

Capture the Fracture®



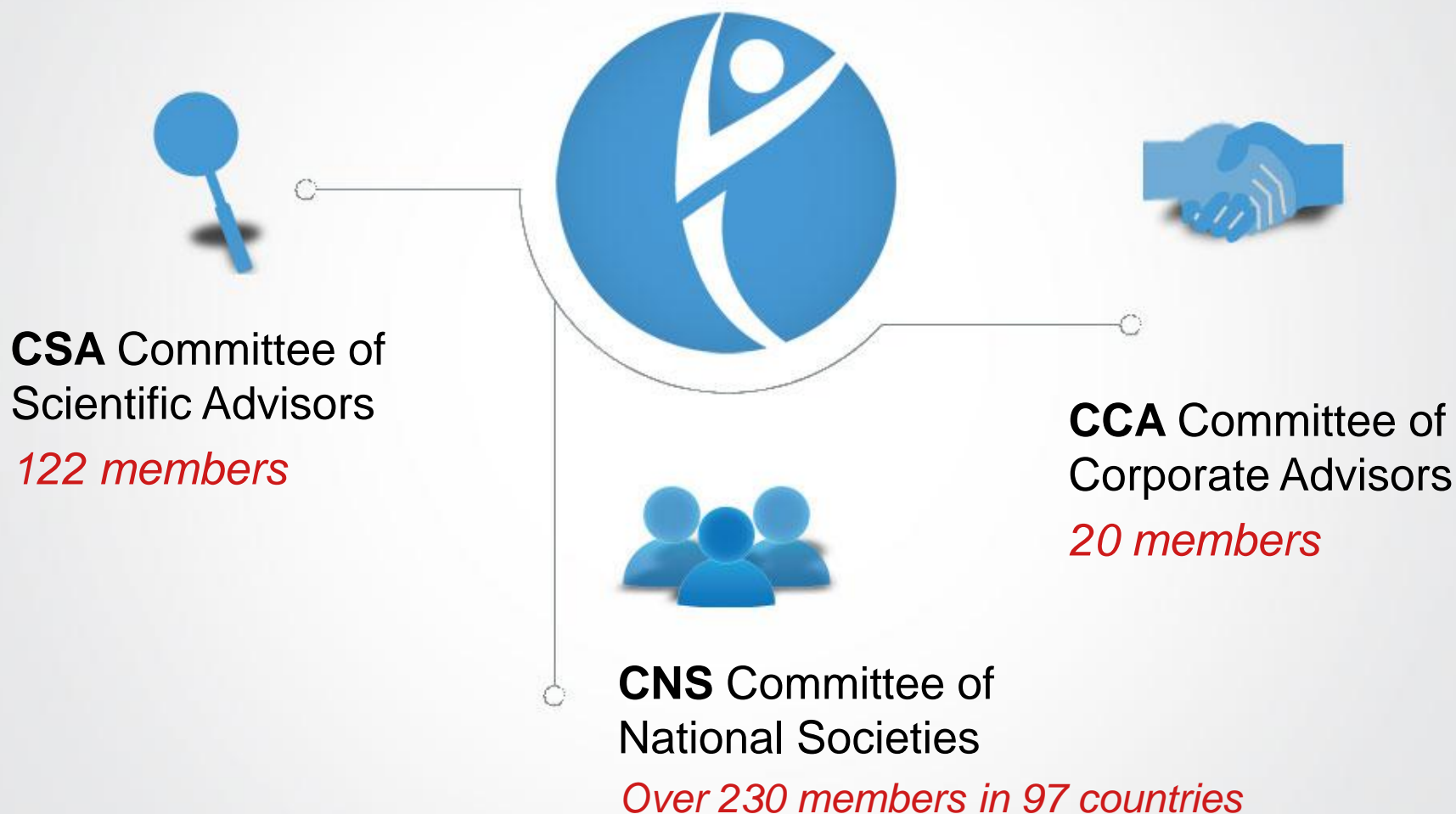
Professor Jean-Yves Reginster, MD, PhD

Department of Public Health, Epidemiology and Health Economics, University of Liège, Liège, Belgium

Capture the Fracture® name and logo are registered trademarks of IOF and should always be acknowledged with the trademark symbol

IOF: OUR STRUCTURE

all stakeholders united around one common mission



The Burden of Fragility Fractures

Fragility fractures are common

- 1 in 3 women and 1 in 5 men over 50 years of age. One fracture every 3 seconds

Fractures affect quality of life

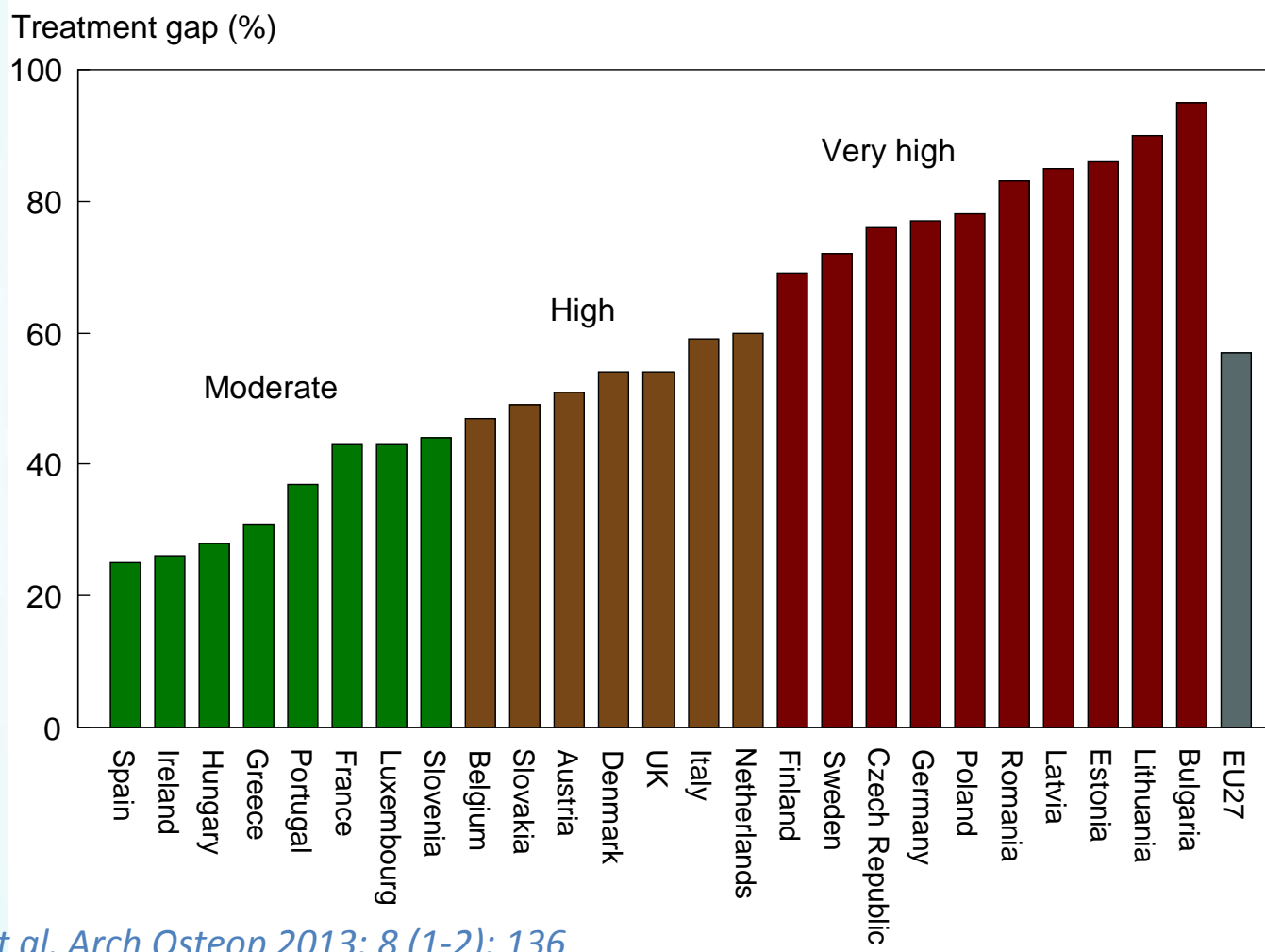
- Functional decline, loss of independence
- Mortality

Fractures are costly

- **EU:** estimated costs of 32 billion EUR per year
- **USA:** costs of 20 billion USD per year



Proportion of women at high risk that are untreated (treatment gap) in 2010 ranked by country and score

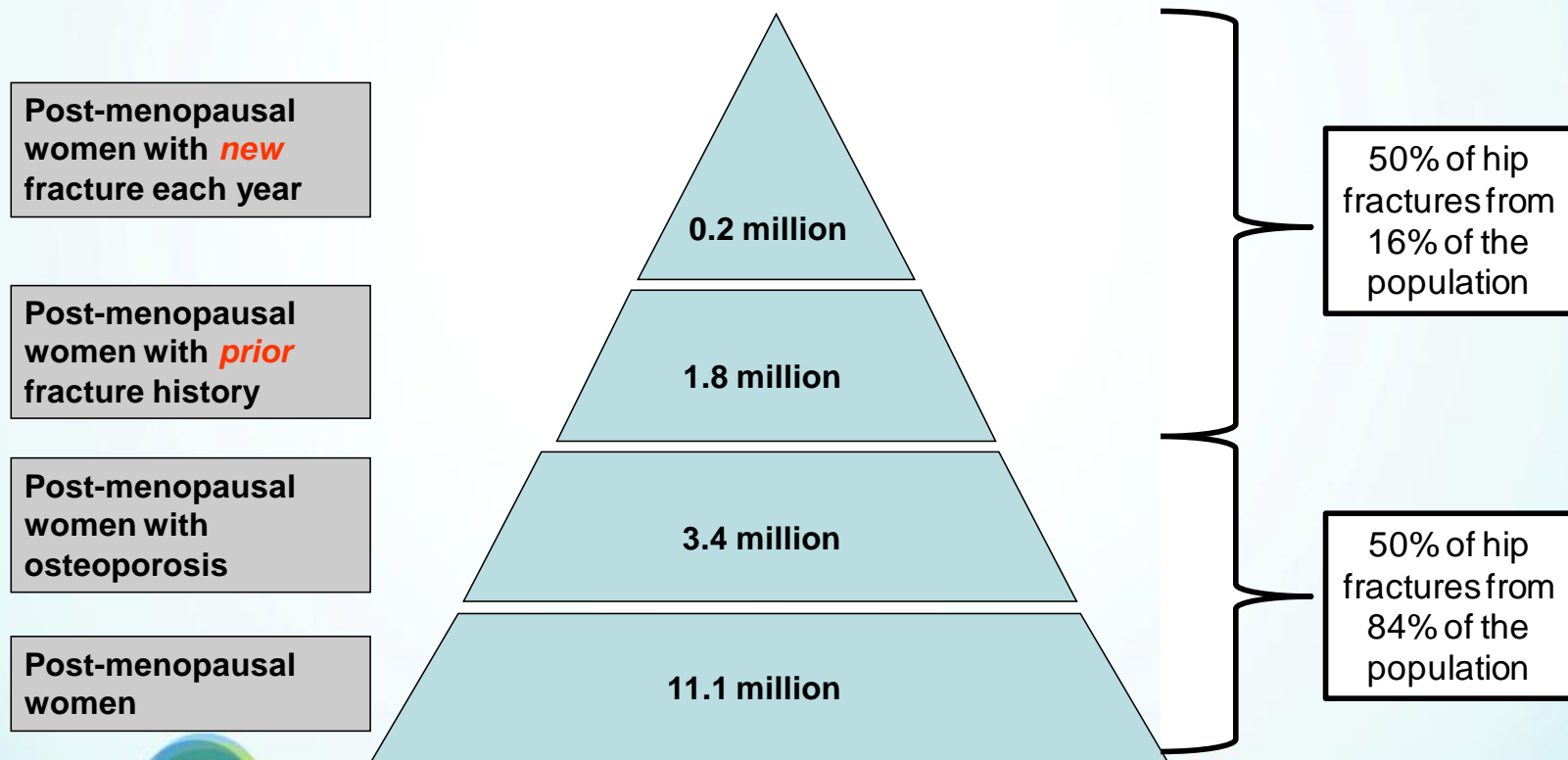


Hernlund E et al. Arch Osteop 2013; 8 (1-2): 136



Effectiveness of secondary fracture prevention

Amongst post-menopausal women, the majority of the population have not suffered fragility fractures. Case-finding strategies prioritising assessment of women with prior fracture could identify 50% of potential hip fracture cases from 16% of the population



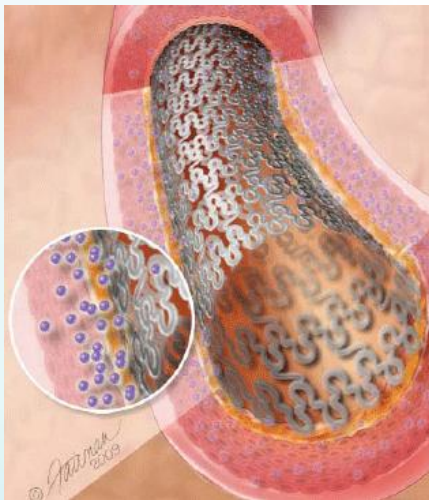
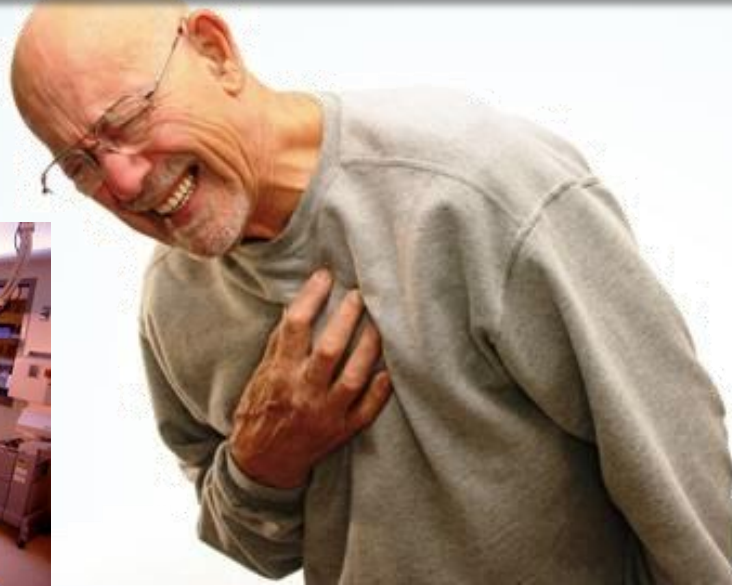
More than **80%** of patients
receive **inadequate**
care after their fragility
fracture



www.capturethefracture.org



Would we accept less than 20% secondary Prevention after heart attack?



Closing the care gap: 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
- ✓ Monitor for adherence & re-fracture



Capture the Fracture®



A global programme for the prevention of secondary fractures by facilitating the implementation of Fracture Liaison Services (FLS)

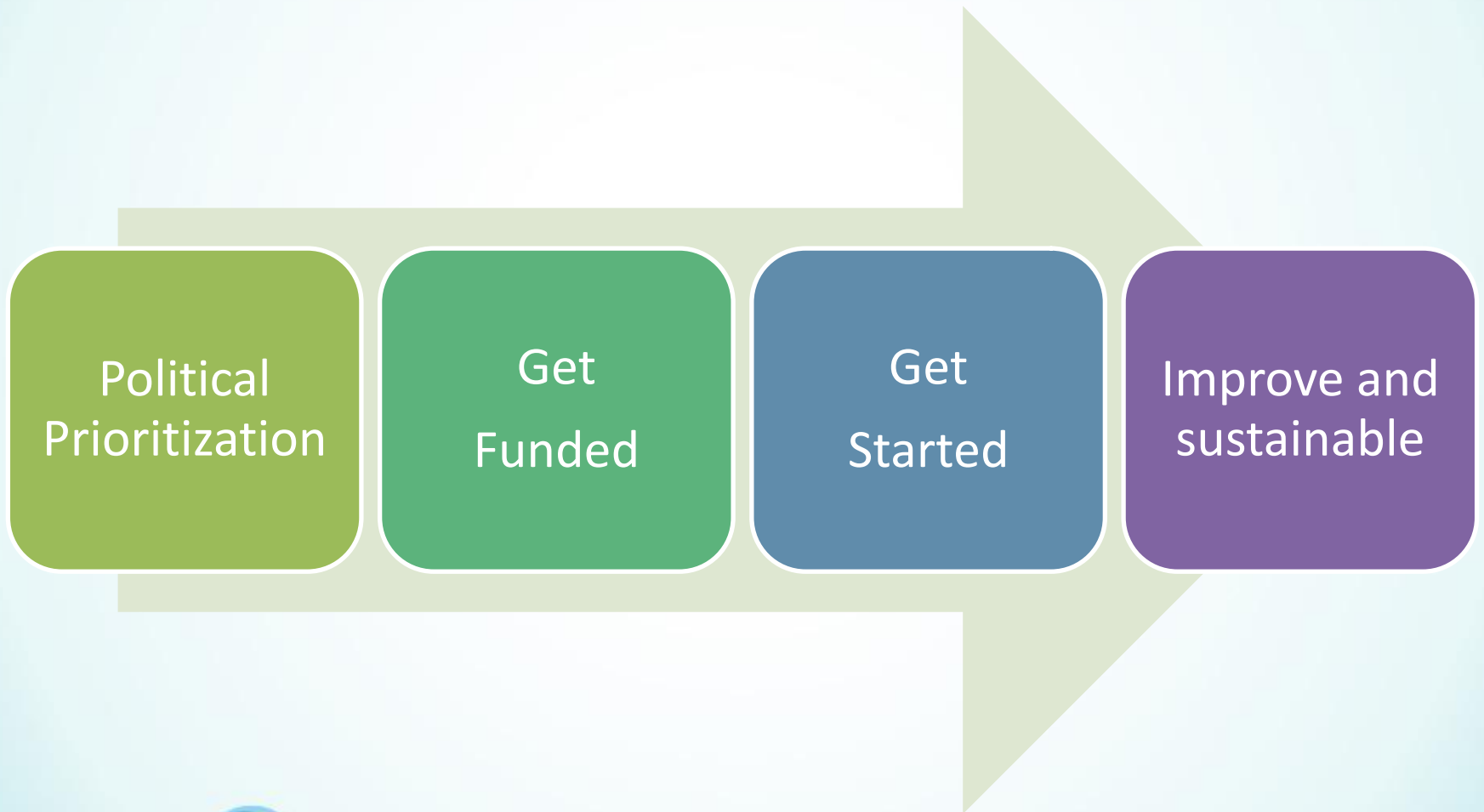
Capture the Fracture® name and logo are registered trademarks of IOF and should always be acknowledged with the trademark symbol



www.capturethefracture.org



Implementation of FLS



Key Aims

- ***Be*** the global voice for secondary fracture prevention
- ***Drive*** national/international policy and prioritization of secondary fracture prevention
- ***Ensure*** quality in secondary fracture prevention
- ***Provide*** support for FLS implementation, getting started and improving



Objectives of Capture the Fracture®

Set the standards

- Sets guidelines from the Best Practice Framework (BPF)
- Showcases FLS on the Map of Best Practice
- Recognizes Best Practice

Facilitate change

- Helps FLS get a start with the Mentorship programme
- Provides free implementation guides & toolkits
- Offers webinars on FLS implementation

Raise awareness

- Disseminates free resources
- Communicates to communities and health authorities worldwide
- Gathers support from influential coalition of Partners



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, <i>not</i> tracked	Patients ID'd, <i>are</i> tracked	Patients ID'd, tracked & <i>Independent review</i>

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



Is every FLS automatically effective?



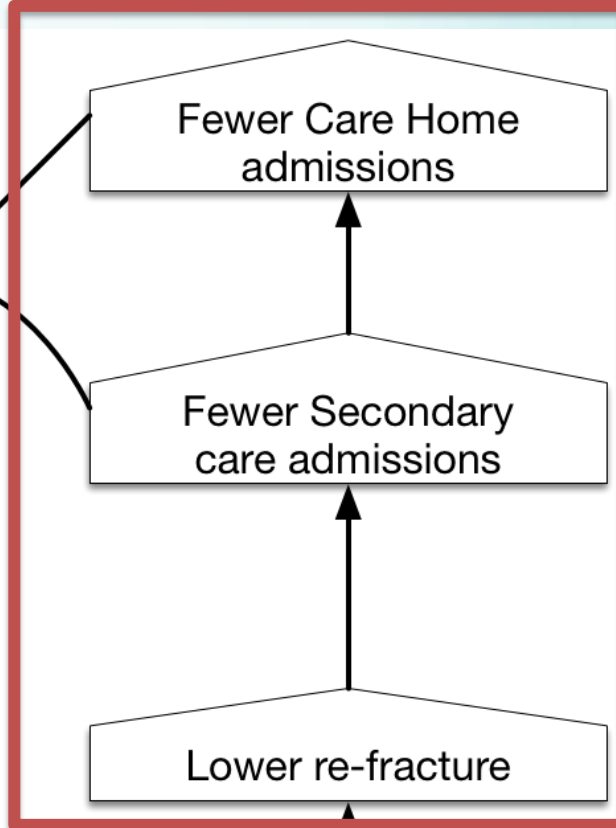
www.capturethefracture.org



Closing the care gap is hard!

Dedicated Fracture Liaison Service (FLS)

Healthcare savings



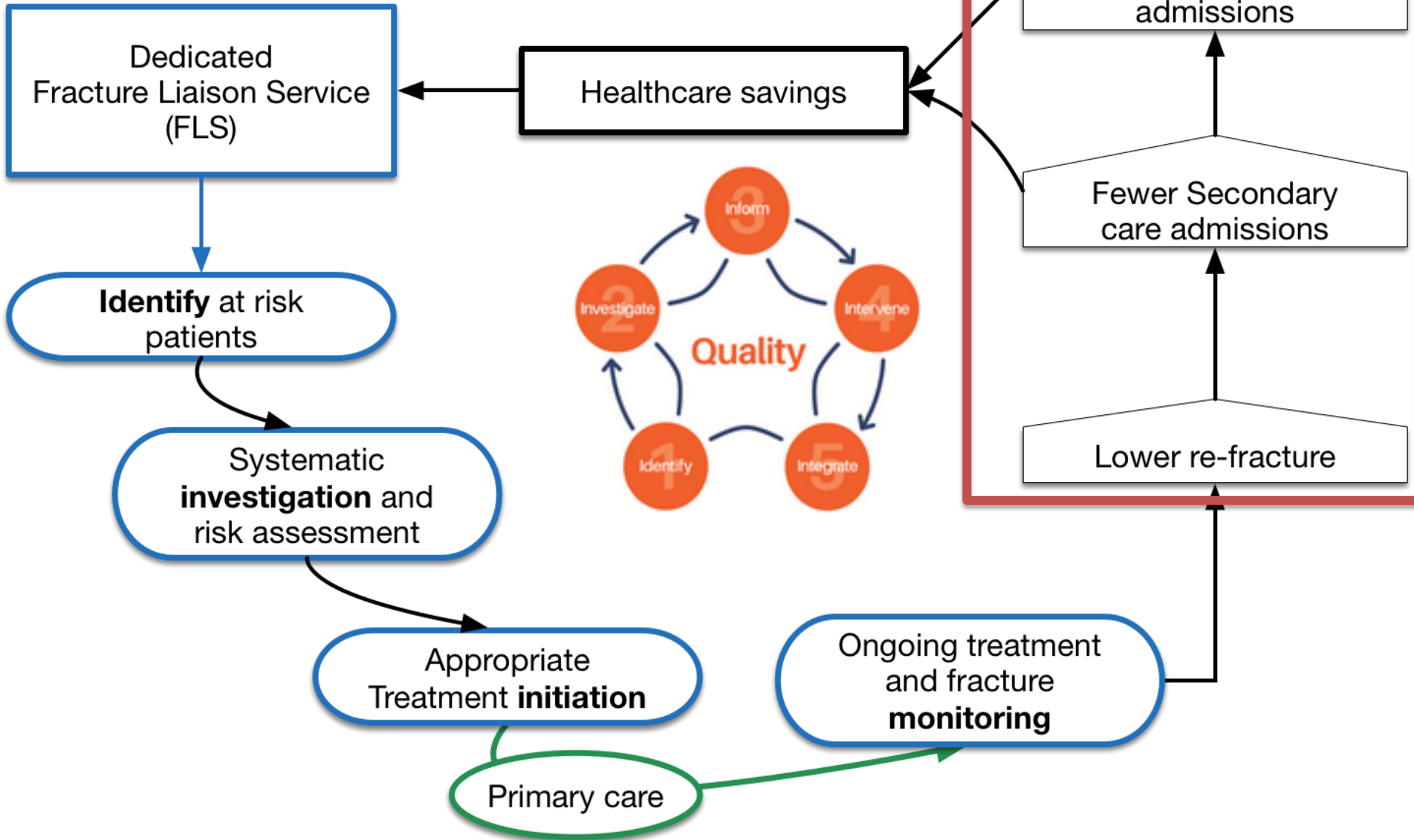
Identify at risk patients

Systematic investigation and risk assessment

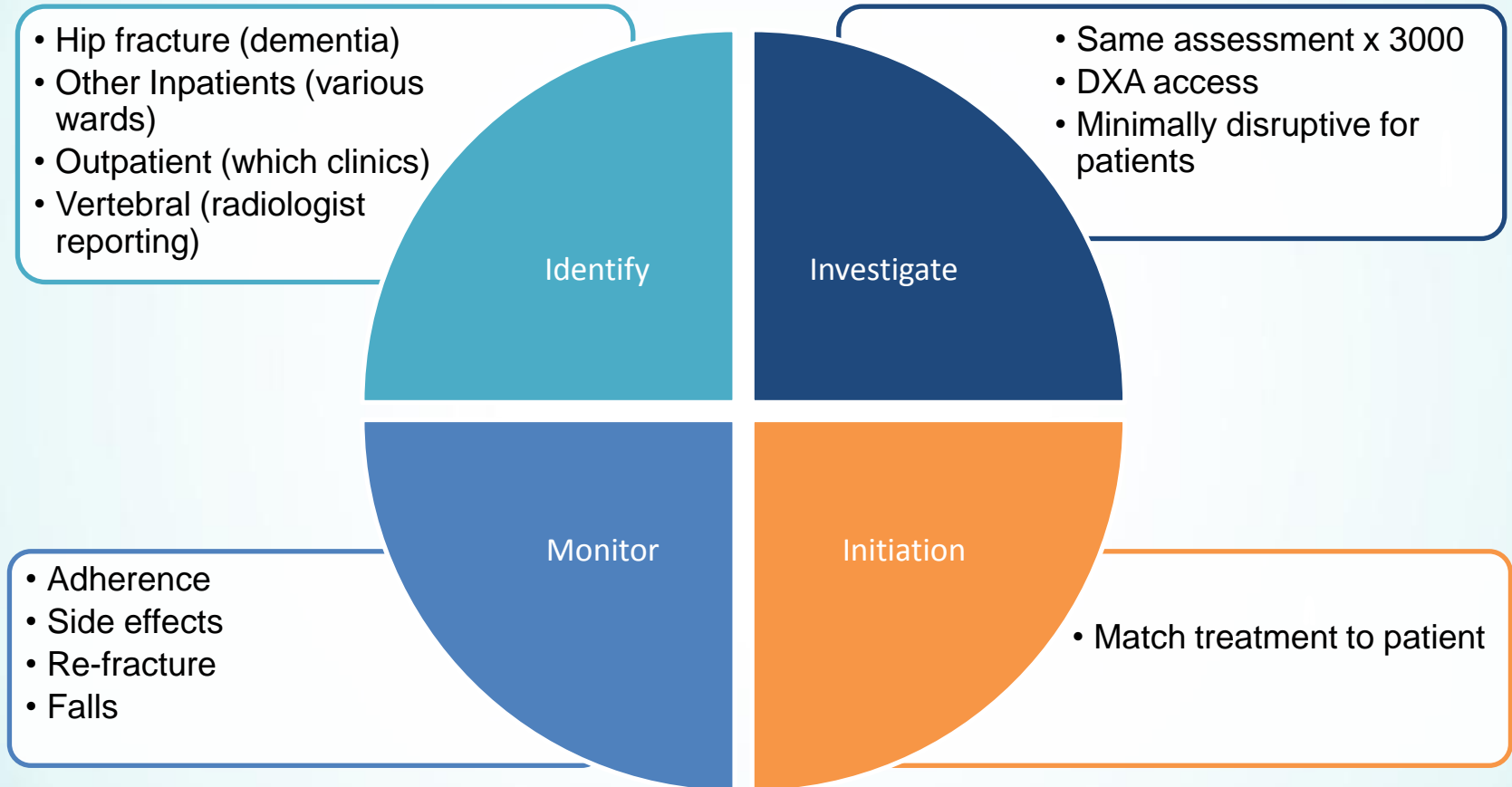
Appropriate Treatment initiation

Ongoing treatment and fracture monitoring

Primary care

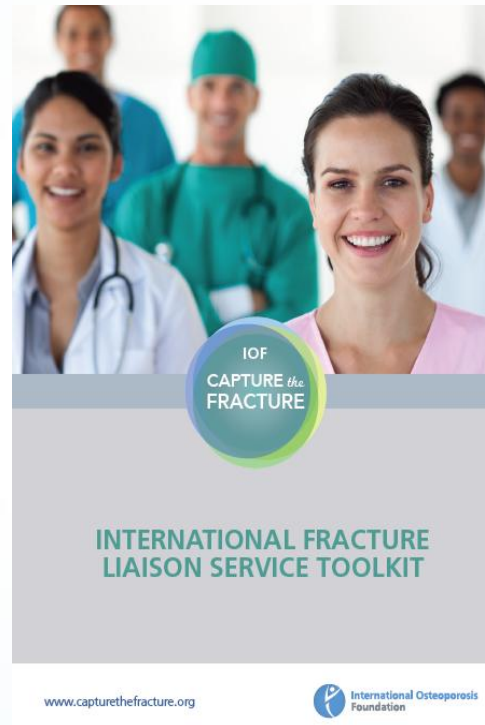


4 Key Challenges of the Care Gap



FLS Implementation: Putting into Practice

Toolkit :
Guide healthcare professionals, health administrators and policymakers to implement a successful FLS



WHY HAVE A TOOLKIT FOR FRACTURE LIAISON SERVICES?

The International Osteoporosis Foundation (IOF) has developed this toolkit to facilitate the implementation of Fracture Liaison Services (FLS). Used in conjunction with resources from the IOF Capture the Fracture® initiative (www.capturethefracture.org), the toolkit gives those wanting to establish an FLS the case for, and the resources to, enable FLS expansion.

WHAT'S IN THIS TOOLKIT

The following tools are to support clinicians, health administrators and policymakers in the implementation of effective FLS based on successful experiences from established high performing FLS.

1. Understanding the need for FLS

A guide to understanding the size of the problem and why FLS is the solution to secondary fracture prevention.

2. FLS implementation guide

A step-by-step 'how to' guide to design and implement an FLS in hospitals and health systems throughout the world.

3. FLS business planning process guide

A tool intended to support clinicians and health administrators in the FLS business planning process, including a [generic FLS business plan template](#).

4. Multi-sector FLS coalition guide

A tool intended for national osteoporosis societies and national healthcare professional organizations to establish an effective national coalition to drive widespread adoption of FLS in your country.

HOW TO USE THIS TOOLKIT

Use Tools 1 - 4 for implementing an FLS.

This document contains resources and links of case studies and success stories that can be used to model your FLS.

IOF Generic FLS business plan template

Executive Summary

Fracture Liaison Services improve quality of care and save costs by reducing unscheduled emergency admissions for hip fractures and the incidence of other fragility fractures

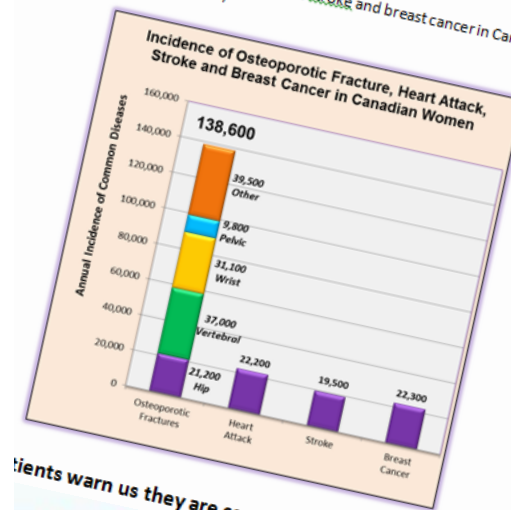
- **XXX** patients from [Insert locality/healthcare system] presented with a hip fracture to [Insert hospital(s)/facility] in year **20ZZ** incurring an annual cost of **\$(Y)Y,YYY,YYY**
- Half of hip fracture patients suffer a fracture of the hip, wrist, humerus or other skeletal sites prior to breaking their hip¹⁻⁴
- Approved osteoporosis treatments have the potential to halve secondary hip fracture incidence if initiated when patients present with their first fragility fracture⁵⁻¹⁴ [author to check which treatments are available in your country and amend references accordingly]
- National guidance in **YOUR COUNTRY** calls for routine assessment and osteoporosis treatment, where appropriate, for patients that have suffered fragility fractures [insert references]
- Numerous surveys conducted in **YOUR COUNTRY** at the national level [insert references], state/provincial level [insert references] and in individual organisations [insert references] have documented a significant and persistent post-fracture osteoporosis care gap in **YOUR COUNTRY** which has been reported throughout the world¹⁵⁻³⁸:
 - **XY%** of fragility fracture patients in **YOUR COUNTRY** do not receive osteoporosis assessment and/or treatment after their fracture
- Fracture Liaison Service (FLS) programs are endorsed by **THE NATIONAL OSTEOPOROSIS SOCIETY OF YOUR COUNTRY** [insert references] as the optimal model of care to eliminate the post-fracture osteoporosis care gap by ensuring that all fragility fracture sufferers receive the secondary preventive care they need
- FLS have also been recognised by the International Osteoporosis Foundation^{26, 27, 39, 40}, the U.S. Surgeon General⁴¹, the American Orthopaedic Association^{42, 43}, the American Academy of Orthopaedic Surgeons⁴⁴, the American Society for Bone and Mineral Research⁴⁵, the National Osteoporosis Foundation and the National Bone Health Alliance⁴⁶ in the United States, and analogous groups throughout the world⁴⁷⁻⁵⁶, as the best model to reduce the incidence of painful, debilitating and costly secondary fractures
- Successful FLS programs have been established in **YOUR COUNTRY** [insert references] and many other countries^{42, 43, 57-91} which have substantially reduced the incidence of hip and other fragility fractures and significantly reduced associated costs
- [Insert name of hospital(s)/facility] does not have a FLS program as of [MM-DD-YYYY]
- Implementation of a FLS program at [Insert name of hospital(s)/facility] could prevent **XYZ** hip

The need for a Fracture Liaison Service in [Insert locality/healthcare system]
 The human and economic burden of osteoporosis in **YOUR COUNTRY**

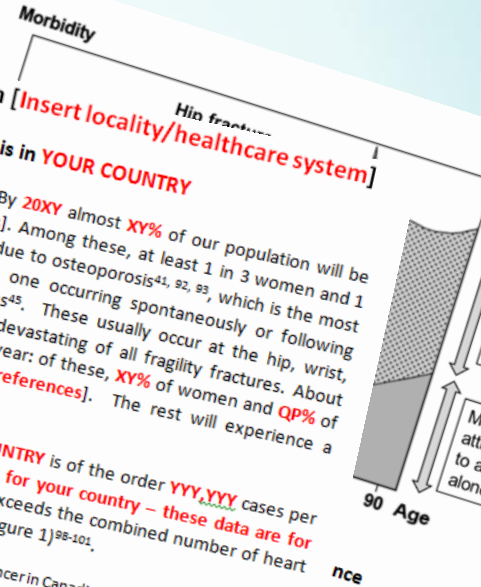
OUR COUNTRY is entering a period of rapid ageing. By **20XY** almost **XY%** of our population will be seniors as compared to **QP%** in **20AB** [insert references]. Among these, at least 1 in 3 women and 1 in 5 men will suffer a **fragility fracture** in their lifetime due to osteoporosis^{41, 92, 93}, which is the most common chronic bone disease⁹⁴. A fragility fracture is one occurring spontaneously or following trauma such as a fall from standing height or less⁴⁵. These usually occur at the hip, wrist, forearm, pelvis or spine. Hip fractures are the most devastating of all fragility fractures. About **QXX** people in **YOUR COUNTRY** break their hip every year: of these, **XY%** of women and **QP%** of men will die within the first year after fracture [insert references]. The rest will experience a significant reduction in their quality of life⁹⁵⁻⁹⁷.

The annual number of fragility fractures occurring in **YOUR COUNTRY** is of the order **YYY,YYY** cases per year for women and men. [Consider analogous statistics for your country – these data are for the United States]. To put this in context, for women, this considerably exceeds the combined number of heart attacks and new diagnoses of breast cancer annually (figure 1)⁹⁸⁻¹⁰¹.

Figure 1: Incidence of osteoporotic fracture, heart attack, stroke and breast cancer in Canadian women⁹⁸⁻¹⁰¹ (reproduced from the Commission of Osteoporosis Canada)



fracture.org
 Patients warn us they are coming: Fracture begets fracture



which can be taken as annual injections^{13, 14} [insert references accordingly]. Fracture reduction reduces mortality^{14, 108-110}.

level, provincial level, and in secondary fracture prevention in individual organizations. A significant body of evidence has accumulated to understand why the post-fracture care gap exists. Put simply, there is a significant care gap in post-orthopaedic services, and this is particularly true for hip and/or osteoporosis.

GET INVOLVED IN THE CAPTURE THE FRACTURE[®] PROGRAMME



www.capturethefracture.org



Running an FLS?

Join the Capture the Fracture[®] programme

Why join?

- Showcase your achievements
- Learn from best practice to improve your service
- Get gold, silver or bronze recognition
- Be part of a global movement for prevention



Who can participate?

- Coordinator-based 'systems' of care
- All type of facilities
- At any stage in development
- Any size world wide



How to join the Capture the Fracture[®] programme

Step 1

FLS submits online questionnaire



Submit online at www.capturethefracture.org

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



www.capturethefracture.org



Step 1: FLS submits online questionnaire

IOF
CAPTURE the
FRACTURE

BEST PRACTICE FRAMEWORK 調査票

はじめに

Capture the Fracture*は、各施設で行われている骨折リエゾンサービス(Fracture Liaison Services, FLS)を、FLS成功例として表彰するCapture the Fracture* Best Practice認定へご招待いたします。

国際的なキャンペーンとして、Capture the Fracture*はFLSを世界的に奨励することで二次骨折予防を目指します。Best Practice Frameworkは、スウェーデンのクリスティナ・アケソーン教授が議長を務める運営委員会が開発いたしました。Best Practice Frameworkは、既存のFLSの成果を確認し、各々のFLSの実施にあたってのシステム発展を促すことを目的としています。

申請のしかた

あなたのFLSを承認するために、以下の調査票に記入して、件名に病院名と日付を入れて(件名は英語で記入してください)、capturethefracture@iofbonehealth.orgへメールでお送りください。

Capture the Fracture*は以下のサイトの双方向性に情報を共有できる地図上に各FLS施設を表示します(www.capturethefracture.org/map-of-best-practice.)。

調査票を記入するには、FLSへすでにアクセス可能なデータのレベルに応じて、約20~60分を要します。

備考

FLSコーディネーターという言葉は、FLSで対象とする患者のケアを統括する医療専門家と定義されます。

Capture the Fracture* Best Practice Frameworkはwww.capturethefracture.org/best-practice-frameworkで利用することができます。この質問票と連動して使用されます。

セクションA「病院について」に関して;もしあなたが複数の病院ネットワーク(単独の病院ではなく)の一部としてあなたのFLSを登録する場合には、この記入欄の最後に病院ネットワークについて簡単に記載してください。

ご参加ありがとうございます!

DEMOGRAPHICS 人口統計
In the following table, enter information about the institution/hospital/clinic and its clinicians. Please fill out all comment fields in English.
以下の記入欄に施設・病院・診療所と臨床医の情報を記載してください

A. About the Hospital 病院について
Please fill out all comment fields in English.

A1. Name of hospital 病院名: _____

A2. Name of FLS 骨折リエゾンサービス(以下 FLSと略記)の名称: _____

A3. Address (include city and country): 住所(国、都道府県名も含む): _____

A4. Hospital is 病院について: _____

Please select one 一つ選んで下さい:

- A single hospital 単独で運営する病院
- Part of a larger hospital network or system 大きな病院ネットワークあるいはシステムの一部
- Other, please specify その他(具体的に): _____

Name of hospital system 病院システムの名称: _____

Number of hospitals in system システム内の病院数: _____

Population size of hospital system 病院システムの対象人口: _____

Name of lead clinician 中心となる臨床医の氏名: _____

Name of FLS coordinator for the system システム内のFLSコーディネータの氏名: _____

Please select one 一つ選んで下さい:

- A single hospital 単独で運営する病院
- A multi-hospital system or network* 複数の病院システムあるいはネットワーク*

*If a multi-hospital system or network, please include a brief description of the hospital network at the end of the form. "複数の病院システムあるいはネットワークの場合にはこの記入欄の最後に病院ネットワークを簡単に記載してください。"

Please select one 一つ選んで下さい:

- Academic/university/teaching 大学/附属病院/教育機関
- District 地域病院
- Clinic with only ambulatory patients 通院可能な患者のみを対象とした診療所
- Private hospital 個人病院
- Public hospital 公的病院
- For-profit hospital 営利病院
- Not-for-profit hospital 非営利病院
- Other, please specify: その他(具体的に): _____

Please select all that apply:

- Private 個人
- Public - government funding 公的-行政の財源
- Public/private - mixed funding 公的/個人-混合の財源
- Other, please specify: その他(具体的に): _____

Population size 人口: _____

Please select all that apply 全てはまるものを全て選択してください:

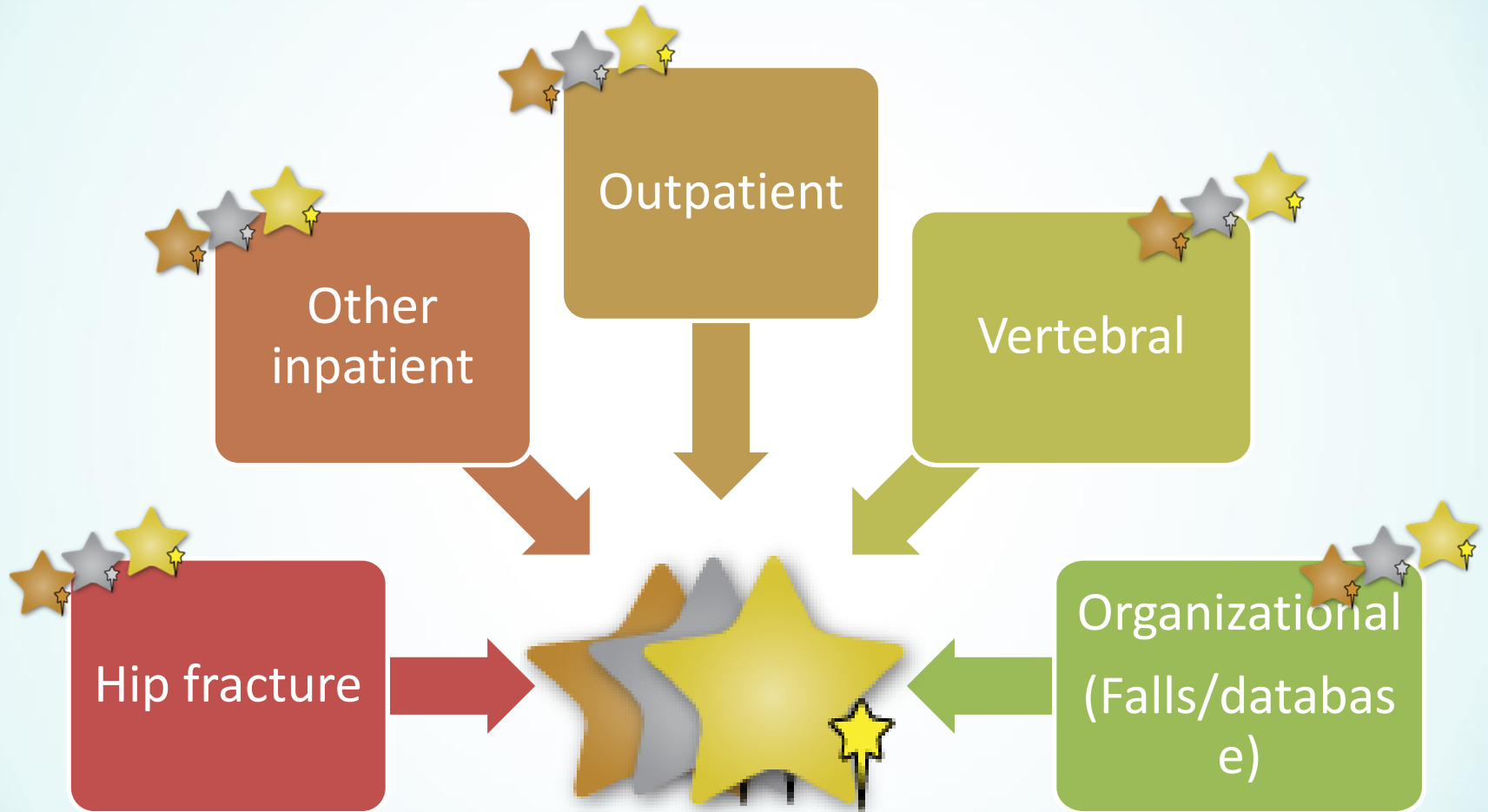
- FLS services are provided 病院サービスを提供
- FLS services are not provided 病院サービスを提供しない



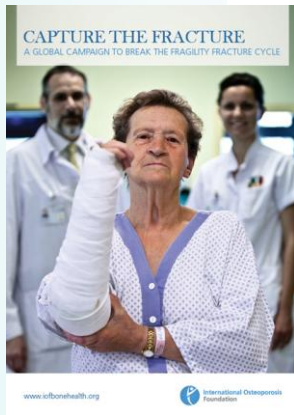
Step 2: FLS marked in green on the map while being reviewed



SCORING: 5 domains



Scoring: Patient perspective



3.75

John Radcliffe Hospital
Oxford
United Kingdom

Hip	Inpt	Outp	Vert	Org
★	★	★	★	★

Will I receive Effective Secondary Prevention after my fragility fracture?

Step 3: FLS is scored and recognized on the map



IOF CAPTURE the FRACTURE

ABOUT SECONDARY PREVENTION BEST PRACTICE FRAMEWORK

IPSWICH NHS TRUST

View Edit Manage display

Directed by lead clinician Dr. Suzanne Lane, the Ipswich NHS Trust Fracture Liaison Service has been running since 2003. The public district hospital is located in Ipswich in the UK and serves a population of around 320,000 people. The fracture liaison service handles all fragility fractures and serves about 1050 patients per year.

Stephenson, S, 2003, 'Developing an orthopaedic elderly care liaison service', *Journal of Orthopaedic Nursing*, vol. 7, pp. 150-155.

[http://www.orthopaedic-nursing.com/article/51361-3111\(03\)00069-4/abstract](http://www.orthopaedic-nursing.com/article/51361-3111(03)00069-4/abstract)

Clunie, G., Stephenson, S., 2008, 'Implementing and running a fracture liaison service: An integrated clinical service providing a comprehensive bone health assessment at the point of fracture management', *Journal of Orthopaedic Nursing*.

<http://www.drgavinclunie.co.uk/FLS.pdf>

nefracture.org

International Osteoporosis Foundation

United Kingdom

5.00

Ipswich NHS Trust
Ipswich
United Kingdom

Hip	Inpt	Outp	Vert	Org
★	★	★	★	★

RESULTS



www.capturethefracture.org



128 FLS registered on the map

77 Complete 14  33  30 
51 In review/waiting for more data 

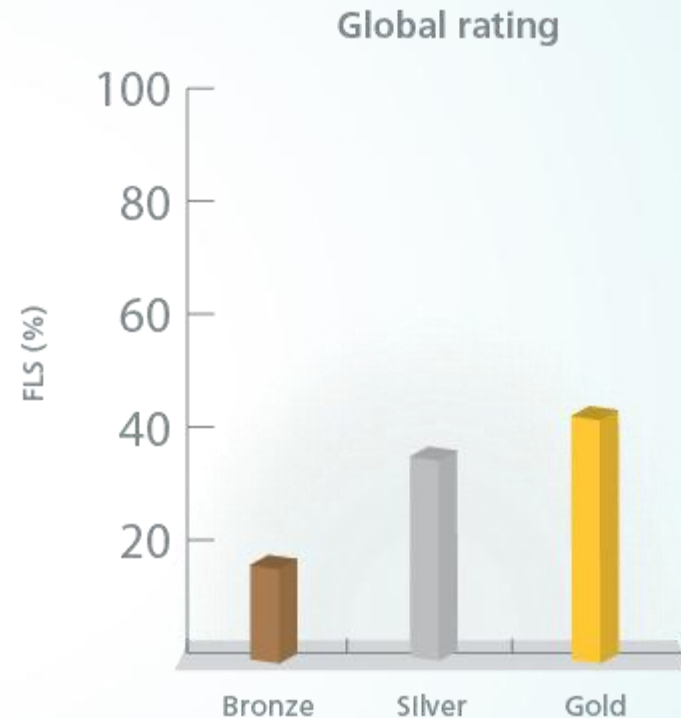


- ✓ Algeria
- ✓ Australia
- ✓ Belgium
- ✓ Brazil
- ✓ Bulgaria
- ✓ Canada
- ✓ China
- ✓ Czech Republic
- ✓ Finland
- ✓ France
- ✓ Greece
- ✓ India
- ✓ Ireland
- ✓ Italy
- ✓ Netherlands
- ✓ New Zealand
- ✓ Portugal
- ✓ Singapore
- ✓ Spain
- ✓ Sweden
- ✓ Switzerland
- ✓ Taiwan
- ✓ Trinidad & Tobago
- ✓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



FLS characteristics

- Range of patient population: from 100,000 to 1.3 million
- Mix of private & publicly funded hospitals
- Range of fracture patients per year: from 181 to 6200



Effective secondary fracture prevention: implementation of a global benchmarking of clinical quality using the IOF Capture the Fracture® Best Practice Framework tool. Javaid et al., 2015, *Osteoporosis International*





UNIVERSITY OF
OXFORD

MRC

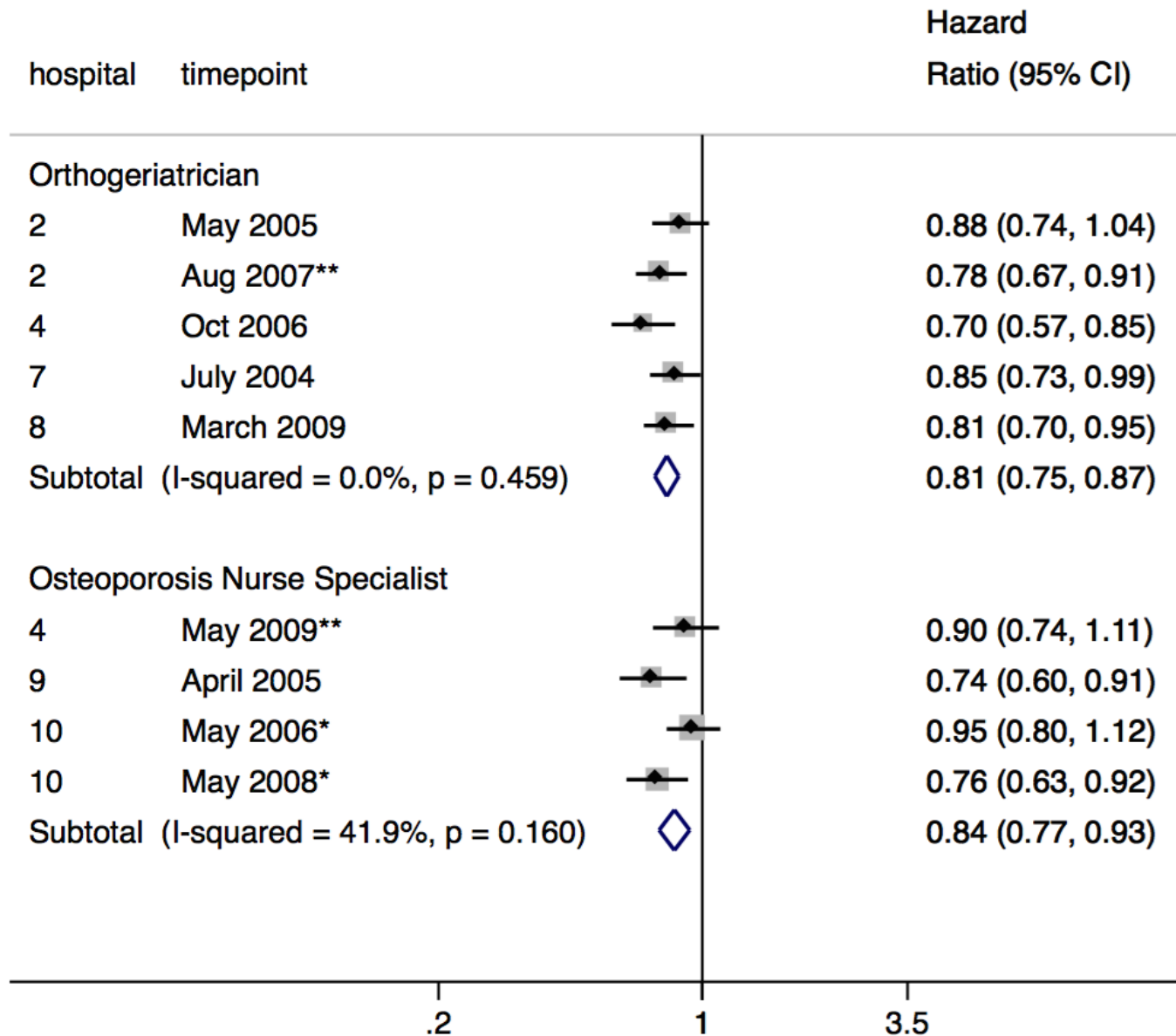
Lifecourse
Epidemiology
Unit

CLINICAL EFFECTIVENESS OF ORTHOGERIATRIC AND FRACTURE LIAISON SERVICE MODELS OF CARE

Samuel Hawley

M Kassim Javaid, Daniel Prieto-Alhambra, Janet Lippett,
Sally Sheard, Nigel K Arden, Cyrus Cooper, Andrew Judge,
The REFReSH study group

Results : 1-year Mortality



5 years Oxford economic model

- Population of 620,000

	Hip	Other inpatient	Outpatient	Vertebral	Total
Annual cases	622	695	2,414	555	4286
Proportion seen by FLS	95%	95%	85%	10%	
Number of fractures prevented after 5 years of FLS	288	152	152	97	629
Hospital savings at 5 years	£2,928,960	£172,064	£52,960	£314,862	£3,469,846
+ primary care/ social care/ community costs	£4,737,024	£210,064	£53,960	£336,784	£5,337,832

The Fracture Risk Assessment Program

Malmö

Osteoporosis & Prevention Center within the Department of Orthopedics

- **Provide service to primary care**
 - Osteoporosis and fracture risk assessment performed
 - Recommendations made
 - **When considered meaningful**
 - Referral for DXA
 - DXA performed
 - Bone density measurement interpreted
 - Recommendations for intervention based on risk factors and DXA
 - **When no further evaluation considered meaningful**
 - Primary prevention and recommendations

NURSE COORDINATOR

The Fracture Risk Assessment Program in Lund

- **Alternative model**
 - Fracture patients below age 75
 - Identified at emergency room – rooster
 - Risk assessment
 - Referred for DXA
 - Letter to patient with DXA result and information letter to primary physician
 - Depend on the patients own activity and willingness
 - Depend on widely informed primary care doctors

The Fracture Risk Assessment Program in Lund

404

Acta Orthopaedica 2008; 79 (3): 404–409

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

Fracture patients care!

Jörgen Åstrand¹, Karl-Göran Thorngren¹, Magnus Tägil¹, and Kristina Åkesson²

Department of Orthopedics, Lund University, ¹Lund University Hospital and ²Malmö 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.

CTF TOOLS



www.capturethefracture.org



Slide kits, Toolkit

Slide kits:

Help educate and promote the need for secondary fracture prevention and effective FLS:

Toolkit :

Guide healthcare professionals, health administrators and policymakers to implement a successful FLS

SLIDE KITS & REPORTS

SLIDE KITS

Capture the Fracture Educational Slide Kit Set

This three-part educational slide set may be used freely by healthcare professionals to help Services and Capture the Fracture at their local hospitals or among healthcare authorities.

- Part 1: The need for secondary fracture prevention (15 slides)
- Part 2: About Capture the Fracture (37 slides)
- Part 3: The Best Practice Framework for Fracture Liaison Services (25 slides)



Best Practice Framework Translations

To facilitate endorsement of our best practice worldwide, the BPF document has been translated into 9 different languages (Portuguese on the way) including 5 out of the 10 most spoken languages in the world.

DOWNLOAD THE BPF

Download the Capture the Fracture Best Practice Framework in the following languages:

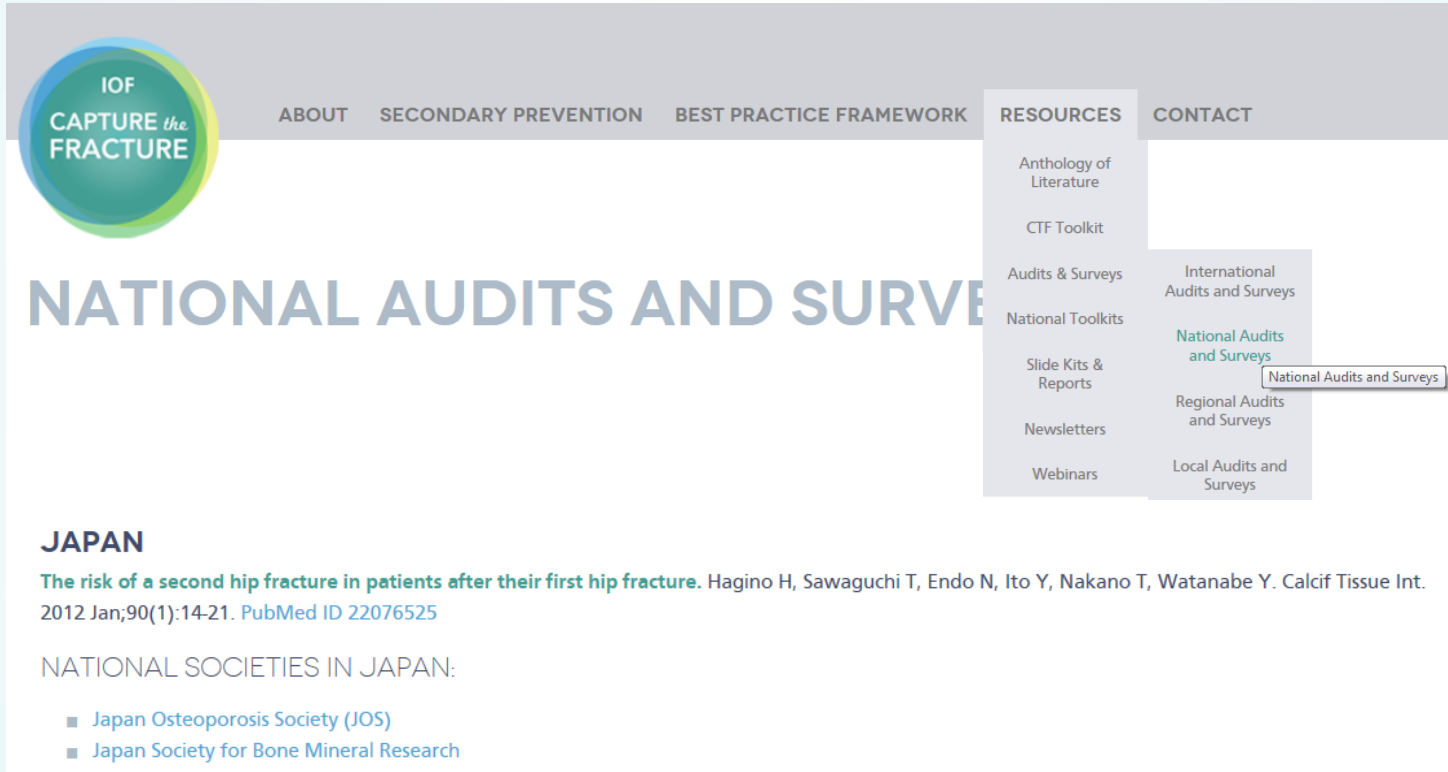
- Chinese (traditional)
- Chinese (simplified)
- English
- French
- German
- Italian
- Japanese
- Russian
- Spanish



www.capturethefracture.org



Other resources



The screenshot shows the IOF website navigation menu. The 'RESOURCES' dropdown menu is open, listing various items. 'National Audits and Surveys' is highlighted with a red box. The main content area below the menu displays the text 'NATIONAL AUDITS AND SURVEYS' in large, bold, blue letters.

IOF CAPTURE *the* FRACTURE

ABOUT SECONDARY PREVENTION BEST PRACTICE FRAMEWORK **RESOURCES** CONTACT

Anthology of Literature

CTF Toolkit

Audits & Surveys

National Toolkits

Slide Kits & Reports

Newsletters

Webinars

International Audits and Surveys

National Audits and Surveys

Regional Audits and Surveys

Local Audits and Surveys

NATIONAL AUDITS AND SURVEYS

JAPAN

The risk of a second hip fracture in patients after their first hip fracture. Hagino H, Sawaguchi T, Endo N, Ito Y, Nakano T, Watanabe Y. *Calcif Tissue Int.* 2012 Jan;90(1):14-21. PubMed ID 22076525

NATIONAL SOCIETIES IN JAPAN:

- Japan Osteoporosis Society (JOS)
- Japan Society for Bone Mineral Research



Conclusions

- A single tool (BPF) can be used to benchmark services internationally
- Provide information on the implementation and development of FLS at global, national and regional levels
- Allow identification of successful sustainable service models

