

Memorandum:

Standardization of Adult Norepinephrine Infusion Concentrations



Date: June 4, 2020
To: Island Health Providers and Clinicians
From: Pharmacy Managers and Medication Safety
Re: Standardization of **Adult** Norepinephrine Continuous Infusion Concentration

Attention: Standardization of Adult Norepinephrine for Continuous Infusion **EFFECTIVE JUNE 10, 2020**

Island Health will no longer utilize norepinephrine 4 mg/250 mL bag (16 mcg/mL) for continuous infusions by large volume IV pumps in **ADULT PATIENTS**. There are now **two** regional standardized concentrations:

- **8 mg/250 mL (32 mcg/mL)**
- **16 mg/250 mL (64 mcg/mL)**

Anesthesiology: Refer to OR implementation details (activated link pending)

Approved by the Therapeutic Stewardship and Safety Quality Council

The Patient Safety Learning System (PSLS) has identified frequent norepinephrine incidents involving a mismatch between **concentration in the medication bag** and **concentration selected during pump programming**. These errors are often attributed to 'look alike concentrations' **16 mcg/mL** and **16 mg/250 mL**.

What do I need to know?

Norepinephrine 4 mg/250 mL (16 mcg/mL) will **be removed from the SIGMA and ALARIS IV Pump Libraries** including the Intranet **IV Dose-Rate Mix Charts** on **June 10th, 2020**.

Pump updates:

- A pump will not update while infusing.
- A wireless pump will automatically update when it is plugged in, has stopped infusing, and returned to the 'Select care area/patient profile' screen.
- Most pumps should be updated wirelessly within three days. Contact Biomed if the pump drug library has not updated by June 13, 2020.

Norepinephrine preparation:

- Standardized concentrations can be prepared using 4 mg/ 4 mL vials and the appropriate [IV Dose-Mix charts](#).
- Norepinephrine **16 mg/250 mL** (64 mcg/mL) is also available as a refrigerated premixed bag at some sites.

Norepinephrine administration:

- Both standardized concentrations may be given peripherally as an interim measure until a central line can be inserted. Large vein peripheral sites with the smallest gauge IV are preferred. Avoid high flexion areas such as the hand and anterior wrist along the radial nerve path.
- Monitoring for extravasation during peripheral infusions is essential. Note that tissue necrosis is related to the DOSE of the norepinephrine extravasated NOT the CONCENTRATION.
- Refer to [IV Monograph](#) for specific administration and monitoring requirements including extravasation risks.
- Consider running a compatible IV solution, via Y-site closest to patient, to prevent a delayed clinical effect when initiating norepinephrine or when administering at low infusion rates.

What do I need to do?

Before June 10th

- Share and post this communication with your colleagues and clinical teams.
- Review the need for premixed bags on your unit and request wardstock per routine process.

On June 10th

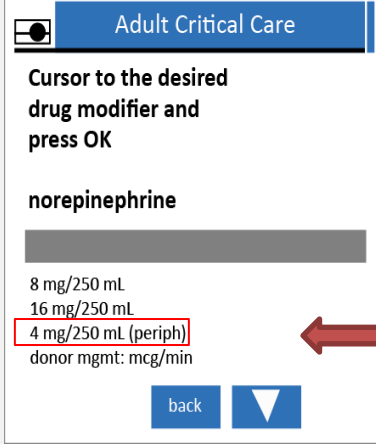
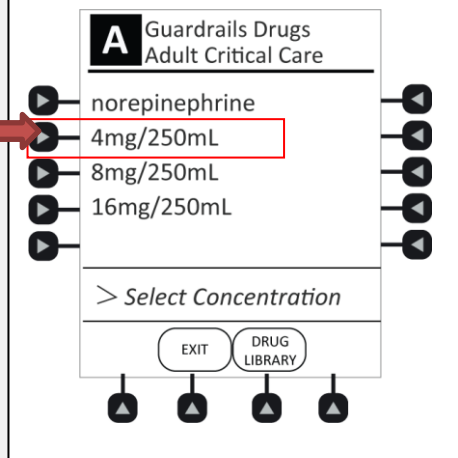
- In the morning, remove any paper Norepinephrine 4 mg/250 mL (16 mcg/mL) dose rate charts.
- Contact provider if non-standardized concentration is ordered.
- Transition patients receiving Norepinephrine 4 mg /250 mL (16 mcg/mL) infusions to a standardized concentration. Use clinical judgment to plan the timing of this transition.

Key points:

- Always prime a new tubing set when changing concentration of an infusion.
- Ensure that the pump has been updated:
 - The **only** norepinephrine programming options should be **8 mg/250 mL** and **16 mg/250 mL**.
 - If an updated pump is NOT available, limit concentration selection to **8 mg/250 mL** or **16 mg/250 mL**.
 - Contact Biomed if the pump drug library has not updated by June 13, 2020.
- Carefully check that the concentration in the bag matches the concentration selected.
- Ensure you have programmed the correct dose and complete an **Independent Double Check**. ([Policy D.22](#)).





See reverse for pump programming and product details.

Changes: Removal from IV Pump Libraries

SIGMA Pump	ALARIS Pump
 <p>Cursor to the desired drug modifier and press OK</p> <p>norepinephrine</p> <p>8 mg/250 mL 16 mg/250 mL 4 mg/250 mL (periph) donor mgmt: mcg/min</p> <p>back</p>	 <p>Guardrails Drugs Adult Critical Care</p> <p>norepinephrine 4mg/250mL 8mg/250mL 16mg/250mL</p> <p>> Select Concentration</p> <p>EXIT DRUG LIBRARY</p>

Norepinephrine 4 mg/250 mL option will be removed from the SIGMA and ALARIS Pumps

Norepinephrine Products, Mixing and Storage

Concentration	Product Options	Storage
<div style="border: 1px solid black; padding: 2px; display: inline-block;">OR</div>	16 mg / 250 mL premixed bag  	Refrigerator
	4 x 4 mg vials (16 mg) in 250 mL bag Dose-Rate Mix Chart  	Vials at Room Temperature
32 mcg/mL (8 mg/250 mL)	2 x 4 mg vials (8 mg) in 250 mL bag Dose-Rate Mix Chart  	Vials at Room Temperature

Contact your Pharmacy Site Coordinator for ward stock supplies

OR

MedicationSafetyConsultants@viha.ca for more information.