq092216.shtml (accessed April 30, 2020).

12 Sanburn J. "Heroin Is Being Laced With a Terrifying New Substance: What to Know About Carfentanil." *Time,* September 12, 2016. http://time.com/4485792/heroin-carfentanil-drugs-ohio/ (accessed April 30, 2020).

13 Favrod-Coune T and Broers B. "The Health Effect of Psychostimulants: A Literature Review." *Pharmaceuticals* (Basel), 3(7): 2333-2361, July 2010. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4036656/ (accessed April 30, 2020).

14 "Opioid Overdose: Other Drugs." In: *Centers for Disease Control and Prevention.* https://www.cdc.gov/drugoverdose/data/otherdrugs.html (accessed April 30, 2020).

15 Email correspondence with Dr. Jay Butler, previously chief medical officer for the Alaska Department of Health and Social Services, January 11, 2019.

16 Kaufman JA, Salas-Hernández LK, Komro KA, et al. "Effects of Increased Minimum Wages by Unemployment Rate on Suicide in the USA." *Journal of Epidemiology and Community Health,* 74: 219-224, 2020. https://jech.bmj.com/content/74/3/219 (accessed April 30, 2020).

17 Thompson MP, Kingree JB, and Lamis D. "Associations of Adverse Childhood Experiences and Suicidal Behaviors in Adulthood in a U.S. Nationally Representative Sample." *Child: Care, Health and Development,* 45(1): 121-128, January 2019. https://doi.org/10.1111/cch.12617 (accessed April 30, 2020).

18 Jones CM, Compton WM, and Mustaquim D. "Patterns and Characteristics of Methamphetamine Use Among Adults—United States, 2015-2018." *Morbidity and Mortality Weekly Report,* 69(12): 317-323, March 27, 2020. https://www.cdc.gov/mmwr/volumes/69/wr/mm6912a1.htm (accessed April 30, 2020).

19 Johnson KE, Varghese R, Feng B, et al. "The Effects of the Comprehensive Addiction and Recovery Act of 2016 on Nurse Practitioner and Physician Assistant Buprenorphine Prescribing in Medicaid." *Health Affairs,* November 6, 2019. https://www.healthaffairs.org/do/10.1377/hblog20191105.242580/full/ (accessed April 30, 2020).

20 A pediatric complex chronic condition is defined as: "any medical condition that can be reasonably expected to last at least 12 months (unless death intervenes) and to involve either several different organ systems or 1 organ system severely enough to require specialty pediatric care and probably some period of hospitalization in a tertiary care center." See: Feudtner C, Feinstein JA, Zhong W, et al. "Pediatric Complex Chronic Conditions Classification System Version 2: Updated for ICD-10 and Complex Medical Technology Dependence and Transplantation." *BMC Pediatrics,* 14: 199, August 8, 2014. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4134331/ (accessed April 30, 2020).

21 Jarlenski MP, Krans EE, Kim JY, et al. "Five-Year Outcomes Among Medicaid-Enrolled Children With In Utero Opioid Exposure." *Health Affairs,* 39(2): 247-255, February 2020. https://www.healthaffairs.org/doi/abs/10.1377/hlthaff.2019.00740 (accessed April 30, 2020).

22 Kelly JF, Humphreys K, and Ferri M. "Alcoholics Anonymous and Other 12-Step Programs for Alcohol Use Disorder." *Cochrane Database of Systematic Reviews 2020,* 3(CD012880), March 11, 2020. https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD012880.pub2/full (accessed April 30, 2020).

23 S.524: Comprehensive Addiction and Recovery Act of 2016. 114th Congress, 2015-2016, https://www.congress.gov/bill/114th-congress/senate-bill/524 (accessed April 30, 2020).

24 H.R.34: 21st Century Cures Act. 114th Congress, 2015-2016. https://www.congress.gov/bill/114th-congress/house-bill/34 (accessed April 30, 2020).

25 H.R.6: SUPPORT for Patients and Communities Act. 115th Congress, 2017-2018. https://www.congress.gov/bill/115th-congress/house-bill/6 (accessed April 30, 2020).

26 Hernandez-Delgado H. "CARA, the 21st Century Cures Act: More Tools to Address the Opioid Epidemic." *National Health Law Program.* https://www.napsw.org/assets/docs/Advocacy/caracuresact%20 2.22.17%201.pdf (accessed April 30, 2020).

27 Ibid.

28 U.S. Senator Rob Portman. "$658 Million for CARA Grants in Final FY 2020 Funding Bill to be Signed Into Law." Press Release, December 19, 2019. https://www.portman.senate.gov/newsroom/press-releases/658-million-cara-grants-final-fy-2020-funding-bill-be-signed-law (accessed April 30, 2020).

29 "State Targeted Response to the Opioid Crisis Grants." In: *Substance Abuse and Mental Health Services Administration,* April 29, 2020. https://www.samhsa.gov/grants/grant-announcements/ti-17-014 (accessed April 30, 2020).

30 Davis CS. "The SUPPORT for Patients and Communities Act—What Will It Mean for the Opioid-Overdose Crisis?" *New England Journal of Medicine,* 380: 3-5, January 3, 2019. https://www.nejm.org/doi/full/10.1056/NEJMp1813961 (accessed April 30, 2020).

31 *Tracking Federal Funding to Combat the Opioid Crisis.* Washington, D.C.: Bipartisan Policy Center, March 2019. https://bipartisanpolicy.org/wp-content/uploads/2019/03/Tracking-Federal-Funding-to-Combat-the-Opioid-Crisis.pdf (accessed April 30, 2020).

32 "5-Point Strategy To Combat the Opioid Crisis." In: *U.S. Department of Health and Human Services,* August 7, 2018. https://www.hhs.gov/opioids/about-the-epidemic/hhs-response/index.html (accessed April 30, 2020).

33 *Fiscal Year 2021, Centers for Disease Control and Prevention, Justification of Estimates for Appropriation Committees.* Washington, D.C.: U.S. Department of Health and Human Services, 2020. https://www.cdc.gov/budget/documents/fy2021/FY-2021-CDC-congressional-justification.pdf (accessed April 30, 2020).

34 *Fiscal Year 2021, Substance Abuse and Mental Health Services Administration, Justification of Estimates for Appropriation Committees.* Washington, D.C.: U.S. Department of Health and Human Services, 2020. https://www.samhsa.gov/sites/default/files/about_us/budget/fy-2021-samhsa-cj.pdf (accessed April 30, 2020).

35 *Fiscal Year 2021, Health Resources and Services Administration, Justification of Estimates for Appropriation Committees.* Washington, D.C.: U.S. Department of Health and Human Services, 2020. https://www.hrsa.gov/sites/default/files/hrsa/about/budget/budget-justification-fy2021.pdf (accessed April 30, 2020).

36 Watson Coleman B. Ring the Alarm: *The Crisis of Black Youth Suicide in America.* Washington, D.C.: Congressional Black Caucus Emergency TaskForce on Black Youth Suicide and Mental Health, December 2019. https://watsoncoleman.house.gov/uploadedfiles/full_taskforce_report.pdf (accessed April 30, 2020).

37 Chubinski J and Mydenberg M. "Philanthropic Strategy in the Face of an Opioid Epidemic." *Health Affairs,* 39(1), January 2020. https://doi.org/10.1377/hlthaff.2019.00705 (accessed April 30, 2020).

38 Barber C, Berrigan J, Henn MS, et al. "Linking Public Safety and Public Health Data for Firearm Suicide Prevention in Utah." *Health Affairs,* 38(10): 1695-1701, October 7, 2019. https://www.healthaffairs.org/doi/abs/10.1377/hlthaff.2019.00618 (accessed April 30, 2020).

39 Elder RW, Lawrence B, Ferguson A, et al. "The Effectiveness of Tax Policy Interventions for Reducing Excessive Alcohol Consumption and Related Harms." *American Journal of Preventive Medicine,* 38(2): 217-229, 2010. https://www.ncbi.nlm.nih.gov/pubmed/20117579 (accessed April 30, 2020).

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