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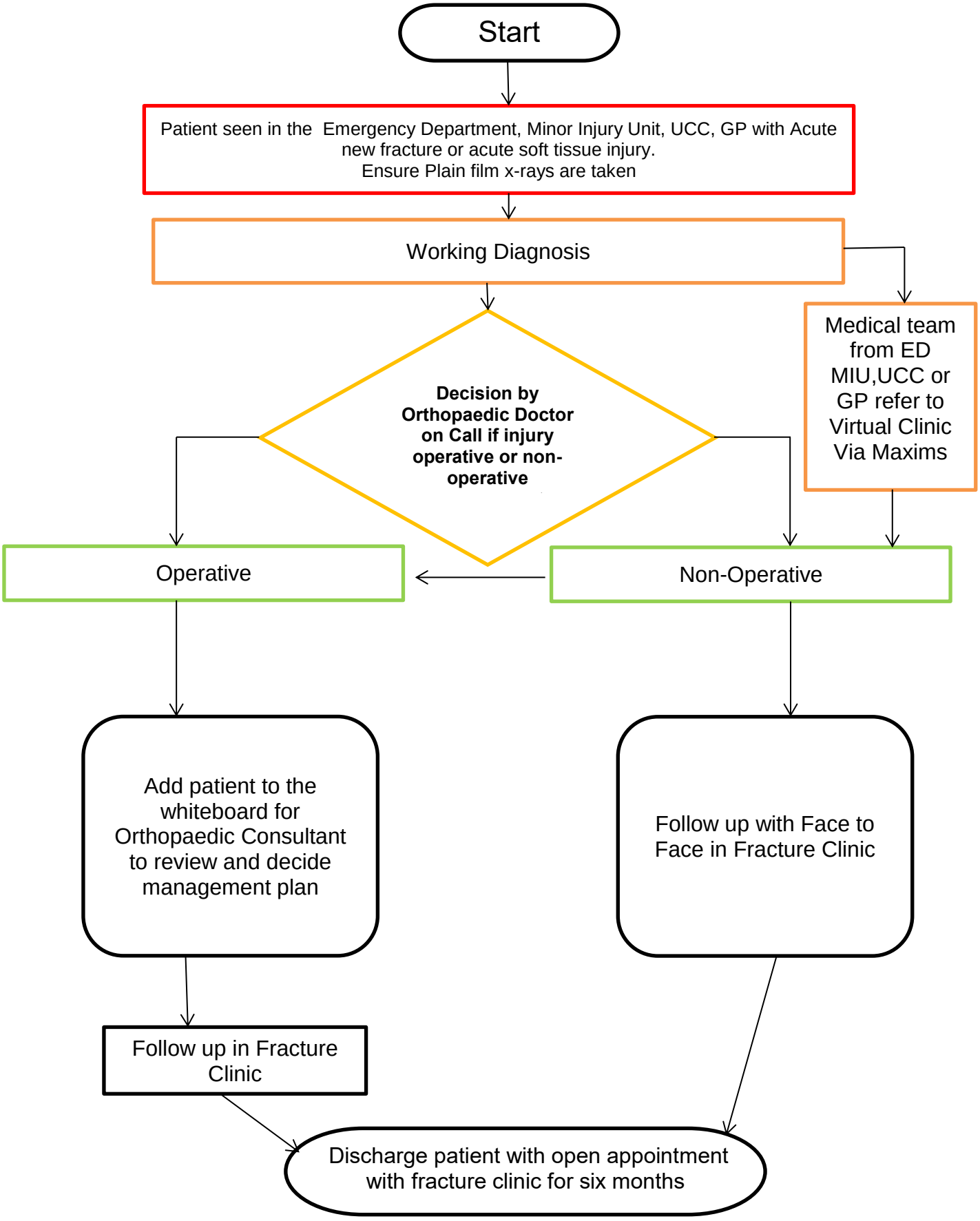
Royal Cornwall Hospitals NHS Trust

Non-Operative Fracture Management for Virtual and Fracture Clinic Clinical Guideline

V1.0

February 2020

Summary


Start
Patient seen in the Emergency Department, Minor Injury Unit, UCC, GP with Acute new fracture or acute soft tissue injury.
Ensure Plain film x-rays are taken
Working Diagnosis
Medical team from ED MIU,UCC or GP refer to Virtual Clinic Via Maxims
Decision by Orthopaedic Doctor on Call if injury operative or non-operative
Operative
Non-Operative
Add patient to the whiteboard for Orthopaedic Consultant to review and decide management plan
Follow up with Face to Face in Fracture Clinic
Follow up in Fracture Clinic
Discharge patient with open appointment with fracture clinic for six months

1. Aim/Purpose of this Guideline

1.1. This guideline applies to all staff working within fracture clinic and the virtual fracture clinic. It also applies to ED, MIUs and GP's that refer into fracture clinic. The aim is to create a guideline for the above staff to use for the management of non-operative conditions both bony and some soft tissue injuries and improve the clinical effectiveness and the patients experience of the virtual fracture clinic and fracture clinic through standardisation of practice.

1.2. The purpose of the guideline is to support all junior staff both static and rotating through fracture clinic and staff working in the virtual fracture clinic to have an evidence based standardised document to guide their clinical practice. It also provides the department with a tool to audit our management of these injuries and allows us to comply with BOAST 7 guidelines.

1.3. This clinical guideline will also enable us to GIRFT: get patients seeing the correct specialist in the correct clinic at the optimum time limit for their particular injury, minimise unnecessary patient journeys and manage certain injuries virtually once seen by orthopedic consultant and discharge over the phone with a clinical letter

1.4. This version supersedes any previous versions of this document.

1.5. **Data Protection Act 2018 (General Data Protection Regulation – GDPR) Legislation**

The Trust has a duty under the DPA18 to ensure that there is a valid legal basis to process personal and sensitive data. The legal basis for processing must be identified and documented before the processing begins. In many cases we may need consent; this must be explicit, informed and documented. We can't rely on Opt out, it must be Opt in.

DPA18 is applicable to all staff; this includes those working as contractors and providers of services.

For more information about your obligations under the DPA18 please see the 'information use framework policy', or contact the Information Governance Team rch-tr.infogov@nhs.net

2. The Guidance

Staff should be using this guideline to guide their management decisions of the injuries included within the document in the virtual fracture clinic and face to face fracture clinic. These guidelines will be updated onto clinical documents and promulgated to all within the department digitally with paper copies available in relevant clinical areas. When new staff rotate, these guidelines will be included within the induction process.

3. Monitoring compliance and effectiveness

<table>
<tr><td>Element to be monitored</td><td>Adherence to guidelines in practice</td></tr>
<tr><td>Lead</td><td>Sharon O’Sullivan (APP), trauma lead in post,</td></tr>
<tr><td>Tool</td><td>
1. A selection of the more common Injuries to be audited for adherence to guideline
2. Select a review period over time with a minimum number of injuries.e.g within last 3 or 6 months
3. Audit using bluespier clinical letters for how these conditions were managed
4. Compare actual clinical practice of each chosen injury amongst x number of clinicians to the suggested management in the guideline

<table>
<tr><th>Injury/ Diagnosis</th><th>Guideline followed at VFC (Y/N)</th><th>Guideline followed at FC (Y/N)</th><th>No of face to face visits</th><th>No of xrays and at what week</th><th>Actual management if different</th><th>Open appt used if relevant</th></tr>
<tr><td>e.g Distal radius</td><td>y</td><td>n</td><td>4</td><td>3. week 1,2,6</td><td>X-rayed at week 6</td><td>no</td></tr>
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Injuries to audit initially in 1st 6 months

1. 5th met
2. Paeds torus
3. Paeds clavicle
4. Distal radius

At 12 months
1. Weber A, B, C
2. Clavicle fractures
3. Proximal humeral fractures
4. Patella dislocations
</td></tr>
<tr><td>Frequency</td><td>First year within 6 months and then annually, complete and share a report following the audit

Annual sharing of adherence to the guideline within T and O audit meetings</td></tr>
<tr><td>Reporting</td><td>Report to be sent to Clinical Director, Trauma Lead, Fracture Clinic Sister and</td></tr>
</table>

arrangements	Governance lead within the department and presented in monthly audit meeting. The consultant Orthopaedic team committee is expected to interrogate the report to identify any deficiencies in the system and act upon them
Acting on recommendations and Lead(s)	Clinical Director or Trauma lead to present deficiencies in the monthly directorate meeting and suggest required actions need to be identified and completed in a specified timeframe and a general consensus among Orthopaedic consultants will be met within a specified timeframe. **Consider stating this responsibility in committee terms of reference**
Change in practice and lessons to be shared	Required changes to practice will be identified and actioned within three months of audit. SOS or trauma lead will be identified to take each change forward where appropriate. Lessons will be shared with all the relevant stakeholders through both the audit and directorate meeting and comms emailed to all clinical staff.

4. Equality and Diversity

4.1. This document complies with the Royal Cornwall Hospitals NHS Trust service Equality and Diversity statement which can be found in the 'Equality, Inclusion & Human Rights Policy' or the Equality and Diversity website.

4.2. *Equality Impact Assessment*

The Initial Equality Impact Assessment Screening Form is at Appendix 2.

Appendix 1. Governance Information

Document Title	Non-Operative Fracture Management for Virtual and Fracture Clinic Clinical Guideline V1.0		
Date Issued/Approved:	December 2019		
Date Valid From:	February 2020		
Date Valid To:	February 2023		
Directorate / Department responsible (author/owner):	Sharon O'Sullivan (Advanced Practice Physiotherapist)		
Contact details:	01872 253091		
Brief summary of contents	This is a clinical guideline for the management of fractures that are to be treated non operatively in adults and children. This guideline is to be used in both virtual and fracture clinic. It excludes the hand.		
Suggested Keywords:	Virtual fracture clinic, non-operative fracture management, upper limb injuries, lower limb injuries, acute soft tissue knee injuries, soft tissue injuries		
Target Audience	RCHT	CFT	KCCG
	✓	✓	
Executive Director responsible for Policy:	Medical Director		
Date revised:	December 2019		
This document replaces (exact title of previous version):	New Document		
Approval route (names of committees)/consultation:	Trauma and orthopaedics directorate meeting		
Care Group General Manager confirming approval processes	Sidwell Lawler		
Name and Post Title of additional signatories	Not Required		
Name and Signature of Care Group/Directorate Governance Lead confirming approval by specialty and care group management meetings	{Original Copy Signed}		
	Name: Becky Osborne		
Signature of Executive Director giving approval	{Original Copy Signed}		

Publication Location (refer to Policy on Policies – Approvals and Ratification):	Internet & Intranet	✓	Intranet Only	
Document Library Folder/Sub Folder	Clinical / Trauma and Orthopaedics			
Links to key external standards	• Boast 7 fracture clinic Services • Fractures (non complex): assessment and management, NICE Guideline 38, 2016 • BOA Virtual Fracture Clinic Statemen t • BSCOS short-life working group: Report on Virtual Clinics in Children's Orthopaedics • BOAST the management of distal radius fractures			
Related Documents:	• Referral pathway into virtual and fracture clinic • 5th metatarsal protocol			
Training Need Identified?	No			

Version Control Table

Date	Version No	Summary of Changes	Changes Made by *(Name and Job Title)*
December 2019	V1.0	Initial version	Sharon O'Sullivan (Advanced Practice Physiotherapist)

All or part of this document can be released under the Freedom of Information Act 2000

This document is to be retained for 10 years from the date of expiry.
This document is only valid on the day of printing

Controlled Document

This document has been created following the Royal Cornwall Hospitals NHS Trust Policy for the Development and Management of Knowledge, Procedural and Web Documents (The Policy on Policies). It should not be altered in any way without the express permission of the author or their Line Manager.

Appendix 2. Initial Equality Impact Assessment Form

Name of the strategy / policy /proposal / service function to be assessed **Non-Operative Fracture Management for Virtual and Fracture Clinic Clinical Guideline V1.0**	
Directorate and service area: Trauma	**New or existing document:** New
Name of individual completing assessment: Sharon O'Sullivan	**Telephone:** Ext 3091

1. *Policy* Aim* *Who is the strategy / policy / proposal / service function aimed at?*	1. ED/ MIUs and UCC 2. GP practices 3. To support health care professionals working in fracture clinic 4. To support nursing staff and physio staff working in virtual fracture clinic				
2. *Policy* Objectives*	Standardise treatment, Get it right first time, work within an evidence based practice				
3. *Policy* – intended Outcomes*	Standardise treatment, Get it right first time, work within an evidence based practice				
4. *How will you measure the outcome?	Audit as per Section 3. Monitoring compliance and effectiveness.				
5. Who is intended to benefit from the *policy*?	Patients, health care professionals working within fracture clinic, peripheral clinics referring into fracture clinic (MIUs, GPs), ED staff, fracture clinic nursing staff, Trauma Coordinators and trauma Practitioners, ward staff and therapy teams referring into fracture clinic				
6a Who did you consult with	Workforce	Patients	Local groups	External organisations	Other
	✓		✓	✓	✓
b). Please identify the groups who have been consulted about this procedure.	**Please record specific names of groups** Mr M. Butler, Mr J. Dainton, Mr R. Hawkins, Mr R. Poulter, Mr Al-Shawi , Surgeon Cdr Jon Matthews and Mr Tim Powell (APP), Mr R. Kincaid, Miss C Taylor, Mr R Walter, Mr R Middleton, Mr D Williams, Mr S Dixon, Mr P Easwarran, Mr M Divekar . Trauma and Orthopaedics Directorate Meeting				
What was the outcome of the consultation?	Introduce the guideline to the clinicians working in the department and disseminate to peripheral teams once the document clears governance.				

7. The Impact
Please complete the following table. **If you are unsure/don't know if there is a negative impact you need to repeat the consultation step**.

Are there concerns that the policy **could** have differential impact on:				
Equality Strands:	Yes	No	Unsure	Rationale for Assessment / Existing Evidence

Age		✓		
Sex (male, female, trans-gender / gender reassignment)		✓		
Race / Ethnic communities /groups		✓		
Disability - Learning disability, physical impairment, sensory impairment, mental health conditions and some long term health conditions.		✓		
Religion / other beliefs		✓		
Marriage and Civil partnership		✓		
Pregnancy and maternity		✓		
Sexual Orientation, Bisexual, Gay, heterosexual, Lesbian		✓		

You will need to continue to a full Equality Impact Assessment if the following have been highlighted:

- You have ticked "Yes" in any column above and
- No consultation or evidence of there being consultation- this excludes any *policies* which have been identified as not requiring consultation**. or**
- Major this relates to service redesign or development

8. Please indicate if a full equality analysis is recommended.	**Yes**		**No**	✓

9. If you are **not** recommending a Full Impact assessment please explain why.

'Not indicated'

Date of completion and submission	December 2019	Members approving screening assessment	Policy Review Group (PRG) ***'APPROVED'***

This EIA will not be uploaded to the Trust website without the approval of the Policy Review Group.

A summary of the results will be published on the Trust's web site.

Appendix 3.

Upper Limb injuries. **NB: certain fracture patterns may need a different sling to ensure optimal outcome**

Type of injury	Non operative Management	VFC/ Clinic RV	Review Interval weeks	Repeat X-ray	Caution
			Shoulder		
Clavicle (Adult) (med/middle/lateral)	Polysling (6 weeks)	VFC FC	1-2 4-6	Y If clinically indicated	• Mal-union, Non Union • Posterior displacement-mediastinal injury (CT chest) • Nerve Injury • Skin compromise
ACJ subluxation or **ACJ dislocation** Superior Posterior/ inferior (rare)	Polysling; (1-2 weeks) mobilise as comfort allows may require fixation polysling	VFC VFC	1 -2 1-2	Clinical Exam Yes +/- CT	• Persistent pain/ deformity • Posterior dislocation NV injury, mediastinal: urgent referral
Sternoclavicular dislocation	Polysling	Ant: YES Post: NO	1-2 weeks	Clinical exam	• Posterior dislocation-refer urgently CT, Potential compression of trachea/ great vessels • Anterior: VFC

Scapula **Blade**: Min displaced **Glenoid, neck, acromion or Corocoid**	1. Polysling for 1-2 weeks 2. follow by early mobilisation to restore shoulder function	VFC FC VFC and discussion with shoulder specialists	1 week 6 weeks 1 week	No No CT scan for glenoid, acromion Yes	• Nerve Injury; Urgent ortho opinion +/- CT • Check for associated injuries as normally high energy fractures
Shoulder Dislocation **# dislocation**	Reduce Polysling for 1-2 weeks Polysling	VFC Refer to Mr Dixon secretary for Annie Rae (APP) VFC		No	• Axillary nerve Injury • RC tear in older patients • Humeral # may occur during reduction if rotation used • Bankhart, Lesion • Posterior: easily missed; look for lightbulb sign • Ortho on call bleep • Axillary nerve check • No elevation/ abduction for 6 weeks

Soft tissue Shoulder injuries	Polysling Early mobilisation	VFC ? FC/ Physio	1 week	No Clinical exam	• RC in older patients > 40 • US scan if high demand patients
Acute Shoulder Pain **Calcific tendonitis**	Sling for comfort	? VFC		No	• Exclude Infection (temp, FBC, CRP) • Calcific tendonitis
Proximal humerus neck and GT **SHAFT**	High arm Collar and Cuff; 6 weeks Humeral Brace (6-8 weeks, occ 12 weeks) or hanging U slab (1 week)	VFC FC	1 weeks- **Refer to physio** 6 weeks 12 weeks (if needed clinically)	Yes Consider CT at 1-2/52	• Document NV findings clearly • **Next available fracture clinic for all 3 types, NB younger patients ? ORIF see quicker** • **Sling advice: Wear day and night** • **Avoid active elevation/ abduction in GT # for 6/52, use waist strap in sling** • Proximal half common site for pathological # • Radial nerve injury-wrist drop • Start physio at 3 weeks, refer promptly • **Midshaft criteria** for acceptable alignment include: ▪ < 20° anterior angulation ▪ < 30° varus/valgus angulation ▪ < 3 cm

					shortening. • **Re-image after any intervention** **(e.g change of sling)**
			Elbow		
Olecranon	Above elbow POP for 2-3 weeks	VFC	Less than a week 3 weeks 6 weeks ? 12 weeks	Yes Yes Yes Clinical examination	• Open • Displacement by pull of triceps • Ulna nerve Injury
Radial Head and neck	Polysling, mobilise early	VFC FC	1-2 weeks and DC	If clinically required or if having trial of non operative mgt	• Posterior Interosseous nerve Injury; check wrist/ finger extension
Biceps Rupture	Polysling	VFC Direct referral to ortho reg for Mr Dainton	**Within a few days at least have Mr Dainton informed**	US	• Urgent Ortho referral for distal biceps rupture
			Forearm		
Radial shaft	Above Elbow POP	VFC	1-2 weeks 6 weeks	Y No	• Watch for Galeazzi; associated dislocation of distal radioulnar joint.
Distal radius/ulna	POP to LW +/- splint	VFC FC	1 week 4 weeks	Yes No	• Shortening, Angulation: Consider Surgery • Check median nerve • Watch for Monteggia • On call ortho for unstable injuries

Lower Limb injuries

Type of injury	Non operative Management	VFC/ Clinic RV	Review Interval	Repeat X-ray	Caution
Pubic Rami	Elbow Crutches x 2	DC to physio from ED **Not for VFC**		no	
Femoral Shaft	Admit	**Not for VFC**		Yes; whole femur	• Fragility fractures in over 50s • Pathological fractures
Femoral Condyles- undisplaced	AB knee cast or brace	On call team called for advice and ?FC	1week 6 weeks 12 weeks	Yes Yes	
Undisplaced Patella #	T scope brace (PWB for 6 weeks) locked in extension until seen in clinic.	VFC FC	Every 2 weeks adjust brace if x-rays satisfactory * 6 weeks	Yes yes	• Ensure extensor mechanism intact, if unsure for senior review • *0-30 for 2/52, 0-60 for 2/52, 0-90 for 2/52 • 6 weeks in brace then mobilise freely if x-rays satisfactory
Tibial plateau undisplaced	Brace *AK cast only if very poor bone quality or non compliant patient **NWB for 6/52**	VFC FC	1-2 weeks 6 weeks 12 weeks	Yes Yes Depends on findings	• 0-30 2/52, 0-60 for 2/52, 0-90 for 2/52 • *Lock in ext for 1st 2/52 if poor bone quality • Wean out of Brace at 6 weeks if good bone quality. • Consider further 6 weeks if multifrag or poor bone quality in unlocked brace PWB and wean at 12 weeks • NWB 6/52

Tibial shaft	1. Backslab NWB for 3/52 2. Sarmiento Cast at 3-6/52 for 4-6/52 FWB 3. Boot (depends on location)	VFC FC	1-2 weeks 4-6 weeks 12 weeks	Yes Yes Yes	• Ensure WB in sarmiento cast FWB • Follow to union
Acute knee Injury • Clinically acutely locked knee with haemarthrosis • Multiple ligamentous Injury • Posterolateral Corner • Probable Meniscal Injury • Grade 2/3 Ligament Injury Isolated	T scope brace in 10 degrees flexion Crutches TWB, (T-scope 30-60) Crutches PWB, (T-scope 0-30). Thermowrap if needed MCL – T Scope 0-90 ACL – T Scope 0-90. PCL – Extension in PCL rebound brace	VFC **Review by Oncall Reg. Not for VFC** VFC VFC VFC VFC	• 48 -72 hours • For urgent MRI +/- CT arteriogram • 48 – 72 hours • 1 week • 1 week	Urgent MRI as clinically indicated Urgent MRI Urgent MRI Urgent MRI	• Suspect ACL/ bucket handle meniscal tear – MRI • Beware of possible knee dislocation – consider urgent CT arteriogram • Generally bracing is 6 weeks • Beware acute MCL injuries opening in extension with positive dial tests at 30 degrees – possible posterior oblique injury

					with MCL (requires acute repair therefore should be reviewed within 48-72 hours)
Patella Dislocation	**<u>T scope</u>**: week 1: 0-45 week 2: 0-90 **Patella Stabilisation brace** once SLR, no lag (6 weeks)	VFC Refer to Tim Powell (APP knee) 1 -2 weeks		• MRI if 1st time dislocators if paediatric or large haemarthrosi • Recurrent dislocators, please refer to their previous Consultant	• Beware of Osteochondral defects with mechanical symptoms. • Haemarthrosis need urgent MRI

Ankle					
Type of injury	**Non operative Management**	**VFC/ Clinic RV**	**Review Interval**	**Repeat X-ray**	**Caution**
Weber A	Boot FWB, wean out as able	VFC	1-2 weeks DC to physio	Y Weightbearing	• Talar shift • DVT • Med tenderness • Infection
Weber B	Boot	VFC	1 week 6 weeks	Yes-Weight bearing Yes If OK mobilise FWB	• Talar shift • DVT • Med tenderness • Infection
Weber C	Boot	VFC	1 week 6 weeks	Yes-Weight bearing Yes If OK mobilise FWB	• Talar shift • DVT • Med tenderness • Infection
Calcaneum #	Discuss with oncall team **all calcaneal fractures with potential for or with skin compromise must be referred as an emergency**	**Not for VFC**		Yes Obtain calcaneal view Yes	• CT if high clinical suspicion but negative on plain films • NWB for first 6 weeks • CT if displaced and urgent F and A apt • Beware risk of pressure necrosis of posterior skin
5th metatarsal #	Boot or supportive footwear FWB	**DC from VFC or RV at 3/12 (SEE**			• ED with info leaflet • Zone 2/3/ and displaced or rotated

		PROTOCOL)			shaft 3/12 F/U • Re fractures of 5th met need to be seen
Displaced 1st Metatarsal Fracture	Boot NWB	VFC	1-2 weeks 6 weeks 12 weeks	Yes Yes	• NB if displaced. Lower threshold for surgery
Phalanges (undisplaced)	Buddy strapping or metatarsal pad	**NOT FOR VFC**		No	• Discharge from ED with leaflet • Consider referral to VFC if big toe
Type of injury	**Non operative Management**	**VFC/ Clinic RV**	**Review Interval**	**Repeat X-ray**	**Caution**
Ankle sprain		**NOT FOR VFC**			• DC TO PHYSIO at ED • REFER BACK AT 3/12 FOR ONGOING PAIN OR INSTABILITY/ SWELLING
TA ruptures	• RCHT TA protocol (vacoped in full equinus) • Under 50 consider operative	• Under 50 urgent CONS review ASAP • If non operative, DC care to physio If non operative, DC care to physio		No	• Re-rupture • Pts under 50, active, with physically demanding jobs; discuss with on call ortho • DVT risk • Delayed presentation need exception and need to be seen

Paediatric Non operative fracture

Type of injury	Non operative Management	VFC/ Clinic RV	Review Interval	Repeat X-ray	Caution
Clavicle (Under 16)	BAS for comfort and info sheet given at ED	**VFC and discharge from VFC if consultant happy**			• NAI • Skin compromise • Ensure info leaflet given at ED
Torus/ Buckle	Splint preferably Or soft cast Info leaflet	**VFC and DC over phone**	No	No	• Missed # • NAI • Ensure info leaflet given at ED
Humerus	C and C	VFC	1 week 4 weeks +/- 8 weeks	Yes Yes If clinically indicated	• NAI • NV status • ROM restriction (elbow and wrist only until united)
Supracondylar	Undisplaced- POP Above elbow with elbow max 90 (3/52) Displaced –MUA +/- wires or ORIF	VFC	1 week 3 weeks	Gartland 1: No Gartland 2; Yes No	• Elbow stiffness • Significant nerve and arterial injury common • Most heal well within 3/52 • NAI
Lateral epicondyle **Med epicondyle**	As above If displaced: open reduction Same as Lateral, discuss with Consultant	VFC	1 week 3 weeks	Yes Yes	• Ulnar nerve Injury • Displacement or incarceration • Watch for associated dislocation • NAI

Lateral condyle	Undisplaced- POP Above elbow with elbow max 90 3/52	VFC	1 week 3 weeks	Yes Yes	• Contact Consultant **Bring in same day if VFC**
Greenstick #	POP/LW or splint	VFC	1 week 3 weeks	Yes If clinically indicated	• NAI
Femoral Shaft	Refer to RCHT protocol	N/A		Y; whole femur	• Pathological fractures • **CONSIDER NAI IF NOT WALKING AGE**
Toddlers #	Long Leg Cast	VFC	1 week 4 weeks	Yes Yes	• **CONSIDER NAI IF NOT WALKING AGE**