



Improving outcomes for families affected by opioid use: Reducing racial disparities and implementing a comprehensive multidisciplinary approach to Neonatal Opioid Withdrawal Syndrome

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1. CHOP Newborn Care at Main Line Health 2. Main Line Health

BACKGROUND

- Opioid use crosses racial and socioeconomic lines
- Implicit bias leads to discrepancies in care
- Best care practice for Neonatal Opioid Withdrawal Syndrome (NOWS) includes:
 - Early identification of prenatal opioid exposure
 - Pre-admission neonatology consultation
 - Family-centered non-pharmacologic management [Eat Sleep Console (ESC) approach]
 - Post-discharge services.
- Racial discrepancies were found in both verbal screening for drug use and urine drug screening performed on white and non-white mothers.
- Implicit bias education and EMR-based screening practices were developed to address this disparity.

AIM

To reduce racial disparities in verbal drug screening and urine drug testing and to optimize utilization of NOWS best practices to improve outcomes.

METHODS & INTERVENTION

Neonatology and Obstetrical Clinical Environmental Workgroups were formed to evaluate existing care processes for families impacted by Opioid Use Disorder (OUD) and neonatal opioid withdrawal syndrome (NOWS). An outpatient Neonatology consultation platform was designed, and OB provider education was implemented to improve referral rates. ESC was adopted as management approach for all opioid-exposed newborns and length of stay and medication usage were tracked as outcomes. A plan for post-discharge referrals and provider handoff was designed and referral rates were tracked and used to provide feedback to providers.

OUTCOMES

- From a baseline of 79.9% (2018), rates of verbal screening for drug use were improved annually, reaching 100% in 2024.
- Historical discrepancies of white/non-white urine drug testing discrepancies (33.8% in 2018) were narrowed to 1.6% in the last quarter of 2024.
- ESC resulted in a decrease in average length of stay from 22.5 days in 2021 to 8.3 days in 2024.
- The percentage of newborns requiring morphine decreased from 80% in 2021 to 14% in 2024, and the percentage of newborns requiring phenobarbital decreasing from 20% in 2021 to 2% in 2024.
- Provider education improved the percentage of prenatal Neonatology consultations from 20% in 2021 to 42% in 2024.

VERBAL SCREENING AT INTAKE

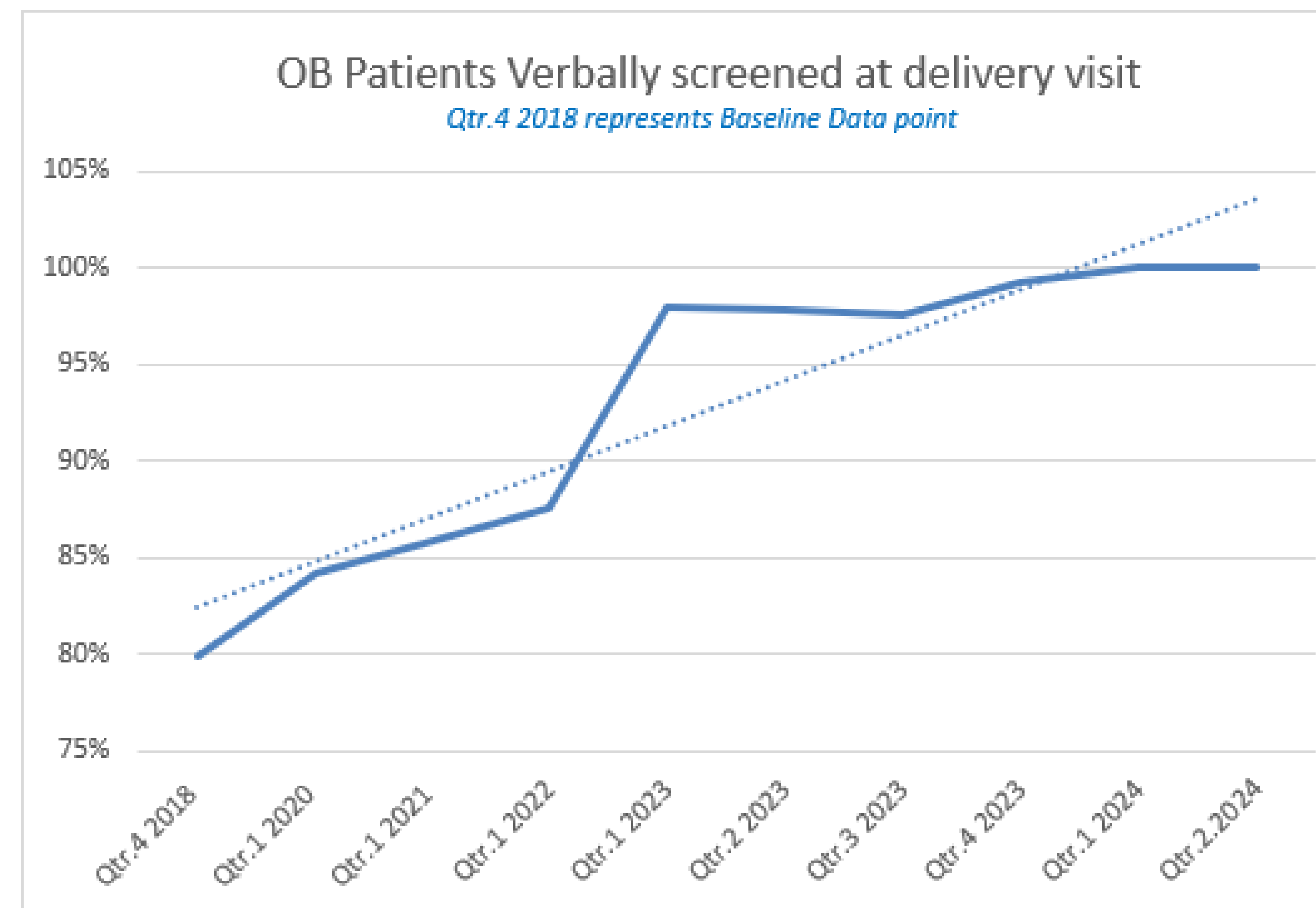


Figure 1. Percent of patients who were verbally screened for drug use at the time of admission

RECEIPT OF URINE TESTING

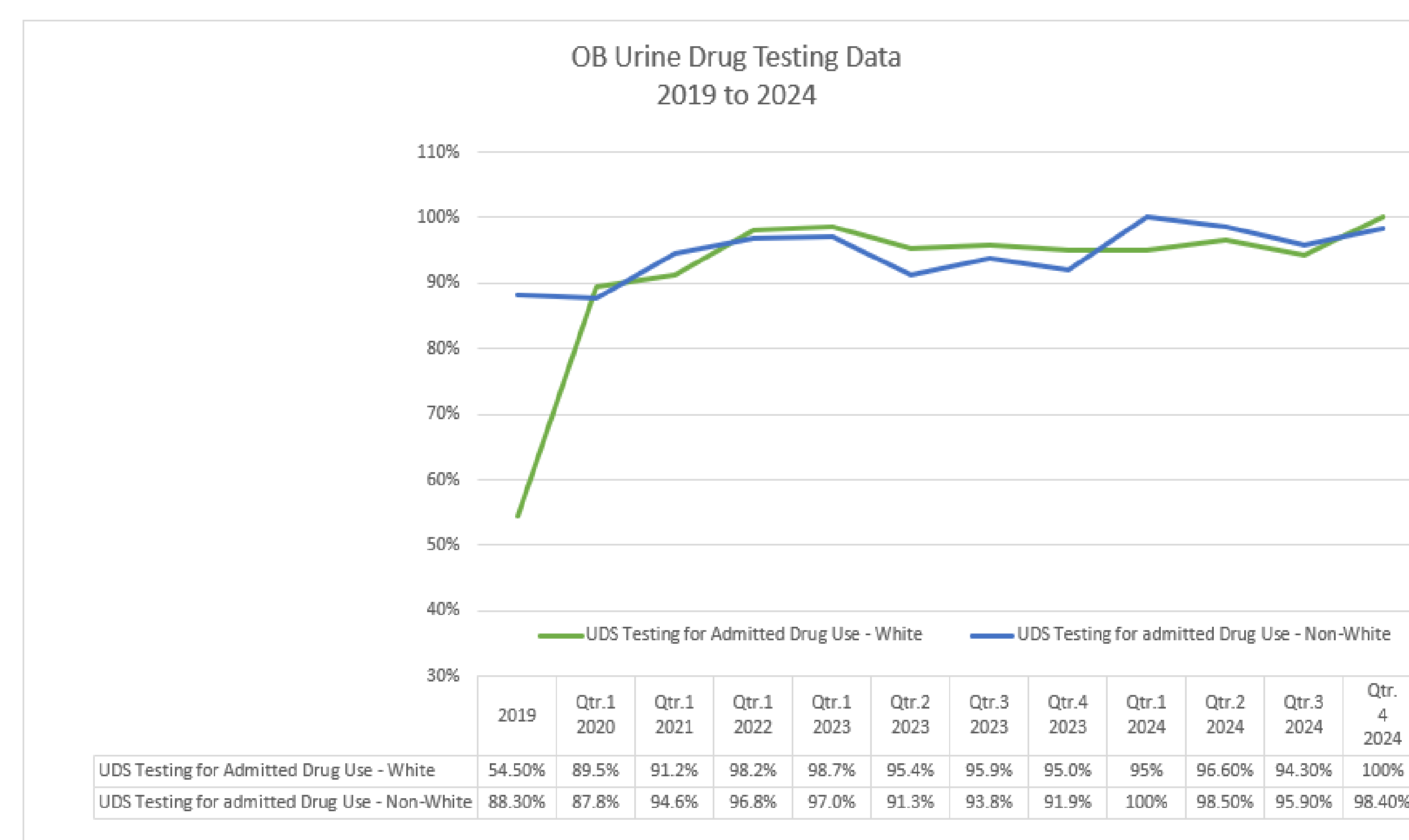


Figure 2. Percent of white and non-white patients with admitted drug use who received urine drug testing at the time of admission

CLINICAL METRICS

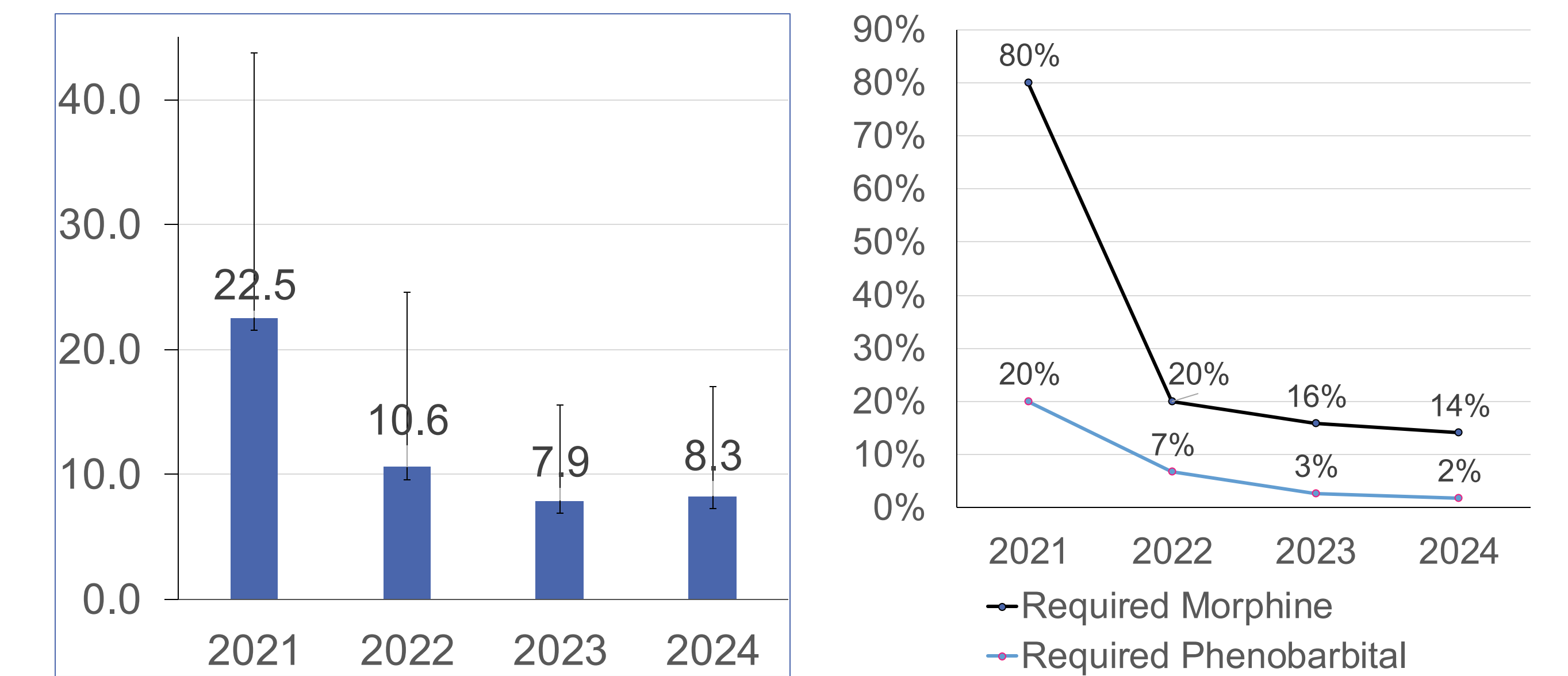


Figure 3. Length of Stay (LOS) per Year

Figure 4. Percentage of Neonates requiring Morphine or Phenobarbital since Implementation

PRENATAL CONSULTS

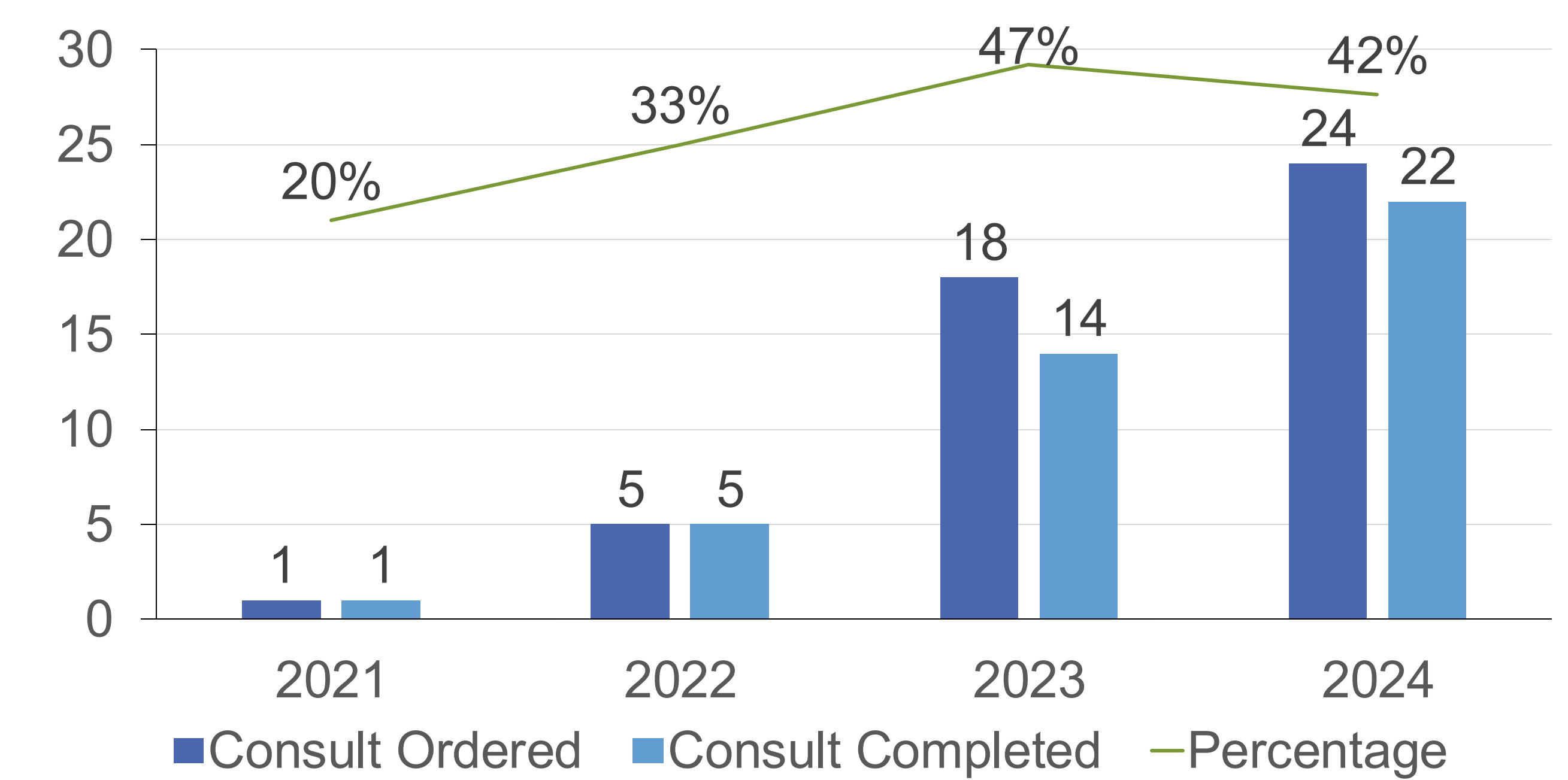


Figure 5. Prenatal Consults over Time

LESSONS LEARNED

A cooperative approach between neonatology and obstetrics can improve outcomes for opioid affected families by removing bias from screening and facilitating prenatal consultations, implementing ESC with resulting shortened length of stay and decreased medication use for NOWS, and increased utilization of post-discharge follow-up.

