Clinically actionable newborn toxicology results are uncommon under new policy

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Introduction

- Perinatal toxicology testing is used to assess in utero substance exposure but can be used inequitably
- Clinician suspicion of prenatal substance use may be higher if a birthing person declines to consent for toxicology testing
- Our hospital revised its perinatal toxicology testing policy in Nov 2021 to require written consent for birthing person urine and newborn meconium testing, but newborn urine testing could be performed with only parental assent

Objectives

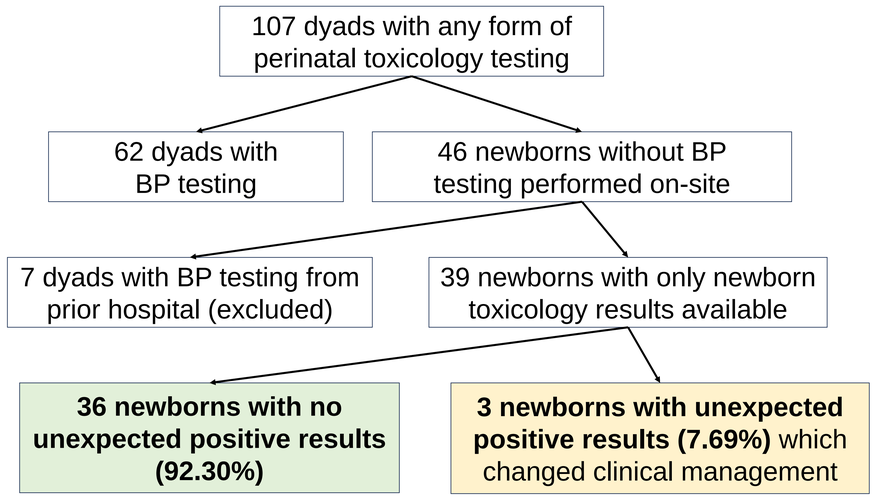
- Determine if the ability to decline birthing person toxicology testing would lead to under-identification of prenatal use of non-prescribed substances

Methods

- Chart review performed for dyads which received only newborn toxicology testing from Jan 2022 to Dec 2023, as a proxy for cases where birthing person declined testing
- Primary outcomes included presence of unexpected positive results and whether result changed clinical management
  - "Unexpected positive result" defined as: not expected based on birthing person self-report, verbal screening, clinical history, or prescribed medications
  - "Change in clinical management" defined as: substance use counselling, change in monitoring or treatment for newborn withdrawal symptoms, change in breastfeeding guidance, or cancellation of newborn workup

Results

Figure 1. Classification of birthing person-infant dyads which underwent perinatal toxicology testing. *BP: birthing person*



- **39 newborns** underwent only newborn testing in the absence of perinatal birthing person testing
- **3 newborns (7.69%)** had an unexpected positive result which led to a change in clinical management, most frequently affecting breastfeeding guidance
- Higher rate of new clinical information added in newborns tested for known use of non-prescribed substances, versus other indications

Table 1. Rate of unexpected positive newborn toxicology results by testing indication

Indication for testing *(Number of newborns tested)*	Rate of unexpected positive results
Known use of non-prescribed substances during pregnancy *(7)*	28.57%
Use of MOUD during pregnancy *(20)*	5.00%
Use of prescribed non-MOUD opioids during pregnancy *(7)*	0.00%
Infant clinical presentation *(3)*	0.00%
No prenatal care *(3)*	0.00%
Obstetric presentation *(1)*	0.00%

Conclusions

- Under a new hospital policy requiring consent for birthing person toxicology, unexpected newborn toxicology results were uncommon
- Birthing persons may decline toxicology testing for reasons other than concealment of substance use
- Study limitations include small sample size and potential misclassification of cases in which the birthing person did not decline testing
- **Comprehensive information about prenatal substance use can often be obtained through birthing person screening, self-report, or clinical history, rather than toxicology testing**

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