Medical Emergencies

What is an emergency?

Any situation in which the condition of a patient or a sudden change in medical status necessitates immediate attention and action

RTs role in an emergency

Preserve life
Avoid further harm to the patient
Obtain appropriate medical assistance as quickly as possible
Must recognize emergency situation and initiate appropriate measures
Medical Emergencies

Emergency Priorities

- Ensure open airway
- Control bleeding
- Take measures to prevent or treat shock
- Attend to wounds or fractures
- Provide emotional support
- Continually reevaluate and follow up appropriately

Medical Emergencies

Crash Cart

- Know where it is located
- Become familiar with contents
- Ensure they are operational
- Daily checklists

Rapid response and available equipment reduces time required to respond

Medical Emergencies

Radiology Emergencies

- Shock
- Anaphylaxis
- Pulmonary embolus
- Diabetic reactions
- Cerebrovascular accident (CVA/Stroke)
- Cardiac and respiratory failure
- Syncope
- Seizures
Medical Emergencies

Head Injury
Assess patient’s level of consciousness
Clinical symptoms may not manifest right away
Hematoma/Brain swelling
CT is preferred modality for assessment

Medical Emergencies

Levels of Consciousness (LOC)
Alert and conscious
Drowsy
Unconscious
Comatose
Assess patient at beginning of procedure (talk to them)
Note signs of deterioration from one level of consciousness to another
Head injuries can deteriorate rapidly

Medical Emergencies

Deteriorating Conditions

<table>
<thead>
<tr>
<th>Signs</th>
<th>Response</th>
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<tbody>
<tr>
<td>Sudden irritability</td>
<td>Maintain an open airway</td>
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<tr>
<td>Lethargy</td>
<td>Move patient minimally</td>
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<tr>
<td>Slowing pulse rate</td>
<td>Stop procedure</td>
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<tr>
<td>Slowing respiratory rate</td>
<td>Get assistance ASAP</td>
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<tr>
<td>Change in LOC</td>
<td>Monitor patient’s vital signs</td>
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Medical Emergencies

Shock

Failure of the circulatory system to support vital body functions

- Compensatory → progressive → irreversible
- Obstructive
- Distributive (Neurogenic, vasogenic)
- Hypovolemic Shock
- Cardiogenic Shock

Medical Emergencies

Anaphylactic/Vasogenic Shock

- Most common type of shock encountered in medical imaging
- May occur with contrast media administration
- Monitor for signs and symptoms especially when using contrast
- Alert physician when signs occur
- Hives, respiratory distress, itching

Medical Emergencies

Diabetes Mellitus (DM)

- Body adjusts insulin production/excretion to meet carbohydrate intake
- Diabetics do not produce enough insulin
- DM can be treated with pills, diet, or insulin (combinations of all three)
- Patients monitor their blood sugar and treat accordingly (70-110 normal)
- Many patients are NPO for testing (may affect their glucose levels)
- Hypoglycemia can occur rapidly – ↓ LOC, nervous, shaky, restless
- Hyperglycemia develops more gradually – may c/o thirst, frequent urination
Medical Emergencies

Respiratory Distress
Asthma – allow patient to use rescue inhaler if needed
Choking – remove object if visible
If unconscious – start CPR

Choking
– remove object if visible
If unconscious – start CPR

Medical Emergencies
Cerebral Vascular Accident (CVA/TIA)
Commonly called a stroke
Can occur at any age
May develop gradually or suddenly
Warning signs (FAST – face, arms, speech, time)
Rapid response for sudden change in condition
Stroke protocol

Medical Emergencies
Other Medical Emergencies
Nausea/Vomiting – upright if conscious, left side lying if unconscious
have suction available, rinse mouth afterwards
Epistaxis – upright in neutral position with bridge pinched for 5 mins
can apply ice to forehead or back of neck
Vertigo/Syncope – lay flat, protect airway, elevate legs
Seizures – protect from injury, DO NOT put anything in mouth
note type and length, rapid response, post-ictal
Falls – assess for injury, prevent further injury, incident report
Wounds – keep covered to prevent infection/exposure, pressure if bleeding