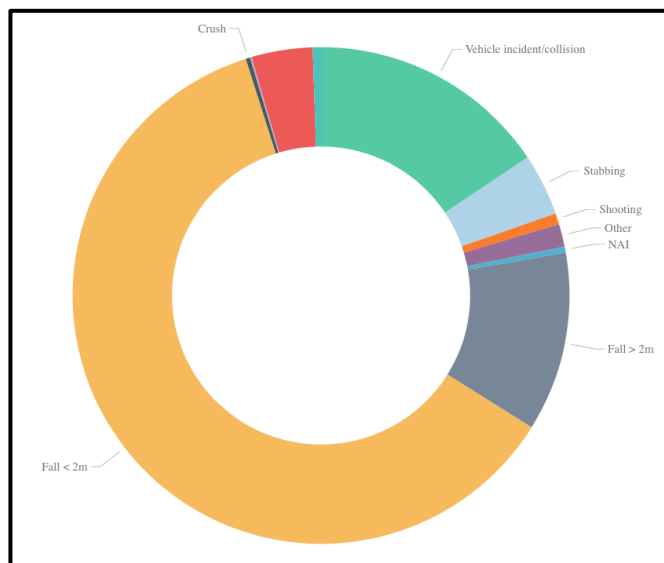# Trauma Calls for inpatient and non-patient Falls

Key Facts

- Falls on hospital estate are a growing problem with over 200,000 falls in hospitals each year.
- Falls less than 2 metres account for the large majority of traumatic injury admissions across NELETN.

- Risk of falling may be related to patient factors, environmental factors, and iatrogenic factors.
- Patient factors include inherent mobility or cognitive impairment, recent surgery, pre-existing medical conditions placing patients at increased falls risk, such as syncope or postural hypotension, and factors such as patient footwear and appropriate use of walking aids.
- Environmental factors include lighting within bays, obstacles, wet floors, and footwear.
- Iatrogenic factors such as medications, surgical drains and drip stands can also play a role in increasing patients falls risk.
- Resulting trauma can include injury to the head, chest, spine and musculoskeletal system, and predominantly affects older or frail people.
- Failure to complete a thorough systematic assessment can lead to missed injuries, prolonged length of stay, new co-morbidity and litigation.
- Therefore, it may be necessary to activate trauma calls for those more seriously injured or more at risk.
- Trauma Calls outside of ED may be led by the most competent person to do so (ideally surgical senior registrar).
- The process is outlined in a flow chart in appendix 1.
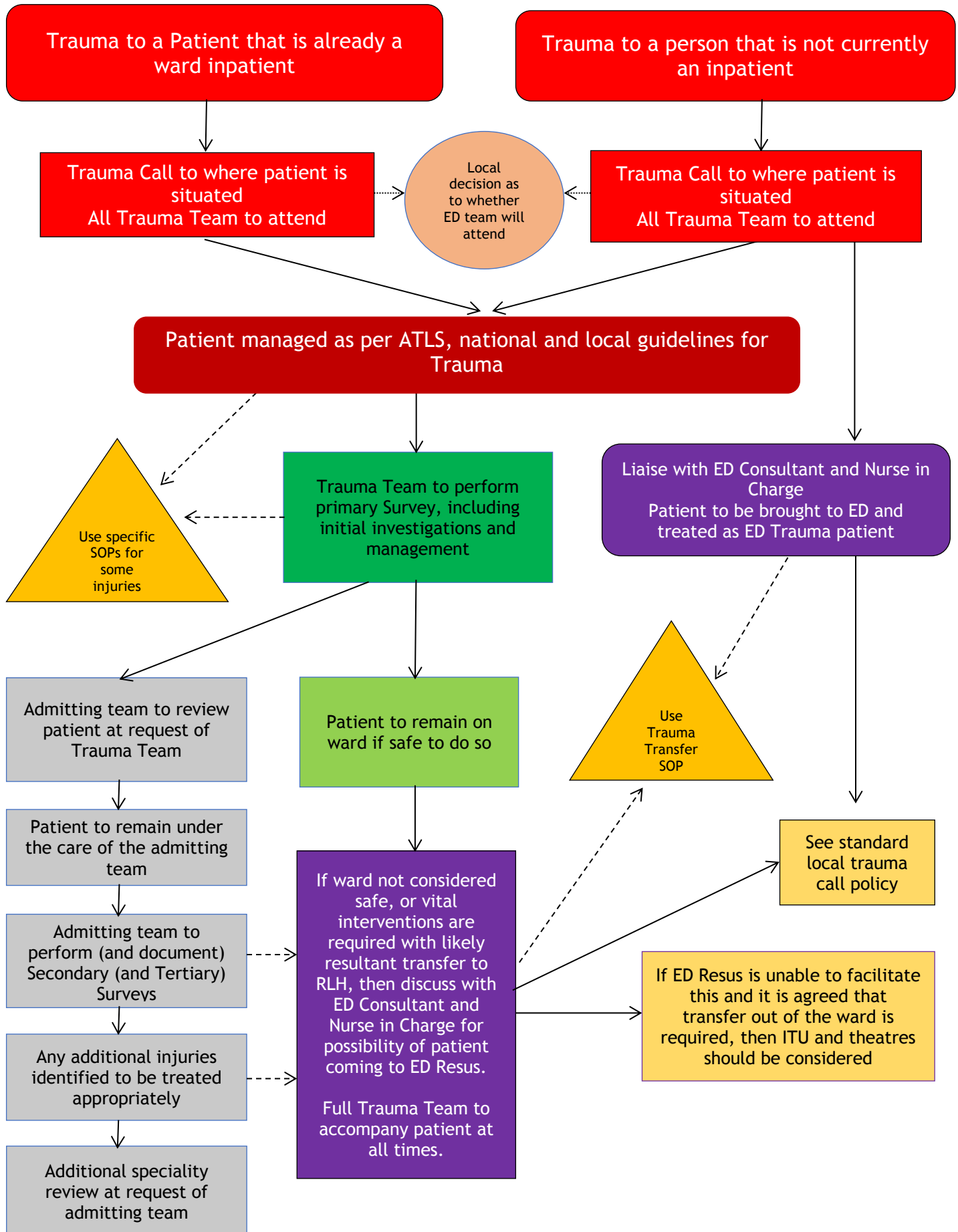
Inclusion Criteria

- Any person on the hospital site involved in an incident with a potential resultant injury.

2: Immediate Management of the fallen patient	
BLS	- The first step after finding a fallen person or witnessing a fall is to carry out basic life support measures. (including calling for help) - If there is any compromise of airway, breathing or circulation; or any major haemorrhage, an emergency resuscitation call must be placed immediately - Apply any immediate first aid measures required. - If it is not necessary to move the individual for safety reasons, then do not do so. They should be managed in situ until a primary survey has been completed. It may be necessary to place screens around the person or block off an area to maintain privacy and dignity in the meantime.
Making the call	- Trauma calls may be activated using whatever local policy is in place (e.g. bleep system) - An inpatient trauma call should be carried out in situ. In most cases it is unnecessary to move the inpatient to the ED, unless intubation or major haemorrhage management is required. Where possible, they should be escorted back to their current inpatient unit when safe to do so. - If the person affected is not currently an inpatient, then they should be moved to the ED after the primary survey by the trauma team and subsequently managed as an ED trauma patient - In this second scenario, if not already present, the Emergency Department Consultant in charge (or most senior doctor on duty) should be contacted as soon as possible and before the patient is moved.
Who should attend?	- Trauma Team Leader (TTL) - In this scenario the TTL should ideally be a senior registrar, not specialty specific. - OOH support should be determined according to local staffing structure and availability - All other elements of the trauma call should mirror that of an emergency department trauma call and should include - General surgery - T&O - Nursing support (airway, circulation and drug) - Scribe - Site management team member - A local decision should be made as to whether ED team attendance at inpatient Trauma Calls will be delivered, but this may differ out-of-hours. Senior registrar support would be desirable if departmental pressure permits (particularly during policy implementation stage).
Process	- A full primary survey should take place according to ATLS principles (see appendix 2) and encompass all critical and immediate interventions. - This should include an agreed plan as to where urgent intubation and chest drains should take place if required. - Requirement for appropriate imaging should be ascertained and ordered, timeframe dependent on primary survey findings. - Special consideration should be given to those who take anticoagulants according to your local major haemorhage process - Be aware of the older patient and/or those at risk of frailty who have a lower threshold for injury and the need for imaging. – Pan-London Trauma System Guidance on Management of Trauma in Older Patients should be followed. - In an inpatient scenario, if the patient has fallen in a communal area (e.g. canteen) then then the admitting team with responsibility for the patient should be contacted as soon as possible.
Post-fall protocol	- A post-fall protocol should include: - checks for signs or symptoms of fracture and potential for spinal injury before the patient is moved. (See Appendix 3).

	- safe manual handling methods for patients with signs or symptoms of fracture or potential for spinal injury according to local policy. - frequency and duration of neurological observations for all patients where head injury has occurred or cannot be excluded (for example, unwitnessed falls) based on the NICE guideline on head injury - Review of a falls care plan for Inpatients. - Incident reporting should take place according to local policy - There should be a robust process in place to ensure that a secondary survey is completed and documented in a timely fashion.
Spinal injury	- Spinal injury should be assessed for and treated according to the network's spinal pathway. - Should a referral be necessary to the MTC, this should be completed via referapatient. - The referral should be sent to the spine team if an isolated injury, or the Major Trauma Centre in the case of polytrauma.
Head Injury	- For adults who have sustained a head injury and have any of the following risk factors, perform a CT head scan within 1 hour of the risk factor being identified: - GCS less than 13 on initial assessment - GCS less than 15 at 2 hours after the initial assessment. - Suspected open or depressed skull fracture. - Any sign of basal skull fracture (haemotympanum, 'panda' eyes, cerebrospinal fluid leakage from the ear or nose, Battle's sign). - Post-traumatic seizure. - New Focal neurological deficit. - More than 1 episode of vomiting - A provisional written radiology report should be made available within 1 hour of the scan being performed - Perform and record observations on a half-hourly basis until GCS equal to 15 has been achieved. The minimum frequency of observations for patients with GCS equal to 15 should be as follows, starting after the initial assessment: - Half-hourly for 2 hours. - Then 1-hourly for 4 hours. - Then 2-hourly thereafter. - Should the patient with GCS equal to 15 deteriorate at any time after the initial 2-hour period, observations should revert to half-hourly and follow the original frequency schedule. - Any of the following examples of neurological deterioration should prompt urgent reappraisal by the admitting team doctor (or on call doctor if out of hours). - Development of agitation or abnormal behaviour. - A sustained (that is, for at least 30 minutes) drop of 1 point in GCS score (greater weight should be given to a drop of 1 point in the motor response score of the GCS). **Any** drop (does not need to be sustained) of 3 or more points in the eye-opening or verbal response scores of the GCS, or 2 or more points in the motor response score. - Development of severe or increasing headache or persisting vomiting. - New or evolving neurological symptoms or signs such as pupil inequality or asymmetry of limb or facial movement. - Should a referral be necessary to the MTC, this should be completed via referapatient. - The referral should be sent to the neurosurgical team if an isolated head injury, or the Major Trauma Centre in the case of polytrauma.

Appendix 1: Trauma following an Inpatient (or non-patient) fall on hospital premises

Trauma to a Patient that is already a ward inpatient

Trauma to a person that is not currently an inpatient

Trauma Call to where patient is situated
All Trauma Team to attend

Local decision as to whether ED team will attend

Trauma Call to where patient is situated
All Trauma Team to attend

Patient managed as per ATLS, national and local guidelines for Trauma

Use specific SOPs for some injuries

Trauma Team to perform primary Survey, including initial investigations and management

Liaise with ED Consultant and Nurse in Charge
Patient to be brought to ED and treated as ED Trauma patient

Admitting team to review patient at request of Trauma Team

Patient to remain on ward if safe to do so

Use Trauma Transfer SOP

Patient to remain under the care of the admitting team

Admitting team to perform (and document) Secondary (and Tertiary) Surveys

If ward not considered safe, or vital interventions are required with likely resultant transfer to RLH, then discuss with ED Consultant and Nurse in Charge for possibility of patient coming to ED Resus.

Full Trauma Team to accompany patient at all times.

See standard local trauma call policy

Any additional injuries identified to be treated appropriately

If ED Resus is unable to facilitate this and it is agreed that transfer out of the ward is required, then ITU and theatres should be considered

Additional speciality review at request of admitting team

Appendix 2 – Primary Survey 'Cheat Sheet'

Safety : Assess risks to staff before approaching (electrical, glass, falls risk, wet floor)

Catastrophic Haemorrhage : Apply direct pressure, elevate, apply splint, apply tourniquet (record time applied and rapidly transfer for definitive management)

Airway & Cervical Spine : If there is any concern over an injury to the spine the neck should be maintained in alignment with the spine, manoeuvres should be led by an experienced team member. Consider 'formal' immobilisation with collar / blocks & strapping.

Is airway clear? Check for oropharyngeal foreign bodies, only 'suck where you can see', Use 'jaw thrust' NOT 'head tilt – chin lift' to open airway, check teeth – including false teeth or bleeding in the oropharnyx. Remember that epistaxis can threaten an airway.

Breathing & Ventilation : Inspect neck & chest wall – front & back, feel for crepitus and surgical emphysema, percuss both apices and bases for equal resonance – hyper resonance may suggest pneumothorax, dullness may suggest haemothorax – these both require drainage. Listen to breath sounds – unequal breath sounds need further investigation and a chest x-ray. Record breath sounds and oxygen saturations – provide supplemental oxygen as required. Actively exclude:

A	Airway Obstruction / Disruption
T	Tension Pneumothorax
O	Open Chest Injury (Sucking Wound)
M	Massive Haemothorax
F	Flail Chest
C	Cardiac Tamponade

Circulation & Haemorrhage Control: HR, BP, Cap Refill, equal peripheral pulses. Palpate abdomen and pelvis – gently – DO NOT 'STRESS' THE PELVIS. If injury is considered, apply a pelvic splint and get a pelvic XR. Inspect long bones for fractures and splint if necessary. Treat hypotension from trauma with blood transfusion.

Disability: Assess GCS, Pupils – size & response to light. Limb movements in all 4 limbs (Power / Tone / Sensation). Is spinal cord injury is suspected get senior help and record the 'sensory level' – the lowest point at which the patient has sensation – on each side of the body.

Exposure: Check temperature and blood sugar. Keep patient warm. Consider need for imaging or FAST-US.

Major Trauma advice is available 24/7 from the Major Trauma Centre at The Royal London Hospital via referapatient.org. Consultant in Charge - 020 3519 7165

Appendix 3 – Adapted Canadian C-Spine Rules

Does the patient have the following?
- Intoxication
- Not alert
- Neurological deficit
- Paraesthesia in extremities
- Painful Distracting injury

Yes → **Immobilise cervical spine and transport for spinal imaging**

No ↓

Midline C-spine tenderness

Yes → **Aged 16-65 and ANY of these low risk criteria?**
- Sitting position in ED *OR*
- Ambulatory at any time *OR*
- Delayed onset of neck pain

AND **NO** dangerous mechanism

No (from low risk criteria box) → **Immobilise cervical spine and transport for spinal imaging**

No ↓ (from Midline C-spine tenderness)

Yes (from low risk criteria box) ↓

Able to rotate neck 45 degrees in both directions

Yes → **Clear**

No ↓

Immobilise cervical spine and transport for spinal imaging

Dangerous mechanisms in the hospital setting:
- Fall from >1 metre or 5 stairs
- Axial load to head