

CICU Nurse briefing notes

Title

Physiotherapy management of an intubated and ventilated child requiring suctioning

Summary/overview

This simulation provides participants with an opportunity to provide assessment and treatment of a simulated patient with likely aspiration pneumonia. During the simulation, it is expected that the participants will be able to review and interpret information, identify precautions / contraindications for treatment, and interact safely and effectively with the patient, treating team and the environment. The participants will also be required to perform manual techniques and suctioning. The simulation will last for 25 minutes.

There will be 2 participants in the simulation who will be working together. The other 4 participants will be observing the simulation. There will be 3 repetitions of the simulation so that each participant will have an opportunity to actively participate in the simulation.

Learning objectives

By the end of this simulation, participants will be able to:

1. Demonstrate safe and effective assessment of an acutely unwell child who is intubated and ventilated in a CICU including subjective and objective assessment.
2. Demonstrate safe and effective treatment of an acutely unwell child who is intubated and ventilated in a CICU including manual techniques and suctioning.
3. Demonstrate re-assessment during and after treatment; and modification of treatment as appropriate.
4. Demonstrate effective skills in communication, teamwork and role delineation.

Scenario

This simulation is set in a Children's ICU (CICU). The CICU registrar has paged the physiotherapist on an evening shift, asking them to review a 7 year old girl, Millie, who has been admitted during the afternoon with likely aspiration pneumonia. The physiotherapist is advised that Millie has chest x-ray (CXR) changes and thick secretions that are difficult to clear with suctioning. Millie has a background of Cerebral Palsy, seizures, reflux (has had a fundoplication & feeds via jejunostomy), scoliosis, poor swallow and global developmental delay (GDD). She has had recurrent admissions with similar presentations. Millie's parents have declined palliative care involvement when suggested in the past and she is for full CPR in the event that she deteriorates.

Participants' tasks

The aim is for participants to incorporate the knowledge and skills presented in the teaching session in to their clinical practice. This will include manual techniques, suctioning, and an understanding of mechanical ventilation. Participants who are not actively participating in the simulation will be observing, and participating through providing feedback in the debriefing.

DISCLAIMER

Care has been taken to confirm the accuracy of the information presented and to describe generally accepted practices. However, the authors and publisher are not responsible for perceived or actual inaccuracies, omissions or interpretation of the contents of this simulation. All characters appearing in this simulation are fictitious. Any resemblance to real persons, living or dead, is purely coincidental.

About your role as CICU nurse

<i>Overview:</i>	You are the treating nurse for Millie. In your role, you may cue the physiotherapist if there are missed opportunities, and provide information to the physiotherapist which may be beyond their scope of practice.
<i>Wardrobe:</i>	You are wearing a nursing uniform. You have a clipboard with handover.

Stage 1: (0-8 mins)

The physiotherapist may ask you a number of questions about the patient. You may answer their questions.

Responses to questions:

Availability of CXR

State "Yes" and direct participant to the screen in the simulation room.

Last ABG

State ABG results and provide analysis and interpretation.

ABG1

pH 7.25

PaCO₂: 50 mmHg

PaO₂: 60 mmHg

HCO₃: 33mEq/L

Cardiovascular stability and handling tolerance

State "fairly stable and doing OK with handling"

Secretions

State "ETT & nasal/o/p are thick and creamy"

If due for turn and if tolerating position change

State "Yes"

If patient needs sedation bolus pre-treatment

State "No"

If patient coughing

State "Yes – weak. Coughing spontaneously when secretions need to be suctioned"

You can assist with moving patient if requested to do so.

Stage 2: (8-12 mins)

Leave the room to collect some medication and inform the physiotherapist that you will be right back.

The physiotherapist may, however, request that you stay in the room, in which case, agree to do so.

Stage 3: (12-20 mins)

- Hint to the physiotherapist that the patient is coughing.
- If the physiotherapist doesn't identify change in SpO₂, then you may hint at this trend.
- You can assist with bag/suction as requested.
- If the physiotherapist asks about the medical staff, inform them that the medical staff are attending to a patient who is critically unwell.

Stage 4: (20-25 mins)

- If the physiotherapist does not provide advice for nursing staff at the completion of treatment, the nurse to ask.
- You can state repeat ABG results if asked.

ABG2

pH 7.31

PaCO₂: 43 mmHg

PaO₂: 75 mmHg

HCO₃: 33mEq/L

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ABG³	
pH	7.31
pCO ₂	50
pO ₂	55
HCO ₃	33
BE	-2
Na	141
K	3.9
Cl ⁻	101
Ca	2.1
Glucose	5.7
Lactate	0.2
Hb	88

ABG¹	
pH	7.25
pCO ₂	50
pO ₂	60
HCO ₃	33
BE	+1
Na	141
K	4.0
Cl ⁻	101
Ca	1.3
Glucose	4.8
Lactate	1
Hb	107

ABG⁴	
pH	7.37
pCO ₂	40
pO ₂	70
HCO ₃	33
BE	-1
Na	140
K	4.1
Cl ⁻	100
Ca	2.1
Glucose	6.3
Lactate	0.3
Hb	85

ABG²	
pH	7.31
pCO ₂	43
pO ₂	75
HCO ₃	33
BE	1
Na	138
K	4.2
Cl ⁻	99
Ca	1.7
Glucose	5.5
Lactate	1.1
Hb	102

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