Management of Neonatal Hypoglycemia (Gestational Age ≥ 35 + 0/7 weeks) in first 48 hours of age



True hypoglycemia is defined as blood glucose (BG) <45 mg/dL in the first 48 hours of age. Between 48-72 hours, there is no clear guidance on specific BG threshold, but it should rise. After 72 hours of age, hypoglycemia is defined as BG <60 mg/dL. Glucose is checked point of care (POC) first. If POC blood glucose is <40 mg/dL, a confirmation will automatically be sent by the lab. A low POC glucose should be treated while awaiting confirmation result.

For All Infants:

- Encourage breastfeeding or breastmilk expression during the first hour after birth
- For mothers not planning to or unable to breastfeed, provide formula or donor milk (2-10mL per feed in first 24hrs, 5-15mL per feed in second 24hrs)

SIGNS of hypoglycemia: check at any time

- · Seizures, coma, hypotonia, or lethargy
- Jitteriness, irritability
- · Apnea, cyanosis, tachypnea
- Persistent oxygen need beyond transition period
- · Hypothermia or fever
- · Poor suck or refusal to feed
- · Persistent tachycardia or bradycardia

Notify newborn provider and check blood glucose immediately: If BG is normal or if signs of hypoglycemia persist despite treatment, investigate other etiologies.

RISK FACTORS for hypoglycemia: screen for first 24 hours

- Prematurity (<37 weeks)
- SGA (weight <10%ile)
- Infant of a diabetic mother (IDM)
- LGA (weight >90%ile)
- 10 minute APGAR <7
- Polycythemia (Hct >65%)
- Maternal terbutaline, beta blockers, or antenatal steroids within 48 hours prior to delivery
- Microphallus (<2cm) or midline defects

Check blood glucose at 2-3 hours of age AND before 2nd feed (after physiologic nadir)

Glucose <25 mg/dL

- Notify newborn provider
- Place PIV
- Start 2ml/kg D10W bolus followed by D10W at 80ml/kg/day
- Recheck within 30 minutes
- Intensify breastfeeding or supplemental feeding as tolerated
- If on IV dextrose, wean when glucose is ≥50 mg/dL

Glucose 25-44 mg/dL

- Notify newborn provider
- Apply 40% dextrose gel (Massage 0.5ml/kg into dried buccal mucosa over 30 seconds)
- Intensify breastfeeding or supplemental feeding
- Recheck glucose in 1-2 hours
- May repeat dextrose gel pathway twice

After 3 episodes of true hypoglycemia, consider IV dextrose if glucose remains <45 mg/dL and feeds are not improving



- Continue breastfeeding or supplemental feeding
- Recheck ac glucose until ≥45 mg/dL x2 consecutive feeds then q6 hours
- Stop risk factor based screening at 24 hours of age

If hypoglycemia persists beyond 72 hours of life (BG <60 mg/dL), further investigation is required. Critical labs should be obtained when BG <50 mg/dL: BMP, beta-hydroxybutyrate, insulin level, free fatty acids, lactate, cortisol, and growth hormone level (PRIORITY = BMP > BOHB > insulin > FFA > cortisol > GH). Consult endocrinology for further support when labs result.