



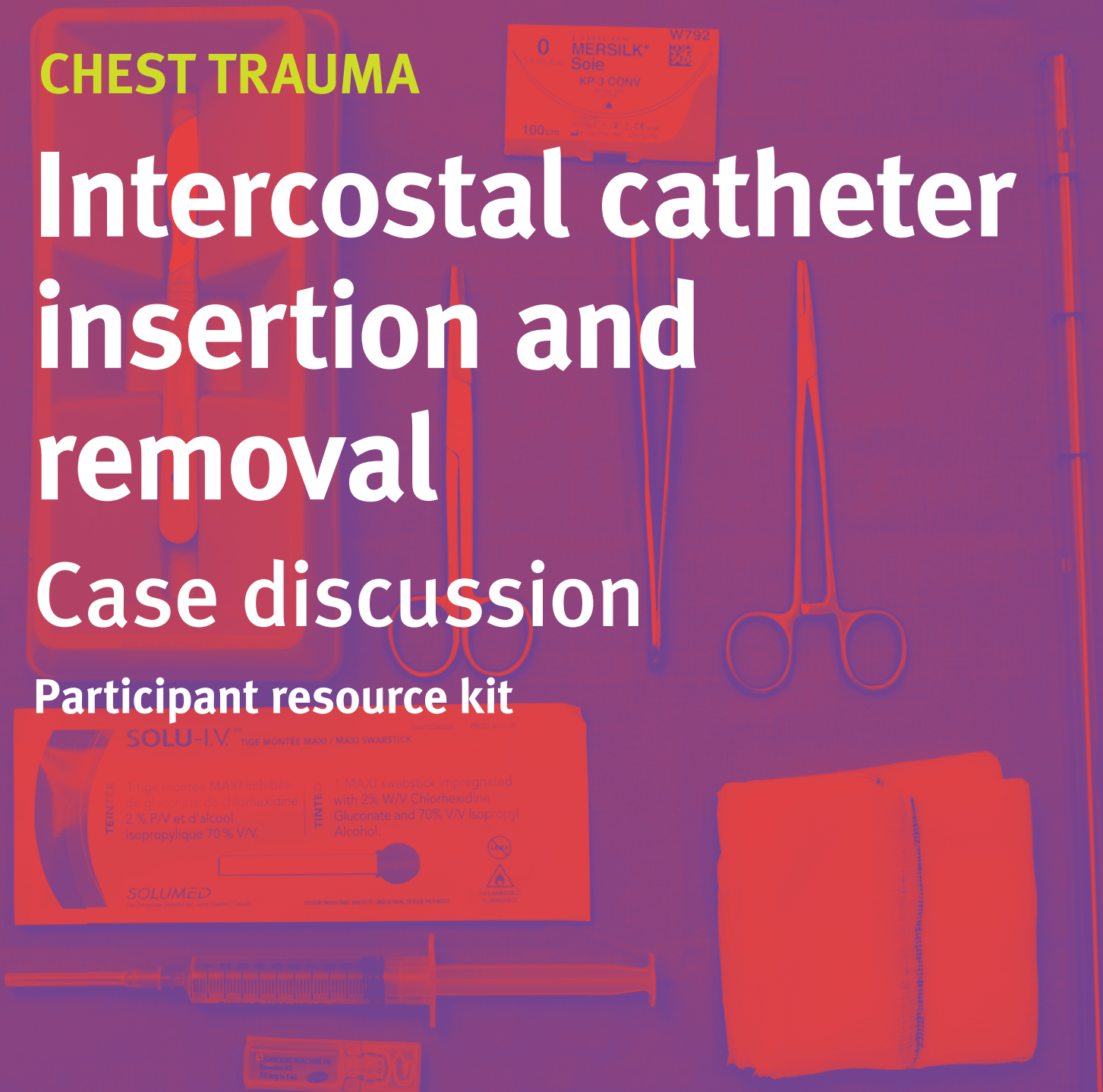
Queensland
Trauma Education

CHEST TRAUMA

Intercostal catheter insertion and removal

Case discussion

Participant resource kit



CSDS



Clinical Skills Development Service

**Metro North
Health**



**Queensland
Government**

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Queensland Trauma Education**Chest Trauma - Intercostal catheter insertion and removal: Case discussion - 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 knowledge and skills to perform the insertion of an Intercostal catheter (ICC) to manage a patient with blunt chest trauma, including the indications and considerations for ICC placement.

Learning objectives

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

- Recognise the indications for ICC insertion including:
 - Size of haemothorax/pneumothorax.
 - Timing of insertion and associated clinical features.
- Understand the considerations for ICC placement and management including:
 - Size of ICC.
 - Location of ICC insertion.
 - Potential complications of insertion and removal of chest drains.

Overview of 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

NSW Agency for Clinical Innovation (2016), Pleural Drains in Adults – A Consensus Guideline, *ACI Respiratory Network*. <https://www.aci.health.nsw.gov.au/resources/respiratory/pleural-drains/pleural-drains-in-adults>

Porcel J. M. (2018), Chest Tube Drainage of the Pleural Space: A Concise Review for Pulmonologists. *Tuberculosis and respiratory diseases*, 81(2), 106–115. <https://doi.org/10.4046/trd.2017.0107>

Maskell, N. (2010), British Thoracic Society Pleural Disease Guidelines - 2010 update. *Thorax*, 65: 667-669. <http://dx.doi.org/10.1136/thx.2010.140236>

Recommended online learning

Chest Drain Course for Doctors, *Clinical Skills Development Service*, Queensland Health. <https://central.csds.qld.edu.au/central/courses/135>

Chest Drain Course for Nurses, *Clinical Skills Development Service*, Queensland Health. <https://central.csds.qld.edu.au/central/courses/138>

Acronyms and abbreviations

ICC	intercostal catheter
Fr	french
UWSD	underwater seal drain
PPE	personal protective equipment

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.
3. NSW Agency for Clinical Innovation, 2016, Pleural Drains in Adults – A Consensus Guideline, *ACI Respiratory Network*. https://www.aci.health.nsw.gov.au/_data/assets/pdf_file/0018/323064/insertion-flow-chart.pdf
4. Porcel J. M. (2018). Chest Tube Drainage of the Pleural Space: A Concise Review for Pulmonologists. *Tuberculosis and respiratory diseases*, 81(2), 106–115. <https://doi.org/10.4046/trd.2017.0107>
5. Maskell, N. (2010) British Thoracic Society Pleural Disease Guidelines - 2010 update. *Thorax*, 65: 667-669. <http://dx.doi.org/10.1136/thx.2010.140236>

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