Opioids and Your Injured Worker

An expert explains the real impact of opioid therapy on your workers' compensation costs

By Edward J. Bernacki, M.D., M.P.H.

As a self-insured employer, one of your biggest challenges and potentially one of the most important contributors to your bottom line, is controlling the cost of your workers' compensation claims. For many years our research has demonstrated that when an injured employee does not receive prompt care, the duration and costs associated with a claim will be higher. Furthermore, our research has also shown that the longer medical issues such as pain are not resolved the more claim costs will continue to rise.

What has not been well quantified is cost and duration impact on workers' compensation claims if an injured employee has a prescription for opioids (like OxyContin and Vicodin) to treat chronic pain, as defined by a duration of greater than three months. Opioid addiction has become an alarming social concern in the past 15 years, in large part because physicians have escalated their reliance on them for pain management.

This reliance on opioids is often coupled with escalating dosing over the course of an injury. Research[1] has shown that the estimated total number of opioid prescriptions in the United States increased by 104 percent, from 43.8 million in 2000 to 89.2 million in 2010, with a six percent increase in the likelihood of someone receiving an opioid prescription.

Relating Opioid Use and Workers' Compensation Claims

In 2009, my colleagues and I began to look at the relationship between opioid use and worker's compensation claims. We studied more than 11,000 lost-time injury claims filed between 1999 and 2002 (and closed by 2009) by the Louisiana Workers' Compensation Corporation (LWCC). The LWCC is a private mutual insurance company writing workers' compensation insurance for approximately 25 percent of the fully-insured market in the State of Louisiana.

From our research, published in The Journal of Occupational and Environmental Medicine (JOEM) in 2012, we found that when an injured worker received a prescription for either short-or long-acting opioids, their claims were six times more likely to have a final cost $100,000 more than a claim by a worker not using opioids.

Prescribing Opioids in Combination with Benzodiazepines

Through this research, we, among other researchers, observed that many of the injured workers who were being prescribed either short-or long-acting opioids for pain management were already using prescription benzodiazepines, like Valium or Xanax. The benzodiazepines were being used to manage long-term depression, anxiety or other psychological conditions, even though well-established guidelines advise against their concurrent use.

Using the same LWCC data set as our 2012 study, our research, published in JOEM in 2014, found that for injured workers who have been prescribed an opioid in combination with their existing benzodiazepine, their claims costs were on average $147,000 compared to $10,000 for claimants who were not prescribed both of these medications.

Managing the Duration of Opioid Use

Previous research had shown that it takes longer for a worker to return to the job following an injury when they are being treated with opioids for pain. In research we published in 2015, we noted an association between the use of short-acting opioids, like Dilaudid and OxyContin, during the first 60 days post-injury and increased claims costs along and was also associated with a delayed return to work. However, other research indicated that there were

no increased claims costs or lost work time when opioid use was limited to just the first two weeks after an injury.

Here's what we wanted to know in that study: *Is there a time frame in which opioids can be prescribed that is both safe and effective for a patient and does not increase the risk of having a final claim amount of over $100,000 and resulting in the worker being off the job for at least 3 years?*

Upon further mining the 11,000+ LWCC lost time workers' compensation claims, we looked at 7,211 claims that were unresolved for at least 180 days, where short-acting opioids were prescribed across four time frames: 0 to 30 days; 31 to 90 days; 91 to 180 days; and 181 days to 360 days.

The workers' compensation literature has been fairly consistent in reporting that any opioid use following injury negatively impacts final claims costs and lost work time. That's why our finding—based on a more comprehensive data set and greater investigative rigor than most similar studies—was so surprising: Our results show that there is no significant difference in claims cost or lost work time for a worker who does not take an opioid after they are injured and one who does, at least if that use is limited to the first 30 days post-injury:

No opioid use	(885 days; $31,331)
1 to 30 days of use	(716 days; $29,455)

That said, we also found that the longer an injured worker has been using an opioid—especially after the first six months post-injury—the greater the likelihood that they will lose more time from work and their final claims costs will exceed $100,000:

31 to 90 days	(853 days; $42,032)
91 to 180 days	(946 days; $54,564)
181 days +	(1,466 days; $113,633)

Employees Can Return to Work Even While Taking Prescribed Opioids

In 1992, I helped open the Johns Hopkins Occupational Injury Clinic to treat employees of the Johns Hopkins Hospital and University who were injured on the job. The Occupational Injury Clinic clinicians work closely with Safety and case managers in order to provide prompt diagnosis and treatment of an injury so employees can regain physical function and get back to their job as safely and promptly as possible.

The management of an injured employee's pain is a vital component of our rehabilitation process. As a physician, I recognize that short-acting opioids (prescribed far more than long-acting opioids) are an important component in the overall management of someone's intense pain caused by injury. And in many cases, that pain does not end at 30 days. As a self-insured employer, you don't want to have to decide when enough pain medication is enough. At the Johns Hopkins Occupational Injury Clinic, we prescribe chronic stable daily doses of opioids for employees as long as they are compliant with their physical rehabilitation and their other medications, and they exhibit functional improvement. The doses of opioid prescribed on a chronic basis in our Clinic are compliant with the Centers for Disease Control and Prevention Guideline for Prescribing Opioids for Chronic Pain[2].

As I mentioned, previous studies have generally equated long-term opioid therapy with increased claims costs and lost work time, particularly when the opioids are prescribed beyond three months post-injury. So, we wanted to conduct another study that would take a closer look at the relationship between how long-term opioid use affected the outcome of workers' compensation claims.


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Our most recent study looked at the opioid prescription patterns and related costs of 4,994 claimants from the Johns Hopkins Workers' Compensation Claims System (JHWCCS). The JHWCCS is an administrative database that includes information on Johns Hopkins employees who are injured on the job. We constructed from this database three groups:

- Those employees who were prescribed opioid therapy for greater than three consecutive months (112; 64 of whom received opioids for more than a year);
- Those employees who were prescribed opioid therapy for less than three consecutive months (419);
- Those employees who were not prescribed any opioids as part of their therapy (4,463).

Here's what our study found:

The opioid costs of the claimants whose prescriptions extended three months and more, compared to those prescribed opioids for less than 30 days, were significantly higher ($8,618 vs. $94), as were the average total cost per claim ($81,510 vs. $21,539). However, the data indicated that opioids did not independently account for this cost disparity.

In fact, opioid costs accounted for less than 4 percent of the average total claims costs, although this cost increased up to 14 percent for the long duration claims. The higher cost of long-term claims presumably was due to the increased number of provider visits, medical treatments (including physical therapy, injections, and surgery) and medical surveillance costs required for employees with more severe underlying injury.

Cost aside, the most unexpected finding of our study is that almost all (over 98 percent) of the claimants—even those receiving opioids for more than three years—were released to work safely while continuing their opioid therapy. In fact, it's plausible that for someone recovering from a particularly severe injury, well-managed long-term opioid therapy may actually facilitate their return to work.

There is evidence that long-term opioid use for some individuals can reduce pain and improve functionality without any cognitive impairment. Of course, employees and employers need to be aware that sustained opioid use might impact an employee's cognition and safety. For this reason, the employee taking opioids should continue to be monitored closely by an experienced practitioner. [3]

Our finding—that long-term opioid use, in and of itself, does not preclude an employee's ability to work—revolutionizes how we think about managing pain after an employee sustains a workplace injury.

Although there has been much debate about the opioid prescribing epidemic in the United States, our study suggests that physicians do not automatically need to limit their opioid therapy to 30 days or less after injury and that employees can be returned to work safely while taking chronic opioid medications, as long as the prescriber is a trained and experienced clinician and the prescribing remains within the range established by the Centers for Disease Control and Prevention. ■

About the Author

Edward R. Bernacki, M.D., M.P.H., is a past president of the American College of Occupational and Environmental Medicine and has published numerous peer reviewed articles in the field of occupational medicine and worker's compensation-related issues. Currently an associate professor of medicine at the Dell Medical School of The University of Texas at Austin, he is professor emeritus of medicine in the Department of Medicine and the director of the Division of Occupational and Environmental Medicine at the Johns Hopkins University School of Medicine. While at Johns Hopkins, Dr. Bernacki served as the administrator of the Johns Hopkins Self-Insured Worker's Compensation Insurance Plan and developed and managed onsite occupational health clinics for large employers across the United States, which deliver to employers $2.80 of health care savings for every $1 spent on employee health care.

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