

Patient Name: David Thomas

Diagnosis: Tracheostomy, Cancer

Part B

Facilitators Guide

Nursing, Physiotherapy

Overview

Target Audience: 2nd year Physiotherapy students, 2nd year Nursing students

Number of Participants: 4 (2 per discipline)

Estimated pre briefing time: 10 minutes

Estimated simulation time: 30 minutes

Estimated debriefing time: 60 minutes

Setting: Surgical ward (ear nose and throat / plastic surgery) in a tertiary hospital.

Simulation method: Immersive simulation using manikin and simulated patient.

Brief summary of scenario

Cancer is a major health problem in Australia today. This year, more than 530,000 new cases of cancer will be diagnosed in the Australian population. Of these, roughly 430,000 people will be treated for one or more non-melanoma skin cancers - two in three Australians will develop at least one of these cancers by the time they are 70. It is estimated that more than 43,000 people will die of cancer this year (National Health and Medical Research Council, 2012).

This case presents a patient who following a diagnosis of tongue cancer underwent complex head and neck surgery with a temporary tracheostomy. Students from nursing and physiotherapy will be introduced to the patient in the early postoperative period, where his care is being managed on a surgical ward. In this scenario, students from nursing and physiotherapy will work together to optimise the patient's respiratory function. A 30 minute period will be available for the students to conduct a joint assessment and intervention, prior to the patient being transferred off the ward to radiology. The scenario will be delivered using a high fidelity patient manikin as well as a simulated patient, with changes in the patient's parameters occurring in response to intervention.

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Learning objectives

Interprofessional

- ☐ **Interpersonal and Communication Skills:** Communicates sensitively in a responsive and responsible manner demonstrating the interpersonal skills necessary for interprofessional collaboration
 - ☐ **Patient-Centred and/or Family-Focused Care:** Through working with others negotiates and provides optimal integrated care by being respectful of and responsive to patient/client and/or family perspectives, needs and values
 - ☐ **Collaborative Decision Making:** Establishes and maintains effective and healthy working partnerships with other professionals whether or not a formalised team exists
 - ☐ **Roles and Responsibilities:** Consults, seeks advice and confers with other team members based on an understanding of everyone's capabilities, expertise and culture
 - ☐ **Team Functioning:** Uses team building skills to negotiate, manage conflict, mediate between different interests and facilitate building of partnerships within a formalised team setting
- (Source: The British Columbia Competency Framework for Interprofessional Collaboration, 2008)

Discipline Specific – Physiotherapy

- ☐ Conduct an appropriate respiratory assessment for a patient who has recently undergone complex head and neck surgery + tracheostomy
- ☐ Select and implement appropriate modifications to respiratory management (including oxygen therapy and humidification) based on assessment findings
- ☐ Demonstrate a safe and clean technique when suctioning via a tracheostomy
- ☐ Make appropriate recommendations for ongoing respiratory management

Discipline Specific - Nursing

- ☐ Conduct an appropriate respiratory assessment for a patient who has recently undergone complex head and neck surgery + tracheostomy
- ☐ Select and implement appropriate modifications to respiratory management (including oxygen therapy and humidification) based on assessment findings
- ☐ Demonstrate safe and clean technique when suctioning via a tracheostomy
- ☐ Demonstrate safe and appropriate administration of inhaled medications via a tracheostomy

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Equipment checklist

- | | |
|---|---|
| <input type="checkbox"/> Tracheostomy tube Size 7.0 cuffed, non-fenestrated double lumen (Portex) | <input type="checkbox"/> Goggles |
| <input type="checkbox"/> Tracheostomy shield | <input type="checkbox"/> Disposable suction unit |
| <input type="checkbox"/> Tracheostomy tapes | <input type="checkbox"/> Oxygen tubing |
| <input type="checkbox"/> Wrist splint | <input type="checkbox"/> Nebuliser |
| <input type="checkbox"/> Crepe bandages | <input type="checkbox"/> Disposable gloves |
| <input type="checkbox"/> Wound dressings | <input type="checkbox"/> TEDS stockings |
| <input type="checkbox"/> IV bungs | <input type="checkbox"/> Redivac x 1 |
| <input type="checkbox"/> IV stopcock | <input type="checkbox"/> IDC |
| <input type="checkbox"/> IV lines | <input type="checkbox"/> Yellow infectious waste bags |
| <input type="checkbox"/> PCA pump | <input type="checkbox"/> F&P humidifier and humidification tubing |
| <input type="checkbox"/> Infusion Pump | <input type="checkbox"/> Vital signs monitor |
| <input type="checkbox"/> Bag normal saline for infusion | <input type="checkbox"/> Pulse oximeter |
| <input type="checkbox"/> Wide bore NGT and tape | <input type="checkbox"/> Bell |
| <input type="checkbox"/> Narrow bore tubing to connect NGT to feeding pump | <input type="checkbox"/> iPad |
| <input type="checkbox"/> NG feeding pump | <input type="checkbox"/> Other communication devices (depending on what was selected during preadmission assessment - Part A) |
| <input type="checkbox"/> 2x IV poles | <input type="checkbox"/> Ventolin 5mg ampoules |
| <input type="checkbox"/> Suction catheters | <input type="checkbox"/> Normal Saline 0.9% 10mL ampoules |
| <input type="checkbox"/> Suction tubing | |

Preparation of simulation and environment

After reading the patient story, students may decide how they would like to structure the assessment / intervention. Encourage the participating students to divide roles and responsibilities so that each can play a part in the assessment / intervention. After 30 minutes, a confederate will inform the students that David is required at radiology. Students participating in Part A of this simulation (social work, speech pathology) will view the patient encounter via video link and participate in the debriefing process.

Use the checklist below to prepare the environment for the simulation:

- ☐ Patient simulator dressed in hospital gown
- ☐ Patient in hospital bed, head elevated 30°
- ☐ Size 7.0 cuffed, non-fenestrated double lumen (Portex) tracheostomy inserted. Cuff inflated.

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- ☐ Tracheostomy shield in situ over tracheostomy, held by tapes
- ☐ Trache shield attached to Fisher and Paykel humidifier set at FiO₂ 0.28, which is attached to wall oxygen at 5Lpm
- ☐ Left forearm immobilised in wrist splint, covered with wound dressing and crepe bandage to simulate radial free forearm flap
- ☐ Left thigh covered in dressing to simulate split skin graft
- ☐ IV bung inserted in right hand, normal saline delivered via infusion pump and morphine via PCA
- ☐ NG tube in situ, held by tape. Attached to pump for feeds
- ☐ Redivac drain R side of neck

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Baseline Simulator Parameters

Start of Scenario

- ☐ SpO₂ = 92%
- ☐ BP = 99/55 mmHg
- ☐ HR = 90 bpm
- ☐ T = 36.5°C
- ☐ RR = 18 breaths/min
- ☐ Auscultation: scattered coarse crackles, wheeze
- ☐ Cough: moist, ineffective
- ☐ Sputum (current): mucoid, some blood staining, moderate amount. If asked "have been suctioned by nurse earlier this morning, but not recently"
- ☐ Sputum (usual): if asked "doesn't usually bring up phlegm", "nothing abnormal"
- ☐ Pain (if asked): 5/10 "Pain around wounds" if asked
- ☐ Breathing (if asked): "chest feels tight". If questioned further "feels like asthma"
- ☐ General condition (if asked): "a little tired", "didn't sleep too well", "relieved the operation is over", "happy to receive good news from the surgeons this morning"

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Patient story

David Thomas is a 54 year old male who was recently diagnosed with an invasive left lateral tongue squamous cell carcinoma. Yesterday he underwent a partial glossectomy to excise the tumour. The tongue and floor of mouth defect were reconstructed with a left radial free forearm flap. The radial defect was closed with a split skin graft from the left thigh. In addition, a surgical tracheostomy was inserted to manage his airway and secretions in the early postoperative period. This was a complex procedure involving participation from multiple surgical teams - oromaxillary facial surgeons, ear, nose and throat surgeons and plastic surgeons. Despite the long operation time, the surgery went as planned and initial reports from the surgeons suggest that he has a good chance of cure.

David is currently being cared for on the surgical ward. He has recovered well from the operation, but has had some difficulty with his respiratory function. He is receiving humidified oxygen via a Fisher and Paykel humidifier and a tracheostomy shield. He has thick secretions which he is unable to clear himself, and required suctioning this morning. He has also reported that his chest feels "a little tight". The morning medical ward round has requested a physiotherapy review for respiratory management. It is usual practice on the ward for the nurse and physiotherapist to work collaboratively when managing the patient's respiratory care.

David is due to go to radiology to have a chest x-ray performed in approximately 30 minutes time. The nurse in charge has instructed you to "have a look" at David and try to improve his respiratory status prior to his transport.

Additional information (on request)

David has a history of asthma. It is often triggered by exercise or stress and is usually managed with a ventolin puffer.

David lives in Cohuna in country Victoria. He lives alone in a two bedroom unit and has a supportive partner Kathy. He has a 34 year old son Ben, who lives in Melbourne. Ben and David have not shared a close relationship, but since his cancer diagnosis David has been keen to improve this. David works full-time in IT support for a local bank in Kerang, 30 minutes drive from his home. He has taken three months leave from his employment to allow him time to recover from the surgery. David usually has four to five drinks per evening (beer or wine) and more on weekends. He had smoked 20 cigarettes per day since his teenage years, but quit two years ago.

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Scenario Interventions

Intervention	Changes in Simulator
Increase level of oxygen therapy \geq 10Lpm at FiO ₂ 0.4	Increase SpO ₂ to 97%
Suction via tracheostomy	Decrease HR by 5 bpm. Reduce/ remove coarse crackles on auscultation. If salbutamol has not been administered, increase wheeze. Add cough following insertion of suction catheter Initially increase HR by 5bpm, then decrease by 10 bpm at 1 minute post suction.
Administration of inhaled salbutamol via nebuliser	After 3-5 minutes remove wheeze. If suction has not been performed increase coarse crackles. Decrease RR to 14 breaths/ min Decrease HR by 5 bpm
Administration of inhaled normal saline	No change in condition

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Proposed correct action

The checklists below provide a guide of the anticipated actions of students when participating in this scenario. Use this list to tick off each action as it is performed and write any comments that may be of value during debriefing in the comments box below.

Nursing

- ☐ Locate and prepare appropriate equipment
- ☐ Communicate clearly and effectively with other health professionals
- ☐ Allocate tasks between team members
- ☐ Introduce self to patient
- ☐ Perform hand hygiene
- ☐ Demonstrates therapeutic interaction and communication with patient
- ☐ Review patients pain
- ☐ Review medical charts
- ☐ Assess the patient - position and problem solving
- ☐ Assess vital signs – of most importance is SpO₂
- ☐ Documents relevant information

Physiotherapy

Professional

- ☐ Locate and prepare all appropriate equipment
- ☐ Communicate clearly and effectively with other health professionals
- ☐ Allocate tasks between team members

Assessment

- ☐ Introduce self to patient
- ☐ Communicate with patient in an appropriate manner
- ☐ Perform hand hygiene
- ☐ Review medical charts
- ☐ Auscultate chest
- ☐ Assess vital signs – of most importance is SpO₂
- ☐ Assess humidifier – correct set up, settings of humidification unit and at wall

Intervention

- ☐ Perform suction via tracheostomy, using clean technique – note pre-oxygenation, explanation of procedure, completion of suction within an appropriate time (<15 sec)
- ☐ Consider appropriateness of inhaled medications to improve respiratory status and discuss with nursing staff

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Reassessment

- ☐ Monitors the effect of interventions
- ☐ Performs reassessment of asterisk signs e.g. SpO₂, auscultation

Additional Comments:

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Debriefing overview

Self-reflection (10 minutes)

Upon return to the observation room, ask students to take 10 minutes to reflect on their performance during the scenario. During this time, encourage students to write down what they feel they did well, and what they would like to improve on. Following completion of the group debriefing session, students will be given an opportunity to receive brief feedback from a staff member from their discipline. They may wish to bring up some of the technical/discipline specific aspects to their reflection during this time.

Group Debriefing (30 minutes)

The primary aim of this activity is for students to gain an interprofessional learning experience, focussing on the following themes:

- Interpersonal and Communication Skills
- Patient-Centred and/or Family-Focused Care
- Collaborative Decision Making
- Understanding Roles and Responsibilities of health professionals
- Functioning as a Health care team

Where possible it is encouraged that group debriefing and feedback be steered towards these topics. An advocacy – inquiry model is the recommended format for group debriefing. Under this model, debriefing is conducted in three stages:

1. Reactions
2. Understanding
3. Summary

1. Reactions

This stage allows the students an opportunity to release some emotions so that they can focus on constructive discussion.

Ask each student who participated in the scenario “How did that feel?” This will guide you on what issues may need to be covered further in the debrief. Listen, but do not make many comments at this stage. This section will highlight any topics they may like to cover in the understandings stage.

Then, review the clinical facts “Can you explain what happened during this scenario?” or “Can you explain what happened to the patient?” It is recommended that they report on the patient's problems, the assessment findings, any interventions provided, outcome measures used (if any) and how effective the intervention appeared. Let the students answer, then fill in the details if necessary.

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2. Understanding

This stage allows exploration of the rationale for a student's behaviour or decision making. The observed action should be important to the individual and the group. It is recommended that an advocacy inquiry approach is used. "Student.... I **observed** X". "I was **concerned** that X occurred because....". "I am wondering **why** X happened" or "**Help me understand** why X happened?" Once an issue is exposed, generalise the discussion to the group. "Has this happened to/for anyone else?" "How did that feel?" Allow the group to discover solutions "How have you dealt with this problem in the past?" "Can anyone think of a strategy to overcome this problem in the future?"

It is also suggested that you focus on the positives from the scenario by asking the group "What went well?" Encourage the students to explore how they worked as a team and what they may have learnt about each other's roles.

To help you with phrasing your questions, below are some examples:

Observation	Reasoning	Question
I noticed...	I liked that....	How do you see it?
I see/ saw that	I thought that was	I was wondering, what are
I hear / heard you say.....	interesting	your thoughts?
	I was thinking....	What were you thinking at
	I was worried /	the time?
	concerned...	Help me understand how
	I had the impression that ...	you decided that?
	It seemed to me that	

3. Summary

In brief, review what was learnt throughout the session "Today we learned about..." You may wish to summarise the learning objectives. Ask each participant for their take home message from this scenario.

Discipline Specific Feedback (up to 20 minutes)

Using the remaining time, students may gather in their discipline specific groups led by a facilitator from their own discipline. Students may lead the discussion and identify any gaps or areas of concern regarding their performance.

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