Guideline

Emergency management and discharge follow up for minor fractures

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Purpose

The purpose of this guideline is to create a guide for medical officers (MO) and nurse practitioners (NP) in relation to the management of simple fractures in paediatrics. Its aim is to guide MO and NP's to appropriate treatment and follow up arrangements with the aim of reducing unnecessary attendances at fracture clinic.

Scope

This guideline applies to medical officers and nurse practitioners who are directly involved in the assessment, investigation and management of paediatric fractures.

Guideline

Many fractures sustained by children are simple in nature and often require no follow up with a specialist orthopaedic team.

The following instructions are a management guide relating to common fractures sustained by children.

This table also includes the recommended ongoing management once discharged from the hospital.

If in doubt, or for any clarification, discussion with the emergency senior medical officer (ED SMO) or the orthopaedic team should occur.

Fractured Clavicle

Fracture Type	ED Management	Follow-up
Middle third (most common)	Collar and cuff to support limb for 4-6 weeks. Child needs to refrain from contact sports for 10 weeks due to risk of refracture If age *>12 years and significant overlapping then discussion with orthopaedic registrar* Give parent Caring for a collarbone fracture advice sheet:	If <11 years and undisplaced, follow-up by a GP or fracture clinic is not usually required. Repeat x-rays are not usually required If displaced refer to fracture clinic
Lateral third	Collar and cuff to support limb for 4 weeks or until comfortable. If displaced, refer to the nearest orthopaedic service on call Give parent Caring for a collarbone fracture advice sheet.	Fracture clinic in 5-7 days with x-ray if fracture displaced
Medial third	If displaced, urgent referral to the nearest orthopaedic on call service	To be arranged by orthopaedic service

AC Joint sprains

Fracture Type	ED Management	Follow-up
AC joint tenderness but nil fracture evident	Difficult to determine from xray regarding an AC joint issue. However, if concerns regarding widening of AC space then consider imaging of contralateral side. However, be aware management is likely to be the same and this would increase radiation exposure.. Collar and cuff or shoulder immobiliser sling. Give family advice sheet for AC joint sprain Acromioclavicular (AC) Joint Sprain | Children's health Queensland Hospital and Health Service	Nil fracture clinic referral needed Physiotherapy follow up at STIC (Soft tissue injury clinic)

Proximal humeral buckle fracture

Fracture Type	ED Management	Follow-up
Buckle fracture of the proximal humerus	Collar and cuff for 4 weeks Nil sports for further 4 weeks post removal of collar and cuff Give parents advice sheet for **Minor upper arm buckle fracture** advice sheet - ***under development***	Follow up with GP at 4 weeks There is no need for xrays at 4 weeks if pain free and there has been no new injury

Occult supracondylar fracture – Evidence of elevated fat pads with no obvious fracture

ALERT

It is critical to ensure that a condyle fracture is not present. An undisplaced condyle fracture requires immobilisation in above elbow cast and fracture clinic referral. If a condyle fracture is displaced then consultation with a paediatric orthopaedic registrar should occur.

Fracture type	ED management	Follow-up
Occult supracondylar fracture of elbow – (Lateral condyle fracture excluded). Raised anterior and posterior fat pad sign with no obvious fracture	If pain controlled with simple analgesia a collar and cuff should be applied with arm underneath child's clothing (easier when changing clothes) and with elbow flexed at 90-100 degrees for 3 weeks. No contact sports or rough activities for further 3 weeks after removal of collar and cuff. (6 weeks in total) Advise to give regular analgesia for first few days and then as required. Give parent Caring for minor elbow fracture advice sheet.	No follow up required unless continues to be sore at 3 weeks. No further x-rays required if no new injury and pain free at 3 weeks.

Radial head buckle fracture

Fracture type	ED management	Follow-up
Buckle fracture of radial neck	If pain controlled with simple analgesia a collar and cuff should be applied with arm underneath child's clothing (easier when changing clothes) and with elbow flexed at 90-100 degrees for 3 weeks. No contact sports or rough activities for further 3 weeks (6 in total)	No follow up required unless continues to be sore at 3 weeks. No further x-rays required if no new injury and pain free at 3 weeks.

	Advise to give regular analgesia for first few days and then as required. Give parent Caring for minor elbow fracture fact sheet	

Buckle fracture of distal radius +/- ulna

Fracture type	ED management	Follow-up
Buckle fracture of distal radius +/- ulna	For children greater than 3 years of age with <15 degrees angulation of fracture and if pain controlled with simple analgesia an appropriate sized buckle wrist splint can be applied. This should be worn at times, other than bathing/showering, for 4 weeks. Contact sports or rough activities should be avoided for a further 4 weeks (8 weeks in total). Children under 3 years of age will often require a plaster of paris backslab (will remove splint) and fracture clinic follow up. Advise to give regular analgesia for first few days and then as required. Give parent Buckle fracture fact sheet	No follow up required unless continues to be sore at 4 weeks. If still sore then should seek review with GP. No further x-rays required if no new injury and pain free at 4 weeks.

Scaphoid (scaphoid fractures extremely rare in children under 10 years of age and requires a FOOSH mechanism to be present)

Injury type	ED management	Follow-up
Scaphoid fracture (visible fracture on xray)	An undisplaced fracture can be treated in below elbow thumb spica cast If scaphoid fracture with displacement, then for discussion with orthopaedic registrar on call regarding need for further imaging Give parents usual advice sheet regarding fracture clinic and cast care. Caring for your child's cast fact sheet | Children's Health Queensland Orthopaedic Trauma Clinic fact sheet | Children's Health Queensland	Fracture clinic follow up As per orthopaedic registrar
Nil visible fracture on xray but tender anatomical scaphoid position (snuff box). Remember for a scaphoid fracture to be present	If pain controlled with simple analgesia an appropriately sized buckle wrist splint should be applied. This should be always worn, other than bathing/showering, for 4 weeks until review. Orthopaedic Trauma Clinic fact sheet | Children's Health Queensland	Refer to fracture clinic but advise family follow up with GP asap to obtain bulk billed MRI scan of scaphoid fracture prior to fracture clinic follow up if possible. If this is not

mechanism must be fall on outstretched hand (FOOSH) and child over 10 years of age.		possible to obtain within timeframe then explain to parents that is fine to attend fracture clinic without scan. REMEMBER to give family letter for GP prior to leaving to speed up process.

Fingers and toes

Injury type	ED management	Follow-up
Metatarsal fractures	If undisplaced and already weight bearing then can often be treated in a firm fitting pair of shoes. Minimally displaced or angulated – If comfort allows then can be weight bearing in moonboot or walking cast depending on availability. Metatarsal fractures with significant displacement, >than 50%, should be discussed with the orthopaedic registrar on call. No contact sports or rough activities for 4-6 weeks. Give parent Foot fracture advice sheet	No follow up required. GP Follow up
Undisplaced NON-intrarticular fractures to fingers or toes	Buddy strapping to affected digit, splinted against unaffected digit for 3 weeks, ensuring IP joints are free to move as tolerated. No contact sports / rough activities for a further 4 weeks (7 in total) Give parent Minor finger or Toe fracture advice sheet	No follow up required unless continues to be sore at 3 weeks. No further x-rays required if no new injury and pain free at 3 weeks.
Sprains to fingers or toes	Buddy strapping to affected digit, splinted against unaffected digit for 7 days or until pain subsides. Ensure IP joints are free to move. Advice regular analgesia for first few days then as required	Follow up with STIC if any required. No fracture clinic input required. No further x-rays required.

Avulsion fracture Pelvis

Fracture type	ED management	Follow-up
Avulsion fracture of the Pelvis	Crutches to be given to child if safe to do so. Likely to be none weight bearing initially and then can slowly weight bear as tolerated. Advise to give regular analgesia for first few days and then as required. Nil sports including activities such as riding scooters, skateboards, trampolines for at least 6-8 weeks or as guided by fracture clinic. Give parent crutches fact sheet	Fracture clinic follow up

Toddlers fracture lower leg

Injury type	ED management	Follow-up
Fracture distal tibia	Imobilisation in non-weight bearing backslab. In younger children consider that this cast may need to be slightly above knee to reduce risk of cast falling off. Give family Caring for your child's cast and Orthopaedic Fracture clinic advice sheets	Fracture clinic follow up
Fracture distal fibula	Immobilisation in either moonboot or backslab dependant on the child level of pain. Consider practicalities of both for child and family. Give family Caring for your childs cast (If treated in backslab) and Orthopaedic Fracture clinic advice sheets:	Fracture clinic follow up
Non-weight bearing toddler after fall with nil radiology evidence of fracture	If there is no visible fracture on xray but child still isn't weight bearing despite analgesia, then should be discharged with advice to give regular Paracetamol QID and Ibuprofen TDS for next 2-3 days regardless of pain level. If no improvement after that time, then should return to Emergency for review. **PLEASE NOTE**: In children who have no history of fall or injury it is important to exclude other causes for them non-weight bearing.	Emergency dept follow up if not improving. Then may need immobilsation and fracture clinic referral.

Avulsion fracture ankle

Fracture type	ED management	Follow-up
Avulsion fracture of the lateral or medial ankle	If an avulsion fracture is large enough to be visualised on plain film xray these can be treated in a moonboot and can be weight bearing. Otherwise should be treated as a sprain with analgesia and mobilise as tolerated. Advise to give regular analgesia for first few days and then as required. Nil sports including activities such as riding scooters, skateboards, trampolines for at least 6-8 weeks. Give parent minor ankle fracture fact sheet - under development	Fracture clinic follow up

Sprains/Strains and non-fractures which remain painful

Injury type	ED management	Follow-up
Sprained ankle ligaments	With no evidence of fracture on x-ray but remains sore after analgesia these patients should be treated as a sprain. Double tubigrip or wear firm fitting shoes with support at ankles. Non weight bearing initially and then, with analgesia, gently mobilisation. Often do not need immobilisation in backslab or moonboot. Advice regular analgesia for first few days then as required. Give parent Caring for lateral ankle sprain advice sheet.	Follow up with STIC (soft tissue injury clinic). No fracture clinic follow up required. No further x-rays required if no new injury and pain free at 3 weeks.
Patella Dislocations	Relocate patella and post reduction x-ray to confirm enlocation and ensure no fractures present. Straight leg removable splint to be worn at all times if there is a fracture present. Straight leg removable splint can be removed at times if there is no fracture present on xray. Advice regular analgesia for first few days then as required Give family Patella dislocations advice sheet – under development.	Follow up with STIC (Soft tissue injury clinic) if first time patella dislocation and no fractures found. A fracture seen on x-ray - refer to fracture clinic Recurrent dislocations should be referred to fracture clinic No further x-rays required.
Shoulder dislocations	Relocation of shoulder and post reduction x-rays to confirm enlocation and ensure no fractures present. Shoulder immobiliser under clothing. Advice regular analgesia for first few days then as required	Follow up with STIC if first time shoulder dislocation and no fractures found and no neuropraxias. No fracture clinic follow up required, unless recurrent

		dislocations or fracture on xray.

Consultation

Key stakeholders who reviewed this version:

- Medical Director of Orthopaedics, QCH
- Director of Emergency, QCH
- Deputy Director Emergency, QCH

Definition of terms

Term	Definition	Source
OPSC	Orthopaedic Physiotherapy Screening Clinic	This is a service offered by the physiotherapy department working closely alongside the orthopaedic medical teams. All referrals are screened and triaged and this service helps to alleviate some of the workload on fracture clinic.

Guideline revision and approval history

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