Review Calculations related to medications and IV drips, Basic Safety and Infection Control, National Patient Safety Goals, Pain Management, and Blood Administration.

Review assessment, interventions, monitoring, and care for conditions commonly encountered in critical care nursing, including:

- Acute coronary syndrome (ACS), initial treatment
- Acute heart failure
- Cardiac tamponade
- Cerebrovascular accident, early signs
- Clinical brain death, indication in a patient who has a heartbeat
- Compartment syndrome, clinical symptoms
- Diabetic ketoacidosis (DKA), clinical symptoms
- Fluid overload
- Hypoglycemia
- Hypotension, medication to treat
- ICU delirium, interventions
- Increased intracranial pressure, early signs
- Pressure ulcer, staging
- Pulmonary embolism
- Myocardial infarction, evolving
- Septic shock, clinical presentation
- STEMI, ECG finding
- Respiratory failure, acute, arterial blood gas findings
- Tension pneumothorax
- Ventricular fibrillation
- Wernicke’s encephalopathy, preventive supplement
- Witnessed cardiac arrest, AHA guideline

Review action, preparation, monitoring, and precautions related to medications commonly used in critical care, such as

- Adenosine
- Amiodarone (Cordarone®)
- Aspirin, use in ACS
- Atropine
- Beta blockers such as metoprolol (Lopressor®), contraindication in acute heart failure
• Benzodiazepines
• Calcium Gluconate
• Dextrose 50%, (D50), indication
• Diltiazem (Cardizem®)
• Diuretics such as furosemide (Lasix®)
• Dopamine (Intropin®), indications, drip rate calculation, risk of extravasation
• Epinephrine
• Fentanyl, toxicity
• Fibrinolytic therapy, indications/contraindications
• Flumazenil
• Heparin protocol
• Insulin sliding scale
• IV drops/minute calculation
• IV infusion calculation
• Lidocaine
• Milrinone (Primacor®)
• Morphine, use in ACS
• Naloxone (Narcan®), fentanyl reversal
• Nitroglycerin (Tridil®), use in ACS
• Phenytoin (Dilantin®)
• Thiamine (Vitamin B-1)
• Venlafaxine (Effexor®), tablet calculation

Review treatments and procedures, including

• Radial arterial catheter, removal, possible complications
• Blood transfusion reaction
• Post-bronchoscopy
• Central venous pressure (CVP) line removal, complications
• Chest tube, high output
• Defibrillation, synchronized cardioversion/biphasic defibrillator
• Enteral feeding tube, importance of confirming placement
• Oxygen, use in ACS
• Pulmonary artery catheter, implications of readings
• Ventilator, patient assessment, settings adjustment based on blood gases, troubleshooting high pressure alarm
Review cardiac rhythm strip interpretation, including

- Atrial fibrillation
- Multifocal PVCs
- Ventricular tachycardia (V-tach)
- Pacemaker rhythm strip, failure to capture

A great source for ACLS protocol review is www.acls.net

A great source for rhythm review is the RN.com course Telemetry Interpretation

Also recommended:

- ECG Library (Jenkins, J & Gerrend, S., 2009)
  http://www.ecglibrary.com/ecghome.html

Review Laboratory Results commonly encountered in critical care, such as

- Arterial blood gases (ABGs)
- Serum glucose, normal range
- Troponin levels (cTnI and cTnT), pattern in evolving MI

Review principles and practices related to safety and infection prevention, including

- Catheter-associated bloodstream infection (CLABSI) prevention bundle
- Catheter-associated urinary tract infection (CAUTI) prevention bundle
- Fall risk, elderly
- Handwashing, C. diff
- Patient identifiers
- Ventilator-associated pneumonia (VAP), prevention

Review principles and practices of communication with patients and family, including

- Demand pacemaker, action
- Patient satisfaction
- Balloon pump, benefit
Review measures to prevent CMS Hospital Acquired Conditions, including

- Air embolus, risk with arterial catheter
- Blood transfusion reaction
- CAUTI prevention
- CLABSI prevention
- DKA management
- DVT, heparin protocol
- Hypoglycemia management
- Pressure ulcer staging
- Risk for falling

Review calculations, including

- Medication protocols
- Sliding scale
- IV drip dosage calculations
- IV drip rate, calculating drops per minute

To calculate the infusion rate: IV drip rate in drops per minute =
Volume to be infused (mL) over 1 hour/ Drop factor constant

<table>
<thead>
<tr>
<th>Common drop factors</th>
<th>Drop factor constant</th>
</tr>
</thead>
<tbody>
<tr>
<td>60 gtt/mL - minidrip set</td>
<td>1</td>
</tr>
<tr>
<td>10 gtt/mL – regular drip set</td>
<td>6</td>
</tr>
<tr>
<td>15 gtt/mL – regular drip set</td>
<td>4</td>
</tr>
</tbody>
</table>

Common drop factors are also known as the clock method – drop factors are obtained by dividing 60 minutes by the number of gtts per mL that the IV set delivers.