

# Glucose Gel Treatment for Neonatal Hypoglycemia

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## Published In/Presented At

Stilley, J. Clayton, E. Adegbite, I. Ackley, T. (2019, March 28). *Glucose Gel Treatment for Neonatal Hypoglycemia*. Poster presented at: LVHN Vizient/AACN Nurse Residency Program Graduation, Lehigh Valley Health Network, Allentown, PA.

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# 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

Maternal, Infant, and Child Health (MICH).

## PICO Question

**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 to promote exclusive breastfeeding?

## Evidence

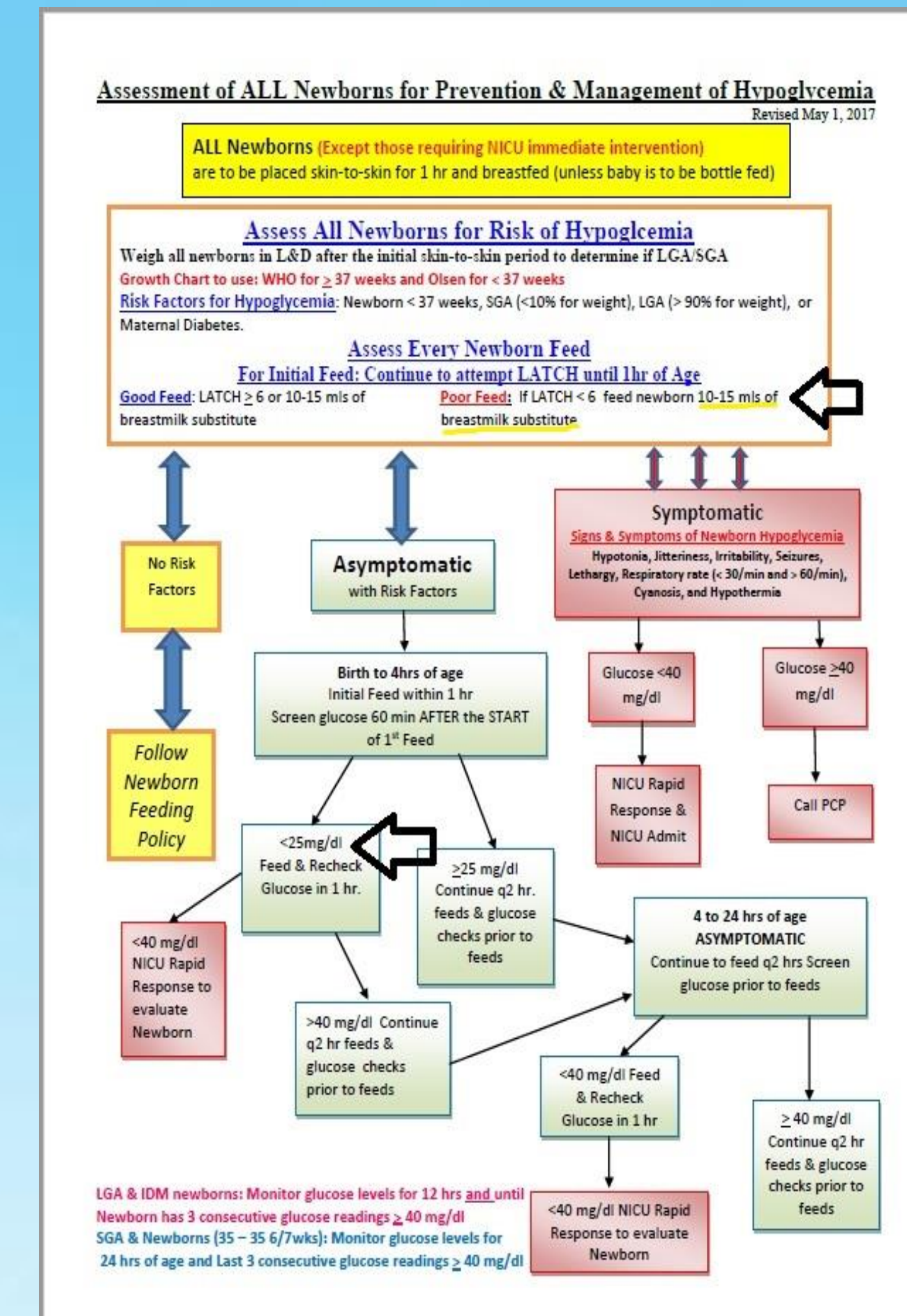
- Reduction of NICU admissions by 73% (Bennett, Fagan, Chaharbakshi, Zamfirova & Flicker, 2016)
- Reduced recurrence rate of hypoglycemia, increased exclusive breastfeeding rates at discharge, and decrease need for admission to the NICU to treat hypoglycemia (Rozance & Hay, 2016)
- Reduce neonatal ICU 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



Neonate Birth weight Kg	Dose of 40% Glucose Gel G	Amount mL
2.0	0.4	1
2.5	0.5	1.25
3.0	0.6	1.5
3.5	0.7	1.75
4	0.8	2
4.5	0.9	2.25
5	1	2.5



Lehigh Valley Health Network. (1, May 2017).

## Next Steps

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

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