Scottish Standards of Care for Hip Fracture Patients

This document has been prepared in collaboration with Healthcare Improvement Scotland to align with the forthcoming updated “Older People in Hospitals” and “Food, Fluids and Nutrition” standards.

These Standards are endorsed by the following organisations:

The Scottish Committee for Orthopaedics and Trauma (SCOT)
Scottish Board of the College of Emergency Medicine (COEM)
British Geriatric Society (BGS)
Orthopaedic Trauma Society (OTS)

And supported by:

Association of Anaesthetists of Great Britain and Ireland (AAGBI)
National Osteoporosis Society (NOS)
Scottish Standard of Care for Hip Fracture Patients

These Standards were compiled by the National Hip Fracture Steering Group. A list of members can be found at the end of this document.

N.B. “Audit Data” noted in the following standards pertains to the “Audit of care pathways for hip fracture patients in Scotland” (December 2012 to March 2013) undertaken by the MSk Audit team (Available on Hip Fracture Care Pathway).

Rationale:
Audit data shows that significant variation exists across Scotland in the quality of care extended to patients who sustain a hip fracture. For each intervention measured, some/many hospitals exhibit good practice. The standard of care should be of high quality for all pathway interventions, for all hip fracture patients, in all hospitals. To reduce variation and to further improve the quality of clinical care, this “Standards of Care” document has been prepared in accordance with SIGN 111, with endorsement from The Scottish Committee for Orthopaedics and Trauma (SCOT), The British Geriatric Society (BGS), and The Scottish Board of the College of Emergency Medicine (COEM). It is also supported by the Association of Anaesthetists of Great Britain and Ireland (AAGBI) and the National Osteoporosis Society (NOS). This document has also been prepared in collaboration with Healthcare Improvement Scotland to align with the forthcoming updated “Older People in Hospitals” and “Food, Fluids and Nutrition” standards.
The “Standards of Care” should be applicable to EVERY patient who is admitted to hospital in Scotland after sustaining a hip fracture. This document covers areas of principle improvement focus some of which are being audited through to March 2015 and all of which will be audited in a ‘snap shot’ audit later in 2015.

Ref 1,2,3

Standard 1: ‘Fast-Track’ Protocols in place in all Emergency Departments

Rationale:
The majority of hospitals in Scotland (all but 3 in the 2013 audit report) have a ‘fast-track’ policy for Emergency Department to ward for hip fracture patients, usually set locally as a 2 hour target. Despite these policies, in the 2013 Hip Fracture Audit, only 16% of patients were transferred from the ED to an Orthopaedic ward within 2 hours, with the median being 3 hours 12 mins. 82% were transferred within the 4 hour national HEAT target. Significant variation is noted across the country. These figures represent substantially longer times compared to 2008 SHFA data, when 28% of patients were transferred within 2 hours and 96% within 4 hours.

Ref 1,3

Quality statements:

1.1 In order to move the median from 3 hours + to 2 hours, at least 50% of clinically appropriate patients should be transferred from the ED to the Orthopaedic ward within 2 hours and 100% within 4 hours. There should be locally agreed protocols for transfer of patients to Orthopaedics without the patient needing to be seen in ED by the receiving Orthopaedic team. It is not acceptable to have frail, elderly patients waiting more than 4 hours in the ED unless indicated for essential medical interventions. It is, however, essential to emphasise the importance of good clinical care while in the ED rather than focus exclusively on transfer time.
1.2 A ‘Hip Fracture Admission Form’ should be used by all Emergency Departments and admitting Orthopaedic clinical staff, tailored to suit local needs but encompassing the core elements of this Standards Document. Examples of such documents currently in use are available for local adaptation.

1.3 An appropriate and timely pathway decision should be made regarding the most appropriate specialty for patient placement. There should be robust departmental protocols in place, locally agreed by ED, orthopaedic and physicians to ensure patients who are clinically unstable are transferred to the appropriate specialty for further stabilisation prior to hip fracture surgery.

1.4 The receiving clinician should be notified within 2 hours of ED presentation.

1.5 Patients requiring inter-hospital transfers should be transferred to the hospital providing definitive care within 24 hours of initial presentation.

Ref 4,5,6

**Standard 2: Interventions in ED**

**Rationale:**
The following data were presented in the 2013 Hip Fracture Audit Report:

**Analgesia** - 94% of patients had analgesia administered prior to transfer to the Orthopaedic ward. This demonstrates an improvement from an SHFA audit in 2005 where this figure was approximately 75%. Despite the improvement, there were still 6% of patients who had no record of any analgesia being administered prior to transfer to the Orthopaedic ward.

**Optimising Fluid and Electrolyte Balance** – 87% of patients had bloods taken but only 60% had IV fluids commenced in ED.

**Pressure Area Assessment** – Only 33% of patients had a documented pressure area assessment within the ED and only 12% had a recorded assessment and protection in situ prior to transfer to the Orthopaedic ward (see Inpatient section for further figures and recommendation).

**Scottish Early Warning System (SEWS)** - 90% of patients had a SEWS score recorded prior to transfer to the Orthopaedic ward. Of these patients, 11% were found to have a SEWS 1 point higher at the time of ward assessment and 6% were 2 points or more higher than the highest score recorded prior to ward transfer.

**Cognition Screening** – although cognition screening was not audited in the 2013 Hip Fracture Audit Report (inpatient cognition assessment was audited, see Standard 4), it was evident in some hospitals that screening was routinely in use in ED providing an early detection of delirium, but variation in practice persists. Patients with a hip fracture have an increased risk of developing delirium and currently this is not well managed.

The “Big Six” – Implementation of the interventions noted above as a “suite” and applied to all hip fracture patients within ED, will further reduce variation in practice.

Ref 3

**Quality Statements:**

2.1 Evidence of local protocols that incorporate the “Big Six”.

2.2 Analgesia: Local protocols for appropriate, individually-tailored analgesia in the ED (or earlier if an inter hospital transfer) for EVERY hip fracture patient.
2.3 SEWS: Evidence that every hip fracture patient has a formal SEWS assessment performed in ED and interventions commenced where necessary to ensure warning scores are addressed appropriately.

2.4 Bloods: If IV access is not established prior to ED presentation there should be evidence of early venous access and biochemistry/haematology assessment, including clotting within ED.

2.5 IV Fluids: Evidence of early fluid balance assessment with action to optimise fluid and electrolyte balance for EVERY hip fracture patient, and/or clear evidence of oral fluids administered as appropriate.

2.6 Pressure Areas Assessment: Evidence that EVERY hip fracture patient has an early pressure area risk inspection whilst in ED and interventions commenced as appropriate.

2.7 Screening for Delirium: Evidence of early cognition screening with a validated screening tool (e.g. 4AT or Delirium Bundle) to detect patients who have a delirium and to ensure appropriate interventions commenced.

Standard 3: Inpatient Care

Rationale:
Cognitive Assessment – 71% of patients had a record of a formal cognitive assessment being undertaken during their acute inpatient stay. This is a significant improvement on previous audit results from 2008 which suggested that only one-third of patients were discharged from Orthopaedic services with documented completion of a cognitive assessment (despite this being an important intervention to aid the management of delirium, a common condition affecting hip fracture patients). It should be noted that the formal assessment of cognitive capacity varied greatly across the country from 6% to 100%.

Food, Fluids and Nutritional Assessment – 88% of patients had a formal nutritional assessment recorded during their acute inpatient stay. Of these patients, 30% were deemed to be at risk.

Falls Assessment – 93% of patients had a record of a formal falls risk assessment being undertaken during their acute inpatient stay. Of these patients, 86% were found to be at risk of further falls. 7% of patients had no record of a formal risks assessment being undertaken at any point during their Orthopaedic inpatient stay.

Pressure Area Assessment - Formal pressure area assessment by Waterlow Scoring was undertaken for almost all patients during their acute inpatient stay and 88% of patients were assessed as being at risk of developing pressure sores.

Overall – In the 2013 Hip Fracture Audit Report only 37% of patients had all four assessments within 24 hours of admission to an Orthopaedic ward. Therefore 63% of patients did not have one or more of the above assessments in this timescale.

Multi-disciplinary care – Almost all hospitals displayed an MDT approach to care and discharge planning, but variation exists on frequency of meetings and disciplines involved, with no hospital providing 7 day access to all MDT services.

Ref 3

Quality Statements:

3.1 Evidence of a baseline assessment of cognitive function, with a validated assessment tool, for EVERY patient within 24 hours of ward admission with input from family/carers where possible. Where cognitive impairment is identified, appropriate interventions for management are
documented in the care plan including the assessment of the capacity to consent to medical treatment and the appropriate use of the Section 47 certificate under the Adults with Incapacity Act.

3.2 Evidence of a Food, Fluids and Nutritional assessment for EVERY patient within 24 hours of ward admission and interventions to optimise where indicated.

3.3 Evidence of a formal falls risk assessment for EVERY patient within 24 hours of ward admission with risk factors addressed accordingly. Where appropriate, further assessment and management of falls risk in the community should be arranged.

3.4 Evidence of a formal pressure area risk assessment for EVERY patient within 24 hours of ward admission and appropriate interventions to minimise the development of pressure sores.

3.5 Evidence of a multi-disciplinary team approach to patient care making full use of Emergency Care Summaries and Anticipatory Care Plans, with regular meetings attended by Orthopaedic clinicians, Nursing staff, AHPs, Geriatricians, Social Workers and Pharmacists.

3.6 Evidence of working towards plans for 7 day working to ensure day of admission/surgery does not affect recovery.

Standard 4: Operative Management

Rationale:

Time to Theatre – The 2013 Hip Fracture Audit shows 92% of patients who were considered medically fit for theatre underwent surgery within 48 hours of admission. This represents an overall 6% reduction from 98% in 2008, but varied considerably between units. Lack of theatre access delayed surgery for 7% of patients.

Unfit for Theatre - 9% of patients were not considered fit for surgery within 48 hours of admission to Orthopaedic care.

Fasting and Oral Fluids - On the day of operation, 21% of patients had clear oral fluids withheld for 6-10 hours and 49% for in excess of 10 hours prior to surgery. 79% of patients were fasted in excess of 10 hours prior to surgery.

Implant Type - A wide variation in practice has been observed across the country. 70% of patients undergoing hemiarthroplasties had cemented implant designs. SIGN Guideline 111 and NICE Clinical Guideline 124 both recommend the use of cemented designs for hemiarthroplasty in hip fracture patients.

Pre-op Catheterisation – 34% of patients were catheterised pre-operatively.

Ref 1,2,3

Quality Statements:

4.1 Surgery for medically fit patients must take place within 48 hours of admission and within normal operating hours. There must be adequate provision of senior staff, theatres and facilities (e.g. image intensifiers) to allow 7 day access to surgery.

4.2 Determining if a patient is unfit for surgery should occur within 24 hours of admission and should be made by a senior doctor experienced in emergency peri-operative assessment. Appropriate interventions should commence at the earliest opportunity and the patient should have a medical re-evaluation daily to ascertain fitness for surgery. The management plan for patients that are unfit for surgery (or a palliative plan if deemed to be approaching end of life) should be recorded and clearly visible in case note documentation.
4.3 Pre-operative fasting and with-holding of oral fluid for patients should be minimised (Anaesthetic Guidelines - solid food 6 hours, clear oral fluids 2 hours). Patients that are scheduled for an afternoon theatre slot should not be fasting longer than 10 hours for solids/non clear fluids. Patients, irrespective of theatre time, should not be having oral fluids with-held for more than 4 hours.

4.4 Repetition of the fasting cycle should be avoided with early decision making regarding patient suitability for surgery/anaesthetic and realistic assessment of theatre availability.

4.5 Evidence of departmental anaesthetic guidelines developed to give the best peri-operative care. These guidelines may include multimodal analgesia, use of regional anaesthesia, use of goal-directed fluid therapy in high risk patients, strategies to limit post-operative delirium, strategies to limit blood loss, anaemia and transfusion triggers. In the guideline some consideration should also be made to the clinical circumstances under which delaying surgery may be appropriate for physiological optimisation, and a strategy to optimise patients as rapidly as possible to minimise the delay to theatre when a delay is seen as unavoidable.

4.6 Use of proven, cemented hemi-arthroplasty implants should be standard as recommended by NICE/SIGN unless contra-indicated by significant anaesthetic risk. Patients pre-existing ambulatory status should be a consideration when selecting the type of implant.

4.7 Pre-operative catheterisation should not be used as ‘routine’ as stated in SIGN 111. Units are encouraged to examine their policies. Unit pre-operative catheterisation rates will continue to be audited against this standard.

Standard 5: Post-Operative Management

Rationale:
Mobilisation – 60% of patients were mobilised by the first post-operative day and 83% by the second.

Geriatric Services - The provision of geriatric services to hip fracture patients is both variable and in some hospitals scarce when compared to other hospitals. Only 47% of patients receive routine geriatric assessment, with a further 11% receiving an ad-hoc service. 41% of patients receive no form of geriatric assessment during their acute inpatient stay. Only 47% of patients underwent geriatric review within a week of admission.

It is evident that the resource of available geriatricians is variable nationally. Improvements to the above level of input are therefore challenging. Standardisation of care that has clinical evidence for improved outcomes is, however, essential.

Bone Protection – 61% of patients had a bone protection medication assessment during their inpatient stay or planned for post-discharge.

Length of Stay - Length of Orthopaedic and rehab stay varies considerably between hospitals. Adoption of the standards laid out in this document may result in a reduction in length of stay as patients may reach their discharge criteria sooner. If the lower three quartiles of hospitals were to reduce LOS to the same level as the top quartile (2013 Audit), this could reduce hip fracture bed days (acute, rehab and continuing care) by 35-40,000 (13-15%) per annum.

Discharge Planning and Destination - 73% of patients were admitted from their own/sheltered housing but only 27% were directly discharged back to their own home/sheltered housing. This highlights the significant effect this injury has on independent living in the short term. The process of discharge planning should ideally commence as soon as the patient is admitted to the Orthopaedic ward. Many hip fracture patients will require interventions such as social work assessment and although recovery after surgery can be unpredictable, routine/expected referrals (e.g. to social work) should begin as soon as is practically possible.
Quality Statements:

5.1 Physiotherapy assessment for mobilisation should be made for all patients by the end of post-operative day 1. There should be provision for physiotherapy input 7 days per week.

5.2 A Comprehensive Geriatric Assessment (CGA) to be performed on patients identified as frail, 50% by the end of Day 2 post-admission, 100% by the end of Day 3 post-admission. Full geriatrician or alternative Medicine for the Elderly input to be commenced by end of Day 3 post-admission for all frail patients.

5.3 A bone assessment to be performed for all appropriate patients and optimised treatment for osteoporosis, ideally through a Fracture Liaison Service.

5.4 Evidence of a patient pathway with interventions aimed at optimising early recovery and reducing complications such as falls (inpatient and following discharge), mortality, VTEs, “failed discharges” and readmissions.

5.5 Evidence of early discharge planning with a timely comprehensive evaluation of the home environment as appropriate, with involvement of patient, family/carer(s) and appropriate services (OT, Social Care, Community MDT, or equivalent).

Standard 6: Outcome Measures and Patient/Carer Satisfaction

Rationale:
Outcome Measures - All professionals involved in the care pathway should have a continuous improvement process in place with recording of Patient Reported Outcome Measures (PROMS) and Patient/Carer Experience. At present there appears to be very little collection of such data.

Quality Statements:

6.1 Evidence of documented goal-setting, recording of Patient Reported Outcome Measures (PROMS) e.g EQ5D and Patient/Carer Experience with improvements implemented as appropriate.

6.2 Written care information to patients and carers supplied as routine.

References


5. Hip fracture admission form. Soon to be available on [Hip Fracture Care Pathway](http://www.aagbi.org/publications/publications-guidelines/)

6. Fast track protocol. Soon to be available on [Hip Fracture Care Pathway](http://www.aagbi.org/publications/publications-guidelines/)

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