

Title: NOWS in COVID - Neonatal opiate withdrawal hospital course after implementation of COVID-19 infection control practices.

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Abstract:

Background: The SARS-COVID-19 pandemic requires hospitals to increase infection control practices and implement policies calling for universal face masks. These policies dramatically changed the hospital milieu for newborns as visitors were either limited or entirely restricted. For newborns experiencing neonatal opiate withdrawal syndrome (NOWS) due to exposure to opioids during pregnancy, hospitalization is often prolonged. Protocols for care for infants with NOWS emphasize the importance of non-pharmacologic care as first-line treatment, recommending holding infants, swaddling, and rooming-in caregivers. With changes to infection control policies, providers are concerned infants with NOWS are experiencing complications including longer stays and more complex clinical courses, which may put this group at higher risk for long-term developmental delays. **Methods:** A retrospective chart review was performed on infants with NOWS admitted to the UNMH for the 8 months prior to the SARS-CoV-2 pandemic (6/1/2019-2/1/2020) [Cohort 1], and for the 8 months following the implementation of infection control practices (4/30/2020-12/31/2020) [Cohort 2]. **Data:** Infant charts were reviewed and admission characteristics were recorded. The cohorts were controlled for gestational age, birthweight and significant pregnancy, delivery and hospital complications. The outcomes are length of stay, medications required for treatment of NOWS symptoms, and whether or not infants needed feeding support with naso-gastric feeds or a speech consult. **Conclusion:** Infants with prenatal opiate exposure are already at risk for developmental delays, but this cohort with an environment lacking in access to care-givers' faces, may be at higher risk. We hypothesize that these newborns may experience longer hospital stays, more medications and more feeding complications, all of which may lead to future developmental issues. We hope to follow the development, health, and social outcomes of these populations long-term.

Non-Expert Summary: 75 words

Newborns with pre-natal exposure to opioids are often hospitalized for neonatal opiate withdrawal (NOWS). First-line treatment for NOWS is cuddling in a rooming -in setting with a caregiver. The COVID pandemic required that all people in the hospital wear masks and visitation limited, creating an environment where newborns would not experience anyone's faces and less contact with caregivers. We hypothesize that infants would have longer hospitalization, more medications and feeding problems, increased long-term developmental risk.