



Opioid sales, use and increase in opioid overdose

A Summary of Evidence

A number of studies have documented the increase in opioid sales and prescribing patterns with a corresponding increase in opioid hospital visits, treatment and overdose. These studies show:

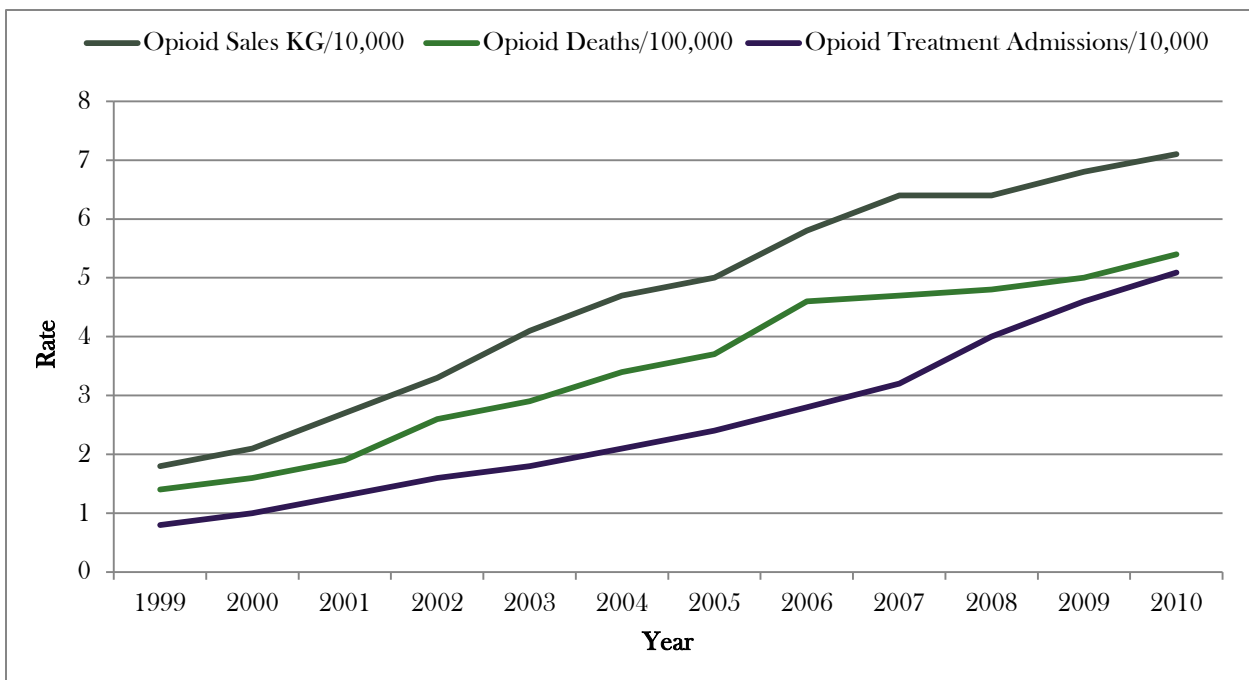
- From 2000 to 2009, the number of opioid prescriptions per 100 people increased by 35.2% and the number of morphine milligrams equivalents (MME) prescribed doubled.
- States with highest sales per capita of prescription opioid painkillers show the highest rates of opioid overdose fatalities.
- High daily dose of opioid pain relievers exceeding 100 MME greatly increases risk of fatal overdose.
- Benzodiazepines were involved in nearly a third of opioid overdose fatalities.
- Doctors and other prescribers are a major source of prescription opioids for chronic opioid users (daily use for more than 200 days.)
- Patients receiving opioid prescriptions from four or more prescribers and/or pharmacies had an increased risk of overdose.

Implications for Practice

Based on this evidence, Dr. Don Teater notes the following implications for practice:

- Benzodiazepines concurrent with opioid therapy is contraindicated
- Calculate MMEs to assess risk. Reevaluate treatment if daily dose exceeds 100 MME
- Reduce risk by using State prescription monitoring program before prescribing any opioid to identify patients with multiple prescribers

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Evidence Summary

- Jones, C. M., Mack, K. A., & Paulozzi, L. J. (2013). Pharmaceutical Overdose Deaths, United States, 2010. *JAMA: Journal Of The American Medical Association*, 309(7), 657-659.
- T.C. Green, L. E. (2010). Epidemiologic Trends and geographic patterns of fatal opioid intoxications in Connecticut, USA 1997 -2007. *Drug and Alcohol Dependence*.
- Volkow ND, M. T. (2011). Characteristics of Opioid Prescriptions in 2009. *Journal of the American Medical Association*, 1299-1301.
- Wisniewshi, A. M., Purdy, C. H., & Blondell, R. D. (2008). The Epidemic Association between Opioid Prescribing, Non-Medical Use and Emergency Department Visits. *Journal of Addictive Diseases*.
- Jones C, Paulozzi L, Mack K. Sources of prescription opioid pain relievers by frequency of past-year nonmedical use: United States, 2008–2011. *JAMA Int Med* 2014; 174(5):802-803.
- Baumblatt JA, Wiedeman C, Dunn J, Schaffner W, Paulozzi L, Jones T. High-risk use by patients prescribed opioids for pain and its role in overdose deaths. *JAMA Int Med* 2014;174(15):796-801.
- Paulozzi L, Zhang K, Jones C, Mack K. Risk of adverse health outcomes with increasing duration and regularity of opioid therapy. *J Am Board Fam Med* 2014;27:329-338.
- Sauber-Schatz, EK, Mack KA, Diekman ST, Paulozzi LJ. Associations between pain clinic density and distributions of opioid pain relievers, drug-related deaths, hospitalizations, emergency department visits and neonatal abstinence syndrome in Florida. *Drug Alc Depend* 2013; <http://dx.doi.org/10.1016/j.drugalcdep.2013.05.017>.
- Logan J, Liu Y, Paulozzi LJ, Zhang K, Jones C. Opioid prescribing in emergency departments: the prevalence of potentially inappropriate prescribing and misuse. *Med Care* 2013; doi:10.1097.
- Paulozzi LJ. [Prescription drug overdoses: a review](#). *Journal of Safety Research*, 2012; 43(4): 283-289.
- Jones, C. [Frequency of prescription pain reliever nonmedical use: 2002-2003 and 2009-2010](#). *Arch Intern Med*, 2012;172(16):1265-1267.
- Kenan K, Mack K, Paulozzi LJ. [Trends in prescriptions for oxycodone and other commonly used opioids in the United States, 2000-2010](#). *Open Med* 2012;6(2)e41.
- Paulozzi LJ, Kilbourne EM, Shah NG, Nolte KB, Desai HA, Landen MG, Harvey W, Loring LD. [A history of being prescribed controlled substances and risk of drug overdose death](#). *Pain Medicine* 2012;13:87-95.
- Paulozzi LJ, Weisler RH, Patkar AA. [A National Epidemic of Unintentional Prescription Opioid Overdose Deaths: How Physicians Can Help Control It](#). *J Clin Psychiatry*. 2011; 72(5):589-592.
- Paulozzi L, Kilbourne E, Desai H. [Prescription drug monitoring programs and death rates from drug overdose](#). *Pain Med* 2011;12:747-754.
- Toblin R, Mack K, Perveen G, Paulozzi L. [A population-based survey of chronic pain and its treatment with prescription drugs](#). *Pain* 2011;152(6):1249-55.
- Toblin RL, Paulozzi LJ, Logan JE, Hall AJ, Kaplan JA. [Mental illness and psychotropic drug use among prescription drug overdose deaths: a medical examiner chart review](#). *J Clin Psych* 2010;71:491-496.

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