



	Nurse Practitioner – Emergency Services CLINICAL PRACTICE GUIDELINE INJURY – FOOT	
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Scope		Outcomes
Nurse Practitioner	<ul style="list-style-type: none"> • Foot injury, pain, swelling or deformity 	Identify patients suitable for NP (Emergency) CPG
Medical Practitioner +/- Nurse Practitioner	<ul style="list-style-type: none"> • Compound # / obvious fracture dislocation/ dislocation • Neurovascular compromise • Altered conscious state including effects of drugs / alcohol • History consistent with collapse 	Identify patients not suitable for NP (Emergency) CPG and redirect NP Mx to usual ED care with NP (Emergency) part of the ED team.
Initial Assessment and Interventions		Outcomes
History	<ul style="list-style-type: none"> • Mechanism of injuries sustained • Time of injury • Treatment given pre hospital • Range of movement / Ability to weight bear • Deformity • Past medical history / medications • Allergies / immunisations • Last food / fluids • Compensable status - MVIT / WC / DVA / Private Insurance 	Exclusion criteria identified → exit CPG. Immediate referral to EP.
Neurovascular assessment	<ul style="list-style-type: none"> • Color • Warmth • Movement • Sensation • Capillary refill • Peripheral pulses • Tendon assessment 	Neurovascular compromise → exit CPG. Referral to EP.
Focused clinical assessment	<ul style="list-style-type: none"> • Ottawa Ankle/Foot Rules ^[1] 	Determine need for ankle/Foot x-ray
Pain assessment	<ul style="list-style-type: none"> • Pain scale 	Determine need for and type of analgesia
Analgesia / First Aid	<ul style="list-style-type: none"> • - rest • - ice / immobilisation • - compression • - elevation • Administration of analgesia (see medications) 	Reduction / relief of pain Minimise / prevent swelling

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Working diagnosis and Investigations		Outcomes
Imaging	<ul style="list-style-type: none"> No imaging required if <ul style="list-style-type: none"> - patient able to weight bear - no bony or focal tenderness^[1] 	
	<ul style="list-style-type: none"> Foot x-ray required Pain in mid foot zone plus <ul style="list-style-type: none"> ○ +/- bone tenderness at the base of fifth metatarsal ○ - +/- bone tenderness at the navicular bone - +/- inability to weight bear both immediately and in the ED 	Identify specific injury and determine patient management
Pathology	<ul style="list-style-type: none"> Not routinely indicated but consider necessity for IV access and insert cannula if required Pre operative investigations may include FBP, U&E, Group and Hold and INR as discussed with admitting medical officer. 	Ongoing assessment of need for intravenous access
Interpretation of results (diagnostic features) and management decisions		Outcomes
Imaging ± clinical features		
No fracture seen and weight bearing –soft tissue injury ^[2]	NP (Emergency) review with view to discharge <ul style="list-style-type: none"> • Tubigrip application • Appointment with LMO if required • patient education / health promotion 	Patient discharged
No fracture seen and non-weight bearing ^[2]	NP (Emergency) review with view to discharge <ul style="list-style-type: none"> • Tubigrip application and crutches • Appointment with LMO 1/52 • Patient education / health promotion 	Patient discharged
Minor avulsion fractures of the Talus, Talar neck fractures Type 1 – non displaced ^[2]	NP (Emergency) review with view to discharge <ul style="list-style-type: none"> • Below knee POP back slab • Crutches • Appointment with Fracture Clinic 	Patient discharged

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	<p>1/52</p> <ul style="list-style-type: none"> • Patient education / health promotion • ± Referral to physiotherapy 	
<p>Talar neck fracture Type 2,3 and 4 injuries ^[2]</p>	<p>NP (Emergency) review with view to referral to Orthopedic Unit</p> <ul style="list-style-type: none"> • R.I.C.E. • Review and maintain adequate analgesia • Monitor neurovascular perfusion of foot • Maintain nil orally until review • Below knee POP backslab ^[3] if unstable • If discharged refer to above management decisions 	<p>Assessment by Orthopedic Unit Patient discharged or admission arranged</p>
<p>Calcaneal fractures ^[2]</p> <ul style="list-style-type: none"> - vertical - horizontal - avulsions - subtalar joint involvement - Intra articular 	<p>NP (Emergency) review with view to referral to Orthopedic Unit</p> <ul style="list-style-type: none"> • R.I.C.E. • Review and maintain adequate analgesia • Monitor neurovascular perfusion of foot • Maintain nil orally until review • Below knee POP backslab if unstable <p>If discharged refer to above management decisions</p>	<p>Assessment by Orthopedic Unit Patient discharged or admission arranged</p>
<p>Acute rupture of tendocalcaneus ^[2]</p>	<p>NP (Emergency) review with view to referral to Orthopedic Unit</p> <ul style="list-style-type: none"> • R.I.C.E. • Review and maintain adequate analgesia • Monitor neurovascular perfusion of foot • Maintain nil orally until review • Below knee POP back slab if unstable <p>If discharged refer to above management decisions</p>	<p>Assessment by Orthopedic Unit</p> <p>Patient discharged or admission arranged.</p>

Navicular and Metatarsal Fractures - undisplaced ^[2]	NP (Emergency) review with view to discharge <ul style="list-style-type: none"> • Below knee POP back slab • Crutches • Appointment with Fracture Clinic 1/52 • Patient education / health promotion • ± Referral to physiotherapy 	Patient discharged
Navicular or Metatarsal fracture - Displaced. ^[2]	NP (Emergency) review with view referral to Orthopedic Unit <ul style="list-style-type: none"> • R.I.C.E. • Review and maintain adequate analgesia • Monitor neurovascular perfusion of foot • Maintain nil orally until review • Below knee POP back slab if unstable • If discharged refer to above management decisions 	Assessment by Orthopedic Unit Patient discharged or admission arranged
Associated care	<ul style="list-style-type: none"> • Consider ECG / CXR for patients who require surgical intervention • Consider IV fluids for patients who require fasting for surgical intervention 	
Acute Referral	<ul style="list-style-type: none"> • Referral to +/- physiotherapy +/- interpreter +/- Allied health etc. 	

Patient Discharge Education		Outcomes
When to return	<ul style="list-style-type: none"> • Verbal instructions from NP (Emergency) 	Ensure patient understands problem, treatment, follow up and is safe for discharge home
Follow up appointments	<ul style="list-style-type: none"> • Verbal instructions from NP (Emergency) • Written instructions for LMO/Fracture clinic (if applicable) • OPD appointment book (if applicable) 	Ensure patient understands problem, treatment, follow up and is safe for discharge home
Medication instructions	<ul style="list-style-type: none"> • Verbal instructions from NP (Emergency) Contact Pharmacist to provide medication education for patient when available. Written information as per Hospital Pharmacy on medications dispensed. 	Ensure patient understands problem, treatment, follow up and is safe for discharge home
POP care	<ul style="list-style-type: none"> • Verbal instructions from NP (Emergency) • Plaster check 24 hrs with LMO • ED written patient information 	Ensure patient understands problem, treatment, follow up and is safe for discharge home
Safety assessment i.e. crutches	<ul style="list-style-type: none"> • Appropriate fitting of crutches and ambulation instructions • Patients > 60 yrs of age, consider referrals 	Ensure patient understands problem, treatment, follow up and is safe for discharge home
Other Referrals	<ul style="list-style-type: none"> • Referrals may be made for specific patient problems or as required to; <ul style="list-style-type: none"> - social work - physiotherapy - drug and alcohol counsellor - aboriginal liaison officer 	Ensure patient understands problem, treatment, follow up and is safe for discharge home
Certificates	<ul style="list-style-type: none"> • Absence from work certificates • WC certificate • Certificate of attendance 	Appropriate documentation completed
Letters	<ul style="list-style-type: none"> • Local medical officer letter 	Ensures continuity of care and referral to health care team

Medications		Outcomes
<p>All medication will be stored, labelled and dispensed in accordance with hospital policy and relevant legislation ^[3] According to Ambulatory Pain Management Guideline</p>		
<p>Simple analgesia^[4] S2 Mild</p>	<p>Paracetamol 500mg: 1 or 2 tablets 4-6/24, not to exceed 8 tablets in 24 hrs. Children: 15 mg/kg 4 hourly up to 4 times a day. Not to exceed 4 doses in 24 hours</p> <p>PAINSTOP DAY: 0.6 - 0.8 MLS/KG ⁽⁶⁾</p>	<p>Patients given analgesia appropriate to allergies, current medications and past medical history</p> <p>Analgesia requirements determined by ongoing assessment of pain and adequate analgesia provided</p> <p>Patients with excessive pain or pain unrelieved by analgesia need review by EP</p>
<p>NSAIDS ^[4] S4 Moderate</p>	<p>ADD to paracetamol if still in pain Naproxen 500 mg initially then 250 mg 6 – 8 hourly</p> <p>Children; Ibuprofen: 10 mg/kg 3-4 times daily to maximum of 600 mg in 24 hours ⁽⁷⁾</p> <p>If NSAIDS contraindicated, Tramadol Adults and Children > 12 years Contraindicated in epilepsy, SSRI use Caution in the Elderly – Maximum 300 mg daily Oral: 50-100mg QID, maximum 400mg over 24 hours OR Intravenous: 50-100mg QID, maximum 600mg over 24 hours</p>	
<p>Narcotic Analgesia ^[4] S8 Severe</p>	<p>ADD to paracetamol + NSAID if still in pain</p> <p>Currently NPs require Medical Prescription for Schedule 8 medication</p> <p>Oxycodone: Adults only; Oral: 5mg every 4 hours OR Morphine Adults; Intramuscular/intravenous: 2.5mg then incremental doses to a maximum total dose of 10mg (given over period of 30 minutes) Children; IM – 0.2 mg/kg IV: 0.1- 0.2 mg/kg/dose given in titrated doses: IF PAIN NOT CONTROLLED WITH ALL 3 AGENTS, REFER TO ED CONSULTANT</p>	

Anti-emetic ^[4] S4 PRN	Metoclopramide hydrochloride: Oral/IM/IV:10-20mg 8/24 Prochlorperazine: Oral 5-10mg 8-12/24 IM deep 12.5 mg 8/24 Not in Children.	
Intravenous fluids S4	Adults: 0.9% Sodium Chloride Intravenous fluid: 5-10ml flush of Intravenous cannula 6/24 or Infusion at 8-12hrly titrated to patients requirements. Children: Discuss with ED Consultant.	

Clinical audit evaluation strategies		
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Unexpected representation	Emergency Department attendance register and NP (Emergency) clinical log	
Missed problem	Emergency Department x-ray review	

References		
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1.	Broomhead, P. and P. Stuart, Validation of the Ottawa Ankle Rules in Australia. Emergency Medicine, 2003. 15 (2): p. 126 - 132.
2.	McRae, R. and M. Esser, Practical Fracture Treatment. 4th Ed. 2002, Sydney: Churchill Livingstone.
3.	JHC Medication Storage and Administration Policy. Available via Hospital Intranet
4.	eMIMS 2006 [cited 2006 Mar 16]; Available via Hospital Intranet

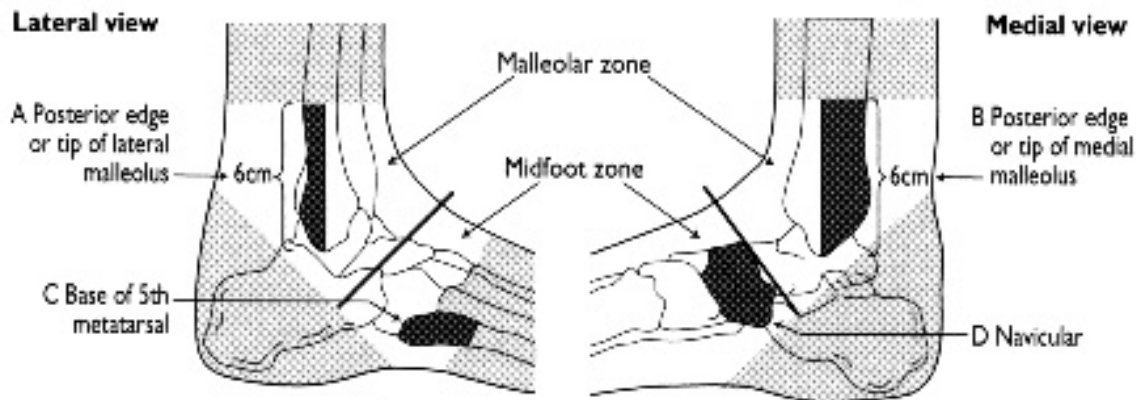
Authorship and endorsement (This Guideline has been developed in collaboration with the JHC ENP CPG Review Committee)		
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Key to terms	Appendices
<p>CPG- Clinical Practice Guideline DVA- Department of Veteran Affairs EP- Emergency Physician PS- Pain Score S1-S4- Schedule of the drug administration act LMO- Local Medical Officer MVIT – Motor Vehicle Insurance Trust NP (Emergency)- Nurse Practitioner – Emergency Services OP- Outpatients WC- Work cover</p>	<p>Ottawa Ankle and Foot Rules</p>
<p>Written: June 2006 Reviewed: N/A</p>	<p>Review date: June 2008</p>



An ankle x ray series is required only if there is any pain in malleolar zone and any of these findings:

- Bone tenderness at A
- Bone tenderness at B
- Inability to bear weight both immediately and in emergency department

A foot x ray series is required only if there is any pain in midfoot zone and any of these findings:

- Bone tenderness at C
- Bone tenderness at D
- Inability to bear weight both immediately and in emergency department