

# Impact of prescription drug monitoring programs on pediatric opioid exposures

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A new study measures the impact state-run, prescription drug monitoring programs (PDMPs), pain clinic legislation and opioid prescribing guidelines have on opioid exposures among children. Findings from the

study will be presented during the Pediatric Academic Societies (PAS) 2019 Meeting, taking place on April 24—May 1 in Baltimore.

"The U.S. remains in the throes of an opioid epidemic born out of the overzealous prescribing of opioids over the past two decades and with national guidelines and monitoring programs primarily focused on adult populations, there is limited information on the effects of opioid policies on opioid exposures and poisonings in children," said Michael Toce, MD, one of the authors of the study. "We investigated the effects of state-level PDMPs, pain clinic legislation and mandatory opioid prescribing limits on pediatric opioid exposures reported to U.S. Poison Control Centers. Our results indicate that these policies—though designed primarily for adults—are associated with significant reductions in opioid exposures among children."

The study analyzed opioid exposures reported to the National Poison Data System (NPDS) for children less than 20 years of age between 2005 and 2017. The NPDS database is maintained by the American Association of Poison Control and collects data on exposures reported to 55 poison control centers across the U.S. Then, the authors conducted a state-level interrupted time series analysis to examine the impact of PDMPs, pain clinic legislation and opioid prescribing guidelines have on the rate of opioid exposures in children per month. The primary outcome was the change in rate of pediatric opioid exposures, before and after implementation of each opioid reduction policy at the state level. Models included covariates to account for socioeconomic and demographic factors that are associated with opioid [exposure](#).

There were 332,745 opioid exposures in children reported to the NPDS during the study period. The majority of exposures in children at or less than 4 years were unintentional (99.2%) while the majority among those 15 to 19 years were intentional (88.8%). The total number of exposures peaked in 2009. The rate of exposures per 100,000 children was highest

for children less than or equal to 4 years of age, followed by children 15 to 19 years of age. The implementation of a PDMP was associated with an overall decrease of 0.27 fewer opioid exposures per 100,000 children per month. Implementation of an opioid prescribing guideline was associated with an immediate 20% reduction in the rate of opioid exposures, but the overall effect was not statistically significant.

Conversely, implementation of pain clinic legislation was associated with an immediate 22% reduction in exposures, and overall was associated with a decrease of 0.84 fewer opioid exposures per 100,000 per month.

The findings indicate that state opioid reduction policies are associated with a significant decrease in opioid exposures among children.

Dr. Toce added, "Building on this work, additional analyses will be conducted to identify [policy](#) features most protective to [children](#) so that future initiatives can further promote the public health benefits of [opioid](#) policies for pediatric populations."

**More information:** Dr. Toce will present findings from "Impact of Prescription Drug Monitoring Programs on Pediatric Opioid Exposures" on Monday, April 29 at 1 p.m. EDT.

Provided by American Pediatric Society

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