Maternal and neonatal outcomes in women with opioid use disorder treated with buprenorphine versus buprenorphine/naloxone

Zachary Stanley, MD, Brooke Andrews, MD, Brittany McKinley, MD, Katherine Vignes, MD, Cynthia Cockerham-Morris, RN, Yan Xu, MS, Arnold Stromberg, PhD, Erin MacLeod, BS, Katia Vela, BA, John O'Brien, MD

Objective: This study specifically assessed whether the formulation of buprenorphine impacts maternal and neonatal complications.

Study Design: This retrospective cohort study evaluated all women enrolled in our treatment program between 2015-2020. Inclusion criteria included those prescribed a buprenorphine product and delivery outcome. Women on methadone in this program were excluded. The primary outcome was the rate of NAS requiring medical treatment in those treated with and without naloxone. Secondary outcomes included gestational age at delivery, rates of NOWS, and neonatal length of stay.

Results: 310 patients were included with 129 (41.6%) receiving the mono-product and 181 treated with the combination product (58.4%). No significant differences were identified in GA at program start, total daily dose, educational, or housing, as seen in Table 1. Maternal outcomes did not differ between groups for the gestational age at delivery, birthweight, or frequency of preterm birth. Neonatal outcomes were also similar between groups for the frequency of medication treatment for NOWS, neonatal length of stay, and frequency of anomalies observed between these subpopulations. No cases of fetal death or acute withdrawal related to misuse with IV injection were reported.

Conclusion: This large cohort study did not identify a difference in obstetric or neonatal outcomes with combination products versus mono-buprenorphine products. Neonatal outcomes were similar and no safety concerns were observed. Both formulations of buprenorphine should be considered as appropriate for use in obstetric populations.