

Fracture Liaison Service (FLS) Data Analysis

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GUBMES

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Fracture Liaison Service Database (FLS-DB)

- Bone health check
± DXA scan
- Falls Risk assessment
- Medication
- Ongoing Monitoring



- “The Fracture Liaison Service Database (FLS-DB) is a clinically-led, web-based national audit of secondary fracture prevention in England and Wales commissioned by the Healthcare Quality Improvement Partnership (HQIP) as part of the Falls and Fragility Fracture Audit Programme (FFFAP).”
- Data for patients diagnosed with fragility fracture within the NHS was gathered from January 2016 and the latest data published is from December 2019.

Patient records

Of the 69,771 patient records, the site of index fracture was reported to be:



10% spine



19% hip



71% other

Aim and Objectives

- Aim: use the data from the transparency csv file to identify trends during the data collection period.
- This can be the proportion of patients: who got FLS diagnosis (within 7, 30, 90, or more than 90 days), who got DXA scans for diagnosis, who got prescribed bone strengthening medicine (e.g. Risedronate), who got a falls risk assessment, and who got follow up appointments.
- “The audit's objective is to improve the quality of the clinical care delivered to patients who sustain fractures through effective measurement against standards, feedback to providers and quality improvement initiatives.”

Key Findings From the Work in this Field

Key findings and quality improvement

For the second year in a row, the number of FLSs participating in the FLS-DB has increased, as has the number of services achieving amber (orange) and green grades of performance as illustrated in [Fig 2](#). The report on 2018 data recommended that FLSs look into pathways where identification was below 80%; 2019 data found an increase in patients identified.

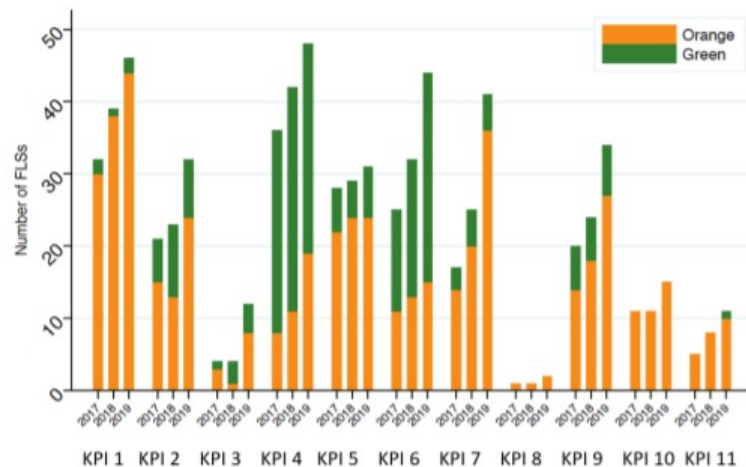


Fig 2. Change in number of FLS KPI achieved from 2017 to 2019

Colour coding of green as 80% or more achievement, amber as 50–79% achievement and red as <50% achievement; except for: i) KPI 1 where data completeness is measured by the number of KPIs with more than 80% complete data, red shows 0–4 KPIs, amber shows 5–7 KPIs and green shows 8–10 KPIs and ii) KPI 7 where green shows >50% and red <50% achievement. Red colour coding has not been included in this figure.

In our last report, a high-level recommendation was made for FLSs to focus on at least one KPI for service improvement, while maintaining existing performance in other KPIs. Out of 59 FLSs actively participating in both 2018 and 2019, 52 (88%) FLSs improved in at least one KPI compared with 33% of participating FLSs from 2018. A comparison for the 65 FLSs with data for both 2018 and 2019 is shown in [Fig 3](#).

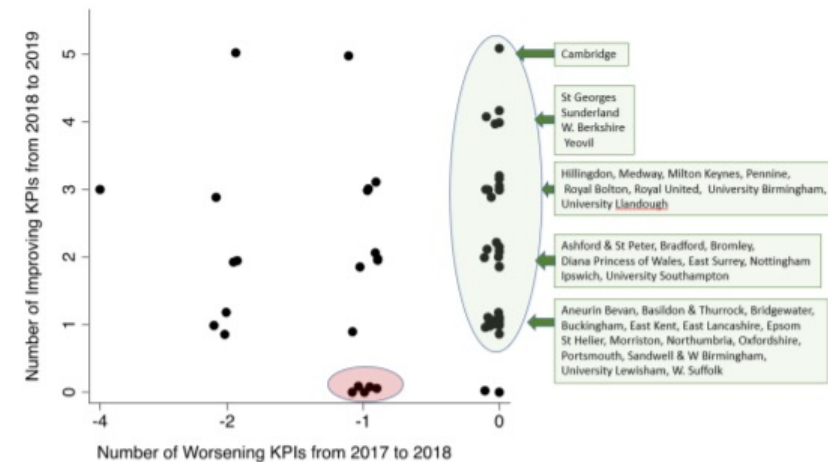


Fig 3. Comparison Improvement vs worsening of KPI achievement between 2018 and 2019 by FLS.

Green circle highlight: 35 FLSs improved a grade without getting worse in other KPIs (individual FLSs listed). Red circle highlight: five FLSs got worse without improving a grade in other KPIs: Chesterfield Hospital NHS Foundation Trust, Guy's and St Thomas' NHS Foundation Trust, Poole Hospital NHS Foundation Trust, North Tees and Hartlepool NHS Foundation Trust and Queen Elizabeth Hospital Lewisham. (In this instance, a grade refers to the red, amber, green 'grading' system in the results (Table 2)).

Data

What period does the data cover?

Round 1 - January 2016 to June 2016

For round one of the FLS-DB audit data was extracted from the FLS database in October 2016, and covers patients diagnosed with a fragility fracture within the NHS between January and June 2016.

[FLS-DB Annual Report Transparency Data 16.39 KB](#)

[FLS-DB Data Definitions 12.52 KB](#)

Round 2 - January 2016 to December 2016

For round two of the FLS-DB audit data was extracted from the FLS database in June 2017, and covers patients diagnosed with a fragility fracture within the NHS between January and December 2016.

[FLS-DB Annual Report Transparency Data 28.55 KB](#)

[FLS-DB Data Definitions 14.97 KB](#)

Round 3 - January 2017 to December 2017

For round three of the FLS-DB audit data was extracted from the FLS database in June 2018, and covers patients diagnosed with a fragility fracture within the NHS between January and

FLS Name	Number of cases submitted	Uploaded in bulk (Y/N)	Number of fields (out of 29) with 20% or more missing data	Number of fields (out of 29) with 50% or more missing data	From NHFD - Hip	From NHFD - Non-hip	From FLS-DB - Hip	From FLS-DB - Non-hip	FLS-DB case identification % - Hip	FLS-DB case identification % - Non-hip	Diagnosis to FLS assessment within 7 days (n)	Diagnosis to FLS assessment within 7 days (%)
Barnet Hospital Fracture Liaison Service	156	N	3	0	212	848	3	151	1.4	17.8	32	
Bromley Healthcare Falls and Fracture Prevention Service	283	Y	2	1	175	700	12	271	6.9	38.7	44	
Broomfield Hospital	382	N	9	9	229	916	63	283	27.5	30.9	306	
Dorset County Hospital	536	N	20	15	166	664	135	397	81.3	59.8	48	
East Lancashire Hospitals NHS Trust	273	N	3	1	248	992	4	261	1.6	26.3	74	
East Surrey Hospital	233	N	2	2	252	1,008	3	228	1.2	22.6	0	
FLS West Berkshire	358	Y	3	3	198	792	10	347	5.1	43.8	113	
Guy's and St Thomas' NHS Foundation Trust	284	Y	21	21	107	428	16	267	15	62.4	0	
King's College Hospital & Denmark Hill site	79	N	7	7	73	292	*	70	*	24.3	65	
Medway NHS Foundation Trust	436	N	12	12	156	624	92	332	59	53.2	0	
Milton Keynes University Hospital Foundation Trust	134	Y	12	10	134	536	8	119	6	22.2	39	
Musgrove Park Hospital	811	Y	0	0	200	800	213	598	106.5	74.8	281	
North Bristol NHS Trust	1,111	Y	9	2	264	1,056	249	861	94.3	81.5	317	
North Tees and Hartlepool NHS Foundation Trust	553	N	9	5	206	824	109	440	52.9	53.4	225	
Nottingham University Hospitals	1,250	Y	11	11	377	1,508	291	959	77.2	63.6	1,195	
Oxfordshire Fracture Prevention Service	1,210	Y	7	5	358	1,432	196	1,013	54.7	70.7	282	
Peterborough and Stamford Hospitals NHS Foundation Trust	260	N	2	0	216	864	12	246	5.6	28.5	32	
Poole General Hospital	69	Y	15	15	472	1,888	*	68	*	3.5	0	
Portsmouth and Southeast Hampshire	936	Y	16	13	386	1,544	46	880	11.9	57	815	
Queen Elizabeth Hospital, Woolwich	109	N	7	7	170	680	12	94	7.1	13.8	0	
Royal Surrey County Hospital	251	N	1	0	152	608	12	235	7.9	38.7	60	
Royal Wolverhampton Hospital NHS Trust	285	N	16	11	245	980	19	264	7.8	26.9	169	
Sandwell and West Birmingham Hospitals NHS Trust	86	Y	11	10	191	764	5	9	2.6	1.2	0	

- 83 columns
- 38 services

Useful Links

- FLS database annual report 2021:
<https://www.rcplondon.ac.uk/projects/outputs/fls-database-annual-report-2021>
- Fracture Liaison Service Database (FLS-DB) home page:
<https://www.rcplondon.ac.uk/projects/fracture-liaison-service-database-fls-db>
- Explaining the purpose of the audit:
<https://www.rcplondon.ac.uk/projects/outputs/fracture-liaison-service-database-fls-db-methodology>
- UK Government website where data was also published: <https://data.gov.uk/dataset/119e6e10-a50d-4617-8e23-56cf8e40fd65/the-fracture-liaison-service-database-fls-db-jan-to-december-2018>
- Data for different years:
<https://www.rcplondon.ac.uk/projects/outputs/fls-db-transparency-data>