Scenario Development -an Interactive Workshop

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No Conflict of Interest

- The speaker, planning committee members and/or persons who can influence CME content have indicated they have NO relationships with commercial industry to disclose relevant to the content of this CME activity.

- Background on scenario development

- Small group work on developing a scenario

- Discussion of proposed scenarios

- Effective simulation education requires both participation in the scenario and the debriefing.

- What do I want to talk about in the debrief?
  - Primary Driver for the Scenario

Approach to Scenario Development

- Who
- What
- Where
- How
- Why

- Identify the learning objectives- primary and secondary- and the rest will follow.

Who

- Identify the learners.
  - Students
  - House-staff
  - Nursing
  - Allied Health
  - Single discipline
  - Teams- multi discipline

Why and What

- Identify the educational and/or simulation objectives.
  - Education
  - Assessment
  - Competency training
  - Procedural training
  - Systems Probing

Where

- How long do you have for the experience including orientation to the simulation environment, simulation, and debriefing.

- Where are you going to run the simulation?
  - In situ- announced or unannounced
  - Simulation center
  - Conference room

How

- What type of simulation modality best fits with the simulation objective?
  - Part task trainer
  - Virtual world
  - Standardized patient actor
  - Mannequin
  - Hybrid

Creating a Scenario

what works

what does not

Good Cases for Simulation

- Cases that you have had or are pulled from other people's prior experiences

- Case reports

- Can modify to achieve goals

Good Cases for Simulation

- Cases that can be achieved in the allotted time

- Cases that require teamwork and communication

- Cases that can be used across many different learners

- Signal to noise ratio can be changed

Cases to Avoid

- Very obscure or rare condition (unless)

- Obvious single cause and treatment (unless)

- Requirements for excessive outside resources or personal

Cases to Avoid

- Case that forces the participant to make a mistake

- Overreliance on physical findings

Cases to Avoid

- The "too much" scenario

- The "too fast" scenario

- The "find the detail" scenario

- The "too long" scenario

- Should you kill the simulator?

Scenario progression

- Once you have picked your clinical case an important step is to play out what you would expect to happen and cross check the likely actions or steps against available resources, props, personal, and time.

- You can expect A to B but should be ready for A to A ' then to C and back to B

11 Elements of Scenario

- 1. **Narrative** description of the scenario

- 2. **Characteristics of the underlying patient** & appropriate simulator patient **files** (if any)

- 3. Description of the beginning **clinical situation**

11 Elements of Scenario

- 4. **Abnormal events** that will occur & their timing

- 5. **Guidelines** for the **simulator operator and instructor** for running the scenario properly

- 6. **Instructions** for **actors and confederates**

11 Elements of Scenario

- 7. Info on **needed props** & directions for use

- 8. Baseline **patient records** and needed images   (e.g. XRays, ECGs) or "reports" thereof

- 9. "**Stem**" **information** for the participant(s) to read before beginning the scenario {if no confederates}

11 Elements of Scenario

- 10. **Teaching points** for debriefing

- 11. **References** (if applicable)

Example Scenario

- <u>Primary Educational Goal</u>: to teach/discuss how to manage multiple patients as sole anesthesia provider

- <u>Secondary Goal</u>: to practice surgical airway

- <u>Students</u>: Senior Anesthesia residents

- <u>Course</u>: ACRM

- <u>Time</u>: 30 minutes for simulation and 45 minutes for debrief

- <u>Space</u>: Simulation Center

- <u>Simulators</u>: Two patient simulators

- <u>Confederates</u>: Surgeon, Circulator RN, PACU RN

- Scenario starts with local sedation case in OR when they are called by PACU nurse for patient with respiratory distress in PACU.

- Student must leave patient in OR and attend to patient in PACU.

- Help is 20 minutes away if called for.

- First patient must be stable and not under GA-regional anesthesia with sedation near the end of the case.

- Surgeon should not be helpful with airway management- podiatrist

- Second patient should have plausible need for surgical airway- post op thyroid

- Student is the last anesthesia provider in outpatient surgery center.

- Equipment needed: Difficult airway equipment including surgical airway equipment.

DUKE Simulation Template

- http://simcenter.duhs.duke.edu/support.html

Section 1: Demographics

- **Case Title**:
- **Patient Name:**
- **Scenario Name**:
- **Simulation Developer(s):**
- **Date(s) of Development**:
- **Appropriate for following learning groups (circle all that apply)**
- Faculty: CME
- Residents:(PGY)   1   2   3   4   5   6
- Specialties: Anesthesiology   Nurse Anesthesia Surgery
- Critical Care   Emergency Medicine   Obstetrics
- Medical Students (yr):   1   2   3   4
- Nurse Anesthesia Faculty: CEU
- Nursing Students (yr):   1   2
- Other:

Section 2: Curricular Information

- **Educational Rationale:**
- **Learning Objectives**: (ACGME Core Competencies)
- objective 1
- objective 2
- etc
- **Guided Study Questions**:
- question 1
- question 2
- etc
- **References used** (included PubMed ID when possible):
- reference 1
- reference 2
- etc
- **Didactics:**
- powerpoint slide set
- web site
- etc
- **Assessment Instruments:**
- Instrument name

Section 3: Preparation

- **Monitors Required:**

- **Other equipment required:**

- **Supporting Files (cxr, ekg echo, assessment, handouts, etc):**

- **Time Duration**

Section 4: Case Stem

- **Case Stem (one to two paragraphs on pertinent patient and scenario information-this should be the stem for the learner and should include location, physician/help availability, family present, etc.):**

- **Background and briefing information for Facilitator/coordinator's eyes only:**

Patient Data Background and Baseline State

- **Patient History (should follow standard H and P format):**
- **Review of Systems:**

  - CNS:
  - Cardiovascular:
  - Pulmonary:
  - Renal / Hepatic:
  - Endocrine:
  - Heme/Coag:

- **Current Medications and Allergies**
- **Physical Examination:**

  - General:
  - Weight, Height:
  - Vital Signs:

- Airway: Lungs: Heart:
- **Laboratory, Radiology, and other relevant studies:**
- HCT:
- CXR:
- EKG

Crisis Resource Management
Key Points
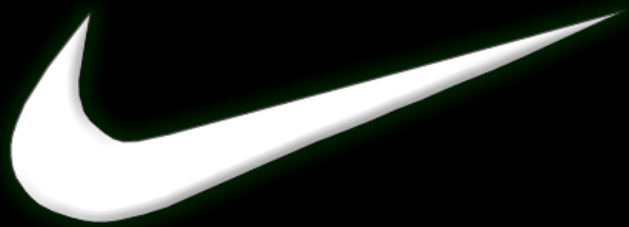
Small Group Work

- Work on your own project

  - OR

- Develop 20 minute scenario to teach a CRM principle to a learner

- Example: teach/discuss effective communication between health care workers (SBAR)

- Primary educational goal
- Secondary educational goals