

Lindsay Morrow  
Block 8 CAT

Article: Opioid Prescribing After Nonfatal Overdose and Association with Repeated Overdose. *Annals of Internal Medicine*. 2016; 164: 1-9.

Clinical Question: Is prescribing opioids to a patient on long-term opioid therapy following an overdose associated with repeated overdose?

Background: Chronic pain treatment with opioids has been increasing for the past few decades, along with increasing rates of misuse, overdose and death. Current guidelines do recommend that patients who present with overdose related to possible misuse of opioids no longer undergo long term treatment, although this is not the standard and many people continue to receive long term treatment, the subsequent overdose rates related to continued prescribing has never been fully investigated.

Methods and Results: Retrospective cohort study of patients who experienced a non-fatal opioid overdose during treatment of non-cancerous pain with long-term opioid use. Researchers identified 14,725 patients 18 to 64 years old from May 2000 to December 2012 who presented with their first overdose related to prescription opioid or heroin. Patients were required to have a minimum of 90 days of continuous opioid use prior to overdose with less than 60 days between the run out date and the next prescription dispensing; total cohort of 2,848 patients. Included patients were followed from 90 days prior to the overdose until they had a second opioid overdose, reached 65 years old, two years passed, they disenrolled from the health plan, or the conclusion of the study was reached.

The opioid dosage was converted to morphine-equivalent dosage and then average daily MEDs were calculated for the cohort. These dosages were divided: none, low, moderate, or large. Categories were then further divided into three periods: 60 days prior to overdose, days 31-90 after overdose, and days 91-365 after overdose.

Data review did show that in the 60 days prior to overdose the MED was 152 to 164 mg until one week prior when dosage increased rapidly to a peak of 187 mg MED. Following the overdose, mean daily dosage decreased to 118 mg MED and ranged 111-131 mg MED for the two years following. The study was meant to conclude after two years of follow-up, however 72% were censored before completion due to health care disenrollment or reaching 65 years of age. At the two year mark, seven percent of patients had a repeated opioid overdose, primarily associated with increased dosages, and there was an association of benzodiazepines with repeated overdose.

Discussion and Conclusion: This study did find an association between high doses of opioid prescribing and risk of repeated overdose, however, the study size was extremely small based on the amount of narcotics being prescribed in the United States today and the majority of the patients were not followed for the entire study goal time. The study was also unable to capture patients who pay with cash or who did not have insurance such as those in the VA system. Ultimately, the study did prove the hypothesis it was testing, but it was a single study and per their reports no other study of its kind exists. Further studies with a larger sample size including such systems as the VA are needed to further validate their points.

---