Step-by-step guide for implementing a successful FLS

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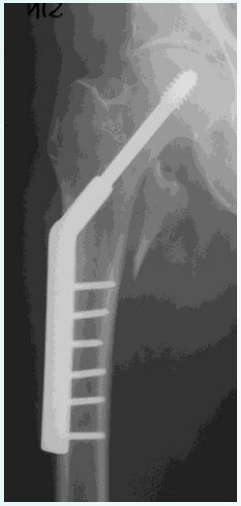
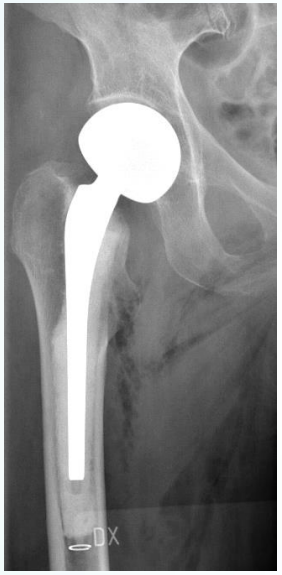
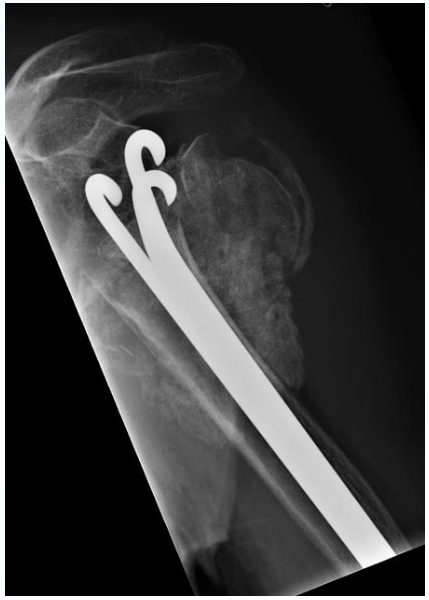
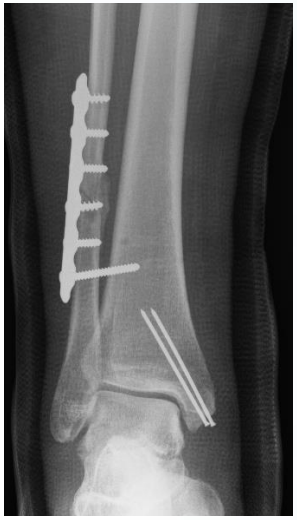
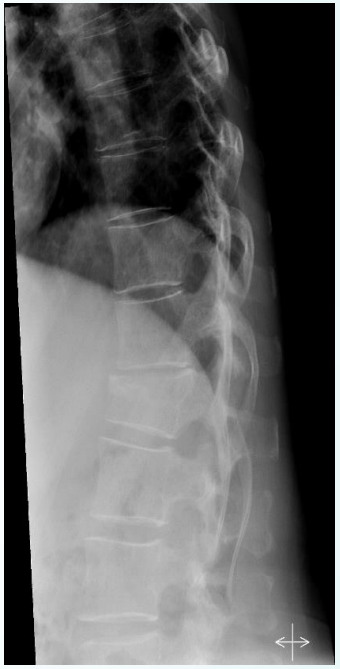
Fragility fractures – a consequence of osteoporosis and underlying frailty

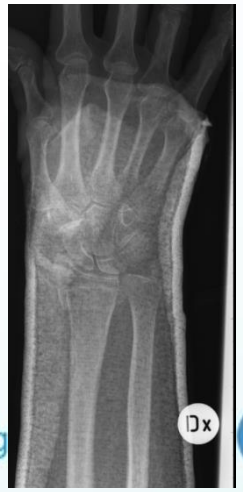












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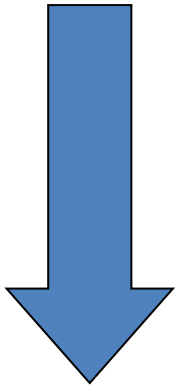
Fracture Liaison Service Step-by-step

- Understanding the need for FLS
- FLS implementation
- FLS business planning process
- Multi-sector FLS coalition
- Case-model

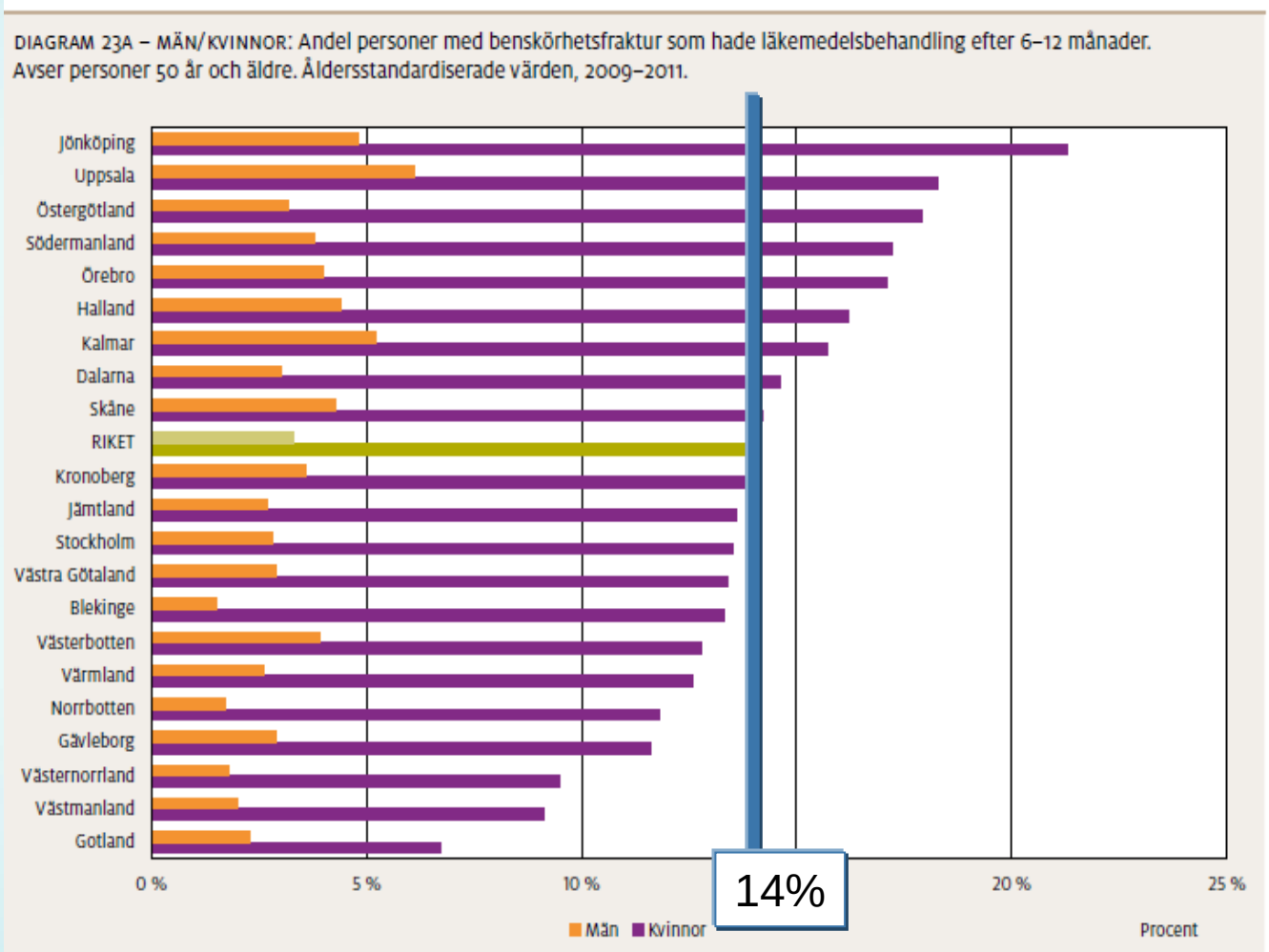
What we know

One Fracture



More Fractures

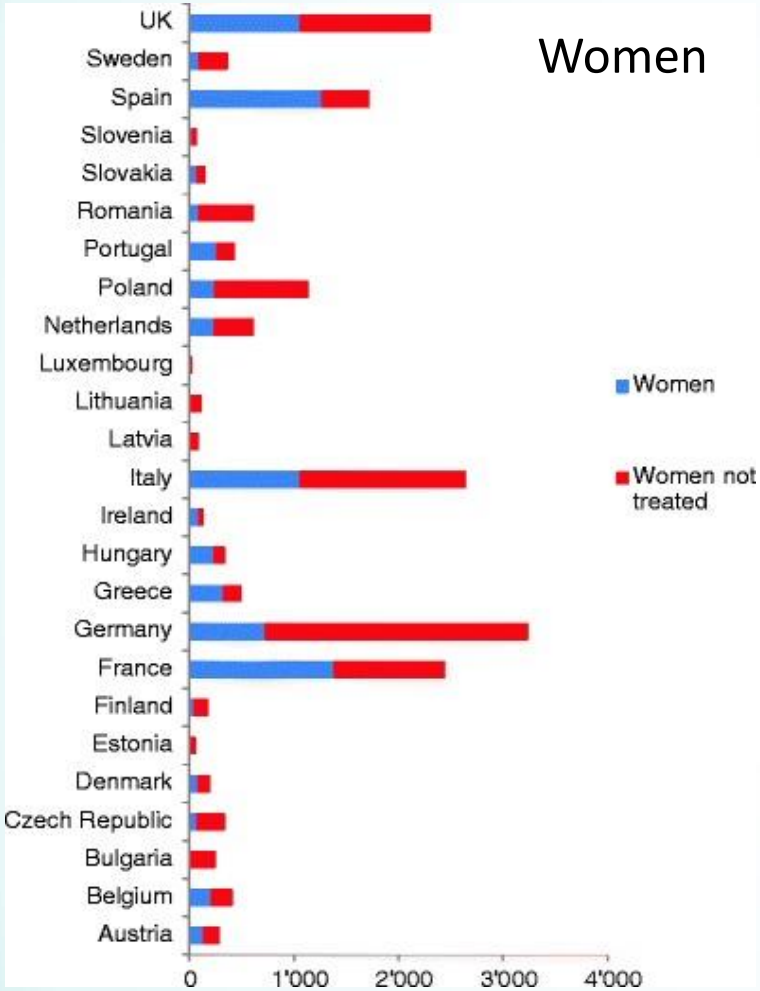
The Problem

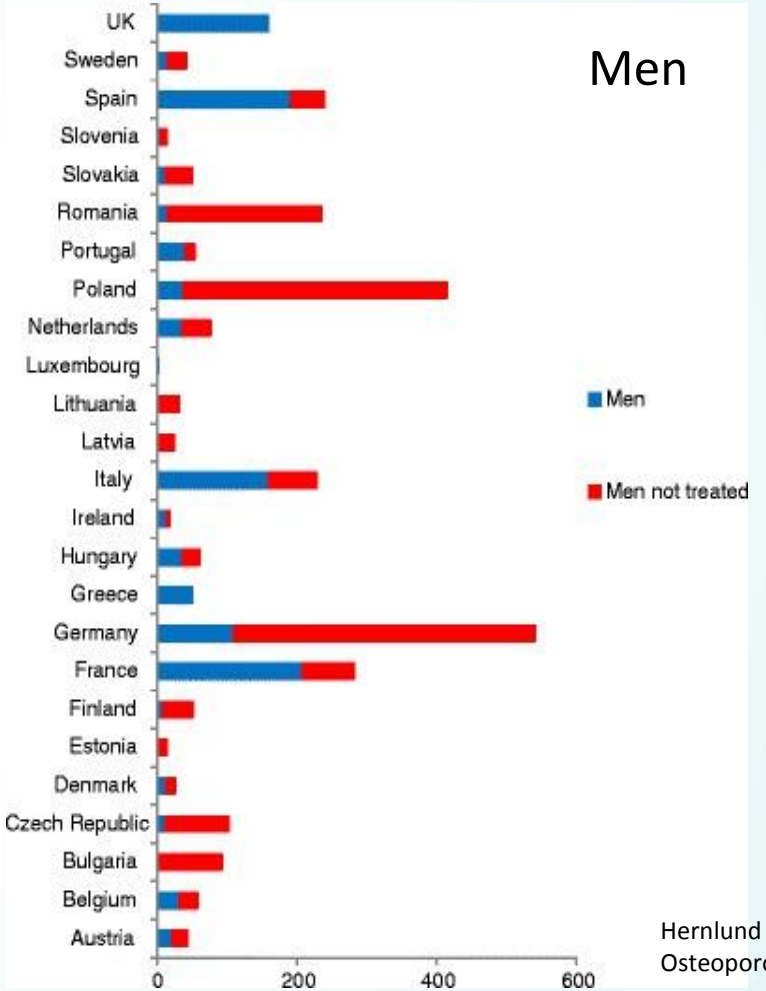


Treatment to reduce the risk of recurrence is not undertaken

Source National board of health and welfare 2013

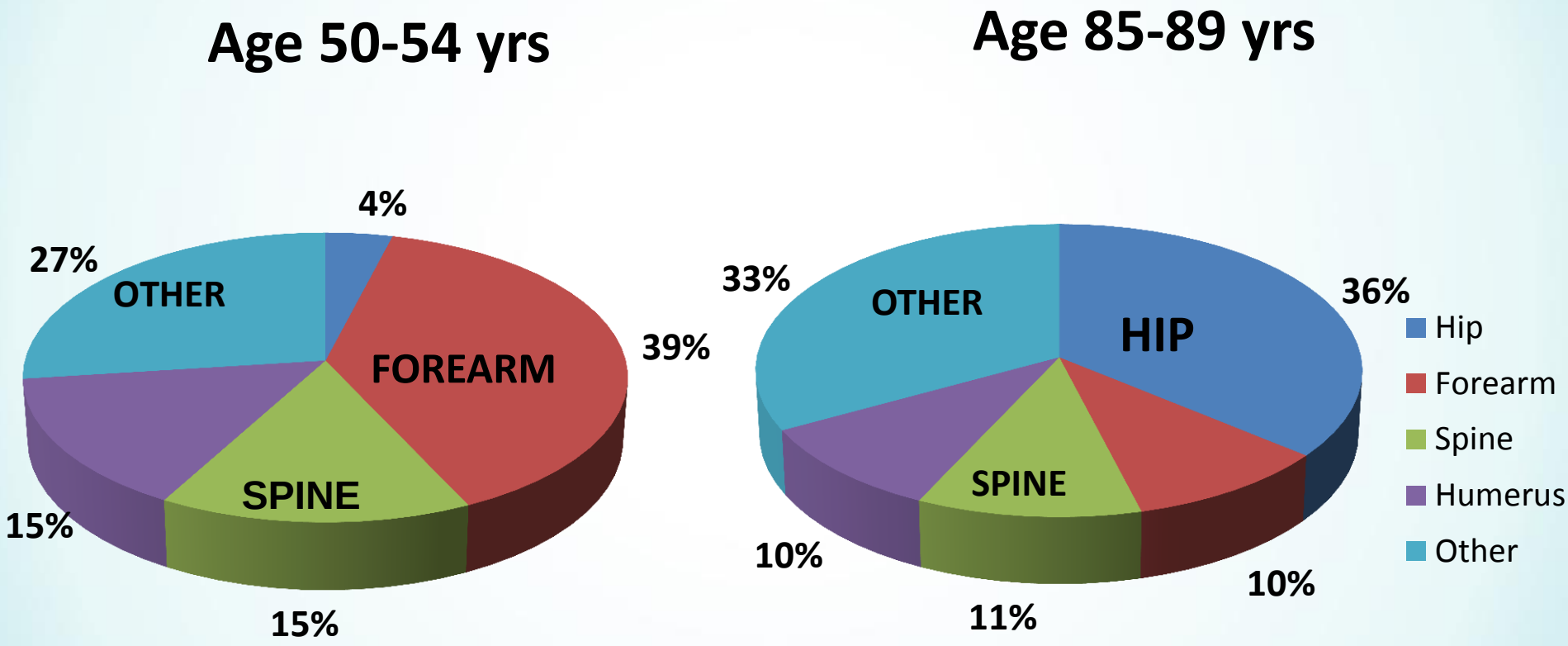
Estimated number (in thousands) of women/men treated (blue) and patients eligible for treatment that are not treated (red) in 2010





Hernlund E el a. Arch Osteoporosis 2013;8:36

Site Specific Pattern of Osteoporotic Fractures



Johnell O el a. Osteoporosis Int 2006;17:1726

The management gap

The first fracture is a sentinel event

- Healthcare institutions are failing to respond to the first fracture
- The underlying causes of incident fractures remain under-diagnosed and under-treated
- Pharmacological interventions have been shown to substantially lower the risk of subsequent fractures

Comprehensive Fragility Fracture Management

STARTS IMMEDIATELY AFTER THE FRACTURE

- Medical management
- Surgical management
- Post-operative management & Rehabilitation
- Management to avoid or reduce risk of recurrence

TOOL BOX for Comprehensive Fragility Fracture Care

- Standardized management process
- Standard care plans
- Check lists
- Experienced staff
- Coordinated systematic Fracture Liaison Service

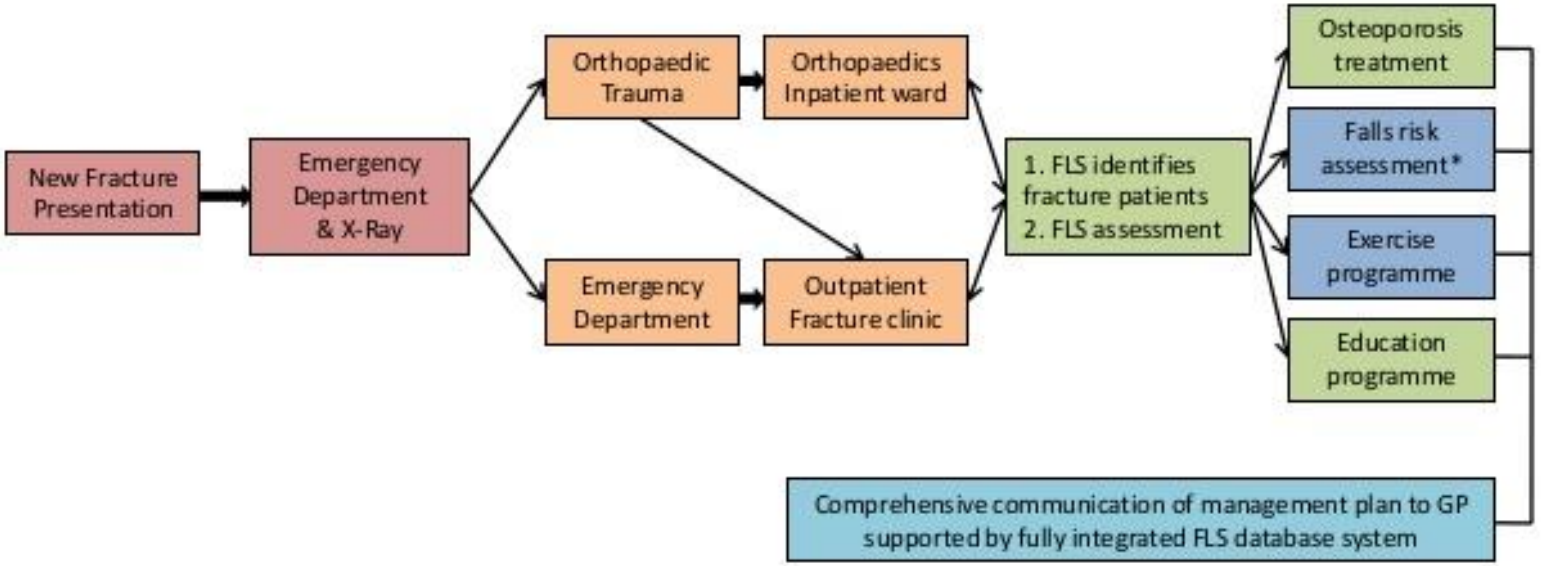
Secondary prevention

- Secondary prevention is more effective than primary prevention
- A systems approach with automatic **capture** of patients is necessary
- When it is done systematically, it is **cost-saving**

FLS Implementation

How to build an efficient and sustainable FLS?

Fracture Liaison Service
Service structure



(Adapted from) BOA-BGS 2007 Blue Book. http://www.nhfd.co.uk/

* Older patients, where appropriate, are identified and referred for falls assessment

Systems approach to secondary fracture prevention

- Fracture Liaison Service
- Fracture Chain
- Fragility fracture nurse
- Coordinator led fracture service
- Case manager
- ….
- ….

A Proven Solution: Fracture Liaison Service (FLS)

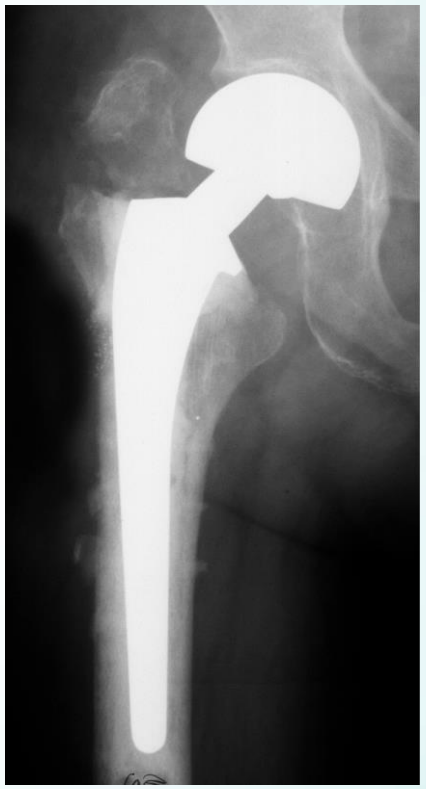
FLS models have been shown to be effective and cost-saving

Role of an FLS:

- ✓ Identify Fx patients
- ✓ Investigate OP risk factors
- ✓ Initiate treatment and fall prevention
- ✓ Ensure adherence to the treatment

Programmes to prevent secondary fractures

- Initiated
- Systematic
- Coordinated
- Politically acceptable
- Adapted to healthcare system
- Cost-effective



Steps toward Implementation

- LOCAL
  - Hospital department, clinic
- REGIONAL
  - County government, hospital trust, health management organisation
- NATIONAL
  - Departments of Health, national health service, other governing, regulatory or financial stakeholders, private health care providers and health care insurance organisations

Key Components

- Identification of patients
- Investigation and risk assessment
- Interventions initiated against osteoporosis and falls
- Information and ensure adherence

- Interaction with decision levels for implementation
- Data acquisition

Key partners

- Patient organizations
  - National osteoporosis society
  - Societies representing older people
- Professional organizations
  - Physician
  - Primary management team
  - Post-acute care team (extended)
- Politicians
- Policy makers
- Payers (public, insurance)
- Pharmaceutical

Key Components

- Target standards to measure against
- Define achievable goals at your own site
- Local logistics including IT-support

Steps toward Implementation

Create a multi-disciplinary FLS project team

1. Lead clinician/local champion
2. Fracture coordinator
3. Orthopaedic surgeon
4. Secondary care clinicians
5. Nurse specialists
6. Primary care physicians
7. Allied health professionals
8. Public health consultants
9. Service manager, administrator
10. Pharmacists

Marsh et al. (2011) Osteoporos Int 22, 2051

Steps toward Implementation

Design a FLS service model

1. Write specific and time-dependent aims and objectives
2. Identify how you will capture fragility fracture patients
3. Write case-finding protocols for the appropriate setting, e.g. inpatient ward, fracture clinic, diagnostic imaging, etc.
4. Decide what to include in your service model – see Best Practice Frame work
5. Ensure all members

Marsh et al. (2011) Osteoporos Int 22, 2051

The Best Practice Framework
13 internationally endorsed standards to guide FLS

1. **Patient Identification**
2. **Patient Evaluation**
3. **Post Fracture Assessment Timing**
4. **Vertebral Fracture (VF) ID**
5. **Assessment Guidelines**
6. **Secondary Causes of OP**
7. **Falls Prevention Services**
8. **Multifaceted Assessment**
9. **Medication Initiation**
10. **Medication Review**
11. **Communication Strategy**
12. **Long-term Management**
13. **Database**

Standard	Bronze	Silver	Gold
1.Patient Identification	Patients ID'd, *not* tracked	Patients ID'd, *are* tracked	Patients ID'd, tracked & *Independent review*

Standard	Bronze	Silver	Gold
9.Medication Initiation	*50%* of patients initiated	*70%* of patients initiated	*90%* of patients initiated

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Steps toward Implementation

- Secure access to post-fracture patients
- Estimate the workload and resources needed
- Define the role of the coordinator
- Engage with local planning machinery
- Start prospective data collection
- Initiate the service and develop it iteratively

FLS Business planning process

KEY SUCCESS FACTORS IN AN FLS BUSINESS PLANNING PROCESS

1. **Early engagement** between the clinical leads of the proposed FLS and local hospital or health system administrators

2. **A clear understanding of the management gap**

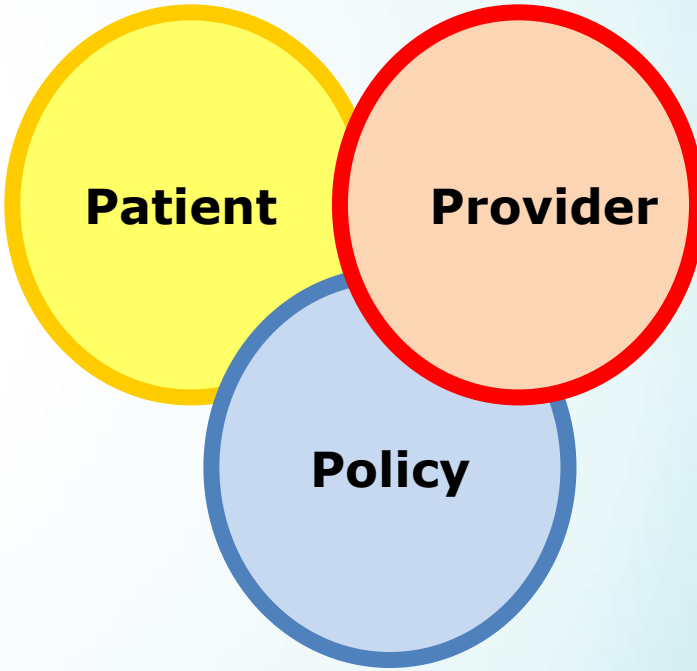
3. **Identification of where secondary fracture prevention features** in national clinical guidelines, particularly those that are considered mandatory, and national healthcare policy.

4. **Development of a fully costed business plan.** Health economic modelling is inevitably country-specific on account of costs, and savings associated with reduced incidence of subsequent fractures, varying between different countries' health systems.

Multi-sector FLS coalition

Advocacy at a National Level

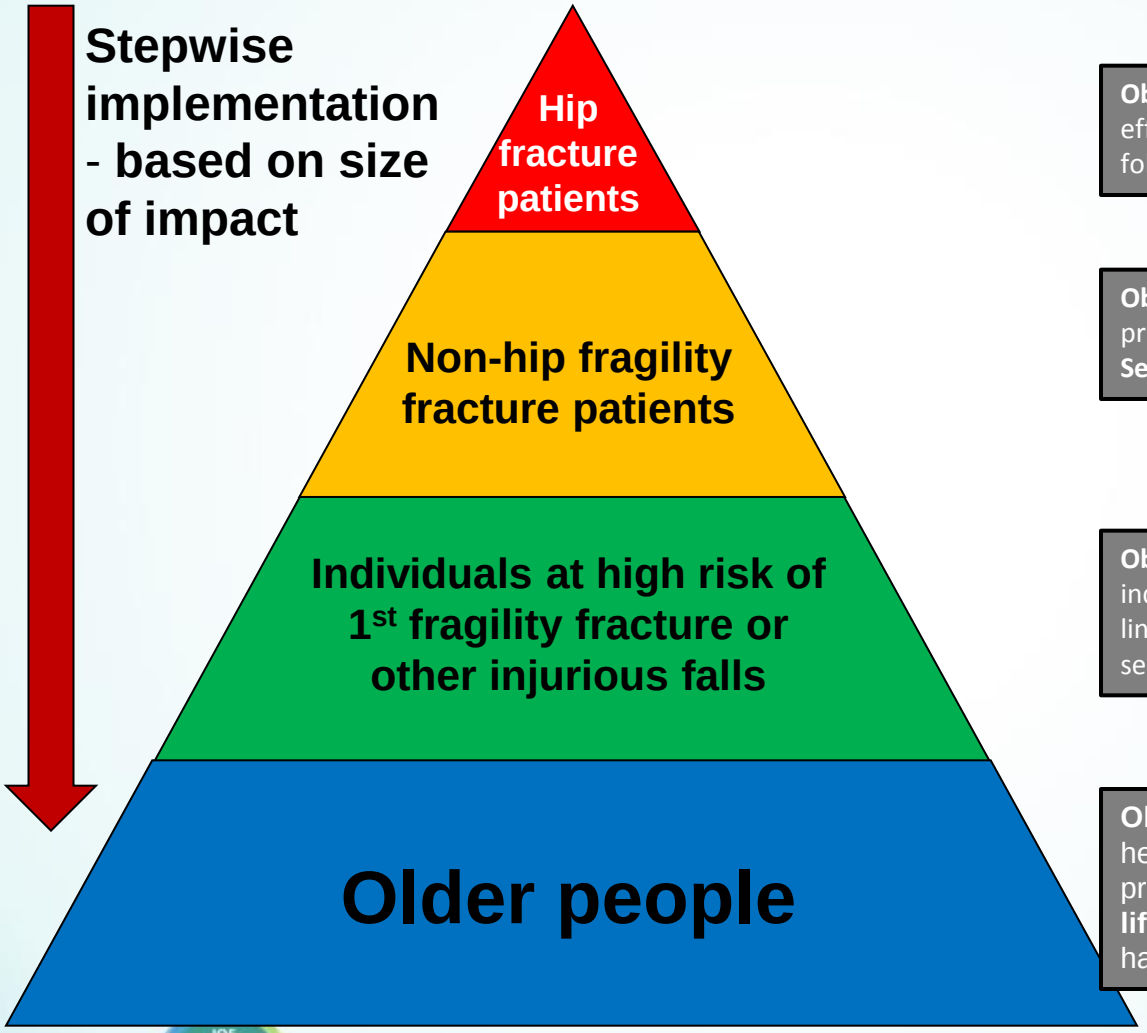
- Establish an exemplar system
- Data collection is key
- Form a coalition of relevant professional/patient societies
- Define national implementation guidelines
- Conduct national audit of all current secondary fracture prevention units
- Seek government-supported policy working group to achieve uniform best practice
- Implement national policy



Political acceptance

- National guideline for Musculoskeletal Conditions
  - Osteoporosis
  - Provider targets and responsibilities
- Patient involvement and lobbying

Prevention Package – Falls and fracture care
A road map for a systematic approach



Objective 1: Improve outcomes and improve efficiency of care after hip fractures – by following **the 6 "Blue Book" standards**

Objective 2: Respond to the first fracture, prevent the second – through **Fracture Liaison Services** in acute and primary care

Objective 3: Early intervention to restore independence – through **falls care pathway** linking acute and urgent care services to secondary falls prevention

Objective 4: Prevent frailty, preserve bone health, reduce accidents – through preserving physical activity, healthy **lifestyles** and reducing environmental hazards

Financial acceptance

- The payer does not perceive the gain

Financial acceptance

- The payer does not perceive the gain
- Secondary fracture prevention is cost-saving

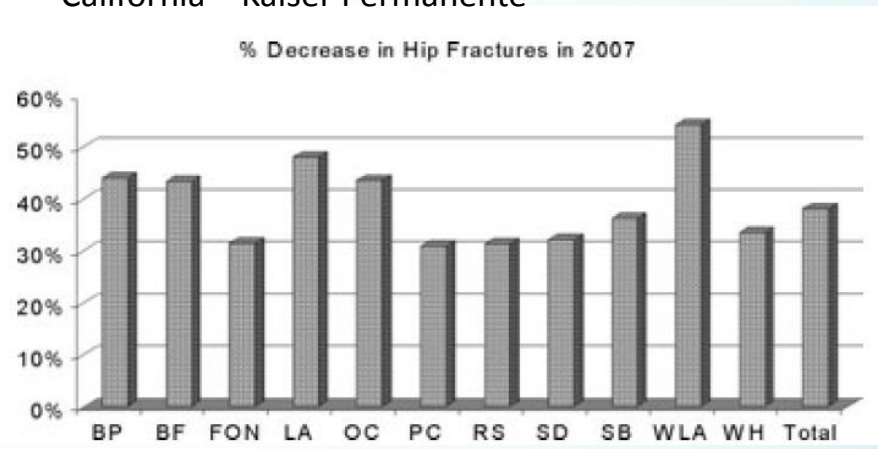
Glasgow:

FLS cohort of 686 patients, compared with 'usual care' cohort of 193 patients:

- 18 fewer fractures
- 3 life years gained
- 22 QALYs gained
- 266 hospital bed-days saved
- Cost saving of 312,000 GBP from fractures avoided

McLellan et al. (2011) Osteoporos Int 22 (7) 2083

California – Kaiser Permanente



Greene D & Dell R. JAANP 2011;6:326

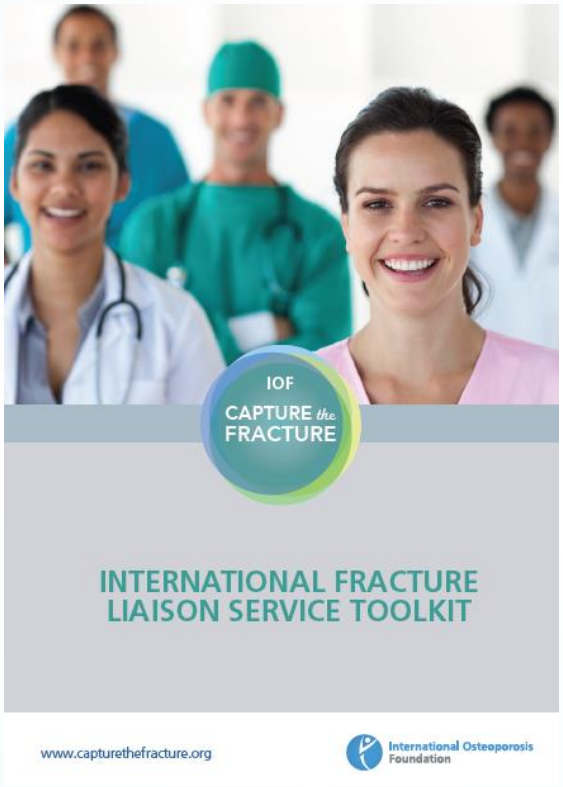
Challenges to maintain a sustainable FLS

- Identification of patients and tracking
  - IT-systems are still inadequate
- Adherence to treatment
  - Reminder systems prompting medication intake, prescription refills and nurse monitoring
- Transfer of patient and information between care providers
  - Multi-professional acceptance along the entire chain and
- Monitoring of non-pharmacological interventions
  - Report systems and software support
- Demonstrate long-term benefits

Facilitators in establishing successful FLS

- Awareness of the benefits in targeting secondary prevention
- Available therapies have reached cost advantages
- Increasing interest in the orthopedic community
- Advances in surgical management of fragility fractures leading to overall better outcomes
- Ortho-geriatrics gaining ground
- Demographics – it is necessary! Patient / public demand!

Resources
CAPTURE THE FRACTURE® and FLS TOOLKIT



1. Understanding the need
2. Implementation guide
3. Business planning process guide
4. Multi-sector coalition guide

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Implementation – making a change

- Professional expertise
- Patients voice
- Political awareness

National Guidelines for Musculoskeletal Conditions

Nationella riktlinjer för Rörelseorganens sjukdomar 2012

National Guidelines for Musculoskeletal Conditions - Osteoporosis

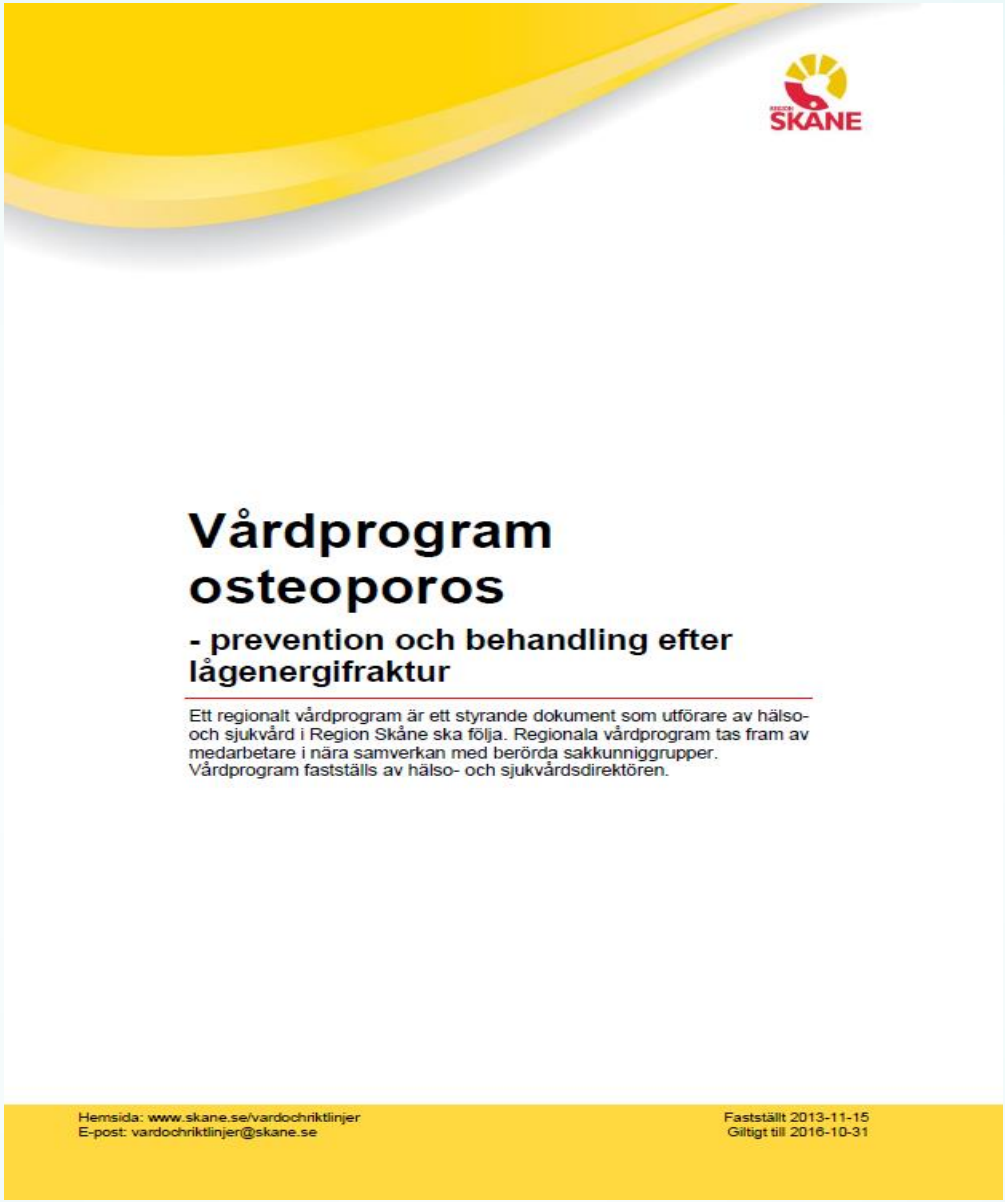
National priority

Investigation: FRAX, DXA,

Intervention: alendronate, zolendronic acid, denosumab, teriparatide

2014 update

Identification: systematic risk assessment



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Kortversion

Vårdprogram: Osteoporos – efter lågenergifraktur

Riskvärdering omfattar:
Frakturtyp
Riskfaktorer enligt FRAX (www.shef.ac.uk/FRAX/tool.jsp)
Fallbenägenhet
Läkemedel
Längdminskning
Allmäntillstånd

Patient över 45 år med aktuell lågenergifraktur (ej hand, finger, fot, tå och skalle) som inkommer till sjukhus

Akutmottagning | Slutenvård

Frakturkoordinator
Identifierar
Riskvärderar (enkät + FRAX)

Ansvarsfördelning:
Frakturbehandlande enhet
Identifiering + riskvärdering + behandlingsrek. till vårdcentral

Vårdcentral
Behandling + återkoppling + uppföljning

- Låg risk → Ingen behandling
- Medelhög/Hög risk

A	B	C
Patient med lång förväntad överlevnad (>3år)som tolererar* läkemedelsbehandling	Patient med kort förväntad överlevnad (<2 år) som tolererar* läkemedelsbehandling	Patient där sekundära orsaker till osteoporos först måste utredas
Eventuellt DXA	Ingen ytterligare utredning	Kompletterande utredning

Beslut om behandlingsrekommendation

Överföring av information till patientens vårdcentral.
Vid rekommendation om specifik åtgärd alltid remiss.

*Patient som **inte** tolererar läkemedelsbehandling ska alltid få information om icke farmakologisk behandling

Kalcium och vitamin D ska ges vid all läkemedelsbehandling samt till alla patienter över 80 år efter fraktur oavsett läkemedelsbehandling. Behandlingstid: Cirka 5 år, därefter uppehåll minst 2 år.

Farmakologisk behandling:

Första hand: **Alendronsyra** **Risedronsyra** → Andra hand: **Zoledronsyra** → Tredje hand: **Denosumab**

Icke-farmakologisk behandling:
- rökstopp
- kostråd
- fysisk aktivitet, t.ex. FaR
- fallprevention
- patientutbildning, t.ex. osteoporosskola

Återkoppling + uppföljning
Alltid återkoppling till frakturkoordinator som remissvar med uppgift om insatt behandling.
I vissa fall kan förnyad DXA vara motiverad efter 2-3 års behandling – till exempel för att motivera patienten.

Hemsida: www.skane.se/vardochriktlinjer
E-post: vardochriktlinjer@skane.se

Fastställt 2013-11-15
Giltigt till 2016-10-31

Program Summary

Screening of Fracture patients

All hospitals with orthopedic departments managing acute fractures

- Fracture patients above age 45 yrs
- Low energy fractures
- All hip fractures regardless of age
- In- and out-patients

Targets for the program

- Increase pharmacological treatment among high risk persons
  - Reaching 25% in 2 yrs and 50% in 4 yrs
  - Ultimate goal – 60-70% in highest risk groups
- Increase non-pharmacological prevention
  - Outcomes follow-up through the primary care register

Sharing of Responsibilities

- **Hospital care** – **Orthopedics** - identification and screening, investigation, support and recommendations to primary care and other care givers

- **Primary care** – implementation of recommendations, initiating pharmacotherapy and/or other preventive measures

Logistics is Key in a Systematic Approach

- Planning
- Process optimization
- Flow-charts
- Screening forms
- Trigger levels
  - DXA
  - No DXA – only lifestyle and/or falls interventions
  - No DXA – treat directly
- Decision aids
- Portfolio of standard letter

Fracture Risk Assessment Program – an evaluation

3-year follow-up of 215 fracture patients from a prospective and consecutive osteoporosis screening program

Fracture patients care!

Jörgen Åstrand[1], Karl-Göran Thorngren[1], Magnus Tägil[1], and Kristina Åkesson[2]

Department of Orthopedics, Lund University, [1]Lund University Hospital and [2]Malmo University Hospital, Sweden

76/87 with osteoporosis saw their doctor and 2/3 received anti-osteoporotic treatment.

None of those with normal bone density received treatment.

Summary

- The burden of osteoporosis and fragility fractures is known
- Interventions to reduce risk are available and cost-effective
- The treatment gap is pronounced across most countries

- To close the gap systems approaches and continued educational efforts needs to be prioritized

- Pre-planning to obtain an effective work flow
- Good organizers in your staff
- Acceptance on all levels

- New IT-soft ware solutions are warranted for registration, tracking and to improve monitoring of interventions

Summary

- Pre-planning to obtain an effective work flow
- Good organizers in your staff
- Acceptance on all levels

Secondary fracture prevention

A SYSTEMATIC APPROACH

AND

LOCAL ADAPTAION

ARE KEY TO SUCCESS

Capture the Fracture®

A flagship programme of IOF to prevent secondary fractures due to osteoporosis

Launched in conjunction with World Osteoporosis Day 2012

www.capturethefracture.org

The Process

Step 1
FLS submits online application

Step 2
FLS marked in green on the map while being reviewed

Step 3
BPF achievement level assigned

Step 4
FLS is scored and recognized on the map

128 FLS Registered on the Map

68 complete 13 26 29

25 in review and 35 new FLS waiting for more data

- ✓ Algeria
- ✓ Australia
- ✓ Belgium
- ✓ Brazil
- ✓ Bulgaria
- ✓ Canada
- ✓ China
- ✓ Czech Republic
- ✓ Finland
- ✓ France
- ✓ Greece
- ✓ India
- ✓ Ireland
- ✓ Italy
- ✓ Netherlands
- ✓ New Zealand
- ✓ Portugal
- ✓ Singapore
- ✓ Spain
- ✓ Sweden
- ✓ Switzerland
- ✓ Taiwan
- ✓ Trinidad & Tobago
- ✓ UK
- ✓ USA

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Thank you for attending the webinar!

If you have any additional questions, comments or feedback:
please email Muriel at mschneider@iofbonehealth.org