



Queensland  
Trauma Education

## ABDOMINAL TRAUMA

# Management of blunt abdominal trauma - splenic injury

## Immersive scenario

### Participant resource kit

**CSDS**



Clinical Skills Development Service

Metro North  
Health



Queensland  
Government

**Developed by**

Dr Frances Williamson  
Emergency Staff Specialist - Metro North Hospital and Health Service

Kimberly Ballinger  
Simulation Educator - Clinical Skills Development Service

**Reviewed by**

Education Working Group, Statewide Trauma Clinical Network - Clinical Excellence Queensland

**Designed by**

Rebecca Launder  
Product Designer - Clinical Skills Development Service

**Queensland Trauma Education****Abdominal Trauma - Management of blunt abdominal trauma - splenic injury: Immersive scenario****Facilitator resource kit****Version 1.0**

Published by the Clinical Skills Development Service

Herston, Queensland, Australia

[csds.qld.edu.au/qte](https://csds.qld.edu.au/qte)

Phone +61 7 3646 6500

Email [CSDS-Courses@health.qld.gov.au](mailto:CSDS-Courses@health.qld.gov.au)

© Metro North Hospital and Health Service through the Clinical Skills Development Service (CSDS) 2003 - 2021.  
All rights reserved.

**Disclaimer:** The content presented in this publication is distributed by the Queensland Government as an information source only. The State of Queensland makes no statements, representations or warranties about the accuracy, completeness or reliability of any information contained in this publication. The State of Queensland disclaims all responsibility and all liability (including without limitation for liability in negligence) for all expenses, losses, damages and costs you might incur as a result of the information being inaccurate or incomplete in any way, and for any reason reliance was placed on such information.

## 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 assess and manage a patient with blunt abdominal trauma.

### Learning objectives

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

- Demonstrate the effective assessment of a patient with blunt abdominal trauma.
- Recognise and effectively manage a patient with haemodynamic compromise.

### Supporting resources

- Structured assessment in trauma - infographic poster.

# Overview of blunt abdominal trauma

Blunt abdominal injury often occurs as a result of road traffic crashes and falls. It is a common body region injured, with up to 22% of traumatic injury following trauma. Blunt abdominal injury can often be challenging to diagnose with significant injury present without external signs of trauma.<sup>1</sup> A direct blow to the abdomen can cause solid organ rupture, visceral damage and haemorrhage, contamination from peritoneal contents and peritonitis. The spleen, liver and small bowel are commonly injured following blunt trauma.

Significant injury should be suspected with the presence of a seatbelt injury, peritonitis- with rebound tenderness or guarding, hypotension (SBP <90mmHg) and other associated trauma.<sup>2</sup>

## Haemodynamic assessment to determine:

- Investigation profile.
- Urgency of diagnosis.
- Resuscitation strategies.
- Definitive care.

## Further reading

Australian Trauma Quality Improvement (AusTQIP) Collaboration (2019). *Australia New Zealand Trauma Registry, Management of the Severely Injured*, 1 July 2017 to 30 June 2018. Alfred Health, Melbourne, Victoria. Retrieved from [https://static1.squarespace.com/static/5b761ed3f93fd491065f7839/t/5f5ede7f02b4ba0be6129464/1600052899945/ATR\\_Annual+Report\\_18-19\\_FINALAUGUST\\_web.pdf](https://static1.squarespace.com/static/5b761ed3f93fd491065f7839/t/5f5ede7f02b4ba0be6129464/1600052899945/ATR_Annual+Report_18-19_FINALAUGUST_web.pdf)

Diercks, D. C. (2016, 12 18). *Initial evaluation and management of blunt abdominal trauma in adults*. Retrieved from Up to date: <http://www.uptodate.com/contents/initial-evaluation-and-management-of-blunt-abdominal-trauma-in-adults>

Radiopaedia Splenic Trauma <https://radiopaedia.org/articles/splenic-trauma>

AAST Spleen Trauma Classification  
<https://wjes.biomedcentral.com/articles/10.1186/s13017-017-0151-4/tables/1>

Bloom BA, Gibbons RC. (2020). *Focused Assessment with Sonography for Trauma*. Retrieved January 13, 2021 from <https://www.ncbi.nlm.nih.gov/books/NBK470479/>

Primary Clinical Care Manual 10th edition, Abdominal injuries, p.183  
[https://qheps.health.qld.gov.au/\\_data/assets/pdf\\_file/0027/2354850/PCCM-10th-Edition.pdf](https://qheps.health.qld.gov.au/_data/assets/pdf_file/0027/2354850/PCCM-10th-Edition.pdf)



## ABDOMINAL 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

<b>MTP</b>	massive transfusion protocol
<b>PRBC</b>	packed red blood cells
<b>OT</b>	operating theatre
<b>EFAST</b>	extended focussed assessment with sonography in trauma
<b>VBG</b>	venous blood gas
<b>UA</b>	urinalysis
<b>ECG</b>	electrocardiogram
<b>CXR</b>	chest XRAY
<b>FBE</b>	full blood count
<b>NAD</b>	nil abnormalities detected
<b>BHCG</b>	beta-human chorionic gonadotropin

## References

1. Australian Trauma Quality Improvement (AusTQIP) Collaboration (2019). *Australia New Zealand Trauma Registry, Management of the Severely Injured*, 1 July 2017 to 30 June 2018. Alfred Health, Melbourne, Victoria. Retrieved from [https://static1.squarespace.com/static/5b761ed3f93fd491065f7839/t/5f5ede7f02b4ba0be6129464/1600052899945/ATR\\_Annual+Report\\_18-19\\_FINALAUGUST\\_web.pdf](https://static1.squarespace.com/static/5b761ed3f93fd491065f7839/t/5f5ede7f02b4ba0be6129464/1600052899945/ATR_Annual+Report_18-19_FINALAUGUST_web.pdf)
2. Diercks, D. C. (2016, 12 18). Initial evaluation and management of blunt abdominal trauma in adults. Retrieved from Up to Date: <http://www.uptodate.com/contents/initial-evaluation-and-management-of-blunt-abdominal-trauma-in-adults>

## Share your feedback

**Please complete our survey to help make Queensland Trauma Education better.**

The survey should take no more than 5 minutes to complete.

Scan the QR code or visit this link:

<https://www.surveymonkey.com/r/3FWL3ZD>



**Queensland Trauma Education**  
**Abdominal Trauma - Management of splenic injury: Immersive scenario - Participant resource kit**

Published by the Clinical Skills Development Service  
Herston, Queensland, Australia  
[csds.qld.edu.au/qte](https://csds.qld.edu.au/qte)  
Phone +61 7 3646 6500  
Email [CSDS-Courses@health.qld.gov.au](mailto:CSDS-Courses@health.qld.gov.au)