

Nicholas De Luca

Diagnosis: Deteriorating Patient in Cardiac Rehabilitation

Student Guide

Simulated Learning Environment Rules

General Rules

1. Students will be issued with nametags at the commencement of the learning activity. These should be worn at all times.
2. Participating students must wear their clinical uniform.
3. Students are not to bring food or drink into the simulation laboratories.
4. To prevent tripping hazards, all bags and coats must be stored in the bag racks/lockers provided.
5. For your safety we recommend that you wear protective clothing (lab coat, gown, goggles, mask and/or gloves) relevant to the task being undertaken.
6. Wash your hands upon entering and leaving the simulation laboratories.
7. Immediately report any injury or near miss to a member of staff.
8. In the event of damage to or malfunction of equipment, immediately stop using it and advise staff.
9. Do not remove equipment or models from the laboratories without prior approval of staff.
10. Be considerate: keep noise to a minimum; there is often more than one group working in the labs.
11. Consult staff about any lost or found property.
12. Any deliberate damage, defacing or theft of University property must be dealt with as outlined in the Incident Reporting and Investigation policy; <http://policy.unimelb.edu.au/UOM0364>
13. You may be asked to leave the laboratories if your behaviour is inappropriate.
14. Mobile phones must be placed on silent and conversations with external parties during laboratory lessons are to be avoided.
15. If you are unsure of something, please ask staff.

Dress Code

An appropriate code of dress applies to the simulated learning environment. This is to encourage students to reflect upon their own professional image, practice the implementation of Infection Control principles and Occupational Health and Safety (OH&S) standards as well as facilitating best practice.

- **Shoes** must be clean and in good repair. Sensible, flat-soled and comfortable shoes are encouraged to promote safety and prevent trauma. Open toed or slip-on backless shoes are not suitable.
- **Jewellery** should be plain and restricted to minimum usage. The following items of jewellery are permitted: wrist or fob watch, wedding ring, stud earrings (earrings of any other description are not permitted). Facial rings are not permitted for Occupational Health and Safety reasons. If necessary they may be replaced by studs. Nail rings are not permitted.
- **Nails** are to be kept short (less than $\frac{1}{4}$ cm), natural fingernails with fresh clear nail polish or none at all. Please note that artificial / acrylic nails harbour pathogens, especially gram-negative bacilli and yeasts and are not suitable for clinical practice.
- **Hair** should be clean, neat and tidy. It should be kept off the face and secured as to not interfere with patient care procedures. To facilitate this, hair should be tied back once it is collar-length. Hair accessories should be plain / neutral and in keeping with a professional image.

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Overview

Target Audience: Master of Nursing Science / Doctor of Physiotherapy / Master of Social Work

Groups of no more than three nursing students, three physiotherapy students & two Social Work students

Estimated pre briefing time: 15 minutes pre brief

Estimated simulation time: 40 minutes scenario

Estimated debriefing time: 30 – 40 minutes

Setting: Ritz Medical Centre Rehabilitation Unit, Ground round floor.

Simulation method: Full immersed.

Brief summary of scenario

Cardiac rehabilitation programs are designed to limit the physiological and psychological effects of cardiac illness, reduce the risks for sudden death or reinfarction, control cardiac symptoms, stabilise the atherosclerotic process, and enhance the psychosocial and vocational status of selected patients (Woods et al. 2010). A key responsibility of cardiac rehabilitation staff is to anticipate, recognise and react to adverse responses to exercise activity (Moser & Riegel, 2008).

It is recommended that direct staff supervision of exercise programs should occur for at least 6 to 8 exercise sessions or 30 days after the cardiac event or procedure (in a low risk individual)(Woods et al. 2010). Typically, this may involve continuous ECG monitoring and then decrease to polar monitoring as appropriate (Moser & Riegel, 2008; Brown & Edwards, 2012). Thus, a thorough understanding of the normal physiological responses to exercise is required of the Registered Nurse and the Physiotherapist supervising cardiac rehabilitation. Early recognition of clinical deterioration, followed by prompt and effective action, can minimise the occurrence of adverse events such as cardiac arrest, and may mean that a lower level of intervention is required to stabilise a patient (ACSQHC, 2010).

During this simulation activity, a low risk patient (Mr De Luca) attends the Cardiac Rehabilitation program at the Ritz Medical Centre. Mr De Luca is three weeks post STEMI/CABS x3 and rapidly deteriorates during the exercise class. Mr De Luca will experience shortness of breath, dizziness, nausea and palpitations (irregular HR of 140 indicating acute onset of atrial fibrillation) during the first 1-3 minutes of the simulated exercise class. The nursing & physiotherapy students will be required to assess the patient, implement an emergency plan of care for the patient including the initiation of a MET call. There are approximately 4 other participants in the class.

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Rosa and the S/Worker are in a room adjoining the exercise class. At seeing that Mr De Luca has collapsed to the floor, Rosa becomes highly anxious. The social work students stay with Rosa to support her at the time of distress while that nursing & physiotherapy students attend to Mr De Luca.

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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 - Social Work

- 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

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- Works with the patient and the medical service so that the patient receives the most appropriate and effective service from the organisation

Discipline Specific - Physiotherapy

- Perform an appropriate assessment of a patient's suitability to participate in an exercise program
- Recognize an adverse response to exercise and take reasonable action to ensure patient safety (i.e. stop exercise, closely monitor patient, call for help)
- Communicate effectively with the team in a crisis situation
- Ensure the safety and welfare of all participants in an exercise class (taking into consideration other people in the room)

Discipline Specific - Nursing

- 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
- Performs procedures confidently and safely
- Monitors the responses of an individual through each interventions and adjusts care accordingly
- Responds effectively to emergencies
- Maintains self control in the clinical setting and under stressful conditions
- Implements crisis interventions and emergency routines as necessary
- Recognises when resources are insufficient to meet an individual's needs
- Demonstrates flexibility in providing care when resources are limited
- Frames questions in ways that indicate the use of a theoretical framework/structure approach
- Accurately uses health care technologies in accordance with manufacturer specifications and organisation policy
- Identifies deviation from normal or improvement in the individuals health status
- Practices in a way that acknowledges the dignity, culture, values, beliefs and right of individuals/groups
- Understands and practices within own scope of practice
- Integrates nursing and health care knowledge, skills and attributes to provide safe and effective patient centred care
- Uses a range of assessment techniques to collect relevant and accurate data
- Analyses and interprets assessment data accurately
- Documents a plan of care to achieve expected outcomes
- Established, maintains and appropriately concludes therapeutic relationships

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- 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

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Patient story

Patient Description:

Name Nicholas De Luca	Age 48	Ethnicity Italian Roman Catholic
Setting:	Ritz Medical Centre Cardiac Rehabilitation Outpatient Clinic	
Patient Information	<p>Previous Medical Hx Type Two Diabetes, Dyslipidemia, Hypertension, BMI 28. Last serum cholesterol was 6.5 mmol/L.</p> <p>Previous Family Hx Type Two Diabetes and Cardiovascular Disease. Carlo De Luca, Nicholas father, died suddenly at the age of 54 of a myocardial infarction.</p> <p>Current Medications He currently takes 40 mg Simvastatin for elevated serum lipids. Since his wife's death, Mr De Luca has been commenced on a beta blocker to treat his blood pressure. He also takes 300 mg of aspirin daily.</p> <p>Allergies – Codeine</p> <p>Lifestyle & Health Practices Mr De Luca has a past medical history of smoking 25 cigarettes a day for 30 years (37 pack years). Mr De Luca drinks three to four glasses of Chianti per night. He is a member of a gym in Carlton however, due to busy lifestyle he rarely gets to exercise. Mr De Luca does not monitor his blood pressure or his blood glucose level. At times he is non adherent to his medication regime for his chronic conditions.</p> <p>Social History Mr Nicholas De Luca is a 48 year old business executive. He is the managing Director of Cassandra Fine Foods Pty Ltd. Cassandra Fine foods is an importer and distributor of pasta, rice, polenta and tomato sauces in Australia. The family operated business was initially started in 1952 by Carlo De Luca. Mr De Luca is a single father of three teenage children, Renzo (15years), Teresa (13years) and Alberto (9 years). His wife Daniela</p>	

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died of breast cancer eight years ago. Since his wife's death, Mr De Luca's mother Claudia has lived with the family in their single storey house in Parkville. Mr De Luca's current girlfriend is called Rosa; she works as a Chartered Accountant with Price Waterhouse and Coopers.

Hx Present Health Concern

Mr De Luca presented to the Ritz Medical Centre with an acute episode of crushing central chest pain, nausea and shortness of breath. His oldest son Renzo called an Ambulance when his father collapsed to the ground clutching his chest whilst they were playing a game of backyard soccer. Mr De Luca was quickly reviewed in the Emergency Department and was diagnosed as an experiencing an acute Anterolateral ST Elevation Myocardial Infarction (STEMI). He was rapidly transferred to the Ritz Medical Centre Cathlab where he underwent a Percutaneous Coronary Intervention (PCI). It was discovered that Mr De Luca had a 66% occlusion of his left main artery, an 80 % occlusion of his left anterior descending artery and 75% occlusion of his left circumflex artery. Due to the existence of extensive coronary artery disease, Mr De Luca was transferred to the operating theatre for urgent Coronary Artery Bypass Surgery (CABS).

It is now three weeks posts Mr De Luca's STEMI/CABSx3, he has just started attending the Cardiac Rehabilitation Program at the Ritz Medical Centre. Today is the second time that Mr De Luca has attended the CRP. Currently, Mr De Luca's greatest concern is about resuming sexual activity with his girlfriend, Rosa. Today, he has requested some information on how he will know when he is "ready" to return to his normal "level of activity". In addition, Mr De Luca has given informed consent for the hospital social workers to liaise with his girlfriend Rosa around available options for community support and referral. Mr DeLuca claims that Rosa often takes a lead role in helping him and his family negotiate with organisations and services because she is educated and good at all of that.

Mr DeLuca attended an initial assessment last week and following completion of outcome measures, an exercise routine was developed appropriate to his capabilities. The routine includes participation in a 10 minute low intensity group warm up, walking on a treadmill, stationary cycling, upper limb range of motion/ strength exercises and a group cool down. Prior to participation in the exercise class, a brief assessment of Mr DeLuca is to be performed (as per the assessment form). Rosa is also attending the Cardiac Rehabilitation Program today as she has an appointment with the Social Worker to discuss community supports for Mr DeLuca. MrDeLuca has given written consent for the hospital social workers to liaise with Rosa on available options for community support and referral.

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Patient Information

Clinical Setting – Ritz Medical Centre

The Ritz Medical centre is the oldest hospital in Victoria, having been built just prior to the gold rush era. 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.

Ritz Medical Centre MET Call Criteria (Adults) Emergency Number 888

Airway	Threatened
Breathing	Respiratory rate < 5 breaths per minute Respiratory rate > 36 breaths per minute
Circulation	Pulse rate < 40 beats per minute Pulse rate > 140 beats per minute Systolic blood pressure < 90
Neurology	Sudden decrease in level of consciousness Decrease in GCS of > 2 points Repeated or prolonged seizures
Other	Any patient causing concern who does not fit the above criteria

*Source ARC Advanced Life Support Level 2 (6th ed), p 13

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ISBAR Handover Tool

<h1>I</h1> <p>Identify</p>	<ul style="list-style-type: none"> • Yourself: <ul style="list-style-type: none"> ○ name, ○ position, ○ location • Receiver: Confirm who you are talking to • Patient: name, age, sex, location
<h1>S</h1> <p>Situation</p>	<ul style="list-style-type: none"> • State purpose "The reason I am calling is....." • If urgent – SAY SO, Make it clear from the start • May represent a summary of Assessment and Requirement
<h1>B</h1> <p>Background</p>	<ul style="list-style-type: none"> • Tell the story • Relevant information only: <ul style="list-style-type: none"> ○ history, ○ examination, ○ test results, ○ management • If urgent: Relevant vital signs, current management
<h1>A</h1> <p>Assessment</p>	<ul style="list-style-type: none"> • State what you think is going on, your interpretation • Use ABCDE approach <ul style="list-style-type: none"> ○ Airway ○ Breathing ○ Circulation ○ Disability ○ Exposure • State any interventions e.g applied oxygen
<h1>R</h1> <p>Requirement</p>	<ul style="list-style-type: none"> • What you want from them – BE CLEAR • State your request or requirement <ul style="list-style-type: none"> ○ Urgent review (state time frame) ○ Give approval / recommendation for further course of action while awaiting attendance eg. ECG, bloods ○ Give opinion on appropriate management

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Resources

Australian Resuscitation Council (ARC) Guidelines 2010 available at <http://www.resus.org.au/>

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Moser, D. & Riegel, B. (2008). *Cardiac Nursing: A companion to Braunwald's Heart Disease*. St Louis: Saunders Elsevier.

Curtis, K., & Ramsden, C. (2011). *Emergency & Trauma Care for Nurses & Paramedics*. Chatswood: Elsevier.

Sole, M., Klein, D. G., & Moseley, M. J. (2009). *Introduction to Critical Care Nursing*. (5th Ed.). St. Louis, Missouri: Saunders Elsevier.

Tollefson, J. (2010). *Clinical Psychomotor Skills*. (4th ed.). Australia: Cengage Learning.

Wesley, K. (2011). *Huszar's Basic Dysrhythmias & Acute Coronary Syndromes. Interpretation & Management*. (4th ed.). St Louis : Elsevier Mosby. Chapter 4, p. 53 – 78.

Woods, S. L., Sivarajan Froelicher, E. S., Halpenny, C. J., & Underhill-Motzer, S. (2010). *Cardiac Nursing*. (6th ed.), Philadelphia: JB Lippincott Company.

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Student Notes

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