Development of patient level outcomes: KPIs for FLSs for the IOF

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427 FLS, 46 countries, 6 continents

- FLS in N. America = 39
- FLS in LATAM = 66
- FLS in Europe = 208
- FLS in MENA region = 9
- FLS in APAC + S. Africa = 105

June 15, 2020
How to get mapped - 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

https://youtu.be/gpAAvvukjQw VIDEO!
AIM:

1. Set the standard for FLS (13 criteria)
2. Guidance
3. Benchmarking and Quality improvement

➢ Available in 11 different languages

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
- Slovak
- Spanish
- Polish
13 Criteria and Standards

<table>
<thead>
<tr>
<th>1. Patient Identification</th>
<th>Standard 1 definition: Fracture patients are identified to enable delivery of secondary fracture prevention</th>
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<td>2. Patient Evaluation</td>
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<td>3. Post Fracture Assessment Timing</td>
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<td>Patient Identification</td>
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<td>Patients identified, are tracked</td>
<td>Patients identified, tracked &amp; independently reviewed</td>
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</table>
The FLS should be effective at organisational level.
Fracture Liaison Services

- Identify
- Investigate
- Initiate
- Monitor

Not Education
Not leaflets
Not Referring or asking others to do extra work
Not every FLS is automatically effective

Berwick: triple aim
1. Be Effective
2. Be Efficient
3. Deliver Patient Experience
The FLS should be effective at organisational level (BPF)

Is it effective at patient level? (KPI)
Key performance indicators at patient level

• Show the current performance for key FLS steps

• Prioritise what to improve

• Understand how to improve
Question:

• The obvious KPI for an FLS is re-fracture rates is it?
Key performance indicators

- Meaningful
- Measurable

- Fracture rates
- Re-fracture rates

- Number and % on anti-osteoporosis medication at 4 and 12 months

......from date fracture diagnosed in healthcare system
KPI

• WHY we need KPI

• HOW the KPI work

• What is the next step
FLS = Complex clinical pathway

Health Care system

Identify at risk patients

Systematic investigation and risk assessment

Appropriate Treatment initiation

Primary care

Ongoing treatment and fracture monitoring

Healthcare savings

Fewer Care Home admissions

Fewer Secondary care admissions

Lower re-fracture

Fewer patients needing family support

Fewer operations

Fewer patients in emergency room
How to measure if an FLS is working?
Number of non-spine fractures submitted

Expected local case load

Local audit
Population data
X5 Hip fracture admissions

Marsh RCP 2015
Question:

• So if an FLS captures only hip fractures, KPI 1 would necessarily be 20% at best? What is the message here?
Number of Index spine fractures submitted

Local Hip fracture admissions

Require different pathway
Clinical vs. Reported vs. Opportunistic radiological
Local audit, Population data, Hip fracture admissions
Will be high in year 1 then reduce
75% of hip fractures
Question:

- In my hospital where there is a vertebral FLS based on systematic reviews of chest X-rays, the number of prevalent vert fractures detected after age 50 is greater than the No of hip fractures admissions, so a ratio > 1 😊. Is that good or an artefact?
fracture diagnosis to assessment less than 12 weeks

All submitted patients

Imminent fracture risk is high
Upto 50% of re-fractures within 2 years
fracture diagnosis to DXA less than 12 weeks

All submitted patients

Does every patient need a DXA to start therapy
Over 75 yr
Over 65 with hip or spine
FRAX
Question:

• This criteria depends more on the availability of DXA in a certain hospital / region, than on the effectiveness of the FLS itself is it?
Falls assessment

All submitted patients

Falls risk
Falls cause
Local/ regional/ national recommendations
Question:

• Falls assessment goes from simple falls risk questionnaires to complex instrumental evaluations. What is the minimum standard evaluation here?
Recommended Anti-osteoporosis Medication

All submitted patients

Calcium and vitamin D therapy alone is not enough
Question:

• For some patients treatment recommendation may be that treatment is NOT recommended...yet that recommendation wouldn’t be taken into account here. Why?
Recorded monitoring within 16 weeks of fracture

All patients recommended anti-osteoporosis therapy

Low adherence – initiation of recommendations
Imminent risk of fracture is high
Question:

- What do you recommend for monitoring? Patients call? Doctor? What should be monitored?...
Strength/ balance started by 16wk post fracture

All patients recommended anti-osteoporosis therapy

Evidence based exercise is needed
May exclude hip fracture patients
Restrict to those aged 75+ years
Anti-osteoporosis medication started by 16wk post fracture

All patients recommended anti-osteoporosis therapy

Re-fracture risk high
Oral therapy take time to reduce fracture risk
Question:

• Why not recommend medication started, at least prescribed, before discharge? (as we know recommendations to treating physicians, GPs are not effective)
Anti-osteoporosis medication
52wk post fracture

All patients recommended anti-osteoporosis therapy

Measuring adherence is challenging in real world setting
Includes patient report, prescription, clinical review
Number of KPI with >80% complete data

10 KPI

Without good quality data, benchmarking is pointless
Indicator Standards: nothing is 100%

• < 50%

• 50-80%

• >80%

AN FLS needs to achieve this level to be effective
Question:

• Without an FLS the criteria of effectiveness above will reach about 0%...so why say that effective is $> 80\%$? Would 30% or 50% not be already better than nothing?
I have an FLS commissioned and it is working well

*Do we need to audit?*

- > 80%> Effective/ Maintain
- > 50 - 80%> Keep Improving
- < 50 %> Priority

FLSDB clinical report 2017
### Potential patient impact over 5 years

If all patients in England received a comparable service to the highest treating FLS:

21,848 fractures would be prevented - including 9157 hip fractures.

Saving £151 million from just hip fractures.

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### Table: Hip Fracture Case Details and FLS Characteristics

<table>
<thead>
<tr>
<th>FLS name</th>
<th>Number of cases submitted</th>
<th>Number of fields (out of 29) with 20% or greater missing data</th>
<th>Hip case ascertainment – %</th>
<th>Non-hip case ascertainment – %</th>
<th>Within 90 days (Diagnosis to Assessment) – %</th>
<th>Within 90 days (Diagnosis to DXA) – %</th>
<th>Bone therapy missing – %</th>
<th>Falls assessment done or referred – %</th>
<th>Patients followed up (of those prescribed bone therapy or referred for further clinical opinion/GP) – %</th>
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Berwick: triple aim
1. Effective
2. Efficient
3. Patient Experience

1. Identify priority
2. Develop improvement plan
3. Deploy improvement plan
4. Re-Measure

Most change will not result in improvements, but can not improve without change

Balancing measures

Langley 2009
PDSA1: Change form

PDSA2: Change upload

PDSA3: Modify new nurses induction

Investigation and treatment - Oxfordshire Fracture Prevention Service

Date Index Fracture Diagnosed Year & Month

% Patients

FLS assessment <=90 days %
FLS assessment <=90 days National %
Patients offered Bone Protection medication %
Bone Protection Meds National %
Patients offered/undergo a DVA %
Patients offered/referred for falls risk assessment %
Falls assessment National %
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<th>Site of fracture</th>
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<th>Date of FLS assessment</th>
<th>Date of DXA scan</th>
<th>Falls assessment performed</th>
<th>AOM recommended</th>
<th>Date if patient Died</th>
<th>Date of first follow-up</th>
<th>AOM initiated</th>
<th>Strength? balance initiated</th>
<th>Date of second follow-up</th>
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| 6: AOM recommendation | | | ✓ | | | | | | | | | ✓
| 7: First follow-up | ✓ | | | | | ✓ | ✓ | ✓ | | | | |
| 8: AOM initiation | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| 9: Strength/Balance initiation | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| 10: AOM persistence | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| 11: Data completeness | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
KPI: Ensuring FLSs deliver on their expectations

• WHY we need KPI

• HOW the KPI work

• What is the next step
Q & A
THANK YOU

On behalf of IOF, we thank you for your participation in this webinar