

**OLIVE VIEW-UCLA MEDICAL CENTER
LABOR & DELIVERY/3D NURSERY POLICY & PROCEDURE**

NUMBER: 4772

VERSION: 6

SUBJECT/TITLE: **STANDARDIZED PROCEDURE: STANDARDIZED PROCEDURE:
HYPOGLYCEMIA IN THE NEWBORN**

POLICY: The Registered Nurse who has been trained and demonstrated competency will adhere to approved protocols in **the defined need for glucose monitoring and/or treatment of hypoglycemia in the newborn**

PURPOSE: To standardize a nursing procedure and process to utilize when administering care to the newborn infant with/or the potential for having hypoglycemia post-delivery.

DEPARTMENTS: **Labor & Delivery, Nursing 3D Postpartum/Nursery**

DEFINITIONS: Hypoglycemia is defined as:
BLOOD GLUCOSE <45 MG/DL

A physician or neonatal nurse practitioner should be notified immediately of hypoglycemia even if the infant is asymptomatic.

Routine monitoring of blood glucose is indicated for all at risk infants with the following conditions or symptoms of hypoglycemia:

- SGA- Weight less than the 10th percentile for gestational age.
- LGA- Weight greater than the 90th percentile for gestational age.
- LBW- Low Birth Weight <2500 grams
- Discordant twins: weight 10% below larger twin
- Premature Infants- < 37 weeks.
- Postdates Infant - > 42 weeks gestation.
- IUGR- Intrauterine growth restriction
- IDM- Infant of diabetic mother, including gestational diabetic
- Dysmaturity – infants whose appearance is wasted with or without peeling, cracked skin.
- Perinatal stress; APGAR SCORE at 5 min <7, cold stress
- Infants with intrauterine exposure to intra-partum Terbutaline or propranolol within 2 hours of delivery.
- Infants displaying the following symptoms of hypoglycemia:
 - Jitteriness and tremors
 - Irritability
 - Exaggerated Moro reflex
 - Lethargy or coma (unresponsiveness)

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- Poor suck or refusal to feed
- Hypothermia or temperature instability
- Seizures
- Apnea or irregular breathing
- Grunting or other signs of respiratory distress
- Tachypnea
- Cyanosis
- High Pitched Cry
- Sweating

PROCEDURE: BLOOD GLUCOSE SCREENING AND MONITORING

Blood for glucose screening should be obtained by heel stick or by venipuncture.

Screening should be done within 60 minutes of birth in infants at risk for hypoglycemia or immediately in symptomatic infants.

Prior to obtaining POC blood glucose sample warm the infant's heel with infant heel warmer for 3-5 minutes. Wipe the initial drop of blood and use 2nd drop of blood for testing.

Initiate skin to skin immediately after delivery, ensure baby breastfeeds and continue on demand.

Additional glucose levels should be obtained until the blood glucose is ≥ 45 mg/dl x4 consecutively.

If **4 (four)** values ≥ 45 mg/dl are obtained, glucose screening can be discontinued, clinical surveillance for symptoms of hypoglycemia should be continued. Repeat glucose check at 12 and 24 hours of life.

MANAGEMENT OF HYPOGLYCEMIA IN THE ASYMPTOMATIC NEONATE.

1. Blood Glucose ≤ 25 mg/dl

- A. Notify MD and prepare for transfer to NICU

2. Blood Glucose 26-44mg/dl

- A. MD/NNP must be notified for every POC blood glucose result < 45 mg/dl.
- B. Administer a weight based dose of 40% glucose gel (0.5ml/kg) by syringe to the neonate's buccal cavity.
- C. Initiate interventions as soon as possible after low blood glucose result.
- D. Continue skin to skin and breastfeeding (approximately every 1–2 hours, after each blood glucose check) and/or hand express

- 1-5ml EBM.
- E. Recheck blood glucose concentration within 30 minutes-1 hour after gel administration.
- F. Glucose gel can be administered 3 times during the entire hospital stay.
- G. If after 3 doses of gel and breastfeeding/EBM, blood glucose remains below 45mg/dl notify MD/NNP for further orders.

3. Blood Glucose \geq 45mg/dl

- A. Continue skin to skin, breastfeeding/hand expression on demand but not to exceed more than 2 hours
- B. Recheck blood glucose concentrations within 2 hours of previous result.

If the blood glucose level remains <45mg/dl after 2 hours of life, despite feedings, or the infant becomes symptomatic notify MD.

Carefully document interventions and response to treatment.

MANAGEMENT OF HYPOGLYCEMIA IN A SYMPTOMATIC (CLINICAL SIGNS) INFANT OR PLASMA GLUCOSE LEVELS \leq 25 MG/DL

- 1. Notify MD/NNP to obtain order to transfer to NICU.
- 2. The glucose concentration in infants who have had clinical signs should be maintained at \geq 45 mg/dL
- 3. Carefully document interventions and response to treatment.

GUIDELINES FOR ADMINISTRATION OF GLUCOSE GEL

- 1. A dose of 40% Glucose Gel will be based on the patient's weight
- 2. Weight dose of Glucose Gel for a newborn will be:

Weight (grams)	Dose of 40% Glucose Gel grams	Quantity (ml)
2000-2499 grams	0.4g	1ml
2500-2999 grams	0.5g	1.25ml
3000-3499 grams	0.6g	1.5ml
3500-3999 grams	0.7g	1.75ml
4000-4499grams	0.8g	2ml
4500-4999grams	0.9g	2.25ml

- 3. The procedure of administering the Glucose Gel will follow these guidelines.
 - a. Apply 0.5ml to the infants to the buccal cavity and massage with gloved finger.
 - b. Repeat procedure in alternate cheek until the entire dose has been administered.
- 4. Discard the used tube of Glucose Gel (single use only).

**** Please note: Infants may receive 3 doses of Glucose Gel during their hospital stay.**

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REQUIREMENTS FOR CERTIFICATION FOR PERFORMANCE OF THE STANDARDIZED PROCEDURE

1. **Education:** Licensed with a current California RN license.
2. **Training:** Each RN performing this Standardized Procedure must be oriented to this Standardized Procedure Policies annually and competency checklist completed. A copy of the sign-in sheet and supporting documents will be kept in the educational binder and/or employee file.

References: American Academy of Pediatrics (2011). Clinical Report-Postnatal Glucose Homeostasis in Late Preterm and Term Infants. (Pediatrics 127(3),575-579 Bennett, C., Fagan, E., Chaharbakhshi, E., Zamfirova, I., Flicker, J. (2016). Implementing a Protocol: Using Glucose Gel to Treat Neonatal Hypoglycemia. Nursing for Women’s Health. Feb/March, p.65-74 Wight, N., et al. (2006). Academy of Breastfeeding Medicine Clinical Protocol #1: Guidelines for Glucose Monitoring and Treatment of Hypoglycemia in Breastfed Neonates. Revision June, 2006. Breastfeeding Medicine, 1(3), 178-184	
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