The Emergency Department Adult Hip Fracture Pathway

Written by	Mr Mario Mallia	Practice Development Nurse ED
	Dr Sarah Debattista	Emergency Physician
	Dr Maria Cutajar	Emergency Physician

Checked by	Dr Mary Rose Cassar	Consultant Emergency Medicine
	Ms Victoria Rausi	Practice Development Nurse ED
	Dr Mark Anthony Vassallo	Consultant Geriatric Medicine
	Dr John Cordina	Consultant Geriatric Medicine
	Mr Julian Zammit Maempel	Consultant Orthopaedics and Trauma

Approved by	Mr Joe Debono	Medical Director
	Ms Carmen D'Amato	Nurse Director
	Dr Patrick Farrugia	Chairman Emergency Department
	Mr Ivan Esposito	Chairman Orthopaedic Department
	Ms Maria Schembri	Emergency Department Charge Nurse

Change History

Version No.	Revision Date	Change Description
		Guideline Accident and Emergency Department 2011: Accident and Emergency Department Nurse-Led Adult Hip fracture Fast Track Form endorsed between Emergency Department and Orthopaedic Department

This document is not valid without all the number of pages specified

1. Purpose

1.1 The purpose of this SOP is to introduce a safe standardized pathway to expedite care for patients presenting to the ED with a fracture of the hip joint.

1.2 Hip fractures commonly present to the ED, predominantly among frail elderly patients who have sustained a fall. Prolonged immobilisation from hip fractures is known to result in poor outcomes, with a thirty-day mortality ranging from 6 to 11% [1]. This is particularly significant given the steady growth of the elderly population.

1.3 The Scottish Standards of Care for Hip Fracture Patients [2] recommend that the following interventions take place in the ED to improve the care of such patients and optimise their outcomes:

- **Transfer from the Emergency Department to an Orthopaedic ward within 4 hours**
- Initiation of the **"Big Six" interventions** or treatments before leaving the Emergency Department:
    a. Provision of Pain Relief
    b. Screening for Delirium
    c. Early Warning Score system
    d. Full blood investigation and ECG
    e. Intravenous fluid therapy
    f. Pressure area care

2. Safety Issues

2.1 The aim of this SOP is to fast-track and optimise the immediate care given in the ED to patients who suffer a fracture of the hip joint. This will increase patient safety by early administration of pain relief and necessary fluids, prevent unnecessary prolonged immobilisation on a stretcher and expedite early diagnosis of a fracture to a hip joint.

2.2 This SOP also aims to expedite early admission to an appropriate hospital bed, under the care of the appropriate specialists.

3. Who will this SOP apply to

3.1 This SOP will apply to all patients who present to the ED with a suspected hip fracture.

3.2 A fast track system has been set up to expedite patient care and transfer to the ward. This fast-track system will apply to those patients who will satisfy the inclusion and exclusion patient criteria below:

Inclusion criteria - ALL MUST BE present:

- an individual over 16 years who has sustained a fall ***(and)***
- has pain in the upper thigh and groin area ***(and)***
- is unable to bear weight since the fall ***(and)***
- has sustained a fracture at the neck of the femur only (i.e., intracapsular or pertrochanteric fracture). This will be confirmed after the x-rays are done.

Exclusion criteria – ALL MUST NOT BE present:

- involved in a road traffic accident **(or)**
- fall from a height greater than 1 meter **(or)**
- assault **(or)**

- has additional injuries to other limbs, chest, abdomen, or head **(or)**
- has an underlying acute medical condition such as hypoglycaemia, hypothermia, shortness of breath, delirium **(or)**
- had an episode of loss of consciousness with inability to recall what happened **(or)**
- any abnormal parameters **(or)**
- has other femoral fractures, such as femoral shaft, subtrochanteric, pubic rami or acetabular fractures.

3.4 For those patients in whom fast tracking is not possible a more detailed clinical assessment will be carried out as detailed below.

3.5 Other areas and departments contributing to this care pathway are the following:

- Orthopaedics Department
- Geriatrics Department
- Emergency Department Radiology Unit
- Bed Management Unit
- Admitting Orthopaedic/ Surgical wards

4. Terms and Definitions

- BST – Basic Specialist Trainee
- ECG – Electrocardiogram
- ED – Emergency Department
- ESI – Emergency Severity Index
- HST – Highest Specialist Trainee
- MDH – Mater Dei Hospital
- PSO – Patient Safety Officer
- SOP – Standard Operating Procedures

5. Reference to other documents

Emergency Department Nurse-Led Adult Hip Fracture Fast Track Form: Emergency Department 2011

Emergency Department Nursing documentation sheet (Red Sheet)

Scottish Standards of Care for Hip Fracture Patients [2]

Royal College of Emergency Medicine Fractured Neck of Femur Standards [3]

6. Patient Pathway

There should be a high index of suspicion of a hip fracture for any patient presenting to the ED with pain in the upper thigh and groin following a fall with subsequent inability to weight bear. This is irrespective if they arrive by ambulance or via their own transport.

These patients will be registered and triaged according to normal triage procedure using the ED ESI triage tool. The triage nurse will immediately inform the lead nurse when a patient with a suspected hip fracture has been triaged.

The lead nurse will allocate the patient to a team area according to their triage. They will also inform the lead doctor that a patient with a suspected hip fracture has been triaged and the team they are allocated to.

The patient will be taken to the allocated area and transferred to a stretcher unless this has already been done. A cubicle should be made available for the patient as soon as possible.

Once the patient is in a cubicle, a team nurse will be allocated to the patient. The nurse will follow the Emergency Department Hip Fracture Fast Track Documentation Form section by section going through the inclusion and exclusion criteria, checking the patient's parameters, taking a concise past medical and drug history, checking the pressure areas, providing analgesia, monitoring the pain score, screening for delirium,

and organising the appropriate investigations. The nurse will also liaise with the lead doctor and inform them if there are any exclusion criteria for the fast track.

The lead doctor will review the patient as soon as possible. If the lead doctor is unable to review the patient themselves, they should allocate the task to the doctor who is the team lead.

The reviewing doctor will take a brief history and perform a targeted clinical examination (Senior First Medical Contact – SFMC). If they are assured that no exclusion criteria are present, the patient will be fast tracked to the ward once there is confirmation that a neck of femur (intracapsular or pertrochanteric) hip fracture is present. If any exclusion criteria are present, the reviewing doctor will adjust the ED management plan accordingly by ordering any further investigations or treatment as deemed necessary. The reviewing lead doctor will also identify a team doctor to follow up the investigations and SFMC plan. All documentation will be done on the Emergency Department Hip Fracture Fast Track Documentation Form.

In the circumstance when the medical resources are stretched and a team doctor is not readily available to process the investigations requests, this job can be delegated to the Foundation Year Doctor (FYD) who is covering the PSO role. This FYD (the PSO) whose role is mainly to follow up the patients' pathways in the department and assist the Lead Physician as necessary, will assist the team nurse and lead doctor in these circumstances by ordering the necessary blood and radiological investigations as outlined in the investigations section in the Emergency Department Hip Fracture Fast Track Documentation Form. The following blood tests should be booked for all patients: complete blood count, renal function, clotting screen, cross match (2 units) and venous blood gas. The radiological investigations that need to be booked are an AP pelvis, lateral hip and chest x-ray. The reviewing doctor may also request further investigations at their discretion. **It is very important that prior to sending the patient for x-rays, adequate and safe analgesia is administered to the patient, since the radiological procedures may cause increased pain whilst manoeuvring of the patient and this will also lead to inadequate x-rays and unnecessary increased radiation.**

The PSO may also be delegated to assist with bloodletting if the team nurse encounters any difficulties. Once the ECG and radiological investigations have been performed, they will alert the reviewing doctor. The reviewing doctor will then confirm whether a hip fracture is present or not and will check the ECG.

If a hip fracture is identified on x-ray and there are no exclusion criteria for fast tracking, the team nurse will inform bed management unit to expedite allocation and transfer to the ward. This ward should ideally be Orthopaedic Ward 1 or Orthopaedic Ward 3. The reviewing doctor will fill in the admission plan on the Emergency Department Hip Fracture Fast Track Documentation Form and the treatment chart which should include an adequate analgesia plan for the ward, based on the pain ladder escalation pathway. This doctor will perform all necessary scanning on cTrack and inform the on call orthopaedic surgeon that a hip fracture patient is being admitted to the ward.

If a hip fracture is present on x-ray but the patient cannot be fast tracked because of any exclusion criteria the team doctor allocated by the lead doctor will take a detailed patient history, perform a full clinical examination, and follow up on any investigations and treatment detailed in the SFMC. In this case, all documentation will be done on iSOFT Clinical Manager. The team doctor will hand over to the orthopaedic doctor on call themselves explaining why the fast track could not be followed. They will also hand over to any other specialist on call who needs to be involved in the patient's care and will perform all the necessary scanning on cTrack. In such cases, the team nurse will still follow the Emergency Department Hip Fracture Fast Track Documentation Form, going through all the sections. The team nurse may also be asked to provide additional treatment and care as directed by the caring physician.

If the hip x-rays views, requested as per current practices, are inconclusive, a CT of the pelvis should be performed if the clinical suspicion for a hip fracture remains. This applies to both those patients who are eligible for fast tracking and those who are not. The decision to book a CT of the pelvis should be taken by either the lead doctor or the caring senior ED physician.

In all patients, a fascia iliaca block is highly recommended as it provides the best possible analgesia. This however should only be carried out by trained physicians. If such doctors are unavailable, the patient's pain needs to be monitored closely and opiate analgesia should be prescribed as stat doses in the ED and continued in the ward as per pain ladder escalation pathway and according to the patient's medical status. All such prescriptions are to be entered in the patient's treatment chart, whether they are stat ED doses or for the in-patient use.

Once all necessary assessments, investigations and treatments have been completed, the patient is to await an appropriate ward within the cubicle. Ward transfer for all hip fracture patients should be done within 4 hours of registration. Transfer to the ward should not be delayed by pending orthopaedic reviews.

6. Summary of individual roles

6.1 The role of the Triage Nurse/ Blue Code Nurse will be as follows:

- To triage the patient according to the ED ESI triage tool.
- To inform the Lead Nurse that a patient with a suspected hip fracture has presented to the ED.

6.2 The role of the Lead Nurse will be as follows:

- To allocate the patient to a team in the ED and allocate a nurse to start the ED Adult Hip Fracture Form.
- To inform the Lead Doctor immediately that a patient with a suspected hip fracture has presented to the ED who could possibly benefit from the ED Adult Hip Fracture fast-track pathway and document this on the Hip Fracture Fast Track Documentation Form (Appendix 1**).
- To facilitate any problems encountered during the process.
- To communicate regularly with the ED staff nurse responsible for the patient to ensure the process is being fast tracked.

6.3 The role of the ED Staff Nurse will be as follows:

- To **transfer the patient onto a stretcher as soon as possible** if this has not already been done**.**
- To go through the inclusion and exclusion criteria as documented on the Adult Hip Fracture Documentation Form. If the patient falls within the exclusion criteria, the lead doctor is informed so that these patients are given an early first medical contact and an early management plan.
- For those patients who fall within the inclusion criteria of the Hip Fracture Fast Track pathway, the nurse should liaise with the Lead Doctor and with the ED doctor in charge of the patient (identified by the Lead Doctor) to request the required investigations and continue the patient's management.
- To assess such patients and carry out the following steps prior to ward transfer and document them on the Hip Fracture Fast Track Documentation Sheet:
    - Take a full set of parameters.
    - Document all other relevant nursing and patient information on both the ED nursing documentation and the Adult Hip Fracture Fast Track documentation form
    - Obtain venous access and take the relevant blood investigations. If this is not possible the ED doctor can do this procedure
    - Request an ECG
    - Assess the patients' pain according to the numerical pain score chart and administer pain relief according to the Hip Fracture Fast Track documentation sheet. This STAT dosing is to be documented on the appropriate front page STAT dose section of the treatment chart and is to be signed clearly as having been administered and marked as having been given according to department protocol.
    - To liaise with ED doctor if the pain score is more than 7 so the ED doctor can prescribe analgesia as indicated in the form and consider a fascia iliac block which should be done only by a doctor trained in the technique.
    - Reassessment of the patient's pain is to be done every 15 minutes initially and then every 30 minutes if pain is controlled.

- Screen for delirium using 4AT scoring (also part of the Hip Fracture Fast Track Documentation sheet. Patients with a score of 4 or more should be identified as having delirium and flagged for further investigation and appropriate management with the caring doctor.
- Administer appropriate IV fluid therapy as prescribed by the ED doctor
- Pressure area care - pressure areas to be inspected in ED with clear documentation as indicated in the ED nursing documentation sheet

- To arrange transfer to ED Radiology unit; the ED Radiology unit will be notified by telephone to prioritise this request. The nurse will then inform the caring ED doctor once the radiological investigations have been completed.
- To inform bed management about this high-risk patient for pressure ulcers and that an adequate bed (ideally with an air mattress) needs to be allocated.
- To give handover via telephone to the receiving ward nurse once an appropriate bed is made available.
- To ensure that all required investigations for admission were performed.
- To re-assess the patient's pain score and give analgesia accordingly prior to ward transfer. Such repeated analgesia is to be documented in the treatment chart as above.

6.4 The role of the ED lead doctor is as follows:

- To oversee the booking of the blood investigations, chest, and pelvic X-rays; in the lack of an available team doctor, the Patient Safety Officer (PSO) will assist in this regard.
- To ensure that the patient is tracked on cTrack against a medical officer and team.
- To prescribe analgesia according to the Analgesia Criteria in the fast-track form if the patient's pain score is more than 7. In such cases, the patient would also benefit from a facia iliaca block. The Lead doctor will allocate this task to another ED doctor trained in the procedure, if such a doctor is present on the floor.
- To assist, if necessary, in confirming the diagnosis of a hip fracture on x-ray. If this is inconclusive, to consider CT of the pelvis.

- To make sure that the care of the patient is delegated to an appropriate ED doctor once a hip fracture is confirmed.
- To ensure that this pathway is completed and that the patient is tracked as ED ready for admission on cTrack once the diagnosis of a hip fracture has been made.
- If any exclusion criteria for fast tracking have been identified, the Lead Doctor should initiate an early first medical contact and delegate the management plan for the patient to the ED doctor.

6.5 The role of the ED doctor is as follows:

- To prescribe analgesia according to the Analgesia Criteria in the Adult Hip Fracture fast-track form if the patient's pain score is more than 7.
- To book all blood investigations, chest x-ray and pelvic x-ray.
- To review the x-rays and confirm the diagnosis of a hip fracture.
- To review the chest x-ray and ECG and ensure that no acute changes are present.
- To prescribe the appropriate IV fluid therapy.
- To assist the ED nurse in any difficulties encountered whilst following this SOP.
- To in-form and hand-over to the Orthopaedic BST/HST on call that a patient with a hip fracture will be admitted to the ward.
- To fill in the patient's treatment chart. All drug treatments given in the ED are to be documented in the patient's treatment chart and this chart should also include adequate analgesia for the ward.
- If no abnormal blood results are clinically suspected, blood investigations are to be chased from the ward.
- To take over the care of the patient if any exclusion criteria are identified.
- If an underlying medical cause for the fall or a complication of the fall is suspected, the patient will have an early senior first medical contact with the aim of a management plan which will target the possible cause of the fall and manage accordingly. The case will be discussed with BST/HST Medicine or Surgery on call who will admit the patient as joint care with the Orthopaedics. The objective still remains that such patients are expedited to an appropriate ward preferably with an

air mattress within 4 hours of presentation to the Emergency Department whilst ensuring overall patient safety.

- To ensure that all appropriate tracking on cTrack has been done.
- To ensure that the admission plan is clearly documented on the Adult hip fracture fast track form.

6.6 The role of the ED PSO:

- Ensure that the patient is appropriately and timely tagged on cTrack.
- Be available to assist with investigation requests if no other team doctors can assist the ED nurse.
- Be available to assist with intravenous cannulation if no other team doctors can assist the ED nurse.
- Be available to assist as necessary the team doctors in fast tracking these patients.

6.7 The role of the Orthopaedic BST/HST is as follows:

- To accept the handover of the patient from the ED over the phone.
- To review the patient in the admitting ward within a reasonable timeframe to ensure that the appropriate management and analgesia are ongoing.

6.8 The role of the Bed Management Unit is as follows:

- To allocate an appropriate and an available bed (ideally with an air mattress) for the patient within 1 hour of being informed.

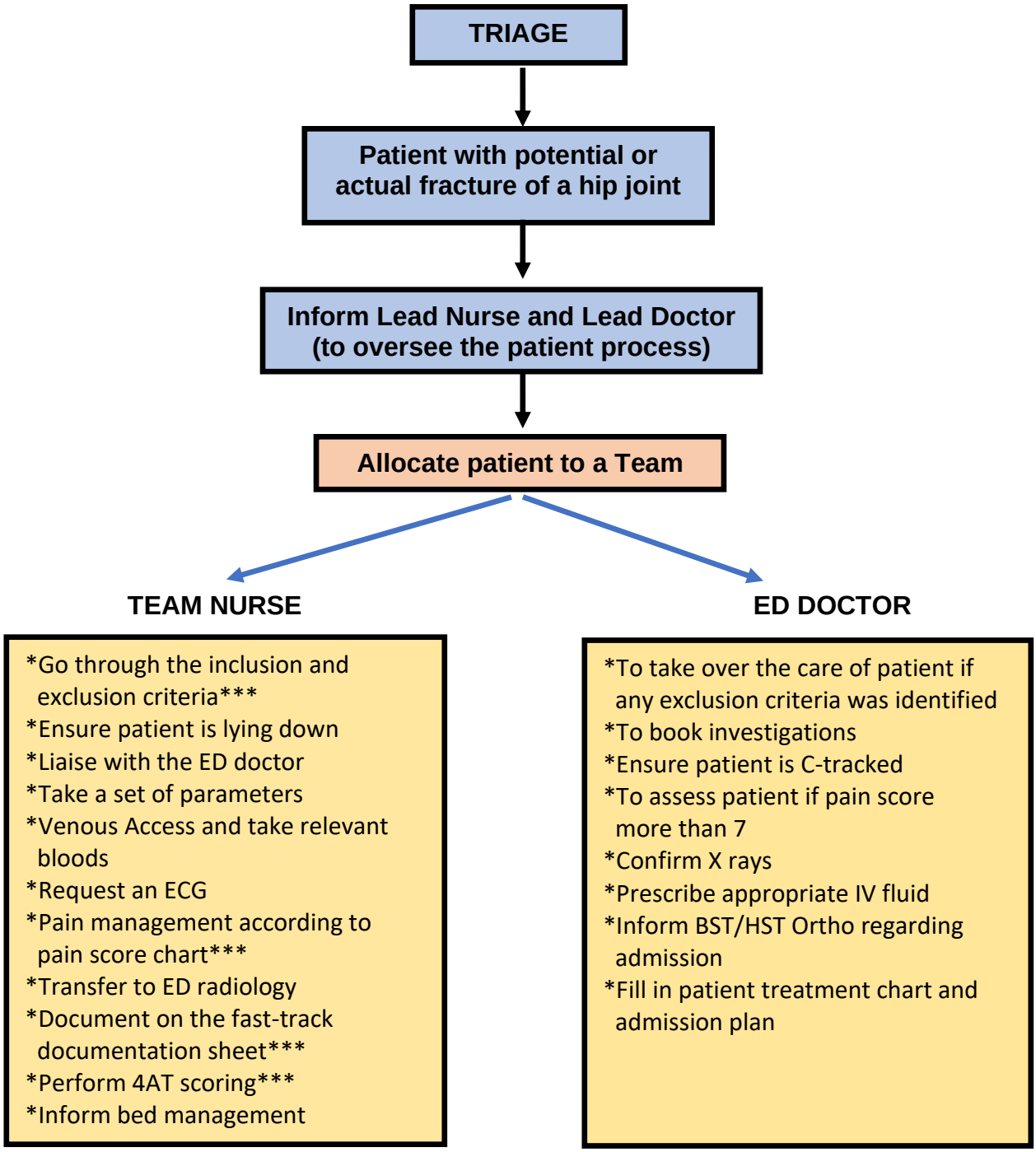
6.9 The role of the Admitting Ward Staff Nurses is as follows:

- To inform the Orthopaedic BST/HST of the ward admission.
- To ensure the safe transfer to a bed using a sliding device.
- To follow on the prescribed fluids and pain relief in the treatment chart.

7. Patient Pathway Algorithm

An algorithm has been inserted as an easy visual pathway which includes the roles and responsibilities of each person within this pathway. This is found overleaf.

ED PATHWAY FOR THE ADULT HIP FRACTURE



*****Please see SOP for further details**

References

1. (Pollmann,C.T. 2019)
2. Scottish Standards of Care for Hip Fracture
3. Royal College of Emergency Medicine Standards