Western Health

Guideline for the Management of Suspected and Confirmed Hip Fractures

Guideline code: OG-CC4	Current version: September 2021
Previous version: Updated document	Next review date: December 2023
Section: Connecting Care	Sub-Section: Care Assessment/Planning/Delivery

1 Overview

The objective of this guideline is to provide clinical staff with a standardised pathway for the assessment and management of patients with suspected hip fractures.

2 Applicability

This guideline relates to all clinical staff that have direct contact with patients throughout all Western Health facilities, with no exclusions.

3 Responsibility

The Divisional Directors of Operative & Critical Care Services, Emergency Medicine & Cancer Services, and Subacute & Aged Care Services have the initial responsibility for introducing and implementing this guideline into the relevant clinicians' practice and to ensure the associated medical record and forms are finalised and circulated.

4 Authority

Exceptions to the clinical practices described in this guideline can only be authorised by an Executive, Divisional or Clinical Services Director.

5 Associated Documentation

In support of this guideline, the following Manuals, Guidelines, Instructions, and/or Forms apply:

Code	Name
OG-GC2	Delirium Guidelines
OP-CC4	Fasting Procedure for All Patients Requiring Anaesthesia
OP-GC4	Resuscitation Planning
OP-GC6	Adult Venous Thromboembolism Prevention
OP-GC6	Peri-operative Management of Diabetes in Non-pregnant Adults
Emergency Department DP-CC2	Admission Procedure for Adult Patients in Emergency Departments who require Inpatient Admission
Reference Sheets*	Fractured Neck of Femur Analgesia Reference Sheet Neck of Femur Fracture Antiplatelet and Anticoagulation Management Reference Sheet #NOF Bladder Management Pathway #NOF Peri-operative Management of Diabetes Quick Reference Sheet Post-Operative DVT Prophylaxis Reference Sheet

*available on the OGS webpage:http://inside.wh.org.au/departmentsandservices/subacute_aged_care_services/Pages/Ortho-Geriatric-Service-(OGS).aspx

6 Definitions and Abbreviations

6.1 Definitions

For purposes of this guideline, unless otherwise stated, the following definitions shall apply:

Hip Fracture	Fracture of the proximal femur, a periprosthetic fracture of the femur or a fracture of the distal femur associated with a low trauma mechanism
Resuscitation Plan	A set of medical orders detailing which resuscitation therapies are to be used, or withheld, in the case of medical deterioration of the patient.

6.2 Abbreviations

For purposes of this guideline, unless otherwise stated, the following abbreviations shall apply:

CT	Computed Tomography
CXR	Chest X-ray
ECG	Electrocardiogram
FBE	Full Blood Examination
MRI	Magnetic Resonance Imaging
MSU	Mid-stream Urine
UEC	Serum Urea, Electrolytes and Creatinine

7 Guideline Detail

This guideline applies to patients presenting to hospital with a suspected hip fracture, or sustaining a suspected hip fracture in hospital.

Pre-diagnosis Management

7.1.1 Pain Assessment and Management

- Patients with a suspected hip fracture should have their pain assessed:
  a. Immediately;
  b. Within 30 minutes of administering initial analgesia;
  c. Hourly until settled;
  d. Then every 2 hours while the patient is awake.
- Analgesia should be offered in accordance with the *Fractured Neck of Femur Analgesia Reference Sheet*.
- Patients should be made non weight bearing until such time a hip fracture is ruled out or a decision is made to mobilise the patient following discussion with the Orthopaedic unit team

7.1.2 Imaging

- Initial imaging of patients with a suspected hip fracture should include an anteroposterior pelvis and lateral hip x-ray.
- If there is continuing suspicion of a hip fracture despite negative findings on plain x-ray imaging:
  a. MRI should be offered (unless contraindicated);
  b. However, if an MRI is not available within 24 hours, or contraindicated, then a CT should be considered.

7.2 Pre-operative Management

7.2.1 Pain Assessment and Management

- Pain should continue to be assessed and managed as per *Section 7.1.1*.
- In addition, once diagnosed with a hip fracture, patients should be offered a fascia iliaca nerve block, undertaken by trained personnel regardless of the patient's pain profile.

Quality indicator: At least 95 per cent of patients receive a nerve block prior to surgery. For patients presenting to hospital with a suspected hip fracture, at least 70 per cent of patients receive a nerve block within 3 hours of arrival at the Emergency Department.

7.2.2 Admission to the Orthogeriatric Service

- Once diagnosed with a hip fracture:
  a. The patient should be admitted to hospital under the OrthoGeriatric service as per *Emergency Department DP-CC2 Admission Procedure for Adult Patients in Emergency Departments who require Inpatient Admission; or*
  b. If the patient is already an inpatient (i.e. for hip fractures sustained in hospital), the patient should be transferred to the Ortho~~G~~geriatric service.
- To do this, contact both the:
  a. Orthopaedic unit Registrar (between 6am and 10pm); and
  b. OrthoGeriatric unit Registrar (between 8am and 5pm, Monday to Friday).
  c. Outside of these hours if a hip fracture is confirmed in the Emergency Department then a 4-hour plan can be established and patient admitted under the Ortho~~g~~Geriatric Service as per the Admission Guidelines with the orthopaedic registrar being notified at 0600. All patients should be fasted from 0200 following the *Fasting Procedure for All patients requiring Anaesthesia* protocol. The only exception to this is a subcapital neck of femur fracture under the age of 60 years in which the orthopaedic registrar should be notified as soon as the fracture is confirmed (even after-hours).

7.2.3 Transfer to Footscray Hospital

- If a patient with a hip fracture is located at a Western Health site other than Footscray Hospital, they should be

transferred to Footscray Hospital as soon as possible, and no later than 24 hours after hip fracture diagnosis (unless operative intervention is not to be undertaken).

- The orthopaedic registrar on-call for that site should be contacted who will liaise with the OGS team at Footscray
  a. If a patient is deemed too medically unstable for transfer to Footscray by the Emergency or Orthopaedic team, contact the ED Geriatrician (Monday – Friday, 0800-1600) or the on-call Geriatrician (after-hours and weekends) to discuss whether appropriate for admission under Acute Aged Care at Sunshine

7.2.4 Medical Assessment

- Pre-operative medical assessment should be undertaken immediately to assess fitness for surgery and optimise treatable co-morbidities.
- This should involve assessment of:
  a. Cardio-respiratory fitness;
  b. Anti-coagulation/anti-platelet therapy;
     - see *Neck of Femur Fracture Antiplatelet and Anticoagulation Management Reference Sheet*;
  c. Diabetes management;
     - see *#NOF Perioperative Management of Diabetes Quick Reference Sheet*;
  d. Results of blood tests (FBE, UEC, coagulation studies) and other investigations (CXR, ECG, MSU); and
  e. Any other injuries resulting from the fall.
  f. Any other illnesses that may have precipitated the fall (ie infection, decompensated heart failure etc.)

Fitness for surgery needs to be evaluated in light of the goals of care (eg surgery may be palliative in nature); if it is considered that the patient is not fit for surgery, this should be discussed between the Orthopaedic, Geriatric Medicine and Anaesthetics teams with the involvement of the patient and medical treatment decision maker.

Quality indicator: At least 65 per cent of patients are reviewed by Geriatric Medicine prior to surgery.

7.2.5 Cognition/Delirium Assessment

- The patient will be assessed for delirium each day in accordance with the OG-GC2 delirium guidelines.
- Screening for delirium will be completed preoperatively and ideally post-operatively by the medical team.
- Interventions will be put in place based upon screening as per the OG-GC2 delirium guidelines.

Quality indicator: At least 75 per cent of patients with a hip fracture receive a delirium assessment using a validated tool prior to surgery.

7.2.6 DVT Prophylaxis

- The patient should receive treatment to prevent deep vein thrombosis in accordance with the *OP-GC6 Adult Venous Thromboembolism Prevention procedure* and *# NOF DVT Prophylaxis Quick Reference Sheet*.
  - DVT prophylaxis to be charted and administered at 2000 (8pm) to account for cancellations to theatre. To discuss with orthopaedic registrar regarding timing of DVT prophylaxis if surgery is completed after-hours (after 1700).

7.2.7 Goals of Care

- Goals of care should be discussed with the patient/medical treatment decision maker as soon as possible to identify and document any treatment limitations in the Resuscitation Plan in accordance with the Resuscitation Planning procedure.

Quality indicator: All patients with a hip fracture have a completed goals of care form within 24 hours of admission, with the expectation that these will be completed prior to theatre unless extenuating circumstances apply.

7.3 Operative management

7.3.1 Surgery

- Operative intervention should be undertaken within 48 hours of hip fracture diagnosis unless:
  a. The patient/medical treatment decision maker reasonably refuses consent;
  b. The patient is not fit for surgery; or
  c. Surgery is not indicated (e.g. stable peri-prosthetic fracture).

Quality indicator: At least 90 per cent of patients with a hip fracture receive surgery within 48 hours of hip fracture diagnosis.

7.3.2 Intra-operative Nerve Block

- Intra-operative fascia iliaca nerve blocks should be considered for all patients undergoing operative intervention of

a hip fracture.

7.4 Post-operative Management

7.4.1 Pain Assessment and Management

- Pain should continue to be assessed and managed as per *Section 7.1.1*.
- Once pain has settled, the frequency of pain observations can be adjusted as clinically indicated.

7.4.2 Mobilisation

- All clinicians involved in care of the patient post hip fracture will advocate for, and encourage early mobilisation.
- All patients will be given the opportunity to mobilise within 24 hours of surgery without restrictions on weight bearing. This may be initiated by Allied Health, Nursing or Medical staff.
- If the patient is unable to mobilise, the reasons for this will be clearly documented.
- An opportunity for mobilisation will be provided every day the patient is in hospital. An opportunity for mobilisation can include sitting the patient on the edge of the bed, sit to stand practice, sitting out of bed, or walking.

Quality indicator: 100% of patients with a hip fracture will be provided with the opportunity to mobilise within 24 hours of surgery.

7.4.3 Minimising Fracture and Falls Risk

- In order to reduce the risk of future fractures, assessment of falls risk and bone health should be undertaken during the hospital admission (either the acute or sub-acute phase of the admission).

Quality indicator: All patients should undergo bone health optimisation, including appropriate nutritional/lifestyle advice and screening investigations, and a plan should be made for prescription of an anti-resorptive agent as soon as medically indicated, unless contraindications apply.

7.4.4 Rehabilitation Assessment

- All patients post hip fracture will be assessed for suitability for rehabilitation, with consideration the criteria outlined below.
- Assessment of suitability for rehabilitation assessment will begin as early as possible in order to facilitate appropriate discharge planning with documentation completed by the Orthogeriatric team, with input from the wider multidisciplinary team.
- The multidisciplinary team will document patient goals and discharge recommendations to facilitate a timely and accurate rehabilitation assessment.
- Delivery of rehabilitation may occur in an inpatient or outpatient setting.

Suitability for rehabilitation will involve consideration and documentation of the following:

- Medical stability
- Ability to participate in inpatient rehabilitation (slow stream rehabilitation, also known as GEM, or fast stream rehabilitation)
- Rehabilitation goals with timeframes
    - Determined collaboratively with the patient and or carer
    - Including medical and functional goals
- Barriers and enablers to rehabilitation
- Availability of resources in premorbid living setting (eg. access to transport or access to therapy in Residential care).
- Discussion with the patient, family or carer about expectations and preferences for rehabilitation and recovery.

Eligibility for inpatient rehabilitation includes (but is not limited to):

- Patient is medically stable for transfer to inpatient rehabilitation ward.
- Patient is below premorbid level of functional ability.
- Patient has clearly documented rehabilitation goals.
- Patient can participate in inpatient rehabilitation (slow stream rehabilitation, or fast stream rehabilitation).
- Patient and or family/carer is agreeable to inpatient rehabilitation.
- Expectations of inpatient rehabilitation stay, including frequency of therapy and active participation have been discussed with patient and family/carer.

Note: Cognitive impairment, or living in residential aged care, does not preclude consideration for inpatient rehabilitation and factors above will be considered on a case by case basis.

Quality indicator: Every patient with a hip fracture will have a documented rehabilitation assessment based on criteria above.

7.4.5 Early Supported Discharge to residential care or the community

- Early supported discharge to the patient's home or to a residential aged care facility post operatively will be considered where appropriate.

- Early supported discharge to a residential aged care facility will be considered when the patient meets the following conditions:
    - Patient has been deemed medically stable for transfer back to facility by OGS team
    - Appropriate medical follow up and aids/ equipment to meet the patient's needs are accessible within the facility
    - If required, therapy follow up for hip fracture is available post discharge
- Early supported discharge for patients residing in the community will be considered when the patient meets the following conditions:
    - Patient has been deemed medically stable for discharge home
    - Patient is at an appropriate functional level for discharge home with available supports
    - Appropriate rehabilitation to meet the patient's needs based on clinical judgement is available (may be community or home based)
    - Can participate in ongoing rehabilitation

Quality indicator: Number of patients discharged from acute orthopaedic wards with a length of stay less than 5 days, via annual audit.

7.4.6 Discharge Requirements

Standard discharge requirements will be met for the patient post hip fracture. Discharge requirements include, and are not limited to:

Patient & Carer Communication

- Patient and family or carer will be fully informed of the discharge plan and given the opportunity to ask questions.
- Patient and family or carer will have an understanding of the patient's journey to date and their ongoing care plan going forward.
- Clinicians will work collaboratively to ensure reliable and consistent information is provided to patients and their caregivers.
- Patients & Caregivers are provided with relevant contact details to enable follow up of any queries post discharge.
- Information regarding falls prevention strategies will be routinely provided to patients and caregivers upon discharge.

Medications & GP follow up

- The patient or family/carer is aware of, and can administer, the discharge medication schedule.
- The patient has planned follow-up with their GP or other services.
- There is a documented plan in place for wound management.
- Bone medications have been prescribed as appropriate.
- Plan for ongoing therapy/ rehabilitation documented and confirmed with patient and or carer with contact numbers for ongoing services and ward staff provided.

Equipment follow up

- Ongoing aids or equipment needs will be discussed and confirmed with the patient, carer and or residential care facility.

8 Document History

Number of previous revisions: 1

Previous issue dates: November 2019 (OG-CC4 Guideline for the Management of Suspected Hip Fractures)

9 References

Australian & New Zealand Hip Fracture Registry Steering Group, *Australian & New Zealand Guideline for Hip Fracture Care: Improving Outcomes in Hip Fracture Management of Adults,* 2014.

Australian Commission on Safety & Quality in Health Care, *Hip Fracture Care Clinical Care Standard*, 2016.

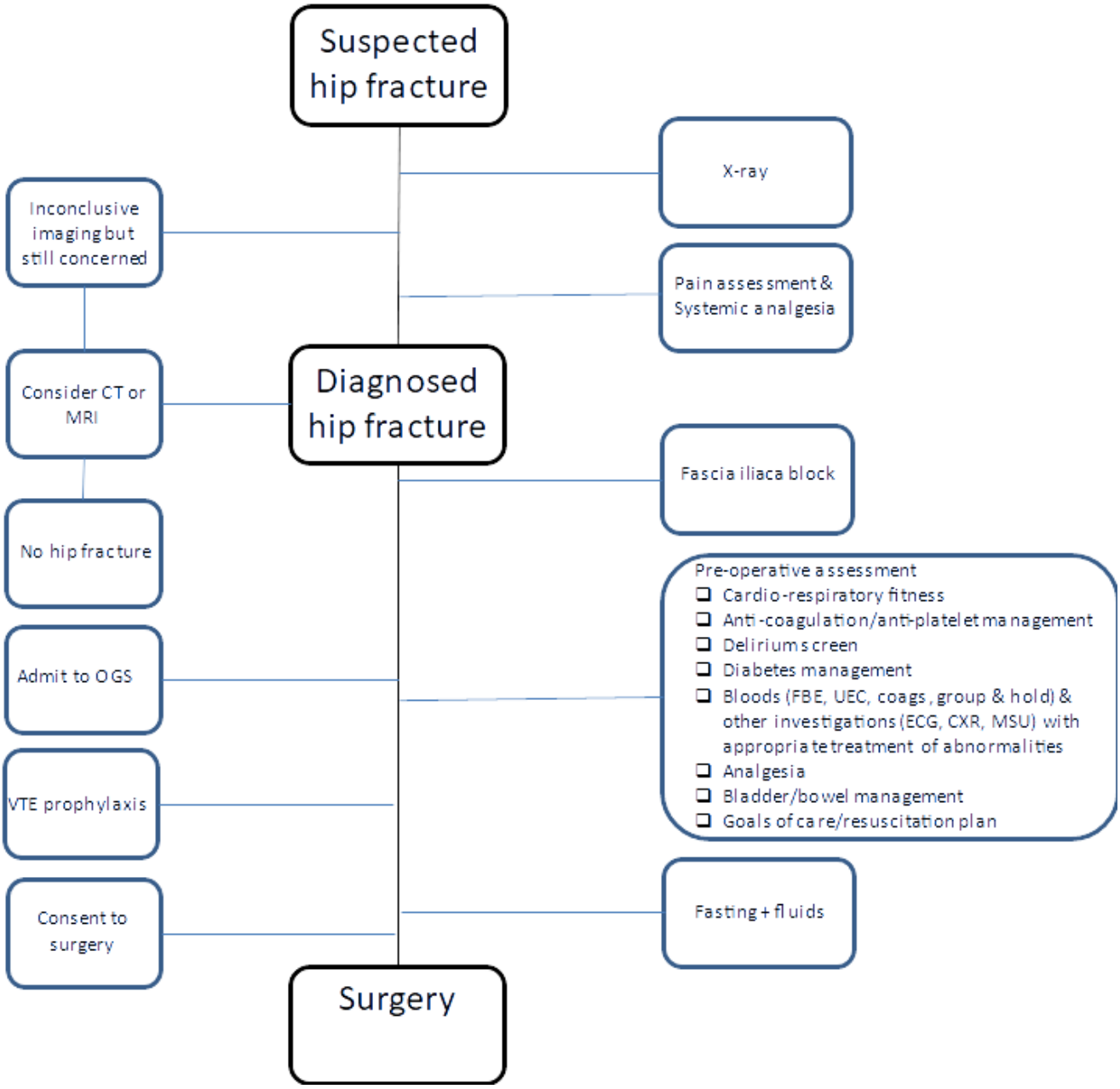
10 Sponsor

Executive Director of Operations

11 Authorisation Authority

Executive Director of Operations

Appendix 1: Diagnosis and Pre-operative Management of Patients with Hip Fractures


Suspected hip fracture
X-ray
Inconclusive imaging but still concerned
Pain assessment & Systemic analgesia
Consider CT or MRI
Diagnosed hip fracture
Fascia iliaca block
No hip fracture
Pre-operative assessment
Cardio-respiratory fitness
Anti-coagulation/anti-platelet management
Deliriums creen
Diabetes management
Bloods (FBE, UEC, coags, group & hold) & other investigations (ECG, CXR, MSU) with appropriate treatment of abnormalities
Analgesia
Bladder/bowel management
Goals of care/resuscitation plan
Admit to OGS
VTE prophylaxis
Consent to surgery
Fasting + fluids
Surgery

Appendix 2: Post-operative Management of Patients with Hip Fractures