



Mitigating the Effects of Opioid Use Among Workers

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The advent of opioid analgesics such as oxycodone has helped revolutionize the management of chronic pain, allowing many individuals to lead more productive and higher quality lives. However, such progress has come at a cost—literally and figuratively—and with increased use, opioids also have become a growing issue for employers concerned about the health and safety of their employees.

A Costly Concern

Because of their strong potential for causing impairment or other safety hazards, opioids are a significant matter in the workplace. Opioid-related problems also can become a significant expense to companies because of absenteeism and lack of productivity, increased health care costs, increased employee turnover, and risk of workplace injury and violence.

According to the *New York Times*, workplace insurers spend approximately \$1.4 billion annually on opioid medications (Meier, 2012). Opioids feature prominently workers' compensation (WC) claims, particularly given the high prevalence of musculoskeletal injuries in the workplace. A study from the Workers' Compensation Research Institute found that, among 16 states, 26% of lost-time claims were associated with at least one prescription for opioid medications (Wang, Mueller, & Hashimoto, 2011). In 2009, nearly one quarter of all WC pharmacy costs were attributed to opioids (Lipton, Laws, & Li, 2009; Paduda, 2009). The Hopkins-Accident Research Fund found that the average total cost of claims involving just one opioid was more than three times higher than that of claims without opioids (White, Tao, Talreja, Tower, & Bernacki, 2012).

There appears to be a dose-response relationship between opioid use and negative occupational outcomes, including delayed recovery, longer disability, and greater medical expenses (Meier, 2012; Wang, Hashimoto, & Mueller, 2012). Swedlow, Gardner, Ireland, and Genovese (2008) have reported that greater numbers and higher dosages of opioid prescriptions have each been linked to higher WC cost claims, more lost time from the workplace, and greater duration of paid short-term disability. An analysis of WC claimants in Ohio (Dembe, Wickizer, Sieck, Partridge, & Balchick, 2012) similarly found that 19% of claims involved at least one opioid prescription, with an increased prevalence corresponding to increases in lost time from work: Compared with the 19% overall prevalence, opioid prescription was present in 32% of claims of 14 or more lost-work days and 57% of claims of 180 or more lost-work days (Dembe et al., 2012).



As a reaction to the rising availability of opioids over the past 30 years, the American College of Occupational and Environmental Medicine (ACOEM) updated its opioid practice guidelines in 2014 (Hegmann et al., 2014a) to include recommendations for the use of opioids in safety-sensitive occupations (Hegmann et al., 2014b). ACOEM found an increased risk of vehicle crashes and unsafe driving behaviors with opioid use, including fatal accidents; consequently, ACOEM recommends against the use of opioids in occupations of high safety sensitivity. This includes those involving the operation of motor vehicles, forklifts, cranes, or other heavy machinery; the use of sharp objects (e.g., needles, knives, box cutters); or the high risk of falling (Hegmann et al., 2014b).

Getting the Facts: Opioid Use in the United States

Opioids are synthetic narcotics derived from compounds present in opium. They bind with receptors in the central and peripheral nervous system and gastrointestinal system to block pain. Side effects include euphoria, drowsiness and sedation, respiratory depression, and constipation. Common opioid analgesics include morphine, fentanyl, oxycodone, and hydromorphone, which are typically prescribed for pain related to cancer, back injury, or other musculoskeletal causes.

Historically, opioid analgesics were primarily given for cancer-related pain. Prescription for noncancer pain was considered too risky because of the drug's high addiction potential, as well as assumptions that opioid medications would be ineffective for other types of pain, such as neuropathic and musculoskeletal discomfort. However, that trend began reversing in the 1980s, as state medical boards lifted restrictions on the use of opioids for noncancer pain, causing the number of prescriptions to skyrocket (Manchikanti et al., 2012).

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United Nations Office on
Drugs and Crime, 2011

The United States consumes at least 75% of the world's opioid prescription drugs (United Nations Office on Drugs and Crime [UNODC], 2011). Retail sales of opioids in our country quadrupled between 1999 and 2010 (Manchikanti et al., 2012) and increased by 127% from 1997 to 2007 specifically (Manchikanti & Singh, 2008). Findings from the 2010 National Survey on Drug Use and Health, sponsored by the Substance Abuse and Mental Health Services Administration, (Substance Abuse and Mental Health Services Administration, 2011) indicate that more than 256 million prescriptions for opioids were filled in 2009. This represents a 146% increase from 2002 for extended-release opioids and a 42% increase in immediate-release opioids.

Opioid overdose can lead to loss of consciousness, brain damage, cardiac arrhythmias, and, in severe cases, death. Fatalities also can result indirectly from accidents and injuries related to being under the influence of opioids. The UNODC and the World Health Organization (2013) estimate that between 70,000 and 100,000 people die from opioids each year. In 2010, opioid overdose fatalities outnumbered those from heroin and cocaine combined (National Safety Council, 2014).

While greater access to opioid painkillers has brought relief to patients with chronic pain, public awareness of their dangers has made the increase in availability a controversial issue. Use of opioids is considered problematic because of the high potential for misuse, abuse, and diversion. According to the U.S. Food and Drug Administration (Lapteva, 2014), these are defined as follows:

- Misuse: the use of a drug outside label directions or in a way other than prescribed or directed by a healthcare practitioner
- Abuse: the nonmedical use of a drug, repeatedly, or even sporadically, for the positive psychoactive effects it produces
- Diversion: the use of legally prescribed medications for illicit purposes, including selling to others

As the medically approved use of opioids has increased, so too has their problematic use: From 1996 to 2011, use of opioids increased 1,448%, while misuse rose 4,680% during that same time period (Atluri, Sudarshan, & Manchikanti, 2014).

In its extreme form, misuse, use, and/or diversion of opioids can manifest as opioid use disorder. Previously termed opioid abuse or opioid dependency, opioid use disorder is a psychiatric illness, as defined in the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 2013). The disorder consists of negative patterns of opioid use that lead to clinically significant distress or impairment, which can be manifested in numerous ways, including, but not limited to, the following:

- Needing to take larger doses of opioids or for a longer period of time than intended
- Reducing or giving up social, occupational, or recreational activities because of opioid use
- Recurrent use of opioids despite failure to fulfill obligations at work, school, or home
- A persistent and unsuccessful desire to cut down on use of opioids
- Craving or a strong urge to use opioids

Presence of two to three symptoms indicates a mild opioid use disorder—what used to be referred to as opioid abuse. The diagnosis previously known as opioid dependence is now diagnosed as either moderate or severe opioid use disorder, indicated by the presence of four to five symptoms and six or more symptoms, respectively.

Of note, addiction can develop insidiously and inadvertently in individuals who are genetically predisposed to substance use disorders (e.g., a child of a parent with an addictive disorder) and who are prescribed opioid analgesics for appropriate reasons, such as dental-related pain or sports injuries. Understanding the role of not just genes but also the gene–environment interaction can help mitigate stigma surrounding the perception that addictions arise solely from intentional, irresponsible drug use.



Barriers to the Treatment of Opioid Use Disorders

Opioid use disorders are treated with a combination of medication and behavioral health services delivered in inpatient and outpatient settings. Medication-assisted treatment is evidence-based and needs to be accompanied by psychosocial supports, including psychosocial needs assessment, supportive counseling, links to existing family supports, and referrals to community services (American Society of Addiction Medicine, 2015). The U.S. Food and Drug Administration (FDA) has approved three medications to treat opioid use disorder: methadone, naltrexone, and buprenorphine. These medications reduce illicit opioid use, reduce cravings, provide relief from opioid-withdrawal symptoms and increase treatment adherence. There is significant concern that patients are not receiving effective treatment despite its robust evidence base. New research published in *Psychiatric Services* (Naeger S. 2016) found that only 17 percent of people hospitalized for opioid abuse, dependence, or overdose between 2010 and 2014 received a prescription for any of the three medications used to treat opioid use disorder in the 30 days after discharge.

The American Psychiatric Association and the American Medical Association are concerned about a number of barriers to effective treatment (Harris, 2015; ASAM, 2015). For the medication component of treatment, for example, physicians report experiencing difficulty navigating complexities related to obtaining initial prior authorization, step-therapy, fail-first policies, and reauthorization processes that require extensive detail and documentation and become more demanding with each reauthorization. These administrative requirements are particularly troubling because the medications are used as long-term maintenance therapy. Other problems identified include lengthy prior authorization processes for inpatient treatment of people in crisis that result in coverage denials, refusals by insurance companies to pay for court-ordered inpatient treatment, and inadequate coverage of inpatient treatment needed to stabilize the patient, among others. There is also significant concern about the inadequate number of physicians trained to treat opioid use disorder. Of note, treatment for medical injuries resulting from opioid use disorder (falls, accidents, etc.) is covered by insurance, but treatment for the underlying opioid use disorder itself is subject to very different coverage determination policies.

Thinking Ahead

The human and monetary costs associated with opioid use by employees are clear but can be potentially offset by implementation of substance abuse programs for employees, including education, employee assistance program (EAP) services, and access to confidential treatment. The National Safety Council (2014) recommends that companies consider taking the following actions:

- Establish a drug-free work environment enforced by random drug testing. Managers should develop rules with legal counsel and human resources to ensure inclusion of risk management, injury protection, and liability information. Terms should be clearly

articulated and distributed in writing to all employees. In developing the company's drug use policy, employers also may want to include a medical review officer to evaluate the policy and results from testing.

- Managers need to familiarize themselves with the company's drug policies pertaining to prescription medication use, as well as regulations on fitness for duty and return to work. For instance, appropriate use of certain prescribed medications may be covered by the American Disabilities Act and, therefore, may not be subject to violation of drug testing.
- Training for supervisors should provide education on how to identify opioid use disorder behaviors. Similarly, understanding strategies on how to effectively intervene and communicate with employees who may be struggling increases the likelihood of individuals receiving treatment in a timely manner.
- Employee wellness programs can provide valuable education about the risks associated with opioid use, including impairments in driving, concentration, strength, coordination, balance, and judgment. Individuals taking opioids also should be reminded about contraindications with alcohol or other medications, such as antidepressants, sedatives, or other psychoactive drugs, which can further impair their cognition and functioning.
- An EAP is a vital resource for directing employees to confidential treatment as needed, including inpatient detoxification, medication-assisted therapy (e.g., buprenorphine, naltrexone), and psychotherapy. Screening, treatment, and aftercare should be benefits covered by the company's health plan. Employer-sponsored interventions can help defray costs associated with having to replace an employee altogether, such as loss of continuity and productivity.
- Prescription benefit manager technology can be used to alert physicians to potential misuse or abuse, such as attempted early refills, the prescription of opioids with other medications that may be contraindicated, and visits to multiple physicians for the same prescription—known as “doctor shopping.”
- Informing employees about their rights and treatment options creates an environment more conducive to help seeking. Employees who want help may understandably worry about whether they will lose their job while in treatment. The Americans with Disabilities Act offers some protection, as does the Family Medical Leave Act. What constitutes a “typical” treatment plan varies by an individual's diagnosis, severity, and level of functioning. Offering short-term and long-term disability allows employees to continue collecting an income if they need to enter rehabilitation, which will require them to take time off from work.
- Finally, employers can help mitigate stigma associated with substance use disorders by educating employees about the biological nature of addictions. Substance use disorders are brain-based illnesses; they are not diseases of failed willpower or character weakness. Creating a tolerant, understanding work environment helps increase the likelihood that employees will feel comfortable seeking assistance.

REFERENCES

- American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (5th ed.). Arlington, VA: Author.
- American Society of Addiction Medicine. (2015). National practice guideline for the use of medications in the treatment of addiction involving opioid use. Chevy Chase, MD: Author.
- American Society of Addiction Medicine. (2015). Medications for the treatment of opioid use disorder: public/private policies. Retrieved from http://www.asam.org/docs/default-source/2015-conference-epk/asam-impact_barriers4-02-14.pdf?sfvrsn=4
- Atluri, S., Sudarshan, G., & Manchikanti, L. (2014). Assessment of the trends in medical use and misuse of opioid analgesics from 2004 to 2011. *Pain Physician*, 17, E119–E128.
- 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. *American Journal of Industrial Medicine*, 55, 313–324.
- Harris, P. (2015). Statement of the American Medical Association to the Committee on Energy & Commerce Subcommittee on Oversight and Investigations, United States House of Representatives, Re: "Combating the Opioid Abuse Epidemic: Professional and Academic Perspectives. Retrieved from <http://docs.house.gov/meetings/IF/IF02/20150423/103367/HHRG-114-IF02-Wstate-HarrisP-20150423.pdf>
- Hegmann, K. T., Weiss, M. S., Bowden, K., Branco, F., DuBrueler, K., Els, C., . . . Harris, J. S. (2014a). ACOEM practice guidelines: Opioids for treatment of acute, subacute, chronic, and postoperative pain. *Journal of Occupational and Environmental Medicine*, 56, e143–e159.
- Hegmann, K. T., Weiss, M. S., Bowden, K., Branco, F., DuBrueler, K., Els, C., . . . Harris, J. S. (2014b). ACOEM practice guidelines: Opioids and safety-sensitive work. *Journal of Occupational and Environmental Medicine*, 56, e46–e53.
- Lapteva, L. (2014). Regulatory history of development of abuse—Deterrent formulations. (2014). Retrieved from <http://www.fda.gov/downloads/AdvisoryCommittees/CommitteesMeetingMaterials/Drugs/AnestheticAndLifeSupportDrugsAdvisoryCommittee/UCM233240.pdf>
- Lipton, B., Laws, C., & Li, L. (2009). Narcotics in workers compensation [NCCI Research Brief]. Boca Raton, FL: NCCI Holdings. Retrieved from https://www.ncci.com/documents/Narcotics_in_WC_1209.pdf
- Manchikanti, L., Helm, S., Fellows, B., Janata J. W., Pampati V., Grider, J. S., & Boswell, M. V. (2012). Opioid epidemic in the United States. *Pain Physician*, 15(3, Suppl.), ES9–E38.
- Manchikanti, L., & Singh, A. (2008). Therapeutic opioids: A ten-year perspective on the complexities and complications of the escalating use, abuse, and nonmedical use of opioids. *Pain Physician*, 11(2, Suppl.), S63–S88.
- Meier, B. (2012, June 2). Pain pills add cost and delays to job injuries. *New York Times*. Available online at <http://www.nytimes.com/2012/06/03/health/painkillers-add-costs-and-delays-to-workplace-injuries.html?pagewanted=all&r=1&>
- Naeger, S., Ali, M., Mutter, R., Mark, T., Hughey, L. (June 2016). Prescriptions Filled Following an Opioid-Related Hospitalization. *Psychiatric Services in Advance*.
- National Safety Council. (2014). The proactive role employers can take: Opioids in the workplace. Itasca, IL: Author. Retrieved from http://www.nsc.org/RxDrugOverdoseDocuments/proactive_role_employers_can_take_opioids_in_the_workplace.pdf
- Paduda, J. (2009). Prescription drug management in workers' compensation: The sixth annual survey report. Madison, CT: Health Strategy Associates. Retrieved from <http://www.comppharma.com/PBMinWC2009.pdf>
- Substance Abuse and Mental Health Services Administration. (2011). Results from the 2010 National Survey on Drug Use and Health: Summary of National Findings. NSDUH Series H-41, HHS Publication No. (SMA) 11-4658. Rockville, MD.
- Swedlow, A., Gardner, L. B., Ireland, J., & Genovese, E. (2008). Pain management and the use of opioids in the treatment of back conditions in the California Workers' Compensation System. Oakland, CA: California Workers' Compensation Institute. Retrieved from http://www.pdmpexcellence.org/sites/all/pdfs/Swedlow%20CWCI_PainMgt_0608.pdf
- United Nations Office on Drugs and Crime. (2011). World drug report 2011. New York, NY: United Nations. Retrieved from http://www.unodc.org/documents/data-and-analysis/WDR2011/World_Drug_Report_2011_ebook.pdf.
- United Nations Office on Drugs and Crime and the World Health Organization. (2013). Opioid overdose:

Preventing and reducing opioid overdose mortality [Discussion paper]. New York, NY: United Nations.

Wang, D., Hashimoto, D., & Mueller, K. (2012). Longer-term use of opioids. Cambridge, MA: Workers' Compensation Research Institute. Retrieved from <http://www.oregon.gov/oha/pharmacy/Documents/ArticlesPublications/Longer-Term%20Use%20of%20Opioids%20%E2%80%93%20WCRI.pdf>

Wang, D., Mueller, K., & Hashimoto, D. (2011). Interstate variations in use of narcotics. Cambridge, MA: Workers' Compensation Research Institute. Retrieved from http://works.bepress.com/cgi/viewcontent.cgi?article=1053&context=dean_hashimoto

White, J. A., Tao, X., Talreja, M., Tower, J., & Bernacki, E. (2012). The effect of opioid use on workers' compensation claim cost in the State of Michigan. *Journal of Occupational and Environmental Medicine*, 54, 948–953.



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The Partnership for Workplace Mental Health is a program of the American Psychiatric Foundation, a subsidiary of the American Psychiatric Association. The Partnership collaborates with employers to advance effective approaches to mental health and promotes the business case for quality mental health care. The Partnership's network includes more than 9,000 employers and related stakeholders. For more information see www.workplacementalhealth.org.

The American Psychiatric Association is a national medical specialty society whose physician members specialize in the diagnosis, treatment, prevention and research of mental illnesses, including substance use disorders. Visit the APA at www.psychiatry.org.