



Clinical Practice Guidelines: Trauma/Chest injuries

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Date	January, 2019
Purpose	To ensure a consistent approach to the management of a patient with chest injuries.
Scope	Applies to Queensland Ambulance Service (QAS) clinical staff.
Health care setting	Pre-hospital assessment and treatment.
Population	Applies to all ages unless stated otherwise.
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Half of all trauma deaths have some form of **chest injury**.

Although most thoracic trauma in Australia results from blunt forces,^[1] penetrating injuries are on the increase.^[2]

Life threatening injuries may not be initially apparent and the mechanism of injury is important in guiding further investigation (e.g. rib fractures suggest significant force with possible underlying organ damage). Lack of obvious fractures doesn't exclude injury especially in a paediatric patient.

Clinical features



- Injuries sustained depends on mechanisms and forces
- Penetrating trauma:
 - entry and exit wound
 - external bleeding may be evident
 - internal bleeding may be occult.
- Blunt trauma:
 - contusion/abrasion
 - haematoma
 - obvious rib fracture AND/OR clavicular fracture.



Clinical features (cont.)

Signs suggesting life-threatening conditions:

- Unequal air entry and/or crackles
- Asymmetrical or paradoxical chest wall movement
- Surgical emphysema
- Chest hypomobility
- Bubbling or sucking wounds
- Extreme tachypnoea
- Tracheal shift
- Hypotension
- Altered conscious state
- Jugular venous distension
- Muffled heart sounds
- Cardiac dysrhythmias.

Complications

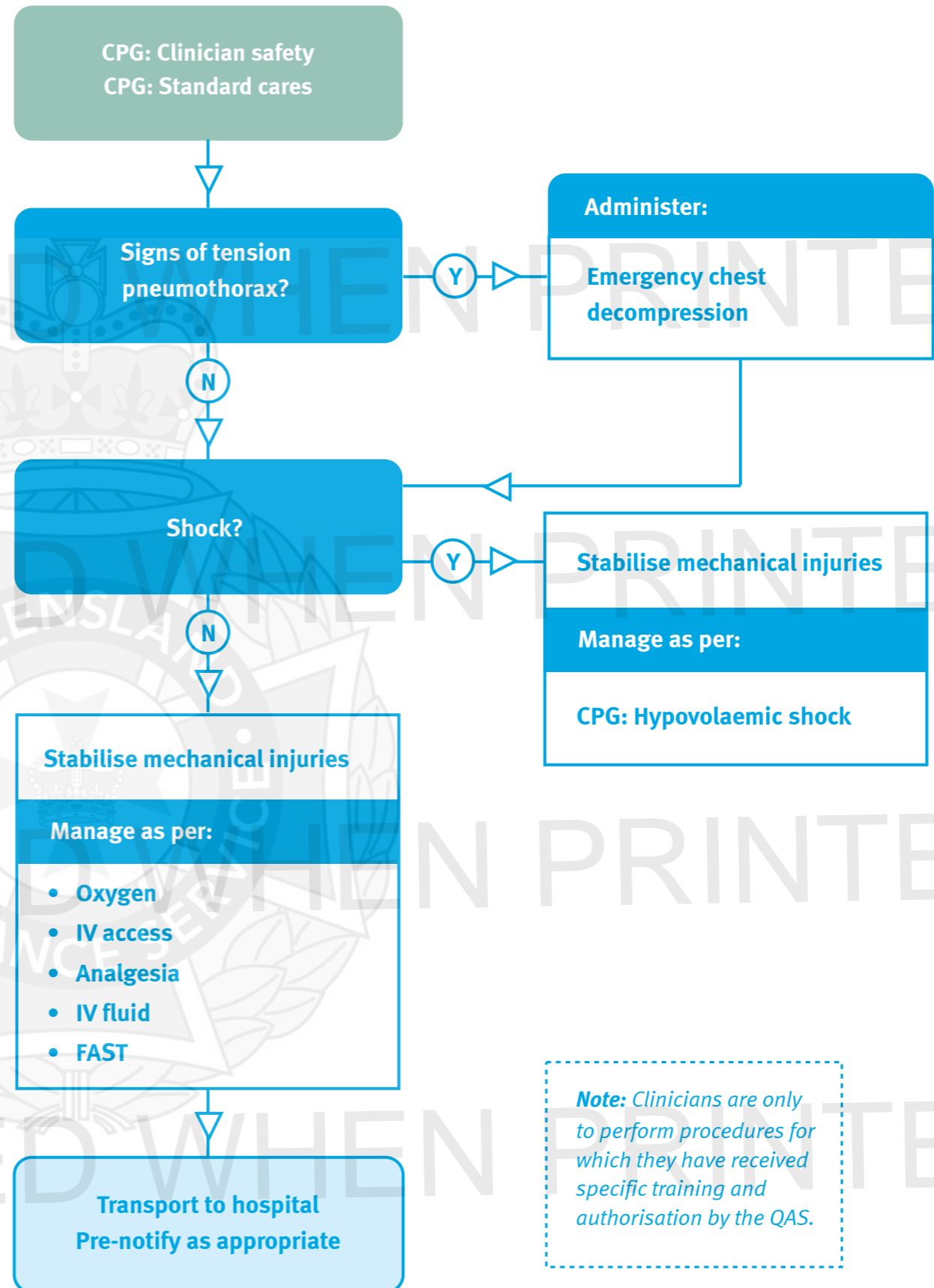


- Over-zealous IPPV may precipitate a tension pneumothorax, especially in an intubated patient.^[3]
- Chest pain in trauma can be due to myocardial ischaemia, but blunt trauma to the heart can precipitate ECG changes as seen in myocardial contusion.^[4]
- Consider the possibility of cardiac arrest after trauma.
- Penetrating trauma to the thorax may appear minor, but life-threatening injury can be sustained (e.g. aortic or ventricular laceration, pneumo or haemothorax). All wounds are treated as life-threatening regardless of the size or perceived depth.

+ Additional information

Common features:

- pleuritic pain, shallow respirations and postural splinting
- reduced or absent breath sounds (pneumothorax), crepitus/subcutaneous emphysema
- hypoxia, tachypnoea



Note: Clinicians are only to perform procedures for which they have received specific training and authorisation by the QAS.