



**Medical Education Simulation Center**

**<<Scenario Name>>**

**Section 1: Demographics**

**Case Title:**

**Case Description & Diagnosis:**

**Author(s):**

**Editor: Keith A. Beaulieu, MBA, BS**

**Date(s) of Development:**

**Target Audience:**

**Specialties:**

**Section 2: Curricular Information**

**Educational Rationale:**

**Prerequisite Knowledge and Skills:**

Required Knowledge Background

* Anatomy related to airway and breathing
* Progression of symptoms of high spinal
* Intubation techniques
* Oxygenation delivery methods
* Respiratory/droplet precautions
* Fluid and blood products administration
* ACLS

Required Background Skills

* Airway Assessment
* Emergency Airway Management
  + Bag Mask Ventilation
  + Proper use of oral and nasal airway
  + Performing bronchoscopy
  + Performing laryngoscopy
  + Perform suctioning

Advanced Cardiac Life Support Protocols

**ACGME Milestones**

**<<insert here>>**

Patient Care (PC)

Medical Knowledge (MK)

System-based Practice (SBP)

Practice-based Learning and Improvement (PBLI)

Professionalism (P)

Interpersonal and Communication Skills (ICS)

**Learning Objectives**:

* X
* X
* X
* **Demonstrate** proper “time-out” protocol prior to invasive procedure(s), based on University of California Irvine Medical Center time out policy/protocols, without error.

**References used**:

Section 3: Preparation

1. Simulator
   1. SimMan 3G
2. Machines –
   1. Anesthesia machine,
   2. Code Cart
3. Misc
   1. Monitors – Basic Anesthesia and Patient Monitors  
      Will need to have A-line and CVP options

**Supplies (list specific quantities, sizes, and brand)**

1. Airway
   1. Adult nasal cannula
   2. Adult face mask
   3. Adult non-re-breather mask
   4. Purple Oral airway
   5. 26 Nasal airway
   6. 7.0 or 7.5 endotracheal tube with lubricant on end to simulate mucous
   7. Laryngoscope with size 3 MAC blade
   8. Adult BVM
2. Medications/infusions
   1. X
   2. X
   3. X
   4. X
3. Kits
   1. X
4. Misc
   1. x

**Supporting Materials:**

1. Images
   1. CXR
   2. ECHO
2. Labs
   1. ABG
   2. CBC
   3. Chemistry
   4. Cardiac Enzymes
3. Handouts
   1. None
4. Misc
   1. Use EKG generated from Laerdal software (if required)
   2. Ultrasound (not available)

CXR, ECG, ECHO, Labs (CBC, BMP, ABG), ultrasound not available. A-line, Central line

**Standardized Actors/Roles: (**indicate the actors or roles needed to successfully run the scenario; key actions required to elicit behavior; and how the role should be played-i.e. helpful, distracted, confrontational, etc.) Provide a script or typical questions and answers.

Time Duration

|  |  |
| --- | --- |
| Set-up | 15 minutes |
| Preparation | 10 minutes |
| Simulation | 15 minutes |
| Debrief | 30 minutes |

Section 4: Simulation Exercise

Information for Participant

**Case Stem to be read to participants:**

**(.):**

Additional information if asked (patient history, labs, physical findings, etc.):

**Information for Facilitator/Simulator Operator Only**

**Initial presentation:**

**How the Scenario unfolds:**

**Critical Action Items:**

**Actual course of events and outcomes (for real patient cases):**

**Simulation Events Table**

| **Minute (State)** | **Participant action/ Trigger** | **Patient Status (Simulator response) & Operator Prompts** | **Monitor Display (Vital Signs)** |
| --- | --- | --- | --- |
| 0:00  ( Baseline) |  | Simulator voice: none  Confederate script: | Rhythm:  B/P:  P:  R:  T:  O2 sat: |
| *0:00-1:00*  *(State 1)* | Time-out | Simulator voice: none  Confederate script: | Rhythm:  B/P:  P:  R:  T:  O2 sat: |
| *1:00-2:00*  *(State 2)* | Induction | Simulator voice: none  Confederate script: | Rhythm:  B/P:  P:  R:  T:  O2 sat: |
|  |  |  | Rhythm:  B/P:  P:  R:  T:  O2 sat: |

**Section 5: Debriefing & Evaluation**

Debriefing

*Reactions*

1. What Happened?
2. How did you feel about \_\_\_\_\_\_\_?

*Understanding (advocacy/inquiry)*

1. What were you thinking when \_\_\_\_\_\_ happened?
2. It looked to me that \_\_\_\_\_\_\_\_\_\_\_\_?
3. I felt that you \_\_\_\_\_\_\_\_\_\_\_\_?
4. I saw you do/use \_\_\_\_\_\_\_\_\_\_\_\_?
5. What led you down that road?
6. Has this happened in your practice, if so how was it addressed?
7. Now that you have completed this simulation, how will this (if any) change your practice?

*Summary*

1. What did you do well?
2. What could you have done better/differently? (+/▲)
3. Takeaway

**Teaching Points**

|  |  |
| --- | --- |
| **Pathophysiology/etiology** | **Corresponding Learning Objective** |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

Evaluation

X

|  |  |
| --- | --- |
| Instructor Evaluation | Pre-Test |
| Performance Checklist | Post-Test |
| BAT | Team Evaluation |
| ANTS |  |

**Section 6: Instructor’s Notes**

* Ensure the simulation environment is properly set-up (see section 3)
* Orientation (start of session) done in operating room
* Create a simulated OR environment

*Briefing at start of session*

1. Capabilities of simulator and simulation environment (done by simulation specialists)
2. Instructor the learner to call out all medications that are to be given and the associated dosages
3. Discussion of resources available
4. The learner should not assume there is a problem with the simulator
5. Establish a safe environment by explaining this is a training environment
6. Learner will sign both a consent and a video recording policy letter

**Appendix A**

**Imagery File Descriptions**

Chest X-ray

|  |
| --- |
| Figure 2. Two chest radiographs in the same patient. (A) Fat tissue attenuates the x-ray beam, resulting in a limited quality image using standard methods of image acquisition. (B) Increasing the kvP and mAS and using an antiscatter grid can improve the image quality.  Sample |

Just a CXR of obese male with poor penetration, and panel B is better penetration (if they ask for a new CXR)

**Appendix B**

**Handout: Labs**

CBC

WBC: 7.2 cells/uL

Sample

Hgb: 10.5 g/dL

Hct: 32%

Plt: 280,000 cells/uL

Chemistry

Na: 138 mEq/L

K: 4.1 mEq/L

Cl: 101 mmol/L

HC03: 25 mmol/L

BUN: 11 mg/dL

Cre: 1.1 mg/dL

Gluc: 122 mg/dL

CA: 10.1 mg/dL

Mg: 2.0 mg/dL

Phos: 3.1 mg/dL

Coagulation Panel

PT: 11 sec

PTT: 27.1 sec

INR: 1.1

UA (probably will not ask for this)

Prot: 78 mg/dL

Gluc: 89 mg/dL

Leuk: Neg

Nitrite: Neg

WBC: <2/hpf

Sample

RBC: 0/hpf

Bacteria:none

Cardiac Enzymes

Total CK: 51U/L (normal)

TropI: <.01 ng/mL (normal)

CK-MB: 3.4 ng/mL (normal)

Brain Naturietic Peptide (BNP)

2pg/mL

ABG

(if patient progresses to loss of consciousness/cardiac arrest)

pH 7.28

pCO2 44

pO2 85

HCO3 20

(if pt is resuscitated)

pH 7.38

pCO2 38

pO2 160

HCO3 23