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Naloxone decreases the use of emergency room in patients taking opioids for pain

New study by Health Department shows prescribing naloxone along with opioids effective in reducing opioid-related emergencies

Emergency room visits dropped by almost half

SAN FRANCISCO (June 28, 2016) – A new study by Health Department researchers published in *Annals of Internal Medicine* today demonstrates that prescribing naloxone to primary care patients who are on opioid therapy for chronic pain can result in reduced visits to the emergency department for problems related to opioids.

Drug overdose, driven by opioids, is the leading cause of injury death in the United States, accounting for over 47,000 deaths in 2014. In San Francisco, prescribed opioids – such as morphine, oxycodone, and hydrocodone – are responsible for more overdose deaths than heroin. More than 90 percent of fatal opioid overdoses in San Francisco from 2010 to 2012 were due to opioids taken without heroin. In 2014, there were 127 fatal opioid overdoses in the city, the vast majority of them from prescription opioids. These prescriptions appear under brand names such as Roxanol, Percocet and Vicodin.

Naloxone is a safe and effective antidote for opioid overdose that works by temporarily blocking opioid receptors. Centers for Disease Control and Prevention (CDC) opioid prescribing guidelines now recommend offering naloxone to patients on higher doses of opioids or with other risk factors for opioid overdose. However, until now there have been no systematic studies of offering naloxone in these settings.

“We have found that naloxone can be readily prescribed to patients in the primary care setting who are on opioids long-term for pain,” said Dr. Phillip Coffin, MD, Director of Substance Use Research at the San Francisco Department of Public Health. “When patients are prescribed naloxone along with opioids, their use of the emergency room

for opioid-related problems drops significantly. This is good for the patients, and relieves the emergency system of preventable visits."

Coffin is the lead author of the study, along with Emily Behar, MA, Chris Rowe, MPH, Glenn-Milo Santos, PhD, Matthew Bald, MD, Diana Coffa, MD, and Eric Vittinghoff, PhD.

San Francisco became the first city to make naloxone available in 2003, reaching out to heroin users through community-based and syringe access programs. This practice contributed to the decline in heroin overdose fatalities, which have dropped from 120 in 2000, to about 30 in 2014. That year, there were 365 overdose reversals with naloxone.

"San Francisco's harm reduction model meets people where they are, helps them to be safer and saves lives," said Barbara Garcia, Director of Health. "This new study affirms that we can extend harm reduction even further, reaching another at-risk group, people taking prescription opioids for pain. It is critical to develop new solutions like this as we face a terrible opioid epidemic in our city and country."

In the new study, selected clinics of the San Francisco Health Network, which is operated by the Health Department, started co-prescribing naloxone in 2013. Providers successfully prescribed naloxone to 38.2 percent of all patients who were prescribed opioids long-term for pain. Patients were more likely to receive naloxone if they were on a higher dose of opioids or had a prior opioid-related emergency room visit. Patients were advised when and how to use the naloxone nasal spray device, and to ensure someone else also knew where the naloxone was and how to use it.

Compared to patients who were not prescribed naloxone, **patients prescribed naloxone had an average of 47 percent fewer opioid-related emergency department (ED) visits in the first year after receiving the prescription**. If naloxone were prescribed to 10,000 patients, this would represent a decrease from 734 to 387 opioid-related ED visits in the first year. Opioid-related visits include overdoses, falls due to opioid-induced sedation and visits to seek more opioid medications.

"Some have voiced concern that if patients received naloxone they would increase their opioid use," Coffin said. "But that did not happen. The amount of opioids prescribed to patients in the clinics declined during the study, with no net difference between those who were and were not prescribed naloxone. In fact, we found that patients who received naloxone were more likely to be on a lower dose by the end of the study versus having no change in dose."

To obtain an embargoed copy of this study, please contact Angela Collom, Media Relations Manager, *Annals of Internal Medicine* at 215 351-1234 or acollom@acponline.org
The article will be available when the embargo lifts at:
Abstract: http://www.annals.org/article.aspx?doi=10.7326/M15-2771
Editorial: http://www.annals.org/article.aspx?doi=10.7326/M16-1348