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BULLETIN

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New CWCI research examines the prevalence of multiple, concurrent prescription drugs in California workers' compensation claims and identifies the most common drugs and drug combinations found in these claims.

Simultaneous use of multiple drugs for one or more medical conditions by a patient is known as polypharmacy. While ancillary medications are often used to mitigate the risks and side effects of other drugs prescribed to a patient, combining drugs sometimes produces additional health risks, including potentially dangerous drug interactions and the risks of overdosing -- especially when opioids or other controlled substances are part of the drug mix. Because of these risks, polypharmacy has generated growing concern across healthcare systems, including workers' compensation. To assess the extent to which it occurs in California workers' compensation, and to identify characteristics of polypharmacy claims, the Institute used its Industry Research Information System (IRIS) database to generate a sample of claims in which prescriptions were dispensed to California injured workers in 2016 and 2017. For the purposes of the study, claims with five or more concurrent medications during the two-year study period were defined as polypharmacy claims, while for comparative purposes the analysis also examined data on claims that involved fewer than five concurrent prescriptions.

Overall, 43 percent of the claims in the study sample had no overlapping prescriptions; 33 percent had two concurrent prescriptions; 20 percent had three to four concurrent prescriptions; while 4 percent had five or more concurrent prescriptions and were considered polypharmacy claims. Looking at claim characteristics based on the number of concurrent prescriptions, the study found that the likelihood that indemnity was paid on a claim increased with the number of prescriptions as just over half (51.6 percent) of the claims that had one to two prescription drugs involved indemnity payments, but that percentage ratcheted up to 91.3 percent for claims with five or more concurrent drugs. Polypharmacy claims also tended to be older, as 21.5 percent of them were at least 10 years old -- 3.5 times the proportion noted for non-polypharmacy claims. In addition, the demographic data revealed that injured workers who received five or more concurrent prescriptions tended to be older, with more than half (52.3 percent) of the polypharmacy claims involving injured workers who were 50 years of age or older at the time the drugs were dispensed, compared to 38.3 percent of those who received fewer concurrent prescriptions.

The distribution of claims in the study sample by injury type showed that four diagnostic categories accounted for half of the polypharmacy claims, led by medical back problems without spinal cord involvement (including sprains and strains), which represented 21.3 percent of the polypharmacy claims versus 14.2 percent of the non-polypharmacy claims. In claims involving these types of back injuries, different types of drugs were often used concurrently to treat pain, inflammation, and nerve irritation. Rounding out the top 4 diagnoses associated with polypharmacy were ruptured tendons, tendonitis, myositis and bursitis (10.2 percent of the claims); shoulder, arm, knee, and lower leg sprains (9.5 percent); and other heart and circulatory disorders (9.1 percent).

Among claims with three or more concurrent prescriptions, opioids and anti-inflammatories were the most common types of drugs dispensed. Opioids, anti-inflammatories, and muscle relaxants were the most frequent three-drug combination, while those same three therapeutic drug groups along with gastrointestinal agents were the top four-drug combination.

The study also found that among claims with three or more concurrent prescriptions, opioids were present in 13 of the top 20 drug combinations; while among claims with four or more concurrent prescriptions, opioids were present in 16 of the top 20 drug combinations. In addition, opioids were the single most common type of drug dispensed in claims with five or more concurrent prescriptions, as they were present in one out of every six of these polypharmacy claims. Anti-inflammatories were the number two drug category in the polypharmacy claims, noted in one out of every seven of these claims, followed by gastrointestinal agents, muscle relaxants, and antidepressants.

In light of the national opioid epidemic and ongoing efforts to assure the appropriate use of these drugs, the high prevalence of opioids among claims with multiple concurrent prescriptions underscores the need to closely monitor workers' compensation prescription drug therapy, and to remain vigilant in regard to the types of medications that are concurrently dispensed to injured workers. In many ways, the California workers' compensation system has been at the forefront of such efforts, implementing several recent reforms designed to provide better control over the types and quantities of prescription drugs dispensed to injured workers. As noted in the Institute study, these include the statutory requirements for utilization review and the adoption of a Medical Treatment Utilization Schedule (MTUS) based on evidence-based medicine; the adoption of independent medical review by a physician to resolve disputes over treatment requests, including requests for prescription drugs; and this year's implementation of the drug formulary as a component of the MTUS, which has added a new level of oversight for pharmaceutical therapy. In addition, beginning October 2 of this year, California medical providers will be required to consult the state's Controlled Substance Utilization Review and Evaluation System (CURES) database prior to prescribing, ordering, administering, or furnishing a Schedule II – IV controlled substance, including opioids and many of the other drugs which this study found are commonly found in polypharmacy claims. This statewide requirement should help physicians avoid unknowingly prescribing a drug that is contraindicated with another drug.

Such changes should help curb the inappropriate use of opioids and alleviate the need for ancillary drugs used to treat opioid-induced constipation and other side effects. The reductions in opioid usage, and attention to drug combinations that include an opioid (*e.g.*, opioids and benzodiazepines or opioids and muscle relaxants) should also improve injured workers' overall treatment and facilitate their return to work. At the same time, to the extent that these changes lead to increased use of opioid alternatives such as nonsteroidal anti-inflammatory drugs, they could result in fewer medications being used to treat injured workers and/or a change in the mix of drugs used in pharmaceutical therapy, which is an area that CWCI will continue to monitor.

In the meantime, the Institute has published its polypharmacy study which includes additional background information, graphics, and analyses in a Research Note, "An Examination of Polypharmacy Claims in California Workers' Compensation." The report can be downloaded from the Research section of the Institute's website at www.cwci.org.

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