Postpartum Persistent Opioid Use After Opioid Exposure for Childbirth

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Objective: To assess the association between opioid exposure in the childbirth period and persistent postpartum opioid use and to evaluate whether there are differential associations based on specific medication exposure.

Methods: Retrospective cohort study that used 2015-2021 Pennsylvania Medicaid claims of women aged 19-50 years with vaginal or cesarean delivery and Medicaid enrollment for at least 10 months during the postpartum year. Primary exposure was filled opioid prescription from 7 days before delivery to 8 weeks after delivery (childbirth period). The main outcome measure was persistent postpartum opioid use, defined as either a diagnosis of opioid use disorder or at least one filled opioid prescription in two or more calendar quarters from 8 weeks to 14 months postpartum. Multivariable logistic regression analyses included demographic information, mental health and behavioral comorbidities, obstetric trauma, and pre-existing pain conditions with subgroup analysis of the prepregnancy opioid-naïve population.

Results: Of 286,003 births in the Pennsylvania Medicaid program, 172,839 met inclusion criteria (patient demographics: 41,628 Black [24.1%], 102,733 White [59.4%], 26,841 Hispanic [15.5%], mean age at delivery 26.9 years). Childbirth opioid exposure was present in 25% of births (n=43,263). The prevalence of persistent postpartum opioid use was 5.7% (n=9,876). Transition to postpartum persistent use occurred in 7.9% of patients with childbirth opioid exposure and in 4.5% of those without (adjusted odds ratio [aOR] 1.88, 95% CI, 1.79-1.96). Among 132,941 births to opioid-naïve people, 2.6% of patients developed postpartum persistent opioid use; the adjusted odds were higher among those exposed during childbirth compared with those unexposed (aOR, 2.66; 95% CI, 2.49-2.85). The risk of persistent use was highest with tramadol exposure: 30.9% of people exposed to tramadol transitioned to persistent use compared with 7.3% of those exposed to oxycodone (tramadol vs oxycodone: aOR 4.58; 95% CI, 3.87-5.43).

Conclusion: Opioid use for childbirth pain management was associated with persistent postpartum use, including among opioid-naïve patients and those without pre-existing pain conditions. These findings support clinical practice guidelines that balance effective postpartum pain management with minimizing opioid-related risks and underscore the importance of postpartum care coordination.

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