



Clinical Practice Guidelines: Trauma/Hypovolaemic shock

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Date	June, 2021
Purpose	To ensure a consistent approach to the management of a patient with hypovolaemic shock.
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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Hypovolaemic shock

June, 2021

Acute haemorrhage, secondary to trauma, is the major cause of hypovolaemic shock. However, non-haemorrhagic causes of hypovolaemic shock must also be considered, that is, gastro-intestinal (GI) losses, environmental exposure and neglect.

Blood loss can be 'hidden' and not immediately apparent, for example pelvic injury, ruptured ectopic pregnancy, GI haemorrhage or intracranial bleeding in small children.

Awareness of the clinical features of shock is of paramount importance, as early recognition of hypovolaemia can be life-saving. Assessment of volume status extends beyond the vital signs and requires a comprehensive review of the patient.

'Treat the patient, not the vital signs.'^[1]

The Pre-hospital measurement of external blood loss is inherently inaccurate,^[2,3,4] however an **indicative** estimate must be recorded on the eARF to aid patient care considerations.

Clinical features



Blood loss	Signs
15% (750 mL in 70 kg)	<ul style="list-style-type: none">• Minimal or no tachycardiac response• Blood pressure changes do not usually occur
15–30% (750 mL–1500 mL)	<ul style="list-style-type: none">• Tachycardia• Hypotension• Peripheral hypoperfusion• ALOC
> 40% (> 2 L)	<ul style="list-style-type: none">• Haemodynamic compensation at its limit• Decompensation imminent• ALOC

Clinical features (cont.)



Other clinical features

- CVS:
 - pale, cool peripheries, with or without being clammy
 - tachycardia > 100 bpm or bradycardia < 60 bpm
 - decreased pulses peripherally
 - capillary refill > 3 seconds
 - SBP < 100 mmHg

NOTE: Older people may not be tachycardic. Fit/young patients may have normal vital signs and yet be very volume depleted.^[3]

- NEURO:
 - ALOC
 - initially quiet with decreased alertness
 - confusion/agitation
 - obtundation (mental blunting)

NOTE: Be cautious interpreting ALOC as being due to substance misuse or alcohol.

Hypotension in trauma patients may not be secondary to haemorrhage – consider other causes (e.g. obstructive shock (tension pneumothorax tamponade), spinal cord injuries, or toxins).

Risk assessment

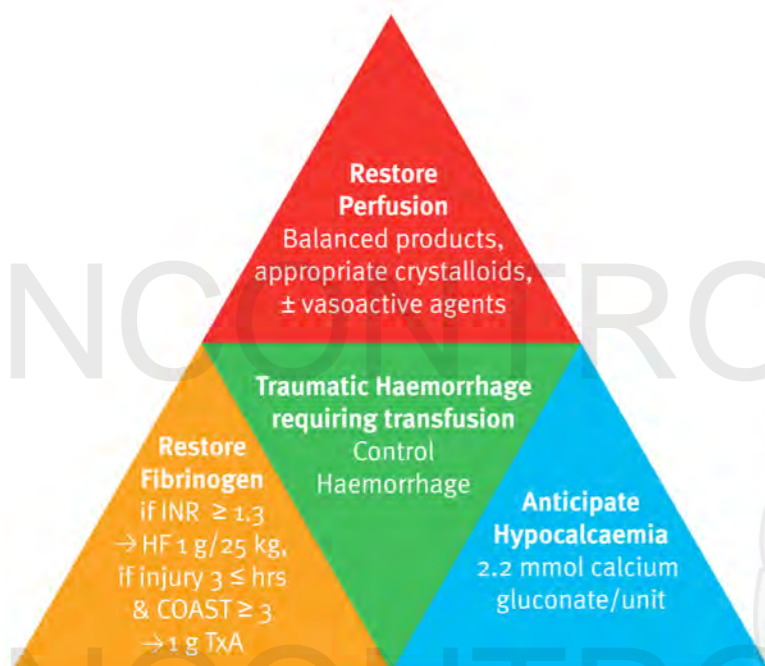


- Nil in this setting

CPG: Clinician Safety
CPG: Standard Cares

Haemorrhagic/traumatic

Non-haemorrhagic



- Control haemorrhage
- Oxygen
- IV access
- Maintain normothermia

Consider:

- PRBC (+ Ca⁺⁺)
 - ELP (+ Ca⁺⁺)
 - Tranexamic acid
- } If point of care INR ≥ 1.3
→ Human fibrinogen

- Oxygen
- IV access
- IV fluid
- Maintain normothermia

Associated traumatic brain injury?

IV fluid (Target: SBP 100–120 mmHg)

IV fluid (Target: palpable radial pulse)

Transport to hospital
Pre-notify as appropriate

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