

# Many opioid overdoses linked to lower prescribed doses, intermittent use

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Overdoses of opioid pain medications frequently occur in people who aren't chronic users with high prescribed opioid doses—the groups targeted by current opioid prescribing guidelines, reports a study in the August issue of *Medical Care*.

"It may be prudent to revise guidelines to also address opioid poisonings occurring at relatively low prescribed doses and with acute and intermittent opioid use, in addition to chronic, high-dose use," comments lead author Deborah Fulton-Kehoe, PhD, a research scientist in the Department of Environmental and Occupational Health Sciences at the University of Washington School of Public Health, Seattle. Guidelines may also need to target prescription sedatives, which are involved in nearly half of opioid overdoses.

## Trends Suggest Need to Update Opioid Prescribing Guidelines

The researchers analyzed Medicaid data on opioid prescribing and opioid poisoning in Washington State between 2006 and 2010. They identified 2,250 opioid overdoses occurring in 1,809 patients. About 35 percent of these events were associated with methadone, which can be used to treat heroin and other narcotic addictions, in addition to use as a pain treatment. The remaining 65 percent of overdoses were due to other opioid medications.

In response to the ongoing opioid epidemic, Washington introduced new State Opioid Guidelines in 2007—emphasizing the high risk of overdose in chronic (long-term) users with high prescribed opioid doses. The number of methadone poisonings continued to increase after the prescribing guideline.

However, nonfatal overdoses from prescription opioid pain medications seemed to level off in Washington State, after introduction of the new guidelines. That was in contrast to increasing rates nationally.

The researchers analyzed the prescription histories of patients with nonfatal overdose caused by opioid pain medications. Previous research has shown that both fatal and nonfatal overdoses were more likely for chronic opioid users and those with higher prescribed opioid doses.

However, many patients in the study met neither of these criteria. Only 44 percent of patients who overdosed on opioid [pain medications](#) were chronic users, with more than a 90-day supply of prescribed opioid medications in the prior year. In the week before the poisoning, only 17 percent of patients had a "yellow-flag" opioid dose targeted by the prescribing guideline: a (morphine-equivalent) dose of more than 120 milligrams per day. In contrast, 28 percent of overdose patients had a relatively low dose of less than 50 mg per day.

Concurrent use of sedatives was another important contributing factor—nearly half of patients also had a sedative prescription at the time of their [opioid overdose](#). That was so for poisonings caused by either methadone or prescription opioids.

Dr. Fulton-Kehoe and coauthors believe their study has important implications for efforts to prevent opioid poisonings. Because only a small fraction of users are at high "yellow-flag" doses (120 mg per day or more) and many opioid poisonings occur at lower prescribed doses in patients who would not be considered chronic users, "Opioid guidelines and other education interventions will need to be developed to address the opioid poisonings occurring among these patients," the researchers write. They also call for strategies targeting patients with [prescriptions](#) for sedatives.

"The topic of overdose from prescription [opioid](#) medication is a current national crisis," comments Dr. Jeroan J. Allison of University of Massachusetts Medical School, Co-Editor-in-Chief of *Medical Care*. He notes that the Centers for Disease Control and Prevention has [declared opioid overdose to be a](#)

[national epidemic](#). "The statistics are quite overwhelming and dramatic, and this problem affects every state in our nation."

While the study is regional, it has national and even global implications, Dr. Allison believes. "Namely, the article notes that many overdoses occur when [patients](#) are prescribed medications at low doses. This has important implications for national policy and debate."

**More information:** "Opioid Poisonings in Washington State Medicaid: Trends, Dosing, and Guidelines" [DOI: 10.1097/MLR.0000000000000384](https://doi.org/10.1097/MLR.0000000000000384)

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