The Pain of a Fractured Neck of Femur

Ms Fiona Nielsen- Project Lead
Our health service

75,000 in-patients
900 beds
70,000 emergency attendances
165,000 out-patients
6,200 staff

#NOF Presentations
2010-2011- 262
2011-2012- 246

12,500 surgical operations
Objectives of this presentation

• The initial reasons for this project
• The diagnostic process
• What we learned
• Designing and implementing a pain management plan
• Results and Ongoing Improvements
Information we were given

- Health Round Table Information
- DRG 108 - Neck of Femur Fracture
- Austin Health had an average LOS >14 days
- The four exemplar hospitals average LOS around 8 days
- Aim – Reduce Length of Stay to that of exemplar hospitals
Visit to another facility and a literature search revealed we needed:

1. Full time Head Of Unit – implemented Sept 2009
2. More theatre sessions and better access for trauma – implemented over 2009
3. Institute ortho-geriatric service – commenced February 2010
Orthogeriatric Service
– New full-time Orthogeriatric registrar
– Over seen by a senior geriatrician
  • Involved in every patient >65yo with low-impact trauma #
  • Cross-campus consultant-led 2x/week ward rounds
    • Ortho in Rehab hospital
    • Geriatric in Acute hospital
Rob Middleton Workshop

- UK Consultant Orthopaedic Surgeon
- National Clinical Lead in THR & TKR service at the NHS Institute for Innovation and Improvement
- Talked about
  - Lean
  - Control of variation
  - Best Practice
- Mainly spoke about Joint Replacements
• Attendance List
  • Executive- CEO, CMO, Executive Directors
  • CSU/ Medical Directors
  • Senior Clinical Staff- ED, Anaesthetists, Orthopedics, Geriatricians
  • Austin By Design
  • Physiotherapy
  • Access, Care & Patient Flow coordinators
  • Ward NUM
  • Liaison nurses
  • Theatre staff…and more
Diagnostics-

• Walk Thorough
  – Follow the patient journey from the front door to discharge.
  – Chance for two way communication and to understand work flows
    » What works
    » What doesn’t

• File audit- 30 patient files

• Interview with patients and their families
Executive Leadership and Visibility
Happy
Supported
Safe
Good
Comfortable
In Pain
Worried
Lonely Sad
<table>
<thead>
<tr>
<th>Patients</th>
<th>Arriving/ED</th>
<th>Information</th>
<th>Waiting</th>
<th>Going to theatre</th>
<th>Post Op Phase</th>
<th>Ward 8N</th>
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Mr Andrew Hardidge
Dr Jane Trinca
Ms Fiona Nielsen
Create a Vision

• Senior clinical staff decided that Austin Health should be the exemplar hospital.
• The care delivered to this patient group should be best practice.
• Senior clinical Staff became the leaders for this vision
• Confronting to clinicians
• Challenges to beliefs
Myth busting

% of Presentations by Age

Red = Austin Health

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<tr>
<th>Age</th>
<th>65-79</th>
<th>80+</th>
<th>65-79</th>
<th>80+</th>
<th>65-79</th>
<th>80+</th>
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<td>% of Total Presentations</td>
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Where we focused

• Three main areas
  – ED
  – Pre operatively
  – Post operatively

• Three main care elements
  – Fasting
  – Pain management
  – Delirium
The Three Main Areas - ED

Before
- No Standard Pain-relief
- Mostly narcotic-based
- Minimal use of blocks (<10%)
- No review of analgesia efficacy
- Multiple trips to Radiology
- Gap from ED until drug chart written up (on ward)
The Three Main Areas - On the ward

- Admitted to the ward at various times of the day.
- Orthopaedic staff in theatre - charts not done
- Variable pain relief/not standard
  - Usually inadequate doses
  - Intermittent/infrequent doses
- Fasted for varying lengths of time
- Analgesia usually ceased if patient became confused
Theatre and Recovery
Arrived at various times
The next day
Post operative

Before
• No Standard Pain-relief
• PRN-Basis
• Usually no maintenance medications
• No formal review of analgesia efficacy
• Usually ceased if patient became confused
• Patients not able to participate in physio due to pain.
ED Now

• Regular Paracetamol 1g TDS in elderly Oral
• Incremental boluses of Fentanyl to effect (or Morphine)
• Regular pain scores on function
• Fascia Iliaca Blocks – Blind and in >80% of presentations
• Single xrays Chest and Hip – ordered as a package.
The Ward Now

• Care Pathway
• Pain Plan
• Hunger clocks
  – Supplements
• Delirium screening – Cognitive Assessment Method
Hunger clock
Delirium

Targeted interventions to reduce DELIRIUM

Cognitive Impairment
- Sleep-wake reversal
- Immobility
- Orientation/Activities with Family support
- Early Mobilisation (short rests during day only)
- Non-drug sleep enhancement

Visual Impairment
- Blinds up & Lights on during day
- Assess vision

Hearing Impairment
- Assess hearing
- Check hearing aids are working

Dehydration
- Early recognition & treatment
- Malnutrition
- Assess diet
Pre Operatively on the Ward

Analgesia
Patient comes from ED with block administered
Regular Paracetamol
& Low dose Fentanyl PCA continuous infusion
plus Clinician dose.
(All to have the option of Clinician top up, )
Consider F.I/ Nerve block

Monitoring
CAM scoring
Campbell's/Numerical Pain scoring /Vital signs
Sedation Scores & FAS
If pain not controlled to allow function – Consider
FI block

Peri-operative Pain Management for patients with a #NOF

Analgesia
Regular Paracetamol
Fentanyl PCA +/- cont infusion
Step down PCA- use CEASE framework
Opioids written up by Orthopaedic team as per pain management plan- i.e. Low dose SR opioid
(Unless opioid tolerant) and frequent PRN short acting oxynorm

Monitoring
CAM scoring
& Campbell's/Numerical Pain scoring
& Vital signs/ Sedation Scores & FAS
If pain not controlled to allow function- Review by Acute Pain Services (lia referral and page)

Post Operative and
Post Operative Oral step down

Review of Patient
- CAM indicates a Delirium = Ortho/OGS review of patient

Increased Pain
- Consider and exclude alternate cause of pain
- Consider F.I block (Pre operatively only)
- Encourage use of PCA/clinician dose

Increased Sedation
- Review patient for cause.
- Reduce continuous infusion &/or bolus dose
- Review medications on drug chart

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Dr Jane Trinca
Ms Fiona Nielsen
Total fasting time - May

Average time spent fasting - 9.7 hours.

Patient not on 8 North
Post Operative Now

• Patient controlled analgesia, with back ground infusion if patient unable to initiate dose.

• Having a PCA pump fits with systems already in place and current nursing knowledge.

» Monitoring
  • Pain at Rest
  • Pain on Activity
  • Sedation Score
  • CAM (Delirium) Score

• Use existing CEASE guidelines to discontinue pump and commence oral analgesia
Pain Care Plan

- Patients are started as soon as they arrive on the ward
- Commenced on PCA
- If cognitively impaired they are on 5mcg of Fentanyl and prior to movement nurses give a clinician dose
- If the patient is cognitively intact they have the PCA demand button

- This worked because:
  We knew we needed it
  It had doctor support
  It was easy to do
  We had the capacity on the ground
Typical Approach for Designing/Standardising Clinical Care

Design

Decision

Design

Design

Design

Clinical Area / Real World

Implementation

Test and Modify PDSA

Test and Modify PDSA

Test and Modify PDSA

Test and Modify PDSA

Design

Approve if Necessary

Implement

Refine the Design for Standardising Clinical Care in the Local Setting Using Small Tests of Change

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Pain Measurement and Governance

- Introduced Campbell’s pain score
- Monitor compliance.
- Capacity on the ground - Nurse Clinical champions
- Acute Pain Service

[Image of the Behavioural Pain Assessment Scale]

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Ms Fiona Nielsen
Standardised Care

• Patient receives the same care no matter what time they are admitted.

• Patients receive analgesia via a pain plan designed by senior clinicians
  – Strategic use of knowledge
  – Use of knowledge ‘where the rubber hits the road’

• Nursing staff make this a priority
March 2011-March 2012

Average Length of Stay (HRT Data)

Days

Pain Plan Starts

Project starts

Exemplars

A H
We measure Pain Plan Implemented

Project starts

FNOF Average Length of Stay - Acute

Average LOS
Grand average
UCL +3 sigma
LCL -3 sigma

Month

Apr-09  Feb-10  Dec-10  Oct-11

Average LOS

0  5  10  15  20

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<tr>
<th></th>
<th>July to Dec 2008</th>
<th>July to Dec 2011</th>
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<tr>
<td><strong>BED DAY SAVINGS</strong></td>
<td>Potential 700</td>
<td>Actual 520</td>
</tr>
<tr>
<td><strong>ALOS</strong></td>
<td>13.2 days 36% longer than 4 exemplar</td>
<td>8.3 days 13% shorter than all HRT</td>
</tr>
<tr>
<td><strong>MODE LOS</strong></td>
<td>9-11 days</td>
<td>3-5 days</td>
</tr>
<tr>
<td><strong>% D/C HOME</strong></td>
<td>23%</td>
<td>30%</td>
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<tr>
<td><em>(not transferred to campuses or other facilities)</em></td>
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<tr>
<td><strong>% EMERG READMISSION RATE</strong></td>
<td>5.8%</td>
<td>1.9%</td>
</tr>
<tr>
<td><strong>(ED) DOSA RATE</strong></td>
<td>71%</td>
<td>75%</td>
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<tr>
<td><strong>RELATIVE STAY INDEX</strong></td>
<td>107%</td>
<td>60%</td>
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<tr>
<td><strong>AVE AGE</strong></td>
<td>79</td>
<td>76</td>
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Sustainability

• Ongoing, # NOF patients coming to ward from recovery without PCA is flagged by nurses on the ward and systems reviewed

• Teamwork and commitment

• Links to other improvement work - Delirium/Pressure Injuries/Nutrition

• Spread to other wards

• Example of ongoing improvement
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Questions?