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	Guideline Name: <b>Hypoglycemia in Newborns</b>	EIPT Number: <b>EIPT-035-025</b>	Page 1 of 13
	Approval Signature: <b>Shared Health Executive/WRHA Executive</b>	Section: <b>035 Women's Health and Neonatal</b>	
Level: <b>SITE-SPECIFIC</b> - Applies to all Shared Health and WRHA staff at the site indicated in the policy name.	Date: <b>01/Mar/2016</b> <b>R1 01/Jul/2018</b> <b>R2 09/Mar/2023</b>	Supercedes:  <b>80.275.750</b>	

## 1.0 **PURPOSE AND INTENT:**

- 1.1 To provide guidelines for identification, monitoring, and management of hypoglycemia in newborns ( $\leq 28$  days of life) within Shared Health and the WRHA. See algorithm in **Appendix A Algorithm for Initial Monitoring of Hypoglycemia  $\geq 35$  Weeks** and **Appendix B Advanced Management of Hypoglycemia in NICU**.

*Note: All recommendations are approximate guidelines only and practitioners must take into account individual patient characteristics and situation. Concerns regarding appropriate treatment must be discussed with the attending care provider.*

## 2.0 **PRACTICE OUTCOME:**

- 2.1 To recognize hypoglycemia in the newborn and treat so as to prevent acute and chronic complications of severe hypoglycemia.

## 3.0 **DEFINITIONS AND ABBREVIATIONS:**

- 3.1 **Blood Glucose level:** Measurement of glucose in plasma or whole blood in mmol/L regardless of method of measurement. For purposes of this document, glucometer glucose refers to point of care monitoring. TBS refers to True Blood Sugar, a venous or capillary sample analyzed in the chemistry lab. For  $<72$  hours of age, the goal is a blood glucose of  $\geq 2.6$  mmol/L. For  $\geq 72$  hours of age, the goal is a blood glucose of  $\geq 3.3$  mmol/L.
- 3.2 **Care Provider:** A physician, nurse practitioner, clinical assistant/physician assistant or midwife with prescriber responsibility in the care of the newborn.
- 3.3 **Glucose gel:** Dextrose in the form of gel, approximately 40% carbohydrate, for buccal administration. This is a standing order and can be given by a nurse using the criteria outlined in this guideline. Dose is 0.5 mL/kg. See instructions for preparation and administration in Appendix C Instructions for Glucose Oral Gel Preparation and Administration.
- 3.4 **Infant of a Diabetic Mother (IDM):** A newborn born to a mother with Type 1, Type 2 or gestational diabetes with or without insulin treatment.
- 3.5 **Hypoxic Ischemic Encephalopathy (HIE) of the Newborn:** Newborn meeting criteria based on Hypoxic Ischemic Encephalopathy (HIE) checklist or those born with an arterial cord pH  $<7.00$  or bicarb  $\leq 12$  or a base deficit (BD)  $\geq -16$  mmol/L.  
See Hypothermia for Newborns with Hypoxic Ischemic Encephalopathy
- 3.6 **Late Preterm Infant:** A newborn born from 34+0 weeks to 36+6 weeks gestational age.

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- 3.7 **Critical Serum Sample For Persistent Hypoglycemia:** TBS, Beta-Hydroxybutyrate, Cortisol, Insulin, Capillary Gases, and Growth Hormone.

#### 4.0 **GUIDELINES:**

- 4.1 Identify all newborn who are “at risk” for development of hypoglycemia based on any of the following criteria:

- Born at less than 37 weeks gestation
- Large for gestational age (LGA) with birth weight greater than the 90<sup>th</sup> percentile on the infant growth chart
- Small for gestational age (SGA) with birth weight less than the 10<sup>th</sup> percentile on the infant growth chart.
- Infant of diabetic mother (IDM)
- Asphyxia
- Any maternal exposure to labetalol within 2 weeks preceding delivery.
- Late preterm exposure to antenatal steroids within 2 weeks preceding delivery.

**Note: For Out of Hospital Births see Appendix E Newborn Hypoglycemia Screening and Management at Out-of-Hospital Births**

- 4.2 Assess **all** newborns for symptoms of hypoglycemia (immediately and ongoing):

<b>Mild Symptoms:</b>	<b>Severe Symptoms:</b>
<ul style="list-style-type: none"> <li>• Jitteriness or tremulousness</li> <li>• Limpness</li> <li>• Mild lethargy</li> <li>• Difficulty feeding</li> <li>• Eye rolling</li> <li>• Weak or high-pitched cry</li> </ul>	<ul style="list-style-type: none"> <li>• Apnea or tachypnea</li> <li>• Seizures</li> <li>• Cyanosis</li> <li>• Cardiac failure / arrest</li> <li>• Episodes of sweating</li> <li>• Pallor</li> <li>• Hypothermia</li> <li>• Significant lethargy or unresponsiveness</li> </ul>

- 4.3 If mild symptoms are present, immediately place newborn skin to skin with birthing parent or support person to help reduce pain during glucometer check and then proceed to check glucometer glucose. Determine next steps based on the result, as outlined below and on the algorithm found in Appendix A Algorithm for Initial Monitoring of Hypoglycemia ≥35 Weeks.
- 4.4 For all “at risk” newborns as identified above, who are ≥35 weeks gestation at birth, facilitate skin to skin care with birth parent or support person after birth and continuing until after the first feed and glucometer test regardless of feeding method. Ensure the newborn is fed at the breast or given 5 ml/kg of formula. Check glucometer glucose at approximately 2 hours after birth, **after the first feed**. Determine the next steps based on the result and assessment of the newborn for symptoms of hypoglycemia as outlined in 4.2.
- 4.5 For **asymptomatic newborn’s** glucometer glucose ≥ **2.6 mmol/L**

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4.5.1 Check glucometer glucose every 3-6 hours prior to feeds. Continue until two consecutive measurements are  $\geq 2.6$  mmol/L AND for the specified time frame outlined below:

- 12 hours of age if IDM or LGA; experienced asphyxia; if any maternal exposure to labetalol in past 2 weeks; if any maternal exposure to antenatal steroids in the past 2 weeks.
- 24 hours of age if SGA or  $<37$  weeks gestation AND feeding established.

Note: If the newborn meets more than one of the above criteria, monitor the newborn for the longer timeframe.

4.6 For **symptomatic newborns** with glucometer glucose  $\geq 2.6$  mmol/L, call care provider to assess for alternate causes of symptoms.

4.7 For the well newborns who can feed and is at risk for hypoglycemia: Glucometer glucose **1.8-2.5 mmol/L** and the newborn is  $\geq 35$  weeks gestation:

4.7.1 Give glucose gel 0.5 mL/kg AND,

4.7.2 Feed the newborn at the breast for maximum of 30 minutes (to prevent exhaustion due to inefficient feeding) or 5 mL/kg expressed breast milk or formula.

4.7.3 Repeat glucometer glucose 30 min after conclusion of the feed.

4.7.4 If glucometer glucose remains between 1.8-2.5 mmol/L, repeat glucose gel, feed and repeat glucometer glucose 30 min after the conclusion of the feed.  
If glucometer glucose  $\geq 2.6$  mmol/L, follow continued monitoring outlined in 4.5.

4.7.5 If glucometer glucose remains  $< 2.6$  mmol/L after 2 doses of glucose gel, call neonatology to order IV glucose maintenance and send TBS.

4.7.6 Counsel the birthing parent in methods to increase or maintain milk supply if the newborn is not effectively latching or if the newborn and parent are separated. Support the parent to hand express in the early hours after birth and to participate in hands-on pumping once appropriate.

[350.275.132-CPG-HSC-Breastfeeding-Optimizing-Breastfeeding-for-Women-at-Risk-for-Suboptimal-Milk-Supply.pdf](#)

4.8 For **newborns with severe symptoms** (as outlined in 4.2) with glucometer glucose **1.8 - 2.5 mmol/L** and neonate is  $\geq 35$  weeks gestation **or for ANY glucometer glucose result  $< 1.8$  mmol/L** regardless of symptoms:

4.8.1 **Call Neonatology on call person immediately and notify Newborn Care Provider during day time hours.**

4.8.2 **If symptomatic, give newborn another dose of glucose gel (0.5 ml/kg) and proceed to IV immediately as outlined in 4.8.4**

**Note: if the newborn is symptomatic with a seizure, do not administer glucose gel and proceed directly with IV insertion.**

4.8.3 If glucose  $< 1.8$  **without symptoms**: give glucose gel 0.5 ml/kg. Feed the newborn. Repeat glucometer glucose 30 min after the glucose gel and call Neonatology with result.

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- 4.8.4 Consider IV D10W at 80 mL/kg/24 hours and IV bolus D10W 2 mL/kg.
- 4.8.5 Repeat glucometer glucose 30 minutes after IV bolus and determine next steps with Neonatology based on result. **If an additional bolus is required, care must be transferred to the NICU if not already admitted to NICU.**
- 4.8.6 **For NICU Urgent Short-Term Use:** Newborns >2000 g with hypoglycemia and no central venous access must be admitted to NICU and can have D20W with no electrolytes run through a peripheral IV with assessment and documentation for phlebitis and extravasation at least every 30 minutes.
- 4.9 **IV weaning:** Following 2 or 3 consecutive blood glucose levels of  $\geq 2.6$  mmol/L, decrease IV by 10 to 20% of the initial full rate, following the feed. Maintain that rate until the next feeding. Check blood glucose prior to next feed and wean IV based on the glucose level:
  - 4.9.1 2.6 mmol/L or greater – decrease IV by 10 to 20%
  - 4.9.2 2.2-2.5 mmol/L and asymptomatic newborn – feed (breastfeed with breast compressions or 5ml/kg of formula), keep IV at same rate and check glucose in 30 minutes. If before the subsequent feed the glucose is again < 2.6, breastfeed with breast compressions or feed 8ml/kg of formula and notify the care provider.
  - 4.9.3 2.2-2.5 mmol/L and symptomatic newborn – Bolus D10W 2ml/kg over 3-5 minutes as for the Pediatric Parenteral Drug Monograph, increase IV to previous rate and call neonatology.
  - 4.9.4 <2.2 mmol/L – Increase to previous IV rate and call neonatology.
  - 4.9.5 When the IV rate has been decreased to 2 ml/hr, IV can be switched to a saline lock and the dextrose can be discontinued. Continue checking blood glucose levels before feeds for the next 1-2 feeds. If newborn remains stable (glucose  $\geq 2.6$  mmol/L) the IV may be discontinued once an order is written.
- 4.10 After consultation with care provider and clinical judgment dictates variation from guideline, care provider documents in the progress notes.
- 4.11 For newborn **<35 weeks** gestation: Glucometer glucose **<2.6 mmol/L**– Call care provider. Glucose gel is not recommended for use in this age group.
- 4.12 Newborn cared for in a neonatal unit with hypoglycemia requiring IV treatment who are <72 hours of age:
  - 4.12.1 Continue to monitor glucometer glucose prior to feeds.
  - 4.12.2 Maintain care in the neonatal unit until glucometer glucose is  $\geq 2.6$  mmol/L on at least two consecutive glucometer glucose checks at least 3 hours apart, and newborn showing no symptoms of hypoglycemia after 6 hours of age.
  - 4.12.3 Care provider assesses the newborn before transfer to postpartum unit and notifies the receiving care provider of transfer. Continue to monitor blood glucose according to risk categories outlined in 4.5. Initiate weaning IV before transfer out of NICU. If the decision is made to begin weaning the IV in the postpartum area, this must be

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approved by the care provider and the unit involved before transfer.

- 4.13 For newborns  $\geq 72$  hours of age **with no known etiology for hypoglycemia**: Blood glucose  $\leq 2.8$  mmol/L measured before a feed on two occasions, OR one blood glucose  $\leq 2.8$  mmol/L in a newborn with persistent hypoglycemia during the first 72 hours - **after a complete assessment**.
- 4.13.1 Send the following pre-feeding bloodwork to Clinical Chemistry (Critical Sample): TBS, Beta-Hydroxybutyrate, capillary gas (see 4.13.2), Cortisol, Insulin and Growth Hormone. Draw a central sample to decrease the chance of hemolysis of the sample and misleading blood glucose results.
- A critical sample may be sent earlier than 72 hours for any newborn with suspected etiology of persistent hypoglycemia (e.g. Suspected metabolic condition or Beckwith-Wiedemann syndrome)
- 4.13.2 Call Respiratory Therapist to do a blood gas with lactate. If results show metabolic acidosis or high lactate ( $>4.0$  or base deficit  $\geq 10$ ) with no known etiology – confirm with an arterial gas and if persistent, consult Pediatric Metabolic Service.
- 4.13.3 If a metabolic or endocrine cause is suspected from results of the blood glucose, consult either Metabolic or Pediatric Endocrinology services for assistance with acute and/or chronic management.
- 4.14 Diazoxide could be prescribed for newborns with hyperinsulinemia (HI) hypoglycemia only after consultation with Pediatric Endocrinology to assist in the assessment of indication of use and monitoring of short- and long-term adverse effects. In newborns with HI suspected to be due to perinatal stress, consideration should be given to avoiding the use of Diazoxide until after 7-10 days of life if euglycemia can be maintained by other means (especially in a patient with respiratory distress, prematurity, small for gestational age, newborns of diabetic mothers, and/or bronchopulmonary dysplasia) to limit risk of adverse events. If diazoxide is started in consultation with Pediatric Endocrinology, a thiazide diuretic should be started concurrently to ameliorate the risk of fluid overload. Due to the risk of thrombocytopenia with Diazoxide, a baseline CBC should be done and then repeated at 5-7 days. A thorough cardiorespiratory assessment should be completed prior to starting Diazoxide. A baseline echocardiogram could be considered based on clinical judgement.
- 4.15 For neonates with persistent hypoglycemia beyond 72 hours of age and/or a confirmed endocrine or metabolic cause for hypoglycemia:
- 4.15.1 Conduct a 5 hour fast prior to discharge in consultation with Pediatric Endocrinologist to ensure glucose is maintained at  $\geq 3.3$  mmol/L. If the newborn fails the fast at anytime prior to the 5 hours, the fast should be stopped and attempted again after 24 hours.
- 4.15.2 Utilize the appropriate discharge checklist as found in Appendix D Discharge Checklist for Infants with Hypoglycemia and Hyperinsulinemia
- 4.16 For newborns  $<35$  weeks and those who are ill and admitted to a neonatal unit, check

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glucometer glucose on admission. Discuss with caregiver in order to adjust IV fluids according to the results. Do subsequent tests based on the clinical assessment.

- 4.17 **For newborns receiving total parenteral nutrition (TPN), check glucometer glucose after initiation and discontinuation of TPN and after any changes in glucose dose infused or deterioration in clinical status. Monitor q8h x 24 hours. Discontinue glucometer testing after 2 consecutive values  $\geq 2.6$  (prior to 72 hours of age) or  $\geq 3.3$  mmol/L (after 72 hours of age) measured pre-feed.**

## 5.0 **PRIMARY AUTHORS**

- 5.1 Dr. Ruben Alvaro, Neonatologist, Medical Director, NICU St. Boniface Hospital
- 5.2 Dr. Fabiana Postolow, Neonatologist, Assistant Medical Director, NICU, Health Sciences Centre
- 5.3 Dr. Michael Narvey, Neonatologist, Section Head of Neonatology, Health Sciences Centre and St. Boniface Hospital
- 5.4 Doris Sawatzky-Dickson, Clinical Nurse Specialist, NICU, Health Sciences Centre
- 5.5 Tanya Tichon, Nurse Educator, NICU, Health Sciences Centre
- 5.6 Shauna Mason, Nurse Educator, Women's Health, Health Sciences Centre
- 5.7 Laurie Bobula, Nurse Educator, Women's Health, St. Boniface Hospital

## 6.0 **REVISIONS MADE BY:**

- 6.1 Dr. Michael Narvey, Neonatologist, Section Head of Neonatology, Health Sciences Centre and St. Boniface Hospital
- 6.2 Dr. Seth Marks, Pediatric Endocrinologist, Health Sciences Centre
- 6.3 Dr. Wail Kassem, Pediatrician, St. Boniface Hospital
- 6.4 Dr. Diana Popescu, Pediatrician, Health Sciences Centre
- 6.5 Tanya Tichon, Nurse Educator, NICU, Health Sciences Centre
- 6.6 Laurie Bobula, Nurse Educator, Women's Health, St. Boniface Hospital
- 6.7 Amber Wiens, Nurse Educator, Women's Hospital, Health Sciences Centre
- 6.8 Veronica Braganza, Clinical Nurse Specialist, NICU, St. Boniface Hospital
- 6.9 Kira Friesen, Clinical Nurse Specialist, Women's Hospital, Health Sciences Centre
- 6.10 Dr. Chelsea Ruth, Neonatologist, Medical Director NICU, St. Boniface Hospital

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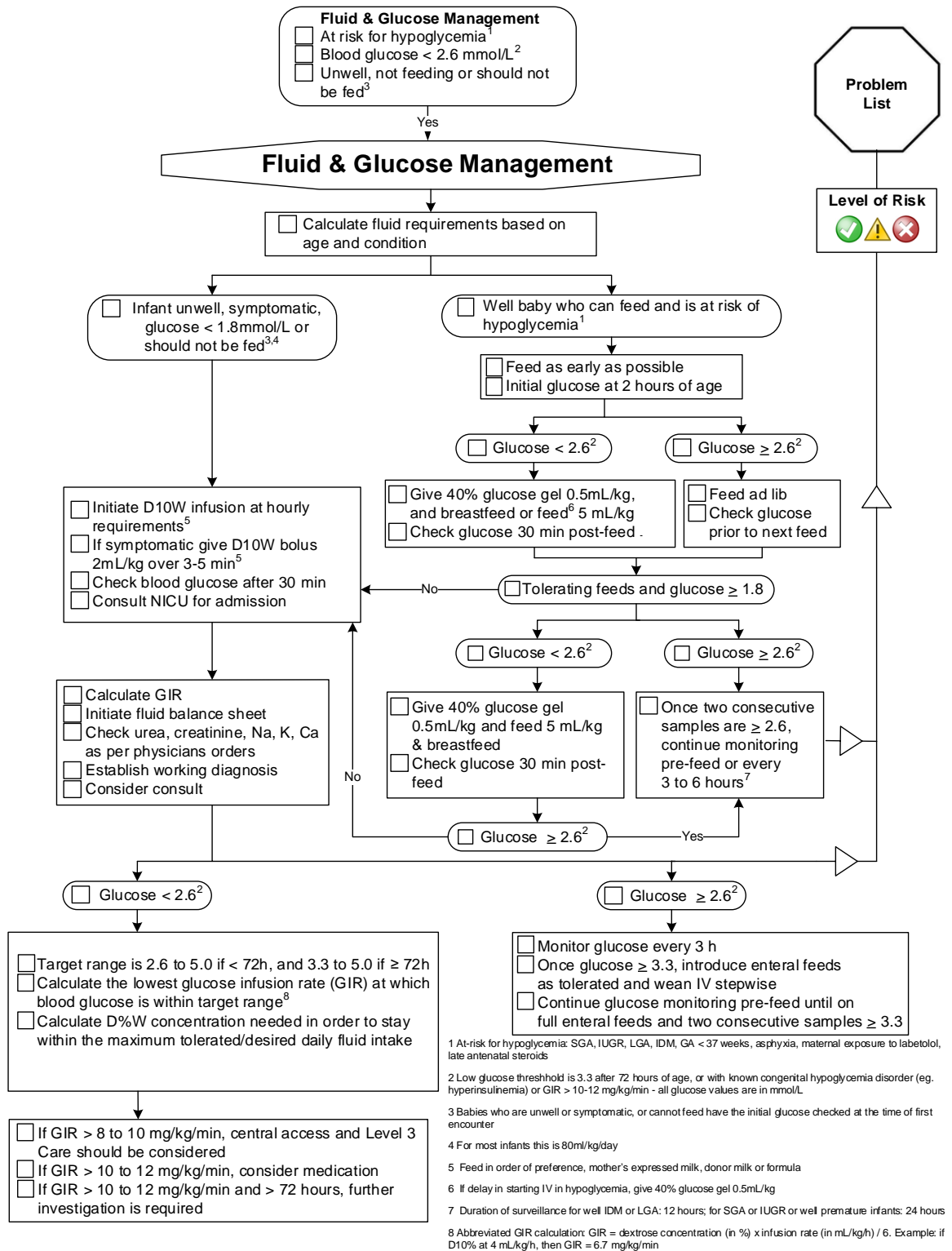
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# APPENDIX B

## Advanced Management of Hypoglycemia in NICU



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## APPENDIX C

### Instructions for Glucose Oral Gel Preparation and Administration

#### Materials Required:

- Glucose Oral Gel (e.g. Instaglucoose): 1 tube
- Oral Syringe 3 - 5 mL size with cap: 1 syringe

#### Preparation Instructions:

1. Remove the plunger from the oral syringe and place a cap on the syringe tip.
2. Open the tube of glucose gel by twisting off the white tab. The tube is not re-sealable once the tab is removed.
3. Squirt the glucose gel into the bottom of the inverted syringe until the desired volume is reached. The dose is 0.5 mL/kg.
4. Replace the plunger back in the syringe until it is just secure. Do not push too hard as there will be air under pressure as well as glucose gel in the syringe.
5. Turn the syringe upright.
6. Remove the cap and push up on the plunger to remove any air from the syringe.
7. Make a final adjustment of the volume and double check the dose.
8. Once opened, glucose gel tubes are to be returned to the clear plastic container that they come in from pharmacy. Place the gel with the opening facing up and replace the lid on the plastic container.
9. Glucose gel can be used for up to 24 hours after opening. Write the 'date and time opened' on the white sticker on the plastic container.
10. Glucose gel tubes can be used for multiple newborn's within a 24 hour period if labelled, kept in the central area on the unit, and nurse ensures that clean technique is used when decanting the gel into a syringe. Tubes brought to the bedside can only be used for that single patient.
11. Use a 2 x 2 to remove any gel around the opening or outside of the tube prior to the next dose being removed.

#### Administration of Glucose Gel:

1. Please have the newborn sitting up when administering the glucose gel.
2. Using the **oral syringe**, instil the gel into the newborn's buccal/cheek area.
3. Using a **gloved finger**, rub the gel into both inner cheeks.
4. Expect that some gel will get swallowed by the newborn, as well as spit out.

## APPENDIX D


### Discharge Checklist for Infants with Hypoglycemia and Hyperinsulinemia

CHECK BOXES AND INITIAL WHEN COMPLETED	<u>Initials</u>
<p><b><u>Parent or Caregiver Teaching:</u></b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Met with the Endocrinology Nurse or physician to discuss diagnosis</li> <li><input type="checkbox"/> Use of glucometer</li> <li><input type="checkbox"/> Target range of blood glucoses _____mmol/L to _____mmol/L</li> <li><input type="checkbox"/> At home treatment of hypoglycemia (low blood glucose &lt; 3.3 mmol/L)</li> <li><input type="checkbox"/> Medication teaching (see below)</li> <li><input type="checkbox"/> Repeat echocardiography (TNE or by Cardiology)</li> <li><input type="checkbox"/> Teaching regarding symptoms of pulmonary hypertension</li> <li><input type="checkbox"/> To contact Pediatric Endocrinology if the blood glucoses are frequently too low (&lt;3.3 mmol/L) or too high (&gt;6.0mmol/L)</li> </ul> <p>Pediatric Endocrinology nurse: Monday to Friday 8:00am - 4:00 pm at 204-787-2490  Pediatric Endocrinologist physician on call: 24 hour on call at 204-787-2071</p>	
<p><b>Medication:</b></p> <p><input type="checkbox"/> <b>Diazoxide</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Dose of Diazoxide _____mg every 8 hours = _____ml every 8 hours by mouth</li> <li><input type="checkbox"/> Caregiver(s) has been instructed on how to give this medication, by _____</li> <li><input type="checkbox"/> Pediatric Endocrinologist has sent prescription to Pharmacy _____          (standard concentration for diazoxide will be 10 mg/mL)</li> </ul> <p><b>OR</b></p> <p><input type="checkbox"/> <b>Octreotide</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Dose of Octreotide is _____micrograms every _____hours subcutaneously</li> <li><input type="checkbox"/> Pediatric Endocrinologist has provided prescription to Pharmacy _____          (concentration of Octreotide prescribed is _____mcg / _____)</li> </ul> <p><b>Dose = _____units on a syringe- given every _____hours</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Caregiver(s) has been instructed how to give his medication, by _____</li> </ul>	
<p><input type="checkbox"/> <b>Glucagon (optional)</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Caregiver(s) has been instructed how to give intramuscular glucagon in case of emergency          by _____ Dose _____mg IM</li> </ul>	
<p><input type="checkbox"/> <b>IM Hydrocortisone (optional)</b></p> <p>Caregiver(s) has been instructed how to give intramuscular hydrocortisone in case of emergency by _____ Dose _____mg IM</p>	
<p><b><u>Infant's Clinical Status:</u></b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Infant must be able to maintain a blood glucose of at least 3.3 mmol/L pre feeds</li> <li><input type="checkbox"/> The infant should be fasted in the NICU prior to discharge and be able to maintain this target blood glucose after a minimum of 4 h (ideally 5 or 6 hours)          After _____hours - _____mmol/L - date _____</li> </ul>	
<ul style="list-style-type: none"> <li><input type="checkbox"/> Caregiver has all medications checked off above, in hand prior to discharge</li> <li><input type="checkbox"/> Clinic Follow up Appointment with Pediatric Endocrinology Booked:</li> <li><input type="checkbox"/> Clinic Follow up Appointment with Pediatric Cardiology Booked:</li> </ul> <p>Cardiology      Date _____ Time _____          Endocrinology      Date _____ Time _____</p>	

# Discharge Checklist for Infants with Hypoglycemia and Hypopituitarism

CHECK BOXES AND INITIAL WHEN COMPLETED	Initials
<b><u>Parent or Caregiver Teaching:</u></b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Met with the Endocrinology Nurse or physician to discuss diagnosis</li> <li><input type="checkbox"/> Use of glucometer</li> <li><input type="checkbox"/> Target range of blood glucoses _____ mmol/L to _____ mmol/L</li> <li><input type="checkbox"/> At home treatment of hypoglycemia (low blood glucose &lt; 3.3 mmol/L)</li> <li><input type="checkbox"/> Medication teaching (see below)</li> <li><input type="checkbox"/> To contact Pediatric Endocrinology if the blood glucoses are frequently too low (&lt;3.3 mmol/L) or high (&gt;6.0mmol/L)</li> </ul> <p>Pediatric Endocrinology nurse: Monday to Friday 8:00am - 4:00 pm at 204-787-2490 Pediatric Endocrinologist physician on call: 24 hour on call at 204-787-2071</p>	
<b>Medication:</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> <b>Prednisolone (Glucocorticoid)</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Dose of Prednisolone is _____ mg = _____ ml _____ times a day by mouth</li> <li><input type="checkbox"/> Caregiver(s) has been instructed how to give this medication by _____</li> <li><input type="checkbox"/> Illness management reviewed - dose will be doubled in case of illness or fever</li> <li><input type="checkbox"/> Illness Management Plan Letter provided</li> <li><input type="checkbox"/> Teaching and prescriptions for other pituitary replacement hormones if applicable (growth hormone and/or L-thyroxine and/or DDAVP) (circle if applicable)</li> <li><input type="checkbox"/> Pediatric Endocrinologist has provided prescription to Pharmacy</li> </ul> <p>(standard concentration for Prednisolone will be 1mg/ml)</p> </li> <li>OR</li> <li><input type="checkbox"/> <b>Growth hormone</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Dose of growth hormone is _____ mg/ day 7 days per week</li> <li><input type="checkbox"/> Caregiver(s) has been instructed how to give this medication by _____</li> <li><input type="checkbox"/> How to prepare _____</li> <li><input type="checkbox"/> Pediatric Endocrinology has sent the prescription to NIFB; GH was approved (date) _____</li> </ul> </li> <li><input type="checkbox"/> <b>Glucagon (optional)</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Caregiver(s) has been instructed how to give intramuscular glucagon in case of emergency</li> </ul> <p>by _____ Dose _____ mg IM</p> </li> </ul>	
<ul style="list-style-type: none"> <li><input type="checkbox"/> <b>IM Hydrocortisone (optional)</b> Caregiver(s) has been instructed how to give intramuscular hydrocortisone in case of emergency by _____ Dose _____ mg IM</li> </ul>	
<b><u>Infant's Clinical Status:</u></b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Infant must be able to maintain a blood glucose of at least 3.3 mmol/L prefeeds</li> <li><input type="checkbox"/> The infant should be fasted in the NICU prior to discharge and be able to maintain this target blood glucose after a minimum of 4 h (ideally 5 or 6 hours) After _____ hours - _____ mmol/L – date _____</li> </ul>	
<b>Discharge Preparation:</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Caregiver has all medications checked off above, in hand prior to discharge</li> <li><input type="checkbox"/> Clinic Follow up Appointment with Pediatric Endocrinology Booked:</li> </ul> <p>Date _____ Time _____</p>	

## APPENDIX E

 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p> <p><b>MIDWIFERY CLINICAL PRACTICE GUIDELINE</b></p>	<b>Title:</b> <b>Newborn Hypoglycemia Screening and Management at Out-of-Hospital Births</b>	<b>Policy Number:</b> <b>MWPG-3</b>
	<b>Approval Date:</b> <b>APRIL 6, 2017.</b>	<b>Pages:</b> 1
	<b>Approved by:</b> <b>ENSIEH TAEIDI, Clinical Director of Midwifery Services</b>	<b>Supersedes:</b> <b>NEW</b>

### PURPOSE

1. To contextualize the “Shared Health/WRHA Neonatal Clinical Practice Guideline: Hypoglycemia in Newborns (2022)” for use by midwives in out-of-hospital settings.

### GUIDELINE

1. Midwives follow the WRHA Clinical Practice Guideline for Hypoglycemia in Newborns (CPG).
2. Facilitate a prenatal informed choice discussion regarding out-of-hospital births and regional guidelines for neonatal hypoglycemia screening during prenatal place of birth discussions.
3. Anytime a newborn presents with symptoms of hypoglycemia, take a glucometer glucose reading.
4. If the newborn has a low glucometer glucose reading ( $\leq 2.6$ mmol), give glucose gel and transport to the hospital.
  - a. If a newborn is less than 2 hours of age and is symptomatic of hypoglycemia, transport the newborn to hospital by ambulance. When a transport is indicated, the midwife will call the on-call neonatologist to consult and determine to which hospital the newborn should be transferred.
5. Identify all newborns “at risk” for hypoglycemia based on the CPG and take a glucometer glucose reading at 2 hours of age.
6. Follow the CPG for timing of screening and application of the glucose gel as required.
7. If the algorithm for screening will take  $>6$ hrs, review the CPG with the parents and recommend transport to hospital to complete the algorithm for care of the “at risk” newborn.
8. For the “at risk” newborn: If there are two normal consecutive readings ( $\geq 2.6$ mmol) within 6 hours facilitate an informed choice discussion with the parent(s) about the CPG and OOH plan of care; offer transfer to hospital to continue the CPG algorithm or stay at home/discharge home.
9. For parent(s) who choose discharge from the birth centre at 6 hours postpartum or to stay at home after a homebirth:
  - a. Review symptoms of hypoglycemia and normal wake/sleep/feeding patterns expected with the parent(s) and when to call the midwife
  - b. Arrange to see the client and newborn at 12 to 24 hours, discuss hypoglycemia with the parent(s) and offer a pre-feeding glucometer glucose reading before a feed at the visit.
  - c. At the day 1 visit (24-48 hours of age), discuss hypoglycemia with the parent(s) and offer a pre-feeding glucometer glucose reading.

**SCOPE:** This guideline is to be used by midwives for newborns born in out of hospital settings.

#### Primary Authors:

Beckie Wood, WRHA Clinical Midwifery Specialist

WRHA Midwifery Practice Council

Dr. Fabiana Postolow, Neonatologist, Assistant Professor of Pediatrics – Section of Neonatology, Health Sciences Centre

Approved by: *Clinical Director of Midwifery Service*

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