Fracture Liaison Services

Evidence proves the case for urgent implementation

Outline

• Osteoporotic fractures
• The post-fracture care gap
• The solution: FLS
• FLS in Canada

How likely are we to break a bone?

<table>
<thead>
<tr>
<th>Likelihood of having a fracture</th>
<th>Women</th>
<th>Men</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 in 3</td>
<td>1 in 5</td>
<td></td>
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</table>
Falls

Implement FLS by 2015

Vertebral body

Broken vertebrae

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Building better bones together.

Implement FLS by 2015

Impact of hip fractures

• Of those who survive, 25% have not regained their mobility at one year\(^1\)
• 15-25% move into nursing home\(^2,3\)

2. Jaglal S, Patterns in Health Care in Ontario, 1998

Mortality

• 28% of women and 37% of men have died 1 yr post hip fracture
  • 1 in 15 will die during hospitalization
  • Almost one third of those who survive to discharge will die within the year.

Jiang HX et al, JBMR, 2005
Osteoporosis is **NOT** a benign disease.

### Incidence of Osteoporotic Fracture, Heart Attack, Stroke and Breast Cancer in Canadian Women

- Hip: 21,600
- Wrist: 23,200
- Vertebrae: 19,500
- Other: 9,950
- Pelvic: 11,000
- Heart Attack: 138,600
- Stroke: 30,000
- Breast Cancer: 30,000

### Costs of fractures

- Each hip fracture: $20,000 - $44,000
- Acute care costs for fractures in Canada (2010): **$2.3 BILLION**
- Incl. OPD, prescriptions, indirect costs, LTC costs (2010): **$3.9 BILLION**

Taride JE et al, Osteoporos Int, 2012
Osteoporotic fractures

- Common
- Devastating
- Expensive
- Fractures beget fractures

Fractures beget fractures

- After a wrist fracture.....
  14% with a new fracture within 3 years\(^1\)
- After a vertebral fracture.....
  20% with a new vertebral fracture within 1 year\(^2\)

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2. Lindsay R et al, JAMA, 2001
After a Hip Fracture

- Risk of a second hip fracture:
  - 9% at 1 year
  - 20% at 5 years

- Risk of a non-hip fracture:
  - 36% at 1 year
  - 57% at 5 years

Ryg J, ASBMR, 2009

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Deciding on Pharmacological Treatment Post Fracture

- Risk of a second hip fracture:
  - 9% at 1 year
  - 20% at 5 years

- Risk of a non-hip fracture:
  - 36% at 1 year
  - 57% at 5 years

Ryg J, ASBMR, 2009

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Undertreatment of Osteoporosis Post Fracture (Women)

- No diagnosis or treatment for osteoporosis
- Diagnosis of osteoporosis only
- Prescribed treatment for osteoporosis

A Population-Based Analysis of the Post-Fracture Care Gap 1996-2008: The Situation Is Not Improving

Either BMD Testing or Drug Treatment

- All subjects
- Previously untreated

The Osteoporosis Career

Solution
We need to find an intervention that works.
Outcomes

• Close the care gap:
  ▪ BMD / osteoporosis meds
• Reduce the risk of fracture
• Reduce mortality
• Reduce health care costs

Systematic review

• interventions within which BMD and/or treatment were conducted
• interventions that included dedicated personnel to implement the intervention.

Sale JE et al, Osteoporos Int, 2011
Ganda meta-analysis
- Identification: capture fracture patient + an alert must go to PCP
- Investigation: BMD
- Initiation of osteoporosis treatment

Implement FLS by 2015  Ganda K et al, Osteoporosis International, 2013

The 3 i’s
- Identification: capture fracture patient + an alert must go to PCP
- Investigation: BMD
- Initiation of osteoporosis treatment

Model Description BMD testing OP treatment
Status Quo
Manitoba (2007/08) 13% 8%
D Zero i No data 8%
C 1i 43% 23%
B 2i 60% 41%
A 3i 79% 46%

Ganda K et al, Osteoporosis International, 2013
35% decreased fractures at 2 years

33% decreased mortality at 2 years

What works

- FLS 3i/2i
- FLS with dedicated staff
When you assess a new “Health Intervention”
• You compare it to the way care is currently being given
• The new way can work better, or less well
• The new way can cost more, or cost less

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Applying the results in practice

If the new technique: Then you should:
• Works less well, and costs more • Definitely NOT do this!
• Works less well, and costs less • Not likely advisable
• Works better, and costs more (common situation) • It depends...
• Works better, and costs less • Definitely DO this!

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What the studies say:
• St Michael’s (Toronto)
• Capital Health (Edmonton)
• Glasgow, UK
• Netherlands
• USA
• Australia
• FLS works better and costs less

Implement FLS by 2015
Even if real cost for program turns out to be twice what was estimated, FLS still **cost effective**

It is considerably less expensive to prevent a hip fracture than to manage it, simple as that.

Richard Dell, MD, Orthopaedic Lead
Kaiser Healthy Bones Program

**In the UK**

Universal access to FLS could be provided across the UK for just 0.6% of the annual cost of hip fracture to the UK economy.

Cooper C et al, Osteoporosis International, 2011
What works

- FLS 3i/2i
- FLS with dedicated staff

What’s sustainable

- FLS 3i/2i
- FLS with dedicated staff
- Government-funded

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Leslie WD et al, CMAJ 2012
Building better bones together.
Implement FLS by 2015
Sustainable 2i/3i FLS
• British Columbia
• Alberta
• Saskatchewan
• Manitoba

Building better bones together.
Implement FLS by 2015
Sustainable 2i/3i FLS
• Ontario: Fracture Clinic Screening Program (part of OOS) operational in 29 high/medium volume fracture clinics, moving towards 2i/3i FLS model

Building better bones together.
Implement FLS by 2015
Sustainable 2i/3i FLS
• Quebec:
  • Sherbrooke (3i for hip #s)
  • Jean Talon/Sacré Coeur (3i model)
  • Verdun Hospital catchment area proposal 3i model
Sustainable 2i/3i FLS

- New Brunswick:
  - 2i FLS starting in Moncton Hospital in September
- Nova Scotia:
  - (2i FLS at Dartmouth General Hospital)

Summary: Sustainable 2i/3i FLS in Canada

- Ontario
- Quebec
- New Brunswick
- (Nova Scotia)
By implementing Fracture Liaison Services across our provinces we CAN make their FIRST break their LAST!

Clinically Effective and Cost-Effective Systems of Post-Fracture Care
Fracture Liaison Services are proven to close the care gap and reduce costs.

Help us promote Osteoporosis Canada's FLS Network:
osteoporosis.ca/FLS

Questions????
Implement FLS by 2015