

Early ID of prenatal exposure to opioids, gabapentin improves timely treatment of newborns

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Timely identification of newborns exposed to both opioids and gabapentin during pregnancy could mean more appropriate care for newborns experiencing withdrawal, according to researchers at Marshall University, in collaboration with Marshall Health, Cabell Huntington Hospital and the Centers for Disease Control and Prevention.

Infants exposed to opioids during pregnancy may experience withdrawal symptoms after birth. However, according to the retrospective review study e-published Oct. 24, 2019, in *The Journal of Pediatrics*, those exposed to both opioids and gabapentin during pregnancy may have atypical [withdrawal symptoms](#) such as rapid eye movement, restlessness of the arms and legs, tongue thrusting, back arching and involuntary muscle twitching. As a result, [health care providers](#) may have a more difficult time treating infants who are co-exposed.

Gabapentin is an FDA-approved medication for nerve pain, epilepsy and in combination with medication-assisted treatment for opioid use disorder, but its misuse has been documented. Because maternal self-reporting can underestimate [prenatal exposure](#) to substances, Marshall researchers examined the impact of universal, post-delivery maternal toxicology screening including gabapentin.

"Our study found an increase in identification of co-exposure, which led to more timely treatment and likely shorter hospital stays for those

newborns experiencing withdrawal," said Sean Loudin, M.D., lead author and associate professor of pediatrics at the Marshall University Joan C. Edwards School of Medicine, a board-certified neonatologist with Marshall Health and medical director of the Neonatal Therapeutic Unit at Cabell Huntington Hospital and Lily's Place.

Before universal screening, newborns with co-exposure began treatment around day 20, on average. After universal screening began, newborns with co-exposure began treatment around day 14 of life, on average. Likewise, before universal [screening](#), newborns with co-exposure had an average hospital stay of 58 days. After [universal screening](#) began, newborns with co-exposure had an average hospital stay of 48 days.

"While the charge for laboratory testing did increase slightly with the additional testing, the potential cost savings by reducing the average length of stay in a medical facility was much greater," Loudin said.

Data are limited on the long-term effects of gabapentin exposure during pregnancy on an infant's development. More research is needed to understand the full impact of multiple substances during pregnancy on infants.

Amy Saunders, managing director of the Marshall University Center of Excellence for Recovery, said the research was an excellent example of interdisciplinary work at an academic medical center.

"Our team of researchers included a neonatologist, a pediatric neurologist, a nurse and two psychologists from Marshall," Saunders said. "Interdisciplinary research is the key to understanding the whole person and responding to their unique needs. By bringing together multiple disciplines, along with local and federal researchers, we were able to draw on the expertise of multiple partners to examine the benefits of universal screenings."

More information: Sean Loudin et al, Identifying Co-Exposure to Opiates and Gabapentin During Pregnancy, *The Journal of Pediatrics* (2019). [DOI: 10.1016/j.jpeds.2019.09.029](https://doi.org/10.1016/j.jpeds.2019.09.029)

Provided by Marshall University

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