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Makenna R. Black
University of Tennessee, Knoxville

Alexandria L. Tasket
University of Tennessee, Knoxville

Megan L. Young
University of Tennessee Medical Center

Tracy L. Brewer
University of Tennessee, Knoxville

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Increasing Nurse Awareness of a Breastfeeding and Substance Use Disorder Guideline to Improve Rates of Breast Milk and Skin to Skin Usage: A Quality Improvement Initiative

Makenna Black, BSN, RN; Alexandria Tasket, BSN, RN; Megan Young, MPH; and Tracy Brewer, DNP, RNC-OB, CLC

Background

As the opioid epidemic has increased, cases of neonatal opioid withdrawal syndrome (NOWS) have increased.

NOWS is due to newborns being exposed to opioids in utero. In 2020, in Tennessee, 824 newborns were diagnosed with NOWS.

Newborns diagnosed with NOWS are treated with pharmacological methods, nonpharmacological methods, or with a combination of methods.

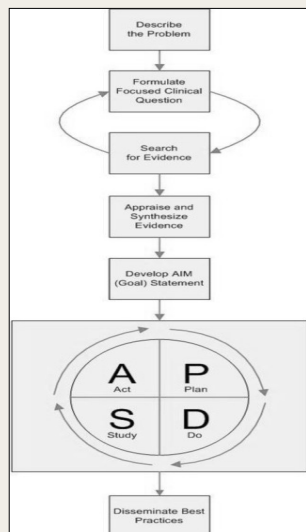
TIPQC

The University of Tennessee Medical Center (UTMCK) has partnered with Tennessee Initiative for Perinatal Quality Care (TIPQC) to implement an opioid use disorder toolkit. Part of the tool kit outlines promoting breastfeeding and skin to skin in mothers with opioid use disorder and newborns diagnosed with NOWS.

Findings have shown that mothers stable on medication assisted treatment can safely breastfeed newborns with NOWS.

UTMCK has a breastfeeding guideline outlining eligibility criteria for mothers with substance use disorder. Prior to implementation, this algorithm was not utilized to its full potential.

EBPI Model



Levin et al. (2010)

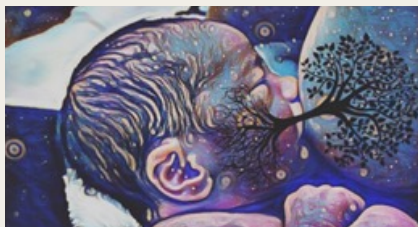
PICOT Question

In term opioid-exposed newborns (P), how does breast milk (I), compared to formula feeding (C), affect length of stay and severity of symptoms (O) during hospitalization (T)?

Research Evidence

Appraised using the Johns Hopkins Evidence-Based Practice: Research Evidence Appraisal Tool. All articles are levels II and III, grades A and B

- Skin to skin decreased length of stay
- Skin to skin decreased need for pharmacological treatment
- Patient education increased rates of breastfeeding
- Breastfeeding decreases need for pharmacological treatment
- Breastfeeding decreases length of stay in opioid-exposed newborns



Non-Research Evidence

Appraised using the Johns Hopkins Evidence-Based Practice: Non-Research Evidence Appraisal Tool.

- All articles are levels IV and V, grades A and B.
- Encourage mothers stable on medication assisted treatment to breastfeed.

Recommendations for Practice

We recommend an educational intervention aimed at nursing staff to improve breastfeeding rates in mothers with substance use disorder.

We recommend mothers stable on medication assisted therapy should be encouraged to breastfeed their newborn to reduce severity of neonatal opioid withdrawal syndrome.

We recommend mothers hold their newborns in skin to skin to improve breastfeeding and decrease symptoms of neonatal opioid withdrawal syndrome.

Methods

All staff nurses in Antepartum, Labor and Delivery, Mother/Baby, and NICU were invited to participate in an online educational module on UTMCK's breastfeeding algorithm. All staff nurses were invited to participate in a pre- and post-survey regarding the educational module.

Patient and nursing education pamphlets regarding breastfeeding and substance use disorder were created and distributed.

Results

77.2% (240/311) of all nurses completed the educational module.

Newborn Breastfeeding, Diagnosis, and Treatment

	Pre-Implementation	Post-Implementation
Receiving mother's milk at discharge	25.9% (14/54)*	48.7% (19/39)*
Diagnosed with NOWS	48.1% (26/54)	38.5% (15/39)
Treated with medication	18.5% (10/54)	20.5% (8/39)
Mean length of medication treatment	27 (±16.32) days*	10 (±9.93)days*
Max LOS	61 days	38 days
Median LOS	5 days	5 days

*= $p < 0.05$; LOS= Length of stay

Conclusion

Our project was part of the TIPQC opioid use disorder toolkit that UTMCK was implementing. UTMCK was concurrently implementing Eat, Sleep, Console. Because this is a quality improvement initiative, findings are not generalizable.

Although diagnosed with NOWS was not statistically significant between our pre- and post-implementation, we saw a 10% decrease in NOWS diagnosis, suggesting clinical significance.

Although there was no statistically significant difference in the percentage treated with medication, there was a statistically significant decrease in the average length of medication treatment.

UTMCK's policy is to observe infants with substance exposure for 5 days after birth for signs of withdrawal. Therefore, five days is the expected length of stay.

Missing data, particularly in regards to breastfeeding in the first hour of life and skin to skin at delivery, affected analysis.