# Opioids: Frequently Asked Questions

Originally Published: September 2017
Updated July 2023

The Secretary of the U.S. Department of Health and Human Services (HHS) has continued to renew the determination that a "public health emergency" exists as a result of the opioid[1] crisis since October 2017. This type of declaration allows federal and state agencies to waive certain funding requirements, make temporary staff assignments, and modify certain practices and deadlines. The COVID-19 pandemic exacerbated the opioid crisis as it reduced access to interventions, reduced access to mental health care, contributed to changes in treatment delivery methods (i.e., from in-person to telehealth), and increased isolation and stress.

As of January 2023, a number of states, tribal areas, and cities had declared a formal emergency, public health emergency, or made a similar type of pronouncement to address this public health crisis (e.g., Alaska, Arizona, Florida, Maryland, Massachusetts, Butte and Blackfeet Nation (Montana), Pennsylvania, South Carolina, and Virginia). Several states used the Centers for Medicare & Medicaid coverage and reimbursement policy to tackle the epidemic and nearly all states were awarded funding by the National Opioid Settlement (with a total of $50 billion expected to be awarded). This funding will improve infrastructure for opioid use disorder prevention, treatment, and recovery.

The most current data (only available for 31 states and the District of Columbia) from the Centers for Disease Control and Prevention (CDC) indicates there was a total of 106,669 reported overdose deaths (due to "all drugs") in the United States in 2021. Additional data from the same CDC report indicates that between 2020 and 2021, the rate of drug overdose deaths involving synthetic opioids other than methadone increased 22%; deaths involving heroin declined 32%. CDC estimates that 187 people die every day from an opioid overdose.

The impact of the crisis is far reaching and not limited to deaths. Emergency departments are reporting large numbers of opioid-related visits, emergency medical services (EMS) agencies across the country are answering many more narcotic related calls, and questions and calls for policy and protective recommendations abound. Additionally, narcotic treatment programs can be disrupted by disasters with severe consequences for patients. In 2021, HHS released an

[1] For the purposes of this fact sheet, the term "opioid" refers to prescription opioids, (illegally produced) fentanyl, heroin, and any combination thereof.

Overdose Prevention Strategy that focuses on four pillars: primary prevention, harm reduction, evidence-based treatment, and recovery support.

This ASPR TRACIE fact sheet was developed to provide answers to some of the most frequently asked questions that affect our audience (e.g., regional ASPR staff, healthcare coalitions, healthcare entities, healthcare providers, emergency managers, and public health practitioners). Links to related resources are grouped into the following categories and provided at the end of the document:

- Resources for Responders Exposed to Fentanyl at Crime Scenes
- General Resources for First Responders
- Select Plans, Tools, and Templates
- General Opioid Resources
- Lessons Learned from COVID-19 and Natural Disasters

This fact sheet does not represent official agency policy, nor is it meant to be all-encompassing, but rather it serves as a snapshot of the challenges facing the healthcare emergency field at this time. We welcome readers to reach out to ASPR TRACIE with additional questions or recommended resources for our Subject Matter Expert Cadre to consider for inclusion.

**Q: Why are we seeing so many deaths in the past few years when heroin has been around for a long time?**

**A**: Illicit narcotics have become much cheaper and far easier to access than prescription narcotics. Because so many people in the U.S. have become addicted through prescribed narcotics, the number of users has skyrocketed. Unfortunately, "heroin" is usually fentanyl or other synthetic opioid derivatives that are easier and cheaper to make than heroin but are much more potent. Additional drugs sold as methamphetamine, marijuana, cocaine, and others may also contain lethal amounts of fentanyl.

**Q: How do patients die from narcotics?**

**A**: Narcotics suppress the drive to breathe, and the respiratory rate slows or stops, depriving the brain of oxygen. If this situation is not reversed within minutes, death will result. Rarely users will die from other complications such as aspirating vomit or from fluid leaking into the lungs.

**Q: Who can give naloxone (Narcan)?**

**A**: Naloxone is a narcotic reversal agent that was traditionally given by advanced life support paramedics or in hospitals. Thanks to new laws, programs, and grants, naloxone (and training on how to use it) is more widely available, not just to first responders, but also school nurses, people using drugs (and their loved ones), and through providers, treatment programs, and retail pharmacies. In 2023, the U.S. Food and Drug Administration approved Narcan, 4 milligram (mg) naloxone hydrochloride nasal spray for over the counter (OTC), nonprescription, use. Naloxone is a medication that rapidly reverses the effects of opioid overdose and is the standard treatment for opioid overdose. Once made available through the manufacturer, it will be sold online and directly (e.g., in drug stores, convenience stores, grocery stores and gas stations). The success of intranasal administration facilitated these changes since administering naloxone in this form does not require injection or intravenous access.

**Q: Does naloxone always work?**

**A**: No. Sometimes a very high dose of naloxone is required to reverse overdose due to many new synthetic drugs – far beyond what is available in standard kits. If naloxone is not used quickly enough, the brain may have already suffered irreversible damage from lack of oxygen. Naloxone cannot reverse opioid-induced cardiac arrest. Additionally, the naloxone reversal of narcotic effect in a frequent user can cause a rapid and severe withdrawal syndrome including vomiting, tremor, and severe anxiety. Contaminants (or "cutting agents") such as xylazine may cause a coma that does not respond to naloxone, even though the patient's breathing may improve.

**Q: Does naloxone cause pulmonary edema?**

**A:** It is unclear. Some victims of opioid overdose get substantial fluid in their lungs (pulmonary edema). While generally mild, when severe it can be very difficult to deliver enough oxygen to the patient. Pulmonary edema seems to accompany more severe overdoses, but it is unclear if it is related to the naloxone or to the severe lack of oxygen that the patient experienced. This uncertainty emphasizes the need for medical evaluation after naloxone is used.

**Q: What does a formal declaration of a public health emergency, emergency, or other similar type of declaration mean with regards to the opioid public health crisis?**

**A**: It means different things at different levels of government and depending on the specific type of declaration that is made. At the federal level, a public health emergency declaration by the HHS Secretary allows certain authorities to be used to respond to a particular public health emergency. However, the HHS Secretary has broad authority to respond to public health crises whether or not a formal public health emergency is declared. At the state and local level, general emergency and public health emergency laws vary widely but may allow release or reallocation of resources such as staff or funds, suspend selected liability laws, and otherwise support necessary response measures. Formal emergency declarations are different than

political proclamations that do not convey specific emergency authorities, though state and local governments should look at their emergency powers and determine if it is in their best interests to invoke these.

**Q: What is the role of a healthcare coalition in the crisis?**

**A**: Healthcare coalitions are perfectly positioned to play a coordinating role since this issue affects EMS, hospitals, public health, and emergency management. Coordination of efforts, messaging, information sharing, and advocacy can support critical response efforts over time. Because this is a longer-term event, the coalition can provide an ongoing role in supporting response, and provide critical liaison to emergency management, including determining if the policy and legal support that can be provided by local emergency declarations justifies their use in this situation. The opioid crisis also provides coalitions the opportunity to engage other stakeholders —particularly the behavioral health and substance use community. Both of these stakeholder groups can be of tremendous value to the coalition during a disaster. Coalitions can also foster planning with opioid treatment programs to guarantee their patients have access to care and medications after disasters.

**Q: What role does emergency management play in this crisis?**

**A**: Emergency management can support jurisdictions in this crisis by coordinating stakeholder and public information; reviewing and incorporating emergency declarations into planning and response efforts; and analyzing the legal aspects of responder protection and civil and criminal liability issues.

**Q: What role does EMS play?**

**A**: EMS responders need to be trained to provide support for patients who are not breathing (or not breathing effectively) both with naloxone as well as by providing oxygen and ventilation. Knowing to give larger doses of naloxone as needed is essential. In some cases, EMS providers can offer connections to treatment resources.

**Q: Is there any risk to providers from synthetic narcotics?**

**A**: Though there have been several reports of law enforcement (and other responder) exposure and accidental overdoses, at present none of these that occurred *during patient care activities* have been confirmed as being caused by narcotics. Most issues have occurred with handling of larger quantities of powder during crime scene processing at manufacturing locations. Most calls will not involve any visible powder and use of usual nitrile gloves and standard precautions will be sufficient (and is important during any patient care activities). Responders should *not* withhold life-saving patient care due to theoretical concerns about powder exposure as the risk is very low but should understand that the risk increases with increasing amounts of powder present and that higher levels of protection are needed when processing lab and crime scenes. Liquid exposures are also possible, particularly at manufacturing locations. The National

Institute for Occupational Safety and Health (NIOSH) released a toolkit in 2019 based on guidelines that distinguish different levels of protection based on the risk. Since powder does not cross intact skin, a responder would need to breathe in airborne particles or ingest material to be affected.

**Q: What if there is powder present on a patient?**

**A**: If powder is present during patient care, it should not be brushed or shaken off clothing. An N95 respirator should provide responders with adequate protection and should be donned as soon as powder is detected. While NIOSH recommends responders wear a P100 respirator, in fact, the Assigned Protection Factor for a 95 and 100 rated respirator is the same. The "P" designation means that the respirator is oil-proof. A related national position statement was published in 2017 by the American College of Medical Toxicology and American Academy of Clinical Toxicology. If a department does not have N95 respirators/filters available, simple medical masks offer some benefit but there is significant variation in their filtering abilities so they cannot be officially recommended.

**Q: What role do hospital staff play?**

**A**: In addition to providing emergency medical care and support to these patients, hospitals need to observe them until it is clear they are safe. Sometimes the naloxone wears off before the opioids do, putting the patient back in grave danger. Further, hospital staff should be able to refer patients to chemical dependency counseling programs and ideally assist the patient with naloxone or other resources on discharge. Suboxone© (buprenorphine + naloxone) can now be prescribed by any physician with a DEA number.[2] Initiation of treatment from the emergency department has been shown to be safe and effective until the patient can connect to a treatment program and should be considered whenever possible.

**Q: What is the role of public health in the opioid crisis?**

**A**: Because this is a public health issue, roles include defining the scope of the problem locally and determining target groups for messaging and interventions (such as information dissemination, treatment support, programs that attempt to limit risk through needle exchanges, naloxone and suboxone programs, and other interventions). Public health should also be coordinating public messaging around these issues in conjunction with a joint information system if one is utilized in the community.

[2] https://www.samhsa.gov/medication-assisted-treatment/removal-data-waiver-requirement

**Q: What are some barriers to solving the problem?**

**A**: Narcotic addiction is extremely difficult to cure. Severe withdrawal symptoms and the availability of cheap illegal narcotics and ongoing prescribing of powerful prescription medicines contribute to the challenge.

Although buprenorphine + naloxone is very effective, it is still not frequently prescribed outside of treatment programs. The limited number of chemical dependency care providers and treatment program options often means that patients do not have access to necessary medicines and support. Intensive social support is usually necessary to prevent relapse after treatment. It can be very difficult for many patients to access adequate treatment assistance and coordinate transportation to appointments and medicine pick-up. Finally, court-ordered treatment is a rarity; despite the concerns of loved ones, it is very difficult in most states to commit a patient for opioid dependency treatment.

**Q: What are some issues that arise with opioid treatment programs during disasters or the COVID-19 pandemic?**

**A:** Following public health emergencies (e.g., COVID-19) and disasters with infrastructure disruption (e.g., hurricanes and wildfires) maintaining treatment medication and supplies and ensuring physical access to treatment clinics can be a problem. This was particularly an issue after Hurricanes Sandy, Maria, and Harvey. Most methadone treatment programs require their patients to visit the clinic *every day* for their dose. Buprenorphine + naloxone is a controlled substance and can only be prescribed in limited quantities. When the clinics or pharmacies are closed and patients cannot access treatment, they are more likely to go into withdrawal and may relapse. Some clinics have plans for alternate dispensing sites and methods during disasters but without planning, this vulnerable group of patients is at risk.

During the COVID-19 pandemic, many opioid treatment programs provided services via telehealth, with mixed results. The pandemic contributed to worsened conditions for many patients due to increases in stress and isolation (e.g., during quarantine), and reduced access to naloxone and mental health care.

## I. Resources for Responders Exposed to Fentanyl at Crime Scenes

American College of Medical Toxicology (ACMT) and American Academy of Clinical Toxicology. (2017). Position Statement: Preventing Occupational Fentanyl and Fentanyl Analog Exposure to Emergency Responders.

This statement provides information and guidance for first responders in the following categories: inhalation exposure risk, dermal exposure risk, ocular-facial exposure risk, and naloxone. Recommendations regarding precautions are provided for each type of risk as well as naloxone administration and airway management.

Blevins, M. (2017). Fentanyl Lab Cleanup & the Growing Need for Educated Remediators. Restoration & Remediation Magazine.

The author of this article describes the complexity of the cleanup process for fentanyl, and what cleanup staff should be on the lookout for as it relates to their safety.

California Healthcare Foundation. (2017). Sacramento Briefing — California's Response to the Opioid Epidemic.

This webpage includes links to a briefing where speakers discussed the role of state agencies in combating the opioid epidemic. It also includes links to related documents that state healthcare providers can consider when forming their own strategies.

Chiu, S., Hornsby-Myers, J., de Perio, M., et al. (2019). Health Effects from Unintentional Occupational Exposure to Opioids Among Law Enforcement Officers: Two Case Investigations. (Abstract only.) American Journal of Industrial Medicine. 62(5):439-447.

The authors examined two instances where officers were exposed to opioid and stimulant drugs and subsequently experienced effects that—while not consistent with "severe, life-threatening toxicity"— kept them from being able to perform their jobs.

Government of British Columbia, Justice Institute of British Columbia, Canadian Association of Chiefs of Police, et al. (n.d.). Handling of Suspected Drugs. (Accessed 7/20/2023.)

While not specific to the U.S., this webpage includes helpful information regarding handling suspected drugs (including how to conduct a risk assessment of the scene) by level of risk. Tips for disposing of equipment are included, as are helpful photos.

Law Enforcement Learning. (n.d.). Fentanyl Safety, Decontamination and Identification. (Accessed 7/20/2023. NOTE: There is a fee to register for this course.)

This online course is intended for law enforcement members who may come across fentanyl in their daily activities. Participants will learn more about: personal protective

equipment related to possession of drug, street sales, and lab/bulk sales cases; the signs and symptoms of fentanyl exposure; the routes of exposure that lead to fentanyl overdoses for first responders; self-protection from fentanyl exposure when working undercover; decontamination steps; risk assessments for "man down" calls (that can help prevent fentanyl contamination); and the history, dosage units and types of fentanyl that are on the street today.

National Institute of Occupational Safety and Health. (2018). Evaluation of Law Enforcement Officers' Potential Occupational Exposure to Illicit Drugs — Virginia. Centers for Disease Control and Prevention.

This report details the experiences of three police officers who responded to a call about an unconscious person and were subsequently exposed to opioids, cocaine, methamphetamine, and cathinones (i.e., bath salts) in the hotel room where the subject was found. The authors detailed the work-related health effects experienced by the officers and emphasized the need for training, policies, improved dispatch information gathering and sharing, and the need for officers to report possible exposures and health effects to their managers.

National Institute of Occupational Safety and Health. (2019). Illicit Drug Tool-Kit for First Responders.

The resources in this virtual tool kit are based on NIOSH recommendations and were designed to help first responders protect themselves from exposure to illicit drugs. Links to training videos, infographics, and other helpful resources are provided.

National Institute of Occupational Safety and Health. (2023). Fentanyl and Work. Centers for Disease Control and Prevention.

This webpage includes links to information on occupational exposure to illicit drugs for emergency responders, an illicit drug toolkit, and information geared towards health care personnel in hospital and clinical settings.

National Institute of Standards and Technology. (2017). Fentanyl Can Sicken First Responders. Here's a Possible Solution.

The author explains how first responders and evidence examiners can use screening technologies to reduce the risk of accidental exposure to synthetic opioids.

National Training and Technical Assistance Center, Bureau of Justice Assistance, Office of Justice Programs. (n.d.). Who Covers Law Enforcement Overdose Response Costs? (Accessed 7/20/2023.) U.S. Department of Justice.

This webpage summarizes funding available as of 2017 to law enforcement agencies for their overdose response costs. It describes programs funded through the Department of Justice and the Substance Abuse and Mental Health Services Administration.

The Office of the National Coordinator for Health Information Technology. (2019). Section 4: Opioid Epidemic & Health IT. Health IT Playbook.

This section of the playbook explains how healthcare providers can use health information technology solutions (including electronic health records) to address the opioid epidemic. Links to other helpful tools and resources are also provided.

U.S. Drug Enforcement Administration. (2017). Fentanyl: Safety Recommendations for First Responders.

This factsheet summarizes how first responders can protect themselves from exposure and provides steps to follow when exposure occurs/negative health effects are observed.

Wiebe, M. (2017). Fentanyl: The Next Trend in Illicit Drug Lab Cleanup. Restoration & Remediation Magazine.

The author of this article provides an overview of fentanyl, its origin and production process, the dangers of cross-contamination, the remediation process, and educational/ awareness information.

## II. General Resources for First Responders

Bureau of Justice Assistance National Training and Technical Assistance Center. (2017). Law Enforcement Naloxone Toolkit.

This toolkit was designed to help law enforcement agencies develop their own naloxone program. It includes sample templates that can be downloaded and customized.

Indian Health Services. (n.d.). Naloxone. (Accessed 12/14/2022.) U.S. Department of Health and Human Services.

The videos and additional resources on this page can help first responders learn more about naloxone procurement and storage and administration.

Indiana Department of Homeland Security. (n.d.). Carfentanil Safety for Responders. (Accessed 7/20/2023).

This fact sheet provides information for first responders on carfentanil, a strong synthetic opioid. The fact sheet covers precautions to take with suspected opioids,

awareness of exposure symptoms, when to seek medical attention, ventilation in case of exposure, and naloxone use.

King, B.S., Musolin, K., and Choi, J. (2013). Evaluation of Potential Employee Exposures during Crime and Death Investigations at a County Coroner's Office. The National Institute for Occupational Safety and Health.

In October 2011 and January 2012, NIOSH evaluated a coroner's office in Ohio to determine if conditions and work practices at the facility were posing a health hazard to employees. This report provides information on the methods used by NIOSH during the evaluation, and their findings after the site visit. Evaluators found that some exposures to formaldehyde in the autopsy suite exceeded recommended exposure levels. Also lead contamination of surfaces in the firearms section and drug particle contamination of surfaces in the drug evidence laboratory may have posed health hazards. Recommendations were provided to improve work conditions and minimize exposures.

National Institute of Occupational Safety and Health. (2023). Fentanyl and Work. Centers for Disease Control and Prevention.

This webpage includes links to information on occupational exposure to illicit drugs for emergency responders, an illicit drug toolkit, and information geared towards health care personnel in hospital and clinical settings.

National Institute for Occupational Safety and Health. (2020). Preventing Emergency Responders' Exposures to Illicit Drugs. Centers for Disease Control and Prevention.

This website contains information on standard safe operating procedures for emergency responders, such as wearing nitrile gloves and respiratory protection when powdered illicit substances are present. It also provides guidance for potential exposures, personal protective equipment recommendations, training, decontamination, and naloxone use.

New York State Division of Criminal Justice Services. (2014). Opioid Overdose and Intranasal Naloxone Training for Law Enforcement.

In 2014, the New York State Division of Criminal Justice Services (DCJS), in collaboration with several partners, offered a statewide opioid overdose reversal training initiative for law enforcement officers. Training included the identification of opioid overdoses and the administration of the medication.

Substance Abuse and Mental Health Services Administration. (2018). Opioid Overdose Prevention Toolkit: Five Essential Steps for First Responders. U.S. Department of Health and Human Services.

This document provides recommended steps to reduce the number of deaths resulting from opioid overdoses.

Vinehout, J. (2014). New York Police Officers on Their Use of Naloxone. Harm Reduction Coalition.

This video features New York City police officers sharing their experiences using and administering naloxone to prevent fatal opioid overdoses.

## III. Select Plans, Tools, and Templates

Arizona Department of Health Services. (2017). Opioid Action Plan.

This report outlines the steps the State of Arizona will take to reduce opioid-related deaths. It can be used as a strategic plan, recommendation brief, and scorecard (to measure monthly progress towards meeting the goals identified by stakeholders).

Environmental Protection Agency. (2018). Fact Sheet for OSCs: Fentanyl and Fentanyl Analogs.

This fact sheet was developed to assist federal on-scene coordinators who may respond with, or provide technical assistance/ advice to, "first responders who may encounter environmental contamination from fentanyl class compounds (fentanyl analogs)."

Idaho Department of Health and Welfare. (2022). 2022 Update and Final Report: Idaho Opioid Misuse and Overdose Strategic Plan 2017-2022.

The components of this plan are organized under three "Critical Success Factors:" Educate Providers, Patients, and the Public; Improve Opioid Prescription Practices; and Strengthen and Support Families.

Illinois Department of Public Health. (2022). State of Illinois Overdose Action Plan.

This plan addresses social equity, prevention, treatment and recovery, harm reduction, justice-involved populations, and public safety with the goal of preventing overdoses in Illinois.

Indiana State Department of Health. (n.d.). Next Level Recovery: Strategic Approach. (Accessed 7/20/2023.)

This webpage document highlights the strategic plan developed by the state to focus on substance abuse prevention, treatment, and enforcement. Links to the strategic approach and action steps are included.

Montana Department of Public Health and Human Services. (n.d.). Montana Substance Abuse Disorder Task Force Strategic Plan, 2020-2023. (Accessed 7/20/2023).

This plan describes the state's approach towards lessening the impact of substance use, grouped under six key areas: partnerships, surveillance and monitoring, prevention, treatment and recovery, harm reduction, and enforcement and corrections.

North Carolina Department of Health and Human Services. (2021). North Carolina's Opioid and Substance Use Action Plan 2017-2021.

This plan provides an overview of the opioid epidemic (e.g., number of deaths, hospitalizations, number of residents who report misusing prescriptions, and the number of prescriptions dispensed). The plan is divided into four priority areas and the authors describe metrics used to track progress and measure success.

North Carolina Department of Health and Human Services. (2019). North Carolina Naloxone Distribution Toolkit.

This toolkit contains information on laws and policies relevant to naloxone and implementing programs utilizing naloxone in North Carolina. It covers laws regarding access to naloxone, dispensing versus distribution standing orders, how to acquire and analyze relevant data, and the storing and tracking of naloxone.

Substance Abuse and Mental Health Services Administration. (2018). SAMHSA Opioid Overdose Prevention Toolkit. U.S. Department of Health and Human Services.

This toolkit was designed to help communities prevent opioid-related overdoses and deaths and includes sections for community members, first responders, prescribers, and patients and family members. The final section focuses on recovering from an overdose.

## IV. General Opioid Resources

American Medical Association, Advocacy Resource Center. (2022). Issue Brief: Nation's Drug-Related Overdose and Death Epidemic Continues to Worsen.

This article contains links to state-by-state resources and information related to the opioid crisis. It can facilitate understanding how the use of prescription and illicit opioids varies in each state.

Association of State and Territorial Health Officials. (2021). Preventing Opioid Misuse and Overdose in the States and Territories: Resources.

This website contains links to resources such as opioid response plans, state examples, a resource database, and guides to current practices and research. It also links to

information on the 2017 ASTHO president's challenge, funding entities, and an interactive United States map.

Centers for Disease Control and Prevention. (2021). Infectious Diseases, Opioids and Injection Drug Use.

This website contains background information at the intersection of opioids and infectious diseases, including blood-borne infections such as hepatitis B and hepatitis C, HIV, and heart infections caused by bacteria. The webpage also links to many relevant resources, such as state laws on access to clean needles, managing outbreaks, and the Health Resources and Services Administration's response to the opioid crisis.

Cross, A. (2017). Flood of Opioid-Addicted Babies Prompts UK, Other Hospitals to Try a New Strategy of Keeping Them with Their Mothers in the Hospital. Kentucky Health News.

The author writes that 15 out of every 1,000 babies born in the State of Kentucky are addicted to opioids, and explains that keeping babies with their mothers can ease infants' withdrawal and shorten hospital stays.

Georgia Bureau of Investigation. (2017). GBI Issues Synthetic Opioids Alert.

This public safety alert lists the number of deaths related to fentanyl, the number of cases the Bureau has investigated to date, symptoms associated with use and overdose, and emphasizes the need for first responders to use extreme caution when handling items that may be contaminated with the drug.

Goldsamt, L., Rosenblum, A., Appel, P., et al. (2021). The Impact of COVID-19 on Opioid Treatment Programs in the United States. Drug and Alcohol Dependence.

The authors of this article interviewed 25 directors of opioid treatment programs to understand the interruptions and changes to these programs during the COVID-19 pandemic. Regulatory requirements changed during the pandemic, including increased access to take home medication for opioid use disorder and telehealth. They found that financial changes for the programs varied, and that more time is needed to fully understand the changes, but that the continued opioid epidemic meant that new patients continued to access services through these programs during the pandemic.

Hayes, R. and Squitieri, J. (2019). How Community Health Centers are Addressing the Opioid Epidemic.

The case studies in this report describe "1) the phenomenon of adolescents becoming addicted to opioids at home by trying a family member's prescription and 2) the importance of providing medication assisted treatment in primary care settings with integrated behavioral health services."

Hedegaard, H., Miniño, A., Spencer, M., and Warner, M. (2021). Drug Overdose Deaths in the United States, 1999-2020. National Center for Health Statistics, Centers for Disease Control and Prevention.

This report highlights trends in drug overdose deaths from 1999-2020.

Help.org. (2020). Heroin: Rehab & Recovery.

The basics of rehabilitation (e.g., detoxification, withdrawal symptoms, and detox medication) and treatment and aftercare for heroin addiction are discussed on this webpage. Links to related resources are provided throughout.

Help.org. (2020). Heroin Addiction: Dangers & Side Effects.

This webpage provides a general overview of the dangers and background of heroin use and forms, addiction, short- and long-term effects of heroin use, recent research, and rehabilitation. Links to related resources are provided throughout.

Langford, J., Abraham, A., Johnson, A., et al. (2017). Prescription Opioids and Heroin Epidemic in Georgia: A White Paper.

This white paper provides an overview of the opioid and heroin epidemic, cites issues specific to Georgia (e.g., overdose reversal and controlling access to opioids), and includes a section on proposed legislation.

Lee, B., Zhao, W., Yang, K., et al. (2021). Systematic Evaluation of State Policy Interventions Targeting the US Opioid Epidemic, 2007-2018. JAMA Network Open. 4(2):e2036687.

The authors conducted a cross-sectional study to understand the association of state level drug policy with opioid misuse. They found that while these policies may have mitigated the misuse of prescribed opioids, they may have also led to unintended increases in other illicit substances or higher mortality due to overdoses.

Lyden, J., and Binswanger, I. (2019). The United States Opioid Epidemic. (Abstract only.) Seminars in Perinatology. 43(3):123-131.

This article describes the public health issue of opioids in the United States, covering the history of opiates since the 1800s, the distinction between different kinds of opioid use disorders, the epidemiology of the epidemic, and the need to reduce stigma to facilitate care for affected patients.

Mammoser, G. (2017). 'Gray Death' is the Latest Dangerous Street Drug. Healthline News.

The author explains how powerful painkillers (e.g., fentanyl, carfentanil, and U-47700) are being combined to create this "cocktail."

National Academy of Medicine. (2017). First, Do No Harm: Marshaling Clinician Leadership to Counter the Opioid Epidemic.

The authors summarize the opioid crisis and highlight the roles of clinicians, "both as primary 'gatekeepers' for the appropriate use of these drugs and as first responders to the consequences of their misuse."

National Alliance of State Pharmacy Associations. (2019). Pharmacy Prescribing: Naloxone.

This map illustrates direct naloxone access from community pharmacies across the United States. States are categorized as having: statewide protocol/pharmacist prescribing authority; statewide standing orders; pharmacist authority to dispense without a prescription; and a standing order. Additional resources are provided on this webpage.

National Association of County & City Health Officials. (2017). Tackling the Opioid Epidemic and its Hidden Casualties.

In this video, locally elected officials and appointed public health directors discuss opioid-specific harm reduction strategies and emphasize the importance of strong federal-state-local partnerships and resources dedicated to battling the epidemic.

The National Academies of Sciences, Engineering, and Medicine. (2017). Pain Management and the Opioid Epidemic.

This comprehensive report addresses the opioid epidemic and shares strategies for pain management. It includes case studies and tips for health professional organizations, research sponsors, state agencies, and federal agencies. It also includes a social media toolkit that can be used to promote the report to health professionals and the general public.

New Hampshire Department of Health and Human Services. (2017). Carfentanil in New Hampshire.

This health alert describes guidance for first responders in New Hampshire who may be exposed to carfentanil, a strong synthetic opioid. It includes background information, resources on treatment services, naloxone orders for pharmacies, and public safety information.

Pitt, A., Humphreys, K., and Brandeau, M. (2018). Modeling Health Benefits and Harms of Public Policy Responses to the US Opioid Epidemic. (Abstract only.) American Journal of Public Health. 108(10): 1394-1400.

This article analyzes eleven policy responses to the opioid epidemic, using dynamic compartmental modeling of opioid use to understand the impact of these policies. They found that services for people living with opioid use disorder, such as increased use of naloxone, needle exchanges, and methadone treatment, improve population health. Reducing the prescription of opioids may cause harm in the short term as patients addicted to pharmaceutical opioids begin using heroin, but in the longer term may reduce new addiction.

Santoro, T. and Santoro, J. (2018). Racial Bias in the US Opioid Epidemic: A Review of the History of Systemic Bias and Implications for Care. Cureus 10(12): e3733.

This article describes racial disparities in prescription of opioids in the US, leading to differences in opioid use among non-white minorities. These differences may be due in part to physician bias, media portrayal of the epidemic, and differential effects of government regulation.

Spencer, M., Minino, A., and Warner, M. (2022). Drug Overdose Deaths in the United States, 2001–2021. National Center for Health Statistics, Centers for Disease Control and Prevention.

This report highlights trends in drug overdose deaths from 2001-2021.

Substance Abuse and Mental Health Services Administration. (2023). Naloxone. U.S. Department of Health and Human Services.

This page explains naloxone, its side effects, and how it can be used to treat opioid overdose.

U.S. Department of Health and Human Services. (2018). Facing Addiction in America: The Surgeon General's Spotlight on Opioids.

This website includes links to the Surgeon General's report and other information related to the opioid crisis.

U.S. Department of Health and Human Services. (2017). Hidden Casualties: The Consequences of the Opioid Epidemic on the Spread of Infectious Disease Pt 4.

This video features the U.S. Surgeon General speaking about his personal and professional experiences and lessons learned from the opioid epidemic. He highlights the effect of the epidemic on overdose deaths, infectious diseases, and healthcare costs.

U.S. Department of Health and Human Services. (2018). Help, Resources and Information: National Opioids Crisis.

This webpage includes general information regarding the opioid epidemic; users can click on tabs to find out more about prevention, treatment and recovery, and overdose response.

U.S. Department of Justice, Office of Public Affairs. (2021). Department of Justice Awards More Than $300 Million to Fight Opioid and Stimulant Crisis and to Address Substance Use Disorders.

This article describes federal funding allocated to address substance use, as the COVID-19 pandemic exacerbated the crisis. The funding supported research, substance use treatment, mental health services, enforcement, response, and evidence-based treatment.

U.S. Food and Drug Administration. (2017). Risk Evaluation and Mitigation Strategy (REMS) for Extended-Release and Long-Acting Opioid Analgesics.

This webpage includes links to resources that explain how the FDA plans to update the Risk Evaluation and Mitigation Strategy for these types of analgesics.

Williams, A., Nunes, E., Bisaga, A. et al. (2018). Development of a Cascade of Care for Responding to the Opioid Epidemic. The American Journal of Drug and Alcohol Abuse. 45(1):1-10.

This article recommends the "Cascade of Care" model for addressing opioid use disorder (OUD), which aims to prevent, identify, and provide population-based services for people living with OUD. Interventions discussed include medications for OUD, prescriber guidelines, prescription monitoring programs, and naloxone.

## V. Lessons Learned from COVID-19 and Natural Disasters

Abadie, R., Cano, M., Habecker, P., et al. (2022). Substance Use, Injection Risk Behaviors, and Fentanyl-Related Overdose Risk Among a Sample of PWID Post-Hurricane Maria. Harm Reduction Journal. 19(137).

This article examines how Hurricane Maria affected people who inject drugs in Puerto Rico. The authors found that after the hurricane injection frequency declined slightly, though fewer participants reported using a new needle every time. They found that reports of an overdose were three times higher after Hurricane Maria.

Coto, D. (2019). Growing Opioid Crisis Adds to Puerto Rico's Problems. PBS News Hour.

This article discusses the issue of opioids and fentanyl in Puerto Rico, as the government struggles to provide services for people who inject drugs, count overdoses, and count overdose-related deaths due to funding constraints. The authors also discuss how law

enforcement presence on the island after Hurricane Maria changed the availability of fentanyl and worsened mental health for many Puerto Ricans.

Ghose, R., Forati, A., and Mantsch, J. (2022). Impact of the COVID-19 Pandemic on Opioid Overdose Deaths: A Spatiotemporal Analysis. Journal of Urban Health. 99(2):316-327.

This article discusses how the COVID-19 pandemic impacted opioid overdose deaths in the United States. The authors used Milwaukee, Wisconsin as a study site to examine the differences in location and demographic characteristics of overdose deaths between 2017 and 2020. The authors found that the pandemic worsened the number of overdose deaths, especially for poor, urban areas, and Black and Hispanic communities. White communities also experienced an increase in overdose deaths during this period.

Haley, D. and Saitz, R. (2020). The Opioid Epidemic During the COVID-19 Pandemic. Journal of the American Medical Association. 324(16):1615–1617.

This article describes trends in opioid use and testing during the COVID-19 pandemic. The authors found that samples tested for opioids were more likely to be from drug treatment programs, and samples were less likely to be from behavioral health and pain treatment clinics. They note an increase in drug overdose deaths in 2019 as compared with 2017 and 2018, and discuss subsequent trends caused by changes to healthcare during COVID-19.

Mason, M., Welch, S., Arunkumar, P., et al. (2021). Notes from the Field: Opioid Overdose Deaths Before, During, and After an 11-Week COVID-19 Stay-at-Home Order — Cook County, Illinois, January 1, 2018–October 6, 2020. Morbidity and Mortality Weekly Report. 70:362–363. Centers for Disease Control and Prevention.

The authors examined the effect of the COVID-19 stay-at-home order on the number of Cook County Illinois'' opioid overdose deaths.

Meyers, T. (2019). A Hurricane or Fire. A Spike in Opioid Abuse. A Possible Connection. Direct Relief.

This article discusses an increase in opioid overdoses after disasters. This may be due to relapse during stressful times causing anxiety, depression, or PTSD. It may also be due to interruptions in prescription opioids leading people to turn to street drugs.

Substance Abuse and Mental Health Services Administration. (2020). Guidance for Law Enforcement and First Responders Administering Naloxone.

This guidance document contains information on administration of naloxone during the COVID-19 pandemic and emphasizes that its use is essential, life-saving care which can be administered both intranasally and intramuscularly. Personal protective equipment

should be used when administering naloxone to reduce the risk to first responders of contracting COVID-19.

Tseregounis, I., Delcher, C., Stewart, S., et al. (2022). The Impact of California Wildfires on Patient Access to Prescription Opioids. Journal of the American Pharmacists Association. 62(6): 1769-1777.

This article examines how California wildfires interrupted many Californians' access to prescription opioids. The authors used prescription drug monitoring program data to examine opioid prescriptions for people living in areas affected by the Camp Fire.