

OxyContin reformulation to curb opioid abuse led to hepatitis C surge, study finds

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Electron micrographs of hepatitis C virus purified from cell culture. Scale bar is 50 nanometers. Credit: Center for the Study of Hepatitis C, The Rockefeller University.

Reformulation of the pain medicine OxyContin in 2010 to make it more difficult to abuse directly led to a large rise in hepatitis C infections as drug abusers switched from the prescription medication to injectable heroin, according to a new RAND Corporation study.

While hepatitis C [infection](#) rates increased broadly across the country during the years following the reformulation, researchers found that states with above-average rates of OxyContin misuse prior to the reformulation saw hepatitis C infections increase three times as fast as in other states.

Public health officials previously have blamed the shift from prescription opioids to injectable heroin as a cause of the rise in hepatitis C cases, but the new study provides the best evidence to date of a direct link between OxyContin reformulation and the infection surge. The findings are published in the February edition of the journal *Health Affairs*.

"These results show that efforts to deter misuse of opioids can have unintended, long-term public health consequences," said David Powell, the study's lead author and a senior economist at RAND, a nonprofit research organization. "As we continue to develop policies to combat the opioid epidemic, we need to be careful that new approaches do not make another public health problem worse."

The hepatitis C virus causes liver disease and is responsible for more deaths in the United States than any other infectious disease, accounting for 20,000 deaths in 2015. While the rate of new hepatitis C had remained steady for several years, the infection rate began rising at an alarming rate beginning in 2010.

Injection [drug](#) use has consistently been identified as a predominant risk factor for hepatitis C, leading experts to consider whether the [opioid epidemic](#) might be a driver of the recent rise in the infection.

Much of the early years of the [opioid](#) abuse epidemic was driven by misuse of prescription pain medicine. But one of the most abused drugs, OxyContin was reformulated in 2010, making the pill difficult to crush

or dissolve, thus deterring the most-dangerous methods of abuse by injection or inhalation.

RAND researchers previously demonstrated that the reformulation of OxyContin caused some nonmedical users of the drug to switch to injectable heroin, which led to a sharp increase in heroin overdoses after 2010.

In the latest study, researchers from RAND and the Wharton School at the University of Pennsylvania examined rates of hepatitis C infections in each state from 2004 to 2015, examining differences between states based on the level of misuse of the drug before the reformulation occurred.

The analysis found that states with above-median OxyContin misuse prior to the reformulation experienced a 222 percent increase in hepatitis C infections after reformulation, while states with below-median misuse of OxyContin experienced a 75 percent increase in hepatitis C infections over the same period.

Before the reformulation, there was almost no difference in hepatitis C infections rates across the two groups of states.

"Even with recent advancements in the treatment for [hepatitis C](#), the dramatic increase in infections represents a substantial public health concern that can have tremendous long-term costs if infected people are not identified and treated," said Rosalie Liccardo Pacula, a study co-author, and co-director of the RAND Opioid Policy Tools and Information Center and the RAND Drug Policy Research Center.

As drug abuse policy continues to reduce access to abusable prescription opioids, researchers say the study suggests that there could be further unintended public health consequences if [drug abusers](#) switch to injected

drugs.

"It is important that strategies that limit the supply of abusable prescription opioids are paired with policies to ease the harms associated with switching to illicit drugs, such as improved access to drug treatment and increased efforts to identify and treat diseases associated with [injection drug use](#)," Pacula said.

Provided by RAND Corporation

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