

Specific Fracture Management in Emergency Department/Walk-in-Centre
(Post-op complications should be referred to FY2 on-call not VFC)

- OPTIONS**
- Discharge home
 - Refer to Orthopaedic SHO on-call to be discussed at trauma meeting or admission
 - Review in ED Clinic
 - Refer to Virtual Fracture Clinic (VFC)

<u>UPPER LIMB</u>				
Diagnosis	Initial Treatment	A&E/WIC Management	Important info for VFC	Standard VFC Management
Clavicle # (adults)	Polysling	VFC	NV intact? Open / closed injury? Skin tenting?	F2F # clinic
Clavicle # (children)	Polysling	VFC	NV intact? Open / closed injury? Skin tenting?	D/C
Neck of humerus #	Collar and cuff	VFC Dementia and/or Nursing Home = discharge home)	NV intact? Open / closed injury?	F2F # clinic

Greater tuberosity of humerus #		Collar and cuff	VFC	NV intact? Open / closed injury?	D/C
Shaft of humerus #		Humeral brace / U-Slab	Refer to Ortho SHO	N/A	N/A
Shoulder dislocation		Reduce & polysling	VFC	NV intact? – Military badge sensation Traumatic / atraumatic? 1 st time or recurrent?	Atraumatic – D/C to Physio Traumatic – D/C to physio to assess for labral tear / RC tear – refer to F2F # clinic if required
Shoulder # + dislocation	Isolated greater tuberosity # + pt <50	Reduction in A&E Polysling	If unable to reduce → refer to Ortho SHO If successful reduction → VFC	N/A	N/A
	Non-isolated greater tuberosity # or pt >50	Reduction in A&E / theatre Polysling	If unable to reduce → refer to Ortho SHO If successful reduction → VFC	N/A	N/A
Acromio-clavicular joint injury		Polysling	VFC	NV intact?	Grade 1-2 – D/C Grade 3 – physio Grade 4-5 F2F # clinic + physio
Distal biceps rupture		USS + polysling	VFC	N/A	N/A
Pec Major rupture		USS + polysling	VFC	N/A	N/A

Elbow dislocation		Reduce Backslab/ Polysling	If unable to reduce → refer to Ortho SHO If successful reduction → VFC	N/A	N/A
Supracondylar humerus # (children)	Undisplaced	Above elbow backslab Post backslab - AP & Lat x-ray	VFC	NV intact? Open / closed injury?	F2F # clinic
	Displaced	Above elbow backslab in flexion as pain allows Post backslab AP and Lat x-ray	Refer to Ortho SHO	N/A	N/A
Proximal radius (head / neck) #	Undisplaced	Collar and cuff	VFC	NV intact? Open / closed injury?	D/C + refer to physio
	Displaced / marginal # / comminuted	Polysling / Backslab if very painful	VFC	N/A	N/A
Olecranon #	Undisplaced	Backslab / Polysling	VFC	NV intact? Open / closed injury?	F2F # clinic
	Displaced	Backslab / Polysling	Refer to Ortho SHO	N/A	N/A
Scaphoid #	Confirmed	Scaphoid POP	VFC	NV intact? Open / closed injury? ASB / scaphoid tubercle tenderness? Axial grind test +ve?	F2F # clinic

	Unconfirmed	Splint with thumb extension	ED Review Clinic for repeat x-ray 10 days – 2 weeks post injury	N/A	N/A
Carpal bone # (excluding scaphoid #)		Backslab	VFC	NV intact? Open / closed injury?	F2F # clinic
Bennett's fracture (intra-articular base thumb MC)		Bennett's POP	VFC	N/A	N/A
Neck / shaft 1 st (thumb) metacarpal #		Splint with thumb extension	VFC	NV intact? Open / closed injury? Rotational deformity?	D/C +/- hand physio
5th metacarpal neck / head #	Undisplaced / min displaced	Buddy Strap	VFC	NV intact? Open / closed injury? Rotational deformity / scissoring?	D/C +/- hand physio
	Rotational deformity or scissoring	Buddy strap	VFC	N/A	N/A
	Angulated >40 degrees	Buddy strap with volar slab	Refer to Ortho SHO	N/A	N/A
Fracture metacarpal shaft/base	Undisplaced	Buddy Strap Multiple MC #'s consider buddy strap + volar slab	VFC	NV intact? Open / closed injury? Rotational deformity / scissoring?	D/C
	Displaced	Buddy strap	VFC	NV intact?	D/C +/- physio

		<50% displaced/ <50° angulated/ no rotational deformity	Multiple MC #'s consider buddy strap + volar slab		Open / closed injury? Rotational deformity / scissoring?	
		>50% displaced />50° angulated/ rotational deformity	Buddy strap + Volar slab	Refer to Ortho SHO	N/A	N/A
Proximal / middle phalanx #'s	Undisplaced		Buddy strap	VFC	NV intact? Open / closed injury? Rotational deformity / scissoring?	D/C +/- hand physio
	Displaced / rotated		Manipulate with ring block/Entenox	VFC	N/A	N/A
IP, MCP & CMC joint dislocation(s)			Reduce + buddy strap + futura splint if MCPJ / CMCJ	If unable to reduce → refer to Ortho SHO If successful reduction → VFC	N/A	N/A
Displaced forearm #'s (Monteggia fracture dislocation, Galeazzi fracture dislocation)			Above elbow backslab	Refer to Orthopaedic SHO	N/A	N/A
Isolated ulna shaft #	Undisplaced		Above elbow backslab	VFC	NV intact? Open / closed injury?	F2F # clinic
	Displaced		Above elbow backslab	Refer to ortho SHO	N/A	N/A

Crush Fracture terminal phalanx	Closed	Consider trephining	VFC	NV intact? Open / closed injury? Mallet deformity?	D/C +/- Hand physio (may need preventative mallet splinting for 3-4/52)
	Open	Wound washout +/- nail bed repair in ED Non-adherent dressing/antibiotic if contaminated	Refer to Plastics Team	N/A	N/A
Mallet injury	Soft tissue	Mallet splint	VFC	NV intact? Open / closed injury?	D/C + hand physio (NB mallet splint for 8/52)
	Bony	Mallet splint	VFC	NV intact? Open / closed injury?	D/C + hand physio (NB mallet splint for 6/52)
Children's wrist #	Undisplaced/ minimally displaced distal radius/ ulna greenstick fractures	Backslab	VFC	NV intact? Open / closed injury?	F2F # clinic
	'Torus/buckle' fracture distal radius / ulna	Offer bandage	No follow up required	NV intact? Open / closed injury?	D/C

	(<13 years) displaced distal radius / ulna #s requiring manipulation		Backslab Urgent MUA required in ED when immediate/impending neurovascular compromise to limb using haematoma/ Biers block	Refer to Orthopaedic SHO	N/A	N/A
	Distal radius / ulnar Salter-Harris #s	Displaced	Backslab	Discussion with ED Reg/ Consultant/ Ortho SHO If non-surgical – F2F # clinic	N/A	N/A
		Undisplaced	Backslab	VFC	NV intact? Open / closed injury?	F2F # clinic
Adult wrist #	Extra-articular adult undisplaced /minimally displaced #s & Low functional demand e.g. dementia, paralysed limb patients (stroke)		Futura splint with thumb extension	VFC	NV intact? Open / closed injury?	D/C +/- physio
	Extra-articular adult undisplaced /minimally displaced #s- normal functional demand		Backslab	VFC	NV intact? Open / closed injury?	F2F # clinic vs D/C
	Intra-articular undisplaced/minimally displaced fractures		Backslab	VFC	NV intact? Open / closed injury?	F2F # clinic
	Ulna styloid #		Futura splint	VFC	NV intact?	D/C

Adult wrist #	Extra-articular # with dorsal displacement		Haematoma/Biers block, MUA & backslab	If successful reduction → VFC If not successful → refer to Ortho SHO (dependent on functional status)	N/A	N/A
	Colles # (intra-articular)	<65 years	Haematoma/Biers block, MUA & backslab	VFC	N/A	N/A
		>65 years	Haematoma/Biers block, MUA & backslab	VFC	N/A	N/A
	Extra-articular # with volar displacement		Backslab	Refer to Ortho SHO	N/A	N/A
	Intra-articular displaced # of distal radius		Backslab	Refer to Ortho SHO	N/A	N/A
	High energy injury, Open fracture, Neurological deficit, Fracture off-ended, Grossly unstable fracture of distal radius and ulna		Backslab Haematoma/Biers block + urgent MUA when immediate / impending neurovascular compromise	Refer to Ortho SHO	N/A	N/A
	LOWER LIMB					

Diagnosis	Initial Treatment	A&E Management	Important info for VFC	Standard VFC Management
Pelvis #	Treat hypovolaemia if required Major disruption - apply pelvic splint	Refer to Ortho SHO	N/A	N/A
Pubic rami #	Analgesia & mobilise	Refer to Medics if unable to mobilise (if Nursing Home then discharge)	N/A	N/A
Hip Pain (unable to mobilise but negative x-ray)	Analgesia (Exclude posterior tenderness/SJ injury)	If no fracture & continuing symptoms - refer to Medics MRI/CT to be done by Medics if unable to mobilise	N/A	N/A
Neck of femur #	Analgesia, IV access and fluids ECG Exclude compounding problems e.g. pneumonia etc.	Refer to Ortho SHO using NOF pathway	N/A	N/A
Femur shaft #	Treat hypovolaemia, x-match, nerve block, IV analgesia, Thomas splint & re-x-ray	Refer to Ortho SHO	N/A	N/A

Acute Paediatric Osteochondral Knee #					
Patella dislocation	Hoffa Fracture (Intra-articular supracondylar distal femur #)	Cricket Pad splint	Refer to Ortho SHO	N/A	N/A
	Able to SLR	Cricket Pad splint	Refer to Ortho SHO	N/A	N/A
	Unable to SLR	Reduce + Cricket Pad splint Check x-ray post-reduction	VFC	Able to SLR? Primary / recurrent?	D/C to physio
Soft tissue knee injury		Reduce + Cricket Pad splint Check x-ray post-reduction	Refer to Ortho SHO	N/A	N/A
	Limited clinical Ax due to pain / swelling	AP + Lat x-ray Cricket pad splint + crutches	ED review Clinic	N/A	N/A
	Obvious Laxity / locking (block to ext) / signs of clinical instability / unable to SLR / obvious swelling or haemarthrosis, acute swelling within 2 hours with pop (heard or felt)	AP + Lat x-ray Cricket pad splint + crutches if required	Refer to Ortho SHO	N/A	N/A
	Nil laxity, Nil locking (block to ext), Nil signs of clinical instability + able to SLR, nil effusion	AP + Lat x-ray Crutches if required	D/C with advice / to physio	N/A	N/A
	Grade 1 (tender without laxity)	AP + Lat x-ray	ED Review Clinic	N/A	N/A

Specific MCL Injury (Knee)	Grade 2 (Mild laxity, firm end point)	Crutches if required	ED Review Clinic	N/A	N/A
	Grade 3 (Gross laxity)	AP + Lat x-ray Hinged Knee Brace unlocked 6/52 + crutches AP + Lat x-ray Hinged Knee Brace HKB 30° – 90° for 6/52 + crutches	ED Review Clinic	N/A	N/A
Patella # (NB Bi-partite patella)	Undisplaced	Cricket Pad splint	VFC	N/A	N/A
	Displaced	Cricket Pad splint	Refer to Ortho SHO	N/A	N/A
Quadriceps/ patella tendon rupture		Cricket Pad splint (arrange urgent USS if daytime presentation)	Refer to Ortho SHO	N/A	N/A
Intercondylar tibial avulsion fracture		Cricket Pad splint	Refer to Ortho SHO	N/A	N/A
Tibial condyle /plateau #	Undisplaced	Cricket Pad splint	VFC	N/A	N/A
	Displaced	Cricket Pad splint	Refer to Ortho SHO	N/A	N/A
Tibial shaft (closed) Displaced or undisplaced		Above knee backslab	Refer to Ortho SHO	N/A	N/A

Proximal / mid-shaft fibula #		Screen for ankle pain (possible Maisonneuve injury) Crutches - FWB as tolerated Mid-shaft – boot for comfort if required	VFC	NV intact? Open / closed injury? Ankle pain?	D/C +/- Physio
Ankle #s	Pilon Fracture (intra-articular distal tibia)	Above knee backslab	Refer to Ortho SHO	N/A	N/A
	Displaced/ unstable ankle #s	Above knee backslab	Refer to Ortho SHO	N/A	N/A
	Medial malleolus avulsion #		VFC	NV intact? Open / closed injury?	D/C +/- Physio
	Isolated tip of fibular or tip of medial malleolus avulsion fracture	Treat as ankle sprain: Fixed walker boot + crutches	Discharge to Physio/ GP	N/A	N/A
	Isolated Weber A distal fibula fracture	Treat as ankle sprain: Fixed walker boot + crutches	VFC	NV intact? Open / closed injury? Medial tenderness?	D/C +/- Physio
	Isolated undisplaced Weber B distal fibula fracture + NO medial tenderness/ bruising/ talar shift	Fixed walker boot + crutches	VFC	NV intact? Open / closed injury? Medial tenderness?	D/C +/- Physio

	Isolated displaced Weber B fracture distal fibula fracture with medial tenderness/ bruising /talar shift	Backslab	Refer to Ortho SHO	N/A	N/A
	Isolated Weber C fracture distal fibula	Backslab	Refer to Ortho SHO	N/A	N/A
	Bi-malleolar/ tri-malleolar Fracture	Backslab	Refer to Ortho SHO	N/A	N/A
Calcaneal #	Undisplaced	Padded crepe if pain/swelling++ or backslab, analgesia and crutches non-weight bearing	VFC	NV intact? Open / closed injury?	N/A
	Displaced	Padded crepe if pain/swelling++ or backslab, analgesia and crutches non-weight bearing	Refer to Ortho SHO	N/A	N/A
Isolated metatarsal #s		Fixed walker boot	VFC	NV intact? Open / closed injury?	D/C
Multiple metatarsal #s / crushed foot		Fixed walker boot	VFC	NV intact? Open / closed injury?	F2F # clinic
Phalangeal #s		Buddy strap	VFC	NV intact? Open / closed injury?	D/C

	Great toe #	Toe Spica (Elastoplast)	VFC	NV intact? Open / closed injury?	D/C
Base of 5 th metatarsal #	Jones # – 1.5cm distal to tuberosity of 5 th metatarsal)	Fixed walker boot, analgesia and crutches NWB Consider VTE Prophylaxis	VFC	NV intact? Open / closed injury? VTE Prophylaxis prescribed?	F2F # clinic
	Avulsion #	Fixed walker boot, analgesia and crutches	VFC	NV intact? Open / closed injury?	D/C
Tarsal Fracture without disruption of tarsal alignment	Undisplaced	Fixed walker boot, analgesia and crutches	VFC	NV intact? Open / closed injury?	D/C
	Displaced	Fixed walker boot/ backslab analgesia and crutches Consider VTE Prophylaxis	Refer to Ortho SHO	N/A	N/A
Intra-articular basal metatarsal fracture/ query Lisfranc injury		Backslab Consider VTE Prophylaxis	Refer to Ortho SHO	N/A	N/A
Tendo-Achilles rupture (High risk DVT)		Aircast walker boot with 4 heel wedges NWB Consider VTE Prophylaxis	Refer to Ortho SHO	N/A	N/A

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SPINAL					
Diagnosis		Initial Treatment	A&E Management	Important info for VFC	Standard VFC Management
Non-fragility/High Trauma #		ATLS	<ul style="list-style-type: none">AED discuss with Walton Centre	N/A	N/A

		<ul style="list-style-type: none">• If TLSO brace needed → Refer to Ortho SHO		
Fragility/Low Trauma #	ATLS	<ul style="list-style-type: none">• Simple osteoporotic wedge compression fracture with no complications → AED book in spinal ambulatory Clinic• Refer to care of elderly via Medicine	N/A	N/A

SOFT TISSUE INFECTIONS (incl. insect bite)

Hand/ Upper Limb	History and examination	Refer to Plastics Team	N/A	N/A
Cellulitis Lower limb	History and examination	Refer to Medicine	N/A	N/A

Exclusions to Virtual Fracture Clinic

- Homeless patients
- Non-English speaking patients
- Prisoners
- Those with hearing difficulties
- Patients with dementia
- Those with no access to a telephone
- Safeguarding concerns (Including alleged assault cases)
- If ED Practitioner feels the patient requires a face-to-face appointment e.g. if telephone conversation would be difficult
- In these circumstances refer to Ortho SHO

Add : -

- Chronic Conditions → Discharge and GP to refer to elective orthopaedic clinic as per agreed pathway.

Changes made to document: -

<u>Date</u>	<u>Condition</u>	<u>Changes</u>
Feb 2020	Proximal/middle phalanx #'s (displaced/rotated)	Change from AED mx of buddy strapping to manipulate with ring block/entnox. Refer to SHO if needed
	Crush Fracture terminal phalanx	Change from review in ED review clinic to refer to plastics team
	Extra-articular undisplaced/minimally displaced #'s	Addition of normal function aspect with management of backslab and VFC.
	Intra-articular undisplaced/minimally displaced fractures	Changed from VFC assessment to face to face fracture clinic for assessment.
	Colles # (extra-articular)	Change condition title to extra-articular with dorsal displacement. Change AED management from F2F # clinic to if successful reduction → F2F # clinic, if not successful → refer to Ortho SHO (dependent on functional status)
March 2020	Smith's #	Change to extra-articular fracture with volar displacement
	Barton's #	Change to Intra-articular displaced # of distal radius
	All with plan for F2F # clinic Achilles Rupture	All F2F clinic removed and plan for refer to ortho SHO or VFC Addition of: → book 1 x stop clinic on Thurs am or pm (Mr. Ballester's/Mr. Morgan's # clinic) and arrange USS.
August 2020	Spinal Fractures	Addition of new table incorporating spinal fracture management
	Soft Tissue Infections	Addition of new table incorporating soft tissue infection management
	VFC Exclusion Criteria	Addition of chronic conditions to be discharged from AED and directed to GP for referral to elective orthopaedic clinic.