

Fragility Fracture Liaison Program – Bridging the gap between the Publics and Private interface in management of osteoporosis after fragility fracture

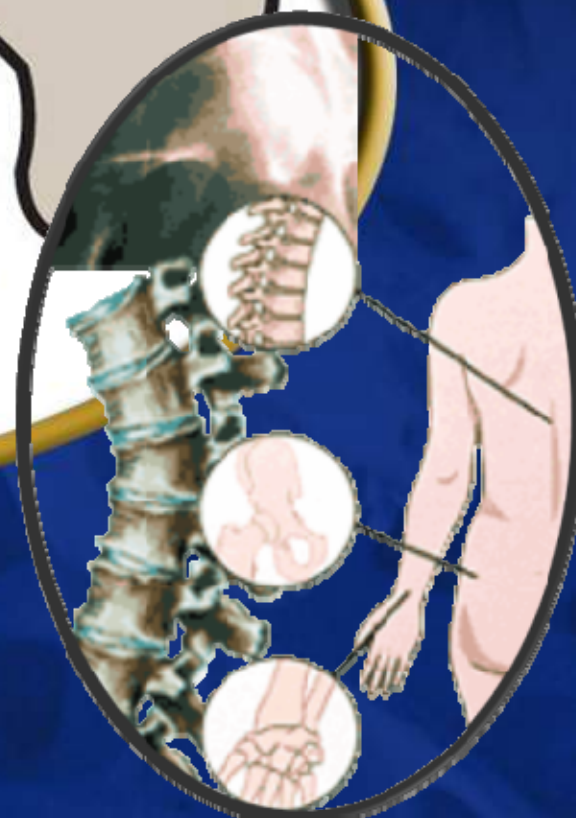
Law SW^{1,2}, Liu PL¹, Fung KY^{1,2}

1. Department of Orthopedic Rehabilitation, Tai Po Hospital
2. Department of Orthopedics and Traumatology, Tai Po
Alice Ho Miu Ling Nethersole Hospital



脆弱性骨折

協 · 作 · 計 · 劃



Outline

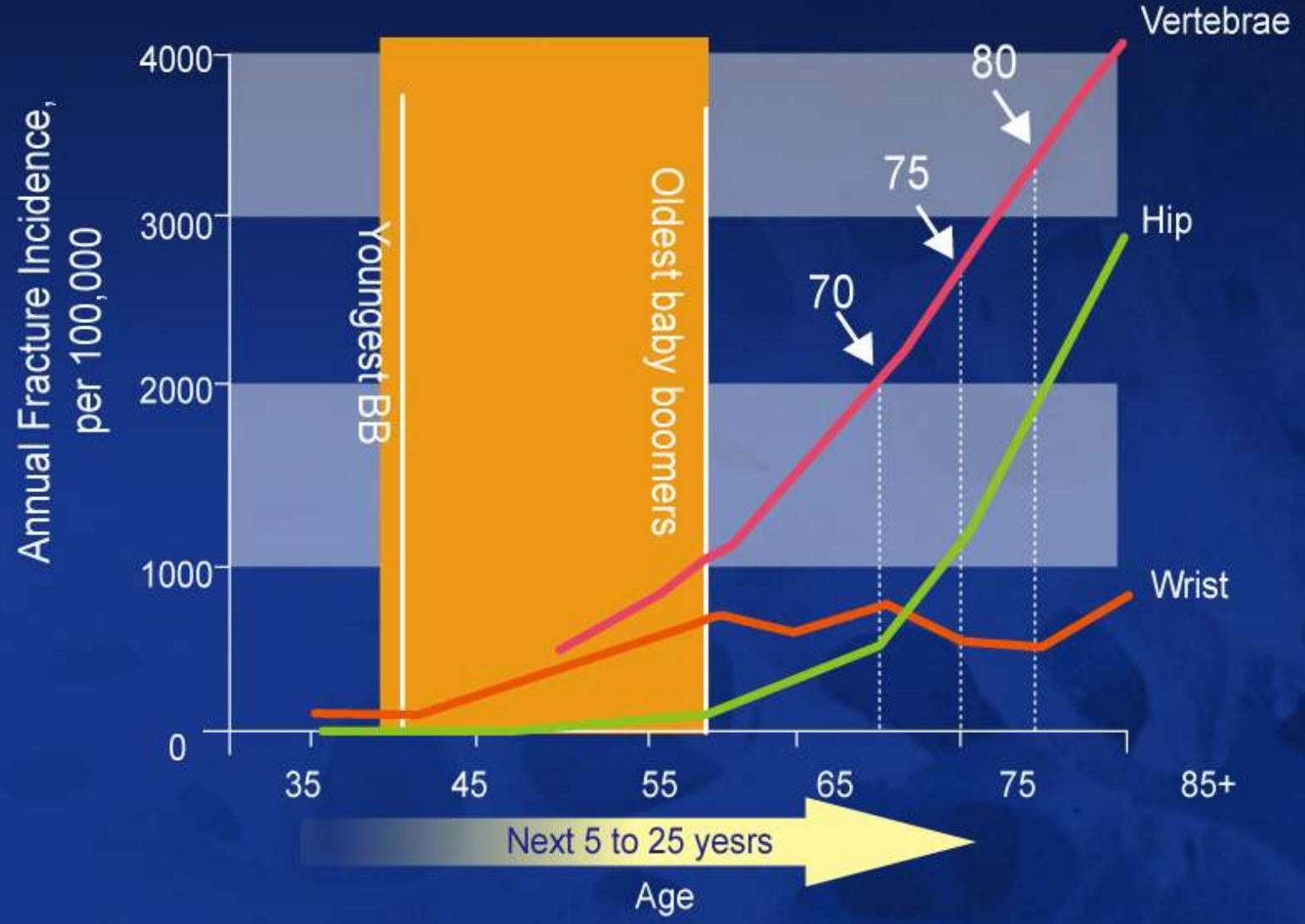
Introduction : Why ?

Methodology : How ?

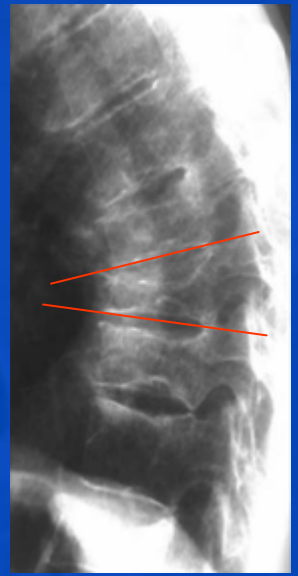
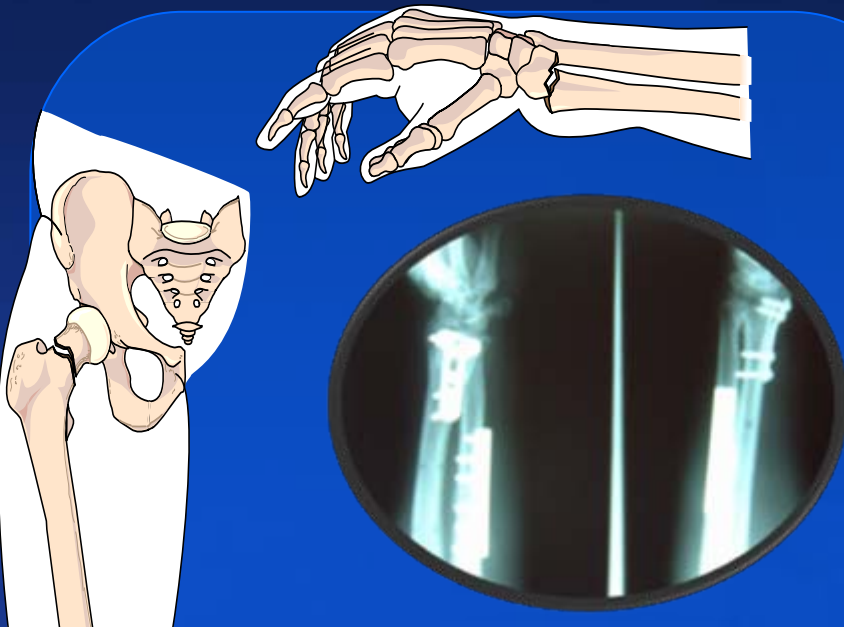
What are the result ?

Future

INCIDENCE OF 3 FRACTURES



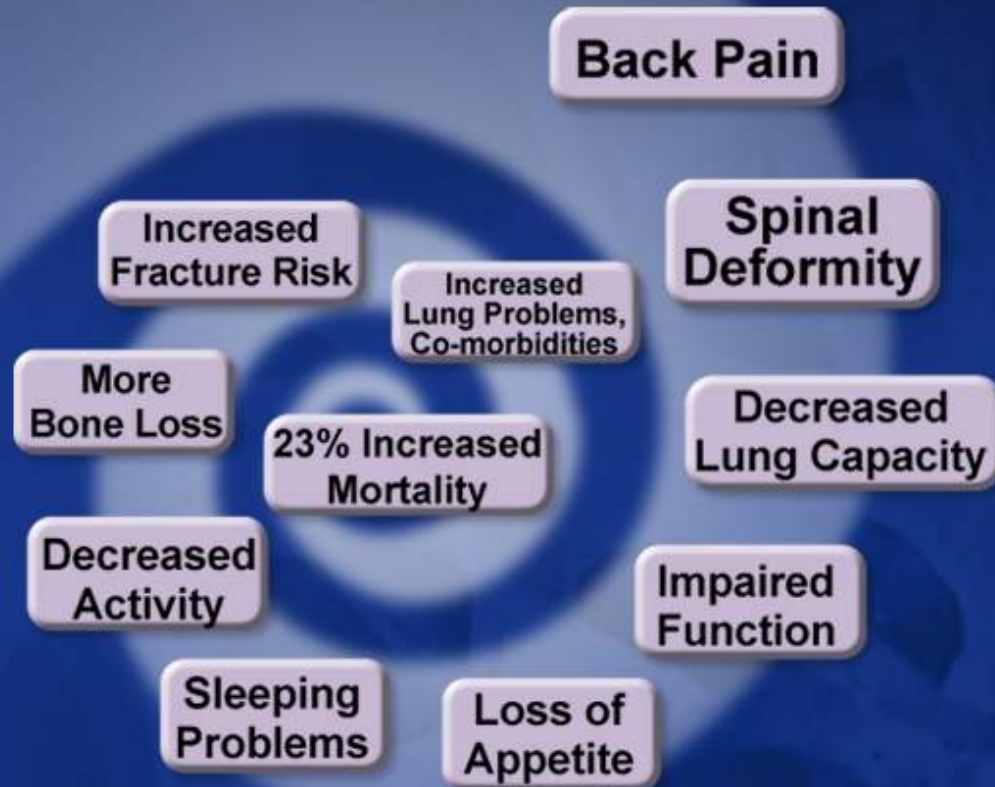
ORTHOPEDIC FRACTURE CARE



Downward Spiral

Osteoporosis
VCF

Mortality



Fracture

Osteoporosis



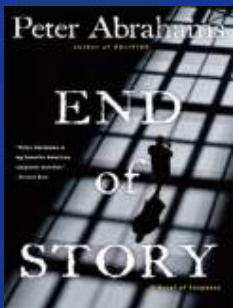
Prior fracture increases the risk of subsequent fracture

Site of prior fracture	Risk of subsequent fracture			
	Hip	Spine	Forearm	Minor fracture
Hip	2.3	2.5	1.4	1.9
Spine	2.3	4.4	1.4	1.8
Forearm	1.9	1.7	3.3	2.4
Minor fracture	2.0	1.9	1.8	1.9

A prior fracture increases the risk of new fracture 2- to 5-fold

Klotzbuecher et al. J Bone Miner Res 2000;
15:721-727

A MILLION FRAGILITY FRACTURES A YEAR



But can we do more?

Secondary Prevention



OPTIMAL CARE OF FRAGILITY FRACTURE PATIENT: GOALS, CHALLENGES AND SOLUTIONS

Fix the fracture

**Surgical
challenges**

Keep patient mobile

**Multidisciplinary
rehab**

**Keep patient
from another
fracture**

**Osteoporosis
management and
secondary prevention**



Local Scene



Hospital Authority

Orthopedic
Care



Osteoporosis
Care

Community Care
Private care

WHERE ARE THE PATIENTS?

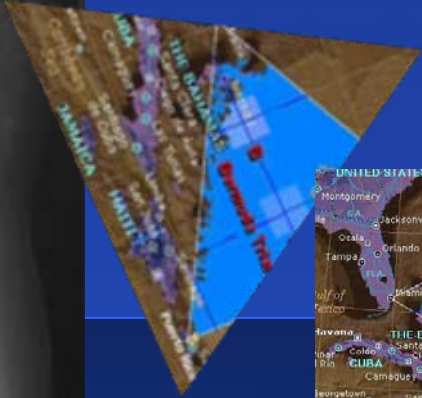
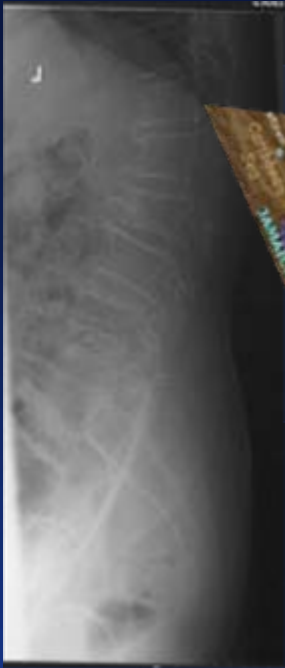
Service Gap

Osteoporosis Expert

**Primary
Physician**

**Orthopedic
Surgeon**





End result

Hospital

GAP

**Secondary
prevention**

**Acute
Rehabilitation**

**Intrinsic : Lack of knowledge
Extrinsic : heavy patient load and
lack of resources**

My
responsibility?

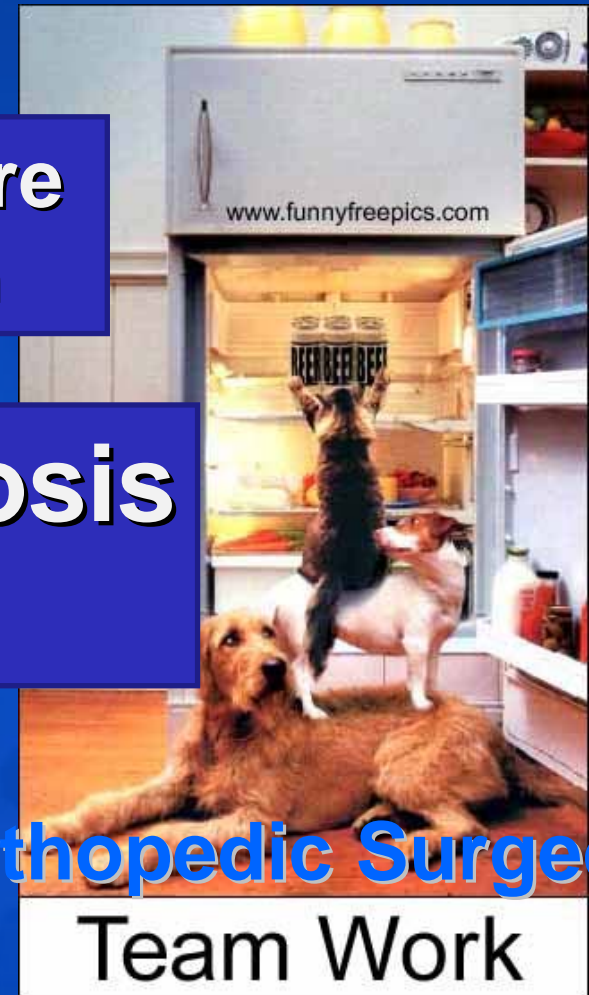


“JOIN UP APPROACH”



**Primary Care
Physician**

**Osteoporosis
Expert**



Fragility Fracture Cases

Fix the fracture



Orthopedics Management



OPD

Rehabilitation
Hospital

Fragility Fracture
Liaison
Coordinator



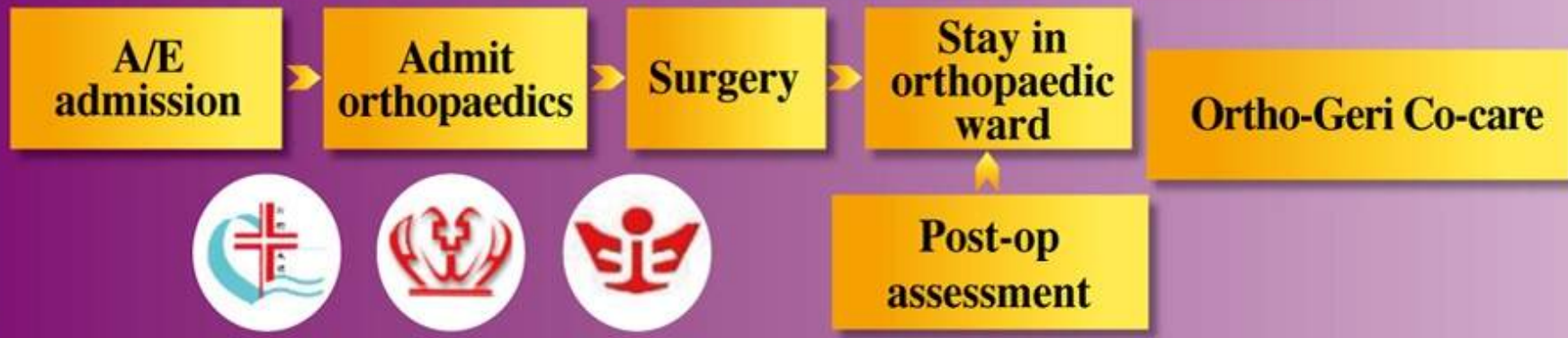
Osteoporosis management
and secondary prevention



基督教聯合那打素社康服務
UNITED CHRISTIAN NETHERSOLE COMMUNITY HEALTH SERVICE

Fragility Fracture Liaison Services

Acute



Rehab. TPH

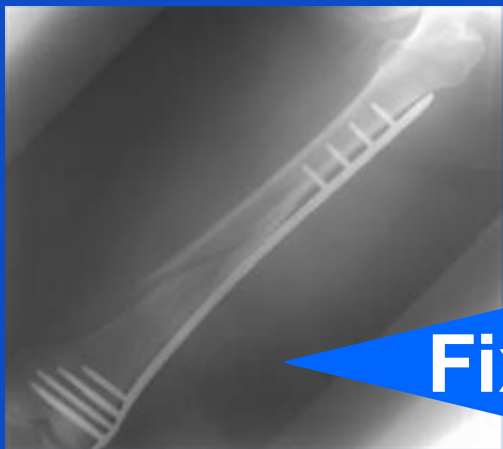


Post fracture care



HONG KONG (NTE CLUSTER) MODEL

- ❖ Ortho-surgeon initiative approach
- ❖ Fragility Fracture Liaison Program
- ❖ Establishment of link with primary care and physician in community for continuation of care



Fix the fracture

Fix the Linkage



Objective

- To evaluate the effectiveness of the FFLP in secondary prevention of fragility fractures.

-Initiation of treatment

-Incidence of second fracture.

Design

Prospective study with control group from historical cohort. Jan 2006- Jan 2007

1. Initiation of Osteoporosis Treatment : 7.8%
2. The rate of second fracture from (Hip fracture , Vertebral fracture)
5.6%

Patients

November 2006-
January 2008

PWH

AHNH

NDH

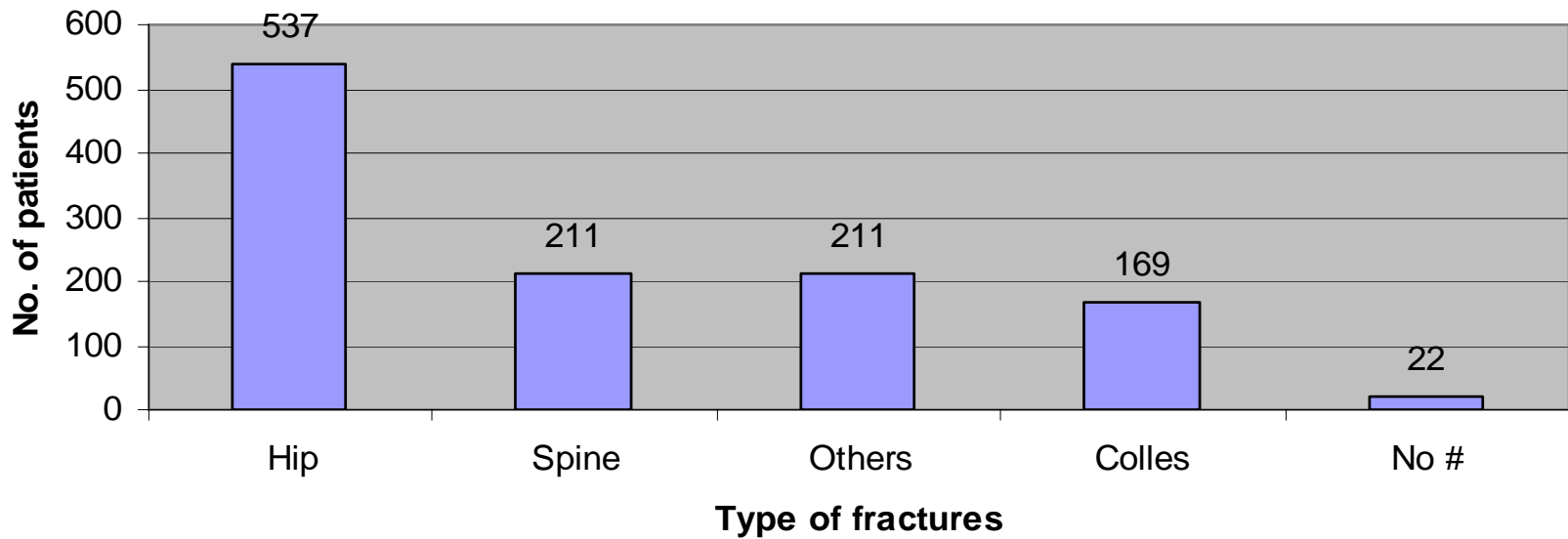
TPH



FFLS – No. of patients vs type of fractures

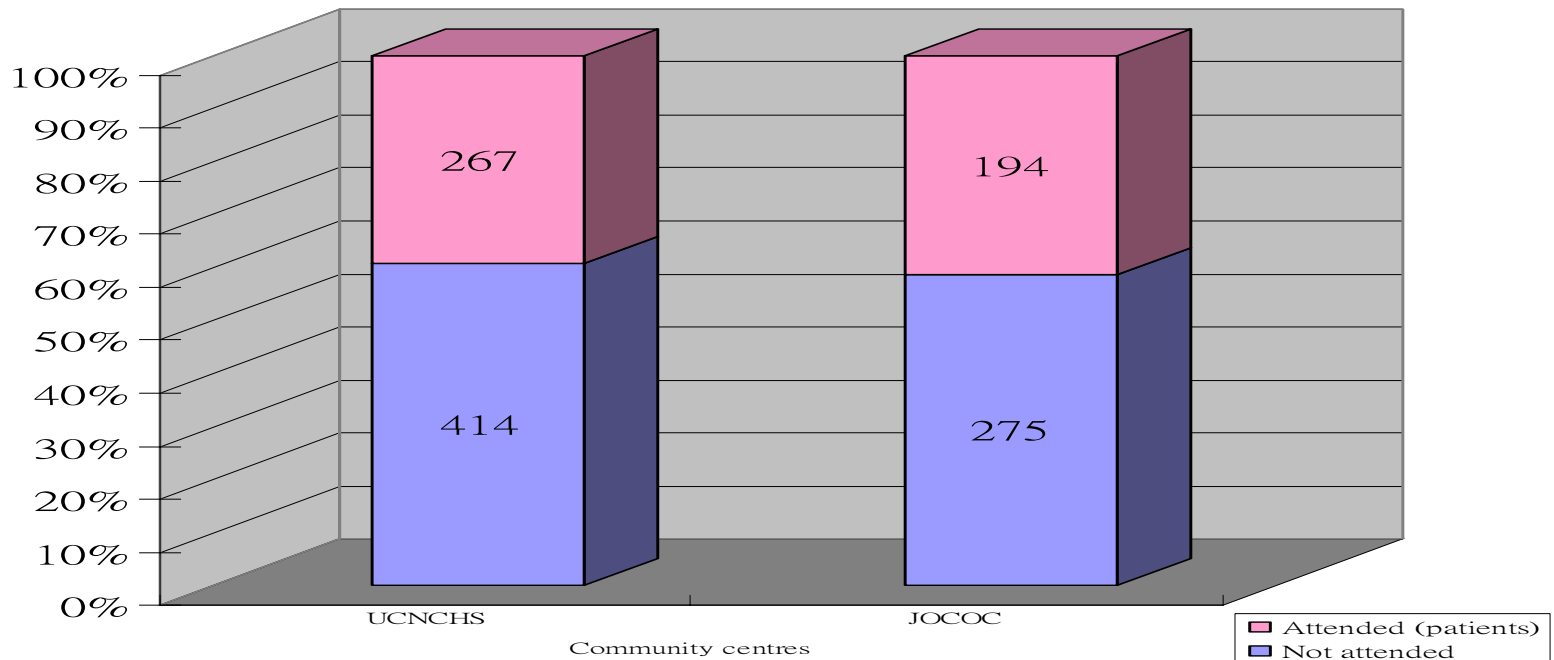
Total: 1150

Type of fractures of patients recruited in FFLS



FFLS – Attendance rate

Attendance of patients at JOCOC & UCNCHS

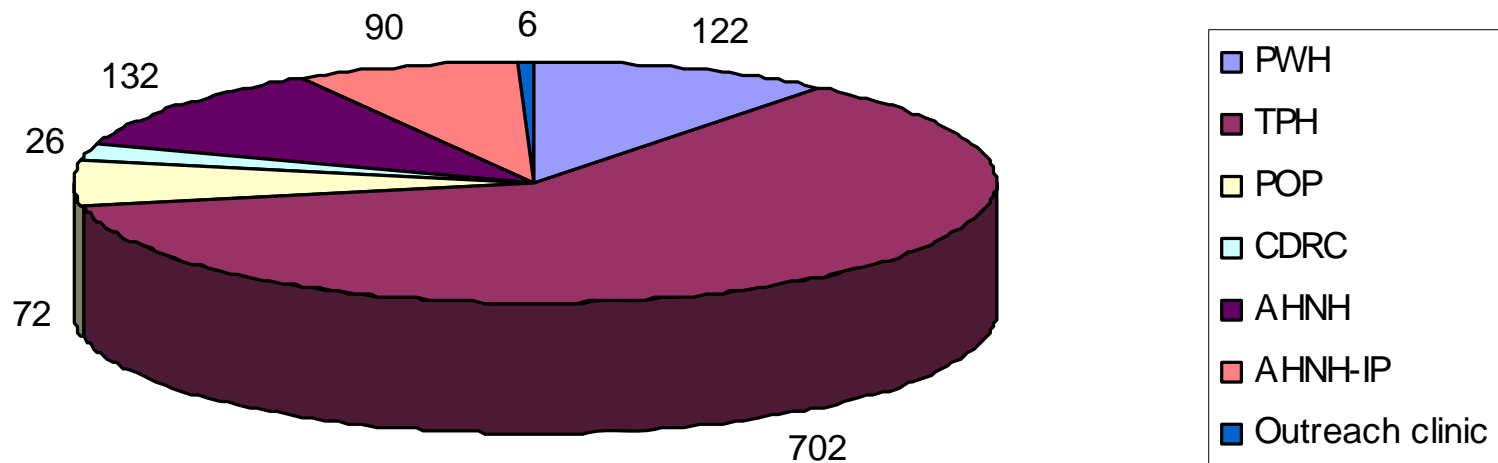


682

469

FFLS – Site recruitment

Different recruitment sites for FFLS



FFLS- Attendance at JOCOC

	No. of pts referrals (HA level)	No. of pts accepted (HA level)	No. of pts visit doctors	No. of pts prescribed Tx.
JOCOC	469	469	194 (41.3%)	Bisphosphonate: 160 Calcium: 8 (82.5%)

FFLS – Attendance (UCNCHS)

	No. of pts referrals (HA level)	No. of pts accepted (HA level)	No. of pts visit doctors	No. of pts prescribed Tx
UCNCHS	681	681	267 (39.2 %)	Bisphosphonate:156 Calcium: 46 Treatment rate: 58.4%

FFLS – Start treatment during in-patient

	Attended	Referred
JOCOC	49 (51.6%)	95
UCNCHS	39 (40.6%)	96

FFLS – Potential reasons for not attended

	JOCOC (Not attended)	UCNCHS (Not attended)
No. of patients (OAH/ CSSA)	25	115
Proportion	9%	27.8%

FFLS – Attendance rate vs type of fractures (UCNCHS)

	Attended	Not attended
Hip fracture	95 (35.6%)	172
Spine	74 (51.0%)	71
Colles	42 (35.3%)	77
Others	53 (41.1%)	76
No fracture	3 (15.8%)	16

FFLS – Attendance rate vs type of fractures (JOCOC)

	Attended	Not attended
Hip fracture	113 (41.9%)	157
Spine	33 (50%)	33
Colles	25 (50%)	25
Others	22 (36.7%)	38
No fracture	1 (33.3%)	2

Second fracture Rate

Historical
Cohort

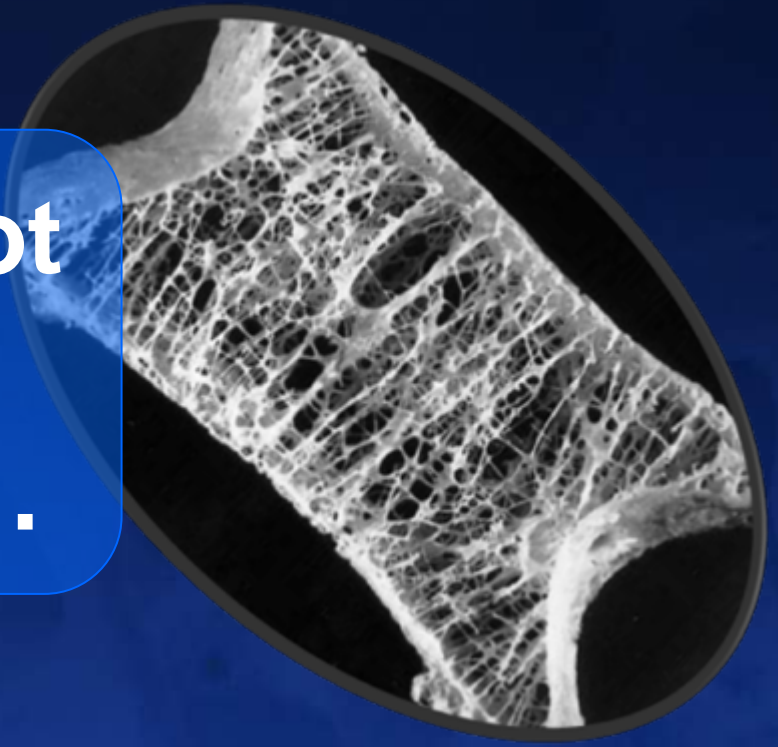
5.6%

FFLP

0.96%



**Bone density is not
the only factor
of fracture risk ...**



**Fall
Prevention**



輪流派米的長者實而在路邊排隊，一名老婦跪在路
旁時在馬路跌倒，由旁人扶起。（記者梁永興攝）

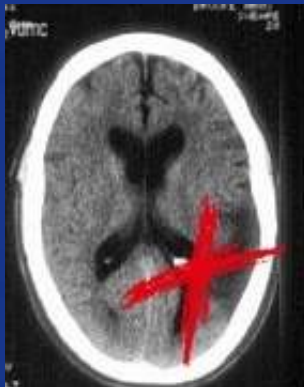


Blood pressure measurement

Increase in BP

Medication

Decrease in BP

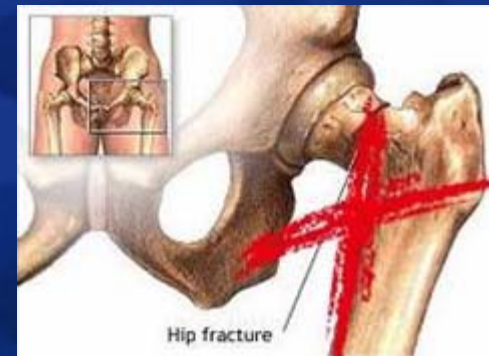


Fragility fracture

Increase in fall risk score / osteoporosis

**Intervention : Medication
Secondary prevention**

Decrease in fracture risk



Conclusion

The Fragility Fracture Liaison Program is effective in secondary prevention of fragility Fracture.

Team Work and Partnership is essential component for success.

