



Clinical Practice Procedures: Trauma/Fracture reduction

Policy code	CPP_TR_FRR_0416
Date	April, 2016
Purpose	To ensure a consistent procedural approach to fracture reduction.
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.
Source of funding	Internal – 100%
Author	Clinical Quality & Patient Safety Unit, QAS
Review date	April, 2019
Information security	UNCLASSIFIED – Queensland Government Information Security Classification Framework.
URL	https://ambulance.qld.gov.au/clinical.html

While the QAS has attempted to contact all copyright owners, this has not always been possible. The QAS would welcome notification from any copyright holder who has been omitted or incorrectly acknowledged.

All feedback and suggestions are welcome. Please forward to: Clinical.Guidelines@ambulance.qld.gov.au

Disclaimer

The Digital Clinical Practice Manual is expressly intended for use by QAS paramedics when performing duties and delivering ambulance services for, and on behalf of, the QAS.

The QAS disclaims, to the maximum extent permitted by law, all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages and costs incurred for any reason associated with the use of this manual, including the materials within or referred to throughout this document being in any way inaccurate, out of context, incomplete or unavailable.

© State of Queensland (Queensland Ambulance Service) 2020.



This work is licensed under the Creative Commons Attribution-NonCommercial-NoDerivatives V4.0 International License

You are free to copy and communicate the work in its current form for non-commercial purposes, as long as you attribute the State of Queensland, Queensland Ambulance Service and comply with the licence terms. If you alter the work, you may not share or distribute the modified work. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc-nd/4.0/deed.en>

For copyright permissions beyond the scope of this license please contact: Clinical.Guidelines@ambulance.qld.gov.au

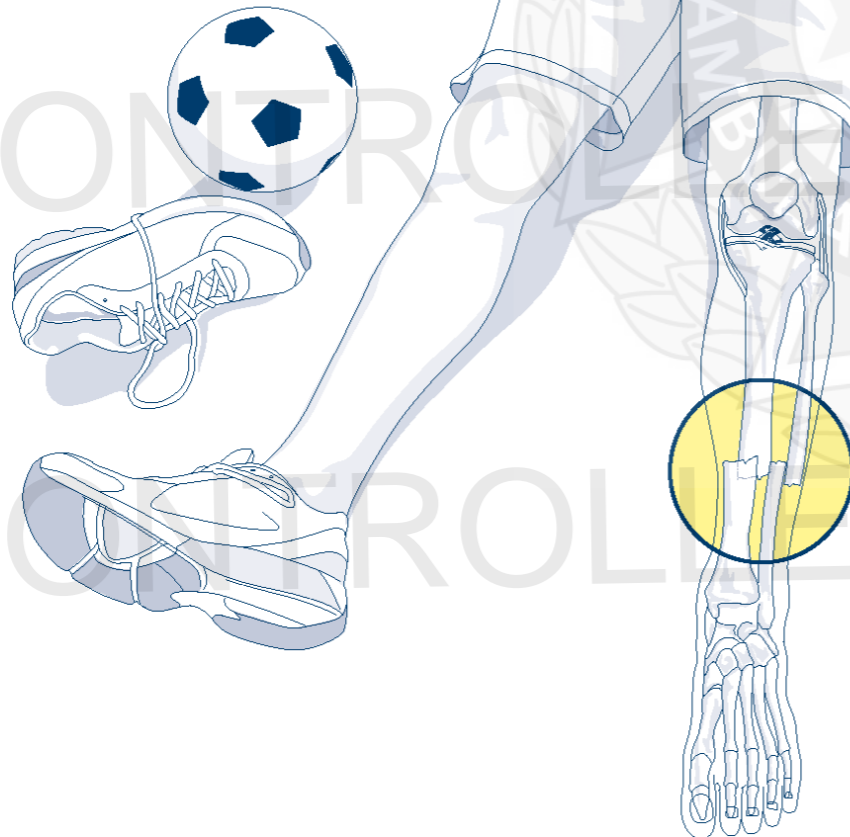
Fracture reduction

April, 2016

Extremity fractures are common, and may result in displacement and neurovascular compromise necessitating timely reduction and realignment.^[1]

An assessment must be made as to the appropriateness of performing this procedure, which takes into account:

- Risks associated with sedation versus the benefit of performing the procedure
- Transport time to a medical officer more experienced in the procedure
- The likelihood of successful reduction, noting that some fracture-dislocations, such as that of the ankle, may be very difficult^[2]



Indications

- Extremity fractures, or fracture-dislocations, with neurovascular compromise

Contraindications

- Nil in this setting

Complications

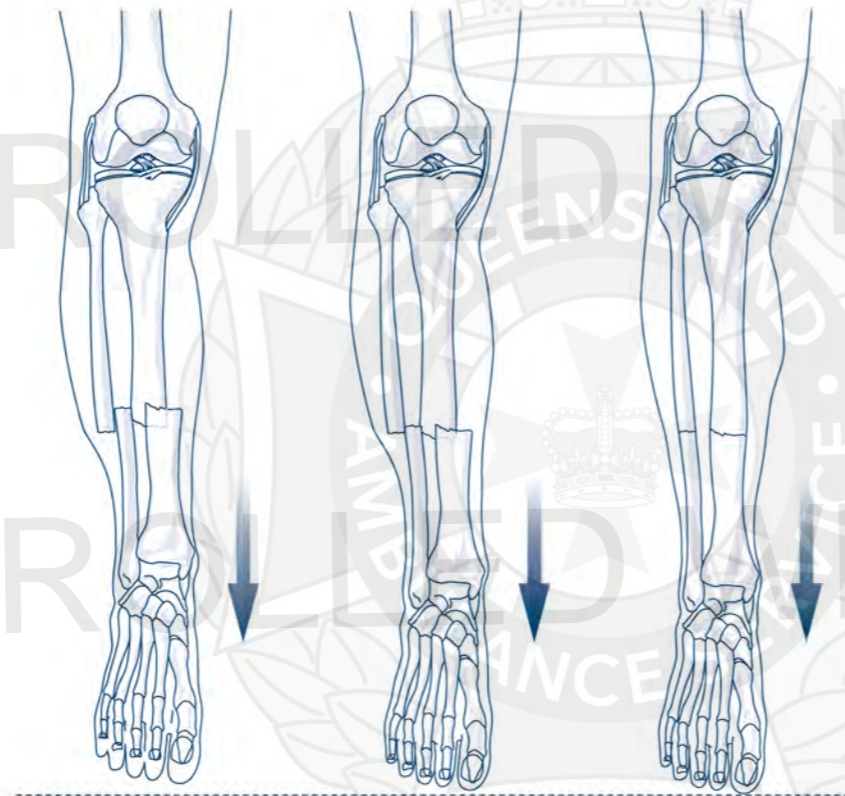
- Pain
- Possible worsening of neurovascular compromise
- Complications associated with sedation

Procedure – Fracture reduction

1. Explain the procedure to the patient.
2. Ensure adequate analgesia and/or sedation.
3. Slightly flex the knee 30 degrees.
4. Apply traction and gentle counter-traction in the line of the limb.
5. This should result in disimpaction of most fractures and lead to resolution of shortening and, in most cases, reduce the deformity.



Place hands above the ankle and apply traction in line with the limb



Profile showing compound fracture



6. Following traction, any remaining angulation can be corrected by placing the heel of one hand under the fracture whilst applying pressure distally with the other hand.
7. Fractures involving prominent bony spikes or soft tissue caught between fragments, may be difficult to reduce. In these instances, initially gently increasing the angulation prior to traction and manipulation may assist.
8. Splint the limb as appropriate.
9. Transport while maintaining appropriate analgesia.

+ Additional information

- The active management and treatment of life threatening conditions take precedence over fracture management.
- Forearm fracture reduction should not be attempted in the pre-hospital environment unless the limb has evidence of neurovascular compromise or is grossly deformed making packaging and transport difficult.
- The limb's neurovascular status must be assessed (and documented) prior to and following fracture reduction.
- All open fractures must be irrigated with 500–1500 mL of sodium chloride 0.9% prior to reduction.