Glucose Gel Treatment for Neonatal Hypoglycemia

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Background/Triggers

**Transient Neonatal Hypoglycemia:**
- Hypoglycemia is one of the most commonly encountered problem in infants within the first 48 hours of life
- At risk infants include: being born late preterm, LGA, SGA, IUGR, and IDM

**Healthy People 2020 Objectives:**
- MICH 21.4 and 21.5: increase proportion of infants breastfed exclusively through 3 months/6 months
- MICH 23: Reduce the proportion of breastfed newborns who receive formula supplementation within the first 2 days of life

P: Infant with hypoglycemia
I: Glucose Gel
C: Formula
O: Achieve therapeutic blood sugar levels while still maintaining exclusive breastfeeding, as well as cost effectiveness.

In neonates, does glucose gel compared to formula maintain therapeutic blood sugar levels while promote exclusive breastfeeding?

**PICO Question**

Evidence

- Reduction of NICU admissions by 73% (Bennett, Fagan, Chaharbakhshi, Zamfirova & Flicker, 2016)
- Reduced recurrence rate of hypoglycemia, increased exclusive breastfeeding rates at discharge, and decrease need for admission to the NICU to treat hypoglycemia (Rozance & Hay, 2016)
- Reduce neonatal ICU admissions, reduce hospital length of stay and cost, support the mother/infant dynamic through reduced separation, support exclusive breastfeeding, and improve parental satisfaction (Newman & Bunch, 2017)

**Gel Cost**
- 15g tube= 15 doses for a 5kg baby
- Each tube costs $2.90
- Each dose of gel: $0.19 for 5kg baby

Implementation

- Met with Joyce Najarian, Inpatient DM
  - Informed about project, received no additional information
- Met with Pharmacy
  - Reviewed cost, brand, dosage, and implementation of gel
  - Agreed on pharmacy pre-filling syringes and stocking in pyxis on units
- Mother-Infant Care meeting
  - Presented research to providers
  - Interest shown in future clinical trial
- Proposed pathway

Next Steps

- Make TLC to educate staff
- Implement EPIC workspace
- Carry out clinical trial

**Proposed Pathway:**
- Initial feed within 1 hour
- Recheck BG 1 hour after start of feed or 30 minutes after completion
- <35: Give glucose gel and feed, recheck in 1 hour
- If <35 again, repeat steps
- After second dose, contact provider

**REFERENCES**


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Maternal, Infant, and Child Health (MICH).