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College of Nursing Simulation**

Simulation Title: Periop surgical asepsis intro Scenario

Course Use: ADTN 345
Developed by: Gunnar Larson

Target Audience: Week 2 for 1st Semester Jr. students studying Periop & Anesthesia

Patient Type: Middle age female **Scenario Overlay:** Scenarios/345/periop surgical asepsis

Abstract: Post op patient returns to room with abdominal pain. Falls asleep due to narcotics which results in dropping respirations and O2 sats. This is a 6 frame loop. The frame vital signs generally stay the same but there are different verbal files associated with each frame. The verbal files are moans about abdominal pain. The frames cycle either by timed intervals or by palpation of a pulse and will eventually move to a narcotized sleep frame with no vocal file and then back to the starting frame. At any time the instructor can push the green OPA button on the airway remote to send the patient to the narcotized sleep frame. During the sleep frame, if a student or instructor attempts to wake the patient (e.g. shake arm) and indicate the patient needs to take deep breaths; by pushing the same Left green button, the last frame is engaged with a vocal file that indicates the patient will try to take deeper breaths. The additional 4 green buttons have A&O X3 vocal responses and a pain scale.

Learning Method: Experiential and observation

Learning Objectives:

During or upon completion of this Simulation experience, the student will be able to:

1. Perform physical examination on post operative client
2. Assess information obtained from physical assessment
3. Identify factors that affect an individual's response to the surgical process, and identify nursing interventions that contribute to a positive response.
4. Identify and discuss the most frequent complications of anesthesia and surgery, including malignant hyperthermia, shock, altered wound healing, and pain; discuss the causes and nursing interventions to detect and prevent each.
5. Describe the goals of client care in the PACU, criteria for discharge from the unit, and nursing assessments and interventions to achieve those goals.
6. Describe the goals of postoperative care on a surgical unit, and the nursing assessments and interventions to achieve the goals.

Simulator Setup:

- Female Wig on head
- Pre-start peripheral IV in right arm (need IV catheter, tape and start kit)
- Colostomy abdomen overlay with colostomy bag with bloody drainage
- Female genitalia with foley cath to bag with urine
- SCD's bilat LE's
- Hospital gown
- L wrist ID bracelet with MH data to indicate Name, age, physician, medical record number and allergies (Label page below)

Additional Equipment:

- Patients monitor showing oxygen saturation only.
- IVF running on infusion pump (may have D5W to see if students discover this medical error).
- Set an empty water pitcher or half full glass of water on the bedside stand

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- Tape
- Alcohol swabs
- Have the patient chart available for students.

History/Information:

Chief Complaint: M.H. is a 48-year-old white female admitted to the hospital unit with lower abdominal pain and a recent history of bloody stools.

Medical and Surgical History: She is 5' 3" tall and weighs 155 pounds. Her past medical history includes two uncomplicated vaginal births and a laparoscopic cholecystectomy 6 years ago.

Health History: The diagnostic work-up revealed a LLQ abdominal mass and M.H. was scheduled for an exploratory laparotomy this morning.

Family History: She is married and has two adult daughters. She is 5' 3" tall and weighs 155 pounds.

M.H. returns to the unit after a stay in the PACU. Her chart indicates that she underwent a low anterior resection with colostomy placement for rectal cancer. Her post-op orders are:

Physician's orders: (See also chart copy below)

D51/2 NS at 125 hour
Cefazolin 1 Gm IV q 8 hours X 3
Famotidine 20 mg. q 12 hours
IV PCA of MS 1 mg every 10 minutes, lock-out of 6 mg/hour
NPO
NG tube to low intermittent suction
IS
SCD's
Dangle this evening, ambulate t.i.d. beginning tomorrow
Foley to gravity drainage

Beginning the Scenario:

In addition to starting the patient and overlaying the scenario, the following should be done:

- Turn on Patient wall monitor
- Turn on bedside speaker and adjust volume
- Engage SpO2 on monitor parameters on the Simman interface
- Place airway remote on medication cart.

To begin the scenario, students may be given about 5 minutes to review the chart or an overview should be given by instructor. They could write pertinent subjective and objective data on blank care plan forms. While

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this is happening, frames 0-3 will cycle and keep the VS's the same and the four different moaning files will cycle the patient responses. Frames advance and revolve by 1 minute intervals or by pulse being checked (or by the remote being used to jump to frame 4). Frame 4 results in a narcotized sleep with HR, respirations, and O2 sats decreasing. Frame 4 advances to frame 0 unless the remote is utilized during frame 4 to jump to frame 5. This can be done if instructor or student tries to wake patient. Frame 5 vocal response is "What...What?...Oh Ok, I'll try to breath deeper" then scenario cycles to frame 0 again.

Airway remote is used and the green OPA advances any frame to 4 and then from 4 the same remote advances to 5. Other responses are 2nd "Ohhh My name is Mary Hospital." 3rd "I'm in Eau Claire" 4th Well, I think it's Monday isn't it?" 5th "I am in a lot of pain! This is a 10!!"

After the 5 minute review or the instructor overview, the faculty member may review:

- Reason and date of admission (H&P) [Note:]
- Admission labs [Note:]
- Admission radiology reports [Note:]
- Orders are for the client with .

OR

The instructor will then give a change of shift report:

M.H. is a 48-year-old white female admitted to the hospital unit with lower abdominal pain and a recent history of bloody stools. She is married and has two adult daughters. She is 5' 3" tall and weighs 155 pounds. Her past medical history includes two uncomplicated vaginal births and a laparoscopic cholecystectomy 6 years ago .The diagnostic work-up revealed a LLQ abdominal mass and M.H. was scheduled for an exploratory laparotomy this morning. M.H.'s preoperative orders were:

Consent for exploratory laparotomy with possible colon resection
CBC
Serum electrolytes, BUN, creatinine
Type and crossmatch for 2 units packed cells EKG
U/A
NPO after midnight except for sips clear liquids

M.H. returns to the unit after a stay in the PACU. Her chart indicates that she underwent a low anterior resection with colostomy placement for rectal cancer. Her post-op orders are:



D51/2 NS at 125 hour
Cefazolin 1 Gm IV q 8 hours X 3 Famotidine 20 mg. q 12 hours IV PCA of MS 1 mg every 10 minutes,
lock-out of 6 mg/hour NPO
NG tube to low intermittent suction is
SCD's
Dangle this evening, ambulate t.i.d. beginning tomorrow Foley to gravity drainage

Proceed to direct students to take vital signs then assess the client.

UNIVERSITY HOSPITAL
Eau Claire, Wisconsin
PHYSICIAN'S ORDER SHEET

Patient Label

ALLERGIES _____

ORDERED DATE	"Another brand of drug generically and therapeutically equivalent may be dispensed unless checked" <input type="checkbox"/>	DO NOT USE THIS SHEET UNLESS A RED NUMBER SHOWS  
1	D51/2 NS at 125 hour	
2	Cefazolin 1 Gm IV q 8 hours X 3	
3	Famotidine 20 mg. q 12 hours	
4	IV PCA of MS 1 mg every 10 minutes, lock-out of 6	
5	NPO	
6	NG tube to low intermittent suction	
7	IS	
8	SCD's	
9	Dangle this evening	
10	Ambulate t.i.d. beginning tomorrow	
11	Foley to gravity drainage	
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State:	Subjective and Objective Data * = you will have to tell students this use the microphone for other subjective data.	Learner Behaviors	Prompts and Questions Teaching Points
Frame 0-3:	A: Sinus Tach = 120 B/P = 90/54 Monitor Controls SpO2 = 98% Breathing Rate: 16 Auscultation sounds Lungs: clear Heart: S1S2 Bowel: Post-op hypo active Has post-op abdominal pain Is slightly confused R/T anesthesia	<ol style="list-style-type: none"> 1. Complete Vital Signs 2. Complete initial head to toe focused assessment 3. Identify client's symptoms/look for symptoms of <ol style="list-style-type: none"> a. b. Discuss pathophysiology 4. Identify client's symptoms/look for symptoms of <ol style="list-style-type: none"> a. b. c. Discuss pathophysiology 5. Identify risk factors at bedside <ol style="list-style-type: none"> a. b. 6. 	<ul style="list-style-type: none"> • How often will you be taking M.H.'s vital signs in the first few hours post-op? • How will you monitor M.H.'s fluid status? • What will you be doing to help manage M.H.'s post-op pain? • For what purpose is M.H. being given famotidine? • How would you get M.H. out of bed for the first time? • What will you be observing about M.H.'s wound? <p>Trigger</p> <ul style="list-style-type: none"> • 1 min intervals • Palpate pulse • green OPA on airway remote jumps to frame 4
Frame 4:	A: Sinus Tach = 110 B/P = 90/54 Monitor Controls SpO2 = 92% Breathing Rate: 10 Auscultation sounds Lungs: clear Heart: S1S2 Bowel: Post-op hypo active	<ol style="list-style-type: none"> 1. Notice change in breathing rate and O2 sats 2. Identify reasons for change <p>Treatment</p> <ol style="list-style-type: none"> 3. Encourage patient to take deep breaths 	<ul style="list-style-type: none"> ▪ What seems to be happening to the patient now? ▪ What are the changes that you can observe? ▪ What do you think needs to be done with or for the patient? <p>Trigger</p> <ul style="list-style-type: none"> • 1 min intervals • Palpate pulse • green OPA on airway remote jumps to frame 5

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Frame 5:	A:Sinus Tach = 104 B/P = 90/54 Monitor Controls SpO2 = 89% BreathingRate: 8 Auscultation sounds Lungs: clear Heart: S1S2 Bowel: Post-op hypo active	<ol style="list-style-type: none"> 1. Students should recheck vital signs and listen to lung sounds. 2. Students identify a positive client outcome after interventions 3. Students implement orders at this point, calculate and draw up medications 	Trigger <ul style="list-style-type: none"> ▪ 10 secs then jumps to frame 1
			<ul style="list-style-type: none"> ▪

The algorithm below shows the 6 frame rotation of a post op patient who returns to her room with abdominal pain. This is a 6 frame loop which has the patient moaning continuously and then falling asleep due to narcotics which results in dropping respirations and O2 sats. The frame vital signs stay the same until patient falls asleep. The vocal files are moans about abdominal pain. The frames cycle either by timed intervals or by palpation of a pulse. At any time the instructor can forward the patient to the narcotized sleep frame by pushing the first green button on the airway remote. During the sleep frame the instructor can forward the patient to the frame with the vocal file that indicates the patient will try to take deeper breaths by using the exact same green button.

The additional 4 green buttons have A&O X3 vocal responses and a pain scale loaded onto a miscellaneous handler. This provides the students a limited interaction with Simman as an interactive “patient”. 2nd button is “My name is Mildred Johnson”, 3rd button is “I am in the school of nursing hospital”, 4th button is “Yes, I think it is Monday”, and 5th button is “Ohh it really hurts. My pain is at least an 8!”

Set up for the algorithm starts with creating several vocal files and storing them. Then a miscellaneous “voice” handler is loaded with the A&O X3 files and the pain rating file. The scenario is then constructed and the miscellaneous handler inserted and started in the originating frame. The other vocal files are inserted in the various frames. I have created a template miscellaneous handler: voice.vhn and this was used to start the new voice handler and then saved as “345 periop.vhn”. The titling is important when placing the vocal files on the remote, as the titles need to be manually added to the menu screen before they can be dragged to the remote.

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Laerdal Miscellaneous Handler Editor

File Edit View Help

345 periop.vhn

Actions

- BP
- Hand
- Brain
- Lips
- Eye
- SpO₂
- CO₂
- Temp.
- !
- ↑
- ↓

Used Events

- Vocal 1\1st respor
- Vocal 1\2nd resp
- Vocal 1\3rd respor
- Vocal 1\4th respor
- Vocal 1\5th respor

1st response

==== Actions =====

2nd response

==== Actions =====

Vocal Sound: '22fem2 name is Mildred' Number: 1

3rd response

==== Actions =====

Vocal Sound: '22fem3 in hospital' Number: 1

4th response

==== Actions =====

Vocal Sound: '22fem4 monday' Number: 1

5th response

==== Actions =====

Vocal Sound: '22fem5 pain is 8' Number: 1

Start | [Taskbar Icons] | SimMan Universal Patient... | Laerdal Miscellaneou... | 5:09 PM

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Laerdal Miscellaneous Handler Editor

File Edit View Help

Edit Menu

ABC Action

- Airway/Breathing
- Circulation
- System Events

Miscellaneous

- Abort attempt
- Auscultate heart
- Auscultate lungs
- Awaken the patient
- Call for help
- Check diuresis
- Check Hemoglobine
- Consciousness Check
- C-section performed
- Request blood
- Stomach Decompression
- System Events
- Vocal 1
 - 1st response
 - 2nd response
 - 3rd response
 - 4th response
 - 5th response

Medication

- Anesthesia Related Drugs
- Benzodiazepines
- Cardiac
- Conscious Sedation
- Induction Medication
- IV Fluids
- Opioids
- Paralytics
- Reversal agents
- System Events
- Vasoactive Agents
- Wrong Dose Given

Configure your remote by dragging the items you want from the listboxes onto the remote buttons. Assign an item to a shift-function by dropping it in the shift-field above the button.

Airway

Shift

1st resp. 2nd res. 3rd resp. 4th resp. 5th resp.

Cardiac

Shift

Drop here to delete

OK Cancel Help

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Laerdal Scenario Builder

File Edit View Help

perio surgical asepsis.sce

Actions

BP, Monitor Controls, Airway, SpO₂, C O₂, Temp., ABC, Misc.

Events

BP, Monitor Controls, Airway, SpO₂, C O₂, Temp., ABC, Misc.

Frame1

A:Sinus 120
Blood Pressure 90/54
Monitor Controls
SpO₂ = 98
Breathing Rate: 16 CO₂ Exhalation OFF
Airway
Reset All
Vocal Sound: '22 fem late moan' Number: 1
Auscultation Sounds
Left Lung: Normal
Right Lung: Normal
Heart: Normal
Bowel: Hypoactive Bowel Postop
Shock Count = 0
Start Misc. Handler: 345 perio

FrameTime=1:00 | Pulse checked | change

Frame3 Frame2 Frame4

Frame2

A:Sinus 120
Blood Pressure 90/54
Monitor Controls
SpO₂ = 98
Breathing Rate: 16 CO₂ Exhalation OFF
Airway
Reset All
Vocal Sound: '22fem dont touch me stomach' Num

FrameTime=0:16 | Pulse checked | change

Frame3 Frame3 Frame4

Frame3

A:Sinus 120
Blood Pressure 90/54
Monitor Controls
SpO₂ = 98
Breathing Rate: 16 CO₂ Exhalation OFF
Airway
Reset All
Vocal Sound: '22 fem who are you stomach' Number: 1

FrameTime=1:00 | Pulse checked | change

Frame4 Frame0 Frame4

Start | SimMan Universal Patient... | Laerdal Scenario Bui... | 5:13 PM

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Laerdal Scenario Builder

File Edit View Help

perio surgical asepsis.sce

Actions

BP
!
SpO₂
CO₂
Temp.
ABC
Misc.

Events

Frame2
A:Sinus 120
Blood Pressure 90/54
Monitor Controls
SpO₂ = 98
Breathing Rate: 16 CO₂ Exhalation OFF
Airway
Reset All
Vocal Sound: '22fem dont touch me stomach' Num

FrameTime=0:16 Pulse checked change

Frame3
A:Sinus 120
Blood Pressure 90/54
Monitor Controls
SpO₂ = 98
Breathing Rate: 16 CO₂ Exhalation OFF
Airway
Reset All
Vocal Sound: '22 fem who are you stomach' Number: 1

FrameTime=1:00 Pulse checked change

Frame4
A:Sinus 104
Blood Pressure 90/54
Monitor Controls
SpO₂ = 89
Breathing Rate: 8 CO₂ Exhalation OFF
Airway
Reset All
Stop Vocal Sound

FrameTime=2:16 Pulse checked change

Frame5
A:Sinus 110
Blood Pressure 90/54
Monitor Controls
SpO₂ = 92
Breathing Rate: 10
Vocal Sound: '22fem what...ok i will' Number: 1

FrameTime=0:13

Start | SimMan Universal Patient... | Laerdal Scenario Buil... | 5:14 PM

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Laerdal Scenario Builder

File Edit View Help

Edit Menu

ABC Action

- Bag-tube-ventilation
- BURP
- Combi
- Cricoid pressure
- Cricothyrotomy
- Extubation
- Fiberoptic intubation
- Hyperventilation
- Inadequate ventilation
- Intubation
- IV Line
- IVLine Removed
- JET ventilation
- LMA
- Mask ventilation
- NPA
- OPA
- Oxygen
- Oxygen Removed
- Pneumothorax Decompr
- Suction
- System Events
- Two person mask ventil.
- Volume Infusion


Miscellaneous

- 2nd response
- 3rd response
- 4th response
- 5th response
- Abort attempt
- Auscultate heart
- Auscultate lungs
- Awaken the patient
- Call for help
- change
- Check diuresis
- Check Hemoglobine
- Consciousness Check
- C-section performed
- open airway attempt
- Request blood
- simon
- Stomach Decompression
- stop Ancef
- System Events


Medication

- Adenosine
- Albumin
- Aminophylline
- Amiodarone
- Anaesthetised airway
- Appropriate cardiac c
- ASA
- Atropine
- Benzodiazepines
- Blood
- Bretylium
- Dextran
- Dobutamine
- Dopamine
- Epinephrine
- Fentanyl
- Flumazenil
- Furosemide
- General Anaesthesia
- Glucose 5%
- Glucose 50%
- Glycopyrroniumbromi
- Inhalation Therapy
- Ketamine
- Lactated Ringer
- Lidocaine
- Magnesium Sulfate
- Mannitol
- Morphine

Sound



Configure your remote by dragging the items you want from the listboxes onto the remote buttons. Assign an item to a shift-function by dropping it in the shift-field above the button.



Airway

Shift

change 2nd res 3rd resp 4th resp 5th resp

Cardiac

Shift

Drop here to delete

OK Cancel Help