

RESEARCH REPORT

Comprehensive Opioid Abuse Program Assessment: Examining the Scope and Impact of America's Opioid Crisis

Interim Report to Congress

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Introduction

It would be difficult to overstate the devastating magnitude of America's opioid epidemic. Unlike some public health crises, opioid addiction spares no group, striking broadly and lethally and without regard to income, age, or race. Each day, as many as 115 people in the United States lose their lives in opioid-related fatalities, a tide of death that swept away 70,237 victims in 2017 alone (CDC Injury Center 2018b; Hedegaard, Miniño, and Warner 2018).¹ That's five times the number of fatalities from opioids recorded in 1999, and, in most communities, there is no sign of a slowdown. In 2016, opioids were involved in 67 percent of all drug overdose deaths, up from 63 percent the previous year (Seth et al. 2018). Experts say such numbers likely underestimate the true burden of opioids, given the substantial proportion of overdose deaths in which the type of drug is unknown.²

Each year, more people die from opioids than car accidents. Drug overdoses, primarily driven by opioids, now are the leading cause of death among people younger than 50, surpassing heart disease and cancer.³ Perhaps most alarming is the sudden spike in fatalities associated with fentanyl, a highly potent and increasingly popular synthetic opioid. Deaths from fentanyl increased 540 percent over a three-year period ending in 2016, prompting national health officials to label it a key driver of the opioid epidemic's newest wave (Seth et al. 2018). Recent analyses of death records also indicate an increase in dual-drug overdoses, with one in five deaths involving both heroin and cocaine.⁴

But death is merely the most dire consequence of opioid addiction, also known as opioid use disorder (OUD). In 2016, nearly 1 in 30 Americans—more than 11 million people—reported misusing prescription opioids in the previous year and more than 620,000 reported heroin use (SAMHSA 2017a). The same year, an estimated 2 million people were identified as suffering from OUD, broadly defined as the compulsive seeking and use of opioids despite harmful consequences.⁵ Despite the widespread need for intervention, more than 1 million people who could benefit from opioid agonist treatment—the use of medications such as methadone to reduce cravings and the effects of withdrawal—lack access to it (C. Jones et al. 2015).

The harm caused by opioid addiction reaches far beyond those afflicted with OUD, affecting users' families, coworkers, and employers, as well as communities and society at large. Beyond the personal devastation opioids cause, OUD triggers substantial additional costs related to treatment, lost work productivity, criminal activity, and social welfare expenditures. Florence and coauthors (2016) estimated such costs at \$78.5 billion annually. Although some places, like Dayton, Ohio, have begun to experience a reduction in opioid overdoses,⁶ the evolving nature of the crisis, the diversity of

communities it affects, and its heavy toll in human and economic loss pose daunting challenges for practitioners and policymakers alike.

The roots of the opioid epidemic stretch wide and deep, but most experts point to the high rate of opioid prescribing as a key cause. The volume of opioids prescribed began to grow in the 1990s with the advent of oxycodone, a new opioid medication marketed for broad pain management. Until the 1990s, opioids typically had been prescribed following surgery or injury, or for pain related to diseases such as cancer. In recent years, the acceptance and use of prescription opioids for the treatment of chronic pain not related to cancer (such as back pain or osteoarthritis) has increased dramatically, despite serious risks and a lack of evidence about their long-term effectiveness.⁷ This expansive application of opioids for general pain management coincided with a steady increase in the number of overdoses and deaths from opioids.

The rate of opioid prescribing peaked in 2010 in the US and has been declining since 2012. Nonetheless, the rate of opioids prescribed per person remains roughly three times higher than it was in 1999 (Guy et al. 2017), and the risk of addiction remains high.⁸ According to a 2017 Brookings Institution study, “Enough opioids are prescribed in the US each year to keep every man, woman, and child in the country medicated around the clock for one month.”⁹

In addition to excessive medical prescribing, the opioid epidemic is fueled by the illegal transport of heroin into the US. Originating in Mexico, heroin shipments routinely cross the US border via Mexican transnational criminal organizations (DEA 2018b).¹⁰ By contrast, most fentanyl entering the US illegally is produced in China and shipped through either Mexico or, less frequently, Canada (O’Connor 2017). As restrictions on opioids have proliferated, criminal enterprises have become increasingly innovative in their drug distribution. Today, many distribute a portion of their illegal product online and through the mail, making it harder to detect and trace.¹¹ Illicit online pharmacies use social media to market and sell opioids and other controlled substances, including fentanyl (Katsuki, Mackey, and Cuomo 2015; Mackey 2018).

Although opioid addiction itself represents a significant and disturbing problem, it also is a common symptom of many underlying factors, from lack of employment to low education levels and the limited availability of health care. Studies show that these and other dynamics contribute to conditions correlated with high levels of OUD.¹² Many factors have been shown to increase someone’s vulnerability to addiction. These include poverty and economic instability, physical, mental, and behavioral health ailments, and trauma, exposure to violence, and victimization. Understanding and addressing the opioid crisis requires recognizing the confluence of these factors, how they affect

different groups in different ways, and their implications for crafting effective public health and criminal justice responses.

Effective and scalable solutions to the opioid epidemic require policies and interventions that address the unique needs of communities and span multiple domains, including law enforcement/first responders, health care providers, human services agencies, institutional and community corrections, and the courts. Coordination and collaboration among stakeholders at the federal, state, and local levels also are vital to produce lasting progress. Despite these realities, the fields most engaged with the opioid epidemic have remained largely siloed, missing countless opportunities to capitalize on data integration and cross-agency collaboration.

Criminal justice agencies, professionals, and populations figure prominently in efforts to combat and prevent OUD and its devastating impacts on individuals, families, and communities. From first responders to caseworkers in correctional settings, drug court judges, and narcotics agents, the nation's criminal justice practitioners are on the front lines of the opioid crisis. To support their work, the Bureau of Justice Assistance (BJA), the chief grantmaking entity to state and local governments within the US Department of Justice's Office of Justice Programs, introduced the Comprehensive Opioid Abuse Program (COAP) in 2017. COAP is a coordinated response to the opioid crisis, providing leadership, evidence, grant resources, peer learning, and training and technical assistance to states and local jurisdictions. COAP was designed to seed innovation, forge partnerships, leverage local research expertise, enhance empirical understandings of the problem, and help grantees make meaningful progress reducing opioid overdoses and increasing connections to treatment. To date, COAP has received a total appropriation of \$315 million, with awards made in fiscal years 2017 and 2018 to 216 grantees across state, local, and tribal entities in 47 states and Guam. This investment also includes COAP training and technical assistance awards.

COAP includes a congressional mandate to develop a report summarizing the nature, scope, and impact of opioid use and its illegal distribution in the context of the criminal justice system, justice system professionals, and justice-involved populations. To that end, this report discusses the epidemic's impact on health, well-being, communities, and the criminal justice system; describes criminal justice (and justice-related) responses to the crisis; and documents DOJ's investment in COAP and other efforts focused on the opioid crisis. This report aims to provide policymakers with a concise overview of the causes, contours, and context of America's opioid epidemic, with a focus on the criminal justice system, its practitioners, and its populations. Each chapter ends with key takeaways that underscore the report's conclusions.

Nature and Scope of the Opioid Epidemic

The reach of America's opioid epidemic has been astonishing and pernicious, leaving no community or demographic untouched. To understand the nature, causes, and impacts of the crisis, it is essential to first define opioids and examine the history of their illicit and lawful uses.

Defining Opioids

“Opioid” typically refers to three categories of pain-relieving drugs: (1) natural opioids (also called opiates) such as morphine and codeine that are derived from the opium poppy, (2) semisynthetic opioids, such as the prescription drugs hydrocodone and oxycodone, and the illicit drug heroin, and (3) synthetic opioids such as methadone, tramadol, and fentanyl (Cicero, Ellis, and Kasper 2017). Natural opiates, which have been cultivated for medicinal and recreational purposes for several millennia,¹³ are alkaloids derived from the opium poppy, while opioids are entirely or partially synthetic. Purely synthetic opioids are strictly illicit, highly potent, and constantly evolving, with new variations continually entering the black market (Salomone et al. 2018; Schueler 2017).

Opioids can also be defined by their physiological effects. An opioid is any agent that binds to and elicits a response from opioid receptors—protein molecules located on the membrane of some nerve cells—that are found in the nervous system and stomach. The body's response to opioids includes slower breathing, reduced pain sensation, mood elevation, and euphoria.¹⁴ Although all opioids and opiates are highly addictive, they vary in safety, strength, and abuse potential (NIOSH 2018). Today, most people use “opioids” to describe both synthetic and natural opioids.

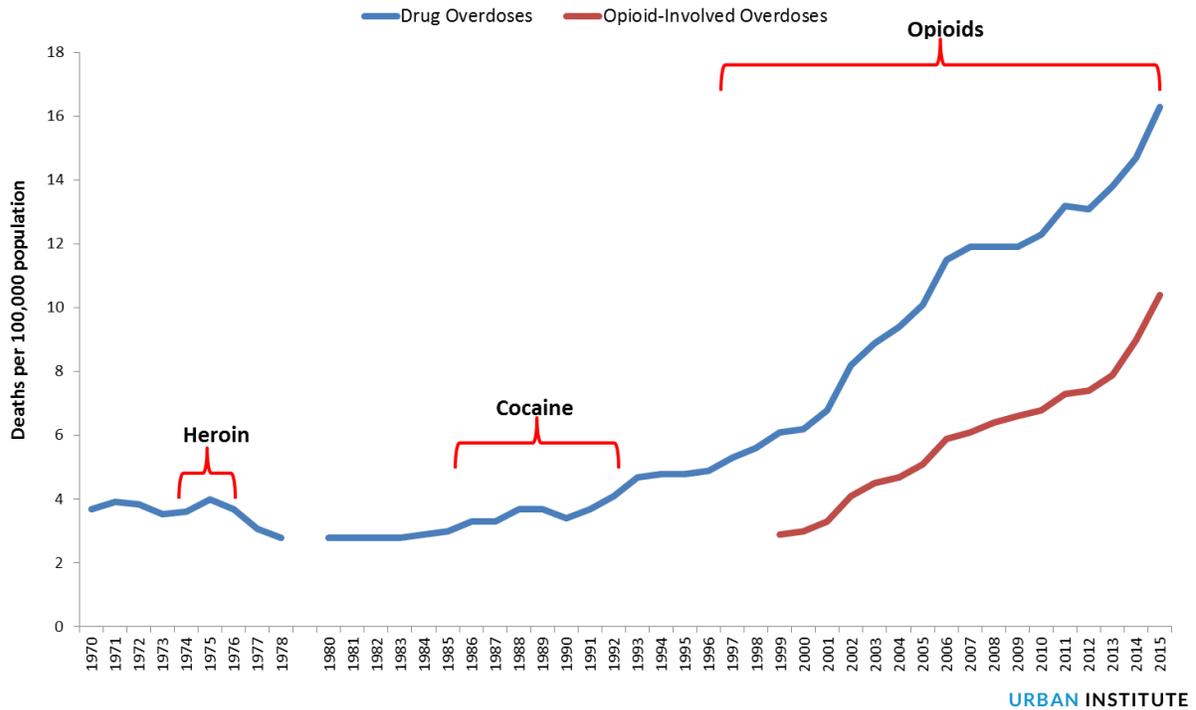
Tracking the Evolution of Opioid Misuse

The US has experienced several opioid epidemics. The first occurred in the 1800s, when opium and morphine were widely distributed by pharmaceutical companies and physicians to alleviate pain. These products gradually proved addictive and dangerous, leading to regulation that resulted in the creation and popularization of illicit heroin and cocaine.¹⁵ In the early 1900s, unregulated morphine, heroin, cocaine, and opium spurred an addiction epidemic, which largely affected upper-middle-class and

middle-class white women (Courtwright 2001; M. R. Jones et al. 2018). Against that backdrop, Congress adopted the Harrison Narcotics Tax Act in 1914 to regulate the importation, manufacture, and distribution of opium and cocaine (Clarke, Skoufalos, and Scranton 2016). Although regulation was necessary, it also created an illicit market for heroin and cocaine.

The 1960s and 1970s brought a new era of opioid misuse as soldiers returned home from the Vietnam War. Unlike previous epidemics driven by physicians and drug manufacturers, the heroin epidemic hit hardest in poor urban communities. The same was true of the crack epidemic, which occurred when regular cocaine prices surged in the 1980s and which endured into the early 1990s, and the meth crisis, which hit the country in the early 2000s.¹⁶

FIGURE 1
Drug Overdose Deaths, 1970–2015



Source: US Department of Health and Human Services, “Combating the Opioid Crisis,” updated PowerPoint presentation shared with the authors in May 2019.

Today’s opioid crisis differs from past drug epidemics in several important ways. First, the misuse of opioids was initially fueled by pharmaceutical opioid prescribing. Second, today’s epidemic involves several kinds of opioids: prescription opiates, illicit opioids (street heroin), and synthetic opioids such as fentanyl, carfentanil, and other powerful and ever-evolving analogs.¹⁷ Moreover, the current opioid

epidemic has unfolded in three distinct waves, each of which expanded the drugs' fatal reach to a wider swath of the American public. Those three waves were (1) the overprescribing of pain medications and the introduction of the highly addictive prescription drug OxyContin, (2) the trafficking of inexpensive black tar heroin from Mexico to the US, and (3) the introduction of synthetic opioids, trafficked primarily from China. Combined, those three waves have created a drug epidemic far more fatal than those of the past¹⁸ and, as illustrated in figure 1, they have contributed to a continued upward trajectory of opioid-related deaths. Since 1999, nearly 400,000 people have died from overdoses involving opioids (Scholl et al. 2019).

Oxycontin and Overprescribing

By most accounts, the onset of America's opioid crisis was marked by the Federal Drug Administration's (FDA's) 1995 approval of OxyContin, an opioid-based, timed-release pain reliever developed and produced by pharmaceutical giant Purdue Pharma. With the FDA's approval, Purdue began promoting OxyContin to general practitioners as an addiction-free remedy for moderate pain. The company sought to validate that claim with two studies, but the research focused on acute rather than chronic pain, and it did not investigate the risks of prolonged opioid use (Van Zee 2009); these studies also failed to recognize the context in which the drugs were administered. Nonetheless, Purdue sales representatives claimed that the risk of becoming addicted to the drug was less than 1 percent, a pitch that enhanced its appeal among clinicians.¹⁹

By 2000, OxyContin sales revenue had doubled, even though the drug was ultimately found to be no more effective at pain relief than other, less addictive painkillers (Van Zee 2009). Purdue's enthusiastic marketing was a key driver. The company spent more than \$200 million promoting OxyContin in 2001 alone, targeting physicians who were the heaviest prescribers of opioids.²⁰ That same year, the Joint Commission on Accreditation of Healthcare Organizations, now known as the Joint Commission, called for pain to be monitored as a "fifth vital sign" to ensure adequate control (Brennan 2015; Hansen and Netherland 2016). This development further legitimized the prescribing of OxyContin as a key pain management tool.

Misinformation about OxyContin's addiction potential, combined with Purdue's aggressive marketing, caused OxyContin prescriptions for non-cancer-related pain to increase tenfold from 1997 to 2002 (Van Zee 2009). By 2003, nearly half of all OxyContin prescribers were primary care physicians (GAO 2003), and by 2004, OxyContin had become a leading drug of abuse (Van Zee 2009). Three years later, Purdue pleaded guilty to criminal charges that it misled regulators, doctors, and patients about the

drug's addictive qualities and potential for abuse, leading to \$600 million in fines and civil litigation payments.²¹

Heroin: An Inexpensive Substitute for Prescription Opioids

As concerns about the abuse and dangers of OxyContin and other prescription opioids began to rise, policymakers and law enforcement stepped up efforts to curb their proliferation and availability. Most states, for example, established prescription drug monitoring programs (PDMPs) to generate surveillance data and combat abusive practices. One goal was to reduce the illegal diversion of opioids through the theft or illicit sale of prescriptions, prescription forgery or counterfeiting, and nonmedical prescribing (Clark et al. 2012; SAMHSA 2017b). Combined with efforts to crack down on doctor shopping and other illegitimate avenues of opioid access, the PDMPs resulted in a reduction in the supply and an increase in the cost of prescription opioids.

That outcome was certainly a positive one for public health. But reducing the opioid supply without addressing the underlying drivers of demand—namely, pain management and drug addiction—created fertile ground for the introduction of a cheaper and more easily accessible alternative to prescription opioids: black tar heroin (Fink et al. 2018; Simoni-Wastila 2011). Transported through Mexico, potent and deadly black tar heroin quickly found a US market and drove what is considered the second wave of the modern opioid epidemic (Ciccarone 2009; DEA 2018b).²²

Much of the heroin supply was produced by Mexican drug cartels. Cultivating opium poppies where they lived, the organizations produced a high-quality, less expensive version of the drug that quickly became prevalent in the western US, particularly in Arizona, California, Colorado, Oregon, Texas, and Washington (Ciccarone and Bourgois 2003). These cartels typically sold their product in small batches to evade severe criminal penalties (Díaz-Briseño 2010); in 2010, they began expanding to new markets that were not already dominated by other organized drug trafficking rings. As word of this cheaper source quickly spread, many prescription opioid users switched to heroin, ultimately increasing the number of overdoses and fatalities (deShazo et al. 2018; Díaz-Briseño 2010).

Synthetic Opioids and Counterfeit Pills

The third wave of the current opioid epidemic involved the introduction of synthetic opioids, such as illicit fentanyl (hereafter referred to as fentanyl),²³ the most common member of a growing family of chemical opioid analogs (Schueler 2017). Synthetic opioids are far cheaper and easier to produce than

heroin and considerably more potent: inhaling just two milligrams of fentanyl can be lethal (DEA 2016; O'Connor 2017). Fentanyl recently became a strong driver of the opioid epidemic east of the Mississippi River, first in the Midwest and Appalachia, and later in the Northeast (Ciccarone 2018).

Fentanyl is produced in clandestine labs, making its sources difficult to trace.²⁴ Sourced from several different distributors, the diffuse nature of its supply network has made the current epidemic more difficult to contain and therefore much deadlier (O'Connor 2017). Adding to the dangers associated with fentanyl, suppliers often use the drug to cut heroin. As a result, users may underestimate the potency of what they believe is street heroin (O'Donnell et al. 2017), often with fatal consequences.

Even before synthetic opioids were introduced, the number of heroin overdoses had surpassed rates of previous epidemics. The introduction of fentanyl exacerbated this trend, and, as suppliers increasingly added it to heroin, the death toll quickly reached even greater heights. Beginning in 2013, public safety and health officials began observing an uptick in fentanyl-related fatalities; now, fentanyl and other synthetic opioids outrank heroin as the leading cause of opioid overdoses.²⁵

The lethal impacts of synthetic opioids have been exacerbated by the production of counterfeit pills laced with fentanyl and fashioned in customized presses to resemble legally prescribed opioids.²⁶ Largely produced in China, these counterfeit pills are identical to less deadly prescription opioids, and the fentanyl additive can only be identified by lab analyses or tests. The proliferation of counterfeit pills has likely contributed to the massive increase in opioid overdoses and deaths since 2013 (DEA 2016).

Another unique feature of the current opioid epidemic is a co-occurrence of opioids and illicit stimulants now prevalent in toxicology reports issued by medical examiners and coroner offices (Jones, Einstein, and Compton 2018). In 2016, approximately 80 percent of overdose deaths involving a synthetic opioid included a mixture of two or more drugs (alcohol is considered a drug in those figures) (Jones, Einstein, and Compton 2018). Some attribute the rise of opioid-stimulant polydrug use to the recent surge of cocaine and fentanyl mixtures in overall drug supplies. From 2015 to 2016, the National Forensic Laboratory Information System found a 262 percent increase in fentanyl reports containing cocaine. These mixtures have led to a growth in both new users and fatal overdoses (DEA 2018b). Fentanyl-laced cocaine has become a growing threat in cities like Philadelphia, which has documented significant increases in multidrug overdoses (DEA 2018a) and where the drug is particularly prominent in black urban communities (DEA 2018b).²⁷ In addition, some attribute the link between cocaine and opioids to the rising popularity of "speedballing," or intentionally ingesting opioids and cocaine to enhance the effects of both drugs while minimizing the side effects of each.²⁸

Factors Driving Opioid Dependence

The single biggest factor driving demand for opioids is chemical dependency. People who are susceptible to opioid dependence include those seeking relief from chronic pain; people with existing substance use disorders, mental health challenges, or both; and those experiencing economic stress and uncertainty.

Pain Management

Opioids are routinely used to treat pain resulting from surgeries or injury. When OxyContin was introduced, it was prescribed for chronic, non-cancer-related pain at high doses and for extended periods; a clinical approach driven by the manufacturer's claim that it was not addictive (Van Zee 2009).²⁹ At the time, patients had little trouble obtaining multiple refills of OxyContin, creating conditions conducive to addiction and overdose (Krashin, Murinova, and Sullivan 2016). Despite recent restrictions on the volume of pills that can be prescribed to individuals, countless adults remain susceptible to addiction through legally prescribed opioid narcotics. Employees in jobs with high rates of workplace injuries, no paid sick leave, and poor job security are particularly vulnerable, and they suffer higher rates of opioid overdoses (DPH 2018). Particularly when pain is chronic, opioid users often find they need to take the drug more frequently and at increasing dosages to obtain relief (Chou et al. 2014, 2015). Until new, effective, and nonaddictive medications become widely available, people suffering from pain will continue to seek prescription opioids and their less expensive, more accessible alternatives, such as heroin and fentanyl (CDC 2015; Cicero, Ellis, and Kasper 2017).

Untreated Substance Use and Mental Health Issues

Preexisting substance use disorders can make people more susceptible to opioid use and misuse (Sullivan et al. 2006). When these disorders go untreated, exposure to opioids can quickly lead to dependency, driving demand for the narcotic (Amari et al. 2011). Untreated mental illnesses, such as depression and anxiety, can also make people more likely to misuse substances such as alcohol and narcotics (Scherrer et al. 2016).

Economic Hardship

Although opioid addiction cuts across social class and income lines, economic distress can be a strong predictor of the prevalence of OUD, particularly in rural areas (Monnat 2018). Generally, areas with

high poverty and unemployment rates tend to have higher rates of opioid prescriptions and drug overdose deaths (Ghertner and Groves 2018). One study employing predictive analysis found that as county-level unemployment rates rise, so do opioid deaths and opioid-related emergency room visits (Hollingsworth, Ruhm, and Simon 2017). The links between opioid addiction and socioeconomic status are still being studied, but there is also evidence that Medicaid recipients and low-income populations are at high risk of addiction and prescription drug overdoses (CDC 2012).

Substance use is more prevalent among low-income families, particularly families living below the poverty level, and factors such as low educational attainment contribute to substance abuse in rural, low-income areas.³⁰ Inequality in particular has factored into the opioid epidemic, with high rates of opioid deaths centered around neighborhoods with high levels of income inequality (King et al. 2014). Zhou, Yu, and Losby (2018) found that people living in nonmetropolitan communities with lower median household incomes and higher unemployment rates are at a greater risk of misusing prescription drugs.

Stress is a known risk factor for substance use disorder (Sinha 2008), and factors that induce stress, such as lack of economic opportunity and overall inequality, are considered root causes of opioid misuse (Dasgupta, Beletsky, and Ciccarone 2018). Financial strain has been associated with excessive drinking, smoking, and potential substance use among older adults (Shaw, Agahi, and Krause 2011); neighborhood disadvantage is also associated with substance use disorders (Karriker-Jaffe et al. 2012). Some have reasoned that these associations between poverty and substance abuse involve a lack of access to quality health care and addiction treatment, and decades of research points to the adverse impact of certain environmental stresses, such as poor economic conditions, on substance abuse.³¹

Key Takeaways

- “Opioid” describes drugs naturally derived from the opium poppy as well as partially or fully synthetic substances.
- Chemical dependency drives opioid demand. Chronic pain, untreated mental health needs, and economic hardship are among the most common risk factors for opioid dependency.
- Unlike past US drug epidemics, the current opioid crisis was fueled by negligent prescribing practices (i.e., overprescribing of opioids).
- Most experts date the onset of the opioid crisis to the FDA’s 1995 approval of OxyContin, a powerful pain reliever manufactured by Purdue.

- Purdue's claims that OxyContin was not addictive drove a nearly tenfold increase in the drug's use for non-cancer-related pain between 1997 and 2002.
- By 2004, OxyContin was a leading drug of abuse. Purdue executives later pleaded guilty to charges that they misled regulators, doctors, and patients about the drug's risk of causing addiction.
- To restrict the proliferation and availability of opioids, states established prescription monitoring programs. Combined with crackdowns on doctor shopping and other efforts, such programs reduced opioid supplies.
- Restricting access to opioids without addressing demand factors such as addiction and pain management opened the door for traffickers to smuggle inexpensive, and highly potent, black tar heroin from Mexico into the US, triggering an increase in overdose fatalities.
- The most recent and deadliest phase of the epidemic involves synthetic opioids (such as fentanyl) that are extremely potent and far cheaper and easier to produce than heroin.
- Fentanyl and other synthetic opioids have eclipsed heroin as the leading cause of opioid overdoses.

The Far-Reaching Impacts of the Opioid Epidemic

As opioid misuse has gradually plagued virtually every corner of the US, the impacts of the epidemic have multiplied, ravaging families and communities. This chapter chronicles this toll, from the lasting damage inflicted on children to the challenges the crisis presents for public safety and the criminal justice system.

National, Regional, and Demographic Trends in Opioid-Related Fatalities

The most disturbing impact of the opioid crisis is the loss of human lives. Rates of drug overdose deaths have been rising for two decades and they continue to increase (Hedegaard, Miniño, and Warner 2018; Scholl et al. 2019). According to the Centers for Disease Control and Prevention (CDC), deaths resulting from all forms of opioids increased six-fold between 1999 and 2018.³² The age-adjusted rate of opioid deaths also is staggering. In 2017, the rate stood at 22 per 100,000 people, up substantially from 20 per 100,000 just one year earlier (Hedegaard, Miniño, and Warner 2018). Although the number of overdose deaths involving all manner of substances continues to grow in the US, opioids are consistently involved in two of three such deaths (Scholl et al. 2019). One factor fueling death rates is the tendency of opioid users to ingest other drugs. Three of four people with OUDs are polysubstance users, and nearly nine in ten women who use opioids for nonmedical purposes use additional substances, particularly benzodiazepines and alcohol (Lorvick et al. 2018). That combination can be lethal: overdose deaths are highest when benzodiazepines and opioids intersect (Zoorob 2018).

Regional Trends

Between 2013 and 2017, 35 states experienced a statistically significant increase in overdose fatalities (Scholl et al. 2019). Though no state is immune to opioid overdoses and fatalities, some regions have been disproportionately affected by the epidemic. West Virginia has the highest rate of fatal drug overdose deaths, followed by Ohio, Pennsylvania, Washington, DC, and Kentucky.³³ But these regional trends are shifting: although prescription misuse has been centered around rural areas in the east,

western states like Oregon and Colorado had some of the highest rates of prescription misuse in 2017.³⁴

Some states have begun to experience declines in overdose rates which may be attributed to a recent and meaningful reduction in self-reported new users of heroin, from 170,000 in 2016 to 81,000 in 2017, as well as a precipitous drop in self-reported users of prescription opioids, from 12.7 million in 2016 to 6.3 million in 2017 (McCance-Katz 2017). This aligns with research finding that the average number of opioids filled per person decreased roughly 13 percent between 2016 and 2017, a finding that Schieber and coauthors (2019) attribute to the effectiveness of PDMPs and laws governing pain clinics.

However, these overall declines mask the increase in heroin-related death rates that 14 states experienced from 2015 to 2016; Washington DC, West Virginia, and Ohio saw the highest rates of such deaths (Scholl et al. 2019). During that period, eight states had significant increases in death rates involving prescription opioids; West Virginia, Maryland, Maine, and Utah experienced the largest increases (Scholl et al. 2019).

Demographic Trends

Just as opioid use varies by state and region, it differs in intensity by demographic group. In rural areas, OUD diagnoses are concentrated primarily among white people of middle age, while diagnoses in urban areas are distributed more equally across the young and middle-aged (FAIR Health 2017). As for opioid-related deaths, rates are highest among adults ages 24 to 35 (Gomes et al. 2018), and men are roughly twice as likely as women to die from opioid overdoses, though that gap is closing.³⁵ The new generation of synthetic opioids has inflicted heavy damage in urban black communities, which have experienced an increase in overdose fatalities.³⁶

Physical Health Impacts

Opioid misuse and dependency can have a broad array of adverse effects on individual health and well-being. These include an increased likelihood of liver damage, malnutrition, infectious disease, and adverse mental health outcomes such as depression, hindrance of standard mental functioning, and heightened risk of self-harm and death by suicide (Van Zee 2009). These ailments are exacerbated by abnormal and unhealthy eating habits and poor nutrition caused by opioid dependence, which in turn can cause sleep interruption, hormonal imbalance, weight gain, dental issues from altered food intake,

glycemic dysregulation, and, in rare instances, organ failure (Nabipour, Said, and Habil 2014). Some studies have shown a link between poor dietary habits and OUD, pointing to deficiencies of such key elements as proteins, minerals, and fats, which disrupt digestion of carbohydrates. These dietary imbalances can also lead to dental issues (Titsas and Ferguson 2002). The negative health impacts can also jeopardize pregnancy and have significant detrimental effects on a fetus, owing both to opioids and to side effects of OUD, such as neglect of medical and nutritional well-being (Fischer 2000).

Intravenous opioid use brings additional health risks. Infectious diseases are commonly linked with needle-sharing behaviors, specifically among heroin users. Human immunodeficiency virus (HIV), hepatitis C virus, skin infections, infectious endocarditis (an infection of the heart chambers and valves), and septic arthritis (an infection of the joints typically caused by bacteria that travel through the bloodstream) are the most common infectious diseases related to opioid abuse (Ronan and Herzig 2016; Wang, Zhang, and Ho 2011). People who use heroin are more likely to experience pneumococcal diseases (Wiese et al. 2018), and intravenous heroin use has been associated with higher rates of HIV, AIDS, gonorrhea, and hepatitis C (Maxwell and Spence 2005).

Psychological Impacts and Suicide

Opioid use disorder and adverse mental health outcomes are closely linked, with each condition exacerbating the other. Lifetime nonmedical opioid use has been associated with several mood disorders, such as depression,³⁷ anxiety, and bipolar disorder (Martins et al. 2012); according to one study, 10 percent of people taking prescription opioids developed depression after one month (Scherrer et al. 2016). The connection between OUD and suicide risk is just emerging in research, but one study found that opioids were involved in more than 40 percent of suicide and overdose deaths in 2017 (A. Bohnert and Ilgen 2019). Similarly, a study of men and women in the US Veterans Health Administration found that OUD was associated more heavily with suicide than any other substance use disorder (K. Bohnert et al. 2017). However, the causal relationship between OUD and mental health issues is unclear and likely bidirectional.

In addition to mental illness, opioid addiction is known to significantly hinder cognitive functions, including attention span, memory, and abstract thinking (Agibalova and Poplevchenkov 2012). Opioids are linked to neurotransmitter activity, affecting the central nervous system in ways that lead to dizziness, mental cloudiness, and loss of fine motor skills (Vainio et al. 1995).

Impacts on Children and Families

The opioid crisis extends far beyond its impact on individuals suffering from OUD and overdosing. It also affects families, children, and communities throughout the US (Casey Family Programs 2018; Child Welfare Information Gateway 2014; Generations United 2018; Normile, Hanlon, and Eichner 2018).

Child Abuse and Neglect

One of the tragic consequences of the opioid epidemic is its harmful impact on children. Parents with OUD may fail to prioritize their children's well-being, including basic needs like food and safe housing (Child Welfare Information Gateway 2014). The field lacks reliable national statistics on rates of child neglect or abuse related specifically to opioid misuse, but the removal of children from the home is a widely accepted indicator of the problem. Nationwide, the proportion of child removals related to substance use rose from 19 percent in 2000 to over 35 percent in 2016, affecting approximately 92,000 children.³⁸ These removals are typically a result of child neglect (Casey Family Programs 2018; Child Welfare Information Gateway 2014; Generations United 2018; Normile, Hanlon, and Eichner 2018). Another study found that a 10 percent increase in the rate of overdose deaths corresponded to a 4 percent increase in the rate of children entering foster care; it is also associated with higher rates of child maltreatment (Ghertner et al. 2018).

Underscoring the link between opioids and the neglect and abuse of children, child removal rates are higher in states that report more incidents of people with OUD and opioid overdose fatalities. In Ohio, for example, 70 percent of children in custody under the age of 1 had parents who used opiates (PCSAO 2017). Even absent the trauma associated with being placed in foster care, children of parents with OUD can be shuffled among institutions that may not coordinate efforts to serve the child's best interests.³⁹

Accompanying the uptick in children placed in foster care is an increase in the number of children being cared for by relatives (i.e., kinship care). These relatives are often grandparents who may be poorly positioned physically or economically to serve as a surrogate parent; they may also lack the support systems to take on that role (Generations United 2018).

Intergenerational Impacts

Many factors afflicting the children of parents addicted to opioids—including abuse and neglect, foster care involvement, parental incarceration, homelessness, trauma, victimization, and exposure to

violence—also increase their risk for substance dependence and other negative outcomes (Dube et al. 2003). This creates an intergenerational cycle of addiction that can be very difficult to escape. Children of parents with substance use disorders are at increased risk for physical and mental health problems, as well as social, emotional, behavioral, and cognitive challenges (Solis et al. 2012).

The impact of child exposure to a family member’s OUD is complex and far-reaching. Those impacts can include exposure to opioids in the womb and resulting neonatal abstinence syndrome, which can cause seizures and other short-term withdrawal symptoms (Kocherlakota 2014), as well as long-term damage to cognitive and motor functioning (Logan, Brown, and Hayes 2013). The number of children born with neonatal abstinence syndrome caused by maternal opioid use is increasing.⁴⁰ Later in life, children in households suffering from OUD are vulnerable to abuse and neglect, as well as their own potential opioid use and related criminal behavior (Child Welfare Information Gateway 2016).

Children who endure such struggles and traumatic experiences can face long-term repercussions that affect their healthy development, future success, and well-being. According to the Substance Abuse and Mental Health Services Administration, children living with an addicted family member are four times more likely to misuse drugs or alcohol than those whose caretakers are not addicted (CSAT 2004b). Indeed, the pathways adolescents follow into opioid use are tragic and well-documented, with most youth who misuse prescription pain relievers reporting that they were first provided the drugs for free by a friend or relative (NIDA 2017, 4).

Economic Impacts

The opioid epidemic has compromised the health of the US economy in meaningful ways. Unemployment related to the large quantities of people suffering from OUD reduces communities’ tax bases, while labor shortages cause significant challenges for employers and slow economic growth. In short, the economic consequences of the opioid crisis can be seen at both the micro and macro levels.

Unemployment and Labor Shortages

Individuals with OUD are far more likely to be unemployed, with one study finding that unemployment levels are a staggering 389 percent higher among those who misuse opioids (Brewer 2017). Another study attributed the increase in opioid prescriptions between 1999 and 2015 with a 43 percent decline in men’s participation in the workforce during that same period (Krueger 2017). Many of these people are jobless because of failed drug tests, disability, and incarceration (Brewer 2017). This opioid-related

decrease in the workforce has led to labor shortages across several industries, with many businesses struggling to find workers to fill open positions (Brewer and Freeman 2018). A manufacturing company in an Ohio town hard-hit by the opioid epidemic, for example, reported \$800,000 in year-long losses owing to labor shortages.⁴¹

Reduced Productivity and Tax Base

In addition to causing recruitment challenges for individual companies, labor shortages have an adverse effect on the broader economy, causing losses in gross domestic product (Gitis 2018), gross state product (Brewer 2017), and small-business profits.⁴² In 2018, the economic impact of the opioid crisis was deemed so severe that Secretary of Labor Alexander Acosta awarded more than \$22 million in grant funding for “reemployment services” related to the epidemic (GAO 2018). Notably, these grant funds are awarded during “emergencies, disasters, or major economic dislocations” (GAO 2018, 7).

The opioid crisis also has influenced tax revenue. Overdose fatalities, for example, resulted in an estimated loss of more than \$12 billion in federal, state, and local tax revenues in 2016 alone (Rhyan 2017). Reduced tax bases force governments to wrestle with decisions about reductions in funding for social services, education, and other public priorities, including public safety and the criminal justice system, a sector that is severely burdened by the opioid crises.

Impact on Public Safety and the Criminal Justice System

Perhaps no sector has been affected by the opioid epidemic as severely as the criminal justice system. The crisis has touched nearly every facet of public safety and criminal justice, from the emergency response network to court processes and incarceration. The strain on agencies and people working on the front lines is significant and shows no sign of abating.

Criminal Justice Professionals

Increases in opioid overdoses have placed tremendous physical and mental burdens on first responders, in some cases leading to compassion fatigue. Compassion fatigue occurs when responders—including law enforcement officials and paramedics—become worn out after repeatedly witnessing traumatic events. Given the recent, precipitous rise in drug overdoses, exposure to compassion fatigue is on the rise among responders owing to their witnessing countless people overdose and, in some cases, die.⁴³

And though the increased availability of the overdose reversal medication naloxone raises the odds of a successful resuscitation, the increasing demand for emergency interventions, along with repeated calls to assist the same people, taxes first responders, leading to a sense of hopelessness. Unsurprisingly, post-traumatic stress disorder and burnout are major threats to the retention of first responders (SAMHSA 2018b). Yet without first responders, many opioid overdoses would not be reversed and more lives would be lost.⁴⁴

Another stressor for first responders is their perceived risk of “contact overdoses.” Given the potency and prevalence of fentanyl and other synthetic opioids, some first responders believe that accidental poisoning is possible when treating people who have overdosed. Though investigating clandestine opioid labs can pose such a risk to law enforcement, investigators are typically well-trained to take protective measures.⁴⁵ Under typical first-responder circumstances, there is a general consensus that skin exposure alone is highly unlikely to lead to opioid toxicity.⁴⁶ Nonetheless, misperceptions among first responders about risk of exposure to synthetic opioids likely contributes to stress and may also fuel stigma toward people with OUD.

Medical examiners and coroners are also experiencing an increased strain. The rise in opioid overdose deaths has led to insufficient staffing and shortages in storage capacity for corpses.⁴⁷ In addition, some offices run the risk of exceeding allowable autopsy caps associated with accreditation.⁴⁸ Medical examiners and their staff, along with forensics labs, are overburdened and stretched thin, leading to secondary impacts, such as inability to accurately detect and document opioid trends and impacts, particularly given the challenges of staying current with newly introduced synthetic opioid analogs.⁴⁹

Impact on Public Safety

The opioid epidemic and its associated illicit drug distribution networks impact public safety in various ways. First, the increased demand for opioids can result in more illicit opioid trafficking, which can spur systemic violence. In addition, disputes over illegal opioid transactions can lead to altercations, assaults, and homicides. Finally, people with OUD may commit crimes to obtain resources to purchase drugs, to steal prescription medications, or to meet basic needs.

OPIOID TRAFFICKING

Like all markets, the illicit narcotics market is governed by supply and demand. As demand for illicit narcotics increases, producers, suppliers, and traffickers are incentivized to increase the supply, and

that may result in systemic violence as rival parties compete for customers and turf (Goldstein 1985; Rosenfeld et al. 2017). This likely explains why upticks in illicit drug distribution are associated with violent crime, though the relationship between the two is not necessarily causal (Disney, Hayward, and LaVallee 2010; Goldstein 1985). As people with OUD move from prescription opioids to the illicit market, demand for illicit opioids rises, increasing opportunities for systemic violence.

The current opioid epidemic has been associated with increases in drug-related homicides, but little data exist to determine what mechanisms are responsible for this increase (Rosenfeld et al. 2017).⁵⁰ Like all other drug markets, disputes in the illicit opioid market may arise between sellers over customers or product. With no legal structure for remedying clashes, sellers use violence to settle conflicts (Rosenfeld et al. 2017). However, the current opioid epidemic has not been as violent or visible in the US as have past epidemics (Quinones 2016). Indeed, much of the violence associated with heroin has taken place outside the US, occurring between rival cartels, street gangs, and governments (Duran-Martinez 2018; Reuter 2009; Rosen and Kassab 2018; Thoumi 2010). Moreover, experts hypothesize that the model for trafficking black tar heroin from Mexico was less likely to incite violence because, rather than relying on the type of location-based model that crack dealers used in the 1980s (which resulted in turf wars), traffickers opted for direct distribution to customers and deliberately went unarmed to avoid the heavy penalties associated with weapons possession (Quinones 2016). This strategy circumvented much of the buyer-seller and seller-seller conflicts that contribute to drug-related violence (Evans, Garthwaite, and Moore 2018; Quinones 2016).

Little evidence exists regarding the degree to which the introduction of fentanyl and other synthetics is fueling violence in the illicit opioid market in the US. Fentanyl and other synthetic opioids often have a different point of origin and supply route into the US. And unlike heroin, which enters the country mainly through illegal smuggling through the southern border, fentanyl is largely produced reputedly in the same areas (and sometimes the same factories) that produce legal medication for legitimate distribution (DEA 2016). People can order fentanyl directly from China online; bulk shipments are also sent from China to drug trafficking organizations in Mexico and then smuggled across the southwestern US border (DEA 2016; Phillips, Ford, and Bonnie 2017). Evidence shows that the short-lived high of crack cocaine and territorial nature of open-air markets drove much of the violence during that epidemic, but much is still unknown about fentanyl and synthetic opioid distribution, especially because these drugs have only recently been introduced into cocaine and methamphetamine markets (Evans, Garthwaite, and Moore 2018). For these reasons, it is unclear whether China's crackdown on fentanyl will result in the degrees of violence seen in the crack epidemic or past drug crackdowns (Rosenfeld et al. 2017).⁵¹

OPIOID-RELATED CRIMINAL BEHAVIOR

In some cases, people with OUD commit crimes associated with their disorder, whether to obtain food or shelter (owing to unemployment or lack of resources) or to acquire opioids or money with which to purchase them. People who use opioids have high levels of involvement in the criminal justice system (Winkelman, Chang, and Binswanger 2018). Though this relationship is not strictly causal, there is evidence that people with OUD are more likely to commit crimes (Disney, Hayward, and LaVallee 2010; French et al. 2000). Similarly, regular users of opioids experience high rates of victimization, especially women (Darke et al. 2010; Jessell et al. 2017). Though people who abuse drugs may commit crimes to obtain money to buy drugs (economic-compulsive) or crimes while under the influence of drugs (psychopharmacological), there is little evidence that opioid users are more likely to commit crimes than other drug users (Caulkins 2014; Darke et al. 2010; Goldstein 1985).

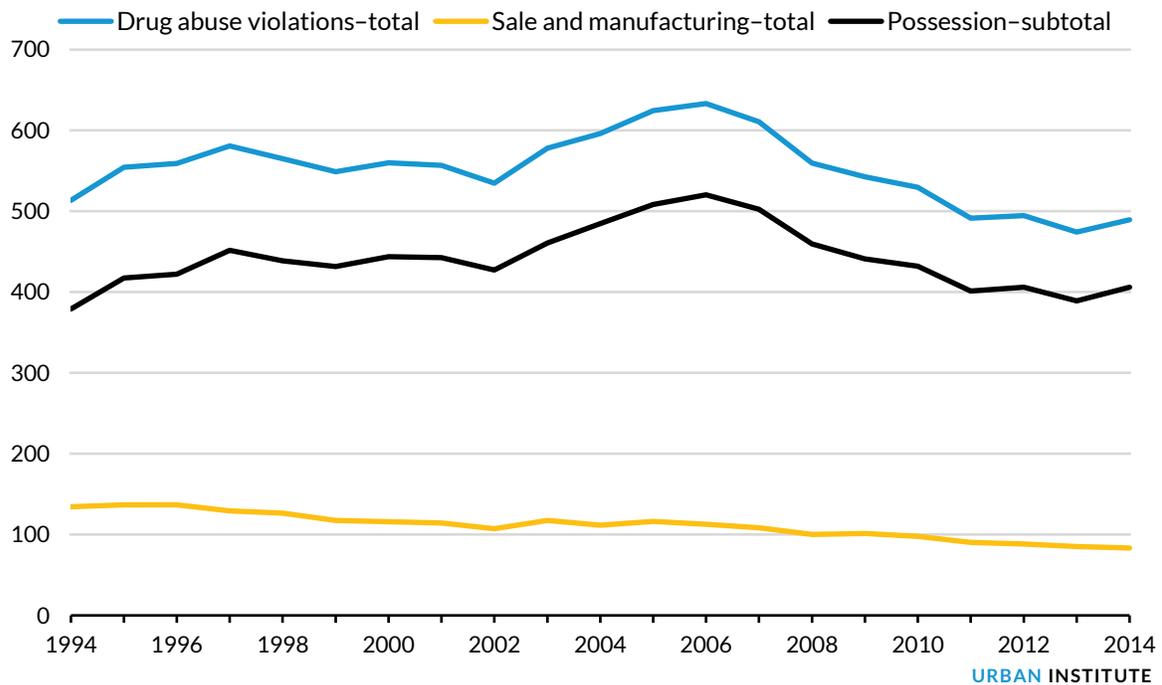
Crimes committed while under the influence of drugs and in service of resources for drugs have cascading effects on familial, community, and neighborhood vitality (ONDPCP 2013). Numerous models have been used to measure the share of crimes committed as a direct result of drug use, but there is disagreement over the accuracy of these models, and few focus solely on opioids (Caulkins and Kleiman 2014). In general, these drug-attributable crimes range from shoplifting and petty theft to robbery, assault, and even murder. Relatedly, burglaries and robberies of pharmacies have also increased as prescriptions for opioids have become harder to obtain (Erensen et al. 2018).⁵²

Impact on the Judicial and Corrections Systems

Despite the research indicating that some level of crime may be attributable to opioid use and trafficking, arrest statistics paint a mixed picture of the impact of the opioid crisis. As illustrated in figure 2, trends in arrest rates for drug possession, manufacturing, and sales from 1994 through 2014 increased somewhat in the mid-2000s but have leveled off since then.

FIGURE 2

Arrest Rate Trends, 1994–2014



Source: Howard N. Snyder, Alexia D. Cooper, and Joseph Mulako-Wangota, “Arrest in the United States, 1980-2014,” Bureau of Justice Statistics, generated using the Arrest Data Analysis Tool at www.bjs.gov, June 19, 2019.

COURTS

While drug arrests have been relatively stable over time, anecdotal evidence indicates that the opioid crisis has nonetheless strained court dockets: over half of surveyed chief justices and state court administrators rated the opioid epidemic’s impact on their courts as “severe” (Bronson et al. 2017; Wakeman 2017).⁵³ This perception may be related more to the nature of opioid-related cases than the volume. As described below, many opioid possession cases are diverted from the system, and those that do make it to court are likely complicated and lengthy, in accordance with the rocky pathways to recovery and complex intersections between OUD and unlawful activity. In the criminal courts, officials are struggling with various issues, including how to maintain optimal caseloads, support treatment engagement, and incorporate their findings into judicial decisions (Strom et al. 2011).⁵⁴ Family courts are also swamped by an increasing number of petitions seeking to remove children from their homes because of parental OUD (NJOTF 2018). Adding to that complexity is a growing movement to use involuntary civil commitment as a way to ensure detoxification and enable access to medication-assisted treatment (MAT). In Massachusetts, for example, blood relatives, spouses, guardians, along

with police officers and health care providers, can petition the court to commit someone.⁵⁵ In 2016 alone, 6,500 people in Massachusetts were involuntarily committed for up to 90 days.⁵⁶

CORRECTIONS

Jails are also bearing the burden of the opioid crisis. Although the criminal justice system was never designed to treat people with OUD, many jails currently serve as de facto drug treatment facilities. With as many as 63 percent of newly admitted people reporting drug abuse or dependence in American jails, and about 12 percent reporting regularly using opioids, the impact of the opioid crisis on the criminal justice system cannot be overstated (Bronson et al. 2017).

Diversion of people with OUD from the criminal justice system through changes in law enforcement practices, such as referring people to treatment rather than arresting and booking them, may help reduce court case processing burdens and constrain jail population growth. In addition, some states, such as New York and Delaware, have passed laws making possession of heroin a misdemeanor to reduce burdens on the criminal justice system and facilitate access to treatment. For example, courts in Buffalo, New York, have begun pioneering opioid drug intervention courts that fast-track people with OUD into wraparound treatment before adjudicating their criminal cases.⁵⁷ These types of specialized opioid dockets differ from drug treatment courts in that they (1) use overdose-specific screening tools, (2) employ relatively few (if any) legal eligibility restrictions, (3) work to provide high-risk cases with immediate access to evidence-based treatment, and (4) prominently feature peer recovery supports (Rossman et al. 2011).

Despite these efforts, jails are opening their doors to a growing share of people with OUDs. Best practice dictates that correctional facilities be equipped to screen and assess for OUDs, initiate and provide various treatment modalities, and mitigate the potential for overdose after release while facilitating and encouraging continued treatment in the community (American Correctional Association and American Society of Addiction Medicine 2018). However, adhering to these practices is a challenge for jails, many of which are chronically underfunded, overpopulated, and understaffed. Of the nearly 3,500 jails across the country, only 200 (or roughly 5 percent) have introduced MAT; within this subset of 200, most facilities only offer one treatment modality: injected naltrexone (NSA and NCCHC 2018). The lack of MAT and reliance on withdrawal management as the only treatment modality can make people leaving jails more vulnerable to subsequent overdoses (Baumgartner and Brookes 2018). According to one study, previously incarcerated people are 13 times more likely to experience death than the general population, with the leading cause of death being a fatal overdose (Binswanger et al. 2007).

Key Takeaways

- Deaths from all forms of opioids increased six-fold between 1999 and 2018; two of three overdose deaths involved opioids.
- Fatal overdose rates are highest among adults ages 24 to 35, and men die from opioid overdoses at about twice the rate of women.
- White people have been far more likely to die of opioid-related causes, but synthetic opioids are claiming a growing number of lives in urban black communities.
- Health impacts of opioid use include malnutrition, infectious disease, and adverse mental health outcomes, such as depression, decreased cognitive functioning, and increased suicide risk.
- The epidemic's impacts on children include abuse and neglect, foster care involvement, parental incarceration, homelessness, and increased risk for addiction.
- Tens of thousands of people with opioid dependency have lost or quit their jobs, exacerbating labor shortages in some industries and undermining economic growth.
- The crisis has taken a toll across the criminal justice system. Courts are shouldering increasingly complex opioid-related cases, jails are generally ill-equipped to provide needed treatment, overloaded first responders are suffering burnout and trauma, and communities are vulnerable to violence associated with transnational criminal organizations.

Criminal Justice Responses to the Opioid Crisis

Criminal justice responses to the opioid crisis include actions that control or reduce the supply and demand of prescribed and illicit opioids, as well as harm reduction efforts in correctional settings and the community. To effectively address this complex public health issue, criminal justice systems and professionals coordinate across multiple public sectors, including health, human services, and education agencies, and they collaborate vertically and horizontally among federal, state, and local governments. These collaborations support the sharing of data intelligence and coordination of efforts aimed at enforcing laws and educating the public about the importance of complying with them.

Supply Reduction

Controlling the supply of prescription and illicit opioids involves establishing and enforcing new regulations and laws to reduce overprescribing and identify, apprehend, and prosecute clinics. Both strategies are supported by the creation and operation of interagency drug task forces (Bao et al. 2016).⁵⁸

Legislating and Enforcing Regulations to Reduce Overprescribing

One key strategy for reducing the opioid supply is passing and enforcing laws to curb overprescribing by physicians and pain clinics. Such clinics, known as “pill mills,” routinely overprescribe opioids in pursuit of monetary gain, often putting patients at risk. State laws targeting pill mills may help reduce opioid overdose fatalities (Kennedy-Hendricks et al. 2016). Several state attorneys general, in partnership with local law enforcement agencies, have also filed lawsuits targeting pill mills, overprescribing, and related practices (Chakravarthy, Shah, and Lotfipour 2012).

In addition to cracking down on pill mills, several states have introduced and passed legislation to regulate overprescribing by individual prescribers, including limiting refills, restricting the types of health care professionals who can prescribe opioids, and requiring examinations that document a person’s need for opioids before a prescription is issued (Blake 2013). A related tactic for reducing the opioid supply involves limits on prescription volume. For example, in 2016 the CDC issued guidelines regulating prescriptions of opioids for chronic and acute pain, suggesting a prescription duration of

three to seven days is sufficient for most patients (Dowell, Haegerich, and Chou 2016). Some prescribers have adopted the CDC guidelines, capping initial opioid prescriptions at seven days or less. In addition, at least 33 states have enacted legislation capping initial opioid prescriptions.⁵⁹ The limits range from 3 to 14 days, and 7 days is the most common length. Some states also set dosage limits, which are measured by morphine milligram equivalents.

Prescribers can face two types of sanctions for violating such laws: civil cases (involving fines) or criminal charges. Recently, the DEA and state prosecutors have stepped up their prosecution of physicians intentionally prescribing drugs for illegitimate, nonmedical purposes (Blake 2013; Dineen and DuBois 2016; Yang, Larochelle, and Haffajee 2017). However, consequences for over-prescribers can vary widely. One West Virginia physician convicted of prescription and health care fraud had his medical license revoked, received six months of home confinement and five years of probation, and was ordered to pay \$200,000 in restitution.⁶⁰ Others, however, have faced far less punitive consequences (Davis and Carr 2017).

Drug Task Forces and Interdiction Strategies

Although state and local drug task forces have existed for several decades, they became more prominent following the Anti-Drug Abuse Act of 1988, which appropriated resources through BJA to support the creation and enhancement of multijurisdictional drug task forces throughout the US (Rhodes et al. 2009). In 1988, Congress created the High Intensity Drug Trafficking Areas (HIDTA) grant program to help federal, state, local, and tribal law enforcement agencies reduce drug trafficking and production through aggressive action in priority locations. HIDTA programs enhance jurisdictions' capabilities to design enforcement strategies and can help facilitate information and intelligence sharing. There are currently 28 HIDTAs throughout the country, as well as additional, opioid-specific and regional task forces created in response to the opioid epidemic.⁶¹

HIDTA entities are tackling opioid trafficking through various measures, including enforcement and information-sharing initiatives. For instance, the HIDTA program in Los Angeles developed a fusion task force of diversion investigators, intelligence analysts, and law enforcement officers to respond to the opioid crisis in the city and greater metropolitan area.⁶² HIDTA's Opioid Response Strategy,⁶³ launched in collaboration with the CDC, is particularly significant as it was established to develop partnerships among both public safety and public health entities at all levels of government. As of the end of 2017, 8 HIDTAs encompassing 20 states were participating in this network, which has been credited with identifying new drug trafficking organizations, seizing hundreds of bags of heroin, and referring more

people to public health agencies.⁶⁴ Most recently, federal authorities announced they had charged 60 people, including 53 doctors, in a sweeping crackdown on illegal prescribing carried out by a regional opioid strike force involving Alabama, Kentucky, Ohio, Tennessee, and West Virginia. The cases involved medical professionals—including a Tennessee physician who dubbed himself the “Rock Doc”—tied to 350,000 prescriptions and 32 million pills.⁶⁵

Reducing Supply through Prescriber Education

Improving prescriber education is another relatively simple and promising step in the fight to reduce the flow of opioids. According to one study, less than half of primary care physicians felt they were adequately trained on opioids, a knowledge gap that has fueled the overprescribing problem (Jamison et al. 2014). Other key players in health care, such as nurses, pharmacists, and behavioral health providers, also lack training on opioids and pain management (Alford 2016). To help raise the knowledge level, public health officials have developed educational materials and trainings on the dangers and appropriate use of opioids and have put them in use across the country. Law enforcement officers who embrace problem-oriented policing approaches to addressing prescription fraud, for example, have partnered to educate doctors and pharmacists about the strategies people employ to obtain opioids unlawfully, such as stealing prescription pads or forging prescriptions (Wartell and La Vigne 2013).

Prescription Drug Monitoring Programs

Perhaps the most impactful response to overprescribing and its deadly consequences is the establishment of PDMPs to collect data on the dispensing of controlled substances by pharmacies. Operational in every state, Guam, and the District of Columbia, PDMPs track prescriptions and dispensing, inform clinical practice, and protect at-risk patients (DEA 2018b). Medical licensing boards use PDMP systems to send warning letters or take disciplinary action against physicians who prescribe opioids beyond the recommended or legal threshold (PDMP TTAC 2018). Moreover, when a prescriber deviates significantly from guidelines, law enforcement may pursue prosecution (PDMP TTAC 2018). Information gathered by PDMPs can also identify patients who may be seeking opioids from multiple doctors, a practice known as “doctor shopping” (Bao et al. 2016; Wartell and La Vigne 2013).

PDMP data can be even more valuable when integrated with electronic health data systems; when combined across states, PDMP data can also be used to identify regional trends in unlawful prescribing practices. Such cross-state analyses can be facilitated by *RxCheck*, BJA’s open data sharing hub (IJIS and Tetras 2018), or PMP Interconnect, a proprietary system. Regardless of the system employed, the

sharing of data across states is facilitated by compliance with national data standards through the Prescription Monitoring Information Exchange.⁶⁶

Research shows that PDMP use improves opioid prescribing and dispensing, informs clinical practice, and protects at-risk patients (DEA 2018b; Freeman et al. 2015). A 2011 research review found ample evidence that prescriber tracking programs like PDMPs improve responsible prescribing practices and reduce opioid prescriptions (Gugelmann and Perrone 2011). Though PDMPs hold tremendous value, particularly when integrated with health data and employed across states, their use and accessibility vary considerably. Some states restrict the information solely to pharmacists, prescribers, and licensing boards, while others make the data available to local law enforcement. Relatively few states enable researchers to access the data (Wartell and La Vigne 2013).

Education and Prescription Take Back Initiatives

In many cases, legitimately prescribed opioids are not misused by patients but by others who gain access to them. Prescription drugs can be stolen, sold to other users, or shared with family and friends. In fact, research has found that most prescription drugs used for opioid abuse come from relatives or friends (Kennedy-Hendricks et al. 2016; Welham, Mount, and Gilson 2015). This finding is consistent with research suggesting that one in five patients who were prescribed opioids reported having shared them with another person (Kennedy-Hendricks et al. 2016). Given this finding, patient education on the dangers of opioid use and the importance of securing and safely disposing of the drugs is critical. Prescription take back initiatives serve both purposes.

The DEA's National Take Back Day, which is conducted in partnership with the US Environmental Protection Agency, is designed to provide a safe, convenient, and anonymous way to dispose of pharmaceutical products. Since 2010, the DEA has collected more than 10 million pounds of prescription drugs through the program, and DEA officials say the movement now involves law enforcement agencies in every state, as well as US territories (DEA 2018b). Evidence indicates that drug take back programs with pharmacist participation can effectively reduce the supply of controlled substances and increase public awareness of how to appropriately dispose of prescription medications—and the importance of doing so (Gray et al. 2015). Though all types of drugs are collected through such programs, a multiyear, six-state study found that 66 percent of medications gathered at take back events from 2011 to 2015 were opioids (Jaramillo-Stametz et al. 2018).

In addition to such events, some localities have established permanent drug deposit boxes, which initial research suggests increase the rate at which controlled substances are removed from community settings, while serving as a public education tool (Gray et al. 2015).⁶⁷

Demand Reduction

Just as criminal justice professionals play a critical role in reducing the supply of opioids by combating drug trafficking and misuse, they are also vital players in efforts to reduce demand for opioids. Law enforcement officers and other first responders are typically among the first to learn of opioid overdoses and are uniquely positioned to educate the public about the dangers of opioid misuse and the legal consequences of opioid diversion through education and partnerships with public health clinicians. In addition, courts and corrections agencies—both institutional and those engaged in community supervision—interact with a substantial share of people with OUD who enter the criminal justice system, creating opportunities for intervention, education, and treatment.

Pre-Arrest Diversion Initiatives

One strategy that can effectively reduce the demand for opioids is educating and training law enforcement officials on public health prevention efforts. As first responders, law enforcement officers are well-positioned to prevent overdoses and connect people in need of treatment with critical resources.⁶⁸ Law enforcement and other first responders are typically first on the scene of an opioid overdose, and equipping them with assessment and response skills is not only commonplace, but effective at reducing overdose fatalities (Davis et al. 2015).

Law enforcement and first responders can enhance the reach and impact of their role by partnering with treatment providers, a promising way of helping meet the mental health needs of people with OUD (Werner et al. 2005). Many US police departments are implementing “deflection” initiatives that aim to reduce barriers to treatment by serving as a point of contact for people with OUDs in need of treatment. Such nonarrest programs vary by jurisdiction: they can occur under branded programs, such as Crisis Intervention Teams (CIT) and Law Enforcement Assisted Diversion (LEAD), or non-branded local undertakings, and they can range from voluntary self-referrals to police without threat of arrest to officer-initiated interventions (some programs have features that fall under multiple categories; for example, LEAD typically includes both officer prevention and intervention). Although initiatives may vary by locality, they all focus on safely diverting people from the justice system and into community

treatment to support wellness and recovery. In Massachusetts, for example, a study of a program in which arresting officers could refer people to treatment rather than booking them in jail found that 94.5 percent of people seeking assistance were admitted into treatment programs (Schiff et al. 2016). These types of pre-arrest diversion initiatives represent an integral component of the pre-arrest diversion programs continuum (see figure 3).

FIGURE 3
Pre-Arrest Diversion Programs Continuum



Source: Police, Treatment and Community Collaborative Guiding Principles, 2018.

SELF-REFERRAL

The most prominent example of a self-referral initiative is the Police Assisted Addiction and Recovery Initiative (PAARI) Angel Program. PAARI currently helps more than 400 law enforcement agencies in 32 states design and implement their own pre-arrest addiction and recovery programs, which include options for self-referral to the station or incident-based outreach.⁶⁹ PAARI has shown early signs of effectiveness: some participating jurisdictions are seeing as much as a 25 percent reduction in crime associated with addiction (PAARI 2016).

ACTIVE OUTREACH

Seeking out people with OUDs and referring them to appropriate forms of treatment is a more proactive approach to pre-diversion. The Quick Response Team (QRT) model is an example of this type of active outreach model (PTACC 2018). The QRT model relies on a cross-disciplinary partnership among a paramedic, a counselor, a law enforcement officer, and a faith-based community member. The law enforcement officer receives a referral from emergency medical services involving an overdose incident and the officer visits the residence alongside the counselor and community member to deliver education about local services and treatment options.⁷⁰ The model has been sparsely evaluated, but some early qualitative evidence indicates health practitioners and other involved professionals have had positive perceptions of such approaches (Leach and Mayo 2013; Stolldorf 2016).

NALOXONE PLUS

Law enforcement can play an expanded role as first responders to overdoses, not just administering naloxone but educating people who are administered naloxone, along with their family members, and

connecting people with OUD to treatment. Notable examples of this type of initiative are Drug Abuse Response Team (DART); Stop, Triage, Engage, Education and Rehabilitate (STEER); and the QRT model (PTACC 2018). For example, STEER has been adopted and implemented in Montgomery County, Maryland, focusing on people with increased likelihood of multiple contacts with police owing to OUD.⁷¹ These models have emerged recently, and robust research on their effectiveness is largely missing. However, the fact that law enforcement agencies have rapidly adopted them means agencies recognize their roles as crisis responders and the need to embrace preventive approaches to curbing the opioid epidemic in their communities.

OFFICER PREVENTION

Initiatives involving officer prevention strategies use similar models for having officers engage and refer people to treatment. Such efforts also incorporate opportunities to avoid criminal charges and divert people from the criminal justice system. The most prominent examples of this model are CIT, LEAD, STEER, Mobile Crisis, and Co-Responders (PTACC 2018). Under the CIT model, officers are trained to identify signs of mental health crises and substance use disorders, and, when appropriate, to divert people to treatment (Munetz and Griffin 2006; Tallon, Labriola, and Spadafore 2018). In Houston, Texas, and Arlington, Virginia, police have paired officers with mental health professionals to deescalate crises (IACP 2010), while other jurisdictions make mental health professionals available by phone to consult with officers (Tallon, Labriola, and Spadafore 2018). In Plymouth County, Massachusetts, all 27 police agencies now use a protocol requiring an officer and clinician to follow up in person with patients the day after an overdose incident to provide information and help with placement in treatment (PERF 2017). CIT evaluations report better and more substantial links to community health care services but show uneven impact on the volume of arrests, with several identifying reductions in arrests but others indicating no change (Borum and Franz 2010; Compton et al. 2014; Teller et al. 2006; Watson et al. 2011). The effect of such approaches on improved behavioral health functioning has not been established empirically (SAMHSA 2018a).

OFFICER INTERVENTION

Officer intervention initiatives are similar to officer prevention efforts; the key difference is charges are deferred until a person completes treatment or follows through on the requirements in a tailored social service plan (PTACC 2018). CIT, LEAD, STEER, and the Civil Citation Network are examples of programs that defer charges rather than dismissing them altogether. LEAD has been evaluated in several jurisdictions and by various researchers, and findings consistently show reductions in recidivism

(with up to 60 percent reduction in future rearrests during six months in some sites) and positive impact on housing stability and employment retention.⁷²

The recent proliferation in law enforcement–led initiatives to address the opioid epidemic is a meaningful philosophical shift from the punitive drug enforcement approaches that have dominated the criminal justice field for decades. Pre-arrest diversion models are complex and evolving, but they hold promise for improved collaboration among multidisciplinary teams, transcending the traditional boundaries between criminal justice and public health to save lives and help families impacted by OUD.

BOX 1

Who Is Watching the Children?

Perhaps the most disturbing casualties of America’s opioid epidemic are the children of family members with OUD. Roughly 8.7 million children in the US live with at least one parent with a substance use disorder, placing them at increased risk of experiencing substance use or OUD themselves (Lipari and Van Horn 2017; Solis et al. 2012). Indeed, among US adults with OUD living with children under age 18, two-fifths have another substance use disorder, fewer than one-third have received any form of treatment, and two-thirds also have a mental illness (Clemans-Cope et al. 2019). Substance dependence is frequently intergenerational; the children of parents with substance use disorders are at higher risk of suffering from it as adults (CSAT 2004b).

A hopeful model for breaking this chain has emerged in a community that has suffered heavy losses in the opioid epidemic: Martinsburg, West Virginia. Through an innovative program known as The Martinsburg Initiative, the city is combining the efforts of families, police, school officials, the local college, and substance use disorder experts to wage a holistic war on three fronts: enforcement, treatment, and prevention.

The initiative builds off the work of the Kaiser Permanente Adverse Childhood Experiences Study, which found that the more traumatic experiences children endure early in life, the greater the likelihood they will succumb to substance use disorder as adults.⁷³ Under the Martinsburg Initiative, families’ needs are assessed and they are linked with resources to stabilize the home and reduce children’s exposure to adverse experiences. Support includes domestic violence counseling, parenting classes, mental health therapy, substance abuse treatment, and mentoring.

“The national opioid epidemic is at the tipping point,” Maury Richards, Martinsburg Police chief, said about the initiative. “The staggering toll in human life and related health, crime, and social costs are unsustainable. Linking the police, schools, communities, and families in a new way, The Martinsburg Initiative is building the foundation for success.”⁷⁴

Drug Courts: Screening and Diversion

Drug courts offer an evidence-based early diversion model allowing defendants to remain in the community rather than being incarcerated, provided they comply with court conditions, including treatment participation. Since the first drug court was established in Miami-Dade County, Florida, in 1989, such courts have expanded rapidly across the country and studies have consistently validated their effectiveness as a cost-effective recidivism reduction tool (Rossman et al. 2011).

With the onset of the opioid epidemic, drug courts have adapted to meet the needs of the burgeoning population of people with OUD entering the criminal justice system (NCJFCJ 2018; NJOTF 2018). Some drug court programs have begun to specialize in opioid dependency. In 2017, Buffalo, New York, created an opioid court, an offshoot of its drug court, to provide stabilization through MAT and education and resources to aid recovery from OUD.⁷⁵ The Buffalo Opioid Intervention Court incorporates research related to drug courts and the broader field of behavioral health. It focuses on screening and assessment before arrest, immediate engagement in evidence-based treatment, and referral to ancillary services, while ensuring accountability through random drug testing and regular—sometimes daily—mandated court appearances before a judge.⁷⁶

New York courts are planning to expand the opioid court model to every district in the state. Bronx County, New York, began an opioid court in December 2017 along with a program that focuses on people charged with illicit opioid possession (a misdemeanor offense in New York) who are assessed as at high risk for opioid overdose and who are diverted to treatment in lieu of jail time.⁷⁷ More recently, Suffolk County, New York, established a similar program that offers the dismissal of charges following successful completion of a tailored treatment plan.⁷⁸

Treatment and Recovery Support

Criminal justice agencies and professionals, from first responders to correctional administrators, can be instrumental in promoting the delivery of treatment and support services to people with OUD. Their potential contributions include supporting the delivery of MAT, both in the community and in jails; helping people enroll in Medicaid to ensure continuity of care when they return to their communities; and partnering with peer recovery coaches and substance abuse treatment providers to help people with OUD obtain treatment and recovery support services (NRRC 2018).

MEDICATION-ASSISTED TREATMENT

MAT, which involves the use of effective medications in combination with behavioral therapies, is a highly effective treatment for opioid abuse and dependency (Pew 2016; Volkow, et al. 2014). MAT decreases opioid use, opioid-related overdose deaths, criminal activity, and infectious disease transmission (Hedrich et al. 2011; Ma et al. 2018; Volkow 2016), and patients receiving such treatment are more likely to remain in therapy (Volkow 2016). Research has shown that MAT yields higher rates of recovery than abstinence alone and several national and international organizations have recognized the treatment as a key evidence-based approach to opioid addiction (Newman and Whitehill 1979).⁷⁹ MAT programs paired with counseling and behavioral therapies can support recovery from opioid dependency.⁸⁰

People who abuse opioids are at high risk of overdoses following their release from correctional confinement or residential treatment, often because they develop a lowered tolerance to opioids behind bars and overestimate their tolerance upon relapse (Binswanger et al. 2007). MAT treatment—both within and outside the criminal justice system—has been associated with a major decrease in opioid overdoses (Bukten et al. 2017). Conversely, the absence of MAT for incarcerated people with substance disorders is dangerous because people with addictions who are confined without treatment are more likely to overdose and die (Rich et al. 2015; Wakeman 2017).

The slow adoption of MAT by criminal justice practitioners owes partly to misconceptions about the treatment; some critics believe it involves substituting one addictive substance for another, and others stigmatize prospective MAT patients.⁸¹ The underutilization of MAT, especially in correctional settings (Friedmann et al. 2012; Nunn et al. 2009), is explained by a host of factors, including a scarcity of the needed medication in some communities, inadequate information about the use of medication, negative attitudes toward MAT and MAT patients, general safety and control concerns from correctional staff, and a preference for abstinence-only approaches throughout the criminal justice system (McKenzie et al. 2009; Volkow et al. 2014). However, a growing number of US correctional facilities support antagonist therapy with extended-release naltrexone (Wakeman 2017). Meanwhile, several studies have found that people who received MAT before being released from confinement continue the treatment over a significant period after release, although findings regarding drug use and criminal behavior have been mixed (Gordon et al. 2015, 2017).

TELEHEALTH

Telehealth, the provision of health care remotely through telecommunications technology, can help correctional systems expand behavioral health treatments that provide an evidence-based complement

to MAT (Young and Badowski 2017).⁸² Although research on the uses of telehealth for the treatment of OUD in correctional settings is sparse, there is evidence validating its effectiveness under other conditions and in different settings (Kay-Lambkin et al. 2009; Totten et al. 2016). Telehealth technology enables the delivery of various forms of behavioral therapy without reductions in effectiveness (Dent et al. 2018). Using telehealth for treating OUDs among people in prison or reentering their communities is promising, and in one case has been shown to be slightly more effective than in-person treatment (Eibl et al. 2017).

MEDICAID ENROLLMENT BEFORE RELEASE TO INCREASE TREATMENT CONTINUITY

Medicaid enrollment can meaningfully improve the ability of people with opioid addictions to access inpatient and outpatient treatment services (Zur and Tolbert 2018). All state Medicaid programs cover at least one MAT medication, and most cover all three commonly used drugs (SAMHSA 2018c). Medicaid expansion has allowed states to improve coverage for many people with OUD who are uninsured. Medicaid covers a considerable share of people who struggle with opioid abuse and includes coverage of numerous substance abuse treatment services, such as outpatient treatment, inpatient treatment, prescription drugs, and rehabilitation. However, Medicaid for correctional populations is only an option for the 37 states, and the District of Columbia, that have expanded coverage to such populations (Pew 2016).⁸³

A national survey of jails found that 32 were deploying Medicaid outreach and assistance strategies to help people enroll in treatment before release in 2018.⁸⁴ Some states have set aside Medicaid funds specifically to provide enrollment assistance for correctional populations. Illinois, for example, helps people in large jails with Medicaid enrollment through its navigator program. Massachusetts and other states work with medical vendors who, under contract with state corrections departments, help enroll people either when they are hospitalized for overdose or before they are released. Massachusetts also assists people in prison who are seeking to access care when they reenter their communities (MACPAC 2018).

PEER RECOVERY PARTNERSHIPS

Peer recovery support services, performed by peer recovery coaches or peer support specialists, supplement clinical substance abuse treatment by providing critical nonclinical assistance to people in recovery. Peer recovery or support experts bring the lived experience of their recovery to the role. Combined with training in evidence-based practices, the benefit of their personal experience enables peer recovery coaches to provide a “range of person-centered and strengths-based supports critical to a holistic recovery approach and long-term recovery management.”⁸⁵

Peer-based assistance is increasingly viewed as a critical element of recovery support services (Reif et al. 2014), and for good reason. Ample evidence suggests that peer recovery support produces several desirable justice-related and behavioral health outcomes (SAMHSA 2018b), including decreased criminal justice involvement (Rowe et al. 2007; DSHS 2008), increased treatment engagement and retention (Reif et al. 2014), improved access to social supports and services central to recovery stability (Andreas, Ja, and Wilson 2010), and reduced substance use (Bernstein et al. 2005).

Harm Reduction

In the context of opioid misuse, harm reduction refers to efforts to prevent overdoses and overdose fatalities and reduce the potential spread of infectious disease that can occur through needle sharing. Opioid overdoses can be prevented by alerting the public when particularly potent synthetic opioids have been introduced to local markets. Overdose fatalities can be reduced by the availability and use of the life-saving medication naloxone, an FDA-approved drug that binds to opioid receptors and, with timely administration, can reverse and block the effects of other opioids. Both first responders and corrections facilities have roles in these harm-reduction activities, including educating the public and family members of people with OUD, because naloxone programs have been found more effective when naloxone and training are offered to family and friends, not just the person at risk of overdose (Keane, Egan, and Hawk 2018; Lewis, Vo, and Fishman 2017).

Preventing Overdoses and Overdose Fatalities

Providing a sufficient supply of naloxone to community distribution programs and first responders is a proven method of reducing overdose fatalities (Wheeler et al. 2015).⁸⁶ This approach is particularly effective when first responders are well-informed and comfortable carrying and administering naloxone (Faul et al. 2015), and when naloxone is provided to people who are at high risk of overdose (e.g., survivors of nonfatal overdoses) or who are experiencing an overdose (Lewis, Vo, and Fishman 2017). Research also highlights the importance of follow-up medical attention after the use of naloxone, because overdose symptoms may return.⁸⁷

In correctional settings, naloxone distribution focuses on people before their release or shortly before the end of their treatment. In addition to the drug itself, it involves offering people overdose response training and naloxone education (Carroll, Green, and Noonan 2018). For people with OUD, the period immediately following release is a time of elevated overdose risk (Ranapurwala et al. 2018),

particularly if their MAT is discontinued (Sordo et al. 2017); this may explain why release from inpatient detoxification and residential treatment programs is associated with increased risk of overdose death (Mistral 2016). Naloxone distribution programs in criminal justice settings are therefore most effective when they provide all people leaving supervision with screening and overdose risk assessment, then offer overdose prevention education and naloxone, when indicated (Brinkley-Rubinstein et al. 2018), including providing naloxone to family members.

BOX 2

Bad Batch Alerts

In 2016, Michael LeGrand, a software engineer from Baltimore, lost a friend who overdosed on heroin laced with carfentanil, an extremely potent analog of the synthetic opioid fentanyl. His friend's passing deeply affected him, and LeGrand resolved to devote his technological talents to reducing overdoses in his city, which many media outlets had dubbed "ground zero" in the opioid epidemic.⁸⁸

Government officials had already created an alert system to notify health care providers when overdoses spiked in certain neighborhoods, but its reach was limited. To fill the gap, LeGrand, who runs a nonprofit that teaches students how to code, created an anonymous free text messaging service with the help of five of his young students. Bad Batch Alert uses data from emergency responders to determine which areas of Baltimore are being hit with bad batches of heroin. When a cluster of overdoses is detected, a text alert is sent to all users registered in the area. The service also offers updates on the locations of needle exchange vans and referrals to a 24-hour help line. Users sign up for the service by texting "Join" to a phone number; loved ones of users often sign up and help spread the word as well.

Although there are no data to demonstrate the effectiveness of Bad Batch Alert, Baltimore health officials say they value its role in their efforts to combat the opioid crisis. There were 798 deaths from opioid-related overdoses in Baltimore in 2018, more than 2.5 times the number of homicides. "The behavioral health provider network in Baltimore City really values the Bad Batch alerts," said Adrienne Breidenstine of Behavioral Health Systems Baltimore, which oversees treatment for the city.⁸⁹

GOOD SAMARITAN LAWS

To encourage bystanders or people experiencing an overdose to summon emergency help, at least 45 states and the District of Columbia have adopted Good Samaritan or 911 drug immunity laws.⁹⁰ Such laws provide full or partial immunity from drug-related and other criminal charges for people who are overdosing or witnessing an overdose (Carroll, Green, and Noonan 2018). One study showed that Good

Samaritan laws increase the likelihood that bystanders will call first responders when an overdose occurs (Jakubowski et al. 2018). In addition, preliminary evidence suggests that these laws may decrease emergency department visits and inpatient hospital admissions for accidental heroin overdoses (Nguyen and Parker 2018), although evidence regarding their impact on opioid-related mortality is mixed (McClellan et al. 2018; Popovici et al. 2018).

The scope of immunity granted under Good Samaritan laws varies across states.⁹¹ Research suggests that these laws may be more effective when immunity is extended to all bystanders on the scene (not just the person experiencing the overdose and the person who called for help) and when bystanders are protected from parole violations and warrant service (Latimore and Bergstein 2017; Tobin, Davey, and Latkin 2005). Emerging research suggests that clarifying and increasing the scope of Good Samaritan protections, educating the community about these protections, and improving first responders' interactions with bystanders and others at an overdose scene may improve outcomes (Watson et al. 2018).

Preventing the Spread of Infectious Disease

Opioids can be ingested orally through prescription or counterfeit pills, through nasal passageways, or by injection. Injection by needle, which remains common, exposes users to the risk of infectious disease and increases the likelihood of future health care needs (Jicha et al. 2019).⁹² When users share needles, the threat of the spread of infectious diseases is considerable.

Syringe services programs are community-based initiatives operating at fixed sites and mobile units that provide access to clean, sterile equipment for preparing and consuming drugs and facilitate the safe disposal of syringes and needles.⁹³ Other names for such efforts include syringe access programs, syringe exchange programs, needle exchange programs, and needle-syringe programs. Decades of research show that they are a highly effective, low-cost intervention to prevent transmission of HIV and hepatitis C (Sweeney et al. 2019). In addition to their principal function, syringe services programs often provide overdose education, naloxone, and naloxone training to prevent and reverse opioid overdose; some also provide products such as fentanyl testing strips.⁹⁴ Local law enforcement agencies are well placed to identify people who take opioids intravenously and guide them toward such programs. Similarly, correctional institutions and probation and parole officers can connect people leaving custody or under community supervision to syringe programs. For example, one study of syringe program clients found that 43 percent of respondents who injected drugs in the prior 30 days had been incarcerated (Barocas et al. 2015; Flath et al. 2019).

In 2015, Congress partially lifted a federal funding ban on syringe services programs that had been in place since 2011. Starting in FY 2016, federal funds again were used to support syringe support initiatives and some wraparound services, although the money could not be used to purchase syringes and needles.⁹⁵ In 2018, there were an estimated 320 syringe programs operating in 39 states, the District of Columbia, and Puerto Rico, across 332 counties. But state laws criminalizing distribution and possession of syringes have impeded the expansion of such efforts in many states (Cloud et al. 2018).

Harm reduction education interventions can increase knowledge of evidence-based practices that control the spread of infectious diseases such as HIV, the hepatitis B virus, and the hepatitis C virus among people who inject drugs.⁹⁶ Peer counselors and people with lived experience of drug use, many of whom have been involved with the criminal justice system, are essential to these interventions, as they effectively leverage their personal knowledge and skills (Marshall et al. 2015). Training police officers on the benefits of syringe programs, for example, can lead to buy-in and increase the likelihood of referrals. One study found that police officers were better positioned to help HIV prevention efforts after receiving training on the benefits of syringe access; before the training, officers held assumptions that counteracted public health efforts (Beletsky et al. 2011).

Early Alert Strategies and Coordinated Data Systems

Spanning efforts to reduce both supply and demand is the use and integration of data to better understand the incidence, nature, and causes of OUD and related public safety and criminal justice outcomes as well as the effectiveness of responses to the opioid crisis. Seeking to develop more effective strategies for reducing overdose fatalities, law enforcement officials are using data in partnership with other criminal justice and public health agencies in various ways. Efforts include contributing to interagency overdose fatality review teams; tracking the date, time, location, and outcomes of overdose incidents; and using data, intelligence, and the testing of confiscated opioids to identify particularly lethal formulas and alert the public.

Overdose Fatality Review Teams

Uniting representatives of public safety, public health, and social services agencies, overdose fatality review teams are designed to examine fatalities to identify missed prevention opportunities and system gaps. Review teams increase collaboration on overdose prevention, promote more openness to data sharing among systems, and inform the development of policies, programs, and laws to prevent

overdoses (The Network for Public Health Law 2018). Though such review teams can be formed in most any county or region, at least nine states (Arizona, Delaware, Maryland, New Hampshire, Oklahoma, Pennsylvania, Rhode Island, Virginia, and West Virginia) have formally authorized the review of fatal drug overdoses.⁹⁷ Maryland's Overdose Fatality Review Team model, for example, was developed by the state Department of Health and Mental Hygiene and is operating in more than 18 counties (Baier 2014; Rebbert-Franklin et al. 2016). Although no published quantitative evaluations exist of the impact of review teams on reducing the number of overdoses, a qualitative study in Maryland found them an effective means of coordinating among system stakeholders and interventions, improving the quality of data, and aiding in strategic planning around prevention efforts (Haas et al. 2018).

Another example of data sharing to combat opioids is Maine, where law enforcement officials are sharing drug arrest data with health care providers under the Maine Diversion Alert Program, an online tool to help reduce the misuse of prescription drugs. Diversion Alert provides monthly drug arrest reports, records of public drug arrest data, and educational resources from law enforcement that prescribers and pharmacists can use to identify patients who are at risk for overdose, in need of treatment, or distributing prescription drugs illegally. Equipped with these data, health care providers can accurately identify and respond to patients at risk for OUD (Martin and Desrosiers 2016). Similarly, officials in New York established *RxStat* in 2012, with the goal of sharing data on opioid misuse between law enforcement and public health entities to inform a multidisciplinary working group of city, state, and federal government employees (Heller et al. 2014).

Perhaps the most prominent system to promote opioid-related data sharing among first responders and other law enforcement and health partners is the Overdose Detection Mapping Application Program (ODMAP), which has been picked up by jurisdictions in 29 states.⁹⁸ Developed by the Baltimore-Washington HIDTA, this online or mobile app tool enables first responders to document, in real time, the location, time, and circumstances surrounding an overdose event, including the number of naloxone doses administered and whether the overdose resulted in death. It captures information on fatal and nonfatal overdose incidents across agencies, allowing law enforcement to share data with public health practitioners.⁹⁹ Real-time tracking of such data can help law enforcement and health care providers recognize overdose outbreaks, design opioid interventions, and dispatch rapid response teams.¹⁰⁰ The system is designed to alert users when an overdose spike occurs in real time, enabling them to mobilize swiftly in response to, for example, an alert about a particularly deadly batch of fentanyl. Though the mapping application has been widely disseminated, more documentation is needed on who uses ODMAP, how consistently, and how the data generated from the app are analyzed and used to support cross-agency prevention and coordination.

Drug Checking

Drug checking is a harm reduction strategy that can be an important tool in overdose prevention (Sherman et al. 2018). Also referred to as pill checking or adulterant screening, drug checking involves a chemical analysis of drug samples to identify unknown substances and allow users to protect themselves from extremely toxic and potentially fatal doses. Drug checking was popularized in Europe in the 1990s and has mostly been offered in the US at music festivals and raves to test MDMA (Sherman et al. 2018). The hazards of fentanyl have fueled interest in drug checking, the most prevalent of which is an analysis performed with fentanyl testing strips, which are simple to use and produce easily understandable results (Sherman et al. 2018). Law enforcement and community-based organizations have distributed fentanyl testing strips to help people take precautions when using illicit drugs, with the goal of reducing overdoses from illicitly manufactured fentanyl (Peiper et al. 2019). Studies of the use of fentanyl testing strips by at-risk populations have found that these strips were convenient and useful for reducing the risk of an overdose,¹⁰¹ and that some participants reported increased perceptions of safety (Peiper et al. 2019).¹⁰² In addition, fentanyl testing strips combined with tools like the ODMAP can help determine when particularly potent sources in an opioid supply pose an elevated risk for overdoses in a particular location (Washington/Baltimore HIDTA 2018).

Despite efforts to collect and share data, the field lacks an early warning system that collects representative data in real time in regions throughout the country to discern emerging trends in opioid and other illicit drug trafficking and use. The Arrestee Drug Abuse Monitoring (ADAM) program presents an excellent model for doing so. Established in 1998, the original program surveyed and interviewed people booked in jails. ADAM collected data on drug markets and substance use in 35 sites through 2003, after which funding for the program ceased for several years. The program was resurrected as ADAM II in 2007 in just 10 of the original sites, selected for geographic diversity (ONDCP 2014). Both ADAM and ADAM II produced valuable data enabling law enforcement to track changes in illicit substance use, along with trends in drug marketing and purchasing behaviors, in near-real time. Unfortunately, budget cuts reduced the number of ADAM II sites to five in 2012 and 2013, and the program was ultimately disbanded (ONDCP 2014).

Key Takeaways

- Criminal justice professionals are at the epicenter of efforts to reduce the supply of and demand for opioids, and they can play a key role in harm reduction.

- Law enforcement responses to the opioid crisis include regional and interagency task forces; targeting “pill mills” through legislation, enforcement, and litigation; and the use of prescription drug monitoring programs.
- Diversion programs led by law enforcement or first responders and other dual-response models involving law enforcement and public and behavioral health officials show promise for improving treatment access, engagement, and other outcomes.
- Some jurisdictions are launching specialized court dockets to fast-track a defendant’s access to opioid treatment, during which the legal process is suspended; these opioid courts are distinct from drug treatment courts.
- Providing naloxone to community distribution programs and first responders reduces overdose fatalities, especially when those administering it are well-trained in its use.
- The increase in synthetic opioids has sparked interest in drug checking, especially the use of fentanyl testing strips; studies show that such measures can reduce overdoses.
- Decades of research show that needle exchange and safe injection site programs are highly effective in preventing transmission of HIV and hepatitis C; they also save money by reducing infectious disease cases. But state laws criminalizing distribution and possession of syringes have impeded their proliferation.
- Data collection, integration, and tracking by law enforcement and public health officials can be facilitated by platforms and apps such as ODMAP, used by first responders at the scene of overdoses, and those designed to facilitate the sharing and analysis of PDMP data.
- The ADAM program, which collected data on drug use and drug market trends sites throughout the country from 1998 to 2003 and again from 2007 to 2013, yielded valuable data for law enforcement to discern emerging regional and national trends.

OJP Funding Initiatives and Collaboration to Address the Opioid Epidemic

Reflecting the complex nature and expansive scope of the opioid crisis, the Office of Justice Programs (OJP),¹⁰³ US Department of Justice, has taken a multipronged approach to its support of communities and criminal justice stakeholders on the front lines of the epidemic, funding nearly a dozen grant programs focused on supporting state, local and tribal governments in addressing the opioid crisis. Congressional authorization of the 2016 Comprehensive Addiction and Recovery Act (CARA, Public Law 114-198) and related appropriations of up to \$181 million annually have been critical in supporting these efforts. More specifically, CARA funding established the Comprehensive Opioid Abuse Program and recognized the following grant programs as opioid-related efforts: drug courts, veterans treatment courts, the Residential Substance Abuse Treatment (RSAT) for State Prisoners program, the Justice Mental Health Collaboration Program (JMHCP), and prescription drug monitoring programs.¹⁰⁴ In FY 2018, OJP administered numerous grant programs focused on the opioid crisis. These criminal justice grant programs span all aspects of the opioid crisis, including diversion and prosecution, treatment, patient and physician education, and PDMPs. OJP grants also support data-sharing and cross-system information exchange, as well as research and evaluation to monitor and assess both the epidemic and the efficacy of various strategies intended to stem the crisis. This section briefly describes OJP's opioid-focused grant programs supported under CARA, beginning with its signature initiative and largest investment, the Comprehensive Opioid Abuse Program, followed by brief descriptions of other OJP opioid-related efforts such as NIJ's Forensic Sciences initiative and Innovations in Prosecution and Policing Strategies solicitations and the Office of Victims of Crime and Office of Juvenile Justice and Delinquency Prevention's youth-related opioid grants.

Comprehensive Opioid Abuse Program (COAP)

Addressing the complex and ever-changing opioid crisis effectively requires a cross-systems, collaborative, and data-driven approach. Most jurisdictions, however, lack the resources and capacity to build such a framework and use it to reduce opioid overdoses and abuse. Recognizing this challenge, BJA implemented the Comprehensive Opioid Abuse Program. Authorized as part of the 2016

Comprehensive Addiction Recovery Act, COAP provides innovative, systemwide approaches to identify, address, treat, and support people affected by the opioid epidemic,¹⁰⁵ particularly those in highly impacted rural and tribal communities.

COAP program goals and objectives are derived from the Sequential Intercept Model, which offers a conceptual framework for systematically assessing available community resources, determining critical service gaps, identifying opportunities to safely divert people from needless involvement in the criminal justice system, and implementing reforms at six distinct justice decision points, or “intercepts” (Munetz and Griffin 2006). COAP funds grantees across six program areas that align closely with the model’s six intercepts: community services, law enforcement, initial detention/initial court hearings, courts and jails, reentry, and community corrections. COAP program categories include (1) first responder partnerships; (2) technology-assisted treatment projects; (3) system-level diversion projects; (4) statewide planning, coordination, and implementation projects; (5) prescription drug monitoring program implementation and enhancement projects; and (6) public safety, behavioral health, and public health information-sharing partnerships.¹⁰⁶ Through these six categories, COAP seeks to advance four broad program goals (Kunkel 2019):

- Promote public safety and support access to treatment and recovery services in the criminal justice system.
- Strengthen the collection and sharing of data across systems to understand and address the impact of the opioid epidemic.
- Align and maximize resources across systems and leverage diverse program funding.
- Prevent opioid misuse and addiction.

COAP is currently BJA’s largest competitive grant program, with a total of \$315 million appropriated since its inception.¹⁰⁷ In addition to funding approximately 216 state, local, and tribal grantees, COAP offers training and technical assistance through four BJA-selected providers. The COAP Resource Center (www.coapresources.org) provides grantees with a robust array of content, supplemented by distance learning and resource dissemination.

COAP also has facilitated collaboration among BJA and other federal agencies on the front lines of the opioid crisis, such as the Substance Abuse and Mental Health Services Administration, the CDC, the United States Department of Agriculture, and the National Institutes of Health. BJA has collaborated with agencies to host events and release joint publications, and, later this year, BJA will jointly fund an opioid-related demonstration project with the CDC. Most recently, BJA partnered with Arnold

Ventures, a private philanthropic entity, to fund a nine-month planning initiative that will build knowledge of and capacity to expand jail-based MAT models and relevant post-release services in 16 selected communities across 14 states;¹⁰⁸ these communities will receive tailored technical assistance and engage with subject matter experts to advance MAT locally.

COAP Grantee Overview

A preliminary analysis of COAP's FY 2017 and FY 2018 awards indicates that grantees span 47 of the nation's 50 states and one US territory (Guam). Twelve states (AL, CA, IN, MO, MS, NJ, NY, OH, PA, TN, WA, WI) have received more than six COAP awards, with Ohio receiving 16 awards covering five of the six COAP categories. Profiles of the 50 FY 2017 COAP grantees are available on the [BJA website](#), and brief descriptions of all COAP grantees can be found on the [COAP Resource Center site](#).

CATEGORY 1: FIRST RESPONDER PARTNERSHIPS

The objective of COAP category 1 is to support county, city, and tribal government entities in designing and implementing comprehensive local responses to the opioid epidemic. Although communities may pursue various interventions, the emphasis here is on law enforcement- and first responder-led diversion programs that link people facing low-level, nonviolent charges to community-based treatment and behavioral health services instead of custodial arrest. In FY 2017, category 1 focused on outreach programs to reduce fatal overdoses, specifically models that would link people experiencing a non-fatal overdose to treatment or recovery support services via law enforcement partnerships with peer recovery coaches and drug treatment providers. In FY 2018, category 1 retained its emphasis on multidisciplinary partnerships—among law enforcement, behavioral health providers, medical professionals, and drug treatment and recovery providers—to divert people into treatment and services. But the COAP solicitation also broadened those partnerships to include victim services and child welfare, a change reflecting the recognition that children often witness an overdose or may otherwise be affected by drug use at home.

To date, BJA has made nearly 50 awards under category 1—12 in FY 2017 and 37 in FY 2018—including 5 awards to federally recognized tribes. Project periods span 24 to 36 months, and funding ranged from \$300,000 in FY 2017 to \$500,000 in FY 2018. Grantees use these awards to “establish coordinated multi-disciplinary response teams that include law enforcement and other first responders, treatment providers, and/or peer recovery specialists” (other team members may include child welfare providers, public health providers, hospital-based program providers, prosecutors, and the courts)¹⁰⁹ to implement pre-arrest or post-arrest diversion programs targeting people with OUD who commit low-

level crimes. Prominent diversion programs highlighted by the COAP solicitation for this category include PAARI, QRT, Drug Abuse Response Teams (DART), STEER, and LEAD. Additionally, consistent with the expanded scope of category 1 in FY 2018, nine grant awards—cofounded by BJA and the Office for Victims of Crime—support children affected by the opioid epidemic. These grants are designed to help children cope with trauma and build resilience.¹¹⁰

CATEGORY 2: TECHNOLOGY-ASSISTED TREATMENT PROJECTS

Category 2 COAP grants support states in piloting the use of technology “to expand treatment and recovery support opportunities to [justice-involved individuals with opioid use disorders who] have limited access to treatment and recovery services due to geographic isolation.”¹¹¹ Nine states have received category 2 funding. Awards range from \$500,000 to \$1 million, and projects span up to 36 months. Examples of category 2 technology projects include the use of tablets, mobile devices, and secure internet-enabled devices for (1) monitoring medication compliance and sobriety among justice-involved people with substance use disorders, and to increase treatment access, (2) facilitating real-time case management and peer recovery support services for incarcerated individuals, and (3) conducting substance abuse and behavioral health assessments of people in rural jails or on community supervision in remote areas.

CATEGORY 3: SYSTEM-LEVEL DIVERSION PROJECTS

Forty awards have been made to state, local, and tribal government organizations under COAP category 3. These grants provide support for the design of a continuum of system-level diversion options that address at least two criminal justice decision points embodied in the Sequential Intercept Model referenced earlier in this section. Successful FY 2017 and FY 2018 category 3 recipients proposed strategies that addressed each sequential intercept. Grantees used category 3 funds to implement pretrial and post-adjudication diversion programs; specialized probation caseloads for people with OUD, featuring Peer Recovery Navigators and naloxone distribution; jail-based treatment programs; community-based Day Report Centers offering overdose survivors access to basic health services, mentoring, life skills programming, and agricultural and artisan training; and myriad other interventions and activities, such as conducting countywide sequential intercept mapping to identify additional intervention points for people with OUD. Category 3 projects span up to 36 months.

CATEGORY 4: STATEWIDE PLANNING, COORDINATION, AND IMPLEMENTATION PROJECTS

Category 4 COAP grants are designed to support initiatives that identify gaps in policy or practice specific to the opioid crisis, and that are jointly planned and implemented by the state administrative

agency responsible for criminal justice planning and the single state agency for substance abuse services.¹¹² Category 4 funding supports two categories of activities: (1) formulating a coordinated plan between the state administrative agency and the single state agency that promotes diversion to treatment at the local level for people with OUD and mechanisms to increase treatment engagement and retention, and reduces overdose deaths (Subcategory 4a); and (2) support for localities to increase engagement in treatment and recovery services, provide prevention education programs to youth, increase the use of diversion - including family drug court - programming, and reduce overdose deaths (Subcategory 4b).¹¹³ Subcategory 4b also gives priority consideration to applicants that engage representatives in child welfare, public safety, and probation and parole . Between FY 2017 and FY 2018, 15 awards totaling \$10.6 million were to expand state and local models of public health, behavioral health, and public safety information sharing and collaboration.¹¹⁴

CATEGORY 5: HAROLD ROGERS PRESCRIPTION DRUG MONITORING PROGRAM IMPLEMENTATION AND ENHANCEMENT PROJECTS

Recipients of category 5 COAP grants may use funds to establish or enhance a current PDMP. State PDMPs “collect, monitor, and analyze electronically transmitted prescribing and dispensing data submitted by pharmacies and dispensing practitioners” (PDMP TTAC 2018, 1). As such, state PDMPs are repositories of critical information that can help officials charged with enforcing drug laws and overseeing the lawful distribution of controlled substances; aid in education, research, and abuse prevention; enhance patient care; inform drug abuse prevention and treatment strategies; and support cross-system collaborations among criminal justice, public health, and treatment stakeholders.¹¹⁵

COAP category 5 grant recipients receive up to \$750,000 and may use these funds to establish a PDMP or enhance an existing PDMP. Funds may also be used to develop training materials, produce and disseminate educational materials, facilitate data exchange, improve data quality, expand monitoring to additional substances, and evaluate the effectiveness of the PDMP.¹¹⁶ Projects may span 24 months. Between FY 2017 and FY 2018, BJA made 34 COAP category 5 awards totaling more than \$19 million. These grants supported various activities, including public education and awareness campaigns, data integration between PDMPs and electronic health records, and improvements to data quality and reporting (Kunkel 2019).

CATEGORY 6: PUBLIC SAFETY, BEHAVIORAL HEALTH, AND PUBLIC HEALTH INFORMATION-SHARING PARTNERSHIPS

Grants awarded in COAP category 6 fund multidisciplinary projects aimed at leveraging and analyzing datasets from PDMPs, public health agencies, law enforcement, and other key sources to create a data-

driven portrait of the opioid crisis and design relevant interventions. Projects undertaken by the 58 category 6 award recipients consist primarily of initiatives led by universities and state departments of health that will advance the use of data. Proposed activities include establishing an opioid and heroin data center; creating a multisector, regional “community of practice” to better understand the context of the local opioid crisis; designing and disseminating data dashboards that integrate and report on relevant indicators such as fentanyl and heroin distribution, naloxone administrations, and fatal and nonfatal overdoses; and improvements to PDMP exchanges across states.

COAP Training and Technical Assistance

Four principal training and technical assistance (TTA) providers—the Institute for Intergovernmental Research, Advocates for Human Potential, Altarum, and Brandeis University—provide COAP grantees with virtual and in-person TTA on a range of analytic and programmatic topics relevant to the successful implementation of their COAP strategies. Core TTA topics include performance measurement and management; peer recovery supports to enhance substance abuse treatment and recovery; medication-assisted treatment, telehealth treatments, naloxone administration, and overdose prevention programs to reduce opioid misuse and overdose fatalities; support for PDMPs; and multisector collaboration to promote best practices.¹¹⁷

The Institute for Intergovernmental Research performs several functions: it coordinates COAP TTA work across selected providers, conducts virtual peer learning exchanges via monthly COAP affinity group webinars, administers national grantee meetings, and coordinates resource dissemination. It also operates and maintains the COAP Resource Center website and related content.

Advocates for Human Potential delivers targeted TTA to category 1, 2, 3, and 4 grantees in collaboration with three partners: Treatment Alternatives for Safe Communities (category 1), the Center for the Application of Substance Abuse Technologies (category 2), and the Crime and Justice Institute (categories 3 and 4).¹¹⁸

Altarum helps COAP grantees implement best practices and promising approaches related to peer recovery support services. The final TTA provider, Brandeis University’s Heller School of Social Policy and Management, operates and maintains the virtual PDMP TTA center in partnership with the Institute for Intergovernmental Research. The center maintains a research clearinghouse that offers research and evaluation resources and data-related guidance. The center also provides training tools, technical guidance, resources, and TTA to advance data exchange via *RxCheck* and PDMP data sharing through the Prescription Monitoring Information Exchange National Architecture. Additionally, the

center provides a comprehensive array of services, including expert consultations, meeting facilitation, and issue briefs on topics such as PDMP best practices, innovations, evaluation, and performance measurements.¹¹⁹

Other COAP-Funded Initiatives

Finally, in spring 2019, BJA launched the following four opioid-focused grant programs designed to advance collaborative, data-driven responses to the opioid crisis:

- *The ODMAP Statewide Expansion and Response grant.* Under this 24-month grant program, six states will receive \$700,000 to expand the use of ODMAP data by localities to identify and deploy needed interventions.
- *The Partnerships to Support Data-Driven Responses to Emerging Drug Threats grant program.* This program seeks to reduce overdose deaths through cross-sector data-sharing and analysis by multidisciplinary partnerships among justice, behavioral health, and public health agencies. BJA anticipates making six awards valued at \$600,000 each.
- *Law Enforcement/First Responder Diversion Mentor Program.* Through this program, BJA will select communities with effective diversion programs and match them to communities ready to implement such strategies. Mentee sites will receive technical assistance and visit mentor sites to observe program operations and engage with their professional peers. TASC, Inc., a COAP TTA provider, will administer this program.
- *Rural Responses to the Opioid Epidemic grant program.* This grant opportunity addresses opioid overdoses, including overdose among justice-involved people, in high-risk rural communities by drawing on the expertise and resources of BJA, CDC, and the State Justice Institute. BJA anticipates making eight \$750,000 awards to rural communities to support innovation and cross-systems collaboration focused on the unique and dynamic aspects of the opioid epidemic in rural areas.¹²⁰

Specialty Court Grant Programs

BJA supports the implementation, operation, and assessment of specialty courts through the following three grant programs: the adult drug courts program, the veterans treatment courts program, and the drug treatment courts program. An extensive body of research indicates that specialty courts' multidisciplinary approach reduces recidivism and promotes treatment engagement. In FY 2018, BJA

awarded \$81.2 million to 110 grantees across the three specialty court grant programs. Drug courts and veterans treatment courts are recognized under CARA as funding efforts related to the opioid crisis and are discussed here for that reason.

Drug courts focus on justice-involved adults with substance abuse issues. The Adult Drug Courts grant program supports local, state, and tribal government organizations in three ways: opening new courts, enhancing the operations of existing courts by adding services or building additional capacity, and expanding drug courts statewide. The program also provides grantees training and technical assistance resources. In FY 2018, BJA made 69 awards totaling \$38.4 million across the three categories.

The veterans treatment court grant program also funds the implementation, enhancement, and expansion of treatment courts, but focuses on justice-involved veterans, who often suffer from substance abuse disorders. These programs provide an array of services, including substance abuse and mental health treatment, housing, employment, and assistance accessing veteran's benefits. The program, coordinated by a multidisciplinary team of criminal justice stakeholders and human services providers, addresses the underlying issues that cause veterans to become justice involved, while holding participants accountable. Eighteen awards totaling nearly \$9 million were made in FY 2018.

Drug treatment courts, the third specialty court program, aim to build the capacity of state, local, and tribal drug court programs to serve juvenile justice-involved youth with opioid abuse problems, as well as those with co-occurring mental health disorders.¹²¹ This grant program funds juvenile drug treatment courts, family drug treatment courts, technical assistance, and research and evaluation of family drug treatment courts. In FY 2018, 20 grants totaling nearly \$13 million were made to state, local, and tribal governments under this program, and three awards totaling \$3.3 million were given for related technical assistance (\$1.5 million) and evaluation (\$1.8 million).

Residential Substance Abuse Treatment for State Prisoners Program

The Residential Substance Abuse Treatment (RSAT) for State Prisoners program “assists states and local governments to develop and implement substance use treatment programs in state and local correctional and detention facilities” and to create, establish, or maintain community-based aftercare services for people released from state and local custody.¹²² The goal of the RSAT program is to break the cycle of drugs and violence by reducing the demand for, use, and trafficking of illegal drugs. RSAT awards also require recipients to help people who are incarcerated prepare for release and community reintegration through reentry planning and referrals to community-based aftercare and services; it also

includes a drug testing component. Training and technical assistance for state RSAT administrators and local facilities is offered from BJA through a cooperative agreement with the Advocates for Human Potential on the RSAT website (<http://www.rsat-tta.com/>).

The RSAT program is a formula grant program whereby state administering agencies are eligible to apply for the formula amount each year. Once awarded, agencies typically subgrant funds through a competitive application process open to state correctional facilities, juvenile facilities, local jails, and/or tribal governments operating substance abuse treatment programs. Between FY 2017 and FY 2018, BJA made 107 RSAT awards totaling approximately \$38 million.¹²³ Notably, through RSAT awards, MAT was made available to prison-based program participants in 20 states and program participants in 29 jail-based programs spanning 13 states and the District of Columbia.

Justice and Mental Health Collaboration Program

The Justice and Mental Health Collaboration Program (JMHCP) seeks to increase access to behavioral health treatment and services for people with mental illness and co-occurring disorders by facilitating collaboration among criminal justice, mental health, and substance abuse treatment systems. Authorized by Congress in 2004 under the Mentally Ill Offender Treatment and Crime Reduction Act, and later under the 21st Century Cures Act, the JMHCP provides state, local, and tribal government entities with funding and technical assistance. The FY 2018 JMHCP solicitation describes the program's objectives this way:

The program promotes officer and public safety through the coordination of system resources for people who are accessing multiple services including hospital emergency departments, jails, and mental health crisis services ... promotes cross-discipline training for justice and treatment professionals; and facilitates communication, collaboration, and the delivery of support services among justice professionals, and treatment and related service providers.¹²⁴

JMHCP grantees may receive funding under one of three categories and use funds for several strategies, including diversion and alternative sentencing programs, mobile crisis outreach teams staffed by law enforcement agencies and mental health providers, cross-training of criminal justice and behavioral health staff, and direct services.¹²⁵ In FY 2018, 15 JMHCP grantees proposed opioid-specific strategies.¹²⁶ These 15 awards totaled nearly \$6 million.

Youth-Oriented Opioid Activities

OJP's commitment to helping youth affected by the opioid epidemic is reflected in three FY 2018 solicitations. One of them, Enhancing Community Responses to the Opioid Crisis: Serving Our Youngest Crime Victims, is administered by the Office for Victims of Crime. The Office of Juvenile Justice and Delinquency Prevention administers the other two, the Opioid Affected Youth Initiative and Mentoring Strategies for Youth Impacted by Opioids.

The Enhancing Community Responses to the Opioid Crisis: Serving Our Youngest Crime Victims grant program provided nearly \$30 million in funding to 41 FY 2018 grantees in 26 states; it also funds training and technical assistance. This program works to fill “an urgent gap in crime victim services related to the opioid epidemic” by establishing new programs or expanding existing programs that provide services to children and youth victimized as a result of the opioid crisis.¹²⁷ Grantee strategies include assessment, parenting training, residential and outpatient treatment, trauma-informed care, and assistance with accessing Medicaid and other services tailored to children and teens.

The Opioid Affected Youth Initiative is designed to address the devastating impacts of the opioid crisis on children. Such impacts include neonatal abstinence syndrome, child abuse and neglect, foster care placement, and child exploitation and trafficking. Research shows that early adverse events put children at increased risk for substance use and substance use disorders, creating an intergenerational cycle of addiction. Most jurisdictions lack the resources and capacity to attack the opioid problem through a cross-system, collaborative, and data-driven framework. This initiative funds multidisciplinary task forces to share and analyze agency data, develop strategies and interventions, and implement data-driven responses that promote public safety, accountability, and life skills to meet the needs of children and families affected by the opioid epidemic. In FY 2018, six grantees representing state and county partnerships (e.g., probation, law enforcement, statewide taskforce) were provided approximately \$7 million to design and implement multidisciplinary collaborations and strategies that address the needs of youth affected by the opioid crisis.

The Mentoring Strategies for Youth Impacted by Opioids grant program funds mentoring services for youth identified as at risk or at high risk for justice system involvement. Grantees are encouraged to prioritize youth with incarcerated parents or parents in the military, youth in rural areas, and youth with opioid or other drug use issues.¹²⁸ Grants were provided in five categories, two of which focused on youth affected by opioids and providing mentoring services as part of a larger treatment approach. In FY 2018, the Office of Juvenile Justice and Delinquency Prevention awarded nearly \$10 million in these

two categories to 12 statewide and local mentoring organizations in as many states. Grantees may provide one-on-one mentoring, group mentoring, peer mentoring, or some combination of the three.

Other OJP Opioid-Related Funding

In FY 2018, the National Institute of Justice (NIJ) made 12 awards, issued under various solicitations and valued at more than \$6 million, to advance research and evaluation of the opioid crisis. Grantees included universities, independent research organizations, state law enforcement agencies, and state forensics departments. These grants supported a broad array of opioid-related research. One project involves developing and testing analytic tools to support investigations of opioid transactions on the dark web, and methods for testing physical evidence. Other research is focused on evaluating the use of telehealth technology in the delivery of opioid-related treatment to incarcerated individuals.

NIJ also administers the Paul Coverdell Forensic Science Improvement Grants Program, which supports forensic activities and can be used to address the challenges posed by opioids and synthetic drugs. In FY 2018, NIJ anticipated allocating up to \$17 million to state and local medical examiners and forensic laboratories to address the dramatic increase in opioid overdose deaths and seized drugs resulting from the opioid crisis.¹²⁹ Of that amount, \$1.2 million was allocated through seven awards to a mix of city, county, and state agencies in Alabama, Arizona, Louisiana, Ohio, Oregon, Pennsylvania, and Texas.

In FY 2018, the Bureau of Justice Assistance also launched a grant solicitation called Innovative Prosecution Solutions for Combatting Violent Crime and Opioid Use. The goal is to develop effective, prosecutor-led programs to address illegal opioid distribution and violent crime, including the prosecution of people responsible for homicides caused by illegal opioid use.¹³⁰ Under this grant solicitation, state, local, and tribal prosecutors are encouraged to develop data-driven violent crime control strategies that also feature promising or evidence-based prosecution practices. As part of their work, prosecutors are directed to partner with a researcher and establish “innovative and effective working relationships” with community members and leaders.¹³¹

Eight prosecutors’ offices in seven states (Alabama, Louisiana, Massachusetts, Michigan, Tennessee, Texas, and Wisconsin) received awards totaling \$2.8 million,¹³² of which three awards were funded under COAP. Apart from Wisconsin, all grantees operate at the county level. Grantee strategies have varied significantly. Some proposed to use analytic tools, such as social network analysis and hot spot mapping, to enhance law enforcement intelligence on local opioid trades. Other grantees proposed to add prosecutors to county overdose taskforces to enhance the prosecutor’s role in fatal overdose

investigations, an approach designed to increase prosecutions of people responsible for opioid-related deaths. Still others sought to more effectively connect people with OUD to treatment and to identify and prosecute traffickers and distributors.

Key Takeaways

- The Office of Justice Programs,¹³³ US Department of Justice, has supported a wide variety of strategies to combat the opioid epidemic, providing grants for detection and interdiction, diversion and prosecution, treatment, and patient and physician education.
- The centerpiece of OJP's effort is the Comprehensive Opioid Abuse Program, authorized as part of the Comprehensive Addiction Recovery Act of 2016. With a total appropriation of \$315 million, COAP is BJA's largest competitive grant program. COAP funding supports more than 200 state, local, and tribal grantees and provides training and technical assistance.
- Through grantees in 47 states, COAP provides innovative, systemwide approaches to identify, address, treat, and support people affected by the opioid epidemic, particularly those in deeply affected rural and tribal communities.
- In addition to COAP, the DOJ's Office of Justice Programs administers federal grants that support specialty courts, prosecutor-led programs to address opioid distribution and violent crime, programs to enhance services and support for children affected by the epidemic, and collaborative efforts to increase access to treatment and services for people with mental illness and co-occurring disorders.
- Under COAP, BJA has forged cross-system collaboration with other federal agencies such as the Substance Abuse and Mental Health Services Administration, National Institutes of Health, and the CDC, as well as joint ventures with private philanthropy to support communities in addressing the opioid epidemic.

Conclusions

The opioid crisis has taken a tremendous toll on this country. Whether prescribed, diverted, or produced illicitly, both natural and synthetic opioids have created a generation of people afflicted with OUD and a generation behind them suffering. The resulting diminishment of human potential and loss of life has had a devastating impact on families and communities, endangering and disrupting the lives of

children, fueling the spread of infectious disease, harming local economies, and diminishing the labor force and tax base nationwide.

The scope and often fatal impact of opioids extend beyond people touched by OUD, imposing tremendous burdens on first responders, health care providers, foster care systems, and other public-sector actors. Among these many stakeholders challenged with responding to the opioid crisis and the people touched by it, criminal justice system agencies and actors find themselves at the intersection of affected populations and communities. First responders struggle to meet the demand for their services, experience vicarious trauma, and are at risk of exposure to infected needles and accidental poisoning. Coroners and medical examiners are overburdened with cases and lack resources and systems to collect and track data on sources of fatalities. Similarly, jails and courts have experienced an influx of clients with OUD, creating both challenges in management and opportunities for prevention, harm reduction, and treatment, including MAT, therapeutic courts, and specialized programs.

The federal government in general, and DOJ specifically, has invested heavily in responding to this crisis. Efforts to infuse states and localities with resources, training, technical assistance, and policy guidance have taken many forms. Following the Sequential Intercept Model, OJP has wisely sought to ensure that every point in the criminal justice system is well equipped to identify and attend to people with OUD and those at risk of succumbing to it. These efforts span supporting front-end diversion programs such as dual-response teams, to enhancing access to treatment behind bars and disseminating a system to collect and analyze overdose data. All these efforts share an overriding theme of cross-disciplinary approaches that promote collaboration and coordination among the many system actors within and outside the criminal justice system and encourage the collection and sharing of data across agencies and levels of government. In fact, BJA is already collecting promising practices on these efforts that are achieving life-saving results. The role of BJA is to disseminate these examples widely and serve as a convener to practitioners and policymakers to engage in peer learning; in essence, to serve as a “one-stop shop” for guidance on battling the opioid crisis in context where public health and public safety intersect.

A review of OJP’s grant programs addressing opioids suggests that DOJ’s investments align well with both the underlying causes and wide-ranging impacts of the crisis on criminal justice systems and populations and the needs of states and localities in combating it. Nonetheless, challenges remain in promoting collaboration across systems, service providers, and affected communities—including data sharing among agencies. Highlighted throughout this report are several key ingredients to ensure the success of these programs and any future investments.

First, criminal justice practitioners on the front lines of the opioid crisis—primarily law enforcement and other first responders—require resources and support not only to respond to opioid overdoses but to play a role in harm reduction and prevention in their communities while supporting their own physical and mental health well-being. In addition, practitioners are uniquely positioned to collect critical data to track trends in opioids and the emergences of new or newly emerging illicit substances. OJP is supporting such efforts through the Justice and Mental Health Collaboration Program, the Innovative Prosecution Solutions for Combatting Violent Crime and Opioid Use grant solicitation, and its recent expansion of funding and support for ODMAP.

Second, given the intersecting nature of the opioid crisis—spanning public health, educational, social welfare, and public safety entities—coordination between criminal justice agencies and actors and other public and nongovernment entities is crucial. This entails the exchange of information, intelligence, and response strategies, as well as the sharing and integration of data—not just among agencies but also across units of government and geographic regions. OJP’s Public Safety, Behavioral Health, and Public Health Information-Sharing Partnerships through the Comprehensive Opioid Abuse Program does this, but the degree of need for better integration and coordination demands continued investments, models for collaboration (such as overdose fatality review boards), and targeted dissemination.

Third, the evidence is clear that medication-assisted treatment, particularly when combined with behavior modification interventions, can effectively combat OUD. Efforts to engage people with MAT should be infused into each stage of the criminal justice system, from first responders referring people experiencing opioid overdoses to treatment that includes access to MAT, to judges referring clients for substance use disorder evaluations, to jails and prisons ensuring access to MAT during incarceration and continued treatment in the community. Incorporating MAT into all manner of criminal justice responses will reduce overdose and overdose fatalities and increase the likelihood of stemming the tide of OUD generally, as well as its resulting harms and burdens to families, communities, and social welfare and public safety systems. OJP’s recent partnership with Arnold Ventures to enhance access to MAT in jail settings is a creative approach to meeting this need.

Fourth, educational efforts that combat stigma and misinformation about OUD and MAT among stakeholders who can facilitate access to and use of MAT among criminal justice-involved people are essential to ensure consistent, widespread use of MAT and other harm-reduction and treatment responses to OUD. Training, public awareness campaigns, and educational efforts to inform criminal justice system actors about the brain science behind addiction will create a stronger foundation from which to engage them in supporting access to treatment and services. OJP has invested in education

projects through COAP's first responder partnerships category, and it should continue to promote the educational materials stemming from those efforts to ensure uptake.

Lastly, the evolving and increasingly complex nature of the opioid crisis—which is marked by the introduction of new synthetic opioids, newly emerging geographic trends, the onset of OUD among different groups, and the increasing evidence of polysubstance use—points to the need for continued vigilance and use of alert systems. PDMP data are helpful, but they pertain only to prescribed pharmaceutical opioids. ODMAP is expanding and should be further promoted and advanced along with efforts among HIDTAs. Resurrecting the Arrestee Drug Abuse Monitoring program for near-real-time tracking of trends in illicit substance use would also be a worthwhile investment. The shifting trends in illicit substance use also raise questions about whether and how focusing on opioids may be overly restrictive. Both Congress and DOJ should consider how to ensure that COAP and related efforts are adaptable so the government can respond swiftly and effectively to new and related illicit drug crises as they emerge.

Notes

- 1 See also “Opioid Data Analysis and Resources,” Centers for Disease Control and Prevention (CDC), National Center for Injury Prevention and Control (NCIPC), last updated December 19, 2018, <https://www.cdc.gov/drugoverdose/data/analysis.html>.
- 2 “Opioid Data Analysis and Resources,” <https://www.cdc.gov/drugoverdose/data/analysis.html>
- 3 “Drug Overdose,” Drug Policy Alliance, accessed June 27, 2019, <http://www.drugpolicy.org/issues/drug-overdose>.
- 4 “Overdose Death Rates,” NIDA (National Institute on Drug Abuse), revised January 2019, <https://www.drugabuse.gov/related-topics/trends-statistics/overdose-death-rates>.
- 5 “Opioid Overdose Crisis,” NIDA (National Institute on Drug Abuse), revised January 2019, <https://www.drugabuse.gov/drugs-abuse/opioids/opioid-overdose-crisis>.
- 6 “Accidental Overdose Death Totals,” Public Health Dayton and Montgomery County, accessed May 28, 2019, <https://www.phdmc.org/coat/158-accidental-overdose-death-totals>.
- 7 “Prescription Opioids,” CDC NCIPC, last updated August 29, 2017, <https://www.cdc.gov/drugoverdose/opioids/prescribed.html>.
- 8 “Prescription Opioids,” <https://www.cdc.gov/drugoverdose/opioids/prescribed.html>.
- 9 Brennan Hoban, “The Far-Reaching Effects of the US Opioid Crisis,” Brookings Institution blog, October 25, 2017, <https://www.brookings.edu/blog/brookings-now/2017/10/25/the-far-reaching-effects-of-the-us-opioid-crisis/>.
- 10 See also Claire Felter, “The U.S. Opioid Epidemic,” Council on Foreign Relations, January 17, 2019, <https://www.cfr.org/backgrounder/us-opioid-epidemic>.
- 11 Ron Nixon, “U.S. Struggles to Stop Smuggling of Mail-Order Opioids,” *New York Times*, May 30, 2018, <https://www.nytimes.com/2018/05/30/us/politics/drug-smuggling-mail-order-opioids.html>.
- 12 Nora Volkow, “Addressing the Opioid Crisis Means Confronting Socioeconomic Disparities,” *Nora’s Blog*, NIDA, October 25, 2017, <https://www.drugabuse.gov/about-nida/noras-blog/2017/10/addressing-opioid-crisis-means-confronting-socioeconomic-disparities>.
- 13 “What Are Opiates? What Is Their Addiction Potential?” American Addiction Centers, last updated June 13, 2019, <https://americanaddictioncenters.org/opiates>.
- 14 Lindsay Liu, Diana N. Pei, and Pela Soto, “Introduction to the Opioid Epidemic,” National Capital Poison Center, accessed March 20, 2019, <https://www.poison.org/articles/introduction-to-the-opioid-epidemic-182>; “How Opioid Drugs Activate Receptors,” National Institutes of Health, May 22, 2018, <https://www.nih.gov/news-events/nih-research-matters/how-opioid-drugs-activate-receptors>; “Education: Opiates/Opioids,” National Alliance of Advocates for Buprenorphine Treatment, accessed March 20, 2019, https://www.naabt.org/education/opiates_opioids.cfm.
- 15 Mike Stobbe, “Today’s Opioid Crisis Shares Chilling Similarities with Past Drug Epidemics,” *Chicago Tribune*, October 28, 2017, <https://www.chicagotribune.com/news/nationworld/ct-drug-epidemics-history-20171028-story.html>.
- 16 Stobbe, “Today’s Opioid Crisis Shares Chilling Similarities with Past Drug Epidemics.”

- 17 Martha Bebinger, “Fentanyl-Linked Deaths: The U.S. Opioid Epidemic’s Third Wave Begins,” *Morning Edition*, NPR, March 21, 2019, <https://www.npr.org/sections/health-shots/2019/03/21/704557684/fentanyl-linked-deaths-the-u-s-opioid-epidemics-third-wave-begins>.
- 18 Stobbe, “Today’s Opioid Crisis Shares Chilling Similarities with Past Drug Epidemics.”
- 19 Barry Meier, “In Guilty Plea, OxyContin Maker to Pay \$600 Million,” *New York Times*, May 10, 2007, <https://www.nytimes.com/2007/05/10/business/11drug-web.html>.
- 20 *OxyContin: Balancing Risk and Benefits*. Hearing of the Committee on Health, Education, Labor, and Pensions, US Senate, 107th Cong. (2002).
- 21 Meier, “In Guilty Plea, OxyContin Maker to Pay \$600 Million.”
- 22 See also Felter, “The U.S. Opioid Epidemic”; and “Opioid Data Analysis and Resources,” <https://www.cdc.gov/drugoverdose/data/analysis.html>.
- 23 Though fentanyl is lawfully prescribed, typically for cancer patients, reference here is to the illicitly trafficked and consumed forms of fentanyl.
- 24 Marisa Crane, “Fentanyl vs. Heroin: The Similarities and Differences Between Two Powerful Opioids,” American Addiction Centers, last updated June 17, 2019, <https://americanaddictioncenters.org/fentanyl-treatment/similarities>.
- 25 “Overdose Death Rates,” NIDA, last updated January 2019, <https://www.drugabuse.gov/related-topics/trends-statistics/overdose-death-rates>; CDC, “U.S. Drug Overdose Deaths Continue to Rise; Increase Fueled by Synthetic Opioids,” press release, March 29, 2018, <https://www.cdc.gov/media/releases/2018/p0329-drug-overdose-deaths.html>.
- 26 “Fake Fentanyl Responsible for Florida Deaths,” Orlando Recovery Center blog, accessed June 27, 2019, <https://www.orlandorecovery.com/blog/fake-fentanyl-causes-florida-deaths/>.
- 27 See also Martha Bebinger, “Fentanyl-Laced Cocaine Becoming a Deadly Problem among Drug Users,” *Morning Edition*, NPR, March 29, 2018, <https://www.npr.org/sections/health-shots/2018/03/29/597717402/fentanyl-laced-cocaine-becoming-a-deadly-problem-among-drug-users>.
- 28 Destiny Bezrutczyk and Theresa Soltesz, “What Is a Speedball?” Addiction Center, last updated May 21, 2019, <https://www.addictioncenter.com/drugs/heroin/speedball/>.
- 29 See also *OxyContin: Balancing Risk and Benefits*.
- 30 “Substance Abuse in Rural Areas,” Rural Health Information Hub, last updated February 20, 2018, <https://www.ruralhealthinfo.org/topics/substance-abuse>.
- 31 Volkow, “Addressing the Opioid Crisis Means Confronting Socioeconomic Disparities.”
- 32 “Opioid Data Analysis and Resources,” <https://www.cdc.gov/drugoverdose/data/analysis.html>.
- 33 “Drug Overdose Deaths,” <https://www.cdc.gov/drugoverdose/data/statedeaths.html>.
- 34 “Opioid Addiction, Death, and Treatment: The Latest Analysis of the Data,” USA Facts, accessed June 27, 2019, <https://usafacts.org/reports/opioid-addiction-deaths-treatment-data>.
- 35 “Prescription Painkiller Overdoses: A Growing Epidemic, Especially among Women,” CDC, last updated September 4, 2018, <https://www.cdc.gov/vitalsigns/prescriptionpainkilleroverdoses/index.html>.
- 36 Peter Jamison, “‘Pure Incompetence.’” *Washington Post*, December 19, 2018, <https://www.washingtonpost.com/graphics/2018/local/dc-opioid-epidemic-response-african-americans/> and Marisa Penalosa, “The Opioid Crisis Is Surging In Black, Urban Communities,” *Morning Edition*, NPR, March 8, 2019, <https://www.npr.org/2018/03/08/579193399/the-opioid-crisis-frightening-jump-to-black-urban-areas>

- 37 Kathleen Smith, "Depression and Opioid Abuse," Psycom, last updated November 25, 2018, <https://www.psycom.net/depression.central.opioid.abuse.html>.
- 38 "Child Welfare and Treatment Statistics," Substance Abuse and Mental Health Services Administration (SAMHSA), National Center on Substance Abuse and Child Welfare, accessed June 27, 2019, <https://ncsacw.samhsa.gov/resources/child-welfare-and-treatment-statistics.aspx>.
- 39 "Treating the Opioid Epidemic as a Children's Health Crisis," National Institute for Children's Health Quality, accessed March 20, 2019, <https://www.nichq.org/insight/treating-opioid-epidemic-childrens-health-crisis>.
- 40 "Treating the Opioid Epidemic as a Children's Health Crisis," National Institute for Children's Health Quality, accessed March 20, 2019, <https://www.nichq.org/insight/treating-opioid-epidemic-childrens-health-crisis>.
- 41 Felter, "The U.S. Opioid Epidemic."
- 42 Felter, "The U.S. Opioid Epidemic."
- 43 Mary Kate McGrath, "Escalating Health Risks for Opioid Crisis Emergency Teams," Rave Mobile Safety, December 5, 2017, <https://www.ravemobilesafety.com/blog/first-responder-ptsd-during-opioid-crisis>; Kathryn Millán, "The Opioid Crisis and the Mental Health of First Responders," Valley Hospital, accessed June 27, 2019, <https://valleyhospital-phoenix.com/opioid-crisis-mental-health-first-responders/>.
- 44 *Ten Standards of Care: Policing and the Opioid Crisis*, Johns Hopkins Bloomberg School of Public Health, https://americanhealth.jhu.edu/sites/default/files/inline-files/PolicingOpioidCrisis_LONG_final_0.pdf.
- 45 Mark Tartaglia and Robert Phalen, "Protection in an Uncontrolled Environment: Emergency Responders and Opioids Exposures," *The Synergist*, December 2017, <https://synergist.aiha.org/201712-uncontrolled-environment>.
- 46 "Fentanyl: Preventing Occupational Exposure to Healthcare Personnel," CDC, National Institute for Occupational Safety and Health (NIOSH), <https://www.cdc.gov/niosh/topics/fentanyl/healthcareprevention.html>.
- 47 Dave Collins, "Overdose Deaths Overwhelm Medical Examiner, Coroner Offices," *AP News*, June 23, 2016, <https://apnews.com/08e507efe2b440fb81eda5278f5c05c5>.
- 48 Dave Collins, "Overdose Deaths Overwhelm Medical Examiner, Coroner Offices," *AP News*, June 23, 2016, <https://apnews.com/08e507efe2b440fb81eda5278f5c05c5>.
- 49 Stephanie Dias and Brian Holsey, "Challenges in Measuring Fentanyl Analogs: Advice from the Front Lines," *Clinical Laboratory News* (AACC Laboratories), May 1, 2018, <https://www.aacc.org/publications/cln/articles/2018/may/challenges-in-measuring-fentanyl-analogs-advice-from-the-front-lines> and Christine Vestal, "Opioid Overdoses Swamp Medical Examiners," PEW (The PEW Charitable Trusts), July 6, 2017, <http://pew.org/2uqUb31>.
- 50 Larry Eichel and Octavia Howell, "Philadelphia's Drug-Related Homicides Continue to Rise," PEW (The PEW Charitable Trusts), September 28, 2017, <https://www.pewtrusts.org/en/research-and-analysis/articles/2017/09/28/philadelphias-drug-related-homicides-continue-to-rise>
- 51 Steven Lee Myers and Abby Goodnough, "China Bans All Types of Fentanyl, Cutting Supply of Deadly Drug to U.S. and Fulfilling Pledge to Trump," *New York Times*, April 1, 2019, <https://www.nytimes.com/2019/04/01/world/asia/china-bans-fentanyl-trump.html>.
- 52 Rick Callahan, "Indiana Crackdown on Opioids Sparks More Pharmacy Robberies," *AP News*, June 23, 2017, <https://apnews.com/2f253ee2b3874285a84ecf584c64e03b>.
- 53 "Opioids and the Courts," National Center for State Courts, <https://www.ncsc.org/Topics/Court-Management/Leadership-and-Change-Management/Opioids-and-the-Courts.aspx>.

- 54 See also “Opioids and the Courts,” National Center for State Courts, accessed April 12, 2019, <https://www.ncsc.org/Topics/Court-Management/Leadership-and-Change-Management/Opioids-and-the-Courts.aspx>;
- 55 Chrysta Slayton, “Maximum Sentencing under Section 35,” honors thesis, Salem State University, May 2015, https://digitalcommons.salemstate.edu/honors_theses/57.
- 56 Slayton, “Maximum Sentencing under Section 35.”
- 57 Eric Westervelt, “To Save Opioid Addicts, This Experimental Court Is Ditching The Delays,” NPR, 2017. <https://www.npr.org/sections/health-shots/2017/10/05/553830794/to-save-opioid-addicts-this-experimental-court-is-ditching-the-delays>.
- 58 Colleen Barry and Richard Frank, “Evidence for Addressing the Opioid Epidemic: Rounding Out the Picture,” Brookings Institution blog, February 6, 2019, <https://www.brookings.edu/blog/up-front/2019/02/06/evidence-for-addressing-the-opioid-epidemic-rounding-out-the-picture/>.
- 59 “Prescribing Policies: States Confront Opioid Overdose Epidemic,” National Conference of State Legislatures, October 31, 2018, <http://www.ncsl.org/research/health/prescribing-policies-states-confront-opioid-overdose-epidemic.aspx>.
- 60 Lou Ortenzio and Beth Schwartzapfel, “I Was a Doctor Addicted to Pills. So Were My Patients,” The Marshall Project, January 3, 2019, <https://www.themarshallproject.org/2019/01/03/i-was-a-doctor-addicted-to-pills-so-were-my-patients>.
- 61 “DEA Programs: High Intensity Drug Trafficking Areas (HIDTAs),” Drug Enforcement Administration (DEA), accessed June 27, 2019, <https://www.dea.gov/hidta>.
- 62 DEA, “DEA Los Angeles Announces New Opioid and Overdose Prevention Efforts as Part of DEA 360 Strategy,” press release, December 18, 2018, <https://www.dea.gov/press-releases/2018/12/18/dea-los-angeles-announces-new-opioid-and-overdose-prevention-efforts-part>.
- 63 Formerly referred to as HIDTA’s Heroin Response Strategy.
- 64 “DEA Programs: High Intensity Drug Trafficking Areas (HIDTAs),” <https://www.dea.gov/hidta>.
- 65 Department of Justice. “Appalachian Regional Prescription Opioid (ARPO) Strike Force Takedown Results in Charges Against 60 Individuals, Including 53 Medical Professionals,” April 17, 2019. <https://www.justice.gov/opa/pr/appalachian-regional-prescription-opioid-arpo-strike-force-takedown-results-charges-against>.
- 66 “Harold Rogers Harold Rogers Prescription Drug Monitoring Program,” n.d. Transmitted via email by Tara Kunkel on May 21, 2019.
- 67 R. L. Wynn, “Opioid Medication Disposal Programs: Reviewing Their Effectiveness,” Wolters Kluwer, January 3, 2017, <https://www.wolterskluwer.com/blog/opioid-medication-disposal-programs-reviewing-their-effectiveness/>.
- 68 *Ten Standards of Care*, Johns Hopkins Bloomberg School of Public Health.
- 69 “Public Safety Strategy Area,” Police, Treatment, and Community Collaborative, accessed June 27, 2019, <https://ptacollaborative.org/strategy-areas/public-safety/>.
- 70 Larreca Cox, “QRT: Huntington Quick Response Team,” undated presentation, Help and Hope WV, <https://www.helpandhopewv.org/sudsummit/docs/QRT%20-%20Larreca%20Cox.pdf>.

- 71 “STEER Deflection Model,” Center for Health & Justice at TASC, accessed June 27, 2019, <http://www2.centerforhealthandjustice.org/content/project/steer-deflection-model-pre-booking-diversion-option-law-enforcement>.
- 72 “Evaluations,” LEAD National Support Bureau, accessed June 27, 2019, <https://www.leadbureau.org/evaluations>.
- 73 “About the CDC-Kaiser ACE Study,” CDC, last updated April 2, 2019, <https://www.cdc.gov/violenceprevention/childabuseandneglect/acestudy/about.html>
- 74 Maury Richards, “This West Virginia Initiative Is a Model Solution to the National Opioid Crisis,” *The Hill*, January 8, 2018, <https://thehill.com/opinion/criminal-justice/367926-this-west-virginia-initiative-is-a-model-solution-to-the-national>.
- 75 Craig D. Hannah, “Buffalo Opioid Intervention Court,” undated PowerPoint presentation, <https://www.ncsc.org/~media/9EC92AA8F5BD4002B8D0C82EE88FDA90.ashx>.
- 76 Hannah, “Buffalo Opioid Intervention Court.”
- 77 Corinne Ramey, “Bronx Drug Court Aims to Help Opioid-Addicted Defendants.” *Wall Street Journal*, January 29, 2018. <https://www.wsj.com/articles/bronx-drug-court-aims-to-help-opioid-addicted-defendants-1517261038>.
- 78 “Suffolk County Launches Innovative Court Initiative in Response to Opioid Crisis.,” New York State Unified Court System, August 13, 2018, http://ww2.nycourts.gov/sites/default/files/document/files/2018-08/PR18_15.pdf.
- 79 Leslie Harris, “Methadone Maintenance Found to Be More Effective in Treating Heroin Addiction than 180 Day Detoxific,” University of California San Francisco, March 7, 2000, <https://www.ucsf.edu/news/2000/03/5047/methadone-maintenance-found-be-more-effective-treating-heroin-addicti>; “Misuse of Prescription Drugs: Overview,” NIDA, last updated December 2018, <https://www.drugabuse.gov/publications/misuse-prescription-drugs/overview>; “Treatment of Opioid Dependence,” World Health Organization, accessed June 27, 2019, https://www.who.int/substance_abuse/activities/treatment_opioid_dependence/en/.
- 80 “Medication and Counseling Treatment,” SAMHSA, last updated May 7, 2017, <https://www.samhsa.gov/medication-assisted-treatment/treatment>
- 81 “Medication and Counseling Treatment,” <https://www.samhsa.gov/medication-assisted-treatment/treatment>.
- 82 “Telemedicine,” Centers for Medicare and Medicaid Services, accessed June 27, 2019, <https://www.medicare.gov/medicaid/benefits/telemed/index.html>; “Telehealth Programs,” Health Resources and Services Administration, last updated May 2019, <https://www.hrsa.gov/rural-health/telehealth/index.html>.
- 83 “Status of State Medicaid Expansion Decisions: Interactive Map,” Kaiser Family Foundation, May 13, 2019, <https://www.kff.org/medicaid/issue-brief/status-of-state-medicaid-expansion-decisions-interactive-map/>.
- 84 “Status of State Medicaid Expansion Decisions,” <https://www.kff.org/medicaid/issue-brief/status-of-state-medicaid-expansion-decisions-interactive-map/>.
- 85 “Peers supporting Recovery From Substance Use Disorders,” SAMHSA, accessed April 12, 2019, https://www.samhsa.gov/sites/default/files/programs_campaigns/brss_tac/peers-supporting-recovery-substance-use-disorders-2017.pdf
- 86 See also *Ten Standards of Care: Policing and the Opioid Crisis*, Johns Hopkins Bloomberg School of Public Health.

- ⁸⁷ “Drug Overdose Immunity and Good Samaritan Laws,” National Conference of State Legislatures, June 5, 2017, <http://www.ncsl.org/research/civil-and-criminal-justice/drug-overdose-immunity-good-samaritan-laws.aspx>.
- ⁸⁸ Luke Broadwater and Alison Knezevich, “Baltimore Launches ‘Bad Batch’ Text-Alert System for Overdoses,” *Baltimore Sun*, August 18, 2017, <https://www.baltimoresun.com/news/maryland/baltimore-city/bs-md-ci-bad-batch-alert-20170818-story.html>
- ⁸⁹ Meredith Cohn, “Baltimore Warnings about Deadly Street Drugs Aren’t Working Because of Ransomware Attack,” *Baltimore Sun*, May 15, 2019, <https://www.baltimoresun.com/health/bs-hs-bad-batch-cut-off-20190514-story.html>
- ⁹⁰ “PDAPS: Good Samaritan Overdose Prevention Laws,” Legal Science, LLC, July 1, 2018, <http://pdaps.org/datasets/good-samaritan-overdose-laws-1501695153>.
- ⁹¹ “PDAPS: Good Samaritan Overdose Prevention Laws,” Legal Science, LLC, July 1, 2018, <http://pdaps.org/datasets/good-samaritan-overdose-laws-1501695153>.
- ⁹² “Injection Drug Use and HIV Risk,” CDC, last updated May 28, 2019, <https://www.cdc.gov/hiv/risk/idu.html>.
- ⁹³ “Safe Community Needle Disposal,” CDC, NIOSH, last updated September 30, 2016, <https://www.cdc.gov/niosh/topics/bbp/disposal.html>.
- ⁹⁴ “Reducing Harms from Injection Drug Use and Opioid Use Disorder with Syringe Services Programs,” CDC, August 2017, <https://www.cdc.gov/hiv/pdf/risk/cdchiv-fs-syringe-services.pdf>
- ⁹⁵ Carl Hulse, “House Republicans Ease Opposition to Needle Exchanges.” *New York Times*, June 16, 2015, <https://www.nytimes.com/2015/06/17/us/house-republicans-ease-opposition-to-needle-exchanges.html>.
- ⁹⁶ “HIV and Injection Drug Use: Syringe Services Programs for HIV Prevention,” CDC, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, November 29, 2016, https://www.cdc.gov/nchhstp/dear_colleague/2016/dcl-112916-hiv-and-injection-drug-use.html.
- ⁹⁷ “More States Authorizing the Use of Overdose Fatality Review Teams,” Association of State and Territorial Health Officials, August 23, 2018, <http://www.astho.org/StatePublicHealth/More-States-Authorizing-the-Use-of-Overdose-Fatality-Review-Teams/08-23-18/>.
- ⁹⁸ Jeff Beeson, “ODMAP: A Digital Tool to Track and Analyze Overdoses,” National Institute of Justice, May 15, 2018, <https://nij.gov/publications/Pages/notes-from-the-field-opioid-epidemic-beeson.aspx>.
- ⁹⁹ Beeson, “ODMAP.”
- ¹⁰⁰ Matt Miclette, “Responding to the Opioid Epidemic: There’s an App for That,” Leonard Davis Institute of Health Economics, July 23, 2018, <https://ldi.upenn.edu/healthpolicysense/responding-opioid-epidemic-there-s-app>.
- ¹⁰¹ “Firsthand Accounts Indicate Fentanyl Test Strips Are Effective in Reducing Overdose Risk,” *Science Daily*, January 19, 2019, <https://www.sciencedaily.com/releases/2019/01/190119095725.htm>.
- ¹⁰² *Ten Standards of Care*, Johns Hopkins Bloomberg School of Public Health.
- ¹⁰³ The Office of Justice Programs (OJP) consists of six units: the Bureau of Justice Assistance (BJA), Bureau of Justice Statistics (BJS), National Institute of Justice (NIJ), Office of Juvenile Justice and Delinquency Prevention (OJJDP), Office of Victims of Crime (OVC), and the Office of Sex Offender Sentencing, Monitoring, Apprehending, Registering and Tracking. Through these units, OJP supports and assists communities across the nation in preventing and controlling crime, addressing victims of crime, and promoting justice.
- ¹⁰⁴ The FY 2019 Commerce, Justice, Science and Related Agencies Appropriations Act provided \$360 million for CARA, including \$102.5 million for the specialty court programs. CARA funding addresses multiple

components of care for drug use, including primary prevention, expanded access to treatment services, and expanded naloxone access to the public and to law enforcement agencies.

- 105 Michael Buenger, "Overview of Key Justice Grant Programs," PowerPoint briefing for congressional staff, National Center for State Courts, 2019.
- 106 Though the names of the COAP grant categories vary by fiscal year, the focus of each category generally remains consistent. For example, across fiscal years 2017 to 2019, the title of category 1 differs, but the substantive focus on law enforcement-led multidisciplinary partnerships to respond to the opioid crisis remains central. Additionally, categories 1, 3, and 6 encourage applicants to prioritize action research partnerships and the development of research plans to monitor and measure progress.
- 107 Buenger, "Overview of Key Justice Grant Programs."
- 108 The 16 selected communities are in Florida, Illinois, Indiana, Kentucky, Louisiana, New Jersey (2), Maine, Michigan (2), Minnesota, Montana, North Carolina, Oregon, Tennessee, and Virginia. Naples, Florida, was added as a 16th community following the announcement (personal communication from BJA, June 12, 2019).
- 109 Bureau of Justice Assistance (BJA), "Comprehensive Opioid Abuse Site-Based Program: FY 2018 Competitive Grant Announcement," BJA-2018-13607, June 6, 2018, <https://www.bja.gov/funding/COAP18.pdf>, p. 8.
- 110 BJA, "Comprehensive Opioid Abuse Site-Based Program: FY 2018 Competitive Grant Announcement," p. 10.
- 111 BJA, "Comprehensive Opioid Abuse Site-Based Program: FY 2018 Competitive Grant Announcement," p. 11.
- 112 BJA, "Comprehensive Opioid Abuse Site-Based Program: FY 2018 Competitive Grant Announcement."
- 113 BJA, "Comprehensive Opioid Abuse Site-Based Program: FY 2018 Competitive Grant Announcement," p. 15.
- 114 Information from the OJP grant awards selector at <https://external.ojp.usdoj.gov/selector/solicitations>.
- 115 "Prescription Drug Monitoring Frequently Asked Questions," PDMP TTAC, accessed June 27, 2019, <https://www.pdmpassist.org/content/prescription-drug-monitoring-frequently-asked-questions-faq>.
- 116 BJA, "Comprehensive Opioid Abuse Site-Based Program: FY 2018 Competitive Grant Announcement."
- 117 "Training and Technical Assistance," COAP (Comprehensive Opioid Abuse Program), <https://coapresources.org/>.
- 118 "Training and Technical Assistance," <https://coapresources.org/>.
- 119 "Training and Technical Assistance," <https://coapresources.org/>.
- 120 BJA, COAP, "Rural Responses to the Opioid Epidemic," grant overview and application, 2019, https://www.coapresources.org/Content/Documents/Funding/Rural_Responses_to_the_Opioid_Epidemic_Grant_Solicitation.pdf.
- 121 BJA, "Fact Sheet: Justice Department Is Awarding Almost \$320 Million to Combat Opioid Crisis," 2018, https://www.bja.gov/Programs/FS-Opioids-Substance-Abuse-2018_508.pdf.
- 122 BJA, "Residential Substance Abuse Treatment (RSAT) for State Prisoners Program FY 2019 Formula Grant Announcement," BJA-2019-15269, issued February 26, 2019, <https://www.bja.gov/funding/rsat19.pdf>, p. 4.
- 123 Information from the OJP grant awards selector at <https://external.ojp.usdoj.gov/selector/solicitations>.
- 124 BJA, "Justice and Mental Health Collaboration Program FY 2018 Competitive Grant Announcement," BJA-2018-13605, issued April 27, 2018, <https://www.bja.gov/funding/JMHCP18.pdf>, p. 4.
- 125 "Justice and Mental Health Collaboration Program (JMHCP)," The Council of State Governments Justice Center, accessed June 27, 2019, <https://csgjusticecenter.org/mental-health/projects/justice-and-mental-health-collaboration-program/>.

- ¹²⁶ BJA, “Fact Sheet: Justice Department Is Awarding Almost \$320 Million.”
- ¹²⁷ US Department of Justice, Office of Justice Programs, Office for Victims of Crime, “OVC Fiscal Year 2018 Enhancing Community Responses to the Opioid Crisis: Serving Our Youngest Crime Victims,” OVC-2018-14323, issued May 30, 2018, <https://www.ovc.gov/grants/pdf/FY18-Opioid-Young-Victims-of-Crime-508.pdf>.
- ¹²⁸ US Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention, “OJJDP FY 2018 Mentoring Opportunities for Youth Initiative,” OJJDP-2018-13523, issued May 15, 2018, <https://www.ojjdp.gov/grants/solicitations/fy2018/mentopps.pdf>.
- ¹²⁹ BJA, “Fact Sheet: Justice Department Is Awarding Almost \$320 Million,” p. 15.
- ¹³⁰ BJA, “Fact Sheet: Justice Department Is Awarding Almost \$320 Million,” p. 1.
- ¹³¹ BJA, “Fact Sheet: Justice Department Is Awarding Almost \$320 Million,” p. 5.
- ¹³² BJA, “Fact Sheet: Justice Department Is Awarding Almost \$320 Million,” p. 1.
- ¹³³ The OJP consists of six units: BJA, BJS, NIJ, OJJDP, OVC, and the Office of Sex Offender Sentencing, Monitoring, Apprehending, Registering and Tracking.

Bibliography

- Agibalova, Tatiana V., and K. N. Poplevchenkov. 2012. "Cognitive Impairment in Patients with Opioid Addiction." *Zhurnal Nevrologii I Psikiatrii Imeni S.S. Korsakova* 112 (5 pt. 2): 24–28.
- Alford, Daniel P. 2016. "Opioid Prescribing for Chronic Pain — Achieving the Right Balance through Education." *New England Journal of Medicine* 374 (4): 301–03. <https://doi.org/10.1056/NEJMp1512932>.
- Amari, Erica, Jürgen Rehm, Elliot Goldner, and Benedikt Fischer. 2011. "Nonmedical Prescription Opioid Use and Mental Health and Pain Comorbidities: A Narrative Review." *The Canadian Journal of Psychiatry* 56 (8): 495–502. <https://doi.org/10.1177/070674371105600808>.
- American Correctional Association and American Society of Addiction Medicine. 2018. "[Joint Public Correctional Policy on the Treatment of Opioid Use Disorders for Justice Involved Individuals](#)." Alexandria, VA: American Correctional Association.
- Andreas, Demetrius, Davis Y. Ja, and Salvador Wilson. 2010. "Peers Reach out Supporting Peers to Embrace Recovery (PROSPER): A Center for Substance Abuse Treatment Recovery Community Services Program." *Alcoholism Treatment Quarterly* 28 (3): 326–38. <https://doi.org/10.1080/07347324.2010.488538>.
- Baier, Michael. 2014. "Overdose Fatality Review in Maryland." Presentation given at the BJA Harold Rogers PDMP national meeting, Washington, DC, September 22–24.
- Bao, Yuhua, Yijun Pan, Aryn Taylor, Sharmini Radakrishnan, Feijun Luo, Harold Alan Pincus, and Bruce R. Schackman. 2016. "Prescription Drug Monitoring Programs Are Associated with Sustained Reductions in Opioid Prescribing by Physicians." *Health Affairs (Millwood)* 35 (6): 1045–51.
- Barocas, Joshua A., Lisa Baker, Shawnika J. Hull, Scott Stokes, and Ryan P. Westergaard. 2015. "High Uptake of Naloxone-Based Overdose Prevention Training among Previously Incarcerated Syringe-Exchange Program Participants." *Drug and Alcohol Dependence* 154 (September): 283–86. <https://doi.org/10.1016/j.drugalcdep.2015.06.023>.
- Baumgartner, Lindsey, and Laura Brookes. 2018. "Safe Withdrawal in Jail Settings: Preventing Deaths, Reducing Risk to Counties and States." Chicago: TASC, Inc., Center for Health & Justice.
- Beletsky, Leo, Alpna Agrawal, Bruce Moreau, Pratima Kumar, Nomi Weiss-Laxer, and Robert Heimer. 2011. "Police Training to Align Law Enforcement and HIV Protection: Preliminary Evidence from the Field." *American Journal of Public Health* 101 (11): 2,012–15. <https://doi.org/10.2105/AJPH.2011.300254>.
- Bernstein, Judith, Edward Bernstein, Katherine Tassiopoulos, Timothy Heeren, Suzette Levenson, and Ralph Hingson. 2005. "Brief Motivational Intervention at a Clinic Visit Reduces Cocaine and Heroin Use." *Drug and Alcohol Dependence* 77 (1): 49–59. <https://doi.org/10.1016/j.drugalcdep.2004.07.006>.
- Binswanger, Ingrid A., Marc F. Stern, Richard A. Deyo, Patrick J. Heagerty, Allen Cheadle, Joann G. Elmore, and Thomas D. Koepsell. 2007. "Release from Prison — A High Risk of Death for Former Inmates." *New England Journal of Medicine* 356 (2): 157–65. <https://doi.org/10.1056/NEJMs064115>.
- Blake, Valarie. 2013. "Fighting Prescription Drug Abuse with Federal and State Law." *American Medical Association Journal of Ethics* 15 (5): 443–48.
- Bohnert, Amy S. B., and Mark A. Ilgen. 2019. "Understanding Links among Opioid Use, Overdose, and Suicide." *New England Journal of Medicine* 380:71–79. <https://doi.org/10.1056/NEJMr1802148>.
- Bohnert, Kipling M., Mark A. Ilgen, Samantha Louzon, John F. McCarthy, and Ira R. Katz. 2017. "Substance Use Disorders and the Risk of Suicide Mortality among Men and Women in the US Veterans Health Administration." *Addiction* 112 (7): 1193–1201. <https://doi.org/10.1111/add.13774>.

- Borum, Randy, and Stephanie Franz. 2010. "Crisis Intervention Teams May Prevent Arrests of People with Mental Illnesses." *Police Practice and Research* 12 (3): 265–72. <https://doi.org/10.1080/15614263.2010.497664>.
- Brennan, Frank. 2015. "The US Congressional 'Decade on Pain Control and Research' 2001–2011: A Review." *Journal of Pain & Palliative Care Pharmacotherapy* 29 (3): 212–27. <https://doi.org/10.3109/15360288.2015.1047553>.
- Brewer, Ryan M. 2017. "The Economic Impact of Opioid Misuse in Indiana." *Indiana Business Review* 92 (4). <http://www.ibrc.indiana.edu/ibr/2017/outlook/opioid.html>.
- Brewer, Ryan M., and Kayla M. Freeman. 2018. "Cumulative Economic Damages from 15 Years of Opioid Misuse throughout Indiana." *Indiana Business Review* 93 (1). <http://www.ibrc.indiana.edu/ibr/2018/spring/article1.html>.
- Brinkley-Rubinstein, Lauren, Nickolas Zaller, Sarah Martino, David H. Cloud, Erin McCauley, Andrew Heise, and David Seal. 2018. "Criminal Justice Continuum for Opioid Users at Risk of Overdose." *Addictive Behaviors, Prevention and Treatment of Opioid Overdose and Opioid-Use Disorders* 86 (November): 104–10. <https://doi.org/10.1016/j.addbeh.2018.02.024>.
- Bronson, Jennifer, Jessica Stroop, Stephanie Zimmer, and Marcus Berzovsky. 2017. *Drug Use, Dependence, and Abuse among State Prisoners and Jail Inmates, 2007–2009*. Washington, DC: US Department of Justice, Office of Justice Programs, Bureau of Justice Statistics.
- Bukten, Anne, Marianne Riksheim Stavseth, Svetlana Skurtveit, Aage Tverdal, John Strang, and Thomas Clausen. 2017. "High Risk of Overdose Death Following Release from Prison: Variations in Mortality During a 15-Year Observation Period." *Addiction* 112 (8): 1432–39. <https://doi.org/10.1111/add.13803>.
- Casey Family Programs. 2018. "What Is the Impact of Substance Abuse on Child Welfare?" Seattle, WA: Casey Family Programs.
- Carroll, Jennifer J., Traci C. Green, and Rita K. Noonan. 2018. "Evidence-Based Strategies for Preventing Opioid Overdose: What's Working in the United States, 2018." Atlanta: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control.
- Caulkins, Jonathan P. 2014. *Drug Control and Reductions in Drug-Attributable Crime*. 246403. Washington, DC: US Department of Justice, Office of Justice Programs, National Criminal Justice Reference Service.
- Caulkins, Jonathan P., and Mark A. R. Kleiman. 2014. *How Much Crime Is Drug-Related? History, Limitations, and Potential Improvements of Estimation Methods*. 246404. Washington, DC: US Department of Justice, Office of Justice Programs, National Criminal Justice Reference Service.
- CDC (Centers for Disease Control and Prevention). 2012. "CDC Grand Rounds: Prescription Drug Overdoses — a U.S. Epidemic." *Morbidity and Mortality Weekly Report* 61 (1): 10–13. Atlanta: CDC.
- . 2015. "Today's Heroin Epidemic." Atlanta: CDC.
- Chakravarthy, Bharath, Shyam Shah, and Shahram Lotfipour. 2012. "Prescription Drug Monitoring Programs and Other Interventions to Combat Prescription Opioid Abuse." *Western Journal of Emergency Medicine* 13 (5): 422–25. <https://doi.org/10.5811/westjem.2012.7.12936>.
- Child Welfare Information Gateway. 2014. *Parental Substance Use and the Child Welfare System*. Washington, DC: US Department of Health and Human Services, Children's Bureau.
- . 2016. *Parental Drug Use as Child Abuse*. Washington, DC: US Department of Health and Human Services, Children's Bureau.
- Chou, Roger, Rick Deyo, Beth Devine, Ryan Hansen, Sean Sullivan, Jeffrey G. Jarvik, Judy Turner. 2014. *The Effectiveness and Risks of Long-Term Opioid Treatment of Chronic Pain*. Rockville, MD: US Department of Health and Human Services, Agency for Healthcare Research and Quality. <https://doi.org/10.23970/AHRQPCERTA218>.

- Chou, Roger, Judith A. Turner, Emily B. Devine, Ryan N. Hansen, Sean D. Sullivan, Ian Blazina, Tracy Dana, Christina Bougatsos, and Richard A. Deyo. 2015. "The Effectiveness and Risks of Long-Term Opioid Therapy for Chronic Pain: a Systematic Review for a National Institutes of Health Pathways to Prevention Workshop." *Annals of Internal Medicine* 162 (4): 276–86. <https://doi.org/10.7326/M14-2559>.
- Ciccarone, Daniel. 2009. "Heroin in Brown, Black and White: Structural Factors and Medical Consequences in the US Heroin Market." *International Journal of Drug Policy* 20 (3): 277–82. doi:10.1016/j.drugpo.2008.08.003.
- Ciccarone, Daniel. 2018. "The Triple Wave Epidemic: Opioids, Heroin and Fentanyl: Supply Issues and Public Health Consequences." Statement before the US House of Representatives Committee on Foreign Affairs, Washington, DC, September 6.
- Ciccarone, Daniel, and Philippe Bourgois. 2003. "Explaining the Geographical Variation of HIV Among Injection Drug Users in the United States." *Substance Use & Misuse* 38 (14): 2,049–63. <https://doi.org/10.1081/JA-120025125>.
- Cicero, Theodore J., Matthew S. Ellis, and Zachary A. Kasper. 2017. "Increased Use of Heroin as an Initiating Opioid of Abuse." *Addictive Behaviors* 74 (November): 63–66. <https://doi.org/10.1016/j.addbeh.2017.05.030>.
- Clark, Thomas, John Eadie, Peter Kreiner, and Gail Strickler. 2012. *Prescription Drug Monitoring Programs: An Assessment of the Evidence for Best Practices*. Waltham, MA: Brandeis University, Heller School for Social Policy and Management, The Prescription Drug Monitoring Program Center of Excellence.
- Clarke, Janice L., Alexis Skoufalos, and Richard Scranton. 2016. "The American Opioid Epidemic: Population Health Implications and Potential Solutions." *Population Health Management* 19 (S1). <https://doi.org/10.1089/pop.2015.0144>.
- Clemans-Cope, Lisa, Victoria Lynch, Marni Epstein, and Genevieve M. Kenney. 2019. "Opioid and Substance Use Disorder and Receipt of Treatment Among Parents Living with Children in the United States, 2015–2017." *Annals of Family Medicine* 17 (3): 207–11. <https://doi.org/10.1370/afm.2389>.
- Cloud, David H., Tessie Castillo, Lauren Brinkley-Rubinstein, Manisha Dubey, and Robert Childs. 2018. "Syringe Decriminalization Advocacy in Red States: Lessons from the North Carolina Harm Reduction Coalition." *Current HIV/AIDS Reports* 15 (3): 276–82. <https://doi.org/10.1007/s11904-018-0397-9>.
- Compton, Michael T., Roger Bakeman, Beth Broussard, Dana Hankerson-Dyson, Lethesia Husbands, Shaily Krishan, Tarianna Stewart-Hutto, Barbara M. D'Orio, Janet R. Oliva, Nancy J. Thompson, and Amy C. Watson. 2014. "The Police-Based Crisis Intervention Team (CIT) Model: II. Effect on Effects on Level of Force and Resolution, Referral, and Arrest." *Psychiatric Services* 65 (4): 523–29. <https://doi.org/10.1176/appi.ps.201300108>.
- Courtwright, David T. 2001. *Dark Paradise: A History of Opiate Addiction in America*. Enlarged ed. Cambridge, MA: Harvard University Press.
- CSAT (Center for Substance Abuse Treatment). 2004a. *Clinical Guidelines for the Use of Buprenorphine in the Treatment of Opioid Addiction*. Report 04-3939. Rockville, MD: Substance Abuse and Mental Health Services Administration.
- . 2004b. "What Is Substance Abuse Treatment? A Booklet for Families." HHS Publication No. (SMA) 14-4126. Rockville, MD: Substance Abuse and Mental Health Services Administration.
- Darke, Shane, Michelle Torok, Sharlene Kaye, Joanne Ross, and Rebecca McKetin. 2010. "Comparative Rates of Violent Crime among Regular Methamphetamine and Opioid Users: Offending and Victimization." *Addiction (Abingdon, England)* 105 (5): 916–19. <https://doi.org/10.1111/j.1360-0443.2009.02872.x>.
- Dasgupta, Nabarun, Leo Beletsky, and Daniel Ciccarone. 2018. "Opioid Crisis: No Easy Fix to Its Social and Economic Determinants." *American Journal of Public Health* 108 (2): 182–86. <https://doi.org/10.2105/AJPH.2017.304187>.
- Davis, Corey S., and Derek H. Carr. 2017. "Self-Regulating Profession? Administrative Discipline of 'Pill Mill' Physicians in Florida." *Substance Abuse* 38 (3): 265–68. <https://doi.org/10.1080/08897077.2017.1316812>.

- Davis, Casey S., Derek Carr, Jessica K. Southwell, and Leo Beletsky. 2015. "Engaging Law Enforcement in Overdose Reversal Initiatives: Authorization and Liability for Naloxone Administration." *American Journal of Public Health* 105 (8): 1,530–37. <https://doi.org/10.2105/AJPH.2015.302638>.
- DEA (Drug Enforcement Administration). 2016. *Counterfeit Prescription Pills Containing Fentanyl: A Global Threat*. Washington, DC: US Department of Justice, Drug Enforcement Administration.
- . 2018a. "Cocaine/Fentanyl Combination in Pennsylvania." Washington, DC: US Department of Justice, Drug Enforcement Administration, Philadelphia Field Division.
- . 2018b. *National Drug Threat Assessment*. Washington, DC: US Department of Justice, Drug Enforcement Administration, Strategic Intelligence Section.
- Dent, Loren, Aimee Peters, Patrick L. Kerr, Heidi Mochari-Greenberger, and Reena L. Pande. 2018. "Using Telehealth to Implement Cognitive-Behavioral Therapy." *Psychiatric Services* 69 (4): 370–73. <https://doi.org/10.1176/appi.ps.201700477>.
- deShazo, Richard D, McKenzie Johnson, Ike Eriator, and Kathryn Rodenmeyer. 2018. "Backstories on the US Opioid Epidemic. Good Intentions Gone Bad, an Industry Gone Rogue, and Watch Dogs Gone to Sleep." *American Journal of Medicine* 131 (6): 595–601. <https://doi.org/10.1016/j.amjmed.2017.12.045>.
- Development Services Group, Inc. 2016. *Family Drug Courts: Literature Review*. Washington, DC: US Department of Justice, Office of Juvenile Justice and Delinquency Prevention.
- Díaz-Briseño, José. 2010. "Crossing the Mississippi: How Black Tar Heroin Moved into the Eastern United States." In *U.S.-Mexico Policy Options for Confronting Organized Crime*, edited by Eric L. Olson, David A. Shirk, and Andrew Selee, 95–120. Washington, DC: Woodrow Wilson International Center for Scholars, Mexico Institute.
- Dineen, Kelly K., and James M. DuBois. 2016. "Between a Rock and a Hard Place: Can Physicians Prescribe Opioids to Treat Pain Adequately While Avoiding Legal Sanction?" *Journal of Law and Medicine* 42 (1): 7–52
- Disney, Lynn, Ashley Hayward, and Robin LaVallee. 2010. "Illicit Drug Use and Criminal Behavior." https://obamawhitehouse.archives.gov/sites/default/files/ondcp/policy-and-research/illicit_drug_use_and_criminal_behavior_literature_review_2010.pdf.
- Dowell, Deborah, Tamara M. Haegerich, and Roger Chou. 2016. "CDC Guideline for Prescribing Opioids for Chronic Pain — United States, 2016." *Morbidity and Mortality Weekly Report* 65 (1): 1–50. Atlanta: US Department of Health and Human Services, Centers for Disease Control and Prevention, Division of Unintentional Injury Prevention.
- DPH (Massachusetts Department of Public Health). 2018. *Opioid-Related Overdose Deaths in Massachusetts by Industry and Occupation*. Boston: Massachusetts DPH, Occupational Health Surveillance Program.
- DSHS (Texas Department of State Health Services). 2008. *Final Evaluation Report: Creating Access to Recovery through Drug Courts*. Austin: DSHS.
- Dube, Shanta R., Vincent J. Felitti, Maxia Dong, Daniel P. Chapman, Wayne H. Giles, and Robert F. Anda. 2003. "Childhood Abuse, Neglect, and Household Dysfunction and the Risk of Illicit Drug Use: The Adverse Childhood Experiences Study." *Pediatrics* 111 (3): 564–72. <https://doi.org/10.1542/peds.111.3.564>.
- Duran-Martinez, Angelica. 2018. *The Politics of Drug Violence: Criminals, Cops and Politicians in Colombia and Mexico*. Oxford, New York: Oxford University Press.
- Eibl, Joseph K., Graham Gauthier, David Pellegrini, Jeffery Daiter, Michael Varenbut, John C. Hogenbirk, and David C. Marsh. 2017. "The Effectiveness of Telemedicine-Delivered Opioid Agonist Therapy in a Supervised Clinical Setting." *Drug and Alcohol Dependence* 176 (1): 133–38. <https://doi.org/10.1016/j.drugalcdep.2017.01.048>.
- Erensen, Jennifer G., J. David Haddox, Maigh S. Attre, and Luis N. Bauza. 2018. "Pharmacy-Related Theft of Controlled Substances: RxPATROL® Findings." *Journal of Opioid Management* 14 (5): 373–80. <https://doi.org/10.5055/jom.2018.0469>.

- Evans, William, Craig Garthwaite, and Timothy Moore. 2018. "Guns and Violence: The Enduring Impact of Crack Cocaine Markets on Young Black Males." w24819. Cambridge, MA: National Bureau of Economic Research. <https://doi.org/10.3386/w24819>.
- Faul, Mark, Michael W. Dailey, David E. Sugerman, Scott M. Sasser, Benjamin Levy, and Len J. Paulozzi. 2015. "Disparity in Naloxone Administration by Emergency Medical Service Providers and the Burden of Drug Overdose in US Rural Communities." *American Journal of Public Health* 105 (S3): e26–32. <https://doi.org/10.2105/AJPH.2014.302520>.
- FAIR Health. 2017. *Peeling Back the Curtain on Regional Variation in the Opioid Crisis: Spotlight on Five Key Urban Centers and Their Respective States*. New York: FAIR Health.
- Fink, David S., Julia P. Schleimer, Aaron Sarvet, Kiran K. Grover, Chris Delcher, Alvaro Castillo-Carniglia, June H. Kim, Ariadne E. Rivera-Aguirre, Stephen G. Henry, Silvia S. Martins, and Magdalena Cerdá. 2018. "Association between Prescription Drug Monitoring Programs and Nonfatal and Fatal Drug Overdoses: A Systematic Review." *Annals of Internal Medicine* 168 (11): 783–90. <https://doi.org/10.7326/M17-3074>.
- Fischer, Gabriele. 2000. "Treatment of Opioid Dependence in Pregnant Women." *Addiction* 95 (8): 1141–44. <https://doi.org/10.1046/j.1360-0443.2000.95811411.x>.
- Flath, Natalie, Karin Tobin, Kelly King, Alexandra Lee, and Carl Latkin. 2019. "Maximizing Order or Harm? Arrests among a Social Network of People Who Inject Drugs in a Large Urban City." *Journal of Ethnicity in Criminal Justice* 0 (ja): 1–14. <https://doi.org/10.1080/15377938.2019.1593909>.
- Florence, Curtis, Chao Zhuo, Feijun Luo, and Likang Xu. 2016. "The Economic Burden of Prescription Opioid Overdose, Abuse, and Dependence in the United States, 2013." *Medical Care* 54 (10): 901–06. <https://doi.org/10.1097/MLR.0000000000000625>.
- Freeman, Patricia R, Amie Goodin, SuZanne Troske, and Jeffery Talbert. 2015. *Kentucky House Bill 1 Impact Evaluation*. Lexington: University of Kentucky, College of Pharmacy, Department of Pharmacy Practice and Science, Institute for Pharmaceutical Outcomes and Policy.
- French, Michael T., Kerry Anne McGeary, Dale D. Chitwood, Clyde B. McCoy, James A. Inciardi, and Duane McBride. 2000. "Chronic Drug Use and Crime." *Substance Abuse* 21 (2): 95–109. 10.1080/08897070009511422.
- Friedmann, Peter D., Randall Hoskinson, Jr., Michael Gordon, Robert Schwartz, Timothy Kinlock, and Kevin Knight et al. 2012. "Medication-Assisted Treatment in Criminal Justice Agencies Affiliated with the Criminal Justice-Drug Abuse Treatment Studies (CJ-DATS): Availability, Barriers & Intentions." *Substance Abuse* 33 (1): 9–18. <https://doi.org/10.1080/08897077.2011.611460>.
- GAO (US General Accounting Office). 2003. *Prescription Drugs: OxyContin Abuse and Diversion and Efforts to Address the Problem*. Washington, DC: GAO.
- (as US Government Accountability Office). 2018. *Opioid Crisis: Status of Public Health Emergency Authorities*. GAO-18-685R. Washington, DC: GAO.
- Generations United. 2018. *Raising the Children of the Opioid Epidemic: Solutions and Support for Grandfamilies*. Washington, DC: Generations United.
- Ghertner, Robin, Melinda Baldwin, Gilbert Crouse, Laura Radel, and Annette Waters. 2018. "The Relationship between Substance Use Indicators and Child Welfare Caseloads." Washington, DC: US Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation.
- Ghertner, Robin, and Lincoln Groves. 2018. "The Opioid Crisis and Economic Opportunity: Geographic and Economic Trends." Washington, DC: US Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation.
- Gitis, Ben. 2018. "The Workforce and Economic Implications of the Opioid Crisis." Statement before the US House of Representatives Committee on Small Business, Washington, DC, September 13.

- Goldstein, Paul J. 1985. "The Drugs/Violence Nexus: A Tripartite Conceptual Framework." *Journal of Drug Issues* 15 (4): 493–506. <https://doi.org/10.1177/002204268501500406>.
- Gomes, Tara, Mina Tadrous, Muhammad M. Mamdani, J. Michael Paterson, and David N. Juurlink. 2018. "The Burden of Opioid-Related Mortality in the United States." *Journal of the American Medical Association Network Open* 1 (2). <https://doi.org/doi:10.1001/jamanetworkopen.2018.0217>.
- Gordon, Michael S., Timothy W. Kinlock, Robert P. Schwartz, Kathryn A. Couvillion, Laura J. Sudec, Kevin E. O'Grady, Frank J. Vocci, and Hamin Shabazz. 2015. "Buprenorphine Treatment for Probationers and Parolees." *Substance Abuse* 36 (2): 217–25. <https://doi.org/10.1080/08897077.2014.902787>.
- Gordon, Michael S., Timothy W. Kinlock, Robert P. Schwartz, Kevin E. O'Grady, Terrence T. Fitzgerald, and Frank J. Vocci. 2017. "A Randomized Clinical Trial of Buprenorphine for Prisoners: Findings at 12-Months Post-Release." *Drug and Alcohol Dependence* 172:34–42. <https://doi.org/10.1016/j.drugalcdep.2016.11.037>.
- Gray, Jeffrey, Nicholas Hagemeler, Billy Brooks, and Arsham Alamian. 2015. "Prescription Disposal Practices: A 2-Year Ecological Study of Drug Drop Box Donations in Appalachia." *American Journal of Public Health* 105 (9): e89–e94. <https://doi.org/10.2105/AJPH.2015.302689>.
- Gugelmann, Hallam M., and Jeanmarie Perrone. 2011. "Can Prescription Drug Monitoring Programs Help Limit Opioid Abuse?" *Journal of the American Medical Association* 306 (20): 2258–59. <https://doi.org/doi:10.1001/jama.2011.1712>.
- Guy, Jr., Gery P., Kun Zhang, Michele K. Bohm, Jan Losby, Brian Lewis, Randall Young, Louise B. Murphy, and Deborah Dowell. 2017. "Vital Signs: Changes in Opioid Prescribing in the United States, 2006–2015." *Morbidity and Mortality Weekly Report* 66 (26): 697–704. Atlanta: US Department of Health and Human Services, CDC. <https://dx.doi.org/10.15585%2Fmmwr.mm6626a4>.
- Haas, Erin, Christine Truong, Laura Bartolomei-Hill, Michael Baier, Barbara Bazron, and Kathleen Rebbert-Franklin. 2018. "Local Overdose Fatality Review Team Recommendations for Overdose Death Prevention." *Health Promotion Practice*, September. <https://doi.org/10.1177/1524839918797617>.
- Hansen, Helena, and Julie Netherland. 2016. "Is the Prescription Opioid Epidemic a White Problem?" *American Journal of Public Health* 106 (12): 2127–29. <https://doi.org/10.2105/AJPH.2016.303483>.
- Hedegaard, Holly, Arialdi M. Miniño, and Margaret Warner. 2018. "Drug Overdose Deaths in the United States, 1999–2017." Washington, DC: US Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics.
- Hedrich, Dagmar, Paula Alves, Michael Farrell, Heino Stöver, Lars Møller, and Soraya Mayet. 2011. "The Effectiveness of Opioid Maintenance Treatment in Prison Settings: A Systematic Review." *Addiction* 107 (3): 501–17. <https://doi.org/10.1111/j.1360-0443.2011.03676.x>.
- Heller, Daliah, Daniella Bradley O'Brien, Alexandra Harocopos, Hillary Kunins, John Hreno, Jason Lerner, et al. 2014. *RxStat: Technical Assistance Manual*. New York: NYC Department of Health and Mental Hygiene, Bureau of Alcohol and Drug Use Prevention, Care, and Treatment.
- Hollingsworth, Alex, Christopher J. Ruhm, and Kosali Simon. 2017. "Macroeconomic Conditions and Opioid Abuse." *Journal of Health Economics* 56: 222–33. <https://doi.org/10.1016/j.jhealeco.2017.07.009>.
- Huxtable, Christine, Roberts, Lindy, Somogyi, Andrew and MacIntyre, Pam. 2011. "Acute Pain Management in Opioid-Tolerant Patients: A Growing Challenge." *Anaesthesia and Intensive Care* 39 (5): 804–23. <https://doi.org/https://doi.org/10.1177/0310057X1103900505>.
- IACP (International Association of Chiefs of Police). 2010. *Building Safer Communities: Improving Police Response to Persons with Mental Illness: Recommendations from the IACP National Policy Summit*. Alexandria, VA: IACP.
- IJIS (IJIS Institute) and Tetras (Tetrus Corporation). 2018. *RxCheck State Routing Service SRS Installation & Setup Guide*. Ashburn, VA: IJIS Institute.

- Jamison, Robert N., Kerry Anne Sheehan, Elizabeth Scanlan, Michele Matthews, and Edgar L. Ross. 2014. "Beliefs and Attitudes About Opioid Prescribing and Chronic Pain Management: Survey of Primary Care Providers." *Journal of Opioid Management* 10 (6): 375. <https://doi.org/10.5055/jom.2014.0234>.
- Jakubowski, Andrea, Hillary V. Kunins, Zina Huxley-Reicher, and Anne Siegler. 2018. "Knowledge of the 911 Good Samaritan Law and 911-Calling Behavior of Overdose Witnesses." *Substance Abuse* 39 (2): 233–38. <https://doi.org/10.1080/08897077.2017.1387213>.
- Jaramillo-Stametz, Jeanie E., Heather Stewart, Leslie Ochs, and Kenna Payne. 2018. "Multi-State Medication Take Back Initiative: Controlled Substances Collected from 2011 to 2015." *Journal of Substance Use* 23 (1): 36–42. <https://doi.org/10.1080/14659891.2017.1337821>.
- Jessell, Lauren, Pedro Mateu-Gelabert, Honoria Guarino, Sheila P. Vakharia, Cassandra Syckes, Elizabeth Goodbody, Kelly V. Ruggles, and Sam Friedman. 2017. "Sexual Violence in the Context of Drug Use Among Young Adult Opioid Users in New York City." *Journal of Interpersonal Violence* 32 (19): 2929–54. <https://doi.org/10.1177/0886260515596334>.
- Jicha, Crystal, David Saxon, Michelle Lofwall, and Laura Fanucchi. 2019. "Substance Use Disorder Assessment, Diagnosis, and Management for Patients Hospitalized with Severe Infections Due to Injection Drug Use." *Journal of Addiction Medicine* 13 (1): 69–74. <http://doi.org/10.1097/ADM.0000000000000454>.
- Jones, Christopher M., Emily B. Einstein, and Wilson M. Compton. 2018. "Changes in Synthetic Opioid Involvement in Drug Overdose Deaths in the United States, 2010–2016." *The Journal of the American Medical Association* 319 (17): 1819–21. <https://doi.org/10.1001/jama.2018.2844>.
- Jones, Hendree E., Rolley E. Johnson, Donald R. Jasinski, Kevin E. O'Grady, Christian A. Chisholm, Robin E. Choo, Michael Crocetti, Robert Dudas, Cheryl Harrow, Marilyn A. Huestis, Lauren M. Jansson, Michael Lantz, Barry M. Lester, and Lorraine Milio. 2005. "Buprenorphine versus Methadone in the Treatment of Pregnant Opioid-Dependent Patients: Effects on the Neonatal Abstinence Syndrome." *Drug and Alcohol Dependence* 79 (1): 1–10. <https://doi.org/10.1016/j.drugalcdep.2004.11.013>.
- Jones, Mark R., Omar Viswanath, Jacquelin Peck, Alan D. Kaye, Jatinder S. Gill, and Thomas T. Simopoulos. 2018. "A Brief History of the Opioid Epidemic and Strategies for Pain Medicine." *Pain and Therapy* 7 (1): 13–21. <https://doi.org/10.1007/s40122-018-0097-6>.
- Karriker-Jaffe, Katherine J., Sarah E. Zemore, Nina Mulia, Rhonda Jones-Webb, Jason Dond, and Thomas K. Greenfield. 2012. "Neighborhood Disadvantage and Adult Alcohol Outcomes: Differential Risk by Race and Gender." *Journal of Studies on Alcohol and Drugs* 73 (6): 865–73.
- Katsuki, Takeo, Tim Ken Mackey, and Raphael Cuomo. 2015. "Establishing a Link between Prescription Drug Abuse and Illicit Online Pharmacies: Analysis of Twitter Data." *Journal of Medical Internet Research* 17 (12): e280. <https://doi.org/10.2196/jmir.5144>.
- Kay-Lambkin, Frances J., Amanda L. Baker, Terry J. Lewin, and Vaughan J. Carr. 2009. "Computer-Based Psychological Treatment for Comorbid Depression and Problematic Alcohol and/or Cannabis Use: A Randomized Controlled Trial of Clinical Efficacy." *Addiction* 104 (3): 378–88. <https://doi.org/10.1111/j.1360-0443.2008.02444.x>.
- Keane, Christopher, James E. Egan, and Mary Hawk. 2018. "Effects of Naloxone Distribution to Likely Bystanders: Results of an Agent-Based Model." *International Journal of Drug Policy* 55 (May): 61–69. <https://doi.org/10.1016/j.drugpo.2018.02.008>.
- Kennedy-Hendricks, Alene, Matthew Richey, Emma E. McGinty, Elizabeth A. Stuart, Colleen L. Barry, and Daniel W. Webster. 2016. "Opioid Overdose Deaths and Florida's Crackdown on Pill Mills." *American Journal of Public Health* 106 (2): 291–97. <http://dx.doi.org.proxygw.wrlc.org/10.2105/AJPH.2015.302953>.
- King, Nicholas B., Veronique Fraser, Constantina Boikos, Robin Richardson, and Sam Harper. 2014. "Determinants of Increased Opioid-Related Mortality in the United States and Canada, 1990–2013: A Systematic Review." *American Journal of Public Health* 104 (8): e32–42. <https://doi.org/10.2105/AJPH.2014.301966>.

- Kocherlakota, Prabhakar. 2014. "Neonatal Abstinence Syndrome." *Pediatrics* 134 (2): e547–e61. <https://doi.org/10.1542/peds.2013-3524>.
- Krashin, Daniel, Natalia Murinova, and Mark Sullivan. 2016. "Challenges to Treatment of Chronic Pain and Addiction During the 'Opioid Crisis.'" *Current Pain and Headache Reports* 20 (12): 65. <https://doi.org/10.1007/s11916-016-0596-2>.
- Kresina, Thomas F., and Robert Lubran. 2011. "Improving Public Health through Access to and Utilization of Medication Assisted Treatment." *International Journal of Environmental Research and Public Health* 8: 4,102–17. <https://doi.org/10.3390/ijerph8104102>.
- Krueger, Alan B. 2017. "Where Have All the Workers Gone?: An Inquiry into the Decline of the U.S. Labor Force Participation Rate." *Brookings Papers on Economic Activity* 2017 (2): 1–87. <https://doi.org/10.1353/eca.2017.0012>.
- Kunkel, Tara. 2019. "State and Local Partnerships to Promote Best Practices in Jail Diversion and Treatment Engagement for People with Co-Occurring Disorders." Presentation given at the SAMHSA/MacArthur Policy Academy, Rockville, MD, April 3–5
- Latimore, Amanda D., and Rachel S. Bergstein. 2017. "'Caught with a Body' yet Protected by Law? Calling 911 for Opioid Overdose in the Context of the Good Samaritan Law." *International Journal of Drug Policy* 50 (December): 82–89. <https://doi.org/10.1016/j.drugpo.2017.09.010>.
- Leach, Linda Searle, and Ann M. Mayo. 2013. "Rapid Response Teams: Qualitative Analysis of Their Effectiveness." *American Journal of Critical Care* 22 (3): 198–210. <https://doi.org/10.4037/ajcc2013990>.
- Lewis, Christa R, Hoa T Vo, and Marc Fishman. 2017. "Intranasal Naloxone and Related Strategies for Opioid Overdose Intervention by Nonmedical Personnel: A Review." *Substance Abuse and Rehabilitation* 8 (October): 79–95. <https://doi.org/10.2147/SAR.S101700>.
- Lipari, Rachel N., and Struther L. Van Horn. 2017. *Children Living with Parents Who Have a Substance Abuse Disorder*. The CBHSQ Report. Rockville, MD: US Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality.
- Logan, Beth A., Mark S. Brown, and Marie J. Hayes. 2013. "Neonatal Abstinence Syndrome: Treatment and Pediatric Outcomes." *Clinical Obstetrics and Gynecology* 56 (1): 186–92. <https://doi.org/10.1097/GRF.0b013e31827f4ea4>.
- Lorvick, Jennifer, Erica N. Browne, Barrot H. Lambdin, and Megan Comfort. 2018. "Polydrug Use Patterns, Risk Behavior and Unmet Healthcare Need in A Community-Based Sample of Women Who Use Cocaine, Heroin or Methamphetamine." *Addictive Behaviors* 85 (October): 94–99. <https://doi.org/10.1016/j.addbeh.2018.05.013>.
- Ma, Jun, Yan-Ping Bao, Ru-Jia Wang, Meng-Fan Su, Mo-Xuan Liu, Jin-Qiao Li, Louisa Degenhardt, Michael Farrell, Frederic C. Blow, Mark Ilgen, Jie Shi, and Lin Lu. 2018. "Effects of Medication-Assisted Treatment on Mortality among Opioids Users: A Systematic Review and Meta-Analysis." *Molecular Psychology*. <https://doi.org/10.1038/s41380-018-0094-5>.
- Mackey, Tim K. 2018. "Opioids and the Internet: Convergence of Technology and Policy to Address the Illicit Online Sales of Opioids." *Health Services Insights* 11 (September). <https://doi.org/10.1177/1178632918800995>
- MACPAC (Medicaid and CHIP Payment and Access Commission). 2018. "Medicaid and the Criminal Justice System." Washington, DC: MACPAC.
- Marlowe, Douglas B., Carolyn D. Hardin, and Carson L. Fox. 2016. *Painting the Current Picture: A National Report on Drug Courts and Other Problem-Solving Courts in the United States*. Alexandria, VA: National Drug Court Institute.
- Marshall, Z., M. K. Dechman, A. Minichiello, L. Alcock, and G. E. Harris. 2015. "Peering into the Literature: A Systematic Review of the Roles of People Who Inject Drugs in Harm Reduction Initiatives." *Drug and Alcohol Dependence* 151 (June): 1–14. <https://doi.org/10.1016/j.drugalcdep.2015.03.002>.
- Martin, Sarah Levin, and Clare Desrosiers. 2016. "Diversion Alert: 1-Year Evaluation Across Northern New England, 2013–2014." *Preventing Chronic Disease* 13 (159): 1–7. <https://doi.org/10.5888/pcd13.160229>.

- Martins, Silvia, Fenton, Miriam, Keyes, Katherine, Blanco, Carlos, Zhu, Hong and Storr, Carla. 2012. "Mood and Anxiety Disorders and Their Association with Non-Medical Prescription Opioid Use and Prescription Opioid-Use Disorder: Longitudinal Evidence from the National Epidemiologic Study on Alcohol and Related Conditions." *Psychological Medicine* 42 (6): 1,261–72. <https://doi.org/10.1017/S0033291711002145>.
- Maxwell, Jane Carlisle, and Richard T. Spence. 2005. "An Exploratory Study of Inhalers and Injectors Who Used Black Tar Heroin." *Journal of Maintenance in the Addictions* 3 (1): 61–82. https://doi.org/10.1300/J126v03n01_06.
- McCance-Katz, Elinore F. 2017. "The National Survey on Drug Use and Health: 2017." Presentation. Rockville, MD: US Department of Health and Human Services, SAMHSA.
- McClellan, Chandler, Barrot H. Lambdin, Mir M. Ali, Ryan Mutter, Corey S. Davis, Eliza Wheeler, Michael Pemberton, and Alex H. Kral. 2018. "Opioid-Overdose Laws Association with Opioid Use and Overdose Mortality." *Addictive Behaviors, Prevention and Treatment of Opioid Overdose and Opioid-Use Disorders* 86 (November): 90–95. <https://doi.org/10.1016/j.addbeh.2018.03.014>.
- McKenzie, Michelle, Amy Nunn, Nickolas D. Zaller, Alexander R. Bazazi, and Josiah D. Rich. 2009. "Overcoming Obstacles to Implementing Methadone Maintenance Therapy for Prisoners: Implications for Policy and Practice." *Journal of Opioid Management* 5 (4): 219–27.
- McSweeney, Tim, Paul J. Turnbull, and Mike Hough. 2002. *Review of Criminal Justice Interventions for Drug Users in Other Countries*. London: Criminal Policy Research Unit.
- Mistral, Willm. 2016. *Integrated Approaches to Drug and Alcohol Problems: Action on Addiction*. Routledge.
- Monnat, Shannon M. 2018. "Drug Overdose Rates Are Highest in Places With the Most Economic and Family Distress." Durham: University of New Hampshire, Carsey School of Public Policy.
- . 2019. *The Contributions of Socioeconomic and Opioid Supply Factors to Geographic Variation in U.S. Drug Mortality Rates*. Working Paper 87. New York: Institute for New Economic Thinking.
- Munetz, Mark R, and Patricia A. Griffin. 2006. "Use of the Sequential Intercept Model as an Approach to Decriminalization of People With Serious Mental Illness." *Psychiatric Services* 57 (4): 544–49.
- Nabipour, Sepideh, Mas Ayu Said, and Mohd Hussain Habil. 2014. "Burden and Nutritional Deficiencies in Opiate Addiction- Systematic Review Article." *Iranian Journal of Public Health* 43 (8): 1,022–32.
- NADCP (National Association of Drug Court Professionals). 2015. *Adult Drug Court Best Practice Standards*. Alexandria, VA: NADCP.
- NCJFCJ (National Council of Juvenile and Family Court Judges). 2018. "Opioids and the Courts." Reno, NV: NCJFCJ.
- Newman, Robert G., and Walden B. Whitehill. 1979. "Double-Blind Comparison of Methadone and Placebo Maintenance Treatments of Narcotic Addicts in Hong Kong." *The Lancet* 314 (8,141): 485–88. [https://doi.org/10.1016/S0140-6736\(79\)91550-2](https://doi.org/10.1016/S0140-6736(79)91550-2).
- Nguyen, Holly, and Brandy R. Parker. 2018. "Assessing the Effectiveness of New York's 911 Good Samaritan Law— Evidence from a Natural Experiment." *International Journal of Drug Policy* 58 (August): 149–56. <https://doi.org/10.1016/j.drugpo.2018.05.013>.
- NIOSH (National Institute for Occupational Safety and Health). 2018. "Using Naloxone to Reverse Opioid Overdose in the Workplace: Information for Employers and Workers." Atlanta: Centers for Disease Control and Prevention, NIOSH. <https://doi.org/10.26616/NIOSH PUB2019101>.
- . 2019. *Illicit Drugs, Including Fentanyl: Preventing Occupational Exposure to Emergency Responders*. Atlanta: Centers for Disease Control and Prevention, NIOSH. <https://doi.org/10.26616/NIOSH PUB2019126>.

- NIDA (National Institute on Drug Abuse). 2017. "Drug Facts: Over-the-Counter Medicines." North Bethesda, MD: US Department of Health and Human Services, NIDA.
- NJOTF (National Judicial Opioid Task Force). 2018. "Five Guiding Principles for State Courts." Williamsburg, VA: National Center for State Courts, NJOTF.
- Normile, Becky, Carrie Hanlon, and Hannah Eichner. 2018. "State Strategies to Meet the Needs of Young Children and Families Affected by the Opioid Crisis." Issue Brief. National Academy for State Health Policy. <https://nashp.org/wp-content/uploads/2018/09/Children-and-Opioid-Epidemic-1.pdf>.
- NRRC (National Reentry Resource Center). 2018. "Best Practices for Successful Reentry for People Who Have Opioid Addictions." Council of State Governments, NRRC.
- NSA (National Sheriffs Association) and NCCHC (National Commission on Correctional Health Care). 2018. *Jail-Based Medication-Assisted Treatment: Promising Practices, Guidelines, and Resources for the Field*. Chicago: NCCHC.
- Nunn, Amy, Nickolas Zaller, Samuel Dickman, Catherine Trimbur, Ank Nijhawan, and Josiah D. Rich. 2009. "Methadone and Buprenorphine Prescribing and Referral Practices in US Prison Systems: Results from a Nationwide Survey." *Drug and Alcohol Dependence* 105 (1–2): 83–88. <https://doi.org/10.1016/j.drugalcdep.2009.06.015>.
- O'Connor, Sean. 2017. "Fentanyl: China's Deadly Export to the United States." U.S.-China Economic and Security Review Commission.
- O'Donnell, Julie K., John Halpin, Christine L. Mattson, Bruce A. Goldberger, and R. Matthew Gladden. 2017. "Deaths Involving Fentanyl, Fentanyl Analogs, and U-47700 — 10 States, July–December 2016." *MMWR. Morbidity and Mortality Weekly Report* 66 (43): 1197–1202. <https://doi.org/10.15585/mmwr.mm6643e1>.
- ONDCP (Office of National Drug Control Policy). 2013. *Improving the Measurement of Drug-Related Crime*. Washington, DC: Executive Office of the President.
- . 2014. *2013 Annual Report: Arrestee Drug Abuse Monitoring Program II*. Washington, DC: Executive Office of the President.
- PAARI (Police Assisted Addiction and Recovery Initiative). 2016. *Annual Report 2015–2016*. Boston: PAARI.
- PCSAO (Public Children Services Association of Ohio). 2017. "The Opioid Epidemic's Impact on Children Services in Ohio." Columbus: PCSAO.
- PDMP TTAC (Prescription Drug Monitoring Program Training and Technical Assistance Center). 2018. "Technical Assistance Guide: History of Prescription Drug Monitoring Programs." Waltham, MA: Brandeis University, PDMP TTAC.
- Peiper, Nicholas C., Sarah Duhart Clarke, Louise B. Vincent, Dan Ciccarone, Alex H. Kral, and Jon. E. Zibbell. 2019. "Fentanyl Test Strips as an opioid Overdose Prevention Strategy: Findings from a Syringe Services Program in the Southeastern United States." *International Journal of Drug Policy* 63: 122–28. <https://doi.org/10.1016/j.drugpo.2018.08.007>.
- PERF (Police Executive Research Forum). 2017. *The Unprecedented Opioid Epidemic: As Overdoses Become a Leading Cause of Death, Police, Sheriffs, and Health Agencies Must Step Up Their Response*. Washington, DC: PERF.
- Pew (The Pew Charitable Trusts). 2016. "How and When Medicaid Covers People Under Correctional Supervision." Philadelphia: The Pew Charitable Trusts.
- Phillips, Jonathan K., Morgan A. Ford, and Richard J. Bonnie, eds. 2017. *Pain Management and the Opioid Epidemic: Balancing Societal and Individual Benefits and Risks of Prescription Opioid Use*. Washington, DC: National Academies Press.
- Popovici, Ioana, Johanna Catherine Maclean, Bushra Hijazi, and Sharmini Radakrishnan. 2018. "The Effect of State Laws Designed to Prevent Nonmedical Prescription Opioid Use on Overdose Deaths and Treatment." *Health Economics* 27 (2): 294–305. <https://doi.org/10.1002/hec.3548>.

- PTACC (Police, Treatment, and Community Collaborative). 2018. "PTAC Guiding Principles for Behavioral Health Practice." Center for Health and Justice at TASC, PTACC.
- Quinones, Sam. 2016. *Dreamland: The True Tale of America's Opiate Epidemic*. New York: Bloomsbury Press.
- Ranapurwala, Shabbar I., Meghan E. Shanahan, Apostolos A. Alexandridis, Scott K. Proescholdbell, Rebecca B. Naumann, Daniel Edwards, and Stephen W. Marshall. 2018. "Opioid Overdose Mortality Among Former North Carolina Inmates: 2000–2015." *American Journal of Public Health* 108 (9). <https://doi.org/10.2105/AJPH.2018.304514>.
- Rebbert-Franklin, Kathleen, Erin Haas, Pooja Singal, Sarah Cherico-Hsij, Michael Baier, Kenneth Collins, Karl Webner, and Joshua Sharfstein. 2016. "Development of Maryland Local Overdose Fatality Review Teams: A Localized, Interdisciplinary Approach to Combat the Growing Problem of Drug Overdose Deaths." *Health Promotion Practice* 17 (4): 596–600. <https://doi.org/10.1177%2F1524839916632549>.
- Reif, Sharon, Lisa Braude, D. Russell Lyman, Richard H. Dougherty, Allen S. Daniels, Sushmita Shoma Ghose, Onaje Salim, and Miriam E. Delphin-Rittmon. 2014. "Peer Recovery Support for Individuals with Substance Use Disorders: Assessing the Evidence." *Psychiatric Services* 65 (7): 853–61. <https://doi.org/10.1176/appi.ps.201400047>.
- Reuter, Peter. 2009. "Systemic Violence in Drug Markets." *Crime, Law and Social Change* 52 (3): 275–84. <https://doi.org/10.1007/s10611-009-9197-x>.
- Rhodes, William, Meg Chapman, Michael Shively, Christina Dyou, Dana Hunt, and Kristin Wheeler. 2009. "Evaluation of the Multijurisdictional Task Forces (MJTFs), Phase II: Project Summary." National Criminal Justice Reference Service.
- Rhyan, Corwin N. 2017. "The Potential Societal Benefit of Eliminating Opioid Overdoses, Deaths, and Substance Use Disorders Exceeds \$95 Billion per Year." Altarum Institute.
- Rich, Josiah D., Michelle McKenzie, Sarah Larney, John B. Wong, Liem Tran, Jennifer Clarke, Amanda Noska, Manasa Reddy, and Nickolas Zaller. 2015. "Methadone Continuation versus Forced Withdrawal on Incarceration in a Combined US Prison and Jail: A Randomized, Open-Label Trial." *The Lancet* 386 (9,991): 350–59. [https://doi.org/10.1016/S0140-6736\(14\)62338-2](https://doi.org/10.1016/S0140-6736(14)62338-2).
- Ronan, Matthew V., and Shoshana J. Herzig. 2016. "Hospitalizations Related to Opioid Abuse/Dependence and Associated Serious Infections Increased Sharply, 2002–12." *Health Affairs* 35 (5): 832–37. <https://doi.org/10.1377/hlthaff.2015.1424>.
- Rosen, Jonathan D., Hanna Samir Kassab. 2018. *Drugs, Gangs, and Violence*. Cham, CHE: Springer Nature Switzerland AG.
- Rosenfeld, Richard, Shytierra Gaston, Howard Spivak, and Seri Irazola. 2017. *Assessing and Responding to the Recent Homicide Rise in the United States*. Washington, DC: US Department of Justice, Office of Justice Programs, National Institute of Justice.
- Rossman, Shelli B., John K. Roman, Janine M. Zweig, Michael Rempel, and Christine H. Lindquist. 2011. *The Multi-Site Adult Drug Court Evaluation: Executive Summary*. Washington, DC: Urban Institute.
- Rowe, Michael, Chyrell Bellamy, Madelon Baranoski, Melissa Wieland, Maria J. O'Connell, Patricia Benedict, Larry Davidson, Josephine Buchanan, Dave Sells. 2007. "A Peer-Support, Group Intervention to Reduce Substance Use and Criminality Among Persons with Severe Mental Illness." *Psychiatric Services* 58 (7): 955–61.
- Rupp, Timothy, and Kathleen A. Delaney. 2004. "Inadequate Analgesia in Emergency Medicine." *Annals of Emergency Medicine* 43 (4): 494–503. <https://doi.org/10.1016/j.annemergmed.2003.11.019>.
- Salomone, Alberto, Joseph J. Palamar, Rachele Bigiarini, Enrico Gerace, Daniele Di Corcia, D., and Marco Vincenti. 2018. "Detection of Fentanyl Analogs and Synthetic Opioids in Real Hair Samples." *Journal of Analytical Toxicology* 43 (4): 259–65. <https://doi.org/10.1093/jat/bky093>.

- SAMHSA (Substance Abuse and Mental Health Services Administration). 2017a. "Key Substance Use and Mental Health Indicators in the United States: Results from the 2016 National Survey on Drug Use and Health." SMA 17-5044. NSDUH Series H-52. Rockville, MD: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration. <https://www.samhsa.gov/data/>.
- . 2017b. "Prescription Drug Monitoring Programs: A Guide for Healthcare Providers." <https://store.samhsa.gov/system/files/sma16-4997.pdf>.
- . 2018a. "Crisis Intervention Team (CIT) Methods for Using Data to Inform Practice: A Step-by-Step Guide," HHS Publication No. SMA-18-5065.
- . 2018b. "First Responders: Behavioral Health Concerns, Emergency Response, and Trauma," Disaster Technical Assistance Center Supplemental Research Bulletin, May, 15.
- . 2018c. "Medicaid Coverage of Medication-Assisted Treatment for Alcohol and Opioid Use Disorders and of Medication for the Reversal of Opioid Overdose," HHS Publication No. SMA-18-5093.
- Scherrer, Jeffrey F., Joanne Salas, Laurel A. Copeland, Eileen M. Stock, Brian K. Ahmedani, Mark D. Sullivan, Thomas Burroughs, F. David Schneider, Kathleen K. Bucholz, and Patrick J. Lustman. 2016. "Prescription Opioid Duration, Dose, and Increased Risk of Depression in 3 Large Patient Populations." *The Annals of Family Medicine* 14 (1): 54–62. <https://doi.org/10.1370/afm.1885>.
- Schieber, Lyna Z., Gery P. Guy Jr., Puja Seth, Randall Young, Christine L. Mattson, Christina A. Mikosz, and Richard A. Schieber. 2019. "Trends and Patterns of Geographic Variation in Opioid Prescribing Practices by State, United States, 2006–2017." *Journal of the American Medical Association Network Open* 2 (3). <https://doi.org/10.1001/jamanetworkopen.2019.0665>.
- Schiff, Davida M., Mari-Lynn Drainoni, Megan Bair-Merritt, Zoe Weinstein, and David Rosenbloom. 2016. "A Police-Led Addiction Treatment Referral Program in Massachusetts." *New England Journal of Medicine* 375: 2,502–03. <https://doi.org/10.1056/NEJMc1611640>.
- Scholl, Lawrence, Puja Seth, Mbabazi Kariisa, Nana Wilson, and Grant Baldwin. 2019. "Drug and Opioid-Involved Overdose Deaths — United States, 2013–2017." *Morbidity and Mortality Weekly Report* 67 (5152): 1419–27. <https://doi.org/10.15585/mmwr.mm675152e1>.
- Schueler, Harold E. 2017. "Emerging Synthetic Fentanyl Analogs." *Academic Forensic Pathology* 7 (1): 36–40. <https://doi.org/10.23907/2017.004>.
- Seth, Puja, Lawrence Scholl, Rose A. Rudd, and Sarah Bacon. 2018. "Overdose Deaths Involving Opioids, Cocaine, and Psychostimulants—United States, 2015–2016." *Morbidity and Mortality Weekly Report* 67 (12): 349–58. Atlanta: US Department of Health and Human Services, CDC. <http://dx.doi.org/10.15585/mmwr.mm6712a1>.
- Shaw, Benjamin A., Neda Agahi, and Neal Krause. 2011. "Are Changes in Financial Strain Associated With Changes in Alcohol Use and Smoking Among Older Adults?" *Journal of Studies on Alcohol and Drugs* 72 (6): 917–25.
- Simoni-Wastila, Linda. 2011. "Prescription Monitoring Programs: Striking the Balance between Medical Use and Diversion." *Journal of Addictions Nursing* 22 (1–2): 77–82. <https://doi.org/10.3109/10884602.2011.551586>.
- Sinha, Rajita. 2008. "Chronic Stress, Drug Use, and Vulnerability to Addiction." *Annals of the New York Academy of Sciences* 1141 (October): 105–30. <https://doi.org/10.1196/annals.1441.030>.
- Solis, Jessica M., Julia M. Shadur, Alison R. Burns, and Andrea M. Hussong. 2012. "Understanding the Diverse Needs of Children Whose Parents Abuse Substances." *Current Drug Abuse Reviews* 5 (2): 135–47.
- Sordo, Luis, Gregorio Barrio, Maria J. Bravo, B. Iciar Indave, Louisa Degenhardt, Lucas Wiessing, Marica Ferri, and Roberto Pastor-Barriuso. 2017. "Mortality Risk during and after Opioid Substitution Treatment: Systematic Review and Meta-Analysis of Cohort Studies." *BMJ* 357 (April): j1550. <https://doi.org/10.1136/bmj.j1550>.
- Stolldorf, Deonni P. 2016. "Rapid Response Teams Are Perceived: A Qualitative Study and Comparison of the Perceptions of Nurse Leaders, Team Members, and Team End-Users." *American Journal of Nursing* 116 (3): 38–47. <https://doi.org/10.1097/01.NAJ.0000481279.45428.5a>.

- Strom, Kevin J., Hope Smiley McDonald, Peter R. Stout, Jeri D. Roper-Miller, and Jamia Bachrach. 2011. *NIJ Controlled Substances Case Processing Study*. 233830. Washington, DC: US Department of Justice, Office of Justice Programs, National Criminal Justice Reference Service.
- Subramanian, Ram, Ruth Delaney, Stephen Roberts, Nancy Fishman, and Peggy McGarry. 2015. *The Misuse of Jails in America*. New York: Vera Institute of Justice.
- Sullivan, Mark D., Mark J. Edlund, Lily Zhang, Jürgen Unützer, and Kenneth B. Wells. 2006. "Association Between Mental Health Disorders, Problem Drug Use, and Regular Prescription Opioid Use." *Archives of Internal Medicine* 166 (19): 2087–93. <https://doi.org/10.1001/archinte.166.19.2087>.
- Sherman, Susan G., Ju Nyeong Park, Jennifer Glick, Michelle McKenzie, Kenneth Morales, Tricia Christensen, Traci C. Green. 2018. *FORECAST Study Summary Report*. Baltimore: Johns Hopkins Bloomberg School of Public Health.
- Sweeney, Sedona, Zoe Ward, Lucy Platt, Lorna Guinness, Matthew Hickman, Vivian Hope, et al. 2019. "Evaluating the Cost-Effectiveness of Existing Needle and Syringe Programmes in Preventing Hepatitis C Transmission in People Who Inject Drugs." *Addiction* 114: 560–70. <http://doi.org/10.1111/add.14519>.
- Szalavitz, Maia, and Khary K. Rigg. 2017. "The Curious (Dis)Connection between the Opioid Epidemic and Crime." *Substance Use & Misuse* 52 (14): 1,927–31. <https://doi.org/10.1080/10826084.2017.1376685>.
- Tallon, Jennifer A., Melissa Labriola, and Joseph Spadafore. 2018. *Creating Off-Ramps: A National Review of Police-Led Diversion Programs*. New York: Center for Court Innovation.
- Teller, Jennifer L. S., Mark R. Munetz, Karen M. Gil, and Christian Ritter. 2006. "Crisis Intervention Team Training for Police Officers Responding to Mental Disturbance Calls." *Psychiatric Services* 57 (2): 232–37. <https://doi.org/10.1176/appi.ps.57.2.232>.
- The Network for Public Health Law. 2018. "Fatal Overdose Review Panels: Overview of Laws in Six States." Edina, MN: The Network for Public Health Law.
- Thoumi, Francisco E. 2010. "The Relationship between Illegal Drugs and Violence: Is There a Cause and Effect?" *Portal* (5): 38–39. Austin: University of Texas at Austin, Teresa Lozano Long Institute of Latin American Studies.
- Titsas, Angelo, and Martin M. Ferguson. 2002. "Impact of Opioid Use on Dentistry." *Australian Dental Journal* 47 (2): 94–98. <https://doi.org/10.1111/j.1834-7819.2002.tb00311.x>.
- Tobin, Karin E., Melissa A. Davey, and Carl A. Latkin. 2005. "Calling Emergency Medical Services during Drug Overdose: An Examination of Individual, Social and Setting Correlates." *Addiction* 100 (3): 397–404. <https://doi.org/10.1111/j.1360-0443.2005.00975.x>.
- Totten, Annette M., Dana M. Womack, Karen B. Eden, Marian S. McDonagh, Jessica C. Griffin, Sara Grusing, and William R. Hersh. 2016. "Telehealth: Mapping the Evidence for Patient Outcomes from Systematic Reviews." Rockville, MD: Agency for Healthcare Research and Quality.
- Vainio, A., J. Ollila, E. Matikainen, P. Rosenberg, and E. Kalso. 1995. "Driving Ability in Cancer Patients Receiving Long-Term Morphine Analgesia." *The Lancet* 346 (8,976): 667–70. [https://doi.org/10.1016/s0140-6736\(95\)92281-4](https://doi.org/10.1016/s0140-6736(95)92281-4).
- Van Zee, Art. 2009. "The Promotion and Marketing of OxyContin: Commercial Triumph, Public Health Tragedy." *American Journal of Public Health* 99 (2): 221–27. <https://doi.org/10.2105/AJPH.2007.131714>.
- Volkow, Nora D. 2016. "What Science Tells Us about Opioid Abuse and Addiction." Statement before the US Senate Judiciary Committee, Washington, DC, January 27.
- Volkow, Nora D., Thomas R. Frieden, Pamela S. Hyde, and Stephen S. Cha. 2014. "Medication-Assisted Therapies—Tackling the Opioid Overdose Epidemic." *New England Journal of Medicine* 370: 2063–66. <https://doi.org/10.1056/NEJMp1402780>.

- Wakeman, Sarah E. 2017. "Why It's Inappropriate Not to Treat Incarcerated Patients with Opioid Agonist Therapy." *AMA Journal of Ethics* 19 (9): 922–30. <https://doi.org/10.1001/journalofethics.2017.19.9.stas1-1709>.
- Wang, Xu, Ting Zhang, and Wen-Zhe Ho. 2011. "Opioids and HIV/HCV Infection." *Journal of Neuroimmune Pharmacology* 6 (4): 477. <https://doi.org/10.1007/s11481-011-9296-1>.
- Wartell, Julie, and Nancy G. La Vigne. 2013. *Prescription Drug Fraud and Misuse*. 2nd ed. Phoenix: Arizona State University, School of Criminology and Criminal Justice, Center for Problem-Oriented Policing.
- Washington/Baltimore HIDTA (High Intensity Drug Trafficking Areas). 2018. *Overdose Spike Response Framework: A Companion Guide for ODMAP Stakeholders*. Greenbelt, MD: Washington/Baltimore HIDTA.
- Watson, Amy C., Victor C. Ottati, Jeff Draine, and Melissa Morabito. 2011. "CIT in Context: The Impact of Mental Health Resource Availability and District Saturation on Call Dispositions." *International Journal of Law and Psychiatry* 34 (4): 287–94. <https://doi.org/10.1016/j.ijlp.2011.07.008>.
- Welham, Grace C., Jeanine K. Mount, and Aaron M. Gilson. 2015. "Type and Frequency of Opioid Pain Medications Returned for Disposal." *Drugs - Real World Outcomes* 2: 129–35. <https://doi.org/10.1007/s40801-015-0019-4>.
- Werner, Danilea, Kathleen Wright, Mike Thomas, and Mark Edgar. 2005. "An Innovation in Partnership among First Responders and Public Health: Bridging the Gap." *Public Health Reports* 120 (S1): 64–68.
- Wheeler, Eliza, Stephen Jones, Michael K. Gilbert, and Peter J. Davidson. 2015. "Opioid Overdose Prevention Programs Providing Naloxone to Laypersons — United States, 2014." *Centers for Disease Control and Prevention, Morbidity and Mortality Weekly Report*, 64 (23): 631–35.
- Wiese, Andrew D., Marie R. Griffin, William Schaffner, C. Michael Stein, Robert A. Greevy, Edward F. Mitchel, and Carlos G. Grijalva. 2018. "Opioid Analgesic Use and Risk for Invasive Pneumococcal Diseases: A Nested Case-Control Study." *Annals of Internal Medicine* 168 (6): 396. <https://doi.org/10.7326/M17-1907>.
- Winkelman, Tyler N. A., Virginia W. Chang, and Ingrid A. Binswanger. 2018. "Health, Polysubstance Use, and Criminal Justice Involvement among Adults with Varying Levels of Opioid Use." *Journal of the American Medical Association Network Open* 1 (3). <https://doi.org/10.1001/jamanetworkopen.2018.0558>.
- Yang, Y. Tony, Marc R. Larochelle, and Rebecca L. Haffajee. 2017. "Managing Increasing Liability Risks Related to Opioid Prescribing." *American Journal of Medicine* 130 (3): 249–50. <http://doi.org/10.1016/j.amjmed.2016.08.041>.
- Young, Jeremy D., and Melissa E. Badowski. 2017. "Telehealth: Increasing Access to High Quality Care by Expanding the Role of Technology in Correctional Medicine." *Journal of Clinical Medicine* 6 (2): 20. <https://doi.org/10.3390/jcm6020020>.
- Zhou, Chao, Ning Neil Yu, and Jan L. Losby. 2018. "The Association between Local Economic Conditions and Opioid Prescriptions Among Disabled Medicare Beneficiaries." *Medical Care* 56 (1): 62–68. <https://doi.org/10.1097/MLR.0000000000000841>.
- Zoorob, Michael James. 2018. "Polydrug Epidemiology: Benzodiazepine Prescribing and the Drug Overdose Epidemic in the United States." *Pharmacoepidemiology and Drug Safety* 27 (5): 541–49. <https://doi.org/10.1002/pds.4417>.
- Zur, Julia, and Jennifer Tolbert. 2018. "The Opioid Epidemic and Medicaid's Role in Facilitating Access to Treatment." San Francisco: Henry J. Kaiser Family Foundation.

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