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Reference Article: Larochelle, Marc R., Jane M. Leibschutz, Fang Zhang, Dennis Ross-Degnan, and J. Frank Wharam. "Opioid Prescribing After Nonfatal Overdose and Association with Repeated Overdose." *Annals of Internal Medicine* 164.1 (2016): 1-9. Print.

PICO Question: Does nonfatal opioid overdose lead to an alteration in the dispensing of narcotic medication, versus no change in the dispensing of narcotics?

Introduction: Treatment of acute and chronic pain with opioid pain medications is on the rise in the US. A common consequence of this has been the rise of accidental overdose presentations in the emergency department. Given this increasingly common presentation, resuscitation of the nonfatal overdose victim presents an opportunity to identify and treat the patient for substance abuse. However, the question remains, do patients with a history of accidental overdose continue to receive narcotic medications from health care providers?

Methods: This study was a retrospective cohort study of patients presenting with a nonfatal opioid overdose during chronic, long term opioid therapy. Information was derived from "Optum," a database compiling the insurance claim records related to opioid use in the ED, inpatient, and outpatient settings. Long term opioid use was defined as three or more dispensing's of narcotic medication at least 21 days apart, and lasting at least 12 weeks. Cancer patients were excluded, as well as out-of-hospital related overdose deaths, and fatal overdoses within the hospital. Narcotic medications were standardized by using morphine-equivalent dosing tables. Patients were followed from 90 days prior to the overdose incident, and following was stopped until a second overdose occurred, the patient disenrolled from the health plan recorded by Optum, the patient became Medicare eligible, 2 years after the overdose, or the end of the study period (Dec 2012); 72% of patients in this study did not make through the full, 2 year following period. The primary outcome measured was morphine-equivalent doses prescribed (MED).

Results: For opioid dispensing prior to overdose, the average daily MED was 152-164 mg, which was noted to rapidly rise to 187 mg the week prior to overdose. Three weeks after the overdose, the MED was 118, ranging between 111 and 131 for the two years after the overdose. 91% of patients continued to receive opioid prescriptions after the overdose. In as little as 30 days after the reported overdose, as many as 69-71% of patients had an active narcotic prescription. (wow) This was reduced slightly to 63-65% by the end of the two year period. 7% of patients did have a repeat overdose.

Discussion: It sounds like the majority of patients who overdose continued to receive opioid prescriptions shortly after the overdose incident. And as high as 1/3 of patients continued receiving >100 MED of narcotics! (which obviously led to a higher risk of overdosing) This author of this study is unsure of why this trend continues, despite increasingly rigorous dispensing guidelines. It is thought that primary providers are unaware of overdoses if not communicated by the emergency department, or possibly providers believe the risk-to-benefit ratio still favors opioid therapy, and that a dosing error is the mistake of the clinician. Regardless, it does not seem that a prime opportunity for intervention is being utilized as it should. Are providers aware? How is counseling provided?

Limitations: The study group only included commercially insured adults. What about the uninsured? What about the elderly individuals on Medicare? What about VA patients? This study also excludes out-of-hospital overdoses, and thus may not be representative of a true, larger number of opioid related overdoses. Lastly, the MED's computed were based on insurance claims numbers, and do not account for patients purchasing prescriptions with cash.

Bottom Line:

Essentially all patients experiencing a nonfatal overdose due to narcotic pain medications continue to be prescribed opioids, and 7% of those go on to have a repeated overdose. The diagnosis of nonfatal overdose seems to be a lost opportunity for appropriate preventative medicine.
