

**North Carolina Medical Board and North Carolina Board of Pharmacy Protocols for Glucagon  
July 21, 2023**

Pursuant to S.L. 2021-110, these protocols adopted by the North Carolina Medical Board and the North Carolina Board of Pharmacy authorize immunizing pharmacists practicing pharmacy in the state of North Carolina and licensed by the North Carolina Board of Pharmacy to dispense, deliver, or administer glucagon as directed below.

<b>Glucagon Dispensing Protocol</b>				
<b>Eligible Candidates</b>	<ul style="list-style-type: none"> <li>▪ Glucagon is indicated for the treatment of hypoglycemia in people unable or unwilling to consume carbohydrates by mouth. Pharmacists may proactively identify patients at risk for hypoglycemia and educate the patient/caregiver about available treatments for hypoglycemia.</li> <li>▪ Persons who voluntarily request glucagon and are at risk of experiencing severe hypoglycemia*, including, but not limited to:               <ul style="list-style-type: none"> <li>○ Persons with an insulin prescription</li> <li>○ Persons at risk for hypoglycemia unawareness</li> <li>○ Persons with low cognition or declining cognition and diabetes</li> <li>○ Persons with recurrent hypoglycemia</li> <li>○ Persons with reduced ability to recognize hypoglycemia symptoms and effectively communicate their needs</li> </ul> </li> <li>▪ Persons who voluntarily request glucagon and are a close personal contact of a person at risk of experiencing severe hypoglycemia*</li> <li>▪ Persons who voluntarily request glucagon and are in the position to assist a person at risk of experiencing severe hypoglycemia*</li> <li>▪ These protocols may be used for persons &lt; 18 years of age with a parent or legal guardian consent.</li> <li>▪ Use in pediatric patients is allowed in accordance with denoted appropriate age and dosage recommendations below.</li> </ul> <p>*Severe hypoglycemia is defined as blood glucose &lt; 54 mg/dL (3.0 mmol/L) or altered mental and/or physical functioning that requires assistance from another person for recovery. (American Diabetes Association. 6. Glycemic targets: <i>Standards of Medical Care in Diabetes—2021</i>. Diabetes Care 2021;44(Suppl. 1):S73–S84)</p>			
<b>Route(s) of Administration</b>	<b>Intramuscular (IM)</b> [may also be administered subcutaneously (SQ)]		<b>Subcutaneous (SQ)</b>	<b>Intranasal (IN)</b>
<b>Medication</b>	Glucagon 1 mg/mL Emergency Injection Kit ▪ Dispense 2 (two) kits	GlucaGen® 1mg/mL Hypokit Injection ▪ Dispense 2 (two) kits	Gvoke® 0.5 mg/0.1 mL Prefilled Syringe or Auto-injector (indicated for pediatric patients ages 2 to < 12 years weighing < 45 kg) ▪ Dispense 1 x two-pack OR 2 x one-pack  Gvoke® 1 mg/0.2 mL Prefilled Syringe or Auto-injector (indicated for adults, pediatric patients ages 12 years and older, and patients ages 2 to < 12 years who weigh ≥ 45 kg) ▪ Dispense 1 x two-pack OR 2 x one-pack	Baqsimi® 3 mg/dose Powder (indicated for patients ages 4 years and older) ▪ Dispense 1 x two-pack OR 2 x one-pack
<b>Directions for Use</b>	Follow steps in kit for preparing a dose. Inject dose (see below) via IM or SQ route into upper arm, thigh, or buttocks. Call 911. Repeat after 15 minutes, if no response. When the patient has responded to treatment, give oral carbohydrates.  <u>Dosing instructions:</u> For adults and pediatric patients weighing ≥ 25 kg, or for pediatric patients with unknown weight and age 6 years and older: Administer 1 mg (1 mL) per dose  For pediatric patients weighing < 25 kg, or for pediatric patients with unknown weight and less than 6 years of age: Administer 0.5 mg (0.5 mL) per dose		Inject dose (see below) SQ in the lower abdomen, outer thigh, or outer upper arm. Call 911. Repeat after 15 minutes, if no response. When patient has responded to treatment, give oral carbohydrates.  <u>Dosing instructions:</u> For adults and pediatric patients age 12 years and older, or for pediatric patients who weigh ≥ 45 kg: Administer 1 mg per dose  For pediatric patients age 2 to 11 years who weigh < 45 kg: Administer 0.5 mg per dose  <u>Indications for emergency administration by pharmacist</u> - Patient presents with	Administer entire dose into one nostril. Call 911. Repeat after 15 minutes, if no response. When patient has responded to treatment, give oral carbohydrates.  <u>Indications for emergency administration by pharmacist</u> - Patient presents with signs and symptoms of severe hypoglycemia and oral glucose is not an option. Pharmacists should perform a finger stick blood test prior to emergency administration to confirm hypoglycemia. Where a finger stick blood test is not possible, pharmacists may provide

	<p><u>Indications for emergency administration by pharmacist</u>- Patient presents with signs and symptoms of severe hypoglycemia and oral glucose is not an option. Pharmacists should perform a finger stick blood test prior to emergency administration to confirm hypoglycemia. Where a finger stick blood test is not possible, pharmacists may provide emergency administration if they have knowledge of the patient's history of or risk of severe hypoglycemia; the patient is accompanied by a person knowledgeable of the patient's history and risk of hypoglycemia; or the patient has a medical alert bracelet/necklace that indicates risk of hypoglycemia. Call 911.</p>	<p>signs and symptoms of severe hypoglycemia and oral glucose is not an option. Pharmacists should perform a finger stick blood test prior to emergency administration to confirm hypoglycemia. Where a finger stick blood test is not possible, pharmacists may provide emergency administration if they have knowledge of the patient's history of or risk of severe hypoglycemia; the patient is accompanied by a person knowledgeable of the patient's history and risk of hypoglycemia; or the patient has a medical alert bracelet/necklace that indicates risk of hypoglycemia. Call 911.</p>	<p>emergency administration if they have knowledge of the patient's history of or risk of severe hypoglycemia; the patient is accompanied by a person knowledgeable of the patient's history and risk of hypoglycemia; or the patient has a medical alert bracelet/necklace that indicates risk of hypoglycemia. Call 911.</p>
<b>Refills</b>	PRN		
<b>Contraindications</b>	Known hypersensitivity to glucagon or any component of the formulation; pheochromocytoma; insulinoma		
<b>Patient Education</b>	<p>Every person dispensed glucagon under these protocols shall receive education regarding:</p> <ul style="list-style-type: none"> <li>• Signs and symptoms of hypoglycemia, and recommend a form of medical alert identification</li> <li>• Proper hypoglycemia response steps and product administration steps</li> <li>• Factors that impact blood glucose, lowering levels, including, but not limited to: alcohol, physical activity, missing meals, and drug interactions)</li> <li>• Potential adverse reactions</li> </ul> <p>Examples of patient education materials that incorporate the above information may be found at:  <a href="https://www.cdc.gov/diabetes/basics/low-blood-sugar.html">https://www.cdc.gov/diabetes/basics/low-blood-sugar.html</a> or <a href="https://professional.diabetes.org/">https://professional.diabetes.org/</a></p>		
<b>Notification of Primary Care Provider</b>	Pharmacies choosing to participate in glucagon dispensing under the authority of these protocols shall notify the patient's primary care provider within 72 hours. Notification should include the pharmacist's name and NPI #, and the pharmacy/practice name and phone number. If the patient does not have a primary care provider, the pharmacist shall counsel the patient regarding the benefits of establishing a relationship with a primary care provider, and provide information regarding primary care providers, including private practices, federally qualified health centers, free clinics, or local health departments serving the area in which the patient is located.		