Falls and fragility fractures:

- 78,000 people fell and fractured their hip in 2007/8.
- More than 200,000 suffer one of the other fragility fractures per year - wrist, pelvis, upper arm.
- This means suffering, cost and loss of independence.
- Yet many could have been prevented, based on evidence-based interventions.

**Objective 1:** Improve outcomes and efficiency of hip fracture care.

**Objective 2:** Respond to the first fracture, prevent the second.

**Objective 3:** Early intervention to maintain independence after falls.

**Objective 4:** Prevent frailty, preserve bone health, reduce accidents.

**What about the other priorities?**

- **STROKES**
- **HEART ATTACKS**
- **FRAGILITY FRACTURES**

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**The issues**

<table>
<thead>
<tr>
<th>Strokes and TIA's</th>
<th>Heart attacks</th>
<th>Frailty Fractures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incidence/year (England)</td>
<td>315,933</td>
<td>275,933</td>
</tr>
<tr>
<td>NHS bed days</td>
<td>1,570,617 (hip)</td>
<td>1,147,268</td>
</tr>
<tr>
<td>NHS costs</td>
<td>£2.8 Billion</td>
<td>£1.7 Billion</td>
</tr>
</tbody>
</table>

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**What we need to know**

- Falls and fractures - the growing epidemic of our ageing population.
- Understanding falls and fragility fractures as long-term conditions.
- What are the standards and how are we doing?
- The 4 key aims - why and how to achieve them.

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**Current achievements**

- Medical, social, psychological, physical intervention.
- Follow up care.
- Improvement in fracture liaison services.
- Multidisciplinary working.
- Significant improvement in fracture liaison services.
- Significant improvement in follow up care.
- Significant improvement in medical, social, psychological, physical intervention.

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**Strategy 2007**

1. National Hip Fracture Database
2. MINAP audit
3. Pain to needle time
4. Telemedicine for every DGH
5. NSF CHD Link
6. NSF Older People Link

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**The issues**

- Medical, social, psychological, physical intervention.
- Follow up care.
- Improvement in fracture liaison services.
- Multidisciplinary working.
- Significant improvement in fracture liaison services.
- Significant improvement in follow up care.
- Significant improvement in medical, social, psychological, physical intervention.
Understanding falls and fragility fractures
Long-term conditions

Osteoporosis care of fracture patients
A Bermuda Triangle phenomenon

Falls and fractures: the challenge for Healthcare

Falls are expensive
- In 2007/8 the total cost of fractures for NHS and local councils in England was £2 billion
- For the average PCT in England, this means £13 million (350 hip fractures + 1000 other fragility fractures)
- This means £10 million through PbR for hip fractures alone
- Ongoing health and social care costs are £50 million per year

The prevalence of osteoporosis increases with age. The older population at risk will grow almost 15% by 2020
By 2020, annual osteoporotic fractures will increase by >10% to 230,000, costs will grow to >£2 billion.

Why we need to get falls and fractures right for older people

Hip fractures are the commonest cause of trauma death of older people
- 10% die within a month, 30% die within a year
- More over 50s women will have a hip fracture than develop breast cancer
- 20% hip fracture patients do not return home but enter care homes
- Older people fear the effect of a serious fall: “40% of older women surveyed would rather be dead than experience the loss of independence and quality of life that results from a bad hip fracture and subsequent admission to a nursing home”

For older people, and their families, falls causing fractures and other injuries are a major source of pain, fear, loss of independence
- 20% over 60s fall per year
- Of those who fall, 50% do so repeatedly
- 7% attend Emergency Department
- 7% are picked up from the floor by Ambulance staff
- 5% have significant injury
- 3% admit to hospital because of the fall

Reduced strength, or judgement, the vicious cycle into dependency


Public Health Approaches

Patients at high risk
- Women >50 years
- Women with prior hip or vertebral fractures

The majority of post-menopausal women (84%) have not suffered a fragility fracture
- 50% of all potential hip fracture cases from 16% of the population


Fractures are expensive
- Hip fractures: UK 76,000 p.a.; 125 per 100,000 p.a.
- Any fracture amongst patients >50 year: UK, 310,000 p.a.; 508 per 100,000 p.a.
- Prevalence
  - Women >50 years: 16%
  - Men >50 years: 6.4%

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Falls and fractures : the challenge for Healthcare

Prevention
- Hip fracture: UK 76,000 p.a.; 125 per 100,000 p.a.
- The prevalence of osteoporosis increases with age. The older population at risk will grow almost 15% by 2020

By 2020, annual osteoporotic fractures will increase by >10% to 230,000, costs will grow to >£2 billion.
A systematic approach to falls and fracture care and prevention

Objective 1: Improve outcomes and efficiency of hip fracture care.
- Respond to the first fracture, prevent the second
- Early intervention to maintain independence after falls
- Prevent frailty, preserve bone health, reduce accidents

Objective 2: Respond to the first fracture, Prevent the second
- Fracture Liaison Services
  - Case finding in A&E, MIUs and hospital fracture services
  - Investigate and start treatments according to NICE guidance for women and local agreements for men
  - Link straight to falls services
  - Monitor and maintain medication adherence
- Case finding for those with previous fractures
  - Use primary care records to improve case finding and audit practice against guidelines
  - Agree who needs specialist investigations and services from local Osteoporosis experts

Objective 3: Early intervention to restore independence

Objective 4: Prevent frailty, preserve bone health, reduce accidents

Key findings:
- Less than a fifth (19%) of non-hip fracture patients and approximately a third (35%) of hip fracture patients received a clinical osteoporosis assessment.
- 19% of non-hip and 18% of hip fracture patients aged 65-74 years were referred for DEXA scan after their fracture as required by NICE TA87.
- 19% of non-hip and 42% of hip fracture patients received osteoporosis treatment in accordance with NICE TA87.

Recommendations included:
- PCTs should commission a patient care pathway for the secondary prevention of falls and fractures that includes a Fracture Liaison Service that targets the high risk group of patients presenting with a first fragility fracture.
- PCTs should commission community or hospital based clinics which can perform the range of investigations that targets the high risk group of patients presenting with a first fragility fracture.
- PCTs should commission community or hospital based clinics which can perform the range of investigations necessary to offer an individual targeted treatment plan to reduce falls and fractures.
- QRESEARCH – Standards in primary care 2007
  - Only 25% of females aged over 75 years with a recorded prior fragility fracture had evidence of bone densitometry in their medical record.
  - 73% of 65-74 year olds with a recorded prior fragility fracture, who also had a diagnosis of osteoporosis, received treatment.
  - ~2% of males aged over 65 years with a recorded prior fragility fracture had evidence of bone densitometry.
  - 44% of males aged over 65 years with a recorded fragility fracture had evidence of osteoporosis were on treatment following their fracture.

Fracture Liaison Services
- Monitor and maintain medication adherence
- Link straight to falls services
- Monitor and maintain medication adherence

Women and local agreements for men

Objective 2: Respond to the first fracture, Prevent the second
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Objective 2: Why does secondary prevention matter

Half of hip fracture patients suffer previous fractures

Observation of the progression of osteoporosis reveals that half of hip fracture patients break another bone prior to their hip fracture occurring. Secondary preventative treatment as recommended by NICE TA161 could prevent half of these hip fractures.

<table>
<thead>
<tr>
<th>Percentage of patients with hip fracture reporting prior fragility fracture</th>
<th>0.0</th>
<th>20.0</th>
<th>40.0</th>
<th>60.0</th>
<th>80.0</th>
<th>100.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lykes et al.</td>
<td>45.3</td>
<td></td>
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<tr>
<td>Edwards et al.</td>
<td>44.6</td>
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<tr>
<td>McDonald et al.</td>
<td>45.4</td>
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</tbody>
</table>

Objective 2: Adoption of Fracture Liaison Services

Adaptability of the model

- 29% of UK hospitals have implemented an FLS
- FLS approach endorsed nationally and internationally as a model of best practice for secondary fracture prevention
- FLS style models developed in many healthcare systems: USA, Netherlands, Ireland, Austria, Belgium and Switzerland

Objectives

- Identify all women >65 years with a fracture history amongst the population served by Coatbridge Local Healthcare Co-operative
- Conduct bone densitometry with axial DEXA to identify those patients with low bone mass
- Manage patients according to Scottish national guidance (SIGN71)
- Before programme, 9% of fracture patients treated
- After programme, 64% of fracture patients treated
- SIGN71 guidance implemented

Resources

- Mobile axial DEXA scanner
- 1 FTE Primary care-based Fracture Liaison Nurse Specialist
- General Practitioner with Specialist Interest in Osteoporosis

Key Findings

- 21% of women > 65 had suffered a prior fracture
- 86% had low bone mass
- 70% of women > 75 with fracture are osteoporotic
- 45% of women and 30% of men had a prior fracture history
- 17% of women and 3% of men receiving osteoporosis drugs
- 18% of hip fracture patients had a preceding Colles' fracture
- 46% of women and 36% of men had a prior fracture history
- 17% of women and 4% of men receiving osteoporosis drugs

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