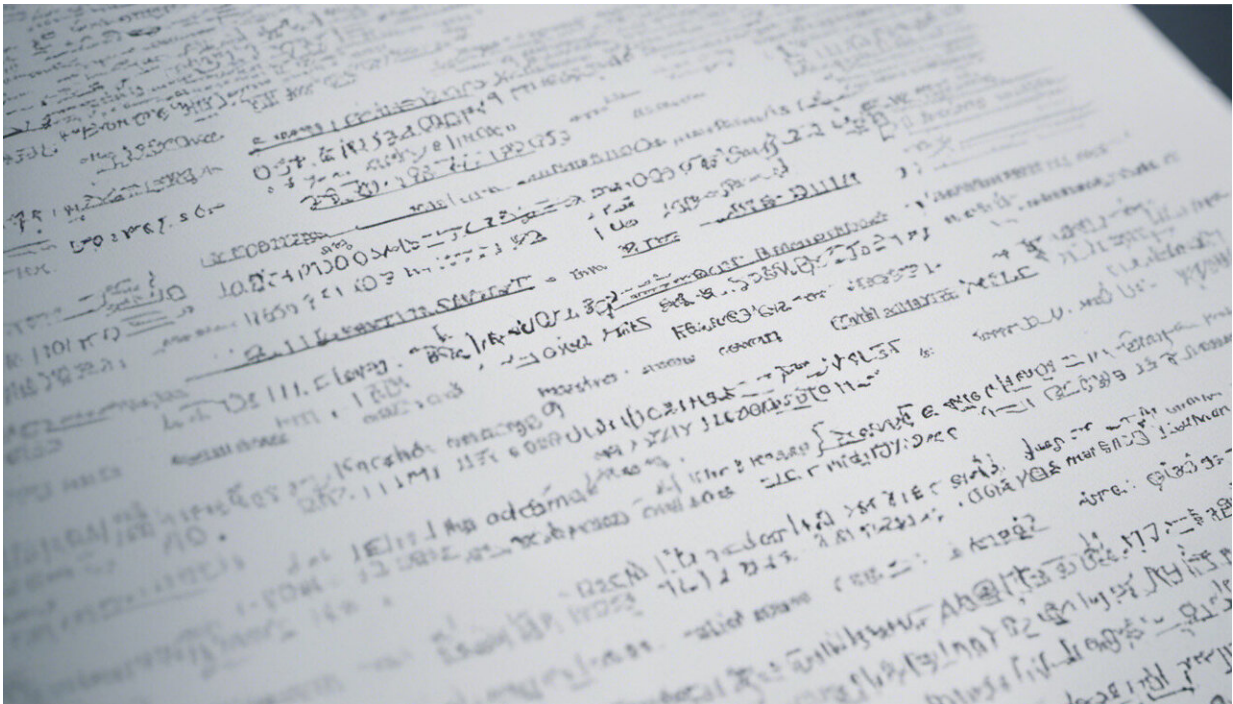


Prescription drug monitoring programs evaluated by researchers

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Deaths resulting from prescription drug overdoses have increased more than seven-fold over the last several decades, and public health officials are calling the epidemic the worst drug crisis in American history.

Prescription [drug](#) monitoring programs (PDMP) are being implemented

in an increasing number of [states](#) to address their misuse, and a team of Penn State researchers, including Young Hee Nam, Yunfeng Shi, Dennis Shea and John Moran, have been investigating their impact.

According to Yunfeng Shi, assistant professor of health policy and administration at Penn State, inappropriate drug use not only affects health outcomes, but can also cause increases in waste and societal costs. "More and more, we are seeing states monitoring prescription drug use via statewide databases that collect data on the prescribing, dispensing and purchasing of [prescription drugs](#)."

These programs use patient databases to identify inappropriate patient behavior (such as doctor shopping), facilitate drug treatment, and inform public health initiatives designed to combat the misuse of prescription drugs, especially opioids.

The researchers looked at the impact of these programs on drug overdose mortality rates across all drug categories from 1999 to 2014, and each of the categories separately from 1999 to 2010, using data from the US Census Bureau and the Centers for Disease Control and Prevention. They examined 34 states that began operating PDMPs in 2002 or later and found that prescription drug monitoring programs had no appreciable impact on drug overdose mortality rates. Moreover, PDMPs may actually have contributed to increases in mortality rates from the use of illicit drugs and other (unidentified) drugs. These counterintuitive effects were concentrated in states with PDMPs operating for five or more years.

"The literature on PDMPs has been accumulating. However, the findings have not been consistent," explained Shi. "To our knowledge, this is the first study that analyzes [drug overdose deaths](#) across different classes of drugs with a relatively robust statistical model that accounts, in a flexible way, for trends in drug overdose mortality that are unrelated to PDMPs."

The researchers were surprised by the fact that states with longer-standing PDMPs may actually be exacerbating the problem, especially with respect to illicit drug use. "However, it is important to note that we only looked at mortality rates; PDMPs could be exerting a positive influence along other dimensions, such as inappropriate prescribing, drug-related emergency room visits, or overconsumption more generally," said Shi.

"The potentially positive impacts on these outcomes, which were not examined in our study, may eventually lead to a reduction in mortality rates. But that needs to be examined in future research. For now at least, our results point to a potential unintended consequence of PDMPs, whereby reduced access to prescription drugs may have led some individuals with addictive disorders to look for alternatives."

The findings have several policy and clinical implications, as PDMPs do not seem to be successful in reducing overdose [mortality rates](#), even in the target categories of [prescription opioids](#). "Unfortunately, PDMPs may not be able to fully address prescription diversions, doctor shopping, or other problematic behaviors. Under these programs, potential drug-related illegal activities are only detectable through prescription fillings," Shi explained. "Further, PDMPs may drive patients away from doctors who could help them address drug abuse or addiction. In addition, the rapid growth of online pharmacies may have increased opportunities for individuals to abuse prescription medications."

As the researchers concluded in their article, published in the American Journal of Managed Care, PDMPs may need to be combined with more comprehensive and prevention-oriented approaches to address drug overdose deaths, such as improving patient education on appropriate drug use, ensuring proper access to prescription drugs for those with medical needs, expanding treatment programs, and providing pain

management education for providers.

In the future, the research team plans to examine the effectiveness of PDMPs based on specific program features, which vary substantially from state to state.

More information: State Prescription Drug Monitoring Programs and Fatal Drug Overdoses: [www.ajmc.com/journals/issue/20 ... fatal-drug-overdoses](http://www.ajmc.com/journals/issue/20...fatal-drug-overdoses)

Provided by Pennsylvania State University

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