Clinical Practice Procedures:
Trauma/Arterial tourniquet – C-A-T®

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<tr>
<th>Date</th>
<th>October, 2016</th>
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<tr>
<td>Purpose</td>
<td>To ensure a consistent procedural approach for the Arterial tourniquet – C-A-T®.</td>
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<td>Scope</td>
<td>Applies to all QAS clinical staff.</td>
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The **Combat Application Tourniquet (C-A-T®)** is a single use arterial tourniquet that provides a consistent, controlled, circumferential force to limbs in an attempt to control life-threatening haemorrhage.\[^{1,2}\]

### Indications
- Life-threatening haemorrhage not controlled by direct AND/OR indirect pressure
- Multiple casualties with extremity haemorrhage and a lack of resources to maintain simple measures of haemorrhage control

### Contraindications
- Bleeding that can be controlled using simple measures such as direct AND/OR indirect pressure

### Complications
- Compartment syndrome
- Reperfusion injury when released
- Embolism
- Permanent nerve damage, muscle injury, vascular injury, and/or skin necrosis
- Ischaemia
- Fractures
- Pain (may require analgesia)

**NOTE:** All risks must be balanced against the risk of exsanguination.
1. Place the tourniquet 5–7 cm above the bleeding point. Pass the tip of the tourniquet through the inside slit of the buckle. Pull the band tight.

2. Pass the tip of the tourniquet through the outside slit of the buckle. The friction buckle will lock the band in place.

3. Pull the tourniquet very tight and securely fasten the band back on itself using the tourniquet velcro.

4. Twist the windlass rod until the arterial haemorrhage has ceased and the distal pulse is unable to be palpated.
**Procedure – Arterial tourniquet – C-A-T®**

5. Place the windlass rod inside the rod locking clip, locking it in place. Confirm that the arterial bleeding has ceased and the distal pulse is unable to be palpated. If haemorrhage is not controlled, consider additional tightening or the application of a second tourniquet (immediately adjacent to the first) and reassess.

6. Secure the windlass rod inside the rod locking clip with the rod securing strap. Record the time and date of application on the rod securing strap and document in the eARF as well. Ensure hospital staff are aware of the tourniquet application time.

**Additional information**

- The C-A-T® is to be applied to limbs only.
- Effective application of the C-A-T® is determined by cessation of external haemorrhage, but slight oozing may occur from exposed bone.
- If an extended transport time is anticipated (>45 minutes), paramedics may consider cautiously loosening the C-A-T® to assess haemorrhage status. The C-A-T® must be immediately reapplied if recurrent severe haemorrhage is identified.