

**Caring for Newborns With Transitional Hypoglycemia: Best Practices for Education Healthcare Providers and Families**

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Purpose: A number of fetal-maternal conditions predispose infants to transient hypoglycemia including infants born to mothers with diabetes, small or large for gestational age infants, premature and low birthweight infants. Neonatal hypoglycemia is not defined by an exact cut point that is applicable to every clinical scenario. National and international position statements on postnatal glucose homeostasis lack full consensus on best-practices on screening and management contributing to mixed communication with families, particularly during level of care transition. Interventions to restore euglycemia may require transfer of the newborn to the neonatal intensive care unit (NICU). There is little research to date on how caregivers and families should be educated on neonatal hypoglycemia to facilitate patient and family-centered care. Ideally, educational opportunities should be provided, prenatally, to parents whose infant may be at risk for hypoglycemia. The impact of transitioning an infant to a higher level of care may be distressing for the family. A multidisciplinary approach, initiated prenatally, would be an optimal approach in education of the potential risks of hypoglycemia in the hours immediately following birth. The mom/baby dyad is surrounded by a multidisciplinary team during all aspects of the infant delivery, pre and post. In the event an infant must be transitioned to higher level neonatal intensive care, a multidisciplinary approach is crucial in the parental comprehension and acceptance of the transition. Separation from mother and possible interruption of breastfeeding are affected areas of concern. Parental education in both higher and lower levels of newborn care must be congruent to reduce the risk of parental confusion. The purpose of this project therefore is to examine the existing evidence informing how to educate healthcare providers and families of newborns with transitional hypoglycemia to improve patient and provider communication during the care of newborns with hypoglycemia. Compassionate, yet informed communication is essential to the successful transition of the newborn into higher level of neonatal care.

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**Keywords:**

education, hypoglycemia and neonatal

**References:**

Adamkin, D. H. (2011, March 2011). Clinical report - postnatal glucose homeostasis in late-preterm and term infants. American academy of pediatrics, 127, 575-579. <https://doi.org/10.1542/peds.2010-3851>

Aziz, K., & Dancey, P. (2016, February 01, 2016). Screening guidelines for newborns at risk for low blood glucose. Canadian Paediatric Society, 9, 723-729. Retrieved from <https://www.cps.ca/en/documents/position/newborns-low-blood-glucose>

Rahmani, A., & Afandi, B. (2015, June 23, 2015). Improving neonatal complications with a structured multidisciplinary approach to gestational diabetes mellitus management. Journal of Neonatal-Perinatal Medicine, 359-362. <https://doi.org/10.3233/NPM-15915014>



Vanderkruik, R., Lemon, E., & Dimidjian, S. (2015, July 14, 2015). Breastfeeding support and messaging: A call to integrate Public and Psychological Perspectives. *Maternal Child Health Journal*, 19, 2545-2547. <https://doi.org/10.1007/s10995-015-1793-z>

World Health Organization. (2013). Postnatal care of the mother and newborn. World Health Organization. Retrieved from [http://apps.who.int/iris/bitstream/10665/97603/1/9789241506649\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/97603/1/9789241506649_eng.pdf)

### **Abstract Summary:**

A number of fetal-maternal conditions predispose infants to hypoglycemia. Consensus on postnatal glucose screening and management is mixed contributing to ineffective communication during level of care transition. This project presents evidence informing best practices in how to educate healthcare providers and families of newborns with hypoglycemia.

### **Content Outline:**

#### 1. Introduction and background – Care, screening, and management of newborns hypoglycemia

1. Definition of newborn hypoglycemia and euglycemia
2. At-risk populations
3. Evidence for screening and management recommendations
4. Interventions and timing issues with newborn hypoglycemia
5. Communication and messaging

1. Intra-professional: nurse-physician
2. Family-healthcare team
3. During transition to a different level of care

#### III. Evidence-based practice approach to education

1. Prenatal and postnatal consistency of education for families of newborns
2. Education of healthcare team on best practices for support and consistency in messaging
3. Future direction and areas of research needed

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