

Adams School of  
Dentistry:

Medical  
Emergency  
Training

# MEDICAL EMERGENCIES IN THE DENTAL OFFICE



# Introduction

- ▶ Medical emergencies happen in dental operatories and can vary between stress-related incidents to a heart attack or stroke.
- ▶ It is the responsibility of all *CLINICAL* Faculty, Staff, and Students to be prepared to intervene.
- ▶ Familiarization with emergency drugs, protocols, and interventions are imperative for successful outcomes.
- ▶ Topics covered include ASOD Statistics, Patient Assessments, Familiarization with Emergency Team and Emergency Equipment, BLS (CPR) Protocols, and responses to multiple types of Medical Emergencies.

# Goals: Medical Emergency Training

At the end of this training, you should be able to:

- ▶ Implement basic assessment requirements
- ▶ Execute contacting the ASOD Medical Emergency Team
- ▶ Locate emergency equipment
- ▶ List and explain the medicaments within a standard emergency kit
- ▶ Analyze different types of medical emergencies and determine appropriate course of action
- ▶ Complete the Medical Emergency Training
  - ▶ <http://bit.ly/asod-medical-emergency>

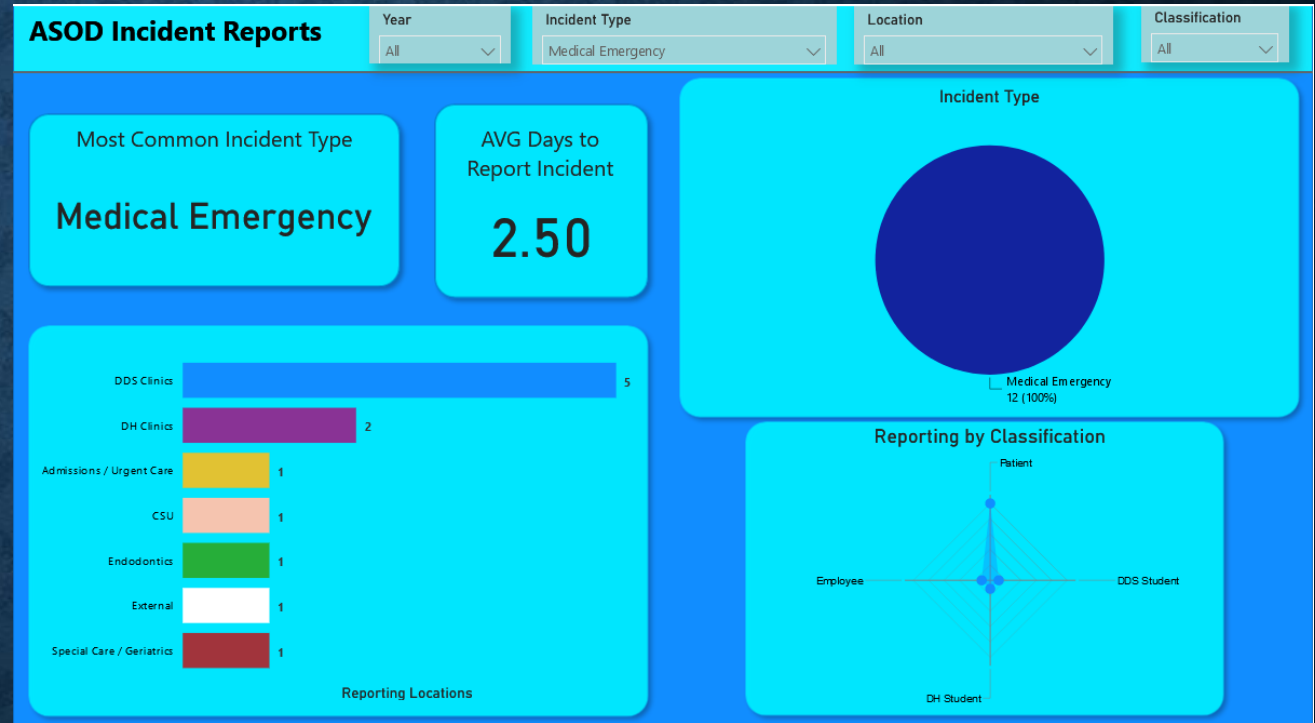
# ASOD STATISTICS

Most common *Medical Emergency* in ASOD is:

- Syncope – Fainting or Passing Out
  - Induced commonly by hypoglycemia and anxiousness.

Incidents must always be reported via:

<https://bit.ly/asod-incident-report>





# IMPORTANT GOALS OF ASSESSMENT

- Assign the patient a “physical status category” per the American Society of Anesthesiologists (ASA) Classification System.
- Determine patient’s ability to physically tolerate dental treatment stress.
- Determine patient’s ability to psychologically tolerate dental treatment stress.
- Determine which treatment modifications may be necessary to reduce patient’s treatment stress.

# INITIAL ASSESSMENTS

- Assessing patient *prior* to initiating treatment is the first preventative measure in reducing medical emergencies.
- Have patient bring any rescue/emergency medications used to manage their medical condition.
  - Examples: EpiPen® , Albuterol Inhaler, and Nitrolingual Spray.
- Conduct comprehensive Patient Assessment of Oral and Systemic conditions:
  - Obtain health history that contains: (1) Chief Concern; (2) General Health; (3) Past Medical and/or Surgical History; (4) Medications; (5) Drug Allergies; (6) Overall Oral Health; (7) Personal/Psychological factors; and (8) ASA Classification.
  - Perform clinical examination: (1) Extraoral / Intraoral examination; and (2) Charting
  - Obtain/Order and Interpret Diagnostic Tests: (1) Radiographs; (2) Blood Glucose; (3) Pathology Studies; (4) Microbiology Reports; (5) Cardiac Function Tests; Etc.



# INITIAL ASSESSMENTS – DRUGS

Review of patient's *medications* may give clues to actual health status, warn of possible drug interactions, and/or suggest need for consultation with patient's physician.

Important to review *Herbal Supplements* and direct patient to stop taking two (2) weeks prior to dental treatment. Some herbal supplements that should be reviewed include:

- **Increases Bleeding (Antiplatelets)**
  - Garlic, Ginger, Ginkgo, Ginseng, Feverfew, Tumeric, and Willow.
- **Increases Effects of Sedation (Central Nervous System Depressant)**
  - Kava, Valerian, Chamomile, and St. John's Wort
- **Increased Heart Rate and Blood Pressure (Central Nervous System Stimulant)**
  - Ephedra

# INITIAL ASSESSMENTS – ASA CLASSIFICATION

Generally, ASOD will only treat patients that are assigned ASA I, ASA II, or ASA III classifications.

ASA Classification	Definition
ASA I	Normal health patient
ASA II	Mild systemic disease
ASA III	Sever systemic disease
ASA IV	Incapacitating sever systemic disease
ASA V	Moribund patient that is not expected to survive 24 hours without an operation
ASA VI	Declared brain-dead patient whose organs are being removed for donor purposes



# AED & Oxygen Equipment

Following section will review the location and use of emergency equipment.  
It is imperative that you locate the closest AED and Oxygen Equipment to your clinical area!

## AED & Oxygen Information Posters

- An information poster is above each oxygen and AED station.
- Each area is separated by building and floor.
- If there are any issues with the equipment, scan the QR code and select the "Station (Oxygen Tank) Number."
- Alternative reporting: <https://bit.ly/o2issue>
- Oxygen tank and supplies are checked bi-weekly.

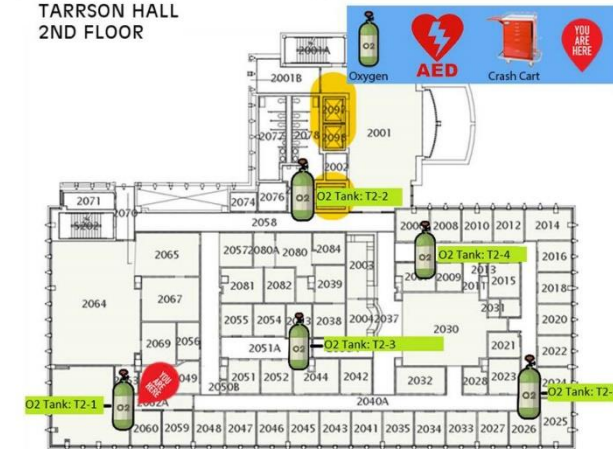
## MEDICAL EMERGENCY

Evaluate patient and have closest person contact

**Dental School Emergency Team**  
7-3911

Conscious	Unconscious
Sit patient upright	Lay patient down
Oxygen when indicated	Open airway
Take vital signs (BP, Pulse, Respirations)	Provide CPR / AED

TARRSON HALL  
2ND FLOOR



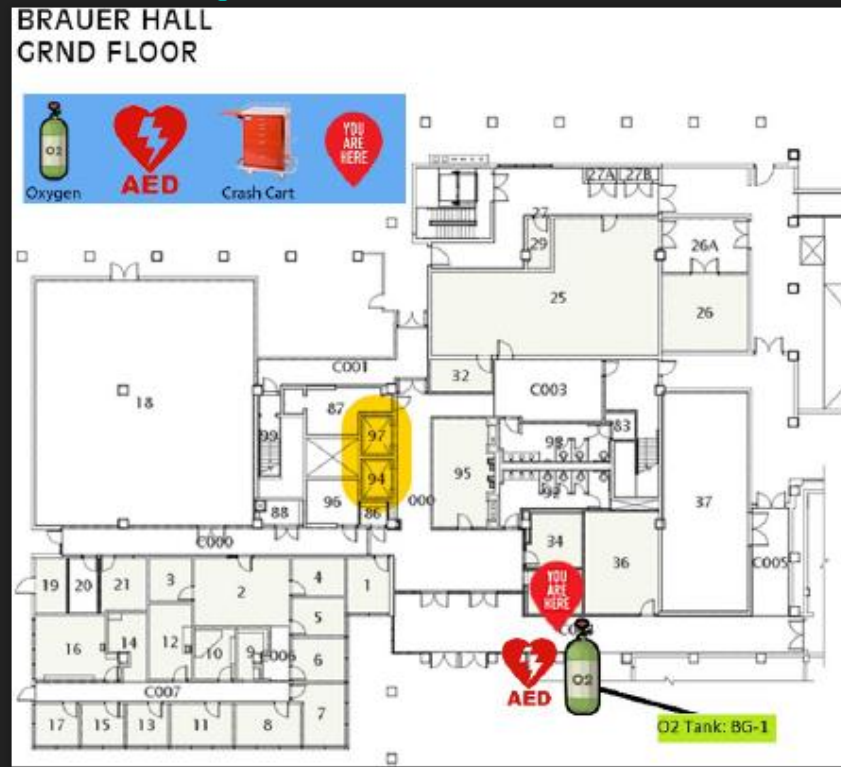
Oxygen Tank Number

**T2-1**

Have an issue to report or a question on a piece of equipment?  
Scan the QR code below to send your question out!

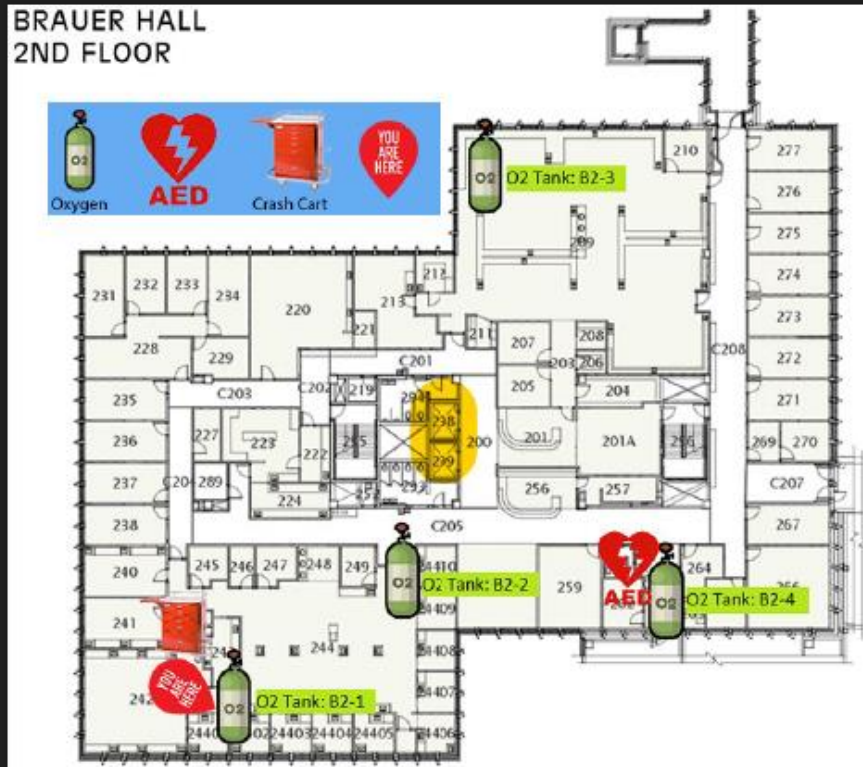


# AED & O2 – Brauer Locations [1]





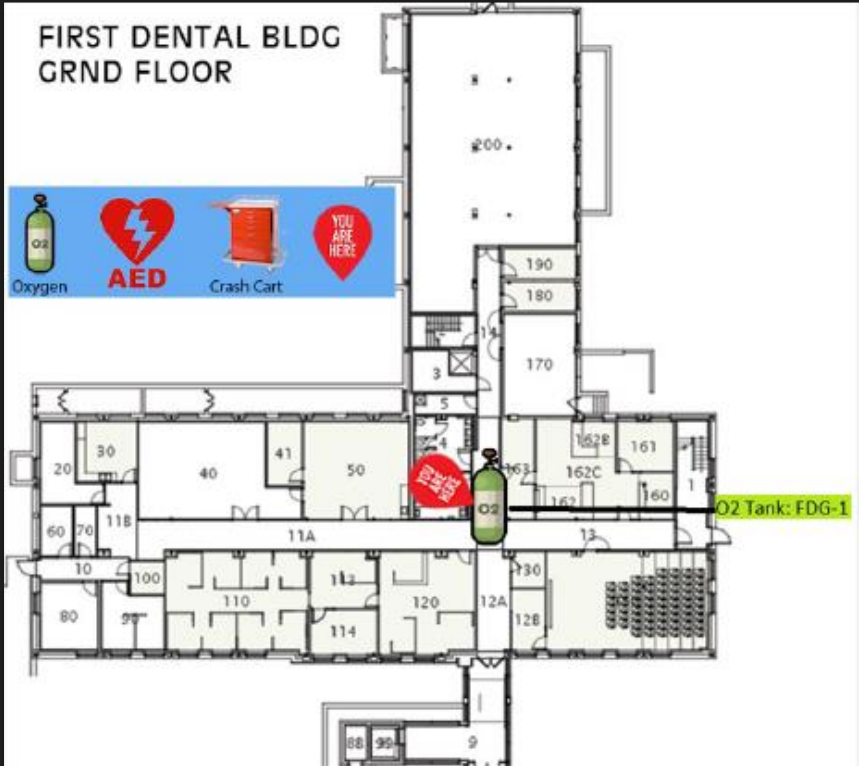
# AED & O2 – Brauer Locations [2]



# AED & O2 – Brauer Locations [3]

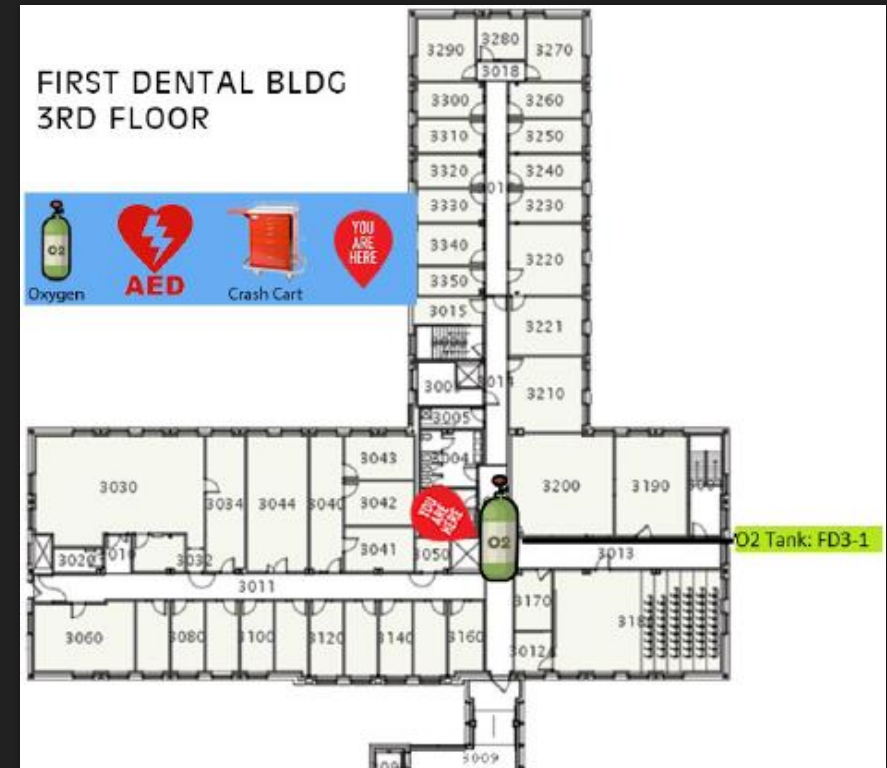


# AED & O2 – First Dental Locations [1]

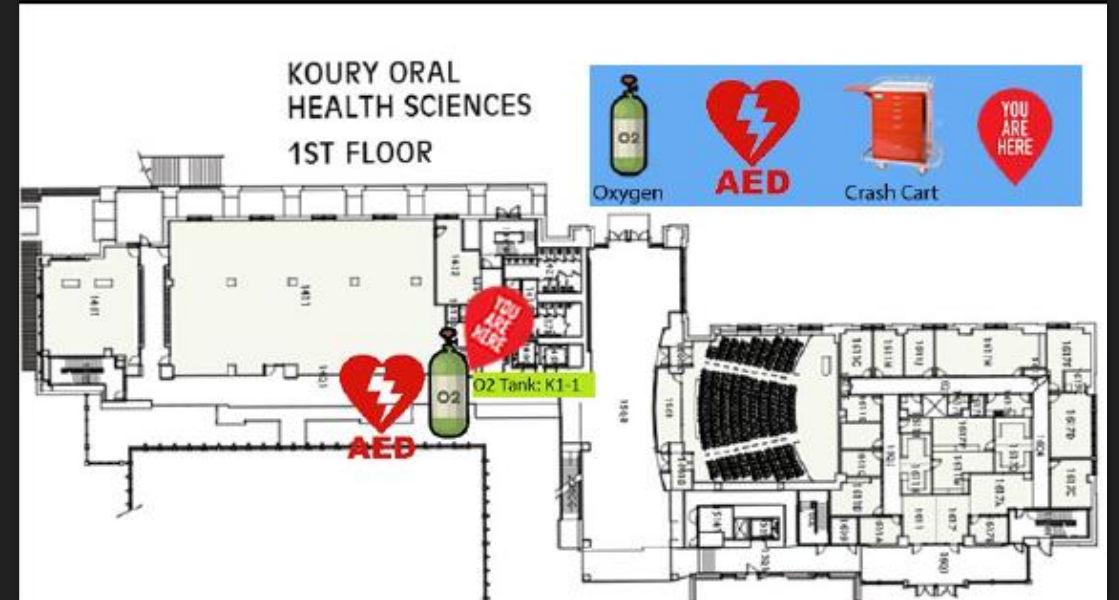
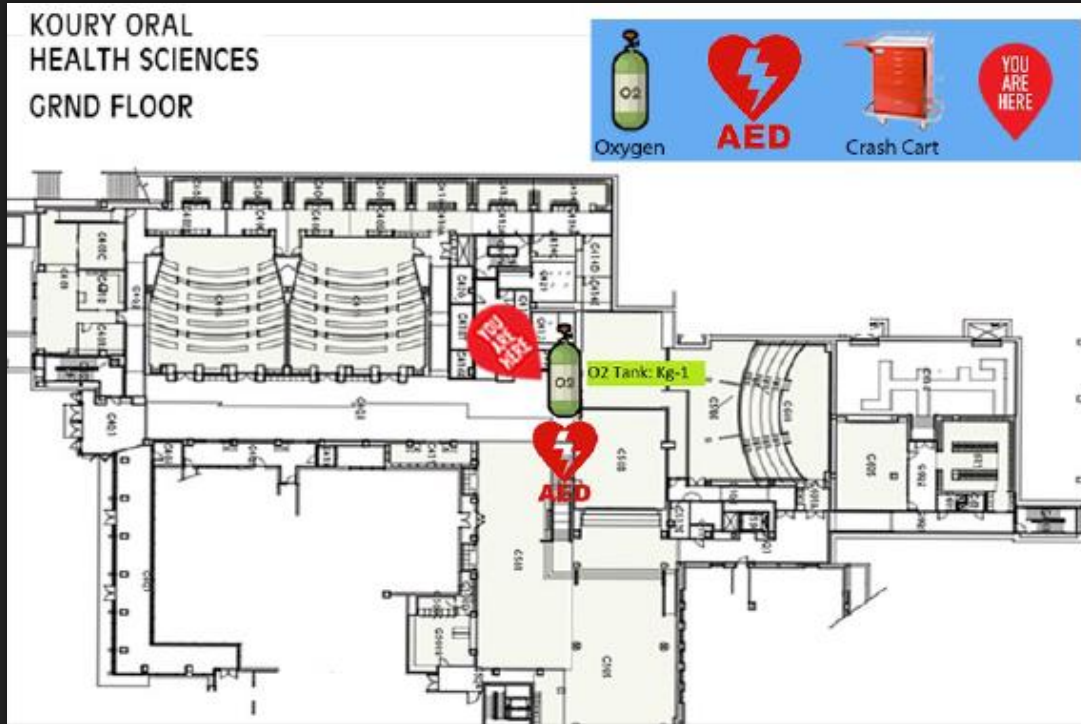




# AED & O2 – First Dental Locations [2]



# AED & O2 – Koury Locations [1]



# AED & O2 – Koury Locations [2]

**\*\*NOTE: Koury “SKIPS” the 2<sup>nd</sup> Floor**

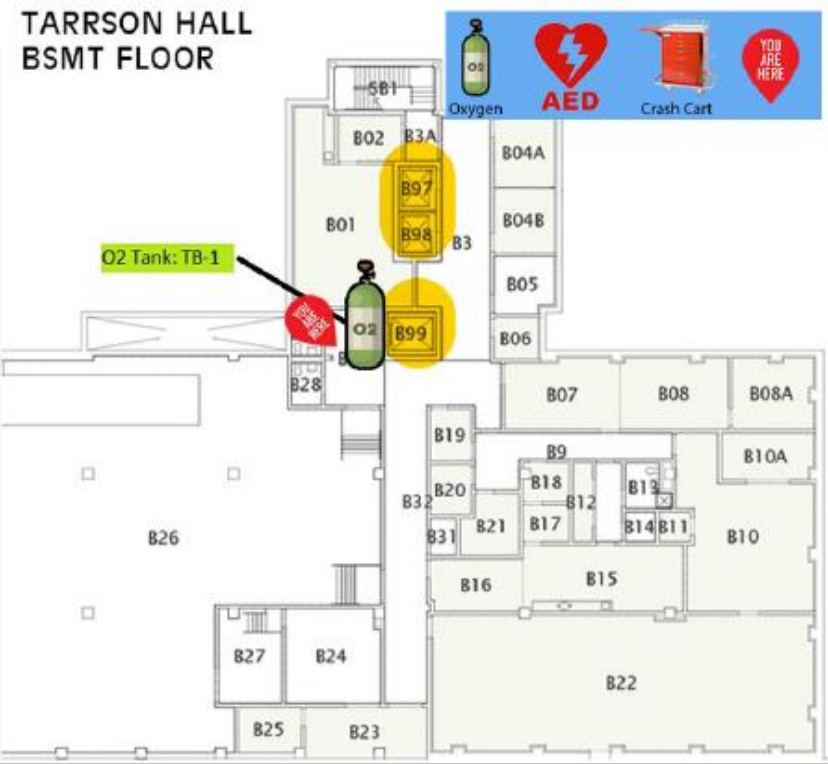




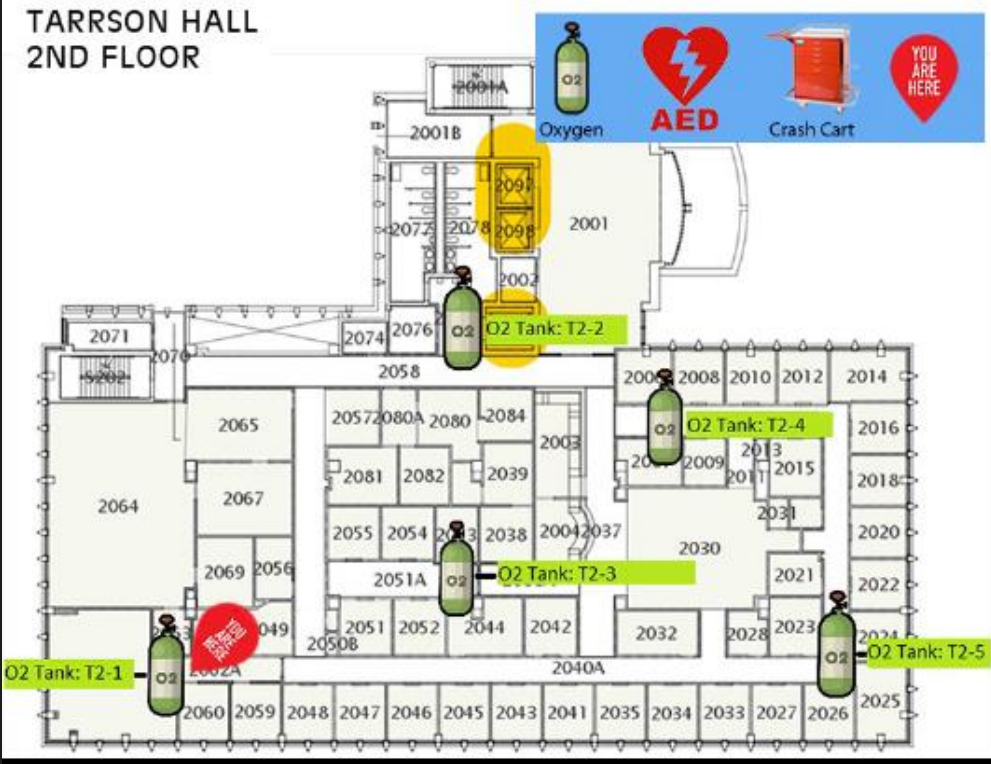
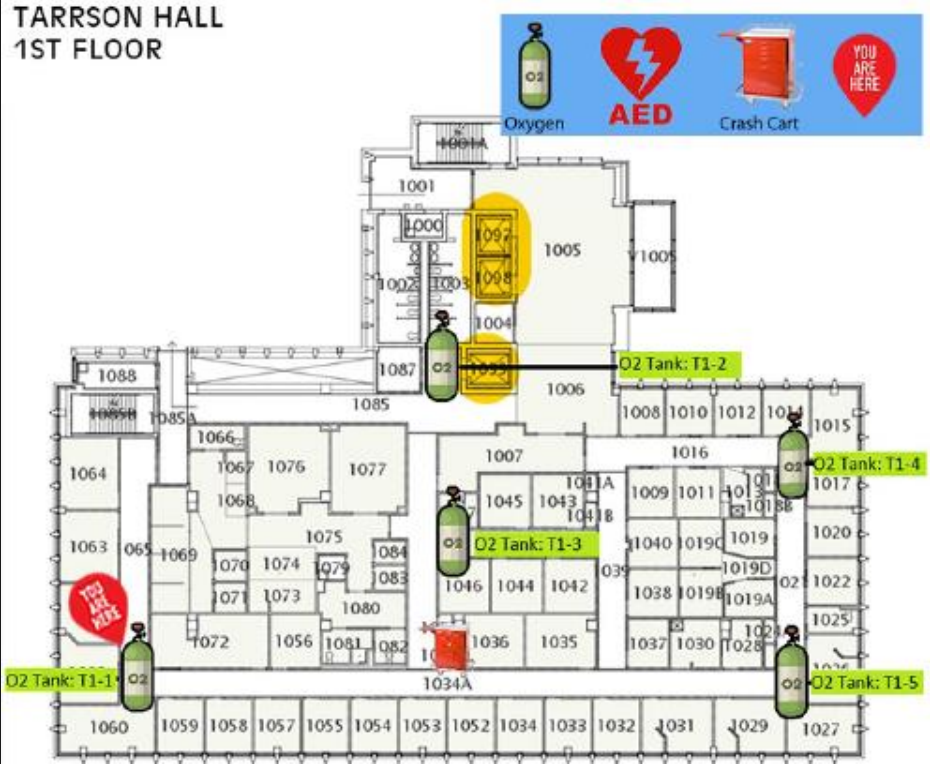
# AED & O2 – Koury Locations [3]



# AED & O2 – Tarrson Locations [1]

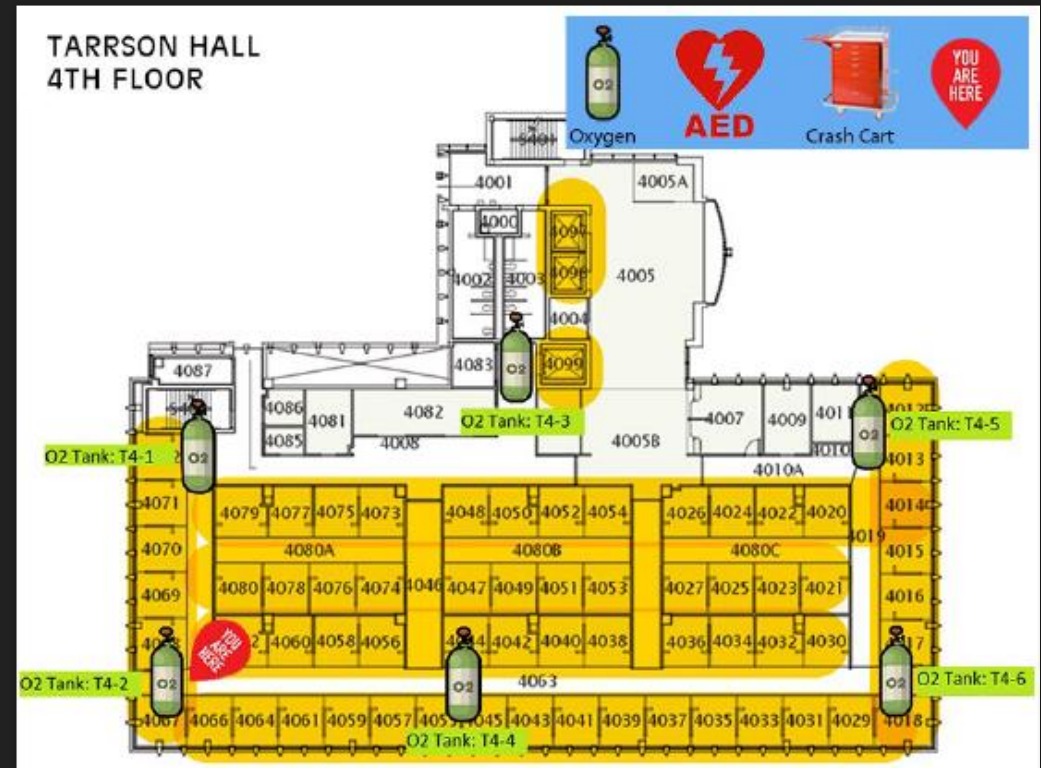
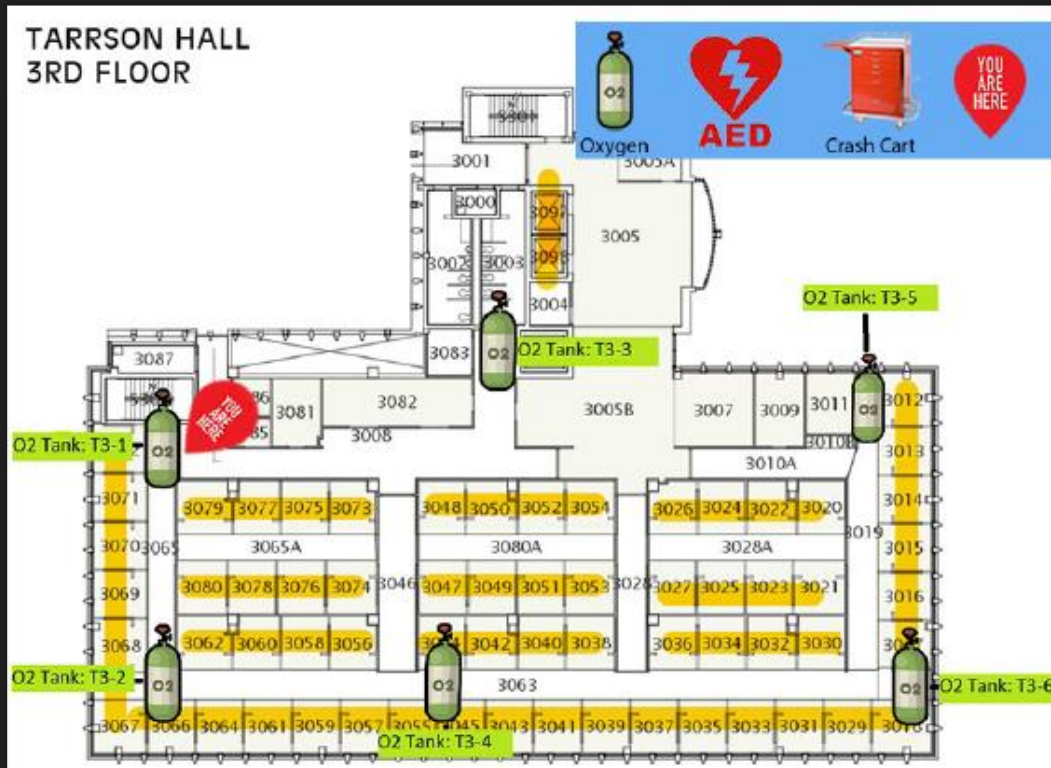


# AED & O2 – Tarrson Locations [2]





# AED & O2 – Tarrson Locations [3]



# AED Equipment - Contents

- Locate the nearest AED equipment to your clinical location.
- If any contents missing, damaged, or used, submit report: <https://bit.ly/o2issue>
- Standard contents include:
  - AED Unit and Case
  - Disposable Razor(s)
  - Adult Pads (1 set)
  - Pediatric Pads (1 set)



# AED Equipment - Use

- Use AED as soon as available.
- Follow the instructions on the AED
  - Shockable Rhythm: Provide 1 shock, then resume CPR
  - Non-Shockable Rhythm: Resume CPR for 2 minutes
- Detailed AED use is covered in required (biannual) BLS (CPR) training





# AED – Use Video Demonstration



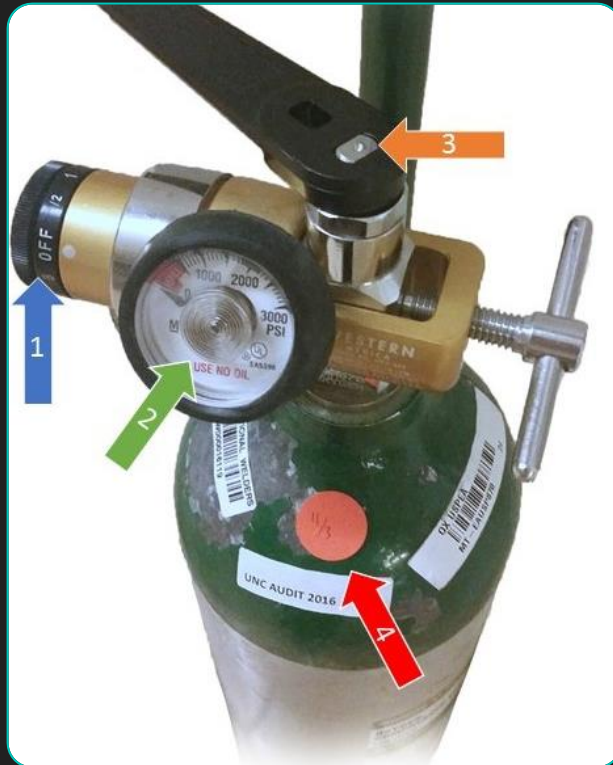
[https://youtu.be/BAWGjNAj\\_vA](https://youtu.be/BAWGjNAj_vA)

# O2 Equipment - Contents

- Locate the nearest oxygen equipment to your clinical location.
- If any contents missing, damaged, or used, submit report: <https://bit.ly/o2issue> or via the nearby QR code
- Standard bag contents, attached to O2 tank, include:
  - Bag to Hold all Contents
  - Adult Oxygen Mask
  - Pediatric Oxygen Mask
  - Pocket Mask
- Non-standard contents:
  - Bag-Valve Mask – depends on clinical location



# O2 Equipment - Use



## General Use of Oxygen Tank

- Indicated for every emergency except hyperventilation
  - Breathing patients: utilize either the Pediatric or Adult mask.
  - Non-breathing patients: (if available) utilize bag-valve mask.
- Most ASOD emergencies, set regulator to 2L (2) per minute.
- Monitor respiratory rate with C.O.P.D. patients.
- Titrate as needed.

## Oxygen Tank Pressure Check

- Set flow O2 regulator (1) is set to "Off" or "0".
- Turn the main valve (3) counterclockwise.
- Read pressure indicated on pressure gauge (2).
  - Below 800 psi, report via: <https://bit.ly/o2issue> or via the nearby QR code
- Turn the main valve (3) clockwise to close it.
- Release the remaining oxygen: Turn the O2 regulator (1) high to bleed O2 from lines, then back to "Off" or "0", once the pressure gauge (2) reads "0".



# O2 – Use Video Demonstration



<https://youtu.be/zmpqn7SEjLY>

# Emergency Kit

Locate and review the Emergency Kit in your clinical area.  
Specialty Clinics *MAY* have items outside of the provided list. Talk to  
your supervisor!

# Emergency Kit - Contents List

## MINIMUM STANDARD

- Blood Glucose Test Kit
- Glucose Tablets and/or Gel
- Albuterol Inhaler (Metered Dose Inhaler - MDI)
- Nitroglycerine Spray and/or Tablets
- Aspirin Tablets
- Diphenhydramine (Benadryl) Tablets
- Epinephrine Auto Injector (EpiPen®)

## NON-STANDARD

- 50% Dextrose or Glucagon Injection
- Epinephrine Ampule
- Naloxone
- Atropine



# Emergency Kit - Blood Glucose Test Kit

- Indicated for verifying glucose levels related to hypoglycemia and hyperglycemia.
- Each blood glucose monitors vary. Review manufacturer instructions before use.
- Watch this vide on how to administer:  
<https://youtu.be/rMMpeLLgdgY>
- Administration:
  - Insert new lancet (insert) and test strip into the Lancet and Monitor.
  - Express finger and clean area with isopropyl alcohol wipe.
  - Lance finger, express blood, and apply to test strip.



# Emergency Kit - Glucose Tablets/Gel

- Indicated for low to moderate hypoglycemia (low blood sugar)
- **Responsive Administration:**
  - Tablets: Provide 3-4 chewable tablets to patients
  - Gel: Dispense 15g - 20g onto tongue
  - Always follow manufacturer's instructions.
- After 15 minutes, recheck glucose levels and vitals.
- Treat again if warranted





# Emergency Kit - Albuterol Inhaler (MDI)

- Indicated for asthmatic attacks (bronchospasms)
- Administration:
  - Breathe out fully;
  - Place mouthpiece between teeth and seal lips around it;
  - Press down on inhaler to release medication and breathe in slowly;
  - Hold breath for 10 seconds.
  - Always follow manufacturer's instructions.





# Emergency Kit - Nitroglycerin Spray/Tablets

- Indicated for chest pain (Angina Pectoris)
- Repeat every 5 minutes as needed, up to 2 times.
- **Nitroglycerin Spray Administration:**
  - Prime bottle before use
  - Do NOT shake the bottle
  - Apply 1 spray either lingually or sublingually
- **Nitroglycerin Tablet Administration:**
  - Apply 1 tablet sublingually
- Always follow manufacturer's instructions.
- **Contraindications:**
  - Systolic blood pressure below 90mmHg
  - After 2nd application and no relief, patient needs work up to rule out heart attack (Myocardial Infarction).



# Emergency Kit - Aspirin (325 mg)

- Indicated for relief of pain and/or reduce risk of heart attacks (Myocardial Infarction)
- Administration:
  - Provide 325 mg to patient
- Contraindications:
  - Active Bleeding
  - Patient taking Warfarin/Coumadin





# Emergency Kit - Diphenhydramine



- Indicated for non-life-threatening allergic reactions.
- Administration:
  - Adults: 50 mg
  - Pediatric: 1 mg per kg (2.2 lbs)



# Emergency Kit - Epinephrine Auto Injector

- Indicated for life-threatening allergic reactions (i.e., anaphylaxis)
- Administration:
  - Follow manufacturer guidelines to prepare auto injector.
  - Watch this video on how to administer:  
<https://youtu.be/K7QyCMNDHAs>
  - **ONLY** inject intramuscularly and into outer thigh.
    - Do not inject intravenously
    - Do not inject into buttock
    - Effective for 10-15 minutes
- Adult Dosage:
  - Above 67 lbs (30 kg)
  - 0.30 mg
- Pediatric Dosage:
  - Between 33 lbs (15 kg) - 66 lbs (30 kg)
  - 0.15 mg



# Emergency Kit - Glucose Injection

- **NON-STANDARD ITEM**
- Indicated for severe hypoglycemia (low blood sugar)
- *Unresponsive* Administration:
  - Inject into muscle or subcutaneous tissue, in upper arms or thigh.
  - 44 lbs or more (20+ kg): 1 mg
  - Less than 44 lbs (20 kg): 0.5 mg
  - Always follow manufacturer's instructions.





# Emergency Kit - Epinephrine Ampule

- **NON-STANDARD ITEM**
- Indicated for life-threatening allergic reactions (i.e., anaphylaxis) and/or cardiac arrest
- Anaphylaxis Administration:
  - Follow manufacturer guidelines to prepare.
  - **ONLY** inject intramuscularly
  - Adult Dosage:
    - 0.3ml of Epi 1:1000 = 0.3mg
  - Pediatric Dosage:
    - Between 33 lbs (15 kg) - 66 lbs (30 kg)
    - 0.3ml of Epi 1:2000 = 0.15 mg
- Cardiac Arrest Administration:
  - Inject intravenously 1.0mg (1:10,000) IV push
  - Repeat every 3-5 minutes as needed





# Emergency Kit - Naloxone

- **NON-STANDARD ITEM**
- Indicated for reversing opioid overdose.
- Administration:
  - Follow manufacturer's instructions.
  - Apply 1 spray into 1 nostril
  - Repeat via alternating nostrils every 2-3 minutes, until emergency assistance becomes available.

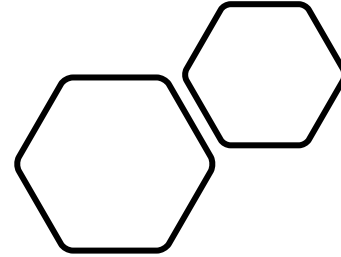


# Emergency Kit - Atropine

- **NON-STANDARD ITEM**
- Indicated for slow heartbeat (bradycardia) or ventricular asystole
- Maximum dose is 3 mg OR 0.04 mg per kg (2.2 lbs)
- *Bradycardia* Administration:
  - Inject intravenously 0.5mg IV every 3-5 minutes, as needed
- *Asystole* Administration:
  - Inject intravenously 1.0mg every 3-5 minutes as needed



# BLS (CPR) Protocols



CPR is a component of **BLS** and is a **required certification**, to maintain clinical access and responsibilities.

Following section will review current requirements, appropriate sequence, and a review video.



# BLS Requirements

- BLS procedures and certification is mandatory
- Recertification occurs every 2 years
- Employee (Faculty, Adjunct, Staff, and Residents) Sign Up:
  - <https://bit.ly/employee-cpr>
- Student Sign Up
  - <https://bit.ly/student-cpr>
- BLS (CPR) Policy
  - [ASOD CPR Policy](#)



# BLS Sequence - *SUMMARY*

1

## Check

- Pulse
- Unresponsiveness
- Breathing

2

## Call out for help

- Regular Hours: 7-3911
- Outside Hours: 911

3

## Assign to retrieve AED

4

## Begin Compressions

- Within 10 seconds
- 100/min "Staying Alive"
- Depth of 2 inches
- Allow complete chest recoil
- Rotate compressors every 2 minutes
- Minimize interruptions <10 sec

5

## Post Compression Set

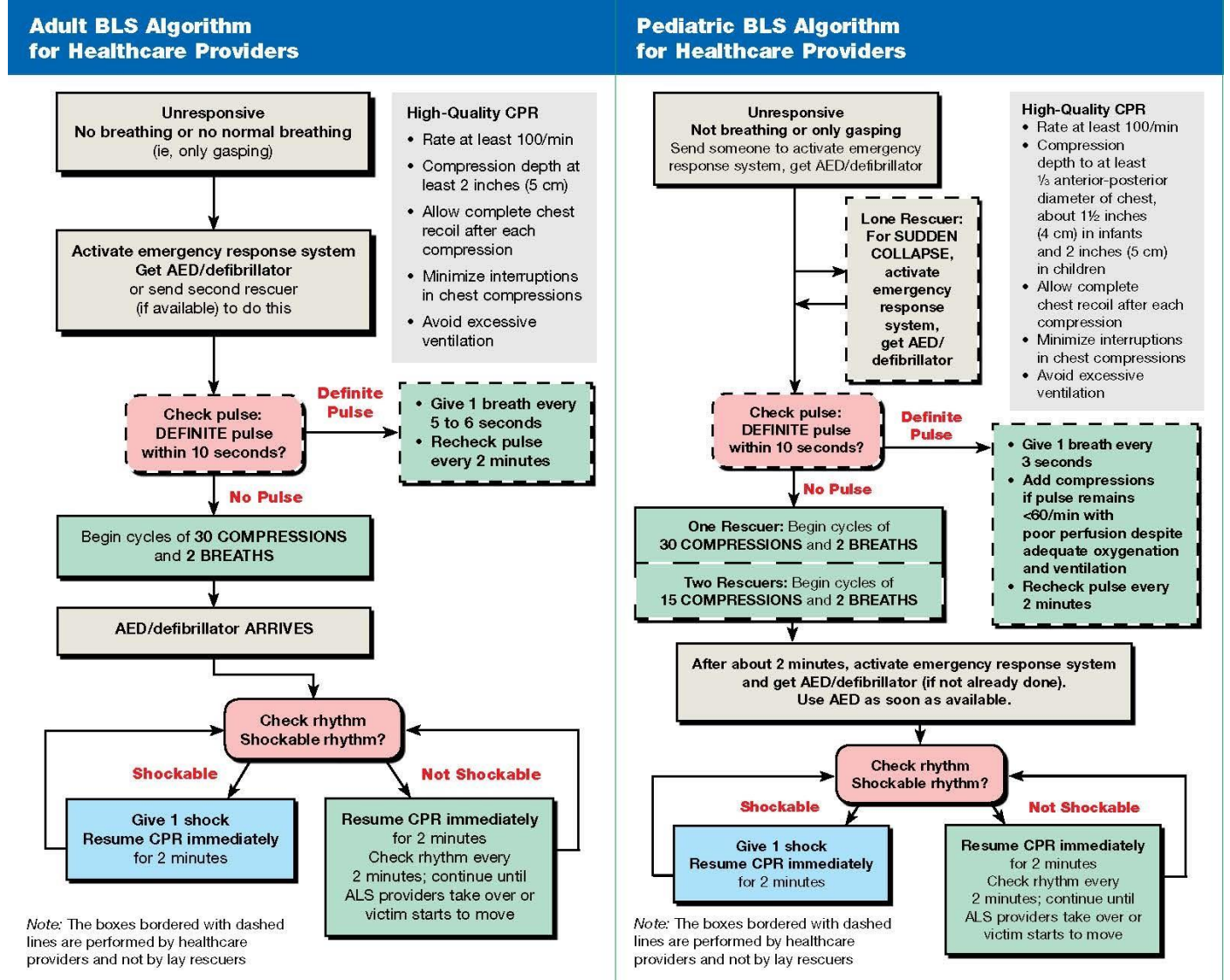
- Aprx. Every 5-6 seconds
- Open airway
- Give 2 breaths

6

## Continue BLS Until

- AED arrives
- Emergency Team arrives

# BLS Sequence Flowchart





# BLS Review



<https://youtu.be/n7kqiAu2gC8>

Team organization, important notes, and contact  
processes

# Emergency Team

# Emergency Team

## ASOD Emergency Team

- Part of Oral Maxillofacial Surgery (OMFS)

## Regular Hours:

- Monday – Friday 8:00 am – 5:00 pm
- Dial 7-3911 from any ASOD Landline

## Outside Regular Hours:

- Saturday – Sunday, Before 8:00 am, After 5:00 pm
- Call 911



# Important Notes On Emergency Team



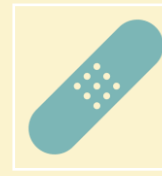
OMFS is **NOT** to be treated as an urgent care, pharmacy, or doctors' office.



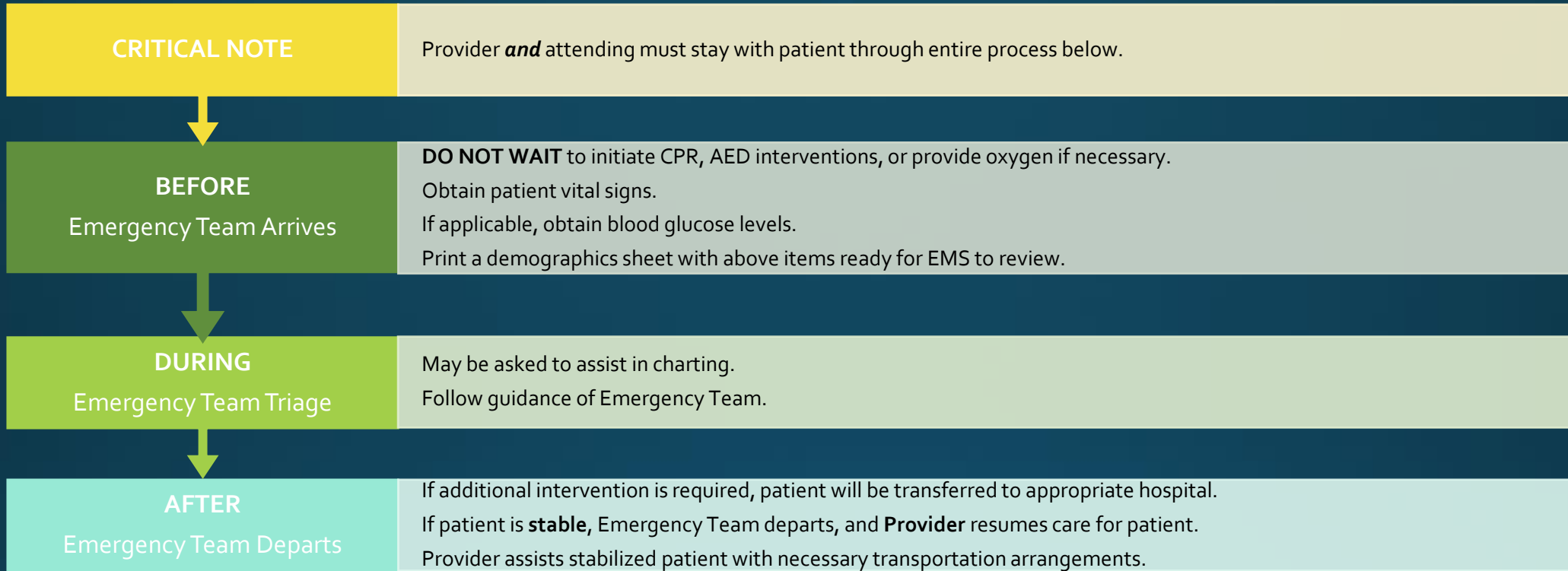
Contact OMFS (73911) solely in the event of a genuine medical emergency.



OMFS has final authority to call 911 or contact UNC Hospital .



For all routine matters, consult your primary provider, Campus Health, or Employee Health.



# After Calling 73911

# TYPES OF MEDICAL EMERGENCIES & RESPONSES

Categorize responses to medical emergencies, define possible causes, review preventative measures, possible manifestations, and how to manage.



# MEDICAL EMERGENCIES & RESPONSES

- Once a medical emergency occurs:
  - *Stop procedure*
  - *Treat patient symptoms*
  - Determine if manageable in clinic or true medical emergency

## MANAGEABLE IN CLINIC

Syncope

Hyperventilation

Hypoglycemia

Hyperglycemia

Asthmatic Attack

## CALL 73911 IMMEDIATELY

Anaphylaxis

*Aspirated Swallowed Object*

Seizures

Angina

Myocardial Infarction (MI)

# SYNCOPE [1] – TREAT IN CLINIC

CAUSED BY FEAR, ANXIETY, STRESS AND/OR PAIN

*Most common medical emergency at the ASOD is Syncope. Triggered commonly by injection of local anesthetic.*

## **Prevention:**

- Identify patients at risk (i.e., states fear of needles).
- Provide adequate sedation at initial injection.
- Set patient so they are lying down for the injection.

## **Early Clinical Manifestations:**

- Complaints of feeling warm (Diaphoresis)
- Fast and/or irregular heartbeat (Tachycardia)
- Nausea and loss of color

## **Late Clinical Manifestations:**

- High blood pressure (Hypertension) and slow heartbeat (bradycardia)
- Breathing more deeply and/or fast (Hyperpnea)
- Pupillary dilation
- Visual disturbances and dizziness
- Loss of consciousness

# SYNCOPE [2] – TREAT IN CLINIC

CAUSED BY FEAR, ANXIETY, STRESS AND/OR PAIN

## Management:

- Stop procedure
- Place patient in head down (trendelenburg) position, unless the patient is pregnant. If pregnant, left lateral position.
- Establish airway and administer oxygen
- Monitor vital signs (compare to pre-op)
- Reassure and support patient
- Cold towels to head

## Delayed Recover:

- If either of the below occurs, **call 73911**.
  - Delayed recovery of greater than or equal to 20 minutes.
  - Patient becomes unconscious at any time.



# HYPERVENTILATION – TREAT IN CLINIC

CAUSED BY FEAR, ANXIETY, AND/OR STRESS

## Prevention:

- Identify patients at risk (i.e., demonstrate increased fear/anxiety).
- Discuss with identified patients' ideas on how to mitigate anxiety (i.e., explaining specific steps or processes).

## Clinical Manifestations:

- Anxiety
- Elevated blood pressure, heart rate, and respiratory rate
- Muscle pain, cramps, tingling or numbness of extremities
- Dizziness and chest pain

## Management:

- Suspend or terminate procedure
- Position patient sitting upright (or comfortable position)
- Monitor vital signs
- Oxygen is NOT indicated
- Have patient rebreathe exhaled air, utilizing:
  - Brown paper bag
  - Full face mask
  - Patient hands cupped over their face
- Reassure patient

If symptoms are not resolving within 20 min, or patient becomes unconscious, **call 73911**

# HYPOGLYCEMIA – TREAT IN CLINIC

PATIENT BLOOD SUGAR (GLUCOSE) LEVEL IS *LOWER* THAN STANDARD RANGE

## Pre-Operative:

- Determine if patient has had a meal.
- Check blood sugar (glucose) levels.
  - Normal (before a meal): 70-130 mg/dL
  - Hypoglycemia: under 70 mg/dL
  - Treatment Goal: above 70 mg/dL

## Clinical Manifestations:

- Nervousness
- Shakiness
- Weakness
- Hunger
- Nausea
- Dizziness
- Headache
- Rapid heartbeat

## Severe Hypoglycemia Clinical Manifestations:

- Diminished cognitive function
- Increasingly bizarre behavior
- Seizure activity
- Unconsciousness

## Management:

- Monitor vital signs and Cognitive (neurological) status
- Administer oxygen
- Check glucose levels
- Responsive:
  - Give Glucose Tablet/Gel and arrange for escort home.
- Unresponsive:
  - **Call 7-3911**, place nothing in patient's mouth, and arrange for escort home.

# HYPERGLYCEMIA – TREAT IN CLINIC

PATIENT BLOOD SUGAR (GLUCOSE) LEVEL IS *HIGHER* THAN STANDARD RANGE

## Prevention:

- Determine last A<sub>1C</sub> level and when it was taken
  - 4-6%: excellent control
  - 7-8%: good control
  - ≥9%: poor control
- If blood glucose levels taken recently, results, and if within normal range:
  - Fasting blood sugar >126 mg/dL = diabetes diagnosis.
  - Random plasma glucose > 200 mg/dL with symptoms = diabetes diagnosis
  - >400 mg/dL, avoid elective dental treatment
- Confirm patient has taken medication (if applicable) and eaten.

## Clinical Manifestations:

- Increased thirst and urination
- High blood sugar (glucose) levels

## Severe Hyperglycemia Clinical Manifestations:

- Shortness of breath (SOB)
- Fruity breath odor
- Decreased consciousness
- Blood glucose level's above 400 mg/dL

## Management:

- Stop procedure and refer to Attending/Provider.
- If loss of consciousness, **call 73911**.



# ASTHMA ATTACK – TREAT IN CLINIC

PATIENT AIRWAYS  
BECOME SWOLLEN  
AND INFLAMED,  
MAKING IT DIFFICULT  
OR IMPOSSIBLE TO  
BREATHE.

## **Prevention:**

- Ask patient if: (1) diagnosed with asthma; (2) last asthma attack; (3) medication taken; and (4) ascertain adherence to medication
- Avoid identified asthma triggers
- Monitor vital signs of an attack

## **Clinical Manifestations:**

- Inability to finish sentences with one (1) breath
- Wheezing / Coughing
- Rapid breathing
- Chest pain or pressure
- Pale / Sweaty face
- Eventually, blue (cyanotic) lips
- “Silent Chest” – lungs tightened to point of no longer breathing

## **Management:**

- Terminate procedure and monitor vital signs, reassure patient, and call 73911.
- Assist with positioning patient in comfortable position (usually sitting).
- Administer albuterol Inhaler (MDI) and Oxygen.
- If needed, administer epinephrine ampule, 1:100/0.3 to 0.5 cc, subcutaneously.

# ANAPHYLAXIS

## CALL 73911

Condition in which a life threatening, allergic reaction occurs with a skin reaction (i.e., Urticaria, Angioedema), respiratory reaction (i.e., Rhinitis, Laryngeal edema, Bronchospasm), or cardiovascular reaction (i.e., Circulatory collapse, Dysrhythmias, Cardiac arrest).

### **Prevention:**

- Patient triggers are well documented and known.

### **Clinical Manifestations:**

- Skin reactions (hives, itching, pale skin)
- Low blood pressure (hypotension)
- Weak and rapid pulse
- Nausea
- Dizziness or fainting
- Shortness of breath and unusual breath sounds

### **Management:**

- Call 73911
- Administer auto injector epinephrine
  - Adults: 0.3 mg
  - Pediatric: 0.15 mg
- Administer albuterol inhaler (MDI)
- Administer oxygen
- Prepare for BLS (CPR) and AED Protocols

# ASPIRATED SWALLOWED OBJECT [1]

**CALL 73911**

Condition in which a patient has either inhaled (aspirated) a foreign object.

## Prevention:

Remain aware of equipment and items in use.

Follow safety precautions provided by manufacturer

Use dental dams whenever possible.

## Clinical Manifestations – *Aspirated* (respiratory distress):

- Chocking
- Coughing
- High-pitches wheezing
- Turning blue (cyanosis)
- Absence of air entry
- Asymmetrical chest movement

## Clinical Manifestations – *Swallowed Object ONLY*:

- No signs of respiratory distress
- Contacting Emergency Team is **NOT** required or advised
- Submit an Incident Report and follow instructions



# SWALLOWED OBJECT / ASPIRATION [2]

**CALL 73911**

## Aspiration Management:

- Call 73911
- Administer oxygen
- If complete airway obstruction:
  - Apply abdominal thrusts (Heimlich maneuver)
  - Provide BLS (CPR)

## Swallowed Object Management:

- Complete Incident Report (<https://bit.ly/asod-incident-report>)
- Utilize Radiology Order Form and provider transports/stays with patient.
- Regular Hours, 8:30 am – 4:40 pm, Mon – Fri:
  - Escort patient to UNC Radiology Department
- Outside Regular Hours:
  - Escort patient to UNC Emergency Department
- Within 24 hours of incident, provider document incident in patient record.
- Review Procedure for Swallowed Foreign Objects

# SEIZURES

**CALL 73911**

Multiple conditions that can cause sudden and uncontrolled electrical disturbances in the brain.

Common causes include epilepsy, intra-cranial pathology, hypoglycemia, hypoxia following syncope, and local anesthesia overdose.

## Prevention:

- Appropriate management of hypoglycemia and syncope.
- Avoidance of local anesthesia overdose
- Remain aware of manifestation and interactions
- Determine medication compliance
- Reduced exposure to flickering lights
- Use of Nitrous Oxide and/or benzodiazepines

## Clinical Manifestations:

- Patient complaint of similar taste, smell, visual, or auditory premonitions.
- Irritability
- “Epileptic Cry” – diaphragmatic muscle spasm
- Muscle rigidity, pupil dilation, and unconsciousness

## Management:

- Remove items from mouth
- Protect the patient and prevent injury, if patient seizes in dental chair.
- Apply passive restraint to prevent injury
- Call 7-3911
- Administer oxygen
- Provide supportive airway measures
- Suctioning as needed

# ANGINA

**CALL 73911**

Condition in which chest pain is experienced, caused by reduced blood flow to the heart. Causes concern for significant coronary artery disease.

## Prevention:

- Remain aware of precipitative episodes including physical exertion, stress, hot/humid environments, and cold weather.
- Patient remain on oxygen
- Use of Nitrous Oxide when possible
- Avoid plain local (contains no epinephrine/vasoconstrictor) anesthetic.

## Clinical Manifestations:

- Dull pain often described as tightness, pressing, or burning on chest.
- Radiation to left shoulder and arm (ulnar nerve)
- Left face or right shoulder radiation less frequent.
- Fast heartbeat (Tachycardia)
- Elevated blood pressure
- Pain relief with nitroglycerin or rest

## Management:

- Stop treatment and place patient in upright position
- Administer oxygen
- Monitor vital signs
- Administer nitroglycerin spray or tablet
- If no relief after third (3rd) spray (or tablet), patient needs a workup to rule out Myocardial Infarction.

# MYOCARDIAL INFARCTION (MI)

**CALL 73911**

Condition in which a lack of blood flow damages or destroys part of the heart muscle.

## **Prevention:**

- Cleared by cardiologist prior to invasive procedure.
- Determine Cardiac Risk Stratification
  - High Risk: symptoms of unstable angina or MI within last 30 days.
  - Intermediate Risk: history of MI with planned extensive surgical procedures.
  - Low Risk: history of MI with planned simple procedures.
- Have nitroglycerin and oxygen available
- Take vital signs

## **Clinical Manifestations:**

- Heavy/Pressure feeling in chest
- Sweating
- Trembling
- Nausea
- Jaw pain
- Feeling of impending doom
- Vomiting
- Loss of consciousness

## **Management:**

- Call 7-3911
- Administer oxygen 4 L/min
- Monitor vital signs
- Administer nitroglycerin spray or tablet
- Crush or apply sublingually Aspirin
- Prepare for BLS (CPR) and AED



# Post Training Assessment

Use the following link to complete the post training assessment:

<http://bit.ly/asod-medical-emergency>

# Helpful Links

## Main Policy Website

- ▶ <https://policies.unc.edu>

## CPR Policy

- ▶ <https://policies.unc.edu/TDClient/2833/Portal/KB/ArticleDet?ID=131267>

## Procedure Following Bloodborne Pathogens Exposure

- ▶ <https://policies.unc.edu/TDClient/2833/Portal/KB/ArticleDet?ID=131302>

## Procedure for Swallowed Foreign Object

- ▶ <https://policies.unc.edu/TDClient/2833/Portal/KB/ArticleDet?ID=131308>

## Policy for Management of Medical Emergencies

- ▶ <https://policies.unc.edu/TDClient/2833/Portal/KB/ArticleDet?ID=131280>

## Incident Reporting

- ▶ <https://bit.ly/asod-incident-report>

## Employee BLS/CPR Signup

- ▶ <https://bit.ly/employee-cpr>

## Student BLS/CPR Signup

- ▶ <https://bit.ly/student-cpr>

## BLS Review Video

- ▶ <https://youtu.be/n7kqiAu2gC8>

## Epinephrine Auto Injector Review Video

- ▶ <https://youtu.be/K7QyCMNDHAs>

## Blood Glucose Monitoring Device Review Video

- ▶ <https://youtu.be/rMMpeLLgdgY>

## Oxygen & AED Issue Reporting

- ▶ <https://bit.ly/o2issue>