



**CAPTURE THE FRACTURE® PARTNERSHIP**

# **ABOUT CAPTURE THE FRACTURE**

An IOF initiative, supported by Amgen and UCB in collaboration with the University of Oxford



# Acknowledgements

## Capture the Fracture Steering Committee:

- Prof Cyrus Cooper, President of IOF, MRC Lifecourse Epidemiology Unit, University of Southampton & University of Oxford, UK
- Dr Kassim Javaid, Co-Chair, CTF Steering Committee, University of Oxford, UK
- Prof Serge Ferrari, Co-Chair, CTF Steering Committee, Vice-Chair, Committee of Scientific Advisors of IOF, Geneva University Hospital, CH
- Prof Kristina Åkesson, Skåne University Hospital, Sweden
- Prof Thierry Thomas, University Hospital of St-Etienne, France
- Prof Willem Lems, VU University Medical Centre, Netherlands
- Prof Stefan Goemaere, Ghent University, Belgium
- Dr Paul Mitchell, Synthesis Medical Limited, New Zealand
- Dr Philippe Halbout, Chief Executive Officer of IOF

# Slide Kit Breakdown

## This slide kit covers:

- The need for secondary fracture prevention
- Capture the Fracture campaign
- How to get involved
- Evaluation methodology
- Results (initial)



*'Over the next 20 years, 450 million people will celebrate their 65th birthday.*

*On account of this, absolute hip fracture incidence will remain high and costly in the West and presents a major threat to financing of health systems in the East.'*

Cooper C, Mitchell P, Kanis JA. Breaking the fragility fracture cycle. *Osteoporosis Int.* Jul 2011;22(7):2049-2050.

# Why the First Fracture is so Important

- 1st fracture doubles the risk for future fractures
- 2nd fracture often happens within 6-8 months
- 50% of all hip fractures come from 16% of the postmenopausal women with history of fracture



# The Problem

## Fragility fractures are common

- 1 in 3 women over 50 years of age
- 1 in 5 men over 50 years of age<sup>12</sup>

## Fractures are costly

- Europe: estimated costs of 32 billion EUR per year<sup>3</sup>
- United States: estimated costs of 20 billion USD per year<sup>4</sup>

## Fractures affect quality of life<sup>5</sup>

- Mortality
- Functional decline
- Loss of independence

1. Melton LJ, 3rd, Atkinson EJ, O'Connor MK, O'Fallon WM, Riggs BL. Bone density and fracture risk in men. *J Bone Miner Res.* Dec 1998;13(12):1915-1923.
2. Kanis JA, Johnell O, Oden A, et al. Long-term risk of osteoporotic fracture in Malmo. *Osteoporos Int.* 2000;11(8):669-674.
3. Kanis JA, Johnell O. Requirements for DXA for the management of osteoporosis in Europe. *Osteoporos Int.* Mar 2005;16(3):229-238.
4. Cummings SR, Melton LJ. Epidemiology and outcomes of osteoporotic fractures. *Lancet.* May 18 2002;359(9319):1761-1767.
5. Boonen S, Autier P, Barette M, Vanderschueren D, Lips P, Haentjens P (2004) Functional outcome and quality of life following hip fracture in elderly women: a prospective controlled study. *Osteoporos Int* 15:87-94

# What we Know

*Half of all individuals who will suffer hip fractures in the future bring themselves to clinical attention before breaking their hip, by suffering a prior fragility fracture<sup>1234</sup>*

1. Gallagher JC, Melton LJ, Riggs BL, Bergstrath E. Epidemiology of fractures of the proximal femur in Rochester, Minnesota. *Clin Orthop Relat Res.* Jul-Aug 1980(150):163-171.
2. Port L, Center J, Briffa NK, Nguyen T, Cumming R, Eisman J. Osteoporotic fracture: missed opportunity for intervention. *Osteoporos Int.* Sep 2003;14(9):780-784.
3. McLellan A, Reid D, Forbes K, et al. *Effectiveness of Strategies for the Secondary Prevention of Osteoporotic Fractures in Scotland (CEPS 99/03)*: NHS Quality Improvement Scotland; 2004.
4. Edwards BJ, Bunta AD, Simonelli C, Bolander M, Fitzpatrick LA. Prior fractures are common in patients with subsequent hip fractures. *Clin Orthop Relat Res.* Aug 2007;461:226-230.

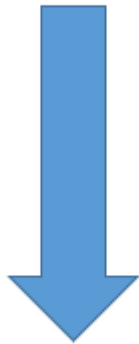
# What we know

The Fracture cascade

+

The care gap

One Fracture



More Fractures





# A Proven Solution

## Fracture Liaison Services (FLS): Coordinator-based models of care

- facilitate risk assessment
- facilitate bone mineral density testing and osteoporosis education and care
- have been shown to be **cost-saving**

# Also Known as

- **Fracture Liaison Services**
  - (UK, Europe and Australia)
- **Osteoporosis Coordinator Programmes**
  - (Canada)
- **Care Manager Programmes**
  - (USA)

# The Link: A dedicated coordinator



## Coordinator links:

- Patient
- Primary care physician
- Orthopaedic team
- Osteoporosis & falls team

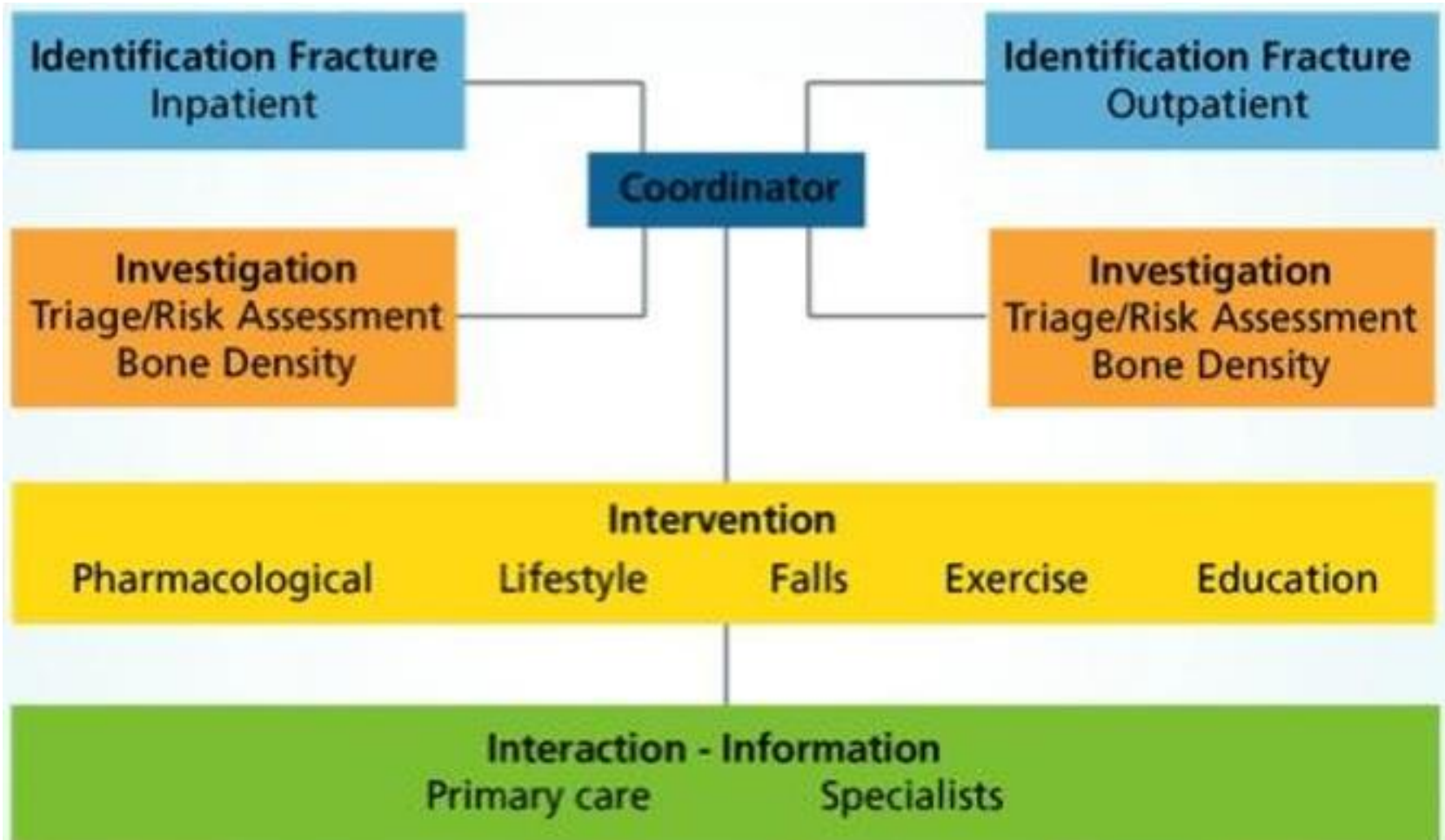


# The Team

A dedicated team of stakeholders:



# Coordinator-based System

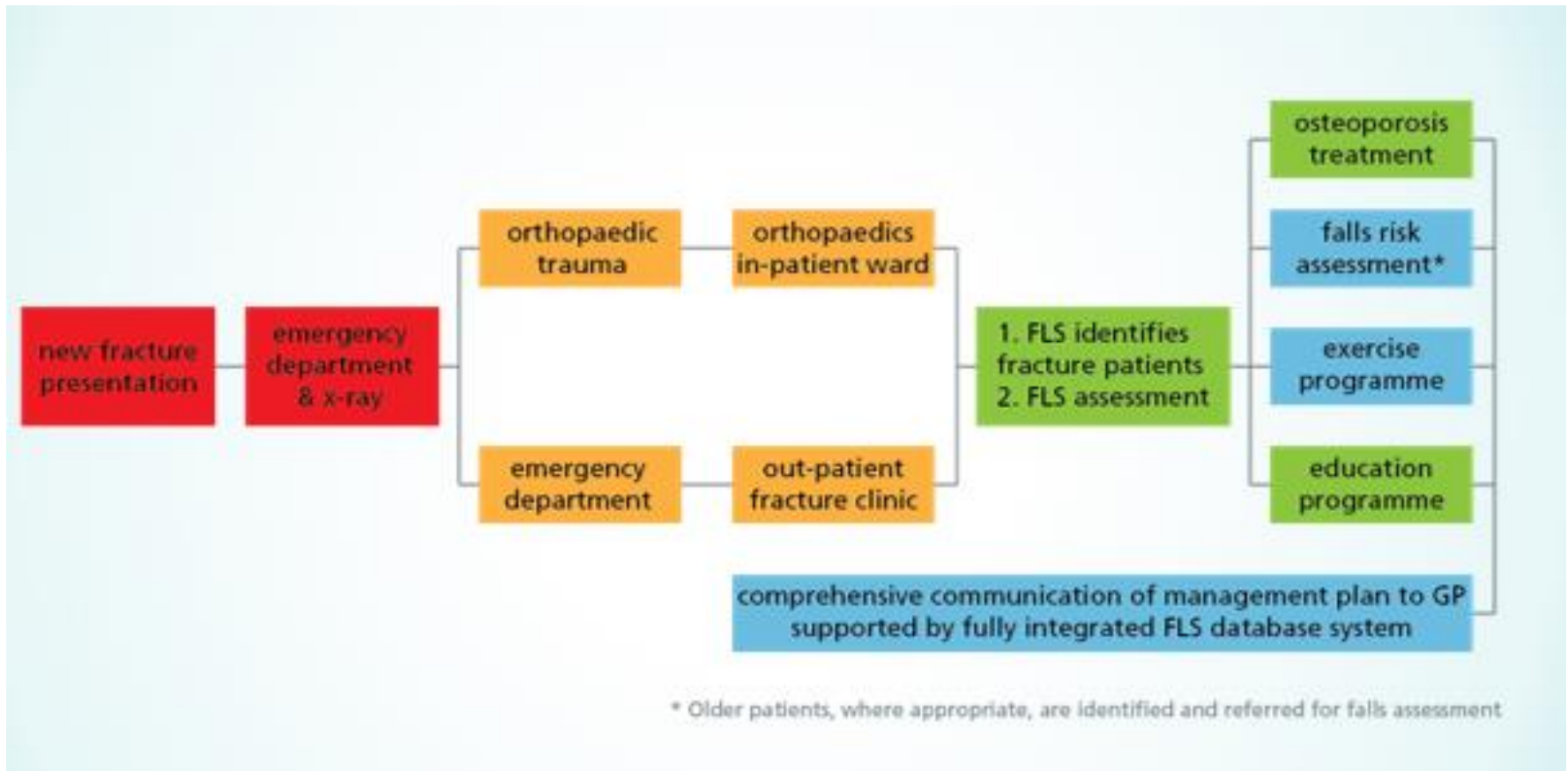


Adapted from McLellan et al OI 2003, 14:1028-1034.

# Core Objectives of FLS

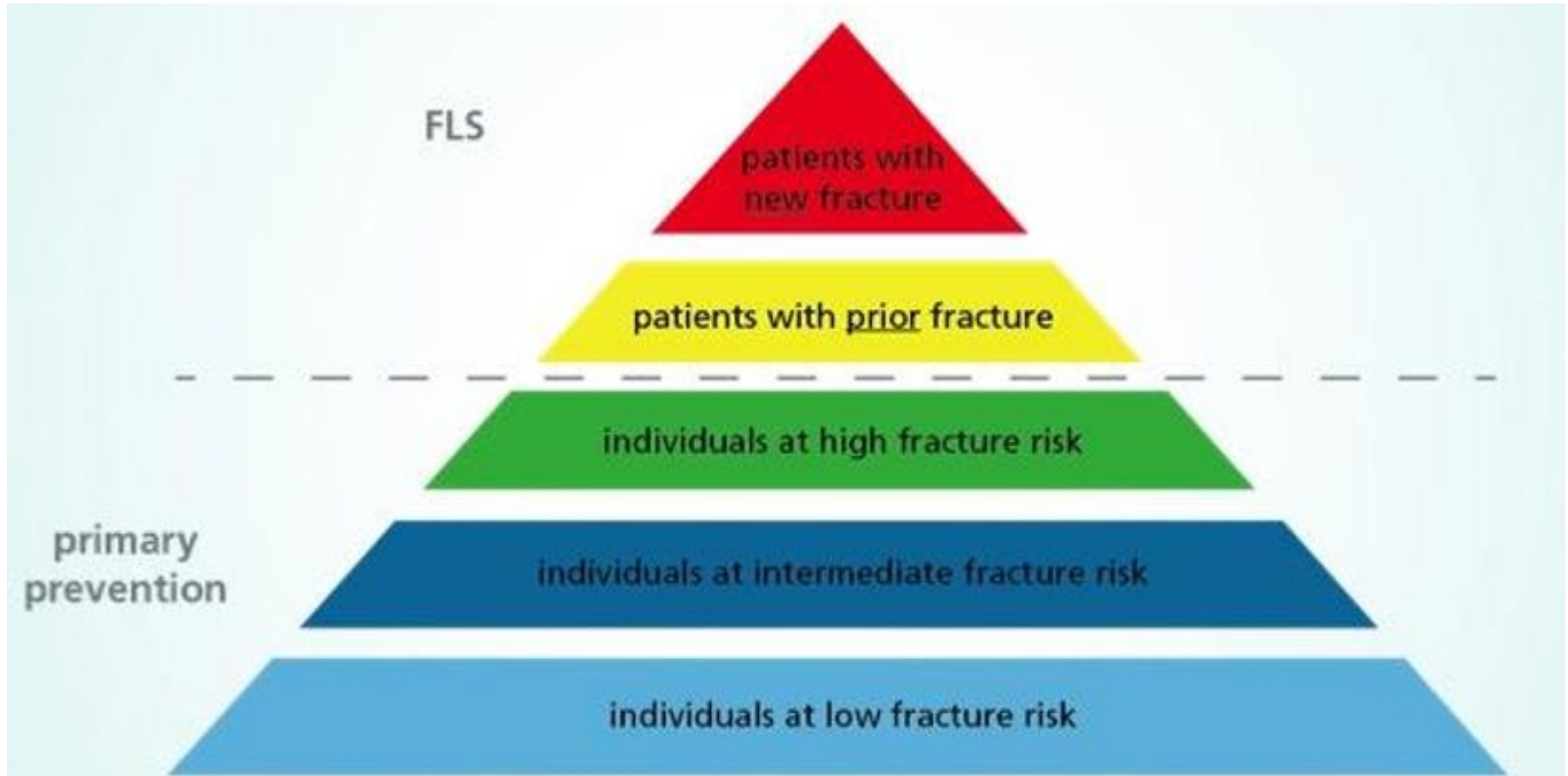
- Inclusive case finding
- Evidence-based assessment: stratify risk, identify secondary causes of osteoporosis, tailor therapy
- Initiate or recommend treatment in accordance with relevant guideline
- Improve long-term adherence with therapy

# The Structure



1. British Orthopaedic Association, British Geriatrics Society. *The care of patients with fragility fracture 2007*.
2. McLellan AR, Gallacher SJ, Fraser M, McQuillan C. The fracture liaison service: success of a programme for the evaluation and management of patients with osteoporotic fracture. *Osteoporos Int*. Dec 2003;14(12):1028-1034.

# Identifying Patients



Adapted from Curr Med Res Opin 2005;21:4:475-482 Brankin E et al \* BOA-BGS 2007 Blue Book. <http://www.nhfd.co.uk>



# FLS: effective and cost-saving

- Coordinator-based, post-fracture models of care have successfully closed the secondary fracture prevention care gap in many countries throughout the world and are highly cost-effective<sup>1</sup>
- Governments and associated agencies have endorsed coordinator-based post-fracture models of care in national and regional healthcare policy<sup>23456</sup>

1. Marsh D, Akesson K, Beaton DE, et al. Coordinator-based systems for secondary prevention in fragility fracture patients. *Osteoporos Int*. Jul 2011;22(7):2051-2065.
2. New South Wales Agency for Clinical Innovation Musculoskeletal Network. NSW Model of Care for Osteoporotic Refracture Prevention. Chatswood, NSW; 2011.
3. Department of Health. Falls and fractures: Effective interventions in health and social care. In: Department of Health, ed; 2009.
4. Ministry of Health and Long-term Care, Ontario Women's Health Council, Osteoporosis Canada. Ontario Osteoporosis Strategy. <http://www.osteostategy.on.ca/>. Accessed 9 February, 2012.
5. Department of Health in England. Prevention speech: old age is the new middle age, by the Rt Hon Alan Johnson MP, Secretary of State for Health, 21 May 2008. [http://webarchive.nationalarchives.gov.uk/+www.dh.gov.uk/en/MediaCentre/Speeches/DH\\_085020](http://webarchive.nationalarchives.gov.uk/+www.dh.gov.uk/en/MediaCentre/Speeches/DH_085020). Accessed 28-10-2011.
6. Department of Health. Fracture prevention services: an economic evaluation; 2009.

# Capture the Fracture



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

# Capture the Fracture



- An initiative of the *International Osteoporosis Foundation (IOF)*
- Launched in 2012
- [www.capturethefracture.org](http://www.capturethefracture.org)

# Capture the Fracture Steering Committee:

- Prof Cyrus Cooper, President of IOF, MRC Lifecourse Epidemiology Unit, University of Southampton & University of Oxford, UK
- Dr Kassim Javaid, Co-Chair, CTF Steering Committee, University of Oxford, UK
- Prof Serge Ferrari, Co-Chair, CTF Steering Committee, Vice-Chair, Committee of Scientific Advisors of IOF, Geneva University Hospital CH
- Prof Kristina Åkesson, Skåne University Hospital, Sweden
- Prof Thierry Thomas, University Hospital of St-Etienne, France
- Prof Willem Lems, VU University Medical Centre, Netherlands
- Prof Stefan Goemaere, Ghent University, Belgium
- Dr Paul Mitchell, Synthesis Medical Limited, New Zealand
- Dr Philippe Halbout, Chief Executive Officer of IOF

# Key Objectives

- Set Standards
- Facilitate Change
- Create Awareness

*for secondary fracture prevention*



# Campaign Structure

## Set Standards (main programme)

- Best Practice Framework (BPF)
- FLS Evaluation / questionnaire
- Best Practice Recognition/Map

## Facilitate Change

- Mentorship programme (planned)
- Implementation guides & toolkits
- Facilitated grant support (planned)

## Create Awareness

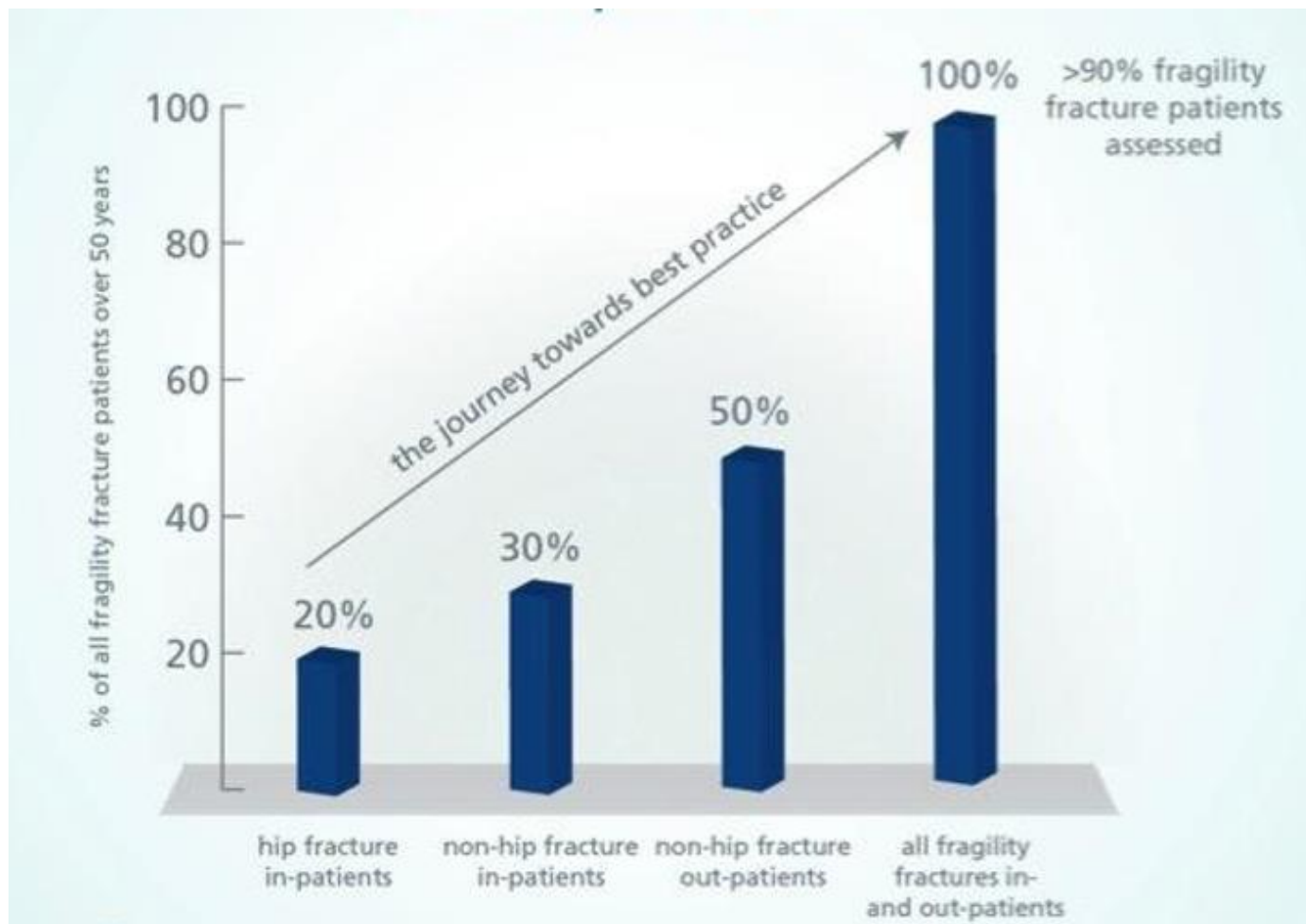
- Website [www.capturethefracture.org](http://www.capturethefracture.org)
- Resources
- Communication/marketing
- Coalition of partners

# Setting the Standards

*Setting standards in health care and being measured against standards are powerful tools to improve patient management.*

- Best Practice Framework (BPF) - sets the standard
- FLS evaluation/questionnaire - measures FLS against the standard (BPF)
- Best Practice Recognition/ Map- recognizes FLS and achievements on website map with a gold, silver or bronze star

# Outcome Targets: Reaching for best practice





# Purpose of the Best Practice Framework

**13** internationally recognized & endorsed standards of care for secondary fracture prevention

1. Set the standard for FLS
2. Guidance
3. Benchmarking and fine-tuning

# The BPF Standards: Achievable & ambitious

STANDARD	LEVEL 1	LEVEL 2	LEVEL 3
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>
2. Patient Evaluation	50% assessed	70% assessed	90% assessed
3. Post Fracture Assessment Timing	Within <i>13-16 weeks</i>	Within <i>9-12 weeks</i>	Within <i>8 weeks</i>
4. Vertebral Fracture (VF) ID	<i>Known</i> VF assessed	<i>Routinely</i> assesses for VF	<i>Radiologists</i> identify VF

# The BPF Standards: Achievable & ambitious

STANDARD	LEVEL 1	LEVEL 2	LEVEL 3
5. Assessment Guidelines	<i>Local</i>	<i>Regional</i>	<i>National</i>
6. Secondary Causes of OP	50% of patients screened	70% of patients screened	90% of patients screened
7. Falls Prevention Services	50% of patients evaluated	70% of patients evaluated	90% of patients evaluated
8. Multifaceted Assessment	50% of patients screened	70% of patients screened	90% of patients screened
9. Medication Initiation	50% of patients initiated	70% of patients initiated	90% of patients initiated

# The BPF Standards: Achievable & ambitious

STANDARD	LEVEL 1	LEVEL 2	LEVEL 3
10. Medication Review	50% assessed	70% assessed	90% assessed
11. Communication Strategy	Communicates to primary and secondary care physicians	Communicates to primary and secondary care physicians w/ %50 criteria	Communicates to primary and secondary care physicians w/ %90 criteria
12. Long-term Management	1 year follow-up		6 month follow-up & 1 year follow-up
13. Database	Local	Regional	National



# Getting your FLS Recognized on the Map

- Submit your application at [www.capturethefracture.org](http://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



# Participation

## Why apply?

- Showcase achievements
- Support FLS implementation worldwide
- Creates visual message of services & opportunities

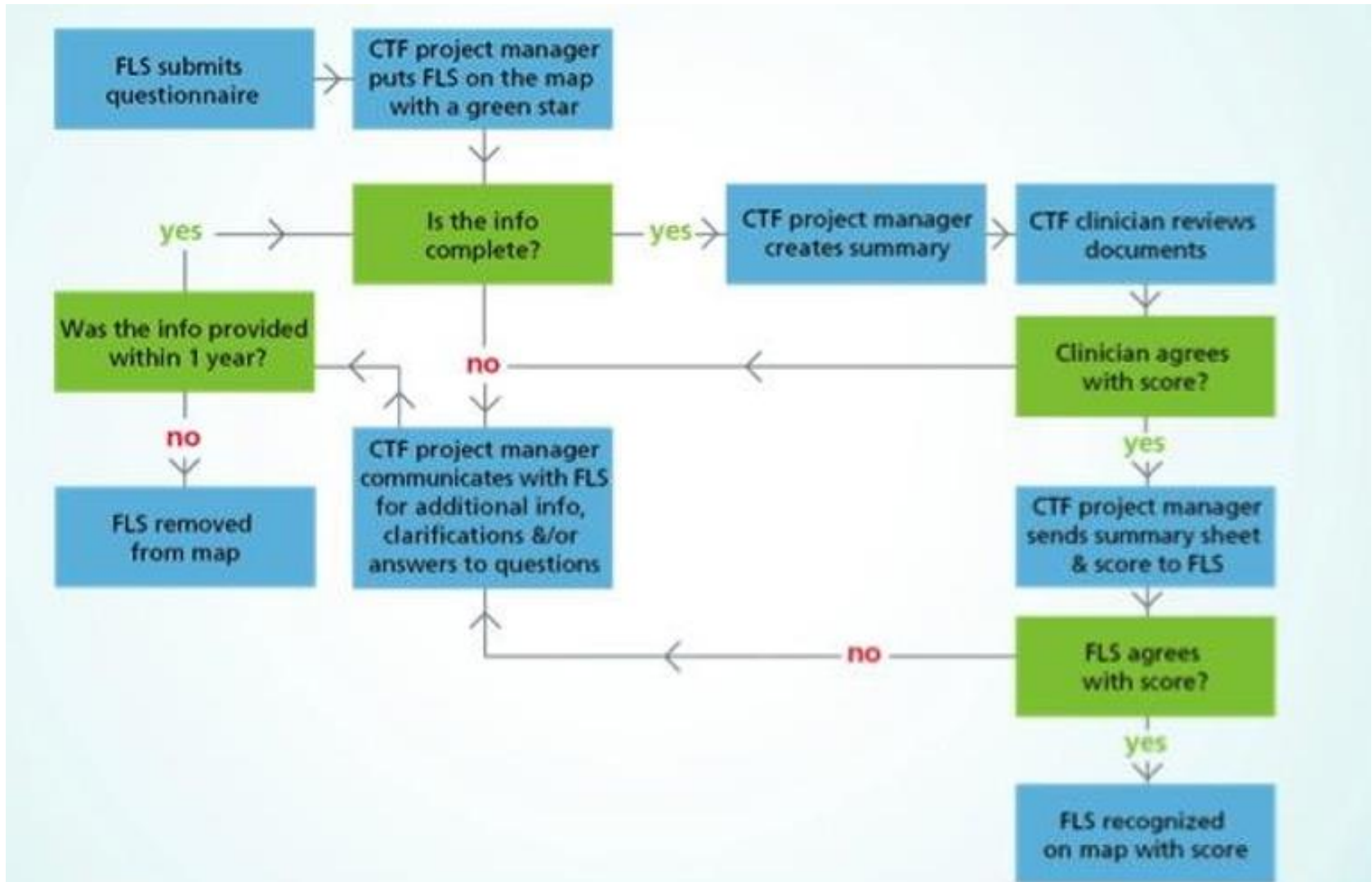
## Who can apply?

- Coordinator-based 'systems' of care
- Inpatient and/or outpatient facility
- At any stage in development, but need enough data
- Worldwide

FLS can submit applications at

[www.capturethefracture.org](http://www.capturethefracture.org)

# FLS Evaluation Flow Chart





# Evaluation Methodology

*13 standards*  
*5 domains*  
*1 star*

Fragility fracture domains	Achievement & Valuation
Hip	★ = >90%
Inpatient outpatient	☆ = >70%
Vertebral	★ = >50%
Organizational	★ = 0-50%

FLS Overall Performance					Calculation	Score	Map Recognition
Star Grade							
Hip	Inpt	Outp	Vert	Org			
★	★	★	★	☆	90+90+90+65+80		☆ 83%

# Evaluation Methodology: Example

Hospital Name: XXXX  
 Location: ABC  
 FLS Name: DEF  
 Evaluate as a: A single hospital  
 Population: 500000  
 Service: Academic/university/teaching / PUBLIC  
 Fracture type: Hip; Inpatient; Outpatient; Vertebral fractures  
 Number of fracture patients last year: 800

Best Practices			FLS performance (Gold,Silver,Bronze or No Data) in accordance with each Standard					Comments	
	Standard		hip	inpatient	outpatient	vertebral	organizational	Capture the Fracture committee	FLS
H.	Standard 1: Patient Identification	1	Gold	Gold	Bronze	No Data	No Data		
I.	Standard 2: Patient Evaluation	2	Gold	Gold	Gold	No Data	No Data		
J.	Standard 3: Post fracture assessment timing	3	Gold	Gold	Gold	No Data	No Data		
K.	Standard 4: Vertebral Fracture	4	No Data	No Data	No Data	Gold	No Data		
L.	Standard 5: Assessment Guidelines	5	No Data	No Data	No Data	No Data	Gold		
M.	Standard 6: Secondary Causes of Osteoporosis	6	Gold	Gold	Gold	Gold	No Data		
N.	Standard 7: Falls Prevention Services	7	No Data	No Data	No Data	No Data	No Data		
O.	Standard 8: Multifaceted health & lifestyle risk-factor Assessment	8	Gold	Gold	Gold	Bronze	No Data		
P.	Standard 9: Medication Initiation	9	Gold	Gold	Gold	Bronze	No Data		
Q.	Standard 10: Medication Review	10	Gold	Gold	Gold	Bronze	No Data		
R.	Standard 11: Communication Strategy	11	No Data	No Data	No Data	No Data	No Data		
S.	Standard 12: Long-term Management	12	Gold	Gold	Gold	Gold	No Data		
T.	Standard 13: Database	13	No Data	No Data	No Data	No Data	Gold		

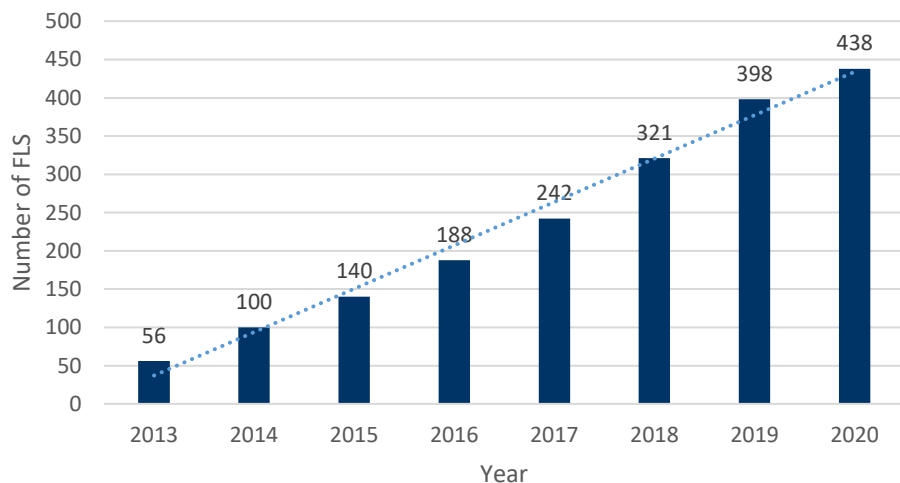
Colour coding	
Gold	Gold
Silver	Silver
Bronze	Bronze
No data	No data

Overall Performance (Gold = 5; Silver = 3; Bronze = 1; Black = 0)					Comments		Global Score
hip	inpatient	outpatient	vertebral	organizational	Capture the Fracture	FLS	
100	100	95	67	60			84.4



# Results from 438 FLS part of CTF

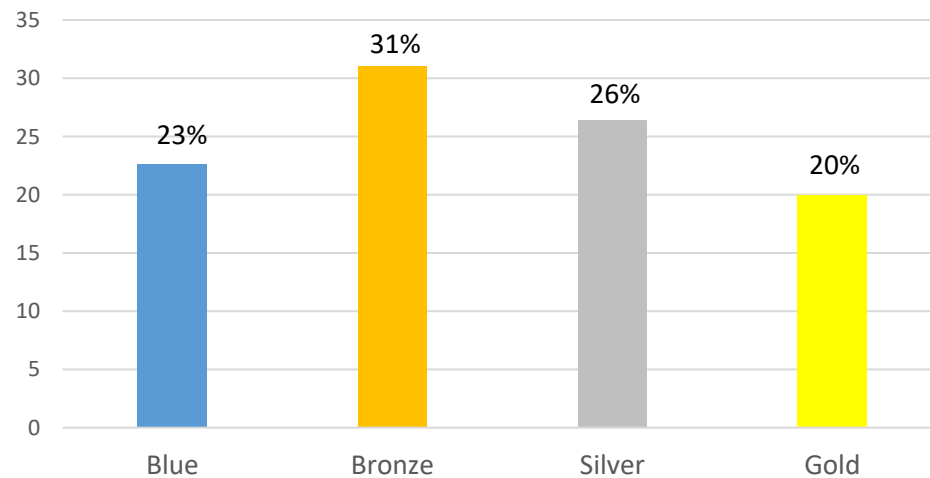
Growth of FLS Network



- Total catchment population:  
>124,136,000
- Total fragility fracture patients identified: > 425,400
- Hip fractures identified: >61,000

- 438 FLS from 49 countries across 6 continents
- Mix of private & publicly funded hospitals
- Mix of FLS that identify hip fractures, inpatients, outpatients and/or vertebral fractures

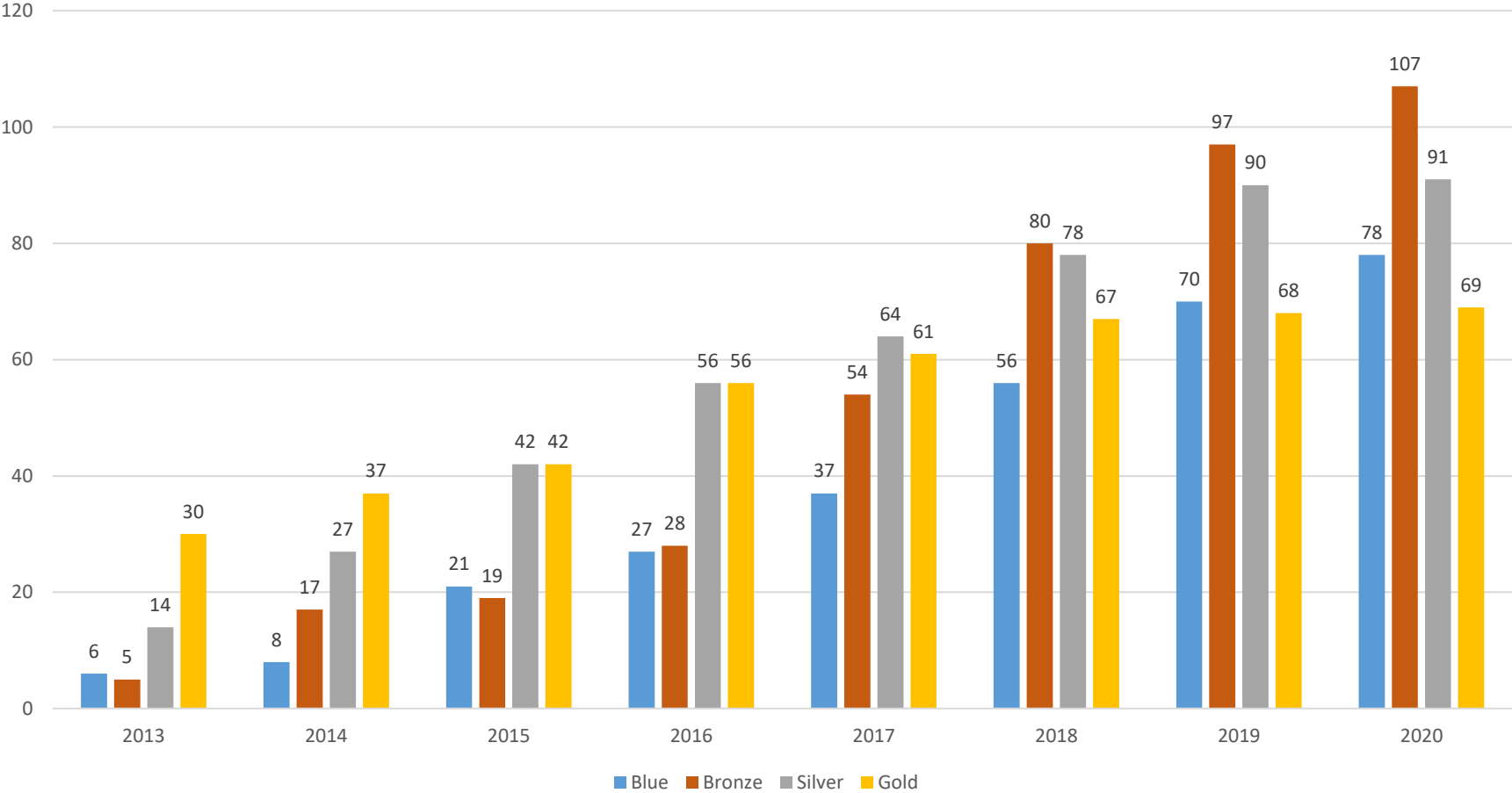
Overall FLS Scores  
%s reaching blue, bronze, silver, gold



# Results According to Stars

## IOF-BPF Graded FLS across 438 Hospitals in 6 Continents

Growth of Stars



# Recognizing Excellence: Awarding Certificates of Best Practice

- Graded FLS receive certificates and CTF Seals of Recognition reflecting the level of excellence obtained (gold, silver or bronze)



# Submit Your Application

## GET MAPPED

Submit your FLS and gain visibility on our Map of Best Practice at: [www.capturethefracture.org](http://www.capturethefracture.org)

