Is there a necessity for digitally assisted integrated post-discharge care for patients with fragility fractures?

A clinician's perspectives

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Objectives

A. The burden of Fragility Fractures

B. Complexity and Gaps in post discharge care pathway

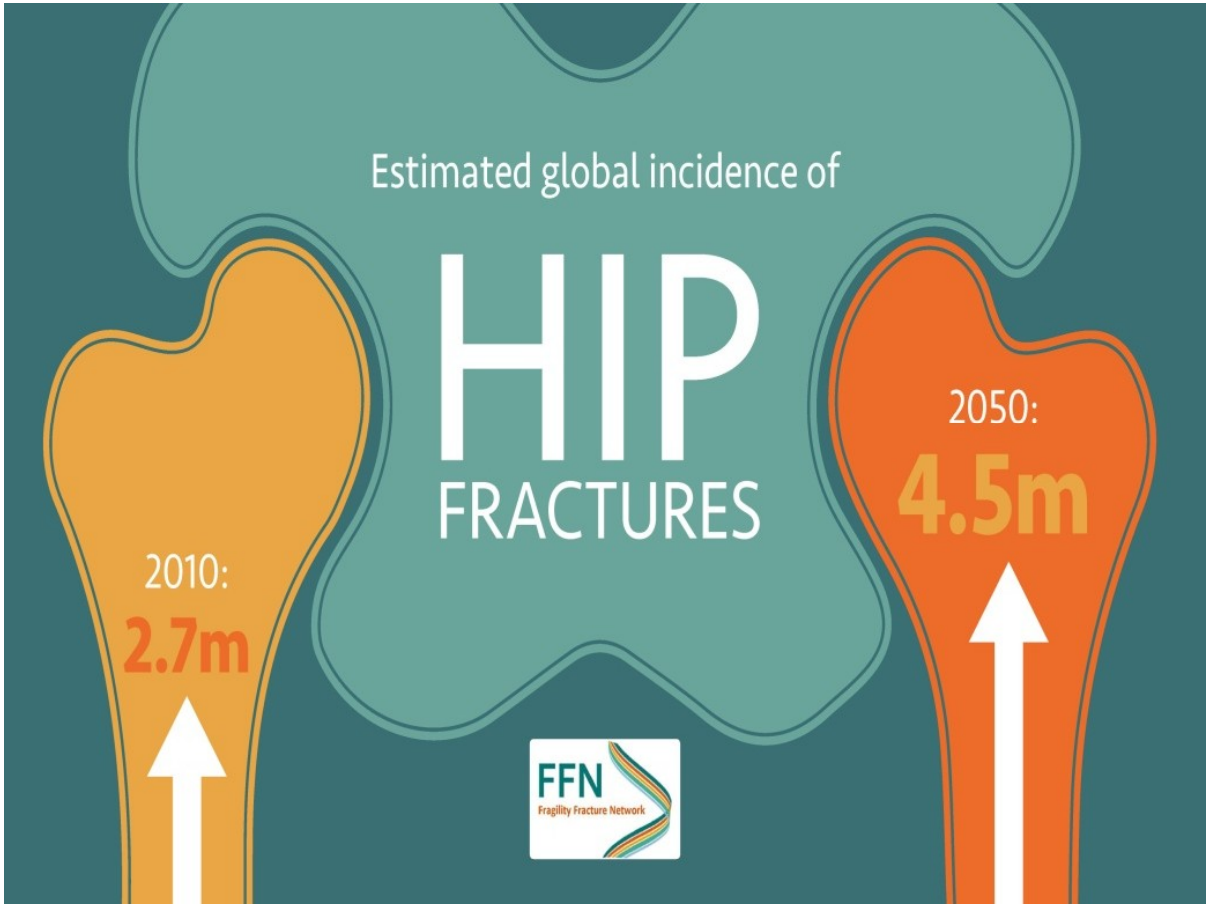
C. Models of existing integrated care

D. Our experience in Fracture Liaison Service (FLS)

E. Patient needs and HCP Expectations from EHDS

F. Conclusions

A1. People live longer….
A2. The Number of fractures are increasing !!!



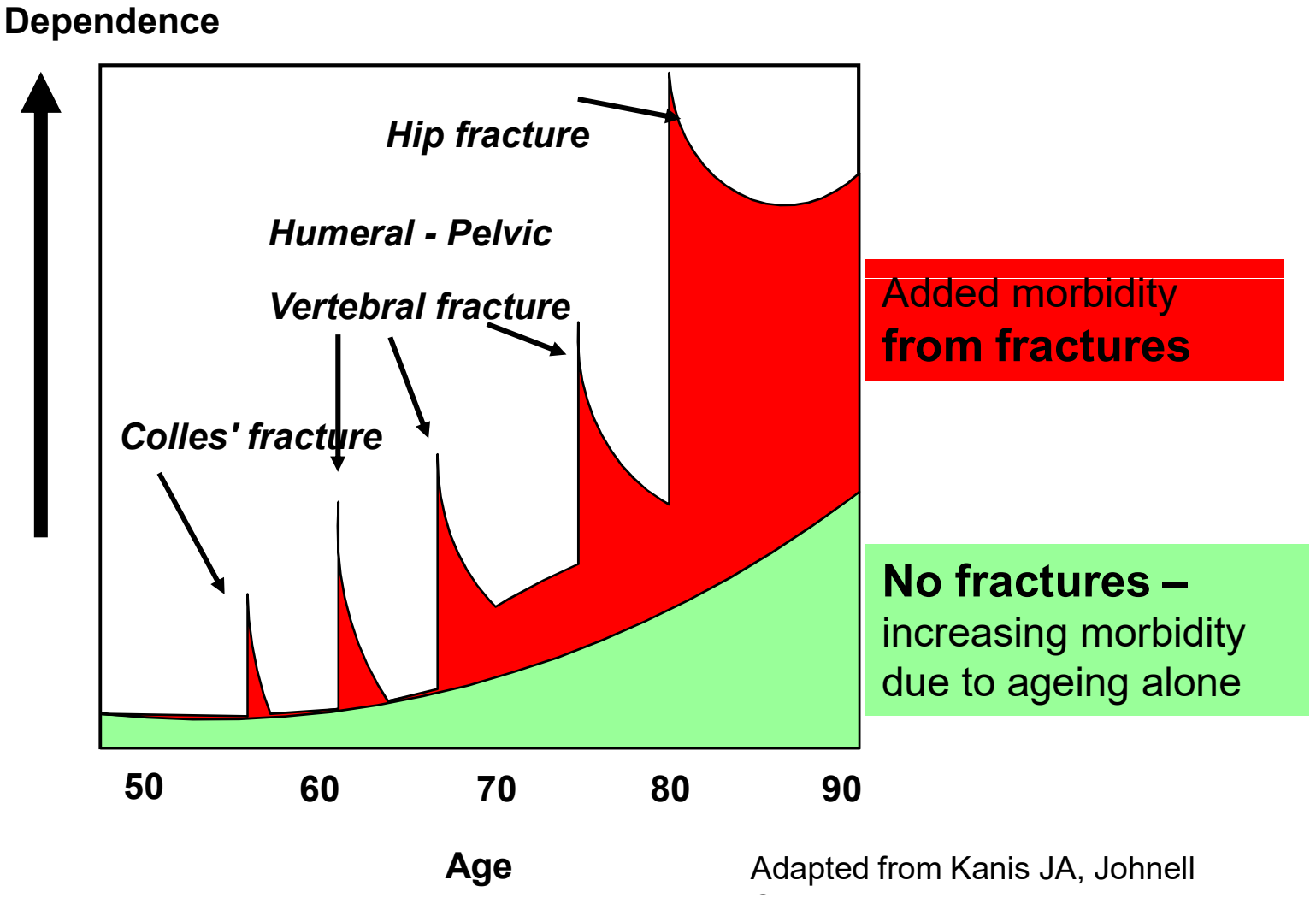
- In Europe and USA: 2X the number of cases and **3X the cost**

A3. Costs are already significant!!!

www.capturethefracture.org

A4. Morbidity is increasing!!!
Quality of life is decreasing

The fragility fracture 'career'- a chronic disease



Adapted from Kanis JA, Johnell

B1. Complex problems after fragility fracture

- **Multimorbidity** is common **impacting on length of hospital** stay and **mortality** (Rajeev et al. 2021).

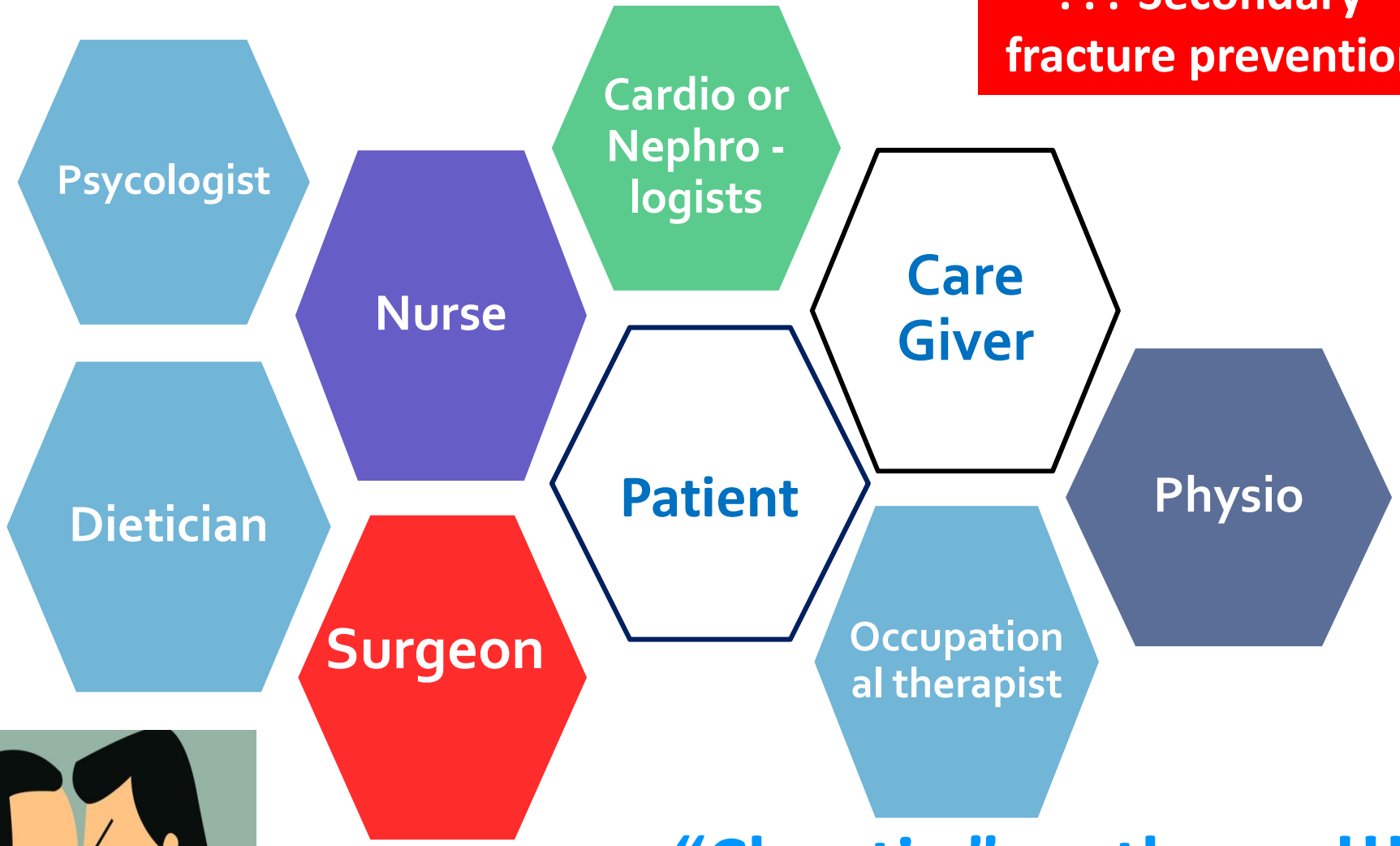
- **Complication rates** vary post hip fracture, with one study reporting 75% of patients experienced one or more complications in the first 6 months post-surgery.

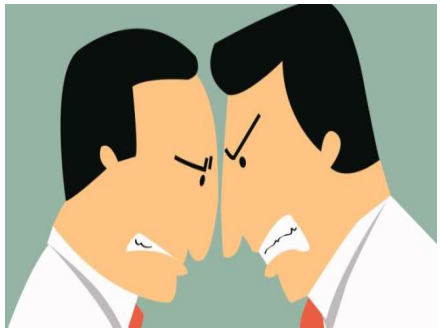
- **Major complications**, including delirium, pneumonia, and heart failure, were represented in 52% of this cohort (Flikweert et al. 2018) impacting on patient recovery

- **Readmission rates range** 10%–15% at 30 days post discharge, and in patients who are readmitted, the mortality rate is almost double at 12 months post hip fracture (Ali and Gibbons 2017).

B2 Complex care needs after discharge

??? Secondary fracture prevention





Different opinions

“Chaotic ” pathway !!!!

B3. Care Gaps in Fragility Fracture patients

- **Absence of Integrated person-centred health services** involving a shared, coordinated approach that empowers, and engages the patient and their care givers across the continuum of care
  (WHO "Integrated People-Centred Care." 2024).

- **No consistency** within integrated care models to improve transitions of care. This is essential for patients post hip fracture who must navigate multiple transitions of care in their journey to recovery
  (Brown and Menec. "Integrated Care Approaches Used for Transitions From Hospital to Community Care: A Scoping Review." *Canadian Journal on Aging* **37**, no. 2: 145–170.).

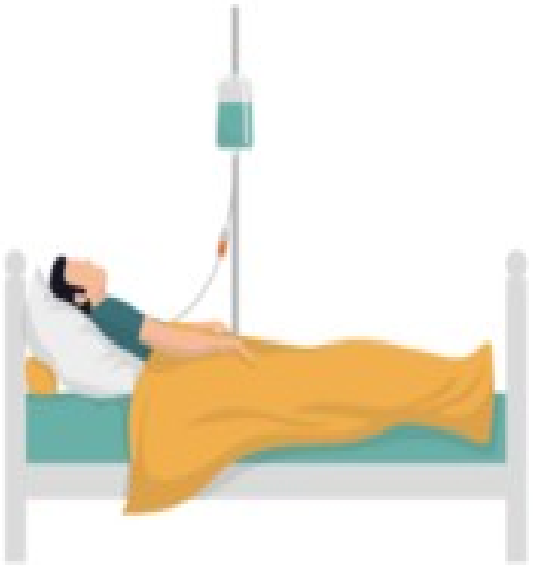
- **No universally agreed** model of care to cover the whole patient journey post hip fracture, and often the expectation for FU is directed through GP settings for ongoing coordination of care
  (Meehan et al. 2018. "Integrated Care Approaches Used for Transitions From Hospital to Community Care: A Scoping Review." *Canadian Journal on Aging* **37**, no. 2: 145–170.).

C1. Models Case Management

- The Brokerage (coordinate services – deal with simple cases- respect patient autonomy)
- Clinical (usually performed by nurses offer therapies – regular visits etc)
- The Strengths-Based Clinical (build upon pt strengths and preferences)
- Intensive (high quality services for short time in the rehabitation process)

Hertz, K., and J. Santy-Tomlinson. 2024. Fragility Fracture and Orthogeriatric Nursing. Springer Nature.

C2.Orthogeriatric Care Model



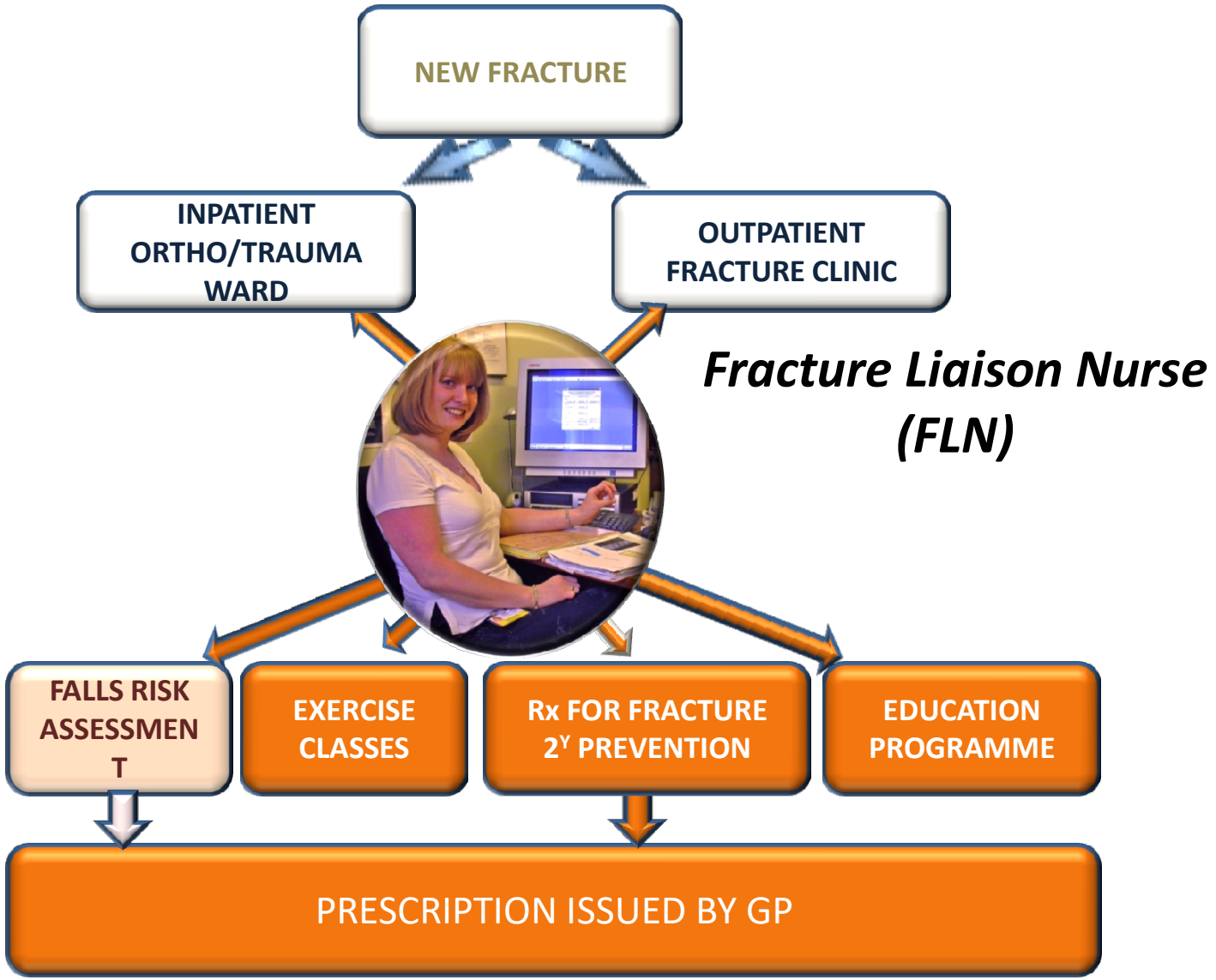
EMERGENCY PHASE

- Accurate diagnosis
- Adequate pain control
- Treatment decision
- Stabilize medically

PR

- R
- S
- S

C3.Fracture Liaison Service for Life long Secondary prevention



McLellan et al OI 2003, 14:1028-

D1. Our experience
1st Attempt to establish FLS in Athens

Arch Osteoporos (2017) 12:3
DOI 10.1007/s11657-016-0299-7

SHORT COMMUNICATION

Evaluation of the first fracture liaison service in the Greek healthcare setting

Polyzois Makras[1] · Maria Panagoulia[2] · Andriana Mari[3] · Stavroula Rizou[4] · George P. Lyritis[4]

Region of Attica 4,2 million people

8yrs ago- One Hospital - 2yrs duration, RN coordinator, lead endocrinologist

- ✓ 211 approached – 116 consent **(54%),**
- ✓ and **18,6%** came to one yr FU,. Stopped.

Gaps:

- The perception that a fracture is not a life-threatening condition,
- Lack transportation especially public- Heavy traffic
- The Surgeon was not involved .
- Coordinator - Part time volunteer

D2. 2nd Attempt to establish FLS at nation level

Archives of Osteoporosis (2020) 15:12
https://doi.org/10.1007/s11657-019-0675-1

ORIGINAL ARTICLE

Experience gained from the implementation of the fracture liaison service in Greece

Polyzois Makras[1,2] · George C. Babis[3] · Efstathios Chronopoulos[2,3] · Theofilos Karachalios[4] · Konstantinos Kazakos[5] · Dionysios Paridis[6] · Michael Potoupnis[7] · Anastasios-Nektarios Tzavellas[7,8] · Christos Valkanis[5] · Christos Kosmidis[2,9]

Six yrs ago, 2yrs duration- 4 orthopaedic Clinics….. **Surgeon Involvement** a bit of improvement but.. Stopped)

Only 1/3 of the patients agreed to participate**, nearly all completed the study.**

Gaps:

- The perception that a fracture is not a life-threatening condition,
- Surgeon involvement increased adherence to treatment
- Lack of funding
- Coordinator - Part time volunteer

E1. Patients expect from EHDS

A Digital health system that could:

- Educate patients and their family members, during the hospital period, and the care pathway.
- Create Personalized care models

- Implement of a tele-rehab program at home, track patients' progress over time, and connect them with other services.

- Empower patients and care givers – via Effective Follow Up Communication - Care Continuum to Support a more holistic **bio-psycho-social** model of care.
- Provide a Red line for patients and care givers

E2. HCPs expect from EHDS

- Identification ALL Fragility Fracture pts from all sources Orthopaedics, Radiology, Endocrinology, GPs etc
- Improved communication – Hospital - GPs and patients
- Pragmatic recommendations and guidelines for each Country and possibly Region - feedback

- Interoperability of IT system enabling efficient communication with the national FLS database
- Stable IT systems – Smooth transitions - No need of retraining
- Data retrieval from other sources and data entrance – summaries (AI?)

F. Conclusions

Patient and care givers feel anxiety, stress and uncertainty after hospital discharge and they need **interdisciplinary care** and a **sound plan.**

- This plan should be:
  - simple, affordable with 24/7 availability,
  - guarantee care continuity
  - check lists and KPIs to improve compliance
- Data collection and machine learning would make **the system** dynamic, flexible and adaptable to patient needs

The doctors need:

- Step by step adaptation and training BUT NOT retraining
- To spent time with patient **(hold patient's hand)**