

# Confronting Two Crises: The COVID-19 Pandemic, the Opioid Epidemic, and the Industrial Hygienist

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## Abstract

This article was originally written for and published in the January 2021 issue of *The Synergist*, a monthly publication of the American Industrial Hygiene Association. The article addresses the convergence of the COVID-19 and opioid crises, the impact of the opioid crisis on the workplace and workers, and the role that industrial hygienists can play in developing workplace programs to prevent and respond to opioid misuse. While the article is specifically written for industrial hygienists, the review and recommendations will be useful to others who are developing workplace opioid prevention programs. Note that the data presented in this article were current as of January 2021. Centers for Disease Control and Prevention's latest available data are for the twelve-month period ending October 2020 and include 88,990 total overdose deaths and 91,862 predicted, when reporting is completed. Source: <https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm> (accessed on 15 June 2021).

## Keywords

opioid, substance use, occupational, workplace, COVID-19, occupational safety and health

## Editor's Note

A different version of this article originally appeared in the January 2021 issue of *The Synergist*, the magazine of the American Industrial Hygiene Association (AIHA). The online version of that article is available at <https://synergist.aiha.org/202101-confronting-two-crises>

## Introduction

Opioid overdoses in the United States have risen sharply during the COVID-19 pandemic. In the absence of a real-time federal surveillance system, the Overdose Detection Mapping Application Program (ODMAP), an online platform that supports reporting and surveillance of suspected fatal and nonfatal overdoses, provides near real-time overdose data across jurisdictions. ODMAP indicates a 17 percent increase in overdoses in April–June 2020 compared to the same period in 2019. According to ODMAP's report on the effects of COVID-19 on the national overdose crisis (PDF, [bit.ly/odmapjune2020](https://bit.ly/odmapjune2020)), approximately 70 percent of those overdoses were associated with opioids. (ODMAP is available to state, local, federal, and tribal agencies that are responsible for public safety and health, and a map of participating agencies by county can be found at [odmap.org/#agency](https://odmap.org/#agency)). In addition, a recent report from the American Medical Association (PDF, [bit.ly/amaoct2020](https://bit.ly/amaoct2020)) reported increases in

overdoses in forty states during the pandemic. Overdose fatalities in Chicago, Illinois, and Buffalo, New York, were double the number reported during the same period in 2019.

Increased stress related to pandemic conditions and its effect on mental health are important factors driving the increase in opioid overdoses and fatalities as well as increased suicides and alcohol consumption, as described in recent research published in Centers for Disease Control and Prevention (CDC)'s *Morbidity and Mortality Weekly Report* (MMWR) and *JAMA Network Open*. Anxiety, depression, and increased risk

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of posttraumatic stress disorder are some of the common mental health effects of concern.

This increase in fatalities indicates the importance of addressing occupational injuries and illnesses and workplace mental health issues associated with prescription opioids. Attention to these issues has the potential to reduce prescription and illicit opioid use among workers.

Industrial hygienists are well positioned to assist employers in addressing the expanding opioid epidemic and related mental health crises during the COVID-19 pandemic. Work-related physical and emotional pain is contributing to the worsening of the opioid crisis, and this connection presents a valuable opportunity for industrial hygienists to share their skills, help American workers, and expand their professional influence.

## Effects of COVID-19

Essential and returning workers are under significant stress during the pandemic. Many are concerned about being infected on the job, infecting their family members, and adjusting to major changes to workplace policies and procedures, including adjustments to shifts and working hours. Additional flash points include customers assaulting essential workers over the enforcement of public health requirements such as mask usage. Workplace changes to prevent the spread of the virus may also increase the risk of injury and stress. For example, social-distancing requirements may result in one person performing what was previously a two-person task. Reduction in teamwork and communication, decreased access to supervisory and management personnel, and limited social contact with coworkers during meetings, training, breaks, and in lunchrooms are further examples of potential stressors.

In addition to workplace stressors are effects on children and families. Restricted visitation policies for loved ones who are hospitalized or in nursing homes are examples of stressors that workers may bring with them to the job.

Representative panel surveys of adults across the United States during late June aimed to assess mental health, substance use, and suicidal ideation during the COVID-19 pandemic. The results of the survey, which are detailed in MMWR at [bit.ly/mmwrccovid](https://bit.ly/mmwrccovid), indicate that approximately 40 percent of U.S. adults reported struggling with mental health or substance use at that time. Nearly 31 percent of respondents reported symptoms of anxiety or depression, about 26 percent reported trauma or stressor-related disorder symptoms, and around 13 percent said that they had started or increased substance use. Almost 11 percent of respondents reported seriously considering suicide during the month preceding the survey.

These mental health challenges were having a significant effect on Americans' health before the pandemic. CDC reports that life expectancy in the United States declined three years in a row—from 2014 to 2017—due to increased mortality related to drug overdoses (mainly opioids), suicide, and alcohol-related diseases. The decrease in life expectancy occurred alongside self-reported increases in physical and mental morbidity.

## Vulnerable Workers

A CDC report published in 2019 at [bit.ly/mmwroverdosedeaths](https://bit.ly/mmwroverdosedeaths) found that although African Americans and Hispanics have rates of opioid misuse similar to the general population, they experienced the greatest increase in overdose death rates from synthetic opioids such as fentanyl from 2014 to 2017.

COVID-19 is also having a disparate impact on African Americans. As of 15 April 2020, African Americans comprised 13 percent of the U.S. population but 30 percent of COVID-19 cases. People of color often work in jobs that require a physical presence in the workplace and are more likely to use public transportation, which puts them at increased risk for exposure to COVID-19. White Americans are 17 percent more likely to receive mental health treatment than Black or Hispanic people, and 20 percent more likely than Asian Americans. These disparities are important to consider when addressing the effects of the opioid crisis in the workplace.

Workers who are in recovery from drug and alcohol addiction are also especially vulnerable during this time. The COVID-19 pandemic has resulted in the shutdown of many treatment and recovery programs and harm reduction sites, which can perpetuate social isolation. Social interaction and support are critical linchpins in maintaining sobriety. However, COVID-19 has led to an increase in the use of telehealth for the provision of medically assisted treatment and related counseling, which has helped offset these problems to some extent.

## Work-Related Pain and Opioid Misuse

Several studies have shown a strong correlation between work-related pain treatment and opioid misuse, addiction, and overdose fatalities. Forty percent of U.S. workers report chronic or recurrent musculoskeletal pain, 15 percent report pain most days, and work-related back pain accounts for \$5.3 billion in lost annual productivity (see the articles from *Spine*, the *Journal of Occupational and Environmental Medicine*, and *MMWR*, which are listed in the Resources section). According to reports from the U.S. Bureau of Labor Statistics, musculoskeletal disorders; slips, trips, and falls; and workplace violence are leading causes of

work-related pain. Occupational stress is also considered an important factor in substance use.

Recent state-level studies (such as [bit.ly/mmwrpattern](http://bit.ly/mmwrpattern) soverdose) show that construction workers are six to seven times more likely to die of an overdose than workers in other occupations. One state-based study published in 2013 in the *American Journal of Industrial Medicine* found that 57 percent of people who died from an opioid-related overdose death had experienced at least one work injury, with 13 percent of overdose deaths preceded by a work injury within the prior three years. Long hours of physically demanding work, related fatigue, and lack of access to paid sick leave are key predictors of increased opioid use. Figure 1 shows how a variety of factors can contribute to an individual developing opioid use disorder.

### Mental Health and COVID-19

Work-related stress can significantly affect individuals' mental health. In a 2017 workplace health survey of more than 17,000 employees across nineteen U.S. industries (PDF, [bit.ly/mindtheworkplace](http://bit.ly/mindtheworkplace)), 63 percent of workers reported that workplace stress had a significant impact on their mental health, with more than one in three reporting that they engaged in unhealthy behaviors in response to that stress. Unhealthy responses to stress include self-medication. For workers in recovery from

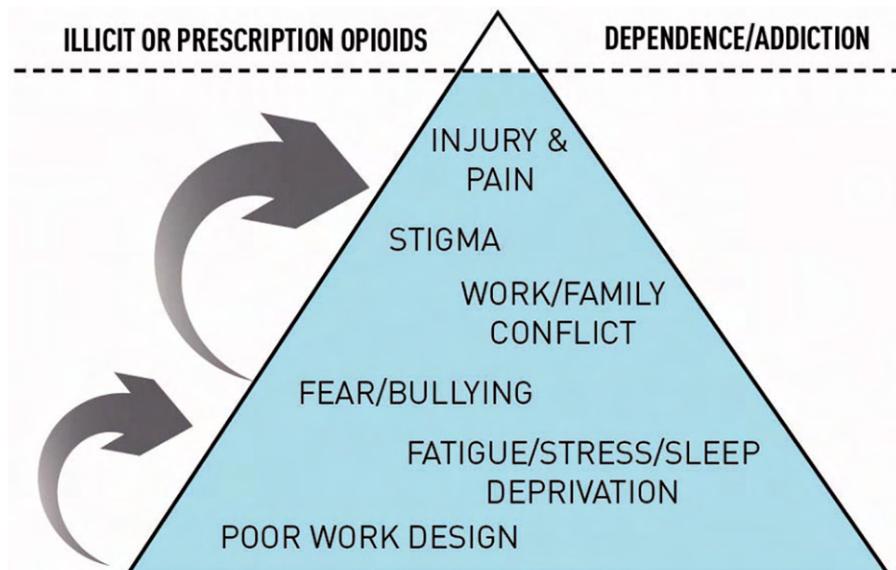
opioid use disorder, workplace stress may lead to returning to use.

The COVID-19 pandemic has intensified this mental health crisis, disrupting the lives of millions of Americans at home and at work. Most U.S. workers are employed in occupations that cannot be performed at home. According to a study published in August 2020 in the *American Journal of Public Health*, this places 108.4 million workers at increased risk for adverse health outcomes related to working during a pandemic. Many of these individuals are lower-income workers, have less access to health insurance, and lack paid sick leave. Coupled with job insecurity, these stressors could result in a large burden of mental health disorders in the United States.

### Public Health Approach to Prevention

Dr. Letitia Davis of the Massachusetts Department of Health and colleagues pioneered the application of a public health approach to preventing opioid use in the workplace. It features primary, secondary, and tertiary approaches to prevention, as outlined in Table 1. Workplace leaders can use this framework to identify gaps and opportunities for improvement in each category and then develop a relevant plan of action.

Primary prevention involves evaluation and control of workplace hazards, especially those that correlate with potential opioid use, such as ergonomic hazards,



From the NIEHS Worker Training Program's Opioids and the Workplace Leadership Training Program.

**Figure 1.** Pathway to opioid use disorder: "Look beyond the tip of the iceberg."  
NIEHS = National Institute of Environmental Health Sciences.

**Table I.** Preventing Opioid Use, Misuse, and Overdose Among High-Risk Worker Groups.

Primary Before pain, injury, and opioid use	Secondary Postinjury	Tertiary Post substance-use disorder (SUD)
Prevention of pain and injuries	Access to treatment and appropriate pain management	Access to SUD treatment and recovery support
Health and safety committees/programs	Paid sick leave	Employee Assistance Programs/peer support programs
Opioid awareness	Return-to-work accommodations	Naloxone/training in the workplace
Address cultural issues regarding help-seeking, stigma		

Source: Dr. Letitia Davis, Massachusetts Department of Public Health.

workplace violence, and slips, trips, and falls. The goal is to reduce workplace injuries, averting the need for an opioid prescription. In addition, identifying and addressing work-related stressors may result in less self-medication, which is a common nonadaptive reaction to stress and a key factor in opioid misuse.

Secondary prevention involves developing systems for providing information to injured workers when they go out on occupational injury leave so that they are prepared to discuss opioid avoidance and alternative pain treatments with their healthcare providers. Adjuvant and alternative pain treatments help workers avoid post-injury opioid misuse. Alternative pain treatments may include over-the-counter nonsteroidal anti-inflammatory drugs (such as ibuprofen or naproxen sodium), physical therapy, chiropractic care, ice, and mindfulness therapy.

Tertiary prevention focuses on workplace programs intended to assist employees in accessing mental health and substance use treatment and recovery resources. Under this approach, workplace leaders should consider evaluating the use and impact of employee assistance programs. Other aspects of tertiary prevention include appropriately structured workplace drug testing and supportive workplace drug prevention policies. Accountability is a key component in a proactive workplace drug program that typically includes individual consent agreements, drug testing, and ongoing participation in recovery programs for workers in recovery upon reentry to the workplace. Employers should also seek to develop a positive workplace culture that encourages employees who are struggling to come forward without fear of recrimination.

## Stigma

A negative workplace culture of stigmatization can deter workers who need help from seeking it, while a supportive culture encourages workers to talk about the uncomfortable issues of mental health and substance use and provides quick access to support services. Nonpunitive

policies and programs can help create an environment where affected workers are more likely to come forward. Peer support programs are fundamental when it comes to encouraging difficult conversations. Peers who are in recovery and have been trained as advocates can have great influence on coworkers who are struggling with mental health or substance use issues.

It's important to understand that opioid use disorder is a chronic medical disorder that affects the brain and changes behavior and is not primarily a criminal or disciplinary matter or a moral issue. (The National Institute on Drug Abuse publication "Drugs, Brains, and Behavior: The Science of Addiction," available at [bit.ly/scienceaddiction](http://bit.ly/scienceaddiction), discusses how science has changed our understanding of drug addiction.) Progressive employers have established "alternatives to discipline programs," which include written consent agreements where affected workers go into treatment and, upon returning to work, agree to individualized recovery programs and periodic drug testing for a designated period.

## Training and Resources

Comprehensive training programs for workers, supervisors, and leaders should be interactive and create a space where participants feel safe to talk about mental health, substance use, and other uncomfortable issues. The National Institute of Environmental Health Sciences (NIEHS) Worker Training Program has developed comprehensive educational programs and resources that are in the public domain and available online at [bit.ly/niehs\\_sopiods](http://bit.ly/niehs_sopiods) for organizations to adapt to their specific needs. CPWR, the Center for Construction Research and Training, has extensive resources for preventing opioid deaths in the construction industry at [bit.ly/cpwropioids](http://bit.ly/cpwropioids), and the National Safety Council has established an "employer toolkit" for addressing opioid use at work, which can be found online at [bit.ly/nsctoolkit](http://bit.ly/nsctoolkit).

In addition, NIOSH has assembled a variety of resources related to evidence-based policies and programs to reduce risk factors for substance misuse at

bit.ly/nioshwsrp. This NIOSH webpage provides useful links to information on topics such as protecting workers at risk, medication-assisted treatment of opioid use disorder, and naloxone, a drug used to reverse opioid overdoses.

A series of “Back to Work Safely” guidelines developed by American Industrial Hygiene Association provides recommendations for limiting the spread of COVID-19 at workplaces operating during the pandemic. These resources are freely available at backtowork safely.org. Addressing the spiking opioid crisis, its connection to work-related physical and emotional pain, and the effects of the pandemic on worker health should be recognized as an essential part of these efforts.

## Taking Action

Industrial hygienists are well equipped to provide leadership as part of a multidisciplinary team to address the increase in mental health and substance use problems associated with the COVID-19 pandemic. Industrial hygienist analytical and problem-solving skills can help solve this crisis. Here are ten ways industrial hygienists can start to tackle these issues:

1. Form a multidisciplinary team to develop a workplace action plan for opioid misuse prevention. This team may include human resources, medical, and operations staff; labor union representatives; and frontline employees.
2. Evaluate injury trends by reviewing Occupational Safety and Health Administration (OSHA) logs, examining incident reports, interviewing injured workers, inspecting work processes and environments, and conducting ergonomic evaluations.
3. Access workers’ compensation data to determine departments and job tasks with significant lost-time injuries that correlate with opioid prescriptions.
4. Implement a program to evaluate and track occupational stress issues. While these issues may go beyond the usual boundaries of industrial hygiene practice, many of the evaluation methods (worker surveys, review of absenteeism and sick leave data, and focus groups) are similar.
5. Develop a system to provide information and support to injured workers at the time of injury. A PDF fact sheet that can be used or adapted for this purpose is available from the NIEHS Worker Training Program at bit.ly/niehsfactsheet. The fact sheet also provides a comprehensive list of opioids in both generic and brand names. A construction-oriented fact sheet is available from CPWR at bit.ly/cpwrfactsheet (PDF).

6. Review the design and use of employee assistance, member assistance, and peer support programs to ensure they are effective and accessible.
7. Review and update drug policies so that they are supportive (not punitive) and appropriately address stigma that may discourage workers who are struggling with mental health and substance use problems from coming forward.
8. Review and consider the adequacy of sick leave policies.
9. Review whether insurance coverage for substance use and mental health treatment are adequate.
10. Develop worker, supervisor, and leadership training that addresses stigma and motivates all employees to be proactive in preventing injury, including physical and emotional pain, and encourages people to talk about difficult issues such as mental health and substance use.

The link between the mental health effects of COVID-19 on the workforce and the growing opioid crisis is clear. While it is understandable that organizations have focused their efforts on developing safety plans to maintain operations during the pandemic, we must not ignore these other present dangers. Industrial hygienists should collaborate with other workplace stakeholders to improve the work lives of employees and the overall productivity and well-being of workplaces. We can and must contribute to solving this combined crisis.

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