



School of Health and Life Sciences

Simulation Centre

**RESP 2695
Pediatric OR – PALS
Stage 1 Induction and Emergence**

Revised Date: November 2020

Public Scenario Title

OR Induction – Pediatric Patient

Scenario Description

The participant is called to assist the anesthetist with inducing a pediatric patient who is having surgery to remove a brain tumor. Assist in induction and emergence.

Scenario Objectives

1. Ensure closed-loop communication between team members
2. Induce anesthesia
3. Ventilation with self-inflating bagger with mask and troubleshooting.
4. Pediatric Intubation
5. Pediatric Extubation
6. **CBO submissions:**
 - a. **S4.1 Intubation** (person intubating only)
 - b. **S4.3 Secure ETT** (both participants in scenario, all if variants run)
 - c. **S4.4 Extubation** (both participants in scenario, all if variants run)
 - d. **S4.5 Intubation assist** (both participants in scenario, all if variants run)
 - e. **S5.1 Assist Anesthetic Administration** (both participants in scenario, all if variants run)
 - f. **S5.2 Assist Emergence** (both participants in scenario, all if variants run)
 - g. **S5.3 Position Patient** (both participants in scenario, all if variants run)

Equipment and Supplies

Sim centre supplied	RT program supplied
Peds mannequin laying on OR table, wearing hospital gown. On cardiac monitor: RR 18 HR 118 BP 115/75 SpO2 99% (1 yr old HAL)	Sim cart (2) and 1 yr old HAL
Cart for mannequin monitor	Anesthetic gas machine
IV in place connected to IV pumps	A frame test lung
Suction set up x 2 with yankauer suction attached	Self inflating bagger
Double O2 flow meter	Ventilator and circuit
IV meds – Fentanyl, versed, rocuronium	
Microphone for confederate	
Epinephrine ampules	
1, 3 ml syringe x 2 each	
2 x 10ml saline flushes	
Stretcher	
Code Cart and ped pads	
O2 tank for transfer	
Large chair	
Gauze to wrap head of pt in at end of scene 1	

As there are competencies attached to this scenario – all students must participate, so variants must be run. Have students complete in pairs.

Briefing Information

Information for participants pre-scenario

Students should be guided in a brief discussion about Anesthetic procedures – administration of meds, what order and monitoring during – guide discussion with CBO descriptions and field any questions.

Participants

Student playing the role of RT - You are working in the OR and are called to assist with induction on Christopher Jones, an 18 month old, 10kg patient who is having surgery to remove a brain tumor.

Student playing the role of anesthetist - You are working in the OR as an anesthetist and have called the RT to assist with induction for Christopher Jones, an 18 month old, 10kg patient who is having surgery to remove a brain tumor. You will ask the RT to do the intubation. You can have RT help you position patient for surgery by moving bed, lying flat. The surgeon will enter the room and wrap the head of the patient in gauze while you are finishing up positioning to progress the scenario to post op recovery. The participant will then help recover patient.

You will use IV atropine, fentanyl, and rocuronium to induce the patient while the RT manages the airway.

Student playing the role of surgeon - once rt and anesthetist secure ETT with tapes you are to come into room and put gauze overhead and state surgery complete and everything went well and then leave, OR may come in while rt and anesthetist taping ETT to tell them to hurry to put them under pressure to complete task if scenario taking a long time so you can start the surgery.

Scenario Flow – 2 participants – 1 RT 1 anesthetist

Mannequin laying on bed, wearing hospital gown. On room air.

On cardiac monitor: RR 24 HR 118 BP 115/75 SpO₂ 99%

RT should discuss the plan for induction with the anesthetist

RT should:

- 1) pre-oxygenate the patient using the mask from the AGM.
- 2) Once comfortable they should have the anesthetist give IV sedation.
- 3) Once the patient goes to sleep the students should intubate the patient.

Vitals should remain stable as long as RT maintains airway and ventilations.

It doesn't matter whether it's a nasal vs. oral intubation – ETT secured – participants can leave the room

***Student playing role of the surgeon comes in to wrap head of mannequin in gauze and states surgery complete and surgery went well with no complication, then leaves abruptly saying he has a meeting to go to ***.

The anesthetist instructs the RT that he/she's happy for them to extubate as soon as the patient is awake.

Students should with help of anesthetist, ensure the patient is awake and then remove the ETT. (open eyes on mannequin)

Have mannequin obstruct requiring jaw thrust. Scene ends as obstructions clears and students remove jaw thrust.

Open Mannequin eyes and have them cry. Airway clear.

Variant – scenario end

*** Student playing role of the surgeon comes in to wrap head of mannequin in gauze and states surgery complete and surgery went well with no complications, then leaves abruptly saying he has a meeting to go to ***.

The anesthetist instructs the RT that he/she's happy for them to

Debriefing Information

Objective	Criteria for Meeting/Exceeding Objective (describe)
Patient Assessment	<ul style="list-style-type: none">• Quickly assesses patient and recognizes need for intervention• Manages AW with jaw thrust• Calls for help
Ventilation with BVM	<ul style="list-style-type: none">• Recognizes need for ventilation• Effectively ventilates via BVM
Intubation	<ul style="list-style-type: none">• Correctly performs both oral intubation• Verifies tube placement• Secures tube safely
Induce a pediatric patient	<ul style="list-style-type: none">• Give IV sedation• Ensure hemodynamic stability after sedation is given• Monitor effectiveness of sedation
Assist with Emergence	<ul style="list-style-type: none">• Assess for readiness to extubate• Perform extubation and ensure patient safety.

Three Stage Debriefing Model

1. Reactions/Emotions

- Participants share their feelings and redeem their actions
- Facilitators can say (to allow for reactions from each participant), “**In one word, describe how that felt for you**”, or “**How are you feeling right now?**”

2. Analysis/Exploration

- Facilitator systematically sets the stage for discussion topics – based on the scenario objectives, and any learning gaps that may have presented in the scenario
- Facilitators can say, “**Now I’d like to talk about (insert topic here).**”
- Facilitators can use a number of techniques to initiate responses from the participants, such as “Advocacy/Inquiry”, “Appreciative Inquiry”, “Self-reflection”, etc.
- Aim is to for the facilitator to LISTEN, understand, and respect learners’ perspectives. Once that is accomplished, the facilitator should “close” any performance/learning gaps.

3. Summary/Application

- Engages participants for future application of all learning points.
- Facilitators can say, “**What is one ‘take away’ from our discussion that you could apply the next time you encounter the same or a similar clinical situation?**”

Roles of the Facilitator through the Simulation Experience

- Respect for learner opinions and psychological safety
- Belief in integrity of learning through simulation
- Manages upset/monopolizing/outlier individuals



**School of Health and Life Sciences
Simulation Centre**

**RESP2695
Pediatric OR – PALS
Stage 2 – Cardiac Arrest – Post op**

Revised Date: November 2020

Public Scenario Title

PALS Scenario

Scenario Description

A post-op patient has a cardiac arrest

Scenario Objectives

7. Perform hand hygiene/ ensure appropriate PPE
8. Use NOD (name, occupation, duty) when first introducing self to patients and family members/Confirm patient identity
9. Principles of PALS
10. Ensure closed-loop communication between team members
11. **CBO submissions:**
 - a. **S4.1 Intubation** (participant performing intubation only)
 - b. **S7.4 PALS** (all participants)
 - c. **S9.4 Transport of an intubated patient** (have all students participate for sign off)

Equipment and Supplies

Sim centre supplied	RT program supplied
Peds mannequin laying on OR table, wearing hospital gown. On cardiac monitor: RR 18 HR 118 BP 115/75 SpO2 99% (1 yr old HAL)	Sim cart (2) and 1 yr old HAL
Cart for mannequin monitor	Anesthetic gas machine
IV in place connected to IV pumps	A frame test lung
Suction set up x 2 with yankauer suction attached	Self inflating bagger
Double O2 flow meter	Ventilator and circuit
IV meds – Fentanyl, versed, rocuronium	
Microphone for confederate	
Epinephrine ampules with 1, 3 ml syringe x 2 each	
2 x 10ml saline flushes	
Stretcher	
Code Cart and ped pads	
O2 tank for transfer	
Large chair	
Gauze to wrap head of pt in at end of scene 1	

As there are competencies attached to this scenario – all students must participate, so variants must be run. Have students complete in pairs.

Briefing Information

Facilitator – Give the participants the info below. But don't call students in, instead, have the RN in the room and once you are up in the control room, change pt status as per scenario flow and have RN call the code.

Participants

You are working in recovery room as RTs. A pt, Christopher Jones, an 18 month old 10 kg patient had surgery earlier today to remove a brain tumor. The surgery was uncomplicated and he was slow to emerge from anesthesia, the RN has called you because she is concerned with how sleepy he has

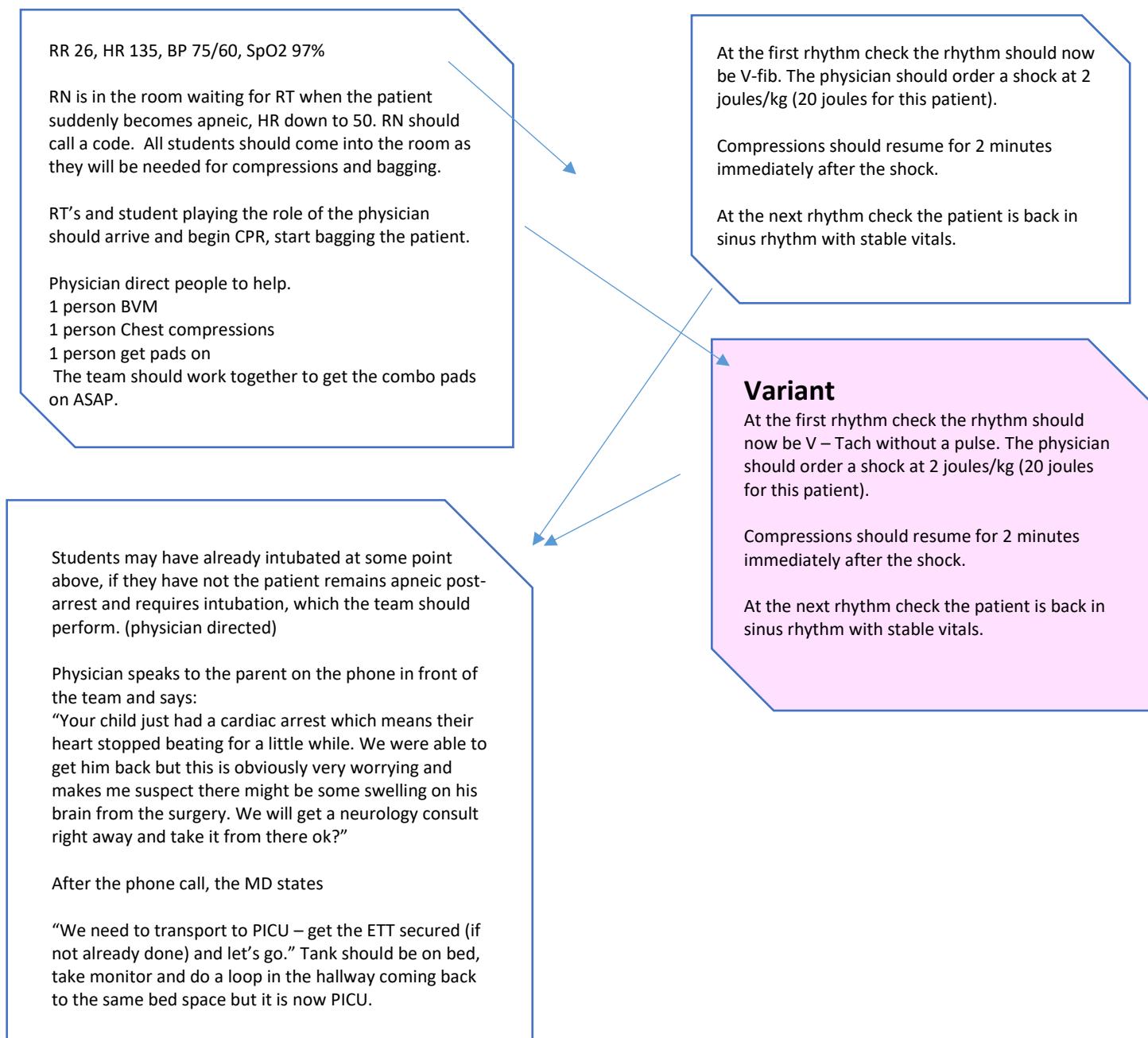
become again and, he started having occasional runs of Junctional Escape Tachycardia which are unexplained. She has called neurology and they should be here soon. You can work together as a team.

Confederate Background Information

One student plays the role of the physician who runs the code. (They are the anesthetist and come when the code is called by the RN.) They should wear a confederate mic and be guided by the sim facilitator. They can be pre-briefed that the patient will have a V-fib arrest and that the patient will require one shock, and will then convert back to sinus rhythm. Provide them with the PALS algorithm below.

One of the students plays the role of the RN. When they start the scenario – ***"hey everyone come in here, I need help, I think Christopher is coding"***. Their role is to manage the code cart, apply the pads, give the shock, and give the epi at the direction of the physician.

Scenario Flow



Debriefing Information

“Debriefing should reflect back on the pre-determined objectives, but may also move in unexpected directions.”

Objective	Criteria for Meeting/Exceeding Objective
<i>Perform PPE and identify self and patient</i>	<ul style="list-style-type: none">• Hand hygiene• ID patient• Communicate with team
PALS	<ul style="list-style-type: none">• Appropriate depth and rate of compressions• Appropriate compression to ventilation ratio• Proper PALS sequence
<i>Transport intubated patient</i>	<ul style="list-style-type: none">• Prepare needed equipment<ul style="list-style-type: none">○ resuscitation meds epi○ Re-Intubation equipment○ Portable suction○ Bagger/Mask/Syringe
<i>Ensure closed-loop communication between team members</i>	<ul style="list-style-type: none">• Organize who's doing what between the two RT student participants, and communication with the doctor and RN

Three Stage Debriefing Model

4. Reactions/Emotions

- Participants share their feelings and redeem their actions
- Facilitators can say (to allow for reactions from each participant), “**In one word, describe how that felt for you**”, or “**How are you feeling right now?**”

5. Analysis/Exploration

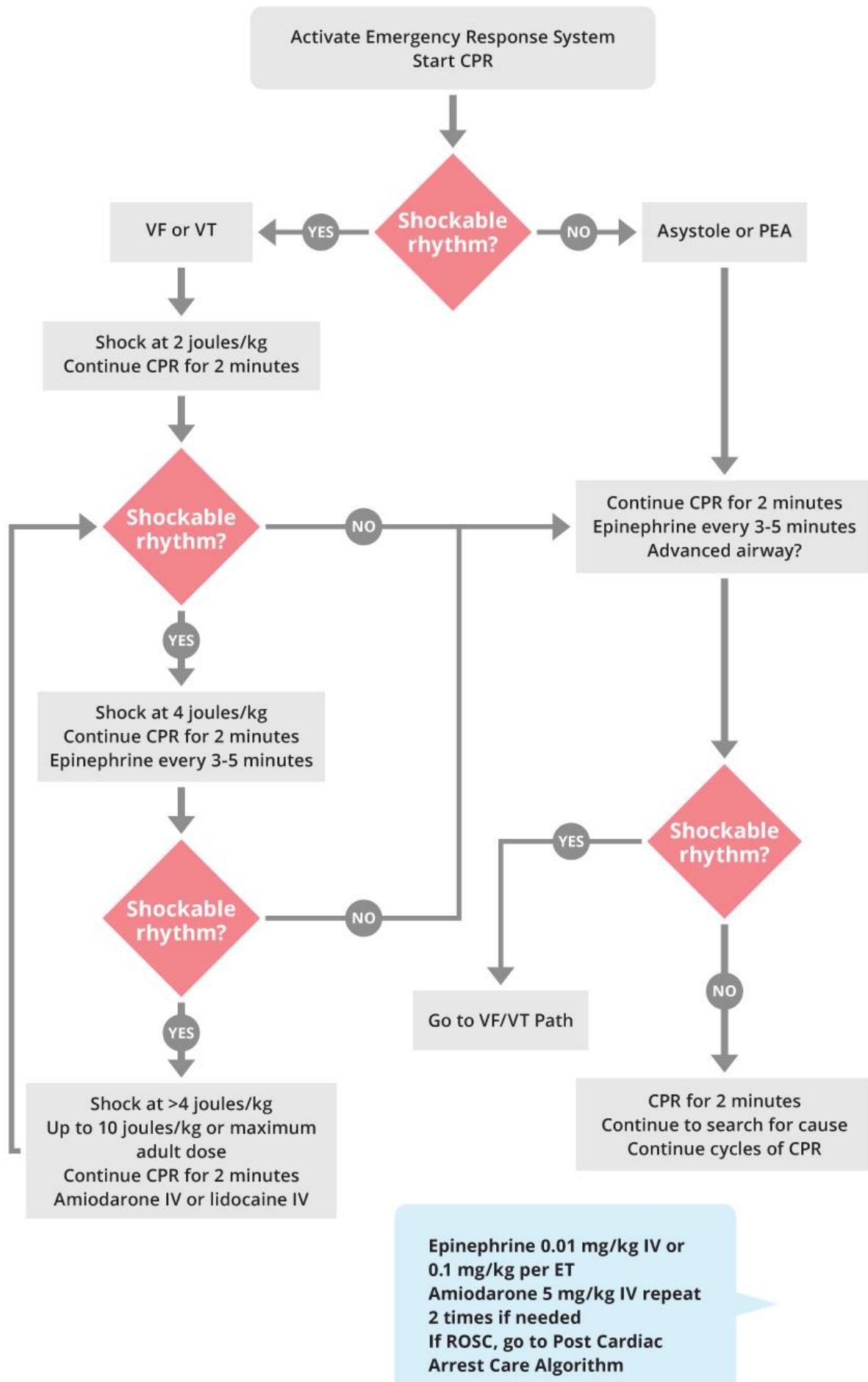
- Facilitator systematically sets the stage for discussion topics – based on the scenario objectives, and any learning gaps that may have presented in the scenario
- Facilitators can say, “**Now I'd like to talk about (insert topic here).**”
- Facilitators can use a number of techniques to initiate responses from the participants, such as “Advocacy/Inquiry”, “Appreciative Inquiry”, “Self-reflection”, etc.
- Aim is to for the facilitator to LISTEN, understand, and respect learners' perspectives. Once that is accomplished, the facilitator should “close” any performance/learning gaps.

6. Summary/Application

- Engages participants for future application of all learning points.
- Facilitators can say, “**What is one ‘take away’ from our discussion that you could apply the next time you encounter the same or a similar clinical situation?**”

Roles of the Facilitator through the Simulation Experience

- Respect for learner opinions and psychological safety
- Belief in integrity of learning through simulation
- Manages upset/monopolizing/outlier individuals





**School of Health and Life Sciences
Simulation Centre**

**RESP2695
Pediatric OR – PALS
Stage 3 Withdrawal of Care**

November 2020

Public Scenario Title

Peds OR Patient Cardiac Arrest

Scenario Description

A 18 month old child had surgery to remove a brain tumor this morning. They have now been in the PICU for 12 hours and have had one cardiac arrest. They are found to be brain dead so the team will withdraw care following a family conference.

Scenario Objectives

12. Perform hand hygiene/ ensure appropriate PPE
13. Use NOD (name, occupation, duty) when first introducing self to patients and family members/Confirm patient identity
14. Compassionate care for the patient and family
15. Extubation
16. Critical incident stress management and debriefing
17. Ensure closed-loop communication between team members

Equipment and Supplies

Sim centre supplied	RT program supplied
Peds mannequin laying on OR table, wearing hospital gown. On cardiac monitor: RR 18 HR 118 BP 115/75 SpO2 99% (1 yr old HAL)	Sim cart (2) and 1 yr old HAL
Cart for mannequin monitor	Anesthetic gas machine
IV in place connected to IV pumps	A frame test lung
Suction set up x 2 with yankauer suction attached	Self inflating bagger
Double O2 flow meter	Ventilator and circuit
IV meds – Fentanyl, versed, rocuronium	
Microphone for confederate	
Epinephrine ampules	
1, 3 ml syringe x 2 each	
2 x 10ml saline flushes	
Stretcher	
Code Cart and ped pads	
O2 tank for transfer	
Large chair – brought in for this scene only	

Only run this scenario once followed by a thorough debrief

Briefing Information

Information for participants pre-scenario

A thorough pre-brief on end of life scenarios and how to withdraw care is essential for this scenario. It is also vital that students know they can quit the scenario at any time. A list of resources is attached to the bottom of the scenario.

Participant

You are working in PICU as RTs. An 18 month old child had a brain tumor removed this morning, subsequently arrested and is now intubated and has now been in the PICU for about 12 hours. They are very unstable and have had one cardiac arrest. Neurology was consulted and the patient went for a cerebral perfusion scan. Unfortunately the patient was found to have no cerebral perfusion and is brain dead.

The physician has already had a family conference and the family has agreed to withdraw care. The physician provides you with an order to extubate the patient to room air. The mother has requested to be holding her child while he's extubated and the physician has agreed with that request.

You are to work with the RN to withdraw care from the patient while the mother holds the child in chair or on stretcher.

Confederate Background Information

One of the students plays the role of the RN. Their role is to remove the ECG leads/BP cuff etc. and turn off the monitor in the room, as well as to assist the RT with withdrawal of care.

Simulated Participant Background Information

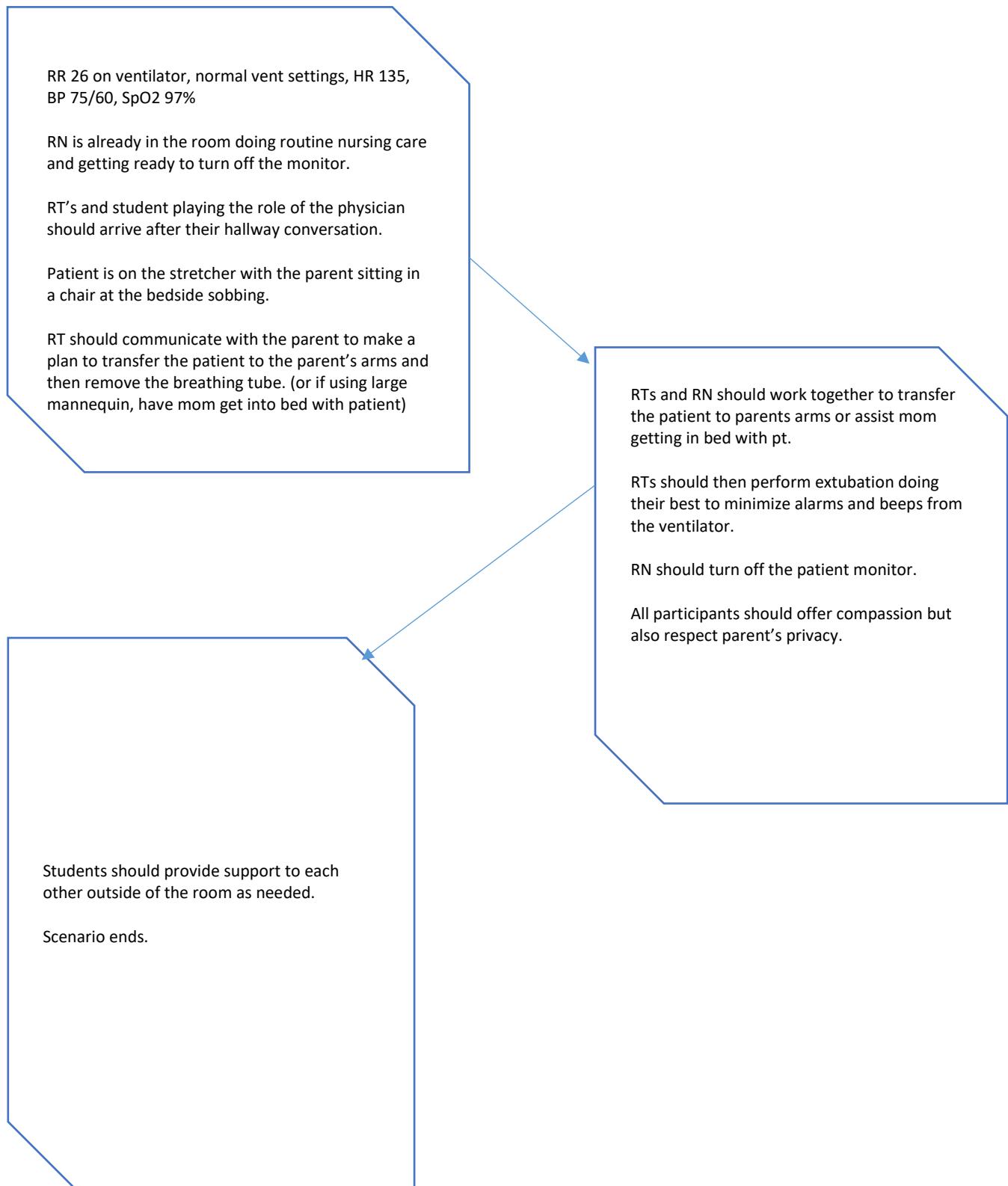
You are the mother/father of a five year old child who had a brain tumor and surgery to try and remove it. They have unfortunately been found to be brain dead after a cardiac arrest following surgery. The physician has just had a family conference with you where you have agreed to withdraw care and let your son pass away naturally. You have requested to be holding him in your arms when the team takes out his breathing tube.

The scenario begins with you sitting in a chair at the bedside sobbing.

The RT will enter the room and should communicate with you about how they will transfer the patient to your arms and the plan to remove the breathing tube. You are sobbing/upset throughout the scenario.

Once they take out the breathing tube you will sob and rock your child while the students provide comfort and then exit the room. The scenario will then end.

Scenario Flow



Debriefing Information

"Debriefing should reflect back on the pre-determined objectives, but may also move in unexpected directions."

Objective	Criteria for Meeting/Exceeding Objective
<i>Perform PPE and identify self and patient</i>	<ul style="list-style-type: none">• Hand hygiene• ID patient• Communicate with team
Compassionate care for the patient and family	<ul style="list-style-type: none">• Provide pt care with compassion for them and family• Appropriate communication
<i>Extubation</i>	<ul style="list-style-type: none">• Handling special situations how extubate to withdraw care looks different than a regular extubation• Pre-silencing of alarms• Preparing family for what comes next• Minimizing trauma and mess• Working around a parent in distress• Speaking to patient during• Allowing privacy
<i>Critical incidence stress management and debriefing</i>	<ul style="list-style-type: none">• Self care techniques• Stress management• Review of resources available• Stress importance of closing the loop
<i>Ensure closed-loop communication between team members</i>	<ul style="list-style-type: none">• Organize who's doing what between the two RT student participants, and communication with the patient's family and healthcare team

Three Stage Debriefing Model

7. Reactions/Emotions

- Participants share their feelings and redeem their actions
- Facilitators can say (to allow for reactions from each participant), "**In one word, describe how that felt for you**", or "**How are you feeling right now?**"

8. Analysis/Exploration

- Facilitator systematically sets the stage for discussion topics – based on the scenario objectives, and any learning gaps that may have presented in the scenario
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- Facilitators can use a number of techniques to initiate responses from the participants, such as "Advocacy/Inquiry", "Appreciative Inquiry", "Self-reflection", etc.
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9. Summary/Application

- Engages participants for future application of all learning points.
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Roles of the Facilitator through the Simulation Experience

- Respect for learner opinions and psychological safety
- Belief in integrity of learning through simulation

- Manages upset/monopolizing/outlier individuals

To end this debrief it may be useful for you to go around the room asking what each student will do for self care activities.

SCENARIO RESOURCES:

NAIT Counselling Services: 780.378.6133, room W111PB on the first floor of the HP center.



School of Health and Life Sciences
Simulation Centre

RESP2695
Pediatric OR – PALS
Stage 4 Withdrawal of Care

November 2020

Public Scenario Title

Peds OR Patient Cardiac Arrest

Scenario Description

A 18 month old child had surgery to remove a brain tumor this morning. They have now been in the PICU for 12 hours and have had one cardiac arrest. They are found to be brain dead so the team will withdraw care following a family conference.

Scenario Objectives

1. Perform hand hygiene/ ensure appropriate PPE
2. Use NOD (name, occupation, duty) when first introducing self to patients and family members/Confirm patient identity
3. Compassionate care for the patient and family
4. Extubation
5. Critical incident stress management and debriefing
6. Ensure closed-loop communication between team members

Equipment and Supplies

Sim centre supplied	RT program supplied
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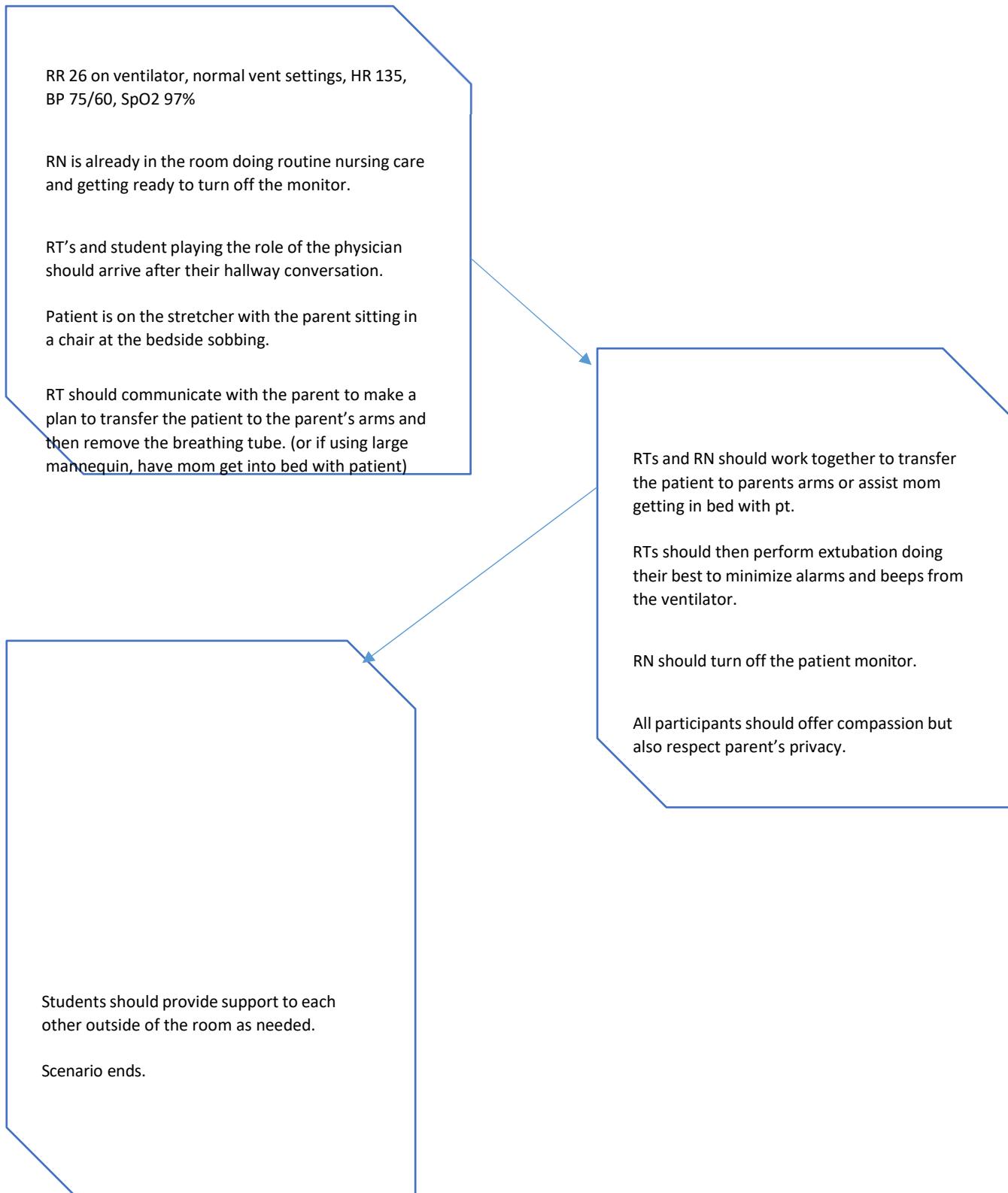
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Scenario Flow



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Three Stage Debriefing Model

1. Reactions/Emotions

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2. Analysis/Exploration

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