



National Institute of
Environmental Health Sciences
Worker Training Program

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OPIOID-RELATED HAZARDS IN THE WORKPLACE

Developing a Training Framework to
Address Exposure, Use, and Prevention

Report from the
Fall 2018 Workshop

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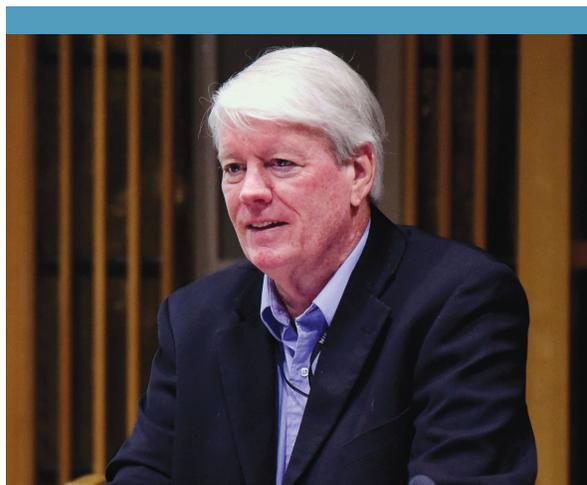
EXECUTIVE SUMMARY

The number of drug-related overdose deaths in the U.S. continues to increase and the number of deaths attributable to opioids has reached [epidemic proportions](#). In 2017, the U.S. Department of Health and Human Services (HHS) declared a public health emergency to address the opioid epidemic. Since then, it has become increasingly clear that the epidemic lies at the intersection of two public health challenges – reducing the burden of pain and containing the rising toll of risks that can arise from the use of opioid medications.¹

Many federal agencies have formed initiatives to respond to the pressing urgency of the epidemic through research, training, and interventions. Although most of these initiatives have been broad-reaching, very few have addressed the opioid-related risks that exist for workers. Workers in labor-intensive occupations, such as construction and mining, face a high risk of painful, job-related injuries. Opioids are commonly prescribed to alleviate the pain, but these prescriptions can be highly addictive. Substance dependence and misuse can become chronic problems, as workers are subjected to long working hours, high levels of stress, physical exertion, and socioeconomic or financial pressures. Additionally, reports of occupational exposure to opioids are becoming more common among first responders. This issue is compounded by the nature of emergency response activities as well as the increasing availability of illicit and synthetic opioids.

To address these issues, the National Institute of Environmental Health Sciences (NIEHS) [Worker Training Program](#) (WTP) is working to raise awareness to prevent and respond to opioid exposure, misuse, and addiction in the workplace. This initiative ties in well with the second theme in the newly released [2018-2023 NIEHS Strategic Plan](#), which calls for promoting the translation of data to knowledge to action. Goals for this theme include responding to emerging environmental health issues, such as the opioid epidemic, as well as sustaining effective partnerships.

¹ National Academies of Sciences, Engineering, and Medicine, Health and Medicine Division, Board on Health Sciences Policy, Committee on Pain Management and Regulatory Strategies to Address Prescription Opioid Abuse. 2017. Pain Management and the Opioid Epidemic: Balancing Societal and Individual Benefits and Risks of Prescription Opioid Use (Phillips JK, Ford MA, Bonnie RJ, eds). Washington, DC: National Academies Press.



WTP Director Joseph (Chip) Hughes welcomed workshop participants and kicked off the discussion on why WTP should consider developing an opioid training framework.

WTP's flexibility to adapt to emerging public health issues, along with its extensive network of awardees, partners, and health and safety experts, provides an incredible opportunity to enhance existing efforts and reduce the impact of opioid hazards for workers and their communities.

Since its inception under the [Superfund Amendments and Reauthorization Act \(SARA\)](#) of 1986, WTP has delivered health and safety training for approximately 3.8 million workers across the country. Currently, WTP supports [22 nonprofit organizations](#), each funded to deliver training specific to one or more program areas.

(Photo courtesy of Steven R. McCaw, NIEHS)

On October 24-25, 2018, WTP held a workshop in Research Triangle Park, North Carolina, to exchange ideas and best practices for development of a training framework to address opioid exposure, misuse, and prevention. Workshop participants included WTP staff, awardees, and partners from external agencies and organizations. A brief synopsis of the workshop is available in a November 2018 NIEHS Environmental Factor [article](#), and presentation slides are available on the [workshop website](#).

“Working in pain is not something new for those of us in the health and safety field. Workers are working in pain even more due to the fear of losing their job, lack of sick time, and lack of access to effective treatment for injuries. This leads to a high use of painkillers, such as opioids; but now, these painkillers are more addictive.”

—Jodi Sugerman-Brozan, executive director of the Massachusetts Coalition for Occupational Safety and Health

The following lists key concepts from the workshop that should be considered for development of a training framework focused on opioid-related hazards in the workplace:

- Workers in high-injury occupations face significant risks for opioid misuse, overdose, and death. Other workers involved in emergency response, law enforcement, health care, and environmental services face the risk of occupational exposure to opioids. These at-risk workers and other populations often lack the necessary resources and education to protect themselves.
- Workplace-based education and awareness-level training on opioid misuse and addiction is needed across most, if not all, occupations. This training should address prevention and access to treatment and recovery programs or resources.
- Operations-level training should be made available to those who face the greatest risk of on-the-job exposure. This training should include naloxone training, especially for those workers in settings where opioid overdoses are common or frequently encountered.
- Prevention through implementation of the precautionary principle (i.e., treating all unknown materials as potentially hazardous) is key.
- Building workers' capacity and empowering them to advocate for workplace safety should be a priority.
- Promotion of self-care, stress reduction, and mental health resiliency should be part of any training focused on opioid misuse and prevention.
- Addressing stigma and punitive workplace policies is key to establishing a workplace culture where workers can feel safe and comfortable with coming forward to access treatment and recovery services.
- Sharing stories can help eliminate stigma surrounding opioid misuse disorders and can help transform the lives of affected workers.

INTRODUCTION

Semantics and Pathophysiology

[John Howard, M.D.](#), director of the National Institute for Occupational Safety and Health (NIOSH), discussed the terminology and pathophysiology of opioids, as well as the work NIOSH is doing to address opioids in the workplace.

Opioids make up a class of drugs that are commonly prescribed to treat pain. According to Howard, there are three categories of opioids: natural, semi-synthetic, and synthetic.

Natural opioids, better known as opiates, are extracted and refined from natural plant matter within the opium poppy, *Papaver somniferum*. However, semi-synthetic and synthetic opioids are not derived from the natural plant and are made up of chemical compounds synthesized in a laboratory.

Synthetic opioids consist of both legal prescriptions, such as hydrocodone and oxycodone, and illegal drugs like [heroin](#), [Fentanyl](#) and carfentanil are two examples of synthetic opioids that are highly toxic. Fentanyl is nearly 50 to 100 times more potent than the natural opioid morphine, while carfentanil is almost 10,000 times more potent. Recently, ecstasy (also known as MDMA), cocaine, and other illegal street drugs have been found to be [laced with fentanyl](#).

Howard stated that opioids increase activity at mu, kappa, and delta opioid receptors; however, mu opioid receptors are responsible for most of the clinical effects and regulate the body's perception of pain and pleasure. These receptors are in different organs throughout the body, including the brain, spinal cord, and small intestine.

The rewarding effects of opioids are accentuated mostly when they are delivered rapidly to the brain via snorting or injection. When an opioid medication is not used in its intended manner, it can lead to an increase in the bodily rate of absorption, and over time, possibly to a drug misuse behavior or disorder.

Opioid use disorder is a chronic, relapsing illness and lifetime treatment is necessary for people who are affected. [Medication-assisted treatment](#) (MAT) is a method that combines behavioral therapy and medications to treat

this disorder. Medications used within MAT programs can potentially relieve withdrawal symptoms and psychological cravings that cause chemical imbalances in the body; however, there are a number of obstacles that complicate accessibility to these programs.

High concentrations of potent opioids can oversaturate enzymatic systems that regulate bodily rates of elimination, potentially leading to overdose and even death. An essential sign of opioid overdose is respiratory depression. Opioid withdrawal is typically classified by symptoms such as runny nose, tearing eyes, chills, headaches, nausea, diarrhea, and anxiety; the symptomology associated with withdrawals is often referred to as being “dopesick.”

Opioids: A Problem of Epidemic Proportions

The Centers for Disease Control and Prevention (CDC) reports staggering [statistics](#) for the U.S.:

- Between 1999 and 2017, roughly 400,000 people died from an overdose involving any opioid.
- In 2017, the number of overdose deaths involving opioids was six times higher than in 1999.
- On average, 130 Americans die every day from an [opioid overdose](#).

These trends are meaningful indicators and are important for identifying effective training approaches and interventions to tackle the epidemic.

A Historical Perspective of Opioids in the U.S.

Howard provided a perspective on opioids throughout history, describing the U.S. government's reaction to opioids in the 19th and 20th centuries (see text box) and how this eventually led to the current opioid epidemic.

In the 1900s, disabled veterans who fought in the Civil War became addicted to morphine and opium pills. Around this same time period, doctors turned to [laudanum](#), a tincture

of alcohol mixed with opium. This “wonder drug” was widely prescribed to treat common pains (e.g., menstrual cramps) and as a cough suppressant for children. It was also used to treat diarrhea in children, until people noticed an increase in infant deaths.

In 1970, the Controlled Substances Act (CSA) was signed into law by President Nixon; it remains in effect today, and its regulations are enforced by the U.S. Drug Enforcement Agency (DEA). Under the CSA, a drug or other substance is classified into one of five schedules based on [several factors](#), including its actual or relative potential for abuse, its risk to public health, and the scientific evidence of its pharmacological effect. These schedules are implemented at the federal level as a hierarchy of production, prescribing, and dispensing controls. The CSA is the primary federal law that governs the manufacture, distribution, and use of prescription and illicit opioids.

The U.S. has witnessed [three distinct waves](#) in the rise of opioid-related overdose deaths within the past two decades. The first wave began with increased prescribing of opioids in the 1990s.

While many factors are suspected to play a role in the opioid epidemic, Howard stated that profligate medical prescribing is a very likely cause. In 1996, the American Pain Society stated that medical doctors were undertreating pain. Physicians were then encouraged to screen patients for pain and to treat non-cancerous pain to a degree that had not been done before. “Drug companies began to educate physicians and the public that opioids were a fast solution to pain without addictive risk; however, this statement was false,” said Howard. “Prescription opioid use increased as insurers reimbursed physicians for opioid prescribing, creating a financial incentive. All of this made opioids the ‘go-to’ drug for pain management.”

The second wave of increases in opioid-related overdose deaths began in 2010, specifically with deaths involving heroin. The third wave began in 2013, when the U.S. witnessed significant increases in overdose deaths involving synthetic opioids, particularly those involving illicitly manufactured fentanyl.

The illicit opioid market has also played a significant role in the epidemic. Over time, the U.S. has seen an increase in heroin availability and use; more recently, fentanyl and counterfeit opioid pills have proliferated the illicit market.² The increasing availability and illegal distribution of these synthetic opioids is a major public health concern, and the rate of overdose deaths due to these drugs is increasing quickly. In 2017, more than 28,000 overdose deaths involved [synthetic opioids](#) (other than methadone) in the U.S. – outpacing more deaths than from any other type of opioid.

Historical Timeline of the U.S. Government’s Reaction to the Opioid Crisis

1890: U.S. government began taxing opium.

1906: Pure Food and Drug Act forced manufacturers to disclose contents of their products.

1909: Congress passed the Opium Exclusion Act, banning its import for the purpose of smoking opium.

1914: Harrison Tax Act required anyone who imported, produced, sold, or dispensed narcotics to register, pay a nominal tax, and keep detailed records.

1970: Controlled Substances Act replaced the Harrison Act, and provided a U.S. drug policy under which the manufacture, importation, possession, use, and distribution of certain substances is regulated.

² National Academies of Sciences, Engineering, and Medicine, Health and Medicine Division, Board on Health Sciences Policy, Committee on Pain Management and Regulatory Strategies to Address Prescription Opioid Abuse. 2017. Pain Management and the Opioid Epidemic: Balancing Societal and Individual Benefits and Risks of Prescription Opioid Use (Phillips JK, Ford MA, Bonnie RJ, eds). Washington, DC: National Academies Press.

WHAT DOES WORK HAVE TO DO WITH IT?

Research has shown that workers in certain industries and occupations may face higher potential for opioid-related overdose deaths. Additionally, there is reasonable evidence that pain management following work-related injuries and illnesses can potentially lead to opioid use disorders.^{3,4}

Exposure Routes and Risks for Workers

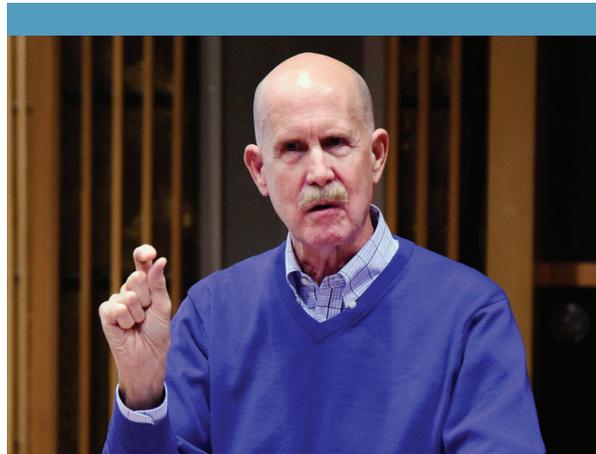
The widespread use and production of fentanyl and other synthetic opioids heightens the risk for potential exposure via inhalation, dermal contact, or ingestion, especially for first responders.

Howard stated that powder-like fentanyl can become airborne by disturbing surfaces, brushing powder from clothing, or other incidental activities that cause aerosolization. Inadvertent contact of fentanyl with mucous membranes of the eye, nose, or mouth presents an equivalent hazard to inhalation. Accidental ingestion or percutaneous exposure (via contaminated needles or sharps) are also major concerns. Additionally, the physicochemical properties of fentanyl pose a concern for dermal exposure.

First responders are finding that overdoses involving fentanyl and carfentanil can be so severe that several doses of [naloxone](#) are needed. Naloxone, also known as Narcan (nasal spray) or Evzio (auto-injection device), is a prescription drug that can reverse the effects of acute opioid overdose. It can save a person's life if it is administered in time, but in some instances, it may be administered too late to restore normal breathing.

3 Franklin GM, Stover BD, Turner JA, Fulton-Kehoe D, Wickizer TM, Disability Risk Identification Study Cohort. 2008. Early opioid prescription and subsequent disability among workers with back injuries: the Disability Risk Identification Study Cohort. *Spine (Phila Pa 1976)* 33(2):199-204.

4 Dembe A, Wickizer T, Sieck C, Partridge J, Balchick R. 2012. Opioid use and dosing in the workers' compensation setting. A comparative review and new data from Ohio. *Am J Ind Med* 55(4):313-24.



Howard, keynote speaker for the workshop, said a tiny amount of fentanyl can be deadly.

(Photo courtesy of Steven R. McCaw, NIEHS)



A lethal dose of fentanyl in powder form (shown on right) is smaller than a penny! (Photo courtesy of Howard's keynote presentation, "Perspectives on the U.S. Opioid Crisis," Oct. 24, 2018)

To date, NIOSH has conducted several health hazard evaluations of first responders that reported adverse health effects during incidents where they encountered overdoses. However, in a number of cases, the reported health effects were not classic opioid overdose symptoms. Most have reported feeling unwell, nauseous, or light-headed. It is unclear whether the cause of these health effects is due to exposure to a mixture of opioids and stimulants, anxiety resulting from risk perception, or a combination of both. NIOSH is currently conducting [field investigations](#) to better understand the risk and causes of the various reported health effects.

A Study of Opioids and Overdose Deaths from Massachusetts

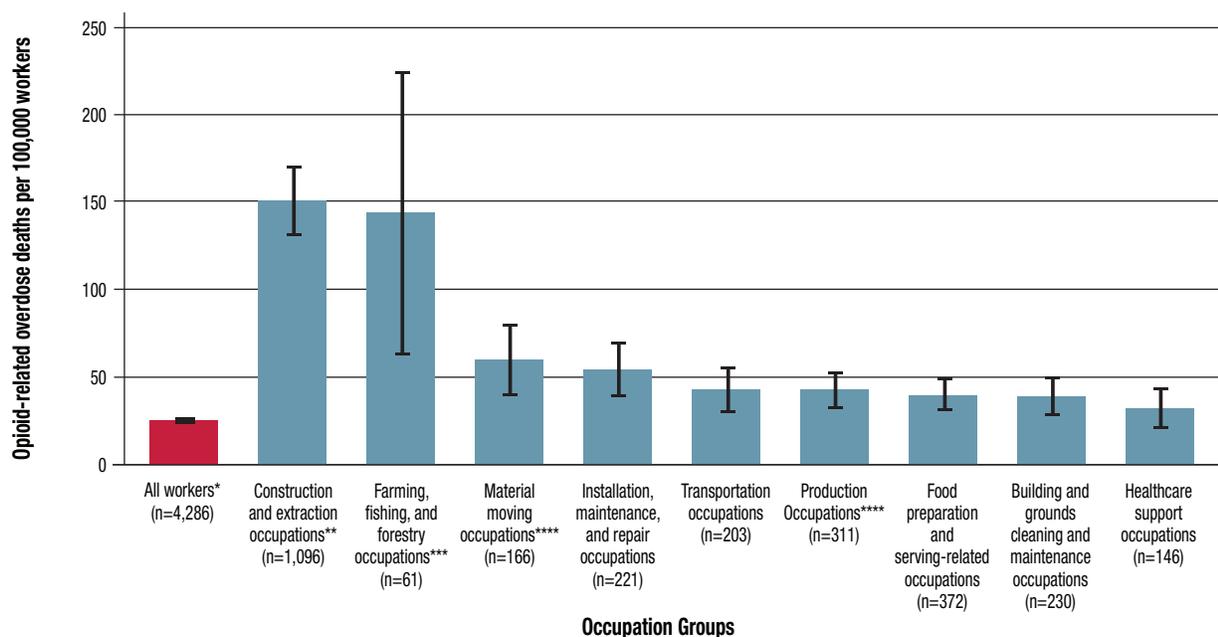
[Letitia Davis, Sc.D.](#), director of the Occupational Health Surveillance Program for the Massachusetts Department of Public Health, described a Massachusetts study⁵ that aimed to:

- Describe opioid-related overdose deaths in residents by industry and occupation.
- Explore different factors that contribute to overdose risks.
- Generate information for targeting interventions in high-risk worker groups.

⁵ [Massachusetts Department of Public Health. Occupational Health Surveillance Program. 2018. Opioid-related Overdose Deaths in Massachusetts by Industry and Occupation, 2011-2015.](https://www.mass.gov/files/documents/2018/08/15/opioid-industry-occupation.pdf) Boston, MA: Massachusetts Department of Public Health. Available: <https://www.mass.gov/files/documents/2018/08/15/opioid-industry-occupation.pdf> [accessed 28 February 2019].

Davis said the impetus for this study was the observed increase in opioid-related overdose deaths in Massachusetts, along with published research on the widespread use of prescribed opioids following work-related injuries. Researchers reviewed Massachusetts death certificates from 2011-2015 and identified cases using cause of death codes (per the CDC case definition). Further analysis and exclusions led to data on 4,301 opioid-related overdose deaths with usable industry or occupation information.

Results showed that out of 23 occupational groups, nine of them had opioid-related overdose death rates higher than the statewide average for all workers (see figure below). Construction and extraction workers were shown to have an extremely high rate of death – close to six times the average rate for all Massachusetts workers. The rate of overdose deaths for workers in the farming, fishing, and forestry was also high – about five times the average rate for all Massachusetts workers. Other occupations with high overdose death rates were largely those in blue-collar and manual labor jobs.



* This category excluded 16 deaths among those working in the military or military-specific occupations due to lack of denominator information.
 ** At least 97.0% of these deaths occurred among workers employed in construction occupations.
 *** 73.8% of these deaths occurred among workers employed in fishing occupations.
 **** This category excludes 1 death among a worker employed in the military industry.

Numerator source: Occupational Health Surveillance Program, 2011-2015
 Denominator source: American Community Survey, 2011-2015

The figure shows occupation groups with opioid-related overdose death rates significantly higher than the average rate for all Massachusetts workers, 2011-2015 (n=4,302).

(Figure reprinted from Massachusetts Department of Public Health (2018), [Opioid-related Overdose Deaths in Massachusetts by Industry and Occupation, 2011-2015.](#))



Results also varied by gender. In general, men had higher overdose death rates than women. Women who worked in health care support or food preparation and serving-related occupations had overdose death rates that were significantly higher than the average rate for Massachusetts female workers.

To identify factors that contribute to the differences in death rates by occupation, the researchers used data from the Massachusetts Survey of Occupational Injuries and Illnesses to group occupations by their rates of work-related injuries and illnesses. They found that occupations with more than 200 work-related injuries (per 100,000 workers) had the highest rates of opioid-related overdose deaths.

Paid sick leave, job security, and income are also potential contributing factors, as these could influence a worker's need to use opioids to alleviate pain and continue working. The researchers used data from national surveys to group occupations into those with high and low job insecurity and paid sick leave. They found overdose death rates were higher among workers in occupations with high job insecurity and with lower paid sick leave.

Davis said overall, findings from this study are consistent with previous reports of widespread use of opioids for pain management following work injuries. Findings from this study underscore the need for education, awareness, and interventions targeting at-risk workers to prevent opioid-

related overdose deaths. The workplace provides a perfect opportunity to promote primary, secondary, and tertiary prevention (see text box). In Massachusetts, prevention initiatives include pathways to alternative pain treatment for those on workers compensation. Other initiatives involve engaging with stakeholders to inform educational outreach strategies and pilot peer-to-peer opioid awareness training programs.

Examples of Public Health Prevention Measures for Workers at the Primary, Secondary, and Tertiary Levels

Primary: Preventing work-related injuries before they happen.

Secondary: Providing access to appropriate treatment and pain management for injured workers.

Tertiary: Providing access to treatment and recovery support, such as peer support programs.

In conclusion, Davis said further research will include a review of prescription monitoring data to describe opioid prescriptions for work-related injuries paid by workers' compensation, and then linking workers' compensation claim data with other databases.



SPECIFIC NEEDS FOR EDUCATION AND TRAINING

Small groups and breakout sessions provided workshop participants with opportunities to discuss challenges, gaps, and training needs for workers who face opioid-related risks in the workplace.

Define At-Risk Workers and Populations

There are several types of workers who are at risk for potential opioid misuse. Most often, this includes workers who encounter a high prevalence of musculoskeletal injuries and disorders, such as workers involved in construction, demolition, fishing, transportation, and health care. For example, truckers are exposed to whole body vibrations during their course of work and may experience painful injuries. This could lead them to obtain opioid prescriptions and later develop opioid use disorders.

The potential for opioid exposure is a major issue for several types of workers. For example, emergency medical service (EMS) workers and law enforcement personnel who respond to overdose emergencies are at risk of occupational exposure due to powders and residues. Forensic laboratorians and support staff must handle and analyze unknown drug evidence to properly identify it for criminal procedures. Health care workers, especially in emergency departments, may encounter opioids when people who have overdosed are brought in for treatment. Environmental service workers may be exposed to opioids when assigned to clean buildings that were used as clandestine drug labs or for illegal handling and distribution of drugs. Parks and highway workers may encounter contaminated drug paraphernalia in public parks or rest stops. Additionally, workers in other settings, such as correctional facilities, homeless shelters, libraries, and schools, may be impacted. These workers should also

be trained to administer naloxone, as these settings are common places where overdoses occur.

Because the risks of job-specific exposure are still being evaluated, it may be difficult to make a distinction between workers that need operations-level training and those that need awareness-level training. For example, health care workers who work at hospital front desks may need awareness training, but it depends on the level and route of potential opioid exposure. The same is true for public employees in libraries or restaurants, as their encounters and interactions with overdoses could be frequent. These employees should be trained to recognize and avoid exposures.

Other barriers and challenges to consider include lack of training, education, and resources among certain industries. Similarly, some workers are not as experienced as others in their field. Guidelines developed by NIOSH and the [Interagency Board for Emergency Preparedness and Response](#) (Interagency Board) should be applied to determine the appropriate level of worker protection based on site-specific risk assessments.

Different groups have access to various levels and types of education when it comes to opioid-related hazards. Therefore, it is important to identify who the experts are, because information can get siloed. There are often barriers related to trust within certain groups, so it is important to identify a trusted person to relay information to workers and their communities.

Reinforce Precautions through Exposure Avoidance

There is a need to reinforce precautions by emphasizing exposure avoidance in both awareness- and operations-level training. Appropriate personal protective equipment (PPE) and workplace controls are needed to protect first responders and other workers from exposure to fentanyl and other opioids. This includes respiratory, dermal, face, and eye protections. Authoritative guidelines exist to help protect first responders from exposure to fentanyl and other synthetic opioids. These include:

- [“Fentanyl Safety Recommendations for First Responders,”](#) produced by the White House Office of National Drug Control Policy.

- [“Fentanyl: Preventing Occupational Exposure to Emergency Responders”](#) and [“Fentanyl: Preventing Occupational Exposure to Healthcare Personnel in Hospital and Clinic Settings,”](#) produced by NIOSH.
- [“Recommendations on Selection and Use of Personal Protective Equipment and Decontamination Products for First Responders Against Exposure Hazards to Synthetic Opioids, Including Fentanyl and Fentanyl Analogues,”](#) published by the Interagency Board.

Additionally, WTP has developed an awareness-level training tool, [“Prevention of Occupational Exposure to Fentanyl and Other Opioids,”](#) which provides background information on the opioid crisis and highlights different different worker populations that face potential on-the-job exposure.

Workshop participants stated that awareness-level training on opioid-related hazards should be offered to all workers, including those who are less likely to come into direct contact with opioids but are still impacted by the epidemic. Another consideration for awareness-level training is to add content about the prevention of opioid addiction and misuse.

There is a need for both awareness- and operations-level training for workers who are expected to take action in dealing with overdose victims. Operations-level training should be offered to those who have the potential for occupational exposure to opioids and should address donning and doffing PPE and site-specific operational procedures. Naloxone training should be expanded to all workplaces where the potential exists for opioid exposure or overdoses.

Leverage Partnerships and Expertise

Workshop participants proposed ideas on how to work collaboratively to address the training needs for at-risk workers. For example, WTP awardees could come together to develop a train-the-trainer (TTT) course or a system where they can exchange best practices and stories with one another. A more focused follow-up meeting on opioids would be ideal, where trainers could come together, brainstorm, and discuss training strategies focused on reducing opioid-related risks in the workplace.

To the extent possible, awardees should develop and use partnerships with external organizations that can facilitate outreach to different workers and communities on these issues. This may include working with region-specific networks and organizations, such as the [National Day Laborer Organizing Network](#) (NDLON) and [Fe y Justicia](#). Outreach may also include working with professional organizations that represent workers in high-risk or labor-intensive industries, as well as state and local health departments.

WTP awardees are experienced in delivering health and safety training for a wide range of hazardous materials and infectious agents. A feasible method to implement training focused on opioid exposure, misuse, and prevention would be to adapt existing course content. For example, in anticipation of a new Occupational Safety and Health Administration (OSHA) law for Massachusetts public sector workers, [The New England Consortium-Civil Service Employees Association](#) (TNEC-CSEA), is expanding their training to incorporate opioid-related issues. They have been working with the [American Federation of Teachers](#) and the [Massachusetts Teachers Association](#) to train teachers and school janitors. They have also been delivering a training module on opioids for state police and the commercial enforcement division and expect to expand this training to municipal police and workers in Massachusetts.



Gibbs explained how BIDTI's expertise in mitigating exposure to infectious diseases is being leveraged to address the issue of opioid exposure among parks employees and volunteers.

(Photo courtesy of Steven R. McCaw, NIEHS)

The [Biosafety and Infectious Disease Training Initiative \(BIDTI\)](#), a consortium led by Indiana University Bloomington, is merging infectious disease training with opioid hazards training. "Infectious disease and opioids have a very similar particle transmission," said [Shawn Gibbs, Ph.D.](#), co-principal investigator of BIDTI.

The BIDTI team is currently using their expertise to develop training content for law enforcement personnel, parks and recreation workers, public lands employees, volunteers, and contractors. "Parks employees and volunteers have also been thrust onto the front lines of the opioid epidemic," Gibbs said. "Parks and public lands have become a frequent location for opioid use and related behaviors, and thus a location for improper disposal of drug paraphernalia and other wastes."

Recent news reports from cities such as New Haven, Connecticut, and Bloomington, Indiana, show that an alarming number of opioid overdoses take place in parks. This raises a health concern, not only for the public, but also for workers and volunteers who provide service, cleanup, and maintenance on park grounds. These workers are not trained in waste management or hazardous waste disposal, so their potential for exposure to infectious diseases or opioids via needlesticks or other drug-related paraphernalia is an issue.



The BIDTI team has a unique opportunity to address the training needs of these employees by leveraging a partnership they have formed with the [Eppley Institute for Parks and Public Lands](#) (Eppley). Founded in 1993 at Indiana University, Eppley serves a variety of park and public land entities, including the U.S. National Park Service, Bureau of Land Management, and numerous state and local parks and public lands. Eppley also provides training and leadership development for park employees, reaching at least 40,000 full-time employees and 70,000 volunteers through its online platform.

In partnership with Eppley, BIDTI is using a blended approach to offer training via hands-on techniques and a learning management system. The team is using a TTT method to raise awareness on how to recognize and safely handle infectious disease and opioid hazards. The team is also developing content for community- and awareness-level trainings on infectious diseases related to the opioid epidemic.

- **Community-level training** will emphasize education on disease transmission and the environmental persistence of organisms likely to be associated with opioid use

paraphernalia. The training will give participants tools to apply and adapt their knowledge to avoid a variety of potential exposure scenarios. It will be provided to park employees or volunteers before activities, such as litter removal and stream water cleanup events.

- **Awareness-level training** will delve deeper into the content to develop knowledge to recognize the hazards of infectious disease risks from bloodborne pathogens associated with opioid use. It will include selection of proper PPE and donning and doffing techniques, as well as a section on how to safely administer naloxone to someone who is experiencing an opioid overdose. This training will only be provided to participants who complete the community-level training and their respective organization's OSHA Bloodborne Pathogen training.

These courses will be incorporated into Eppley's e-delivery platform. They will be made available at no cost to all of Eppley's existing training partners and will be marketed through multiple national distribution lists. These trainings are expected to be fully operational in May 2019.



Encourage Mental Health Resiliency

[Jamie Becker](#), director of the Health Promotion Division for the Laborers' Health and Safety Fund of North America (LHSFNA), is an advocate for incorporating mental health as part of health and safety training to address opioids in the workplace. The LHSFNA is implemented through a [labor-management and nonprofit trust agreement](#) with the Laborers' International Union of North America (LIUNA), which represents over 500,000 members, primarily construction workers, in the U.S. and Canada. In her role with the Health Promotion Division, Becker oversees and manages a wide range of issues, including crisis management, mental health, wellness programming, and substance use disorders and drug-free workplace programming.

The rate of opioid abuse and suicide is increasing among construction workers. In this predominantly male trade, workers have limited time with their families, and often experience physical pain along with financial stress and insecurity. Becker said some workers may have family members who are dealing with opioid use disorders;

therefore, this could affect their presence and productivity while at work.

"Mental health and wellness are huge elements of safety for workers," said Becker. "Not only are workers' lives affected, but also their family members. There is a need to figure out how to reconcile business needs with human needs, and to expand the conversation about what safety training is for the populations we work with."

Patricia Moore, substance use counselor and worker trainer for the [American Federation of Government Employees](#) (a sub-awardee and partnering organization affiliated with the [International Chemical Workers Union Council](#)), echoed many of Becker's points. Moore said her role at the Cincinnati Veterans Affairs Medical Center has shown her that there is no all-for-one solution for opioid use disorders and that treatment must be individualized. "It's necessary to look at the whole person, and mental health resiliency is important," she said. "A training or treatment program should be directed toward restoring physical, emotional, and social function, and improving workers' quality of life. It should also focus on reconnecting a worker to priorities and helping them manage a healthy lifestyle."

BEST PRACTICES FOR PREVENTION, EDUCATION, AND TRAINING

Awardees and partners shared strategies that their organizations have found to be effective for prevention, education, and referrals for treatment related to opioids and other substance use disorders. They shared perspectives on existing public health measures to reduce opioid risks and offered insights on why empowering workers, focusing on mental health, offering peer support, and addressing stigma are key best practices.

Public Health Measures

There are several public health measures and interventions that are being implemented to reduce opioid risks for workers and the general public.

Appropriate prescribing of opioids in clinical practice is imperative. According to the CDC, patients who are prescribed higher dosages face a greater risk of overdose death. Therefore, it is important for clinicians to use [guidelines to calculate](#) the total daily dosage of opioids to protect their patients. Many states have established pharmacy databases and require prescribers to check them to ensure that patients are not obtaining prescription opioids from multiple providers.

Education is important for helping individuals become aware of and understand the risks associated with opioids. Generally, safe injection sites provide protections against the spread of infectious diseases, and drug testing stations allow users to learn more about the chemical composition of drugs they are using.

Naloxone is a very effective reversal agent. Many first responders, including police officers and EMS providers, carry naloxone to save the lives of people who have overdosed. Proper training on naloxone use and administration is needed for workers who commonly encounter overdoses.

NIOSH documents, such as [“Using Naloxone to Reverse Opioid Overdose in the Workplace: Information for Employers and Workers,”](#) provide guidance on how to establish a Naloxone Use Program in the workplace.

Empower Workers

[Jodi Sugerman-Brozan](#), executive director of the [Massachusetts Coalition for Occupational Safety and Health](#) (MassCOSH), shared different approaches her organization is using to reduce opioid addiction and overdose among workers. MassCOSH, a subawardee and partnering organization with TNEC-CSEA, is committed to the mission of ensuring that all workers earn a fair living, are treated with respect, and return home alive and well. Notably, MassCOSH has a special focus on under-represented and vulnerable groups, including immigrants, youth, and low-wage workers.

Sugerman-Brozan explained how MassCOSH became involved with efforts surrounding the opioid epidemic. Each year, MassCOSH releases a report called “Dying for Work” in conjunction with their observance of Worker Memorial Day on April 28. This report provides details on worker fatalities from the previous year and identifies who is dying and what is killing them. The 2018 issue of the report explained the alarming increase in the number of workers who died from suicide and overdose between 2015 and 2017, a trend that is undoubtedly related to the growing opioid epidemic.

“With the unfortunate trend continuing in 2017, we can no longer deny that to exclude these fatalities is to exclude an important cause of workplace fatality that must be studied and addressed. Moving forward, future reports will address this concern. We want the families of those who have lost loved ones from workplace suicides and overdoses to know that we see you, we mourn with you, and together we will take action.”

– Excerpted from *“Dying for Work in Massachusetts: The Loss of Life and Limb in Massachusetts Workplaces”* (2018)

“Working in pain is not something new for those of us in the health and safety field,” said Sugerma-Brozan. “Workers are working in pain even more due to the fear of losing their job, lack of sick time, and lack of access to effective treatment for injuries. This leads to a high use of painkillers, such as opioids; but now, these painkillers are more addictive.”

MassCOSH is taking a workers’ rights approach to preventing and treating opioid addiction. This approach empowers workers to become their own advocates for health, wellness, and safety. Notably, it has proven to be effective for different MassCOSH initiatives, especially the Immigrant Worker Center Injured Workers Committee.

Recently, MassCOSH launched a pilot peer training program focused on opioid awareness. The goals of this program are to:

- Educate workers about the risks of opioids used for chronic conditions.
- Educate workers about more effective and less dangerous alternative pain treatments.

- Empower workers to advocate for themselves before an injury occurs, and during and after medical treatment, so they can return to work safely.
- Educate workers about addiction treatment services that are available to them, as well as their family and friends, and how to use these services without stigma or risking their job.

MassCOSH is partnering with three unions to conduct the pilot training program: the [Massachusetts Nurses Association](#), the [Ironworkers](#), and the [International Brotherhood of Teamsters](#). Prior to training, they will conduct a needs assessment to customize training curricula and content for each union or worksite. They will then conduct one full-day TTT for two peer leaders from each site to build their capacity as peer trainers. Evaluation of the pilot project will help them identify factors that promote or inhibit participation of unions and worker centers and determine the effectiveness of a peer-to-peer model for educating workers on opioid issues. MassCOSH also plans to incorporate the training into their Immigrant Worker Center and Teens Lead at Work initiative.

Promote Wellness and Self-Care

Workshop participants agreed that a structure is needed within the workplace to promote wellness and mental health for all workers, and to offer long-term healing for those who misuse opioids and other substances. During a small group activity, some workshop participants demonstrated a series of mental health and resiliency activities that can be used to train workers and employers.

In one activity, the group listed common stressors for workers and coping mechanisms. Participants identified their top three stressors as work, family, and financial issues. The most common coping mechanisms were exercise, reading, vacation, and companionship with family, friends, and pets.

In another activity, the group used a mapping technique that involved drawing a gender-neutral figure on a flip chart and then placing stickers on areas of the body map where stress commonly causes pain or discomfort. The head, shoulders, and back were the most common areas identified; other areas included the heart, stomach, hips, and feet. Using a gender-neutral figure is valuable to eliminate gender bias and stigma. The group discussed that stress also manifests in other ways, including anxiety, tension, and weight gain or loss.

Another activity allowed the group to discuss ways that stress is often projected onto others and identified ways to mitigate these projections through coping mechanisms. Stress may be projected through impatience, isolation, panic, transference, and other behaviors. Meditation can break a lifetime habit of projection and rumination.

Overall, these activities can help workers become more aware of their own stress and identify co-workers or other people they can relate to and confide in. They allow people to see that they are not alone, and they can create synergy. Greater emphasis is needed to help employers understand the importance of their employees' mental well-being for the sake of their health and overall productivity. The importance of a workplace culture where workers are able to talk honestly about these issues is key. In a positive culture, workers can talk with their managers and employers about their injuries and job stressors. Self-care and stress reduction education should be integrated into training. The [WTP Disaster Worker Resiliency Training Manual](#) offers an ideal model to follow in developing resiliency activities for training.

Prevention of workplace injuries, illnesses, and stress is primary; however, workers should be trained to avoid misuse of opioids if and when they need to seek medical care. Educating workers on alternatives to opioid medication, such as non-prescription pain medications, acupuncture, and physical therapy, is important. Additionally, workers should be provided a checklist or other guidance tool to use when engaging with health care providers about medications and prescriptions for pain management.

Share Stories, Transform Lives

Sharing stories of addiction and recovery can help create an environment where workers will be willing to talk about the uncomfortable issues of mental health and substance abuse, especially when there is effective and timely access to treatment. [Allan McDougall](#), program coordinator for the [United Steelworkers](#) (USW) Emergency Response Team, shared his personal story as a recovering alcoholic. His story demonstrated how pure honesty and transparency can eliminate the stigma associated with substance abuse and ultimately transform lives.

McDougall said he started working as a hard rock miner in 1970. He described the solidarity, loyalty, and trust that

miners have with one another, especially when most of their time working is spent more than 4,000 feet underground. He described it as a dangerous job, where fatalities happen way too often. "In our union, a fatality happens roughly every seven days. A critical injury, every five days," said McDougall. "Our union members experience a higher incidence of post-traumatic stress than workers in most other occupations."

Given the wearisome experiences of work in this type of environment, many miners turn to alcohol or other substances as coping mechanisms. McDougall said he knew that he had a problem; unfortunately, he wasn't comfortable opening up to external treatment and recovery specialists. "The industry of hard rock mining is a 100 percent male workforce, but the people who were coming in to help me and other substance users were not male," said McDougall. "We just didn't go to the people who couldn't identify with our own personal experiences for help."

Now sober for 31 years, McDougall devotes his time to motivational speaking and counseling workers and families who are dealing with or impacted by substance use disorders. "Back in those days, death chased me. But now, I chase death," he said.

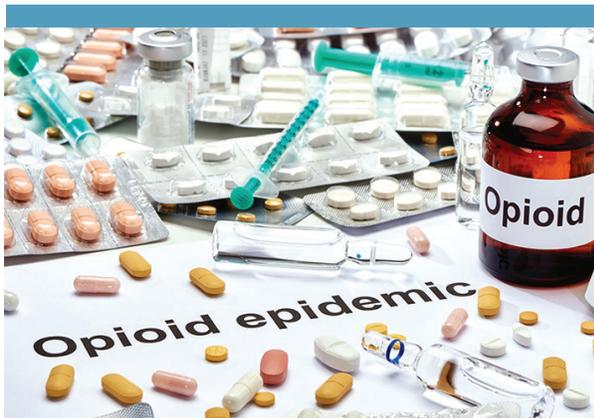


McDougall, center, engages in small group discussion with WTP awardees Jim Frederick, left, and Arturo Archila, right, from USW.

(Photo courtesy of Steven R. McCaw, NIEHS)

McDougall said USW saved his life. The union introduced him to others who were recovering substance users. This helped him walk through treatment and recovery, which is a day-at-a-time process. He said the USW Emergency Response Team includes more than 60 trained advocates across America that serve as peer trainers on topics related to substance use and mental health. They also do follow-ups with all families about twice a year.

In 2018, McDougall launched a weekly radio program and podcast called “[Steppin’ Out Radio](#)” as a means of reaching out, sharing inspiring stories, and destigmatizing substance abuse in the workplace. The program features true stories from USW members who have triumphed over addiction and mental health issues. The program already has more than 2 million listeners, and the team is looking for others to interview who can share their stories anonymously.



Opioids and Worker Health

Listen to a [podcast](#) called “Opioids and Worker Health” featuring Chris Cain, executive director of the CPWR - The Center for Construction Research and Training.

BROADER NEEDS FOR PREVENTION, EDUCATION, AND TRAINING

While WTP is well-positioned to educate workers on prevention of injury, illness, and occupational exposure to opioids, workshop participants recognized there is also a pressing need to broadly address opioid misuse and access to treatment and recovery in the context of training.

Stigma, workplace drug testing policies, and the workers’ compensation system are just a few of the many complex factors that can hinder workers’ treatment or recovery. Most workshop participants stated that these topics are generally beyond the scope of WTP’s focus and expertise; however, most provided insights or expressed interest in exploring how these topics could be addressed within a training framework.

Address Stigma, Workplace Drug Testing, and Disciplinary Programs

The stigma surrounding addiction and opioid use disorder presents a major challenge both for training workers and addressing options for treatment and recovery. Workshop participants agreed that destigmatization needs to be addressed first by educating employers and workers that opioid use disorder is a disease and not a moral failure. Suggested destigmatization methods and training activities include storytelling, videos, scenario-based case studies, forum theater, and photo voice. Awardees could develop a library of select stories and case studies to feature or work through in a small group activity. Forum theater could be used to re-enact a scenario based on a story from a group, then replay with intervention suggestions on how to best deal with the scenario. Photo voice could be used to document pictures from the workplace to illustrate problems and solutions.

Workshop participants also discussed concerns with workplace drug testing policies and how these further complicate workers’ access to treatment and recovery. Alternative-to-discipline programs were described as an approach to encourage workers to come forward to access treatment and recovery without the threat of losing their employment.



Drug testing protocols are common in many states and industries and are used solely for the purpose of removing employees who are impaired by drugs or alcohol. In some cases, language and specifics related to these protocols are also written into union contracts. Triggers for a drug test may include probable cause or suspicious accidents, and some safety-sensitive jobs require drug testing.

Discipline, up to and including termination, is often a result of a positive drug test. Punitive drug testing programs, such as zero tolerance, may deter workers from reporting problems and work-related injuries. Although workers who are impaired may pose a risk to themselves and co-workers, especially in high-risk jobs, most workshop participants echoed that treatment should be offered in lieu of disciplinary action. Others stated that drug testing has gotten out of control – employers often look to blame the worker when an accident happens in the workplace. In this case, some employers use the drug test to place blame on workers instead of exploring the root cause of accidents.

Workshop participants offered insight on how these issues can be addressed within the context of a training curriculum and framework. Training content could include

documentation to educate workers on the parameters of drug testing, debunk inappropriate drug testing protocols, and define false positives and negatives. The training content could identify examples of drug testing contract language for union settings and potential treatment and recovery programs. Additionally, it could define both the terms of drug testing policies and consent agreements for workers who go into treatment. Overall, training needs will vary depending on the industry, so content should be tailored to fit the worksite and target audience.

Following is a summary of considerations and methods to address workplace drug testing and disciplinary programs in training:

- Triggers for a drug test include probable cause, incidents that may be cause for suspicion, or positions that require frequent drug testing.
- Consider and identify drug testing requirements by state.
- Discipline is usually a part of the drug test. Workers usually find out about the consequences of drug test through education, but in the worst-case scenario, they find out when they are caught.



- Treatment should be offered in lieu of discipline.
- Discipline is a deterrent for people reporting problems and injuries.
- Potentially include good versus bad practices for drug testing in a curriculum and tailor it to suit the workplace, audience, and existing situation (e.g., collective bargaining agreements, employer-driven policies).
- Zero-tolerance policies may make sense for high-risk jobs. For other jobs, there could be provisions, such as taking a worker off the job to another sector, etc. These policies need to be worked out with the employers and companies.
- Include a basic outline of steps that a company or organization should take when addiction or substance abuse is identified. Check to see if the company has an opioid action plan as part of the emergency response plan and outline the steps and the roles of employees and management under the policy.
- Drug testing used to be seen as a way to fire people, but now it is a safety issue. A cultural change is needed.
- The issue of represented versus non-represented workers also needs to be considered. It should be centered around employees and their rights.

Address Health Care and the Workers' Compensation System

Most workshop participants agreed that navigating health care policies and the workers' compensation system can be confusing because they vary by state. Education and training addressing pain, injuries, and the risks of opioid prescriptions are needed for both workers and health care providers.

Training programs should first consider prevention of injuries. WTP could help identify ergonomic and other issues that lead to different injuries, then build prevention-focused training around those issues.

There is a lack of accessible data on prevalent injuries related to different industries; although most workers' compensation systems have this information, WTP doesn't necessarily have access to this information. Obtaining this data would enable trainers to know more about potential injuries and make training more effective.

Health care providers need to be informed about a worker's specific job tasks and activities when he or she comes in

“Addiction, suicide, and behavioral health are safety issues. We need to approach these in a strong, yet compassionate way. In order to do this, we need to know our audience, educate ourselves, and get comfortable with an uncomfortable topic.”

– Kyle Zimmer, health and safety director,
IUOE Local Union 478

as a patient. Medical entry forms often request information about location of work, but not necessarily about specifics of on-the-job activities. Providers don't always recognize how critical this information is in deciding a course of treatment, or how they can make working conditions better for their patients. To meet this need, WTP awardees could develop industry-specific materials to help providers become more aware of on-the-job activities that are required as part of a patient's occupation.

Health care providers also need to be educated about the workers' compensation system overall. WTP awardees could develop industry-specific materials, fact sheets, or flowcharts to help providers become more familiar with the process and regulations surrounding the system.

Workers and health care providers need to be educated on how to have meaningful dialogue and productive clinical visits. As patients, workers should consider taking another person with them for these visits, whether it is a family member or peer. A wide range of emotions may arise, hindering a patient's ability to ask the right questions or recall everything that their health care provider says during a visit.

Workers need to be empowered as their own advocates. This will ultimately help them navigate the workers' compensation system, make more informed decisions about their health, and improve interactions with their health care provider. Oftentimes, workers experience a natural fear of dealing with the health care system and potentially losing their job after an injury. WTP should focus on developing training content to empower workers' engagement with health care providers, improve their health literacy, and raise their awareness of alternatives for pain management and medication. For example, developing a list of questions that workers can access and consider during conversations with their provider would be useful. [Ask Me 3](#) is an educational program developed by the Institute for Healthcare Improvement that encourages patients and families to ask three specific questions of their providers to better understand their health conditions and what they need to do to stay healthy. If patients have resources and information on what questions they should ask their doctors, that could help alleviate fear. [CPWR – The Center for Construction Research and Training](#) developed a [physicians' alert handout](#), which is a helpful resource for both providers and workers. It includes information about treatment of common injuries, circumstances of

work, and culture of work for construction workers. It also provides information on what patients need to know before accepting opioid prescriptions.

Workers also need to be educated about their individual rights as well as the regulations surrounding workers' compensation within their state. This will help them better navigate the system and understand how these regulations may impact them. Some workshop participants mentioned development of a peer navigator's program as a potential way to help workers walk through the process of workers' compensation. There are existing navigator programs and worker centers that workers can use to get answers to their questions.

Following is a summary of considerations and methods to address health care and the workers' compensation system in training:

- There are literacy issues that need to be addressed for workers and health care providers.
- Workers need to be educated on terminology and concepts specific to health care and the workers' compensation system.
- Health care providers need to be educated on the risks of opioids and specific activities that are relevant to a worker's role on the job.
- Some level of awareness training may also be required for workers' compensation attorneys.
- Use a multipronged approach to address both injury prevention and alternative treatment options after injury.
- Make training content scalable and adaptable. Training content should be tailored based on identified needs and target populations. Keep in mind that workers' compensation systems vary by state, as well as the availability of expertise and resources.
- Develop checklists and resources that workers can use when engaging with their health care provider.
- Ensure that workers are aware of their individual rights and provide them with guidance to help them understand and walk through the process of workers' compensation.
- Develop fact sheets and resources to educate health care providers on the risks of opioids, and industry- or occupation-specific activities.

Offer Peer Support and Assistance

For workers who are dealing with substance use issues, support is critical to ensuring that treatment and recovery is successful. Employee assistance programs (EAPs), member assistance programs (MAPs), and peer assistance (or advocacy) programs (PAPs) are common types of support programs. Though the semantics are slightly different, these programs are similar in scope. EAPs are typically employer-paid or company-appointed and are often associated with external providers. EAPs provide direct service or referrals, but trust has become a major concern with these programs. MAPs are union-based programs where members can access support services through union-sponsored programs. PAPs involve peer workers, and advocacy is usually the preferred term rather than assistance. These peer-based programs are advantageous, as workers typically feel more comfortable talking to peers who are in the same union, industry, or company.

PAPs emerged as employers and unions recognized the need for workplace programs that can help workers navigate a host of work- and nonwork-related issues. EAPs, MAPs, and PAPs are geared toward developing a healthier and more productive workforce.

Workshop participants said that a facility- or member-based survey is a potential strategy to determine the need for an EAP, MAP, or PAP. Most agreed that investment in these types of programs – whether union- or nonunion-based – typically shows significant returns on investment for industries and companies. One participant shared that they conducted a research survey of union members that came into their MAP within a five-year window. They found that for every dollar invested in the MAP, there was a \$12 return for the company. Having the MAP in place resulted in less accidents and fatalities.



Workshop participants mentioned that there are certain questions and deciding factors that should be discussed prior to implementation of an EAP, MAP, or PAP:

- How will the program be accessed?
- What are the protections?
- What does it cost to manage the program?
- Is the program available to families?
- What level of engagement will be required for all involved parties?
- What model is followed (e.g., alternative medicine, 12-step program)?
- What does the entry and exit strategy look like for rehabilitation?

McDougall shared how he and colleagues implement EAPs and PAPs for the union. They go to a site, assess the issues, then refer the union and employer to professionals and subject matter experts that can help them establish a program. Once a decision is made to implement the program, they host a three- to four-day training. McDougall said he usually brings in people from Alcoholics Anonymous or Narcotics Anonymous, who have five years minimum in

recovery, to serve as sponsors and contacts for workers who have identified that they need help in these areas. These people serve as accountability partners and peer advocates.

McDougall said regardless of the type of program that is implemented, leadership and subject matter experts are critical for its success. Communication and marketing to those who should take advantage of the program is also critical, as well as management of stigma so people aren't afraid to access the resources that are available to them. McDougall typically recommends that the sponsors attend Toastmasters or some other forum to become comfortable with public speaking. This often helps them feel more qualified to help people.

McDougall said Johns Hopkins has a good resource to use when deciding to refer someone to an EAP, MAP, or PAP. It includes 20 questions and 20 signs of addiction. This is a good measure when an individual comes in for an initial assessment. He said it was a personal indicator for him that he needed help.

To evaluate the effectiveness of an EAP, MAP, or PAP, it is important to identify the metrics of success. This information can be gathered through surveys, one-on-one conversations, testimonial videos, and other methods. It is important to identify the sustainability of the program and how many people are using it.

Workshop participants echoed that indicators of success in a recovery-based program may differ. Recovery itself does not stand alone as the best and only metric of success. Relapse is not a discounting factor to success, as it is part of the pathway to recovery. If relapse occurs, we have to be open to remove the stigma and have workers talk about and address the issue.

Kyle Zimmer, health and safety director for the International Union of Operating Engineers (IUOE), Local Union 478, explained that IUOE passed an overarching resolution to educate the membership on substance abuse, suicide, behavioral health, and lifestyle issues. This top-down, high-level support makes outreach and peer support for opioids and other substance use issues very feasible and effective.

IUOE is committed to raising awareness about addiction and suicide and developing curriculum to prevent these issues among union members. Furthermore, IUOE encourages local unions to form partnerships with reputable third-party advocates to assist locals in educating members about addiction.

Zimmer directs the local union's [member assistance and peer-based program](#) that provides confidential and referral services to union members on lifestyle issues such as substance abuse and mental health. Zimmer said the program has proven to be a successful model in education, communication, and assistance for union members. It also provides a viable method for recognizing issues, reacting in a positive way, and recommending helpful resources. Ashley Dwyer, MAP coordinator, carefully examines and vets treatment facilities and develops a network of providers that can respond to the needs of union members. Dwyer said their use of in-house clinicians ensures that union members have experts they can talk to about issues and get the help that they need.

Another advantage of the MAP is its cost-effectiveness. Zimmer said prior to implementation of their MAP, inpatient treatment was the chosen method for several years. However, administration noted that the costs of inpatient treatment were increasing significantly. With the transition to the MAP, they have found that members' utilization rate for substance use and mental health issues has gone up considerably, but the costs have come down.

IUOE also offers support groups for affected family members. "A lot of times during recovery, the family doesn't know that their loved one is struggling with substance use," said Dwyer. "They may choose to enable the problem without even realizing it." In these support groups, they talk with family members, explain what recovery is going to look like, and encourage them to move past any judgments they may have toward their loved one's substance use issue.

Overall, increasing worker awareness about the existence and accessibility of EAPs, MAPs, and PAPs may increase use of these programs. Awardees could offer training to employers and union leaders so that they may consider strengthening existing programs or establishing new ones.



NEXT STEPS: DEVELOPING A TRAINING FRAMEWORK FOR AWARENESS AND PREVENTION

As more is uncovered about the opioid epidemic, the need for prevention, awareness, and training for workers will likely expand across various industrial sectors and populations.

While operations-level training is needed for certain groups of workers who face risks of direct opioid exposure or encounter overdoses, general awareness-level training should be provided to all workers, regardless of their occupation or expertise. Operations-level training should include selection of appropriate PPE, donning and doffing procedures, and administration of naloxone (as needed). There is an overarching need for awareness-level training for employers, organizational leaders, workers, and health care providers. Awareness-level training may include a wide

range of topics, such as opioid pathophysiology and risks, symptoms of overdose, and methods to eliminate stigma associated with misuse and addiction. Ultimately, training content should be tailored depending on workplace needs and target population.

Best practices to develop effective training include emphasizing prevention, empowering workers, promoting mental health wellness, and reducing stress. WTP's focus is directed toward the public health model of primary, secondary, and tertiary prevention. Primary prevention focuses on preventing injuries, and secondary and tertiary prevention focus on providing access to appropriate treatment for injured workers and support for treatment or recovery, respectively.



Recognizing the challenges and issues surrounding opioid addiction and misuse, WTP encourages the use of transformative storytelling to eliminate both individual and workplace stigma. Furthermore, there is a great need to offer workers educational resources that can make peer support treatment and recovery services more accessible. Effective training and education must also address issues related to workplace drug testing, health care, and the workers' compensation system. Although these factors can be complex and difficult to understand, workers should be empowered and equipped with resources to navigate these issues.

Using themes gathered from this workshop and stakeholder listening sessions, WTP will use its network of academic consortiums, union-based programs, nonprofit organizations, and partnering agencies to leverage resources and implement a training framework to reduce the staggering impact of opioids on workers, both at the national and local level.



National Institute of
Environmental Health Sciences
Worker Training Program

OPIOID-RELATED HAZARDS IN THE WORKPLACE

Developing a Training
Framework to Address Exposure,
Use, and Prevention

OCTOBER 24 – 25, 2018

Research Triangle Park, North Carolina

AGENDA

Wednesday, October 24, 2018

8:00 a.m. – 1:00 p.m. **Registration**Rodbell Lobby

1:00 – 1:15 p.m. **Welcome**.....Rodbell Auditorium

- **Joseph “Chip” Hughes**, NIEHS Worker Training Program (WTP)

1:15 – 2:15 p.m. **Keynote Address**

- **INTRODUCTION: Donald Elisburg**, National Clearinghouse
- **John Howard, M.D.**, Director, National Institute for Occupational Safety and Health

2:15 – 2:30 p.m. **Break**

2:30 – 3:30 p.m. **Opioid Exposure: Occupational Hazards and Other Risk Factors for Workers**

- **MODERATOR: Sharon Beard**, NIEHS WTP
- **Letitia “Tish” Davis, Sc.D.**, Massachusetts Department of Public Health
- **Shawn Gibbs, Ph.D.**, Indiana University School of Public Health-Bloomington

This session is intended to discuss occupational exposure to opioids and workers who face the greatest risk of opioid misuse and addiction.

- Opioid drugs, analogues, and toxicity
- What are the signs and symptoms of exposure?
- What are the primary routes of occupational exposure?
- Who is at risk of occupational exposure?
- Who is at risk of opioid misuse and addiction?

3:30 – 4:15 p.m. **Small Group Activity: Assessment of the Current State of Worker Training and Protection from Occupational Exposure to Opioids**

- Do you know what the needs/gaps are in the regions and organizations you work with in protecting and training emergency responders and others with a potential for occupational exposure to opioids?
- What populations can we work with that have a potential for occupational exposure? Is there a distinction between populations that need operational versus awareness training?
- Are there current programs that are being offered or developed addressing these concerns?
- How can grantees collaborate to tackle these issues?
- What external partnerships should WTP/grantees explore to develop and implement a training framework?
- Which occupations and industries that are at greatest risk of opioid misuse and addiction should be targeted for training and outreach efforts?

4:15 – 4:45 p.m. **Report Back from Small Groups**

5:15 p.m. **Bus Departs for Blue Note Grill**

6:00 p.m. **Dinner at Blue Note Grill*** 709 Washington St., Durham

*Please plan to take a taxi from the restaurant back to the hotel following dinner.

Thursday, October 25, 2018

8:00 a.m. **Bus Departs Hotel for NIEHS**

8:00 – 9:00 a.m. **Registration**Rodbell Lobby

9:00 – 10:15 a.m. **Treatment and Recovery**Rodbell Auditorium

- **MODERATOR: Jim Remington, NIEHS WTP**
- **Jamie Becker, Laborers' Health & Safety Fund of North America (LHSFNA)**
- **Allan McDougall, United Steelworkers**
- **Patricia Moore, U.S. Department of Veterans Affairs (VA)/American Federation of Government Employees (AFGE)**

This session will focus on:

- Best practices regarding treatment/recovery
 - Intervention strategies
 - Mental health/resiliency
 - Eliminating the stigma associated with misuse
-

10:15 – 11:00 a.m. **Small Group Activity: Developing a Training Framework Related to Opioid Treatment and Recovery**

Each small group will be tasked with discussing issues that were raised in the previous panel and how training programs might address them.

- Should grantees develop training programs that address best practices for opioid treatment and recovery?
 - Should these programs target employers, union officials, or workers?
 - What are some of the key topics that should be included in this type of training? How specific should these programs be in addressing signs and symptoms, neurobiology, pathways to misuse and addiction, medically-assisted treatment, availability of local treatment resources, etc.?
 - How can these programs emphasize the connection to prevention of occupational injury and illness programs?
 - Should intervention strategies such as employee assistance programs (EAPs), member assistance programs (MAPs), and peer support programs be included in such trainings?
 - Can and should mental health resiliency be integrated into these programs?
 - Are there methods for teaching about stigma that will encourage communication and treatment program utilization?
-

11:00 – 11:15 a.m. **Break**

11:15 a.m. – 12:15 p.m.	<p>Prevention: Strategies for Protecting and Educating WorkersRodbell Auditorium</p> <ul style="list-style-type: none"> • MODERATOR: Demia Wright, <i>NIEHS WTP</i> • Jodi Sugerman-Brozan, <i>Massachusetts Coalition for Occupational Safety and Health (MassCOSH)</i> • Kyle Zimmer, <i>International Union of Operating Engineers, Local Union 478</i> <p>Occupational injury is a pathway to opioid abuse and addiction. Additionally, treatment of pain from non-work-related injuries presents a potential for opioid misuse. This session is intended to discuss strategies for educating employers and workers about risk of abuse/addiction and ways to interact with employers, health care providers, and workers' compensation and health insurance companies on alternatives to opioids for treating pain. EAPs, MAPs, and peer support programs can play a key role in getting workers into treatment and recovery programs.</p>
12:15 – 1:15 p.m.	Lunch NIEHS Cafeteria
1:15 – 2:45 p.m.	<p>Concurrent Breakout Sessions</p> <ul style="list-style-type: none"> • Workplace Drug Testing, Stigma, and Alternative-to-Discipline Programs.....Rodbell A <ul style="list-style-type: none"> • FACILITATORS: Patricia Moore, <i>VA/AFGE</i> and Milly Rodriguez, <i>AFGE</i> • Educating Workers on Interacting with the Health Care and Workers' Compensation Systems Rodbell B <ul style="list-style-type: none"> • FACILITATORS: Jamie Becker, <i>LHSFNA</i> and Mitch Rosen, <i>Rutgers, The State University of New Jersey</i> • Training Related to Strengthening or Establishing Pathways to Treatment through EAPs, MAPs, and Peer Assistance Rodbell C <ul style="list-style-type: none"> • FACILITATORS: Ashlee Fitch, <i>United Steelworkers</i> and Sanobeia Brima, <i>OAI, Inc.</i> • Educating Workers on Self-Care to Reduce Stress and Pain and Promote WellnessRoom E450 <ul style="list-style-type: none"> • FACILITATORS: Arturo Archila, <i>The Labor Institute</i> and Judy Daltuva, <i>University of Michigan</i>
2:45 – 3:00 p.m.	Break
3:00 – 3:45 p.m.	Report Back from Breakout GroupsRodbell Auditorium
3:45 – 4:30 p.m.	<p>Discussion on Developing a Training Framework for Opioid Awareness and Prevention (<i>facilitated discussion</i>)</p> <ul style="list-style-type: none"> • FACILITATOR: Jonathan Rosen, <i>National Clearinghouse</i>
4:30 – 4:45 p.m.	Wrap-up
4:45 p.m.	Adjourn
5:00 p.m.	Bus Departs for RDU Airport



National Institute of
Environmental Health Sciences
Worker Training Program