Continuous Medicated Infusions for Specified Non-ICU Units March 30, 2020 0842
Spectrum Health contact: Logan Dumond

Select units will begin providing additional patient interventions including medicated infusions and BiPAP therapy. The units initially identified include but are not limited to: 1E at Blodgett, 7 South and 9 Center at Butterworth.

For medication infusions, the selected units will be considered as SHGR specified Non-ICU units in: Continuous Intravenous (IV) Preparation and Administration Appendix A (Adult): Intravenous Infusions on Specific Units - Grand Rapids Reference # 24652. Listed below are a few of the medications covered within this appendix. Use Adult Progressive Care drug library in Baxter pump. Ensure patients receiving these infusions are on a cardiac monitor.

**Diltiazem (Cardizem)**
Calcium channel blocker – slows the conduction through the AV node, decreases BP and SVR (reduces afterload). SVR is the resistance in the circulatory system that is used to create BP
- **Indications**
  - SVT or A-fib
- **Half-Life** - single dose 3 hrs., continuous infusions 4-5 hrs.
- **Adverse Effects**
  - Dizziness, Headache, peripheral edema
- **Nursing Considerations**
  - Begin drip at 5mL/hr. and titrate up by 5mL/hr. as patient tolerates to max you unit. Titrate to HR <110 and MAP >60
  - May worsen AV blocks
  - Monitor patient’s BP, HR and ECG rhythm
  - Medication approved for all SHGR specified Non-ICU units up to max rate 15mg/hr.

**Amiodarone (Cordarone)**
Class III Antiarrhythmic - Inhibits adrenergic stimulation (alpha- and beta-blocking properties), affects sodium, potassium, and calcium channels, prolongs the action potential and refractory period in myocardial tissue; decreases AV conduction and sinus node function
- **Indications**
  - Ventricular Arrhythmias, A-Fib and SVT
- **Half-life** - 40-55 days
- **Phases Dose Administration**
  - Phase One: Rapid Loading Dose 150mg over 10 minutes
  - Phase Two: Slow Loading Dose 1mg/min for 6 hours
  - Phase Three: Maintenance Infusion 0.5mg/min
- **Adverse Effects**
  - Hypotension, electrolyte disturbances (Mag & K), elevated liver enzymes
- **Nursing Considerations**
  - Nurse must stay in room with patient during 10-minute rapid bolus infusion
  - Central line preferred
  - There are many drug interactions with Amiodarone, check with pharmacy or Lexicomp
- Low Magnesium and Potassium levels can put patient at risk for Torsade de Pointes – monitor
- **Use 0.22 micron in-line filter when infusing**

**Milrinone (Primacor)**
Phosphodiesterase-3 Enzyme Inhibitor

- **Indications**
  - Perfect medication to treat acute decompensated Heart Failure; increase contractility and decreased preload and afterload
  - Increases intracellular calcium = + inotrope therefore increased contractility
  - Venous vasodilator – decrease preload
  - Arterial vasodilator – decreased afterload
- **Half-life** - 2.5 hours
- **Adverse effects**
  - Ventricular ectopy & arrhythmias, hypotension
- **Nursing Considerations**
  - Not titrated medication, **dose is set** - Dosing changes are made by provider
  - Use with caution in HF patient that are intravascularly dry – could result in symptomatic hypotension

**Dobutamine (Dobutrex)**
Positive Inotropic agent - Causes cardiac stimulation (pump support), increase cardiac contractility and increased heart rate

- **Indications**
  - Heart failure, cardiogenic shock
- **Half-life** - around 2 minutes
- **Dose range**
  - 2 -20 mcg/kg/hour
  - Titrate med by 2.5 mcg/kg/min every 10-15 minutes to desired hemodynamic effect - **Verify with Pharmacist and orders**
- **Adverse Effects**
  - Tachycardia and increased myocardial oxygen demand
- **Nursing considerations**
  - Max dose is 10 mcg/kg/min for all SHGR specified Non-ICU units

**Nitroglycerin**
Vasodilator, antianginal agent - produces vasodilator effect peripheral veins and arteries. Reduces cardiac oxygen demand by decreasing preload, moderately reducing afterload and dilating coronary arteries to improve blood flow to ischemic areas.

- **Indications**
  - Acute MI
  - Chronic stable angina
  - Non-ST segment elevated acute coronary syndrome
  - Hypertension
  - Heart failure
- **Half-life** - 1-4 minutes
- **Routes**
  - Sublingual, IV, Topical
- **Adverse Effects**
  - Hypotension, bradycardia, headache
- **Dosing**
  - Sublingual – 0.4 mg every 5 minutes up to 3 doses
  - IV – Titrate by 5 mcg/min every 3-5 minutes to desired effect
- **Nursing considerations**
  - Mixed in D5W, must be in glass bottle – medication interacts with plastic after prolonged contact.