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MEDICAL DIRECTIVE: <u>Hypoglycemia Management for Paediatric Patients with Diabetes</u>

DEPT. Child and Youth Inpatient and Outpatient, Emergency Department, Child and Youth Mental Health Inpatient Unit SUPERCEDES: <u>NEW</u>

ADMINISTRATIVE AUTHORITY: Medical Advisory Committee Date: January 11, 2018

NAME AND DESCRIPTION OF TREATMENT:

Registered Nurses (RNs) and Registered Practical Nurses (RPNs) at the Royal Victoria Regional Health Centre (RVH) may initiate the following directive.

This Medical Directive applies to paediatric patients under 18 years of age admitted as an inpatient, registered as an outpatient, or being seen in the Emergency Department of the hospital presenting with signs and symptoms of hypoglycemia and for treatment for paediatric patients with a Blood Glucose (BG) level less than 4 mmol/L by venous specimen or point of care testing (POCT). The orders below shall be initiated immediately.

INDICATIONS FOR USE OF DIRECTIVE:

Indications for utilizing this directive include paediatric patients with diabetes and with one or more of the following:

- Diabetes (type 1, type 2) and/or
- Hypoglycemic symptoms

Symptoms of hypoglycemia may include but are not limited to:

- o Inability to concentrate, confusion, drowsiness
- Slurred speech, weakness, vision changes
- Unsteadiness when standing or walking
- Muscle twitching, tingling
- Personality changes such as anger, uncontrollable crying, anxiety
- Sweating, pallor, shakiness, headache, trembling, palpitations
- Hunger, nausea

If the patient meets the indications above check BG using POCT. A POCT can be done at the request of the paediatric diabetic patient if they feel their glucose is low. The practitioner will immediately treat the patient following the orders below if the value is less than to 4 mmol/L and report the glucose POCT to the physician. Refer to RVH Laboratory Departmental Policy and Procedure for Point of Care Testing.



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Treatment:

The RN/RPN: If the patient is conscious with no swallowing difficulties and able to follow treatment directions:

Treat immediately post POCT (do not wait for lab draw confirmation)			
 According to patient's weight, give appropriate amount of juice OR Liquiblast® 			
Patient	Less than	15 – 30 kg	Greater than
Weight	15 kg		30 kg
Juice	40 mL	85 mL	125 mL
OR			
Dex4	20 mL	40 mL	59 mL (entire
Liquiblast®			bottle)
 Repeat POCT in 15 minutes THEN if BG level is still less than 4 mmol/L, repeat above orders one more time (max. 2 doses) until BG is greater than or equal to 4 mmol/L 			

• If BG level remains less than 4 mmol/L after second dose (30 minutes), **notify MRP STAT** for further orders

The RN only:

If the patient is <u>NOT</u> able to take oral liquids or solids, due to swallowing difficulties, decreased level of consciousness, or convulsions:

- Treat immediately post POCT (do not wait for lab draw confirmation)
- If IV in situ: Give 5 mL/kg of 10% dextrose over 1 to 3 minutes to a maximum of 25 grams/dose (250 mL)

If no IV in situ give glucagon:

Weight of Patient	Dose of Glucagon	Route and Frequency
Less than 20 kg	0.5 mg	IM X1 only
20 kg or greater	1 mg	IM X1 only

- Have patient in recovery position and monitor for episodes of nausea
- Notify the Most Responsible Provider STAT for further orders
- Repeat POCT in 15 minutes

NOTE: If weight not available and situation is emergent:

Age	Dose of Glucagon	Route and Frequency
6 years of age and under	0.5 mg	IM X1 only
Over 6 years of age	1 mg	IM X 1 only



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Once BG is greater than or equal to 4 mmol/L, ensure patient follows treatment with a scheduled meal or snack consisting of a serving of protein and carbohydrates (eg. 1 package (28g) of cheese and 6 crackers).

CONTRAINDICATIONS:

- Patients over the age of 18 years
- Patient refusal
- Substitute decision maker refusal

NOTE: Glucagon administration may be less effective in patients using alcohol. In this case, the treatment of choice would be 10% Dextrose intravenously..

PERSONNEL APPROVED FOR IMPLEMENTATION OF DIRECTIVE:

RN or RPN: If patient is conscious and able to follow treatment directions and exhibits no swallowing disorder.

RN only: If patient is NOT able to take oral liquids or solids due to swallowing difficulties, decreased level of consciousness, or convulsions Certified or active POCT glucose testing user.

CO-IMPLEMENTERS:

Certified Diabetes Educators POCT Coordinator Medical Laboratory Technologist Medical Laboratory Assistant Nurse Practitioner Pharmacist

EDUCATIONAL REQUIREMENTS FOR PERSONNEL APPROVED TO INITIATE DIRECTIVE:

Successful completion of yearly education regarding the use of medical directives including attainment of 90% on competency exam.

DOCUMENTATION AND COMMUNICATION:

- 1. A copy of the Medical Directive will be placed in the Physician's Order section on the patient chart with the name, status, and signature of the implementer, the name of the authorizing physician, the date and time of implementation.
- 2. Document the notification of physician in the Interdisciplinary Progress Record (RVH 0818) or in the electronic medical record (EMR).



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PHYSICIANS TO WHOM DIRECTIVE APPLIES: All Paediatricians and Emergency Physicians with privileges at Royal Victoria Regional Health Centre

	Name:	Signature: _	Date:	Time:
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