Orlando Science Center

Session Four



EMPLOYMENT AND TRAINING ADMINISTRATION
UNITED STATES DEPARTMENT OF LABOR

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RNCPI-CBLT Session 4 Folder Contents

Materials Checklist
Session 4 Overview
SimMan Setup Sheet
SimMan Features Sheet
Session 4 PowerPoint Slides
Session 4 Patient Chart Worksheet
Session 4 Teacher Script

Tips/Reminders for a Successful Off-site

1. Get the directions to the school (and reverse directions, if needed).

2. Get the school contact name and phone number.

3. Make sure that you have all materials necessary for the session (see the Materials Checklist).

4. Ask for petty cash for tolls and gas, if needed.

   Receipt Codes:

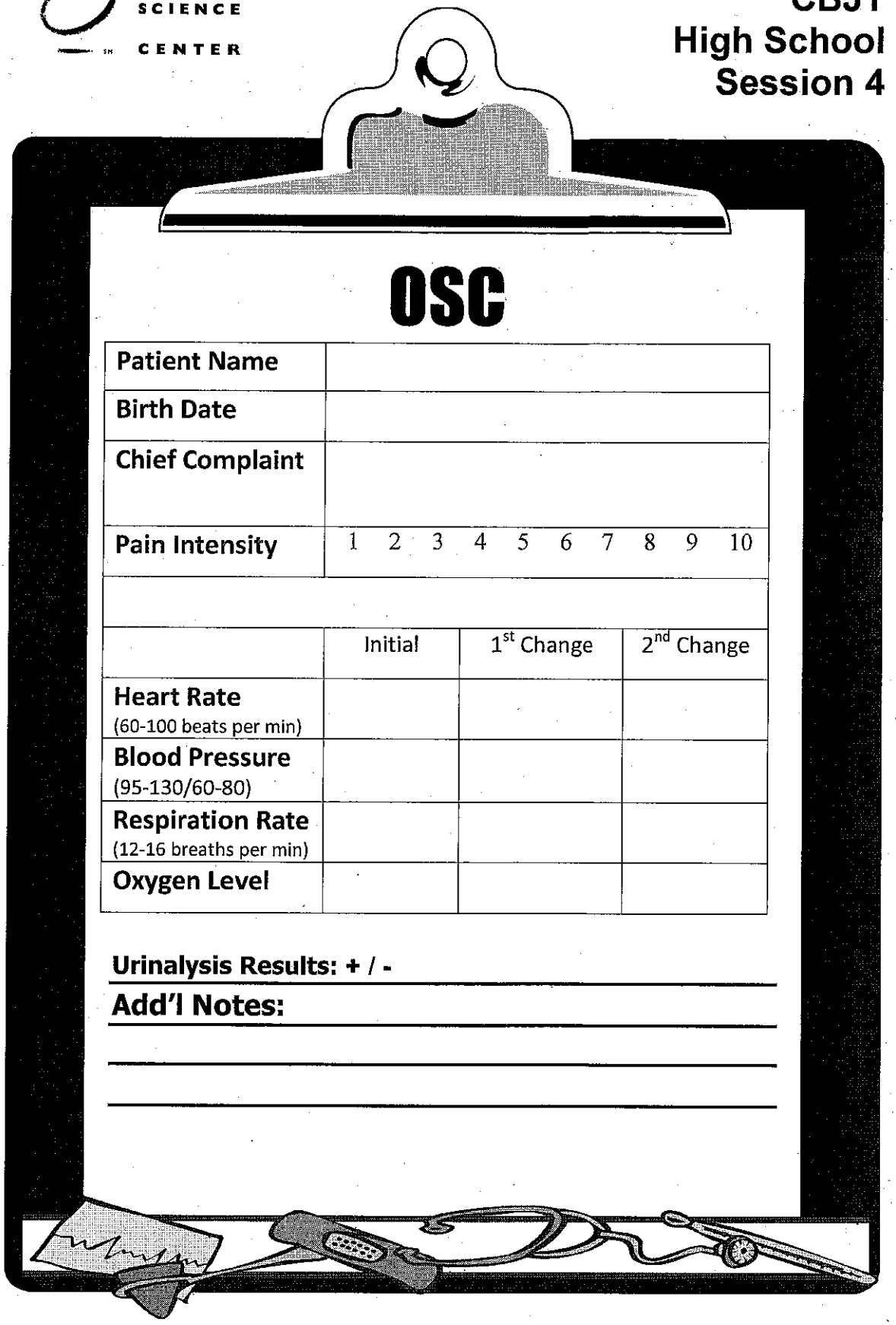
Write the receipt code on the receipt before submitting to H. Norton.

   915 – DOL
   935 – WCF
   290 – Regular Off-site

5. At the end of the session, give the projector time to cool before placing it back in the case. Turn it off as soon as you are finished using it. That should give it ample time to cool off before storing it again.

ORLANDO SCIENCE CENTER

Regional Nursing Career Pathway
CBJT
High School
Session 4



OSC

Patient Name	
Birth Date	
Chief Complaint	
Pain Intensity	1 2 3 4 5 6 7 8 9 10

	Initial	1st Change	2nd Change
Heart Rate (60-100 beats per min)			
Blood Pressure (95-130/60-80)			
Respiration Rate (12-16 breaths per min)			
Oxygen Level			

Urinalysis Results: + / -

Add'l Notes:

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www.osc.org

ORLANDO SCIENCE CENTER

Regional Nursing Career Pathway
CBJT
High School
Session 4

Medical Shorthand Activity:

Translate the Nurse's notes in the space provided below.

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RNCPI-CBLT Session 4 Instructor Reference Sheets
Materials Checklist & Session Overview

Session 4 Materials Checklist

- ❑ Toshiba Laptop **confirm ppt and videos working prior to leaving*
- ❑ Dell Laptop
- ❑ Sim Man and Accessories (see sim man setup)
- ❑ Sim Man Setup (1 copy)
- ❑ Sim Man Features (1 copy)
- ❑ Projector
- ❑ Speakers
- ❑ Exit Surveys (30 copies)
- ❑ Patient Chart (30 copies)
- ❑ Post-Assessment **take extra copies*
- ❑ Clip boards (6)
- ❑ Lab coats (3)
- ❑ Stethoscopes (2-3)
- ❑ Alcohol pads
- ❑ Blood pressure cuff (1)
- ❑ Simulated Urine Sample (prep sample w/ ammonia in labeled container-16 oz.)
- ❑ Small plastic cups for urinalysis (8)
- ❑ Laminated letter cards
- ❑ Phenolphthalein Solution
- ❑ Goggles (8)
- ❑ Gloves 1 box

RNCPI-CBLT Session 4 Instructor Reference Sheets
Materials Checklist & Session Overview

Session 4 Overview

*** Set up Sim Man according to setup instructions. Verify all sounds from both videos, ppt, and simulator working correctly prior to start time.***

What we've done so far; session 1-3 (1 slide)

Student Learning Objectives

Nursing Opportunities (1 slide)

Video: Simulation in Labs

Nursing Review Quiz (16 slides)

What is a Simulator? (3 slides)
- Define simulator
- Patient simulator

Video: Santos lifestyle clip #3

Modes of Gathering Patient information (review patient monitor, chart, and listening to report)

Begin Scenario
- -EMT report
- -Medical Transcription Activity
- -Patient Assessment
- -Urinalysis Activity
- -Diagnosis

Debreifing (2 slides)

Wrap-up
- -Exit Quiz (5 min)
- -Post Assessment (15 min)
- -Hands on Simulation

Simulation (5 slides)
History of simulation/ types of simulators/ newest advancements

RNCPI-CBLT

Session 4

ORLANDO SCIENCE CENTER

What we've done so far...

- **Session 1**
  - –ORLANDO SCI
  - –Patient Intake
  - –Vital Signs
- **Session 2**
  - –Urinalysis
  - –Dangers of Drugs and Alcohol
- **Session 3**
  - -Stimulants and Depressants

Student Learning Objectives

- The students will review nursing careers, medical terminology and the dangers of drugs and alcohol.
- The students will observe and collect data relating to change in vital signs.
- The students will use the skills acquired in previous sessions to infer diagnosis based on physiological changes displayed by a simulator.

Nursing Opportunities

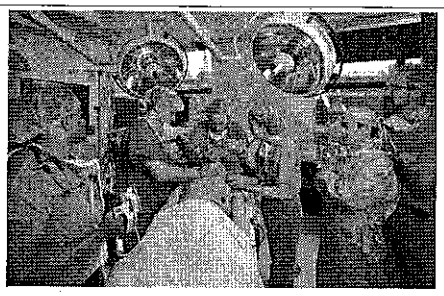
CNA- Certified Nursing Assistant
LPN- Licensed Practical Nurse

RN- Registered Nurse
- –Emergency Room Nurse
- –NICU Nurse
- –PHN- Public Health Nurse
- –CCN-Critical Care Nurse

CRNA- Certified Registered Nurse Anesthetist
CNS- Clinical Nurse Specialist

ARNP- Advanced Registered Nurse Practitioner
RNC- Registered Nurse Clinician

Video: Simulation in Labs



Nursing Review Quiz

Which type of nurse deals specifically with human responses to life-threatening problems?

(a) CNA- Certified Nursing Assistant
(b) RN- Registered Nurse
★ (c) CCN- Critical Care Nurse
(d) NA- Nurse Anesthetist

Which type of nurse focuses on improving the health of the community as a whole rather than just that of an individual or family?

★ (a) Public Health Nurse
(b) Licensed Practical Nurse
(c) NICU Nurse
(d) Nurse Anesthetist

This kind of nurse is also known as a patient care technician or home health aide and works under the supervision of a registered nurse to help patients with daily living tasks.

(a) Clinical Nurse Specialist
(b) Registered Nurse
(c) ER Nurse
★ (d) Certified Nursing Assistant

This type of nurse provides anesthetics to patients in collaboration with surgeons, anesthesiologists, dentists, podiatrists, and other qualified healthcare professionals.

(a) Public Health Nurse
★ (b) Certified Registered Nurse Anesthetist
(c) Clinical Nurse Specialist
(d) Licensed Practical Nurse

What word is used to describe when a medical problem began?

(a) Prescription
★ (b) Onset
(c) Negating Factors
(d) Time

What word is used to describe the degree to which pain is felt?

(a) Location
(b) Onset
(c) Duration
★ (d) Intensity

What word is used to describe where in the body pain or discomfort is experienced?

★ (a) Location
(b) Place
(c) Duration
(d) Prescription

What word means something that causes the symptoms to go away?

(a) Other Symptoms
(b) Social History
★ (c) Negating Factors
(d) Chief Complaint

Which term below describes the force of blood against arterial walls, and is measured as systolic (as the heart beats) and diastolic (as the heart relaxes between beats)?

(a) Heart Rate
(b) Heart Beats
(c) Blood Force
★ (d) Blood Pressure

Which term below is the measure of the number of breaths taken per minute; and, is measured in terms of rise/fall cycles (respirations) of the chest?

(a) Lung Volume
★ (b) Respiration Rate
(c) Pulse
(d) Temperature

Which of the following is not analyzed during urinalysis?

(a) Glucose
(b) Protein
(c) Ketones
★ (d) Vitamin A

How do stimulants affect the heart rate?

(a) They do not affect the heart rate.
★ (b) They decrease heart rate.
(c) They increase heart rate.
(d) They stop the heart immediately.

How do depressants affect the heart rate?

(a) They increase then decrease the heart rate.
(b) They increase the heart rate dramatically.
(c) They cause the heart to temporarily stop beating.
★ (d) They decrease the heart rate.

In the second video, what poor lifestyle choice did Santos make?

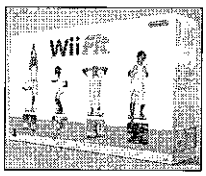
★ (a) Drinking beer
(b) Riding his bike without a helmet
(c) Writing hip-hop music
(d) Going to summer school

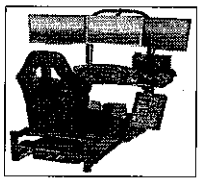
In the last video, Santos participated in recreational drug use (cocaine). What type of drug is cocaine?

(a) Antihistamine
(b) Depressant
(c) Non-steroidal Anti-inflammatory
★ (d) Stimulant

What is a Simulator?

A simulator is a tool that helps people recreate an environment for the purpose of research, training, and recreation.





Patient Simulation: Why is it used?

- Educational Effectiveness
  - •Teamwork
  - •Leadership
  - •Communication
- Multi-function Use
  - •Used in various medical fields
- Anatomically Realistic
  - •Emergency Medical Interventions
  - •Measure Vitals
  - •Practice role-playing scenarios

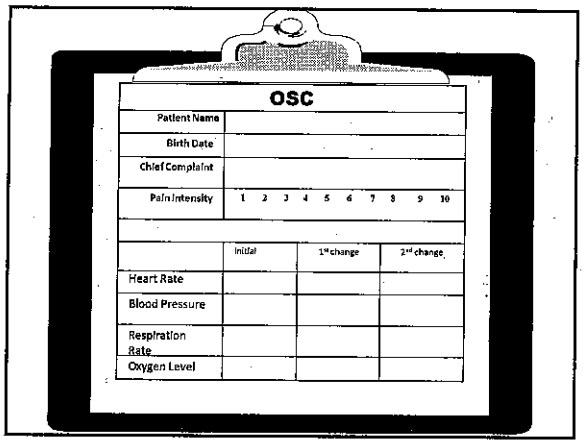
How is Santos doing?

Setting the Stage

Preparing for the Final Scenario

Modes of Gathering Patient Information

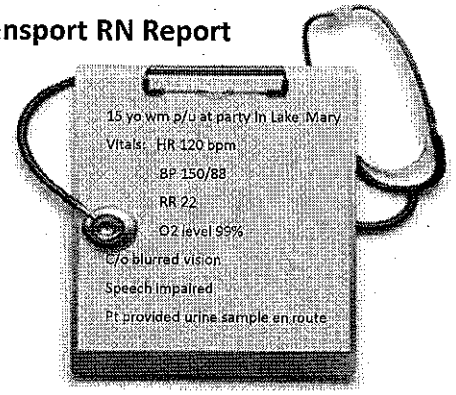
- Direct patient assessment
- Communication with healthcare team
- Patient monitor (See monitor)

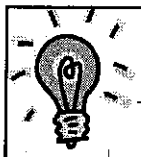


The Scenario

What Happens to Santos C. Jones?

Transport RN Report





What parts of **ORLANDO SCI** have you been able to complete so far?



What do you notice about Santos's *Blood Pressure* and *Heart Rate*?"

- ★ a. Increasing
- b. Decreasing
- c. No change

Urinalysis Testing in Progress



Based on Santos's vital signs, history, and lab results. What might you infer is the cause of his condition?

a. Drank too much alcohol
b. Indigested cleaning agents
c. Smoked pot
d. Snorted cocaine

CODE BLUE !

Debriefing

1. What type of communication took place during the scenario and what information were you able to collect?

2. What did the changes in vitals help you to infer? *(Hint: Think about the brine shrimp lab.)*

Debriefing Continued

3. How could lack of communication negatively effect patient care?

4. What are some advantages of simulation in healthcare?

Wrap Up

Exit Quiz

5 minutes

Post Assessment

15 minutes

Hands-On Simulation

Patient Simulation





Simulation: Past, Present and Future

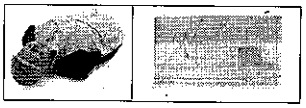
1960

The first Resusci-Anne



1970

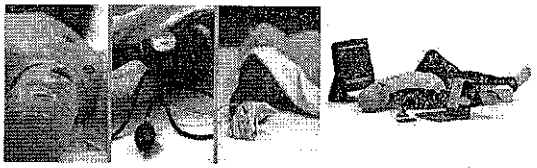
Feedback Added



1980s - American Heart Association required 90% correct performance to receive certification



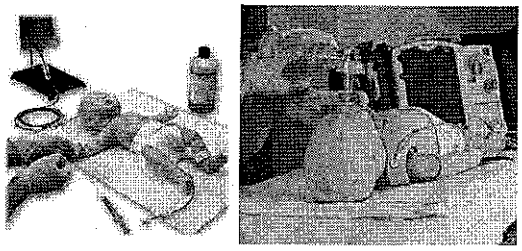
Sim Man



Features of Sim Man

- Palpating Pulse
- Auscultating blood pressure
- Auscultating heart and lung sounds
- Starting IV's
- Delivering electrical shocks

Sim Baby



The Future of Simulation
Sim Man 3G





SimMan Features

PULSE	Arterial palpatation of a heart beat	
	Carotid	Runs vertically along both sides of neck
	Femoral	Begins in abdomen, where your aorta aplits and can be felt in your groin area, at the crease where your lower abdomen meets your upper thigh
	Radial	Found on the thumb's side fo yoru wrist when the palm is facing you (most commonly used)
	Brachial	Found halfway between your shoulder and elbow, in the middle of your inner arm, between your bicep and tricep
BLOOD PRESSURE	The force of your blood pushing against the walls of your arteries (systolic=when heart beats; diastolic=between beats)	
HEART SOUNDS		
	Aortic stenosis	The narrowing/obstruction of the heart's aortic valve; prevents proper opening and blocks the flow of blood
	Austin flint murmur	Caused by aortic regurgitation, originating at the mitral valve when blood enters from both the aorta and left atrium simultaneously (named after Austin Flint who described it in 1862)
	Pericardial friction rub	The rubbing together of inflamed membranes of the pericardium, common after heart attack
	Mitral valve prolapse	Occurs when one of your heart's valves doesn't work properly
	Murmurs	Blowing, whooshing, or rasping sounds produced by turbulent blood flow through the heart valves or near the heart
		Systolic: occur between the first and second heart sound
		Diastolic: occur after second heart sound
LUNG SOUNDS		
	Normal	Breath sounds are the noises produced by the structures of the lungs during breathing.
	Crackles (a.k.a. rales)	Small clicking, bubbling, or rattling sounds in the lung. They are believed to occur when air opens closed air spaces. They can be further described as moist, dry, fine, and coarse.

SimMan Features

	Wheezing	High-pitched sounds produced by narrowed airways. They can be heard when a person breathes out (exhales)
	Rhonchi	Sounds that resemble snoring. They occur when air is blocked or becomes rough through the large airways.
	Stridor	Wheeze-like sound heard when a person breathes out (exhales). Usually it is due to an obstruction of airflow in the windpipe (trachea) or in the back of the throat.
	Pleural Rub	Low-pitched, grating, or creaking sounds that occur when inflamed pleural surfaces rub together during respiration. More often heard on inspiration than expiration
OTHER:		
	Trismus	Inability to open the mouth completely. It can be caused by muscle, nerve or joint damage.
	Pharyngeal obstruction	Characterized by noisy breathing, difficult swallowing, coughing and the coughing up of food
	Tongue edema	Caused by local obstruction to venous blood flow
	Stomach distention	The actual "*physical*" finding that your abdominal area is larger than normal.

PN- *(To Student Nurse)*
Before we begin rounds tonight, I wanted to let you know what to expect from clinicals today. I will rely on you to assist with prep work, patient assessment, and monitoring of vitals. Please don't hesitate to ask questions. This is going to be a learning experience for you. In the Emergency room, you can expect things to be fast-paced and every second counts. Ask questions as needed. Expect to learn a lot. This is your opportunity to get more comfortable with patient interaction and the general atmosphere in a hospital. Let's meet our first patient.

PN and SN wash hands and put on gloves.

EMT- "I have a 15 year old white male. Picked up at a party in Lake Mary. Awake on-site, oriented times three and cooperative.
His vital signs are:

- Heart rate- 120beats per minute- client says its pounding!
- Blood pressure- 150/88
- Respiration rate- 22
- Oxygen level- 99%
- Complains of blurred vision and speech somewhat impaired.
- He stated that he needed to use the restroom and I grabbed you a sample. Here you go!

Good luck. Have a great day!"

Pause scenario for medical transcription activity.

PN- " Hi my name is _____. I'm you nurse for today. This is _____ a student nurse who will be helping to take care of you. We are going to be taking your vital signs so we can help you. Can you tell me your name?" *(checks i.d. bracelet)*

SM- " Santos C. Jones"

PN- "When were you born?"

SM- "April 1st, 1994"

PN- " ____ student nurse can you label this urine sample Santos C. Jones and send it down to the lab for toxicology? And then draw blood for a blood alcohol level?"

SN- "Sure!" *Takes sample to the side and labels*

PN- *While the student nurse labels the cups the PN listens to heart sounds and counts heart rate.* "The client's heart rate is 134 bpm."

*(to student nurse)*_____ Can you please place the pulse oximeter on the clients right index finger?" *SN places pulse oximeter*

checks blood pressure. His blood pressure is 160/92.

(to student nurse) Can you measure respiration?

SN- " Absolutely. His respiration rate is 24."

PN- Santos, are you feeling any pain?

SM-" groans.... My chest hurts!"

PN- " Can you rate your pain on a scale of 1-10 with 1 being the least and 10 being the worst?

SM- "It's a six!"

<ppt slide>
What parts of ORLANDO SCI have you been able to complete so far?

PN- "Ok we will try to make you more comfortable... do you have any allergies? Take any medications? Did you take any recreational drugs or alcohol?

SM- No

PN- " Can you monitor the clients vitals and let me know if there are any changes?

SN- " Yes, I'll let you know if there are any major changes!"

PN- It looks like Santos' *{mother}* has just arrived.

FM: "Yes! I am Santos' *{mother}* ! What's wrong with my son?"

PN: "Your son was brought in... it looks like he had a rough time at the party."

FM: "What party? Is he going to be OK?"

PN: " We will update you on his progress in just a second, but I need to ask you an important question. When was the last time you saw your son?"

FM: " We just got back in town from vacation. I spoke to Santos on the phone at 5 o clock and he said he was going to the park to meet friends! I hope he will be OK... can you update me on what you're doing?"

PN- " Your son was brought in from a party complaining of blurred vision and his speech was somewhat impaired. We ordered labs. We are awaiting test results for more information.

SN- (to mother) We have some paper work for you to sign while we are waiting for test results.

PN checks vitals.

PN- "The heart rate is at 160, BP is 180/100!"

<ppt Q2>
What do you notice about Santos' Blood Pressure and Heart Rate?"
Answer choices:

PN- We need to consult with the ER doctor.

ER doctor enters the room

ERDR- " We have a new patient ? What's going on?"

PN- I have Santos C. Jones; he was brought in from a party after passing out at a party. He complained of blurred vision and his speech was slurred.

ERDR- What are his vitals?

SN- Heart rate is 160. BP is 180/100. His respiration rate has increased to 26. We are awaiting results of the urine and blood toxicology screening.

Pause scenario and have students perform urinalysis. Record results.

ERDR- Thank you. Santos, I am Dr. _____, I'm here to help you feel better. We are waiting on your test results and have noticed that your vitals still seem elevated. I am going to listen to your chest for a minute. Can you breathe in for me? *Listens to chest with stethoscope, checks over patient.*

SM- I feel like I could die.

PN- Hang in there Santos, we are doing everything we can for you.

SN- Here is the test results.

ERDR- *looks over results.... And then share with the PN and SN*

" The blood alcohol level is 0.06%, and the drug strip is positive."

PN- " That confirms what I thought"

ERDR- " I'm going to order a secondary panel to determine the type of recreational substance used. I need to finish rounds, page me if his condition changes."

SN leaves to run secondary panel.

Q3 ppt
Based on Santos's vital signs, history, and lab results. What might you infer is the cause of his condition?

SM- " I'm so sick".

PN- Ok, Santos, hang in there, we are doing everything we can to help you. *(to student Nurse)* We are at the critical stage where every decision counts. Now that we know a recreational substance was used, we can confirm which one and treat our patient more efficiently.

Patient enters VFIB.
PN- " I have a problem here. I need help!"

PN and ERDR return to bedside. PN looks at monitor and feels for a pulse,

PN- " CODE BLUE!"

RNCPI-CBLT Session 4 Teacher Script

Engage: (5 minutes)

Presenter: " We have spent the last three sessions preparing for today. As we have watched the drama unfold, a young life will take a dramatic turn today as we take part in a simulated health crisis using a patient simulator technology."

Explore: (5 minutes)

Presenter: "Before we can begin we need to review what we have learned about nursing careers, medical terminology and the dangers alcohol and drug abuse."

The following script for the dialogue that will take place during the simulation scenario. The students will play the parts of the EMT, family member (FM), lab tech (LT), patient tech (PT), ER doctor (ERDR) and student nurse (SN). The OSC staff will play the part of the Primary nurse (PN). Sim Man will play the role of the patient(SM)

Students who are in the audience will receive a blank patient care chart for recording information. Student observers will chart the client's vital signs and take notes on the scenario.

There will be slides which ask questions as noted throughout the scenario as well as two hands on activities.

Be sure all actors (except for the parent) are wearing proper medical equipment and gloves prior to start of scenario.

PN-Primary Nurse (instructor)
SN-student Nurse
SM-sim man/operator
ERDR- emergency room doctor
FM- family member

{SLIDE 29}

PN- *(To Student Nurse)*
Before we begin rounds tonight, I wanted to let you know what to expect from clinicals today. I will rely on you to assist with prep work, patient assessment, and monitoring of vitals. Please don't hesitate to ask questions. This is going to be a learning experience for you. In the Emergency room, you can expect things to be fast-paced and every second counts. Ask questions as needed. Expect to learn a lot. This is your opportunity to get more comfortable with patient interaction and the general atmosphere in a hospital. Let's meet our first patient.

PN and SN wash hands and put on gloves.

EMT- "I have a 15 year old white male. Picked up at a party in Lake Mary. Awake on-site, oriented times three and cooperative.
His vital signs are:

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- Blood pressure- 150/88
- Respiration rate- 22
- Oxygen level- 99%
- Complains of blurred vision and speech somewhat impaired.
- He stated that he needed to use the restroom and I grabbed you a sample. Here you go!

Good luck. Have a great day!"

Pause scenario for medical transcription activity.
(To students) When given a large amount of information, its important to be able to correctly and quickly document everything. Like we learned in session 1, medical shorthand is used to do this.

Turn your papers over, and translate the shorthand which is displayed on the ppt. This is an example of medical transcription which is another important aspect of patient care.

{SLIDE 30}

PN- " Hi my name is _____. I'm you nurse for today. This is _____ a student nurse who will be helping to take care of you. We are going to be taking your vital signs so we can help you. Can you tell me your name?" *(checks i.d. bracelet)*

SM- " Santos C. Jones"

PN- "When were you born?"

SM- "April 1st, 1994"

PN- " ____ student nurse can you label this urine sample Santos C. Jones and send it down to the lab for toxicology? And then draw blood for a blood alcohol level?"

SN- "Sure!" *Takes sample to the side and labels*

PN- *While the student nurse labels the cups the PN listens to heart sounds and counts heart rate.* "The client's heart rate is 134 bpm."

*(to student nurse)*_____ Can you please place the pulse oximeter on the clients right index finger?"

{ON SIM LAPTOP, DISPLAY VITALS}

checks blood pressure. His blood pressure is 160/92.

(to student nurse) Can you measure respiration?

SN- " Absolutely. His respiration rate is 24."

PN- "Are you feeling any pain?"

SM-" groans.... My chest hurts!"

PN- " Can you rate your pain on a scale of 1-10 with 1 being the least and 10 being the worst?

SM- "It's a six!"

{SLIDE 31}
What parts of ORLANDO SCI have you been able to complete so far?

PN- "Ok we will try to make you more comfortable... do you have any allergies? Take any medications?

SM- No

PN- Did you take any recreational drugs?

SM- I don't want to get into any trouble with my parents.

PN- " Can you monitor the clients vitals and let me know if there are any changes?

SN- " Yes, I'll let you know if there are any major changes!"

{ON SIM LAPTOP, SELECT FIRST CHANGE}

PN- It looks like Santos' *{mother}* has just arrived.

FM: "Yes! I am Santos' *{mother}* ! What's wrong with my son?"

PN: "Your son was brought in... it looks like he had a rough time at the party."

FM: "What party? Is he going to be OK?"

{ON SIM LAPTOP, DISPLAY VITALS}

PN: " We will update you on his progress in just a second, but I need to ask you an important question. When was the last time you saw your son?"

FM: " We just got back in town from vacation. I spoke to Santos on the phone at 5 o clock and he said he was going to the park to meet friends! I hope he will be OK... can you update me on what you're doing?"

PN- " Your son was brought in from a party complaining of blurred vision and his speech was somewhat impaired. We ordered labs. We are awaiting test results for more information.

SN- (to mother) We have some paper work for you to sign while we are waiting for test results.

PN checks vitals.

PN- "The heart rate is at 160, BP is 180/100!"

{SLIDE 32}
What do you notice about Santos' Blood Pressure and Heart Rate?"
Answer choices:

a. **Decreasing**
b. **Remain the same**
c. **Increasing**

PN- We need to consult with the ER doctor.

ER doctor enters the room

{ON SIM LAPTOP, DISPLAY VITALS}

ERDR- " We have a new patient ? What's going on?"

PN- I have Santos C. Jones; he was brought in from a party after passing out at a party. He complained of blurred vision and his speech was slurred.

ERDR- What are his vitals?

SN- Heart rate is 160. BP is 180/100. His respiration rate has increased to 26. We are awaiting results of the urine and blood toxicology screening.

{SLIDE 33- URINALYSIS}
Pause scenario and have students perform urinalysis. Record results.

ERDR- Thank you. Santos, I am Dr. _____, I'm here to help you feel better. We are waiting on your test results and have noticed that your vitals still seem elevated. I am going to listen to your chest for a minute. Can you breathe in for me? *Listens to chest with stethoscope, checks over patient.*

SM- I feel like I could die.

PN- Hang in there Santos, we are doing everything we can for you.

SN- Here is the test results.

ERDR- *looks over results.... And then share with the PN and SN*

" The blood alcohol level is 0.06%, and the drug strip is positive."

PN- " That confirms what I thought"

ERDR- " I'm going to order a secondary panel to determine the type of recreational substance used. I need to finish rounds, page me if his condition changes."

SN leaves to run secondary panel.

{SLIDE 34}

Based on Santos's vital signs, history, and lab results. What might you infer is the cause of his condition?

a. Drank too much alcohol
b. Indigested cleaning agents
c. Smoked pot
d. **Snorted cocaine**

{ON SIM LAPTOP, DISPLAY VITALS}

SM- " I'm so sick".

PN- Ok, Santos, hang in there, we are doing everything we can to help you. *(to student Nurse)* We are at the critical stage where every decision counts. Now that we know a recreational substance was used, we can confirm which one and treat our patient more efficiently.

Patient enters VFIB.
PN- " I have a problem here. I need help!"

PN and ERDR return to bedside. PN looks at monitor and feels for a pulse,

PN- " CODE BLUE!"

{SLIDE 35}