



Queensland
Trauma Education

CHEST TRAUMA

Blunt chest trauma

Immersive scenario

Participant resource kit

CSDS



Clinical Skills Development Service

Metro North
Health



Queensland
Government

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Queensland Trauma Education**Chest trauma - Blunt chest trauma: Immersive scenario - Participant resource kit****Version 1.0**

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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.

National Safety and Quality Health Service (NSQHS) Standards



About this training resource kit

This resource kit provides healthcare workers with the skills and knowledge to effectively assess and manage a patient suffering blunt chest trauma injuries.

The scenario encompasses the decision making and procedural skill for insertion of an intercostal catheter to manage a traumatic haemo-pneumothorax.

Learning objectives

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

- Demonstrate the assessment of a trauma patient with blunt chest injury.
- Recognise and effectively manage a patient with immediately life-threatening blunt chest trauma.

Supporting resources

- Structured assessment in trauma - infographic poster.

Overview of blunt chest trauma

Chest trauma is the second most common traumatic injury in non-intentional trauma.¹ Trauma to the chest is associated with the highest mortality; in some studies, up to 60% depending on the mechanism of injury.² Blunt chest trauma accounts for 90% of thoracic injuries and requires prompt recognition and management to reduce morbidity and mortality.¹

Knowledge of likely sequelae of injury patterns are key factors for assessment, management and patient survival.

Further reading

Queensland Statewide Trauma Clinical Network, Blunt Chest Injury Guideline (coming soon).

Bertoglio, P., Guerrera, F., Viti, A., Terzi, A. C., Ruffini, E., Lyberis, P., & Filosso, P. L. (2019). Chest drain and thoracotomy for chest trauma. *Journal of thoracic disease*, 11(Suppl 2), S186–S191.
<https://doi.org/10.21037/jtd.2019.01.53>

Ludwig, C., & Koryllos, A. (2017). Management of chest trauma. *Journal of thoracic disease*, 9(Suppl 3), S172–S177. <https://doi.org/10.21037/jtd.2017.03.52>

Mumtaz, U., Zahur, Z., Raza, M. A., & Mumtaz, M. (2017). Ultrasound And Supine Chest Radiograph In Road Traffic Accident Patients: A Reliable And Convenient Way To Diagnose Pleural Effusion. *Journal of Ayub Medical College, Abbottabad : JAMC*, 29(4), 587–590.
<https://pubmed.ncbi.nlm.nih.gov/29330983/>

Primary Clinical Care Manual, 10th edition 2019, Section 3: Emergency – Chest, p. 171
<https://www.publications.qld.gov.au/dataset/primary-clinical-care-manual-10th-edition>

QAS Clinical Practice Guidelines: Trauma/chest injuries
https://www.ambulance.qld.gov.au/docs/clinical/cpg/CPG_Chest%20injuries.pdf

CHEST TRAUMA

Structured assessment in trauma

Primary survey

- A Airway/C-spine**
Rapidly assess, maintain or secure airway and C-spine.
Life threats
Airway obstruction, Blunt/penetrating neck injury.
- B Breathing/Ventilation**
Rapidly assess, support ventilation/oxygenation.
Life threats
Tension pneumothorax, Massive haemothorax, Open pneumothorax
Flail chest, Ruptured diaphragm.
- C Circulation with Haemorrhage control**
Rapidly control, assess and support haemodynamics.
Life threats
Exsanguinating external haemorrhage, Cardiac tamponade,
Penetrating cardiac injury.
- D Disability**
Rapidly assess and protect neurological status.
Life threats
Catastrophic cerebral haemorrhage.
- E Exposure**
Expose patient, assess for further injuries,
maintain normothermia.

Acronyms and abbreviations

ICC	intercostal catheter
UWSD	underwater seal drain
RSQ	Retrieval Services Queensland
QAS	Queensland Ambulance Service
RHS	right hand side

References

1. Ludwig, C., & Koryllos, A. (2017). Management of chest trauma. *Journal of thoracic disease*, 9(Suppl 3), S172–S177. <https://doi.org/10.21037/jtd.2017.03.52>
2. Mumtaz, U., Zahur, Z., Raza, M. A., & Mumtaz, M. (2017). Ultrasound And Supine Chest Radiograph In Road Traffic Accident Patients: A Reliable And Convenient Way To Diagnose Pleural Effusion. *Journal of Ayub Medical College, Abbottabad : JAMC*, 29(4), 587–590. <https://pubmed.ncbi.nlm.nih.gov/29330983/>

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