Seven Minimum Standards for Hip Fractures in the Older Patient
ACI

35 Sites throughout NSW in Project

MNCLHD selected - CCHC high mortality rate
PMBH good pain management practice
3 day surgical school in Sydney
2 Day AIM course Port Macquarie
Commenced project in July 2014
Implemented by August 2014
MINIMUM STANDARDS FOR THE MANAGEMENT OF HIP FRACTURE

Standard 1: Orthogeriatric clinical management of each patient
- Orthogeriatric clinical management is a collaborative approach to care provided by orthopaedic and geriatric services for the care of older patients with orthopaedic disorders.
- All older hip fracture patients should be managed in a collaborative model of care by an orthopaedic surgeon and geriatrician from the time of admission.

Standard 2: Optimal pain management
- Effective pain management is a primary goal for patients with a hip fracture.
- Providing a combination of two or more analgesic medications with differing mechanisms is considered best practice in older frail patients who may not tolerate opioids.

Standard 3: Surgery within 48 hours and in hours (regardless of inter-hospital transfers)
- Patients should be optimised for and undergo surgery no more than 48 hours after admission.
- Surgery should be conducted within standard daytime working hours, where possible.

Standard 4: Surgery is not cancelled
- Once a planned date has been identified for repair of a hip fracture, surgery should not be cancelled, unless there are exceptional circumstances.

Standard 5: Commencement of mobilisation within 24 hours of surgery
- Unless medically or surgically contraindicated, patients should be encouraged and supported to sit out of bed and begin mobilising within 24hrs of surgery.

Standard 6: Refracture prevention
- All hip fracture patients should be assessed for future fracture risk and be offered treatment for osteoporosis if clinically appropriate.

Standard 7: Local ownership of data systems/processes to drive improvements in care
- IT systems and a minimum dataset should be developed to facilitate standardised collection and analysis of data.
COLLABORATIVE TEAM

- Dr Rupert Snyman - Orthopaedics (Clinical Lead)
- Dr Luke Bannon - Anaesthetics
- Dr Matt Kinchington - Geriatrician
- Dr Steve Ross – Director ED PMBH
- Felicity Tipping NUM Orthopaedics
- Sandy Foster ANUM PARU
- Helen Ari – Clinical Practice Manager
- Vicki Newton - CNC APS (Project lead)
- APS, ED and Ward Staff, Dietetics, Physio, TNP Psychogerii, Advanced Medical Trainee, Admin
BACKGROUND

Pre 2007 management of # NOF
- Spinal +/- morphine
- oxycodone with sc morphine for breakthrough

Post 2007 management of # NOF
- Continuous FIB
- Spinal +/- morphine,
- Continuous FIB, paracetamol +/- oxycodone

Identified gaps
- NOF pathway in progress but used adhoc.
- Hybrid documentation throughout hospital
- NOF’s not seen as a priority
THE SIX MONTHS BETWEEN AUGUST 2014 – FEBRUARY 2015

76 patients presented during that time to either KDH or PMBH.

- The average age 84 yrs.
- Female to male ratio 4:1
- 35 patients (51%) fell in their own home or in the community,
- 29 patients were from a RACF
- 4 patients (7%) fell in Acute Care Facilities throughout the HMCN
- 16 patients (21%) presented to the Emergency Department at KDH
- Triage time is recorded as the beginning of the patients journey.
- Patients to have surgery by 48 hours and is calculated from that time.
INITIAL PRESENTATION AT KDH

- Patients receive either a stat or continuous FIB prior to transfer.
- Inserted by either the O/C Anaesthetist or the CMO on duty.
- If catheter left insitu connected on arrival at PMBH
- O/A to ED at PMBH if not already insitu, a stat or continuous block was commenced by either the ED or APS staff.
All patients (100%) were managed in a collaborative model of care by the Orthopaedic and Geriatrician from the time of admission.

- The AMT and Ortho Reg is notified of the patient’s admission.
- All patients where seen in the first 24 hrs by the AMT during week.
- Out of hours the Med Reg o/c was notified if clinically indicated
- The Psychogeriatric TNP is also notified to screen for the risk of post operative delirium.
- Separate rounding occurs by the teams each day
- AMT then liaises with the Orthopaedic RMO
- AMT supports patient care plan and discharge management.
**STANDARD 2: OPTIMAL PAIN MANAGEMENT**

All patients received a multimodal approach to their pain management.

- Paracetamol prescribed regularly and based on LBW.
- Oxycodone either orally or SC was ordered for breakthrough pain.
- 90% had either a stat or continuous nerve block inserted.
- Majority were by the fascia iliaca block (FIB) approach.
- Over 90% by landmark method.
- Medical staff from ED rotate through the Critical Care Program at PMBH.
- Time in Anaesthetics is an extension of practical education for ED staff.
- FIB skills are learnt and taken back to the ED for dissemination.
- Prophylactic administration of coloxyl and senna for the management of opioid induced constipation is also commenced in the Department.
STANDARD 3:
SURGERY WITHIN 48 HOURS AND IN HOURS (REGARDLESS OF INTER-HOSPITAL TRANSFERS)

All patients (100%) had their operation within 48 hrs of presentation.

- The opening of 9 bed theatre complex in August 2014 with a dedicated trauma theatre alleviated any problems with time to OR.
- The av time including those transferred from Kempsey is **16hrs**.
- The quickest time to theatre was **4 hours and 18mins**.
- The longest time to theatre was **45 hours and 39 mins** after a patient was cancelled due to a more urgent case.
- All patients received surgery in standard daytime hours.
- The benchmark cut off time for surgery is before 1700 hrs.
- All but two patients (1800 and 1830) went to theatre before 1700.
- Starving Clock commenced as soon as surgery is booked.
Average time to Theatre

- Nov 2013-Apr 2014
- Aug 2014- Feb 2015
Standard 4: Surgery is not cancelled

Once a planned date has been identified surgery should not be cancelled, unless there are exceptional circumstances.

- 37% where patients were cancelled at least once and some patients were cancelled on up to three or more occasions.
- Vulnerable and high risk patients were fasted unnecessarily for long periods.
- # NOF’s were not always seen as a priority.
- Surginet system did not give adequate reasons for cancellations.
- New standards and data collection by the APS for cancellation is more transparent.
- During the survey time 5 patients were cancelled with genuine reason:
  - Equipment malfunction
  - Emergency case
  - Ran out of time >1700hrs (twice)
  - No suitable VMO to perform surgery
**STANDARD 5: COMMENCEMENT OF MOBILISATION WITHIN 24 HOURS OF SURGERY**

Unless medically or surgically contraindicated, patients should be encouraged and supported to sit out of bed and begin mobilising within 24hrs of surgery.

- **All** patients where clinically appropriate were sat out of bed or mobilised on day 1
- Prior to the implementation only 70% complied.
- Despite reduced staff on the weekends and increased work load/activity patients were still mobilised by the Physiotherapists.
- The Physiotherapists have also taken on board the re-education of nursing staff in the correct manner of mobilising patients suffering a fractured hip.
- Thirteen patients (19%) were unsuitable for mobilisation on Day 1 due to
  - Medically unfit (8 patients)
  - Severe dementia and a falls risk
  - Symptomatic anaemia (2 patients)
  - Decreased conscious level (2 patients)
**STANDARD 6: REFRACATURE PREVENTION**

All hip fracture patients should be assessed for future fracture risk and be offered treatment for osteoporosis if clinically appropriate.

- All patients had pathology of Vit D, Ca, Mg Phos and TFT’s ordered on Day 1
- The Orthogeriatric team then changed or prescribed appropriate medication
- Referral to the GP for ongoing investigations if clinically needed.
- The ongoing management is documented in the discharge summary by the RMO after consultation with the AMT
STANDARD 7: LOCAL OWNERSHIP OF DATA SYSTEMS/PROCESSES TO DRIVE IMPROVEMENTS IN CARE

IT systems and a minimum dataset should be developed to facilitate standardised collection and analysis of data.

- Awaiting implementation of STARs program.
- APS using own tool until then to collect data.
- Currently the APS collects data on all # Hips.
**STANDARD 8: IMPROVE NUTRITIONAL STATUS (THIS IS NOT AN ACI STANDARD REQUIREMENT)**

In the past patients were fasted unnecessarily with less than optimal communication between OR and the wards. Patients were not referred to the dietician until day three on the previous pathway.

- Patients are not fasted for more than eight hours
- Referred to the Dietician in a timely manner via MST
- Patients are given a **high carb** “Pre-Op” drink on arrival to ED
- High **protein** drinks are given post op
- “Pre-op” drink can be given up to 2 hours prior to OR
- A laminated “starving” clock is placed at the head of the bed with the start time for fasting.
- Duty Anaesthetist is contacted after 8 hours or before 1700 hours
- Continue fasting or cancelled and fed a nourishing meal.
- Prophylactic aperients of coloxyl and senna are also commenced in the ED to reduce the incidence of opioid induced constipation.
TIME of Operation BOOKED by Orthopaedic Team

Keep Pt NBM

8 hours later OR at 1700hrs

TIME of Operation BOOKED by Orthopaedic Team

Ward staff to ring Duty Anaesthetist

- Theatre Time verified
- Patient able to eat (meal organised)
CHANGES TO PATHWAY

- Earlier referral to geriatric team and delirium screening
- Pre op drink in ED
- Aperient’s prophylactically
- Starving clock commenced
- To OR within 48hrs
- Mobilise day 1
- Re prevention of fractures
- PMBH Pathway now a resource for other ACI sites
  - Eg Westmead Wagga
Patient outcomes after first 6 months review:

- 100% of patients seen in a collaborative model
- 100% received multimodal pain management
- 100% had surgery within 48hrs
- 100% received surgery in daytime hours.
- 100% of patients medically suitable mobilised on day 1
- 100% received osteoporotic evaluation and treatment
- 100% high carbohydrate drinks commenced in ED
- Nil fasting greater than 8hrs
- Prophylactic bowel management commenced in ED
- Nil theatre cancellation without extraordinary cause

*Length of Stay reduced by 1.8 days - saving of $90K in 6 months ($800/day x 62 patients)