

# Fracture Liaison Service Database

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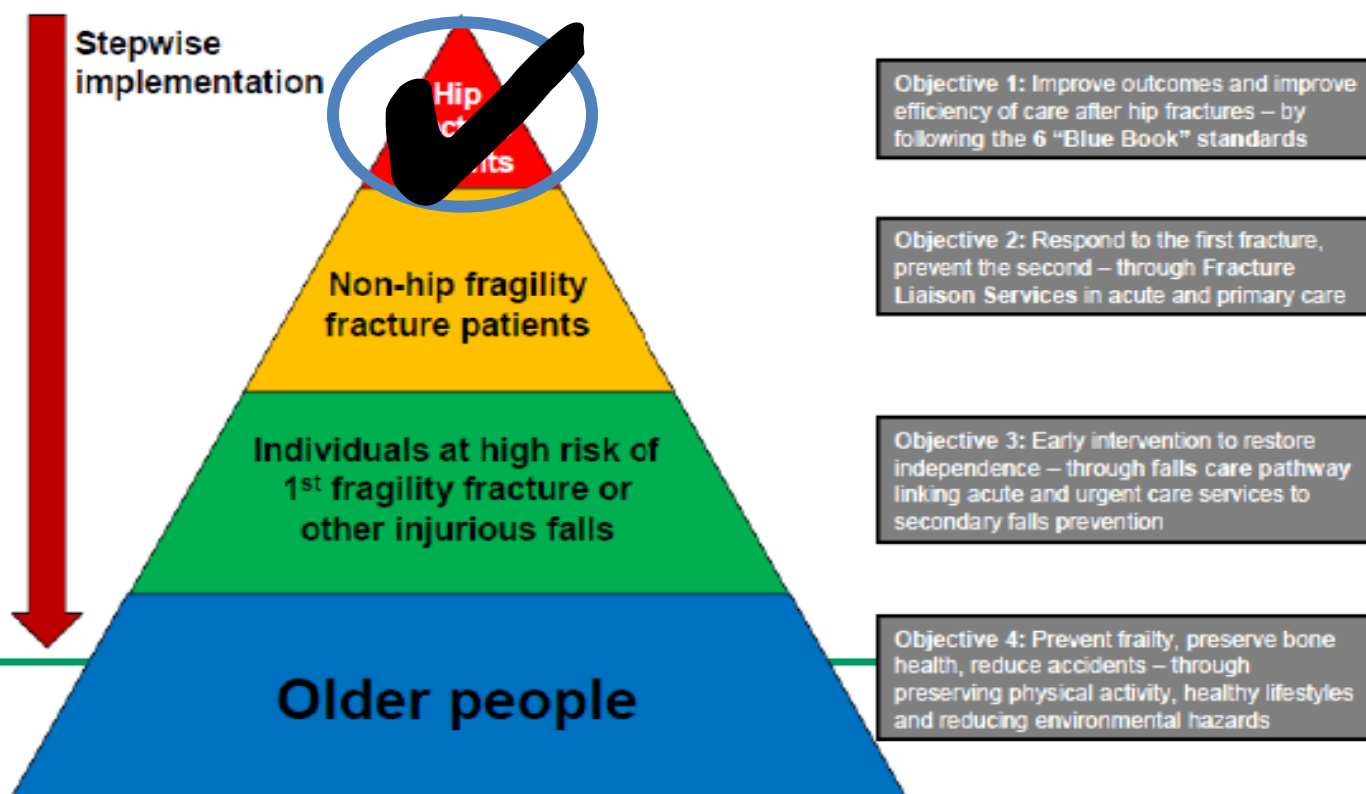
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# Falls and fracture care and prevention

## A road map for a systematic approach

System Reform for Older People



# STEP 2:

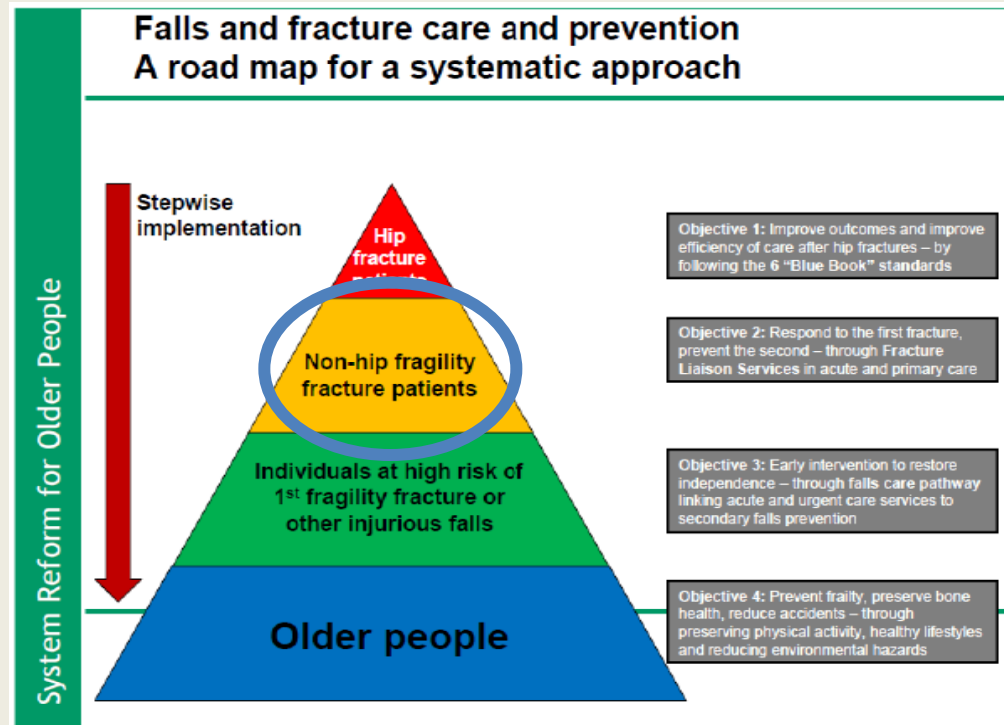
## Fracture Liaison Service Database (FLS-DB)

- **Aim:**

- To measure secondary prevention in *all* fragility fractures
- Through continuous audit and feedback, influence practice

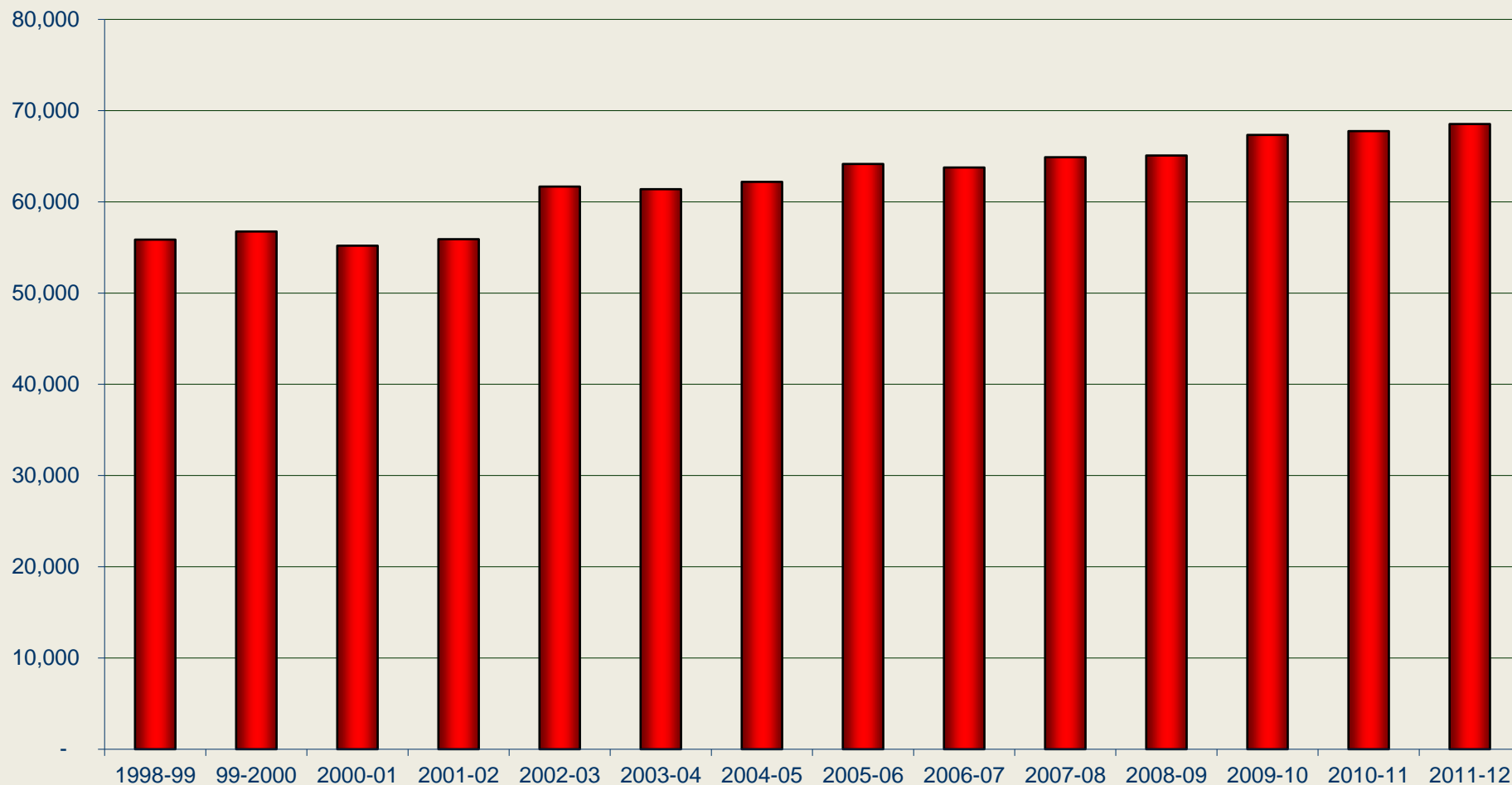
- **Challenges:**

- Approximately 5x number of hip fractures
- Many not admitted - responsibility divided between primary and secondary care, both with different data systems



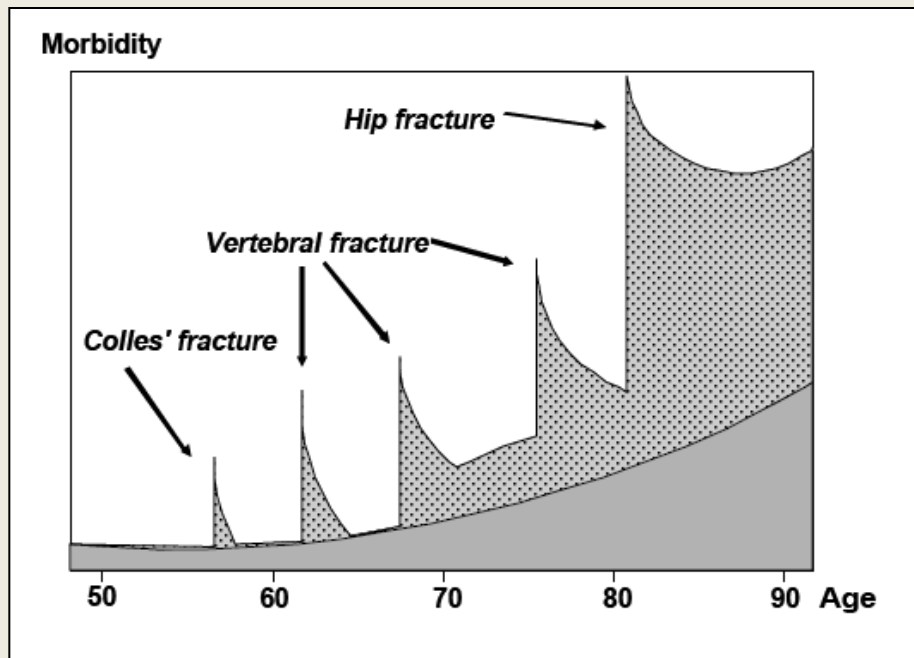
***Why the need?***

# Admissions for Hip Fractures in England (ICD S72.0, 72.1 and 72.2)



# FLS – *preventing that hip fracture*

About 40% of hip fractures have had  $\geq 1$  previous fracture



Kanis JA, Johnell O. J Endocrinol Invest 1999

- Osteoporosis drugs can decrease fracture rates by 30-50%
- Exercise programs can decrease falls risk by >30%

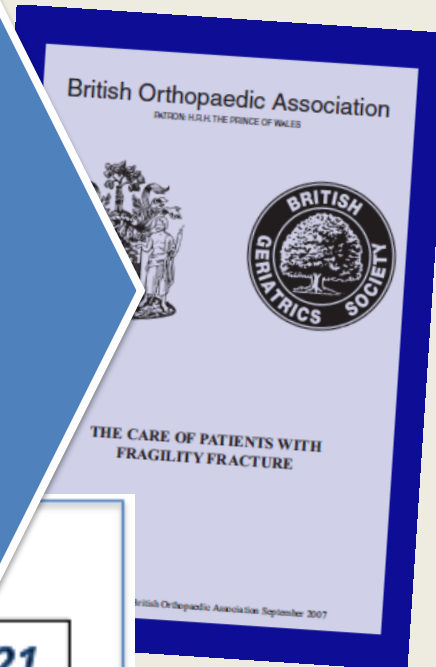
# IMPLEMENTING THE EVIDENCE

*NSF for  
older people*



**CLEAR  
STANDARDS**

*BOA/BGS:  
Blue Book*



**TA161  
TA160**

**National Institute for  
Health and Clinical Excellence**

**Risk assessment of  
Fragility Fractures**

**CG21  
Falls**

*“Failure to treat following fragility fracture may constitute a medico-legal hazard....”*

*McLelland, Osteopor Int 2011*

# RCP-CEEU National Clinical and Organisational Audit on Falls & Bone Health 2010



- *33% of non-hip fracture patients received appropriate treatment for osteoporosis*
- *19% of non-hip fracture patients participated in any form of exercise for falls prevention*

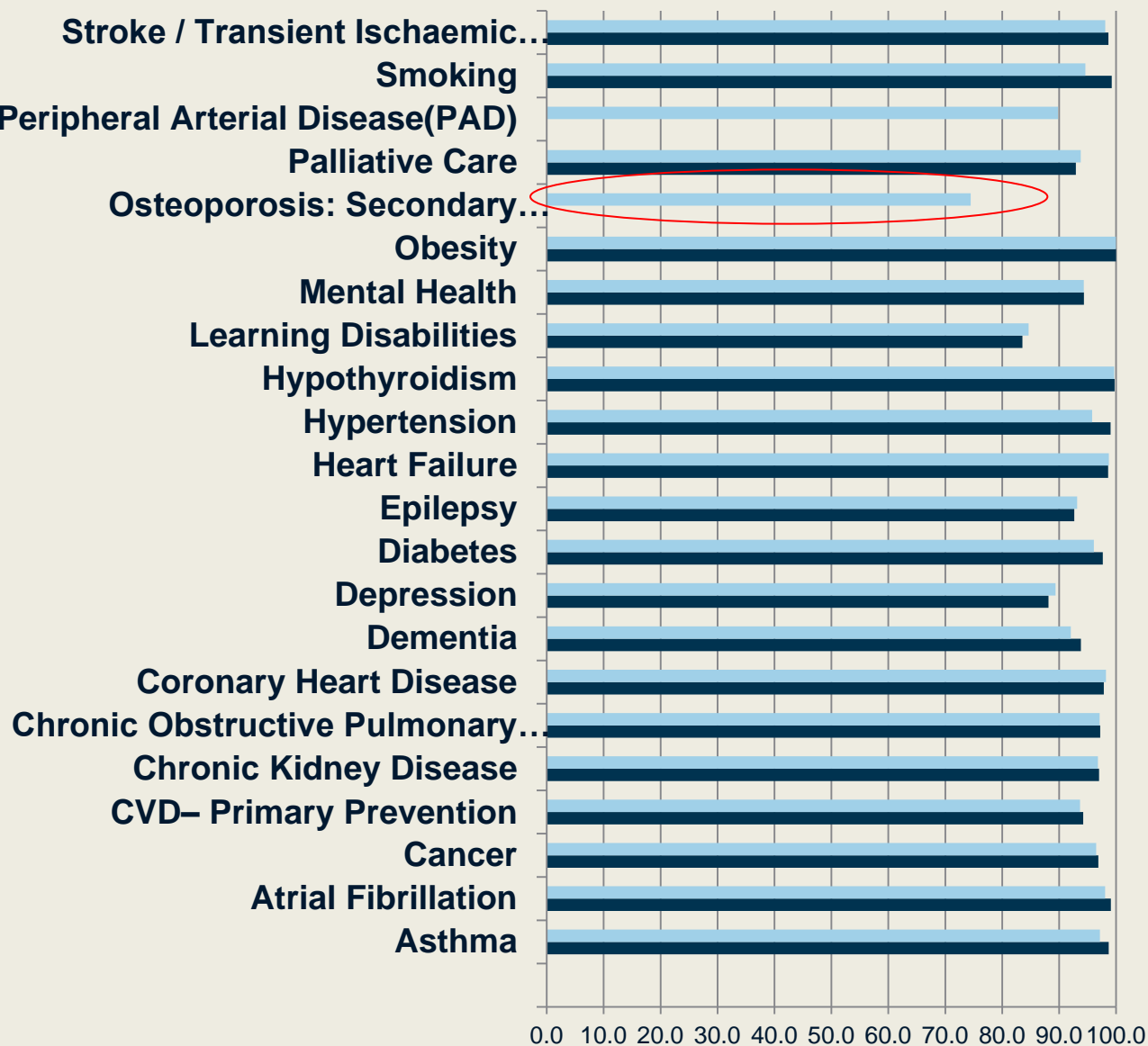
# GP Quality and Outcomes Framework (QoF)

*Fragility fracture identification introduced April 2012*

2012/13 Indicator Wording	Points	Threshold
<i>The practice can produce a register of patients:</i> 1. Aged 50-74y with a record of a fragility fracture and a diagnosis of osteoporosis confirmed on DXA scan 2. Aged $\geq 75$ y with a record of a fragility fracture	3	30-60%
Percentage of patients aged 50-74y with a fragility fracture, in whom osteoporosis is confirmed on DXA scan, currently treated with an appropriate bone-sparing agent	3	30-60%
Percentage of patients aged $\geq 75$ y with a fragility fracture currently treated with an appropriate bone-sparing agent	3	30-60%

- **Maximum points achieved with 60% threshold**

# Achievement by QOF clinical domain 2012-13



■ Percentage points scored 2012/13

■ Percentage points scored 2011/12

**Fragility fractures >50y:**  
**75% of max points gained**

**= 48,242 identified**

**vs.**

**172,000 expected\***

**=**

**29% ascertainment rate**

*\*Estimating the number of fragility fractures treated in the English NHS using the Hospital Episode Statistics. The Falls & Fragility Fractures Audit Project. The Clinical Effectiveness Unit, RCS.*

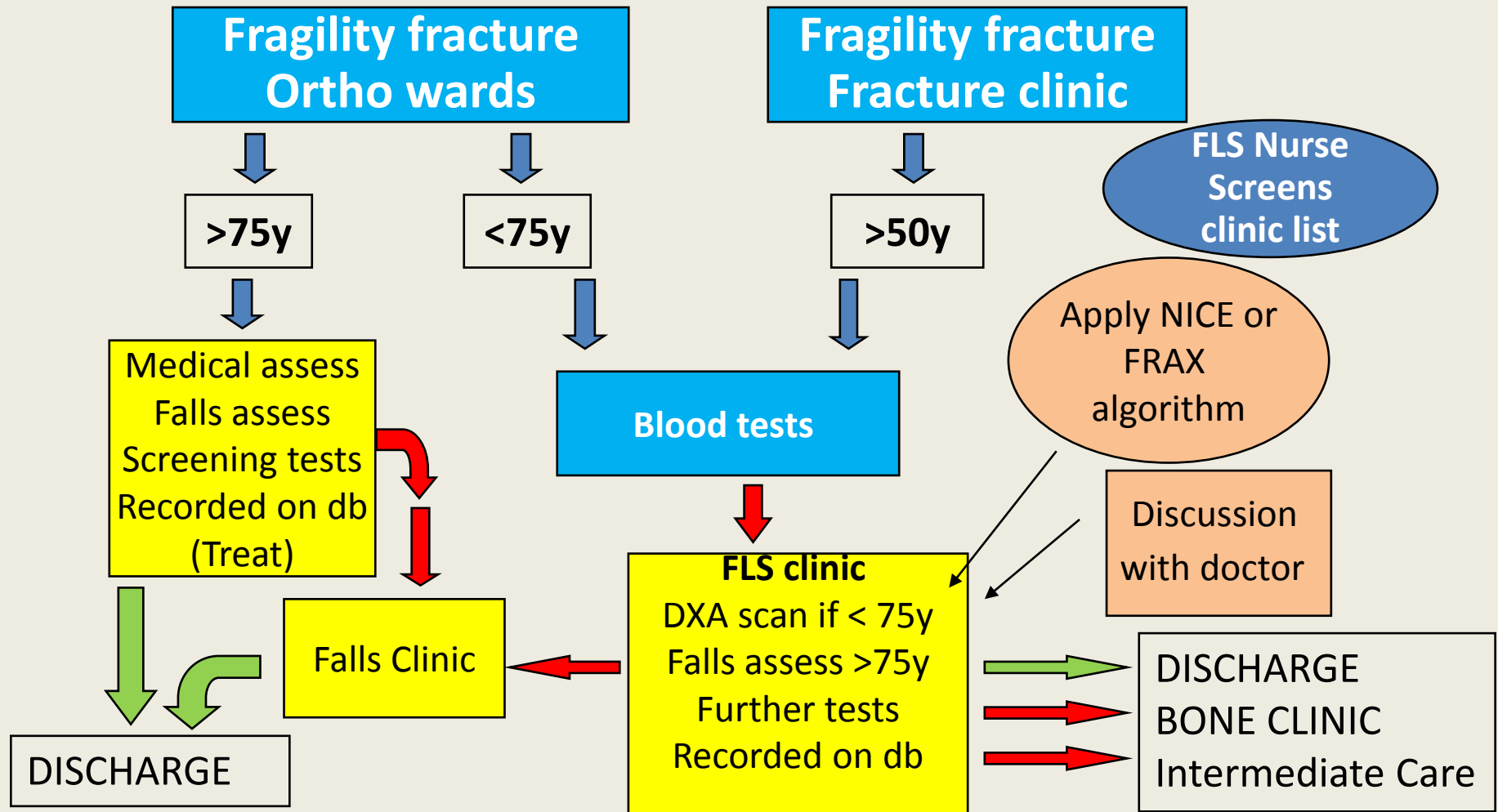
# FLS – the missing link

*A Fracture Liaison Service (FLS) systematically identifies, treats and refers to appropriate services all patients over 50 years of age within a local population who have suffered fragility fractures, with the aim of reducing their risk of subsequent fractures*



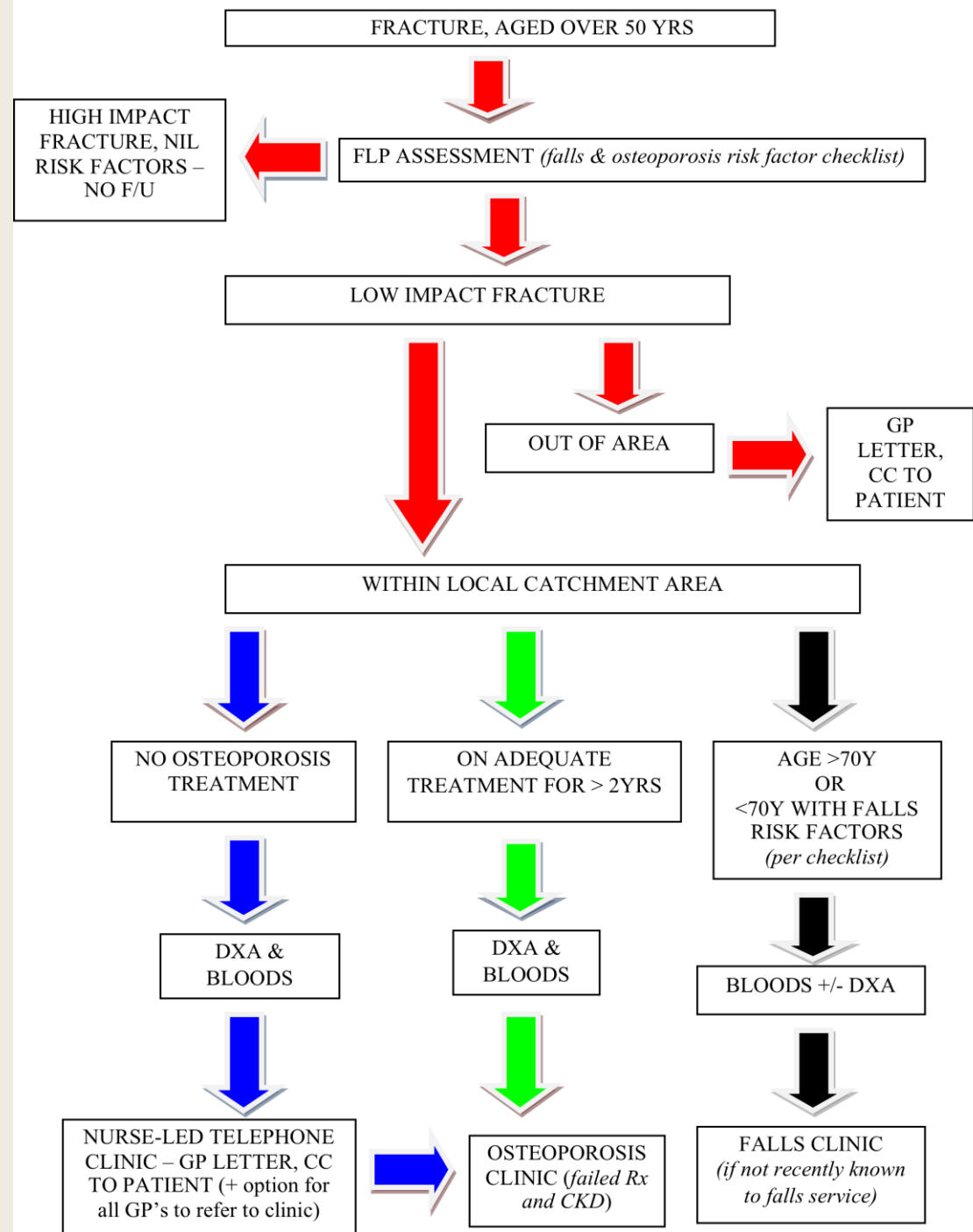
- i.e. implementing the evidence, systematically
- Underpinned by high quality clinical care, as per defined standards
- Based in primary or secondary care
  - *A dedicated practitioner – nurse or therapist, to case find and coordinate screening and treatment of new fragility fracture patients*

# FLS in practice - Ipswich Hospital



# FLS in practice – GSTT

- *Local arrangements will influence pathway, particularly re- falls*
- *Core standards must apply*



***Can a systematic approach influence  
secondary fracture prevention?***

# Reducing fracture risk at a population level: *West Glasgow Fracture Liaison Service*

Osteoporos Int (2003) 14: 1028–1034  
DOI 10.1007/s00198-003-1507-z

## ORIGINAL ARTICLE

### **The fracture liaison service: success of a program for the evaluation and management of patients with osteoporotic fracture**

Alastair R. McLellan · Stephen J. Gallacher  
Mayrine Fraser · Carol McQuillan

*Per 1000 fracture patients:*

- **18 fewer fractures** (including 11 hip fractures)
- **Cost saving £26,000** (after assessment & drug costs)

**Admissions with hip fracture ↓ by 7.3%** between 1998-2008,  
*vs. ↑ by 17% in England same period*

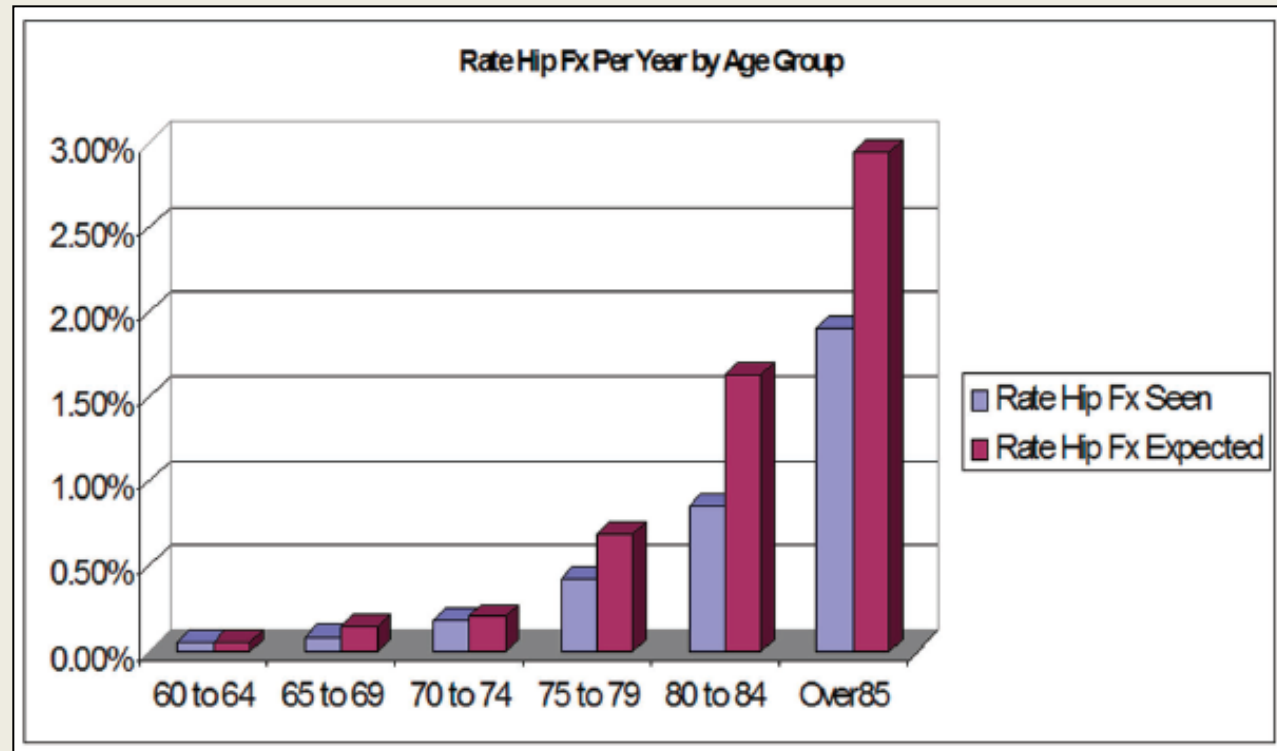
# ***Kaiser Permanente, Southern California***

## *Healthy bones program:*

- 263% increase in DXA scan use from 2002 to 2007
- 153% increase in women taking osteoporosis drugs
- 250% increase in men taking osteoporosis drugs

***31-54% reduction  
in hip fracture  
rates in the 11  
centres***

***Equivalent to  
prevention of 970  
hip fractures per  
year***



# The FLS database – FLS-DB

- FLS-DB is the audit tool to measure performance against quality standards – core to a FLS
- Enables a FLS to improve quality by:
  - Providing feedback at an individual level
  - Benchmarking against national data
- The FLS-DB is a feasibility study across primary and secondary care, to look at current practice in assessment and treatment for falls and osteoporosis, following a fragility fracture

# FLS implementation group

- *A project board to:*
- Provide leadership and co-ordination across projects designed to increase FLS provision across the UK
- Create the motivation for commissioners and providers to act
- Ensure delivery of high quality, efficient and cost-effective FLS
- Adopt a partnership approach, acknowledging skills, experience and diverse backgrounds of the group:
  - *Nursing*
  - *Orthopaedics*
  - *Rheumatology*
  - *Geriatrics*
  - *Endocrinology*
  - *Primary care*
  - *Allied health*
  - *Public health*
  - *Patient organisations*
  - *Commissioning*
  - *Management*

# FLS implementation group

Name	Brief description	File format
Service specification	A part populated service specification suitable for use with NHS Standard Contract	MS Word
Evidence library	A compendium of published materials on relevant topics	Web
Call to action	A concise summary of evidence for providers and commissioners	PDF
Capacity planning tool	A spreadsheet tool to help calculate the number of staff, appointments, etc needed to provide service	MS Excel
Needs analysis tool	A spreadsheet tool to help understand the service need in a given population	MS Excel
Service improvement guide	A descriptive guide setting out step-by-step actions for providers to achieve a service improvement	PDF
Commissioning guide	A descriptive guide setting out step-by-step actions for commissioners to achieve a service improvement	MS Word
Outcome and performance indicators	A set of practical, evidence-based indicators that could be used to demonstrate improvement in a service	MS Excel
Project plan	A comprehensive list of tasks and activities for an improvement project formatted for use by local project teams	MS Excel
Business case	A part populated business case for investment in FLS	MS Word

•FLS standards document      •FLS practitioner training program

# FLS champions

- Network of FLS practitioners and interested others
- Provided feedback on design, dataset

# FLS-DB pilot project – Mission

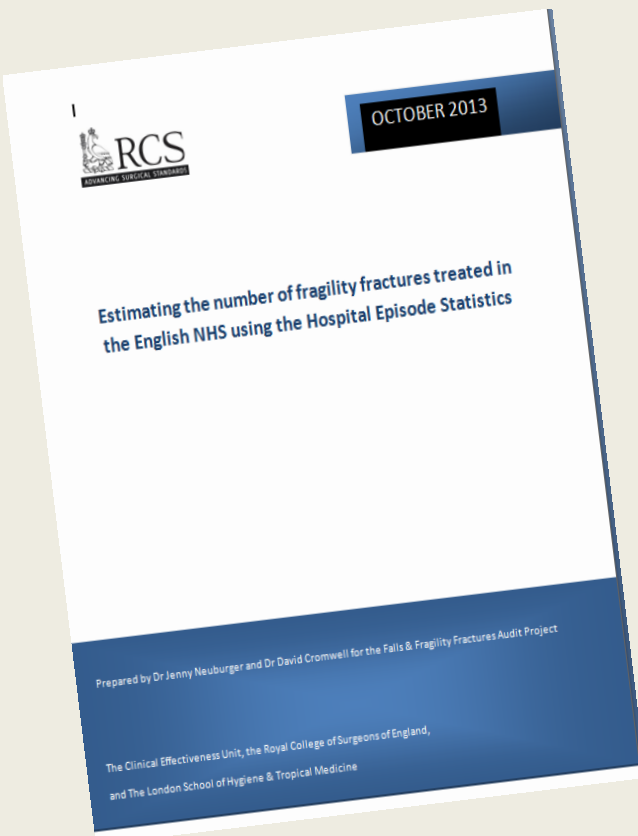
- *What proportion of fragility fracture patients are **assessed** for: (i) osteoporosis and (ii) falls risk?*
- *What proportion of patients are **treated** for osteoporosis?*
- *What proportion of patients are **treated** for falls risk?*
- *What proportion of patients have a **subsequent fracture**?*

1. *To test **feasibility of linking primary and secondary care records** for each fragility fracture patient*
  2. *Develop a minimum **dataset** that included the necessary to monitor the quality of secondary prevention*
  3. *To estimate the **denominator population** – the actual number of fragility fractures per region, to measure performance against*
- *Longer term: to establish a continuous national clinical audit on secondary fracture prevention, as per NHFD, influencing care*

# 3 - What is the denominator population?

Quality largely poor in A&E, awful in OPD

- In 22 Trusts with good data, they compared fractures observed vs.
  1. *Proportion of closed fractures in A&E to all A&E attendances*
  2. *Proportion fractures in A&E to all A&E and OPD attendances for Trauma and Orthopaedics*
  3. *Ratio of all closed fractures in A&E to hip fracture*



Good agreement between 1 and 3 at a hip to “all fracture” ratio of 1:5

**Estimating the number of fragility fractures treated in the English NHS using the Hospital Episode Statistics.**  
Prepared by Dr Jenny Neuburger and Dr David Cromwell for the Falls & Fragility Fractures Audit Project. The Clinical Effectiveness Unit, the Royal College of Surgeons of England, and The London School of Hygiene & Tropical Medicine

## 2 - Dataset

Designed to be compatible with primary care coding

- Link via NHS number
- Queries developed for extract from GP systems
- FLS-DB web tool created, option for excel file upload

Type of data	Number of variables
Demographics	6
Case finding	6
Osteoporosis assessment	10
Osteoporosis Initiation	9
*Falls assessment	2
*Falls intervention	2
Adherence	4

## 2 - Dataset

<i>*What was done to assess falls risk?</i>
*Reason for not assessing falls risk
<i>*What was done to reduce falls risk?</i>
*Reason for not intervening to reduce falls risk

# Dataset

## - Falls

### Assessment of Falls Risk

- 1 Not done or not recorded
- 2 Referred for formal falls clinic assessment
- 3 Falls assessment in primary care
- 4 Falls risk assessment tool used
- 5 Assessed for disorder of gait or balance
- 6 Up and go test (timed or untimed)
- 7 Unspecified falls assessment
- 8 Frequency of falls recorded
- 9 Enquiry about context of fall or fall noted
- 10 Indoor falls recorded
- 11 Focused history to exclude syncope
- 12 Enquiry about visual deficit
- 13 Enquiry about cognition
- 14 Enquiry about urinary incontinence
- 15 Number of medications or polypharmacy recorded
- 99 Not Known

### Falls Risk Reduction

- 1 None
- 2 Advice only
- 3 Referred to multi-disciplinary falls assessment
- 4 Referred for strength and balance training exercise
- 5 Referral to physiotherapist
- 6 Provision of community alarm or other telecare
- 7 Referral to re-enablement service
- 8 Referral to occupational therapy or home safety service
- 9 Refer to optician
- 10 Unspecified falls service referral
- 99 Not Known

# PRELIMINARY FINDINGS – secondary care data, 21 hospitals

VARIABLE	COMPLETENESS
CASES SUBMITTED	20,910
PRIOR FRACTURE RECORDED	50% [0-100]
DXA REQUESTED ( <75Y)	50% [30-80]
RECORD OF OSTEOPOROSIS DRUGS AT TIME OF FRACTURE	8%
RECORD OF OSTEOPOROSIS DRUG RECOMMENDATION	31% (67% yes)
RECORD OF FALLS RISK ASSESSMENT	67% [0-90]
RECORD OF FALLS INTERVENTIONS	10% [0-75%]]
RECORD OF DRUG ADHERENCE AT 6 & 12 MONTHS	5%

# Revised dataset - Falls

Champions meeting – feedback incorporated, dataset revised

Tab name: Fracture risk assessment: Falls			
1	Total number of falls in last year	N	<u>X / not assessed</u>
2	Indoor falls	N	<u>Y / N / not assessed</u>
3	Possibility of syncope from history	N	<u>Y / N / not assessed</u>
4	Pre-fracture gait or balance impairment	N	<u>Y / N / not assessed</u>
5	Slow walking speed	N	<u>Y / N / not assessed</u>
6	Visual deficit	N	<u>Y / N / not assessed</u>
7	Cognition impairment	N	<u>Y / N / not assessed</u>
8	Polypharmacy or sedative medications	N	<u>Y / N / not assessed</u>
9	Fear of falling	n	<u>Y / N / not assessed</u>
Tab name: Secondary prevention: Falls			
1	Falls clinic	N	<u>Referred / Referral recommended via GP / Not necessary / Declined</u>
3	Strength & Balance Exercise program	N	<u>Referred / Referral recommended via GP / Not necessary / Declined</u>
2	Occupational Therapy	N	<u>Referred / Referral recommended via GP / Not necessary / Declined</u>
4	Other referral made or advised	N	<u>Optician / Pharmacist / Continence / Unspecified / Not necessary</u>

- *Non-mandatory fields – remit for falls risk assessment remains with local falls service*
- *Opportunity to record practice in a FLS relating to falls*

# 1 - Feasibility of linking primary and secondary care data

- Information governance took hold..
- Opt-out was the aim
- Opt-in was the reality...  
n=1050 cases
- Second extract run on 134 GP from practices who have opted in



- Full report on the feasibility study due Spring 2015
- Facilities audit 2015
- Webtool reactivated April 2015

# Summary

- FLS – a framework to ensure that due quality of assessment and intervention takes place following a fragility fracture, in order to reduce future fracture risk
- Widespread adoption of FLS have the potential to reduce fracture risk at a population level
  - *FLS-DB is the audit tool to measure performance, quality, enable benchmarking and to this end, raise standards*