



SCENARIO 7
ASTHMA

SIMULATION LEARNING ENVIRONMENT



THE UNIVERSITY OF
MELBOURNE

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Scenario	Asthma education Assessment of development delay in paediatric patient Social Issues	
Estimated Scenario Time	15 minutes pre brief 40 minutes scenario	
Estimated Debriefing Time	30 – 40 minutes	
Target Group	Master of Nursing Science / Doctor of Physiotherapy / Social Work / Master of Speech Pathology	
Student numbers	3 students from each discipline	
Academic Staff		
Prerequisite Knowledge / Requirements		
*Participants should meet the following competencies/requirements prior to involvement in the simulation activity		
<ul style="list-style-type: none">Second year students enrolled into Entry to Practice Programs at The University of Melbourne School of Health Science		
Cognitive Skills		Psychomotor Skills
Demonstrates the ability to educate patient/care giver to promote independence and control over health Demonstrates the ability to conduct a multidimensional assessment and to identify areas of risk and vulnerability Demonstrates skills in working collaboratively within the client family system with a view to setting viable goals for change.		
Clinical Setting – Ritz Medical Centre		
<p>The Ritz Medical centre is the oldest hospital in Victoria, having been built just prior to the gold rush era. It is a modern, state of the art hospital which has over 650 beds. The Ritz Medical is recognized as a pacesetter in the national health care arena and has consistently been linked to progressive developments in health care and services, medical research and health care teaching.</p> <p>The Ritz Medical Centre is the main provider of health services to people living in the inner suburbs of Melbourne and a major provider of specialist statewide services to the people of Victoria. The Ritz Medical Centre is world-renowned for its research and specialist work in burns, trauma management, cancer, liver transplantation, spinal cord injuries, neurology, endocrinology, mental health and rehabilitation. These services are provided across the continuum of care from ambulatory, to inpatient and home and community based services.</p>		
Brief Summary of Learning Activity		
<p>The overall goals of asthma management are to prevent disability, minimise physical and psychological morbidity and assist the child in living a normal and happy life as possible (Wong et al. 2006). In order to achieve this, the family and the child need to recognise asthma symptoms, learn how to manage asthma exacerbations, visit a health care provider regularly, understand and implement the appropriate therapy, and identify and eliminate environmental irritants and allergens (National Asthma Council, 2006).</p> <p>Part A: During this clinical simulation,</p> <ul style="list-style-type: none">Nursing students will focus their attention on educating the parents (Sharon & Graham) on recognising and managing asthma symptoms (asthma action plan). <p>Part B:</p> <p>During this clinical simulation , Speech Pathology & Physiotherapy students will</p> <ul style="list-style-type: none">Obtain a development history, conduct a screening assessment & determine the appropriate course of actionCommunicate findings of communication assessment with parents		

- Behavioural issues and parental functioning
- Assessment of social supports

Part C

During this clinical simulation Social Work students will:

- Explore the circumstances impacting the client family using a multidimensional framework
- Assess risks impacting the welfare of the Zoe
- Work collectively with Sharon and Graham to establish viable intervention to support of Zoe's care

Students will interact with one/two actors who will play the role of Sharon & Graham. Each discipline has 15- 20 minutes in which to discuss and implement their clinical intervention.

Learning Outcomes – Australian Nursing & Midwifery Council National Competency Standards

- ✓ Educates individuals to promote independence and control over health
- ✓ Facilitates coordination of care to achieve agreed health outcomes
- ✓ Approaches and organises assessment in a structure way
- ✓ Determines priorities for case, based on health assessment of an individual's need for interventions
- ✓ Uses resources effectively and efficiently in providing care
- ✓ Practices in a way that acknowledges the dignity, culture, values, beliefs and right of individuals/groups
- ✓ Understands and practices within own scope of practice
- ✓ Practices within a professional and ethical framework
- ✓ Identifies expected and agreed individual health outcomes including a time frame for achievement
- ✓ Provides comprehensive, safe and effective evidence based health care to achieve identified individual health outcomes
- ✓ Integrates nursing and health care knowledge, skills and attributes to provide safe and effective patient centred care
- ✓ Evaluates progress towards expected individual health outcomes in consultation with individuals, significant others and interdisciplinary health care team
- ✓ Documents a plan of care to achieve expected outcomes
- ✓ Established, maintains and appropriately concludes therapeutic relationships
- ✓ Collaborates within the inter-disciplinary health care team to provide comprehensive patient focused health care
- ✓ Demonstrates accountability and responsibility for own actions within practice
- ✓ Ensures privacy and confidentiality when providing health care

Learning Outcomes – based on Australian Association of Social Work Practice Standards (2003)

- ✓ Makes an appropriate assessment of the client's situation
- ✓ Explains the service to the client and describes any limitations with what is being offered
- ✓ Involves the client, as far as possible in developing a service plan and in its implementation
- ✓ Acknowledges and respects the strengths and capacities of the client in developing a service plan
- ✓ Develops a social work assessment and intervention plan that is appropriate to the patient's situation and is in keeping with ethical and legislative requirements
- ✓ Maintains social work principles, values and practice whilst acknowledging the practice base of other disciplines in the multidisciplinary team
- ✓ Recognises the need for and arranges a referral to a relevant service provider and puts in place assistance to enable the provision of service as a result of the referral
- ✓ Advises the client of their right to query the service provided and the avenues and procedures to follow if the client wishes to do so
- ✓ Seeks feedback from the patient in the evaluation of service provision and uses this to improve future practice
- ✓ Works with the patient and the medical service so that the patient receives the most appropriate and effective service from the organisation

Learning Outcomes - Speech Pathology

- ✓ Review care plan prior to meeting the patient, and identify and deal appropriately with any inconsistencies.
- ✓ Introduce self to patient / significant others, and explain speech pathology role and objectives of speech pathology session.
- ✓ Discuss the concerns of the significant other, and demonstrate empathy and understanding.
- ✓ Determine the significant other's knowledge of the patient's development, communication and behaviour. Collect further information regarding the patient's developmental history and current presentation.
- ✓ Conduct an initial screening assessment of the patient's communication development via administering a parent-completed checklist/questionnaire, as appropriate.
- ✓ Review the client's developmental history and screening information provided by the client's significant other.
- ✓ Discuss results of the screening assessment with the client's significant other.
- ✓ Determine need for additional speech pathology assessment and/or further referral to specialist services, as appropriate.

Equipment Checklist

*Equipment that is required for this scenario

Beta-2 agonists: salbutamol (Ventolin, Asmol)	
Preventer: Budesonide (Pulmicort Flexhaler)	
Spacer	
Asthma Action Plan & education paperwork /pamphlets	
Appropriate development checklists /assessment	

Pre Brief

- Outline time allocation proposed for simulation activity
 - Pre brief 15 minutes each part
 - Part A Nursing students -15 to 20 minutes
 - Part B Speech & Physiotherapy students-15 to 20 minutes
 - Part C Social Work -15 to 20 minutes
 - Debrief 30 minutes
- Explain learning objectives for today's experience, and what is required of the students.
 - The aim of the simulation clinical scenario is to enhance a student's ability to assist a family in managing a child's chronic health conditions
- Students must meet all requirements of the dress code & the general rules of the simulation environment
- Remind students about the patients from the case study – use laminated patient case details.
- Remind students to utilise a clinical framework to assist in planning and implementing their care.
- Ask students to read and sign Simulation Observation and Participation Agreement.
 - Reinforce need to respect other members of the group during and after this activity.
 - Remind students that the video of their session will be retained after viewing by the students.
- Discuss layout of simulation laboratory, including patient charts, equipment available, and presence of viewing room and video cameras. Orientate student to 3G manikin if used in scenario
- Allow time for students to ask questions

Patient Description:		
Name Zoe Brooks	Age 2.4 Years	Ethnicity Australian – No religion
Setting:	Ritz Medical Centre Children's Ward	
Patient Information	<p><i>Previous Medical Hx</i></p> <p>IGUR, Prematurity 34/40 Recurrent Otitis Media</p> <p>Moderate Persistent Asthma</p> <ul style="list-style-type: none"> ○ Daily symptoms ○ Night time symptoms > 1 night per week ○ PEF or FEV1 > 60 % to < 80 % of predicted value ○ PEF variability > 30 % <p>Since infancy Zoe has had repeat respiratory infections & wheezy episodes. She has recently been diagnosed with Asthma by her GP. Zoe had two moderate / severe asthma attacks in the last two months, which require admission to the Ritz Medical Centre Children's Ward (Rx did not involve ICU management). So far this year, Zoe has had four presentations to the Ritz Centre Emergency Department with mild exacerbation of her asthma symptoms.</p> <p>A contributing factor to Zoe's frequent admissions/ presentations to the Ritz Medical Centre are her parents' difficulty in managing Zoe's complex health needs. Sharon finds it very challenging to get Zoe to take her regular inhalers, due to Zoe's behavioural problems (hyperactivity). In addition, Sharon & Graham demonstrate limited understanding of asthma management – i.e. clinical indications for each medication i.e. which medication to administer when.</p> <p>Zoe and her parents were booked in for an appointment with the Asthma Liaison Nurse at the Ritz Medical Centre Outpatients Department in December of 2012. This was scheduled after Zoe's last admission to hospital in order to review Sharon's & Graham's understanding of Zoe's asthma management plan. However, Zoe & her parents did not attend this appointment.</p> <p>Weight 10.5kg (10th percentile) Height 86cm (25th percentile)</p>	
	Previous Family Hx Hypertension, Bowel Cancer	
	<p>Current Medications</p> <p>Beta-2 agonists: salbutamol (Ventolin, Asmol) Preventer: Pulmicort Flexhaler 180 mcg twice daily.</p>	
	Allergies – nuts, eggs and lactose	
	<p><i>Lifestyle & Health Practices</i></p> <p>Zoe currently lives with her parents. She attends community day care centre in Collingwood two days a week. Zoe's carers have begun to express concerns about her development & behavior in the past 6 – 8 months.</p>	

	<p>At a child care centre meeting, Zoe's carers told Sharon & Graham that Zoe often does not follow instructions and has difficulty joining in group activities. She sits with the group or at a table only very briefly and does not play well with other children.</p> <p>The carers also spoke about Zoe's clumsiness and her late walking. She has only begun to walk unaided in the last three months and is still unsteady on her feet.</p>
	<p><i>Social History</i></p> <p><i>Father:</i> Graham Williams (24 years - not Zoe's biological father) is employed as a factory worker (production line) for Kerry Ingredients. Last month, Graham's work hours were cut to from 40 to 25 per week due to the company shifting production to other factories interstate and offshore. This has resulted in severe financial difficulty for Graham and Sharon, which has negatively impacted on their characteristically strong and supportive relationship. Graham is known to the Collingwood police and was a participant in a Diversion Program when he was 17 years of age.</p> <p><i>Mother:</i> Sharon Brooks (23 years) is currently studying a Certificate IV in Youth Work at Holmesglen TAFE. Sharon also works as casual night filler at Woolworths in Collingwood.</p> <p>Graham looks after Zoe when Sharon is at TAFE and at work. Sharon is concerned that Zoe's health situation is declining because she is not available to take care of Zoe fulltime. At the same time she is concerned about the family's financial situation if she were to reduce her work hours.</p> <p>Sharon and Graham met each other in 2008 at a REVAL Program that was being run by Youth Support & Service (YSAS) in Prahran. When Sharon and Graham met, Sharon was 24 weeks pregnant with Zoe.</p> <p>Both Sharon and Graham have a history of IVDU (Heroin / Amphetamines) and alcohol abuse. They are currently both on a maintenance Methadone program. Sharon and Graham continue to smoke 10 -15 tobacco cigarettes per day. Sharon and Graham still frequently attend the substance abuse support group meetings offered at Collingwood community centre. Recently however, because of the increasing stress and anxiety associated with their reduced finances Graham has started to drink heavily.</p> <p>Sharon, Graham & Zoe currently live in public housing in Collingwood.</p>
<p>Hx Present Health Concern</p> <p>Today Sharon and Zoe presented to the Ritz Medical Centre Emergency Department at 1030 am. Sharon was becoming increasingly concerned about Zoe's hacking paroxysmal cough, moderate shortness of breath, and audible inspiratory wheeze. Sharon stated to the Emergency Nurse (Helen) that "Zoe's puffers rang out two days ago and cause Graham has had his hours cut at work, we have got no money to buy any more". Sharon went on to say to Helen, that "two nights ago, I gave Zoe the white puffer every two hours via the spacer cause her breathing was getting really bad.....we nearly come to see you on Wednesday night..... But Graham gave her some on the blue puffer and she got better. I was really scared because I just don't know what to do when her breathing gets real bad!</p> <p>Upon examination Zoe demonstrated increased work of breathing (Respiratory Rate 36) with moderate accessory muscle use/recession, a SaO2 of 90 % on room air, a slight tachycardia (125 beats per minute), and a limited ability to</p>	

speak in sentences. After administration of Salbutamol by MDI/spacer every 20 minutes for 1 hour & oral prednisolone (1 mg/kg) Zoe demonstrated little improvement in her condition. Due to a poor response to inhaled salbutamol, an inability to wean the salbutamol to 3 – 4 hourly and oxygen required to keep SaO₂ > 92% Zoe was admitted to the Children's Ward at the Ritz Medical Centre.

From the assessment the Emergency Registrar (Dr Anthony O'Neil) noted that Zoe had limited language and her comprehension of instructions did not appear to be age appropriate. Sharon stated yesterday that she got a letter for Zoe's child care centre complaining about Zoe's disruptive behaviour.

As a result of the concerning psychosocial information & development information gathered by the Emergency Department multidisciplinary team, a referral was made by the admitting Paediatric Registrar to the Allied health care team (Social Work, Speech Pathology & Physiotherapy).

Admitting Diagnosis

Asthma for stabilisation and management

Assessment of development delay and behavioural problem

To be formally assessed – referral to Speech Pathology, Social Work & Physiotherapy

Additional Information available to students upon their request

Nil – for Nursing

Proposed Correct Treatment Outline - Asthma Action Plan

An asthma action plan is a set of individualized written instructions, which detail how a person with asthma should manage his or her asthma at home. The plan includes: a list of what triggers the person's symptoms and how to avoid these triggers, a list of symptoms to watch for and what to do should they occur, and the names and doses of medications the person needs and when to use them.

It can also include emergency telephone numbers, locations of emergency care, and instructions on when to contact the doctor or when to go right to the emergency department. The aim of an asthma action plan is to help a patient with asthma and/or their carer take early action to prevent or reduce the severity of an asthma attack. In children, plans based on symptoms are preferred. In most children with asthma, change in symptoms is just as effective as peak flow for indicating that asthma is getting worse.

Preliminary	Achieved
<ul style="list-style-type: none"> Performs hand hygiene 	
Assessment of Patient	Achieved
<ul style="list-style-type: none"> Assesses Sharon's current knowledge level about Asthma symptoms / triggers Builds on what Sharon's already knows about Asthma action plans Demonstrates empathy & understanding of the content of the disease within families life 	
Implementation	
<p>Objectives /content at a minimum discussed in the 15 minute session by the student</p> <ul style="list-style-type: none"> understand what causes acute attacks of asthma discuss the signs & symptoms discuss strategies to prevent asthma attacks discuss the Asthma Action Plan 	
Evaluation	
<ul style="list-style-type: none"> Presents information in a logical sequence Evaluate Sharon's understanding of the content given Provides Sharon with written material on Action Plan 	

Proposed Correct Treatment Outline - investigation of development, communication & behaviour (Speech Pathology)	
Preliminary	Achieved
<ul style="list-style-type: none"> • Introduces self to Sharon • Informs Sharon of objectives of assessment session and obtains agreement • Reviews care plan and appropriately deals with any inconsistencies • Reads cue card which outlines patient condition 	
Assessment of Patient	Achieved
<ul style="list-style-type: none"> • Discusses Sharon's concerns and assesses her current knowledge of Zoe's development, communication and behaviour • Demonstrates empathy and understanding of Sharon's concerns • Conducts screening assessment of Zoe's communication and behaviour via administering parent-completed checklist/questionnaires • Reviews the assessment information provided by parent • 	
Implementation	
<ul style="list-style-type: none"> • Discusses screening assessment results with parent and need for additional speech pathology assessments • Determines need for further referral to specialist services e.g. ENT surgeon, Development Paediatrician & Community Allied Health & enact 	
Evaluation	
<ul style="list-style-type: none"> • Evaluates own performance • Identifies opportunities for improvement or further training • Demonstrates ability to problem solve • Assessor to notes any issues • 	

Debriefing Overview	
<p>What went well</p> <ul style="list-style-type: none"> • How do you think the scenario went? • How successful were you as a team? • Were directions clear? 	<p>What else happened</p> <ul style="list-style-type: none"> • What were some of your challenges • How could you have been more effective • What were your favourite and least favourite aspects • Did anything make you feel uncomfortable • What emotions did the experience trigger
<p>How did the team function</p> <ul style="list-style-type: none"> • What was your role? • Would you have performed better in a different role? • How did you contribute to the team effort? • What happened to the team during the simulation? • Did team members act professionally? • Did a leader emerge? Why? Why not? • Was important information shared clearly? • How would you describe the communication among team members? • How could communication within the team have been improved? <ul style="list-style-type: none"> ○ Ask students to identify human factors that may have altered their performance ○ Situational awareness ○ Perception & cognition ○ Teamwork ○ Culture 	<p>How would this improve patient care</p> <ul style="list-style-type: none"> • What new knowledge did you gain • Are you comfortable with your knowledge/skill level • How would this help you in practice • How will you apply what you learned to the clinical setting <p>Summarize</p> <ul style="list-style-type: none"> • These are the thing that you identified as going well... • These are the things you identified as needing to work on..... • I saw improvements in the areas of..... <p>In closing</p> <ul style="list-style-type: none"> • Open up the discussion to enable students to discuss any fears or issues of concern from the experience. • End on a positive note, and remind them about the importance of confidentiality.
Teaching Points	
Critical Thinking	Rationale

References for Scenario

Brown, D., & Edwards, H. (2012). *Lewis' Medical-Surgical Nursing*. (3rd ed.). Sydney: Elsevier Mosby.

The National Asthma Council Australia. (2006). The Asthma Management Handbook. Available from <http://www.nationalasthma.org.au/handbook>

Royal Children's Hospital Melbourne. Clinical Practice Guidelines. Available from <http://www.rch.org.au/clinicalguide/>