Simulation Objective:
Demonstrate behaviors necessary to respond in a cardiac arrest caused by CO2 Narcosis
Demonstrate noticing possible causes of cardiac arrest

Scenario: Physiologic System
Elevated levels of oxygen causing decrease in respiratory drive. Elevation in CO2 levels due to decreased respirations lead to acidosis. Patient in scenario has long standing COPD.

Scenario: Skills
Calling code
Starting CPR
Opening crash cart
Placing backboard
Notice Oxygen at 4 L/Min
Giving SBAR to code team lead
Scenario will indicate a PEA caused by the acidosis (monitor will show NSR and there will be not pulse).

Learning Objectives:
Demonstrate initiation of a cardiac arrest situation per hospital and AHA policy
Notice probable cause of cardiac arrest
Demonstrate use of SBAR in a crisis situation.
Demonstrate set-up of cardiac monitor
Demonstrate set-up of suction
Demonstrate set-up of contents in crash cart.

Competencies:

Reference:
AHA 2005 Guidelines
TCGH Cardiac Arrest Policy
Patient Data:
Account Number: 3123453
Medical Record Number: 02-98-35
Name: Victoria Sundquist
Birthdate: July 15, 1930

Patient Case History (brief past medical history of present illness)
This 76-year-old caucasian female has a long history of COPD since 1990. She quit smoking in 1989 after a 30 pack/year history. She has required home oxygen for the past two years. She presents to the ED with increasing shortness of breath over the last two hours which increases with exertion. No complaints of chest pain or palpitations. No edema or orthopnea. Patient is awake and alert sitting up and breathing rapidly.

CXR shows hyperinflation and flattened diaphragm, but no infiltrates, effusion, or failure.

In the ED, the patient was treated initially with IV Methylprednisolone 125 mg and continuous albuterol/atrovent nebulizer treatments. Wheezes diminished after about one hour.

Current meds are:
Alprazolam
Aspirin
Ambien
Combivent
Albuterol
Atrovent
Two liters of oxygen 24 hours a day at home.

VS
BP 179-104
HR 88 and regular
RR 28
Oxygen sat is 100% on two liters
T 98.3

Pt drug allergies
No Known Drug Allergies.

Lab and other information available to participant upon request
### Scenario Flow (desired course events during scenario: changes in VS and assessments)

<table>
<thead>
<tr>
<th>What student should Notice and Interpret</th>
<th>Student expected Response</th>
<th>Computer Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>BP 60/0  HR 33  RR 4  Oxygen sat is 88 on six liters  Saline Lock is in place  Cardiac Arrest  This will be a PEA scenario  NSR with no pulse</td>
<td>❏ Student should respond to this by calling code  ❏ They should recognize the fact that the O2 is too high  ❏ They should start CPR per policy:  ❏ Dial 777  ❏ Lower HOB  ❏ Don gloves  ❏ Open Airway  ❏ Give breaths  ❏ Check pulse  ❏ Start Chest compressions  ❏ Continue 30:2  ❏ Crash Cart comes:  ❏ Hook up monitor around CPR  ❏ Bag-valve-mask  ❏ Start IV  ❏ Give history using SBAR (situation, background, assessment, and response)  ❏ Verbalize Possible causes of arrest:  ❏ Hypovolemia  ❏ Hypoxia  ❏ Hydrogen ion  ❏ Hypo/hyper K+  ❏ Hypoglycemia  ❏ Hypothermia  ❏ Toxins  ❏ Tamponade  ❏ Tension Pneumo  ❏ Thrombus</td>
<td>Scenario will continue as cardiac arrest.  Watch interaction of staff.  Follow protocol  Use SBAR  Code leader will follow AHA with:  Epinephrine 1 mg every 3 minutes and CPR  Be sure to do real time in scenario</td>
</tr>
</tbody>
</table>
What student should Notice and Interpret | Student expected Response | Computer Response
--- | --- | ---
- Trauma
- Rotate Compressor every two minutes

**How will participants be introduced to the case (Report)?**

**Day shift Report:**

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**Manikin used and initial computer set-up (v.s. and assessment information for beginning of scenario: SpO2%, temperature, heart rate, blood pressure, heart, lung and bowel sounds)**

BP 60/0  
HR 33  
RR 4  
Oxygen sat is 88 on six liters

Lungs – wheezes  
Saline lock  
Oxygen set up  
Heart – normal  
Bowel - Normal

**Equipment and props needed:**

Oxygen set up  
No IV line – just lock  
Wrist band  
Chart for history
Medications:
Albuterol/Atrovent neb q 4 hr prn wheezes
Solumedrol 125 mg IV q 6 hours

Paperwork and documentation:
Code Summary
Patient chart with history

Personnel and actors (numbers, roles, and instructions)
None

Orders (if applicable)

Additional teaching tools needed