



Queensland
Trauma Education

WARD TRAUMA CARE

Deterioration in chest trauma

Immersive scenario

Facilitator resource kit

CSDS



Clinical Skills Development Service



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Queensland Trauma Education

The resources developed for Queensland Trauma Education are designed for use in any Queensland Health facility that cares for patients who have been injured as a result of trauma. Each resource can be modified by the facilitator and scaled to the learners needs as well as the environment in which the education is being delivered, from tertiary to rural and remote facilities.

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Queensland Trauma Education

Ward trauma care – Deterioration in chest trauma: Immersive scenario – Facilitator resource kit

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About this training resource kit

This resource kit provides participants with the knowledge and skill to manage a patient who has respiratory deterioration in the setting of chest trauma on the ward.

National Safety and Quality Health Service (NSQHS) Standards



Target audience

Ward medical and nursing clinicians

Duration

45 minutes

Group size

Suited to small group participation

Learning objectives

By the end of this session the participant will be able to:

- Recognise clinical deterioration following chest trauma
- Perform a structured assessment in the assessment of a patient with chest trauma

Facilitation guide

1. Facilitator to use immersive scenario guide to lead simulation event
2. Debrief guide

Supporting resources

- Pre-simulation briefing poster
- Chest Xray

Simulation event

This section contains the following:

1. Immersive scenario
2. Resource requirements
3. Handover card
4. Scenario progression
 - a. State 1
 - b. State 2
 - c. State 3
5. Debriefing guide

Immersive scenario

Type	Immersive scenario
Target audience	Ward medical and nursing clinicians
Overview	<p>Admission to the ward for ongoing management of a pneumothorax following stabbing injury to chest.</p> <p>Patient is on the ward for four hours when he complains of increasing pain and difficulty breathing.</p> <p>A systematic assessment is required to recognise that pain is causing respiratory dysfunction.</p>
Learning objectives	<ul style="list-style-type: none"> • Recognise clinical deterioration following chest trauma • Perform a structured assessment in the assessment of a patient with chest trauma
Duration	45 minutes, including debrief.

Resource requirements

Physical resources

Room setup	Ward patient room, manikin in bed with ICC and UWSD insitu
Simulator/s	ALS Simulator
Simulator set up	<ul style="list-style-type: none"> • Lying flat in hospital bed • Hospital gown • ICC and UWSD connected with suction applied
Clinical equipment	<ul style="list-style-type: none"> • ICC • UWSD • CXR
Access	2 x PIVC setups with 1 x 'No IV' sticker attached
Other	Bedside paper chart

Human resources

Faculty	Facilitator
Simulation coordinators	Facilitator can run scenario via sim-pad
Confederates	Bedside nurse
Other	Clinical support team as per clinical environment

Handover card

Handover from bedside nurse

Thank you for coming to see John with me. He was admitted from ED after being stabbed by an assailant in the side of his chest. He had a pneumothorax diagnosed in ED and has had an ICC placed to treat this. He has been up on the ward now for 4 hours and I have just done a repeat set of observations and found his respiratory rate to be 22 and his saturations 95% on room air.

What do I do now?

Scenario progression

STATE 1: INITIAL ASSESSMENT				
Vital signs		Script	Details	Expected actions
ECG	SR	John I'm in a lot of pain and my breathing feels harder than before		<input type="checkbox"/> Confirm new symptoms with the patient <input type="checkbox"/> Review chart for observation trend and current vital signs <input type="checkbox"/> Review clinical documentation for history and management plan
HR	90			
SpO ₂	95% RA			
BP	120/85mmHg			
RR	22			
Temp	36.8			
BGL	6			
GCS	15			

STATE 2				
Vital signs		Script	Details	Expected actions
ECG	ST	<p>John I am in so much pain</p> <p>Confederate nurse What can we do to make his breathing better?</p>	<p>Patient assessment:</p> <ul style="list-style-type: none"> • Airway intact • Equal breath sounds • Taking shallow breaths • Speaking in short sentences • ICC not bubbling, swing present, minimal haemoserous drainage 	<ul style="list-style-type: none"> <input type="checkbox"/> Perform primary assessment of the patient <input type="checkbox"/> Review the ICC and UWSD- perform systematic review of drain function <ul style="list-style-type: none"> ▪ swing ▪ bubble ▪ drainage ▪ suction ▪ presence of leaks at insertion site and connections
HR	105			
SpO₂	93% RA			
BP	120/80mmHg			
RR	22			
Temp	36.8			
BGL	6			
GCS	15			

STATE 3				
Vital signs		Script	Details	Expected actions
ECG	ST	John This drain is so uncomfortable		<input type="checkbox"/> Review CXR <input type="checkbox"/> Recognise pain causing respiratory dysfunction <input type="checkbox"/> Review medication chart to administer appropriate pain relief <input type="checkbox"/> Consider review by pain team if inadequate analgesia available (local considerations) <input type="checkbox"/> Request medical officer review
HR	109			
SpO₂	91% RA			
BP	120/80mmHg			
RR	22			
Temp	36.8			
BGL	6			
GCS	15			

Debriefing guide

Scenario objectives

- Recognise clinical deterioration following chest trauma
- Perform a structured assessment in the assessment of a patient with chest trauma who has an ICC

Example questions

Exploring diagnosis

- What are the causes of respiratory distress in a patient with chest trauma and an ICC?
- What features demonstrated during the clinical exam help identify the problem?
- Where should an ICC be located when reviewing the CXR? What complications can be demonstrated on the CXR in a patient who has an ICC?
- How does an UWSD function? What features would indicate a complication with the set up?

Discussing management

- How is pain managed in the ward setting?
- What options are there for improving pain management in a patient?
- How is ICC and USWD dysfunction managed?

Discussing teamwork / crisis resource management

- Who is available to help with a deteriorating patient in the ward setting?
- What criteria on patient history, clinical examination or investigations should prompt urgent senior medical review?

Key moments

- Stepwise assessment of a patient who has an ICC to manage chest trauma

Acronyms and abbreviations

Term	Definition
CXR	Chest X-Ray
UWSD	Underwater seal drain
ICC	Intercostal catheter
PIVC	Peripheral intravenous cannula
ED	Emergency department
RA	Room air
ST	Sinus tachycardia

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