Royal College of Physicians

Fracture Liaison Service Database (FLS-DB)

Fracture Liaison Service Database

Annual report benchmarking FLS improvement and performance in 2019: Pre-COVID

Data from January to December 2019

April 2021

In association with

BGS British Geriatrics Society Improving healthcare for older people

British Orthopaedic Association

Royal Osteoporosis Society Better bone health for everybody

Public Health England

Commissioned by

HQIP Healthcare Quality Improvement Partnership

Report at a glance – key messages

A fracture liaison service (FLS) provides secondary prevention for individuals presenting with fragility fractures (defined as a fracture following a fall from standing height or less). These services systematically identify and assess the patient's risk of subsequent fractures, and treat and refer to other services to reduce that risk.

Service performance

We congratulate the achievement of the **67 FLSs* across England and Wales** that submitted 2019 data which contributed towards this report.

88%

of FLSs improved in at least one key performance indicator (KPI) in 2019.

There has been an improvement in most KPIs, but further work is needed for effective and efficient service delivery.

Key findings	Key recommendation
 **Monitoring contact** 2019 has seen monitoring improve for the first time in 3 years, with 41% of patients who have been prescribed osteoporosis treatment being contacted at 12–16 weeks post fracture. This is up from 36% in 2018, 38% in 2017 and 41% in 2016.	Without effective adherence, an FLS cannot reduce fracture risk or deliver expected improvements in patient outcomes. FLSs should use 16-week monitoring to personalise treatment recommendations according to patients' needs and optimise adherence at 1 year.
 **Identification** 9/67 (13%) FLSs submitted over 80% of the expected caseload. This is a decrease in comparison with 2018 (10/62, 16%). Identification of spine fractures decreased to 24% in 2019 from 15% in 2018.	Review performance across other parts of the FLS to establish whether vertebral fracture identification is the next priority for the FLS. If so, further recommendations on page 9 of the report.
 **Quality improvement** 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 in 2018.	Ensure that FLS staff time is dedicated to delivering at least one complete FLS quality improvement cycle in 2021–22. The aim should be to improve in one KPI while maintaining existing performance in other KPIs.

Patient records

69,771

patient records were included in the 2019 audit, an 18.3% increase from 58,979 in 2018.

The number of participating FLSs increased from 63 to 67.

Patient records

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

*Page 18 gives details about the FLSs in England and Wales.

Benchmarking FLS improvement and performance in 2019: Pre-COVID

Falls and Fragility Fracture Audit Programme
The Fracture Liaison Service Database (FLS-DB) is run by the Care Quality Improvement Department (CQID) of the Royal College of Physicians (RCP). It is part of the Falls and Fragility Fracture Audit Programme (FFFAP), one of three workstreams alongside the National Hip Fracture Database (NHFD) and the National Audit of Inpatient Falls (NAIF).

Healthcare Quality Improvement Partnership
The FLS-DB is commissioned by the Healthcare Quality Improvement Partnership (HQIP) as part of the National Clinical Audit and Patient Outcomes Programme (NCAPOP). HQIP is led by a consortium of the Academy of Medical Royal Colleges, the Royal College of Nursing, and National Voices. Its aim is to promote quality improvement in patient outcomes, and in particular to increase the impact that clinical audit, outcome review programmes and registries have on healthcare quality in England and Wales. HQIP holds the contract to commission, manage and develop the NCAPOP, comprising around 40 projects covering care provided to people with a wide range of medical, surgical and mental health conditions. The programme is funded by NHS England, the Welsh government and, with some individual projects, other devolved administrations and crown dependencies.
www.hqip.org.uk/national-programmes.

The Royal College of Physicians
The RCP is a registered charity that aims to ensure high-quality care for patients by promoting the highest standards of medical practice. It provides and sets standards in clinical practice, education and training, conducts assessments and examinations, quality assures external audit programmes, supports doctors in their practice of medicine, and advises the government, the public and the profession on healthcare issues.

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Crown Informatics
The FLS-DB data collection webtool is provided by Crown Informatics (**http://crowninformatics.com**)

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Foreword by the Royal Osteoporosis Society

As the new chief executive of the Royal Osteoporosis Society (ROS), I'm delighted to welcome you to the fifth Fracture Liaison Service Database (FLS-DB) audit report on patient data in England and Wales. The ROS is the only UK-wide charity that supports people living with osteoporosis, their families, friends and carers. As such, we're pleased to continue to support the Falls and Fragility Fracture Audit Programme (FFFAP), with our ROS volunteers representing the patient voice on the FFFAP Patient Panel.

The 2019 audit data demonstrates ongoing service improvement, with a rise in the overall number of fragility fracture patients identified by fracture liaison services (FLSs). Notably, vertebral fractures are the most common type of osteoporotic fracture. Studies demonstrate that 12% of women aged 50–79 have vertebral fractures, the majority of which are osteoporotic in origin. This increases to 20% in women over the age of 80. Traditionally, however, up to 70% of all vertebral fractures go undiagnosed. Critically, vertebral fractures are a powerful predictor of future osteoporotic fractures, in particular hip fractures, for which there is an associated increased relative risk (a ratio used to compare two groups of people's likelihoods of an outcome) of 2.8. Therefore, if vertebral fractures go undiagnosed and those with vertebral fractures go untreated, this has significant potential consequences, for the individual, their family and for healthcare services.

The increased identification of vertebral fractures by FLSs, as demonstrated in the 2019 data, reflects the recent spotlight on vertebral fracture recognition and reporting following publication of the Royal Osteoporosis Society's *Clinical Guidance for the Effective Identification of Vertebral Fractures* in late 2017 and the Royal College of Radiologist's national audit on the reporting of incidentally found vertebral fractures in routine radiology practice in 2019. The charity also placed a strong emphasis on vertebral fracture identification and the development of vertebral fracture management pathways for FLSs in our healthcare professional training events throughout 2019. A number of FLSs involved in the RCP's 2019 quality improvement collaborative focused their quality improvement initiatives on this area, and we were delighted to see that improved vertebral fracture identification and management was the focus of a number of submitted abstracts for the 2020 ROS conference (subsequently Osteoporosis Online).

As part of our ongoing quality improvement focus, the ROS service improvement team continues to work with FLSs to ensure patient pathways meet clinical standards. We also strive to ensure that the voice of those with lived experience of osteoporosis is heard by encouraging and supporting our volunteers to be actively involved in quality improvement initiatives. We welcome opportunities to work with our colleagues in the field. Please do get in touch if we can collaborate on further work.

I can't end, of course, without acknowledging the ongoing impact of the COVID-19 pandemic which will no doubt have a significant impact on the 2020 data. The pandemic has changed the way we all deliver services and, increasingly, new models of FLS delivery are emerging. It's more important than ever to ensure quality meets national standards and that new inequalities are controlled and, where possible, prevented. Thank you to all the teams working to improve patient outcomes throughout these difficult times.

Craig Jones
Chief Executive of the Royal Osteoporosis Society

Patient involvement

Feedback shows that Fracture Liaison Services (FLSs) are much valued by patients and carers, contributing as they do to the provision of a joined up preventative approach to reducing the risk of further fractures in those who have already sustained one. Members of the Patient and Carer Panel are actively involved in the Fracture Liaison Service Database (FLS-DB) and contribute their insights and experiences to this.

Improving the quality of the service received by patients is implicit in what FLSs do. More widely, there is increasing emphasis on and recognition of the value of involving patients and carers in all aspects of healthcare redesign and improvement if aspirations to provide a service that is safe and of high quality are to be realised. Indeed, the RCP's recently published 2019 annual report includes the following statement 'Patients and carers offer a unique perspective and a vital contribution to supporting and influencing improvements in healthcare'.

I have first-hand experience of the power, relevance and value of the lay voice being integral to efforts to improve quality of a service. As part of the multidisciplinary team – comprising physicians, nurses, managers, allied health professionals and patients and carers – which led work to improve access and care of elderly people in an acute trust in mid Yorkshire, my role was to support the local lay people and act as a critical friend to all team members. This took place as part of the RCP's Future Hospital Programme in which patient experience was seen to be as fundamental as clinical outcomes in determining the quality and success of the improvement work undertaken.

On many occasions I saw how questions from the patient and/or the carer in the team provoked much needed discussion about proposed plans which led to rethinking an assumption about what might be 'best' for the patient. This was also prominent in the secondary fracture prevention quality improvement collaborative run by RCP quality improvement (RCPQI) and the Falls and Fragility Fractures Audit Programme (FFFAP) team in 2019. The broader the perspectives involved, the more likely you will have covered risks and areas for consideration ahead of piloting projects.

'Quality' is not always easy to define; quality means different things to different people. If the views and perceptions of the users of the service being provided are not included in how that service is designed and delivered, then even the best-intentioned attempts to make improvements are unlikely to be fully effective. Improving the quality of a service involves a number of different stakeholders; very often from a number of different professions. The increasing inclusion of service users in shaping the decisions and activities that impact on their lives is so important if services are to have the best possible chance of making an impact. In the best services this approach (users as integral stakeholders and equal partners with healthcare professionals) is becoming more and more commonplace and, indeed, automatic in service planning and redesign. As it becomes universally adopted, patients and carers can have confidence not only in the high quality of services such as FLSs but also in the consistency of service quality across all trusts and localities.

Lynne Quinney
FFFAP Patient and Carer Panel member

Introduction

The purpose of a fracture liaison service (FLS) is to reduce recurrent hip and other fractures by ensuring delivery of effective secondary prevention. The benefits of this can be seen in patient outcomes, and in savings for the NHS and social care savings (FLS-DB, 2019). The Fracture Liaison Service Database (FLS-DB) began collecting patient data in 2016, and is still the only national secondary fracture prevention patient-level audit in the world.

Currently, 72 FLSs are actively participating and have submitted data from over 1/4 million patients in England and Wales.

This annual report describes the secondary fracture prevention received by patients 50 years and older in England and Wales in 2019. The quality of patient care is profiled using 11 FLS-DB key performance indicators (KPIs), complemented by the data presented in the benchmark tables and run charts publicly available on the FLS-DB website. These KPIs were derived from National Institute for Health and Care Excellence (NICE) technology appraisals and guidance on osteoporosis and falls, alongside the Royal Osteoporosis Society (ROS) clinical standards for FLSs and quality standards for osteoporosis and prevention of fragility fractures.

We would like to thank the FLS community for their continued support and efforts despite the obvious pressures the NHS has faced this year.

Patient resources

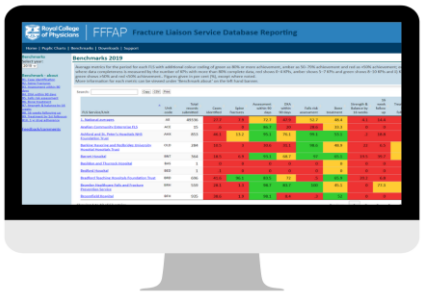
The last report found that fewer than 25% of patients who started on treatment were still receiving it a year after their fracture. Treatments must be taken consistently and appropriately over many years to be effective, but many patients who are given oral treatments find them difficult to take and subsequently stop taking them. The audit's Patient and Carer Panel led the development of a focused patient resource to expand the *Strong bones after 50* guide, specifically around staying on treatment. The document aims to address some common issues raised by patients and signposts to further information.

FLS improvement repository

We have created a platform for services to share improvement stories across the audit's KPIs. We would like to thank those FLSs who have provided case studies so far. If you would like to submit a case study, please complete the case study template and send it to flsdb@rcplondon.ac.uk.

The improvement repository also provides links to resources such as NHS Improvement's statistical process control tool to measure the effectiveness of changes as a result of quality improvement projects.

Benchmarks



The FLS-DB provides feedback in several formats, including annual reports, patient resources, the improvement repository and run charts. Since the last report we have created live benchmarking tables for 10 of the 11 KPIs (data completeness is not included). This enables FLSs, their commissioners, patients and other stakeholders to compare results and monitor their performance throughout the year across the KPIs.

Methods

This report describes the assessment and treatment of osteoporosis in 69,771 patients who sustained a fragility fracture in 2019 and the results of an audit of the facilities in the FLSs looking after them. Details of the methodology used in the audit, including the analysis plan, are available on the RCP website.

Summary of recommendations

All adults aged 50 and over with a diagnosed fragility fracture should have a falls and bone health assessment soon after the fracture (NICE CG161, NICE QS86). A decision should also be made about whether treatment is necessary. These basic steps will enable the prevention of avoidable fractures and the associated lasting repercussions such as suffering pain, loss of independence and increased healthcare use. Sustainable local healthcare systems should be in place to ensure patients receive this level of care within the NHS. Local commissioners and FLSs should use this report to improve the quality of post-fracture care in existing FLSs through service improvement and/or additional commissioning to reduce the number of preventable fragility fractures in this high-risk patient group.

Recommendations for fracture liaison services

General recommendation

1. All commissioned FLSs should ensure that a governance meeting, either standalone or as part of a wider group, takes place to discuss FLS outcomes (KPI measures) at least once every 6 weeks. This should include active involvement by patients.

Key performance indicators

Monitoring contact

Without effective adherence, an FLS cannot reduce fracture risk or deliver expected improvements in patient outcomes.

2. FLSs should use the 16-week follow up to personalise treatment recommendations according to patients' needs and optimise adherence at 1 year.

Identification

3. Review performance across other parts of the FLS to establish whether vertebral fracture identification is the next priority for the FLS.

   If vertebral fractures are a priority, then while waiting for the vertebral fracture sprint audit (VFSA) results:

   a Setup a multidisciplinary team including patients
   b Map current patient journey

Quality improvement

4. Ensure that FLS staff time is dedicated to delivering at least one complete FLS quality improvement cycle in 2021–22. The aim should be to improve in one KPI while maintaining existing performance in other KPIs.
5. Prioritise and co-produce local FLS improvement plans by engaging with patients and incorporating their feedback into the plans.
6. Attend at least one online local, regional or national training session to share experiences and improve the efficiency of participating in the FLS-DB in 2021.
7. Services in England should engage with at least one relevant Getting it Right First Time workstream. If already undertaken, they should demonstrate implementation of recommendations relevant to FLS settings.
8. Use existing resources to learn how to deliver effective and efficient service improvements. These resources include:
   - The Royal Osteoporosis Society Service Improvement Team
   - FLS-DB improvement repository

Recommendations for commissioners and local health boards

Commissioners and local health boards:

9. If you do commission an FLS in your locality you should:
- a Ensure the FLS participates actively with the FLS-DB.
- b Ensure the FLS has the capacity and capability to actively measure and improve performance.
- c Annually review the FLS reporting indicators in the commissioned specification and adjust as needed to map to the key performance indicators used by the FLS-DB.
- d Work with the ROS Service Improvement Team to ensure your FLS is appropriately staffed for the population served.

10. If you do not commission an FLS in your locality, you should:
- a Contact the ROS Service Improvement Leads (fls@theros.org.uk) by September 2021, for support to quantify the impact of effective secondary fracture prevention in your local population and to ensure that the priority for FLS commissioning reflects local population need for the next commissioning round.
- b Host a key stakeholder meeting inviting patient representatives, as well as members of the ROS, to design the local specification for an effective FLS using the KPIs from the FLS-DB.

Recommendations for executive teams for NHS trusts and health boards

The FLS-DB is a mandatory National Clinical Audit and Patient Outcomes Programme (NCAPOP) audit. As part of the NHS contract in England and Wales, NHS trusts/health boards are required to participate in NCAPOP audits that are relevant to the services they provide. This includes all trusts and health boards with adult trauma and orthopaedic and older people's services. Those trusts and health boards that are not currently participating in the FLS-DB audit should be able to demonstrate an action plan to address this by September 2021. Figure 1 shows a map of the participation in the FLS-DB and coverage of the services, helping to identify whether you do or do not have an FLS covering your local population.

Executive teams:

11. If you do have an FLS covering your local fracture population, you should be able to demonstrate your support for the FLS to:
- a Actively and effectively participate in the FLS-DB audit by September 2021.
- b Complete training in quality improvement and have the capacity to deliver at least one cycle of quality improvement in 2021.
- c Ensure quality improvement is part of job descriptions for FLS staff.

12. If you do not have a commissioned FLS covering your local fracture population, you should:
- a Contact the ROS Service Improvement Leads (fls@theros.org.uk) for support to prepare a business case for the 2021/2022 commissioning round.

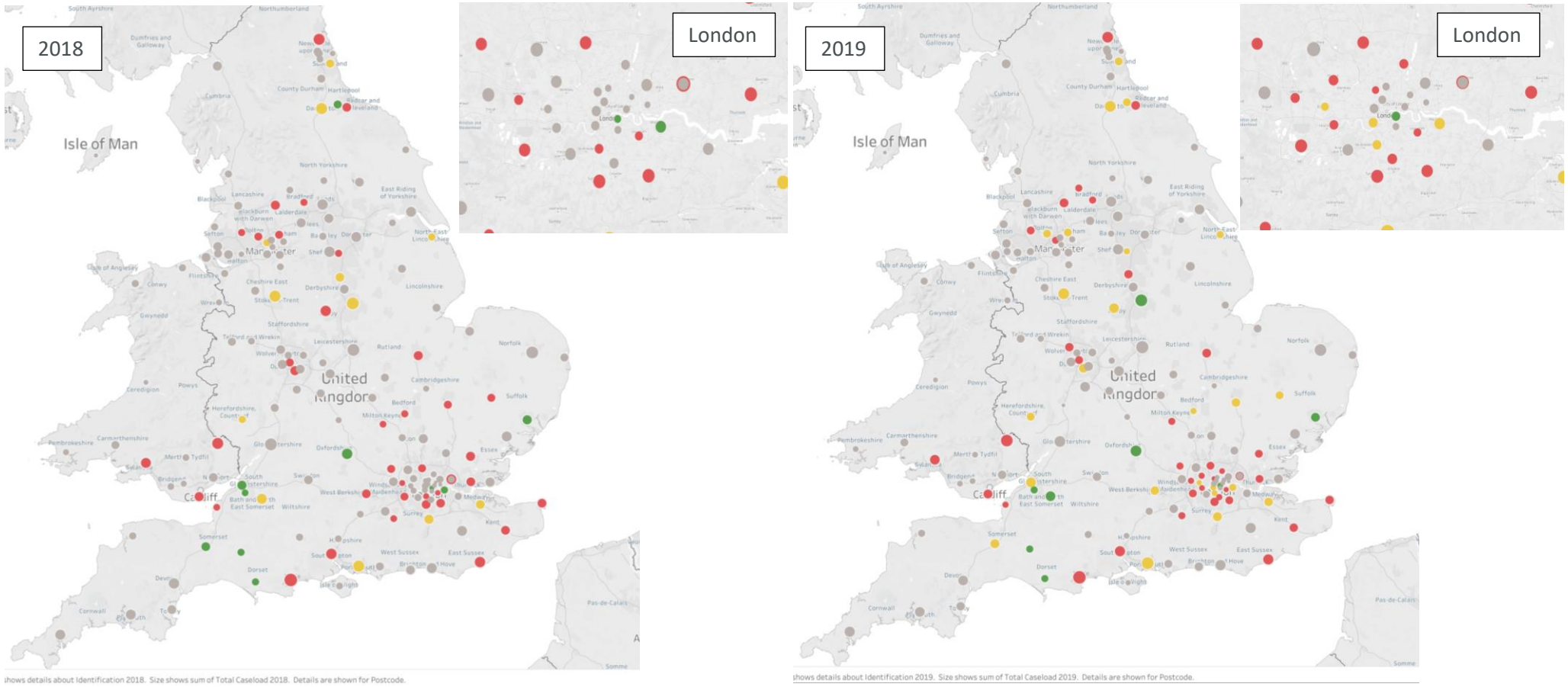


Fig 1. Map of England and Wales showing expected size of local fragility fracture population and achievement of case identification in 2018 and 2019.

Key – hospitals where patients are:

The size of the circle relates to the expected local fragility fracture caseload.

- Not covered by an FLS submitting data or submitting too little data for the FLS-DB to be able to benchmark effectiveness of any potential FLS.
- Covered by an FLS submitting less than 50% of their estimated fragility fracture caseload to the FLS-DB.
- Covered by an FLS submitting 50–79% of their estimated fragility fracture caseload to the FLS-DB.
- Covered by an FLS submitting at least 80% of their estimated fragility fracture to the FLS-DB.

National performance against KPIs: summary

All KPIs measure performance against technology assessments, guidance on osteoporosis and clinical standards for FLSs from the NICE, the ROS and the National Osteoporosis Guideline Group (NOGG). Documents mapping the datasets to evidence-based guidance are available on the RCP website.

KPI 3 – Identification (spinal fracture)

In the previous report (2018 data) the denominator used for the national average for spinal fracture identification was the hip fracture submitted by the service. The denominator has been updated in this report as the annualised hip fracture number from the national hip fracture database in the previous 12 months.

Table 1. KPIs for the FLS-DB for all patients with an index fragility fracture date in 2018 and 2019. FLS level data for the KPIs is available on the charts and reports webpage.

KPI	2018	2019
KPI 1 – Data completeness Average data completeness across KPI 2–11	44%	69%
KPI 2 – Identification (all fragility fractures) The percentage of patient records submitted compared with the local estimated caseload	43%	49%
KPI 3 – Identification (spinal fractures) The percentage of patients with a spine fracture as their index fracture site compared with local estimated caseload	15%	24%
KPI 4 – Time to FLS assessment The percentage of patients who were assessed by the FLS within 90 days of their fracture	67%	69%
KPI 5 – Time to DXA The percentage of patients who had a DXA ordered or recommended and were scanned within 90 days of fracture	46%	46%
KPI 6 – Falls assessment The percentage of patients who received a falls assessment or were referred or recommended for a falls assessment	54%	59%
KPI 7 – Bone therapy recommended The percentage of patients who were recommended anti-osteoporosis medication	50%	52%

KPI	2018	2019
KPI 8 – Strength and balance training The percentage of non-hip fracture patients over 75 who had started strength and balance training within 16 weeks of their fracture	5%	6%
KPI 9 – Monitoring contact 12–16 weeks post fracture The percentage of patients who were followed up within 16 weeks of their fracture	36%	41%
KPI 10 – Commenced bone therapy by first follow up The percentage of patients who had commenced (or were continuing) anti-osteoporosis medication within 16 weeks of their fracture	25%	26%
KPI 11 – Adherence to prescribed anti-osteoporosis medication at 12 months post fracture The percentage of patients who had confirmed adherence to a prescribed anti-osteoporosis medication at 12 months post fracture	23%[1]	19%[2]

[1] Patients first seen in 2017 and followed up in 2018
[2] Patients first seen in 2018 and followed up in 2019

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.

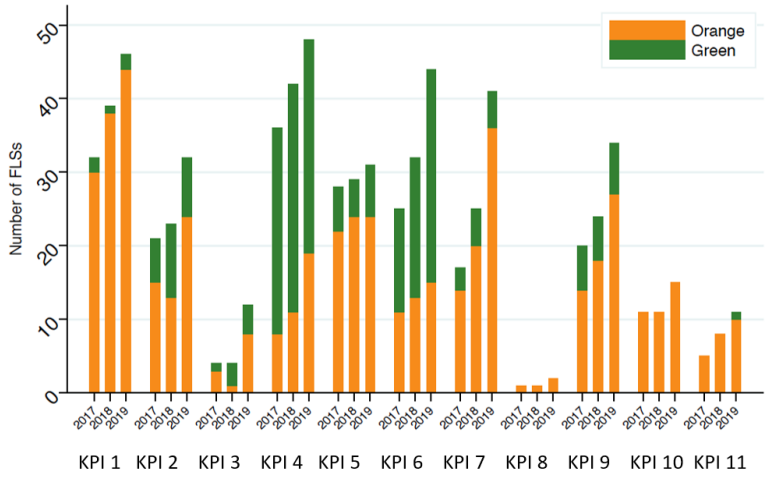


Fig 2. Change in number of FLS KPI achieved from 2017 to 2019
Colour coding of green as 80% or more achievement, amber as 50–79% achievement and red as <50% achievement; except for: i) KPI 1 where data completeness is measured by the number of KPIs with more than 80% complete data, red shows 0–4 KPIs, 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.

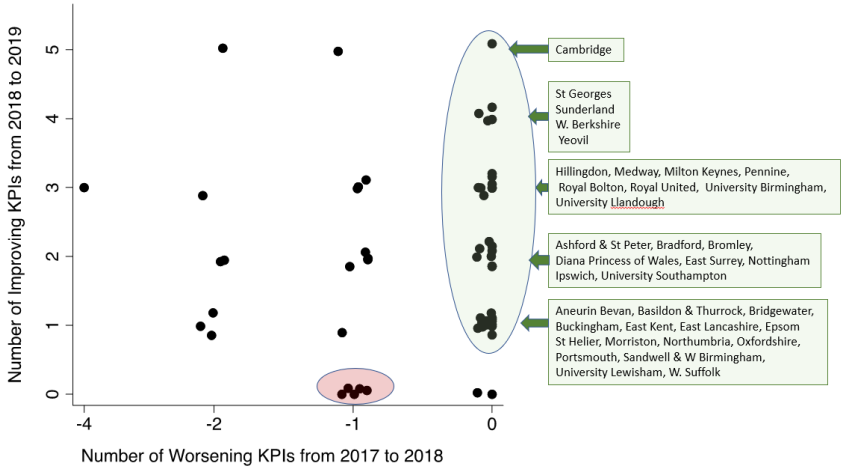


Fig 3. Comparison Improvement vs worsening of KPI achievement between 2018 and 2019 by FLS.
Green circle highlight: 35 FLSs improved a grade without getting worse in other KPIs (individual FLSs listed). Red circle highlight: five FLSs got worse without improving a grade in other KPIs: Chesterfield Hospital 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)).

Quality improvement collaborative

In 2019 the FFFAP team worked with the RCP Quality Improvement programme team to run an Institute for Healthcare Improvement Breakthrough Collaborative Series for FLSs. The collaborative consisted of three 1-day learning sessions, as well as supporting action periods and coaching calls. The 10 teams worked across: identification (KPI 2); vertebral fracture identification (KPI 3); time to FLS assessment (KPI 4); monitoring contact between 12–16 weeks (KPI 9); and commenced bone therapy by first follow up (KPI 10). Participation in the collaborative resulted in dramatic improvements in performance as shown in Fig 4.

Common barriers faced across the participating teams have been collated, alongside tips on how to overcome them. The FLS-DB will be producing quality improvement (QI) resources for FLSs to help plan and implement a QI project.

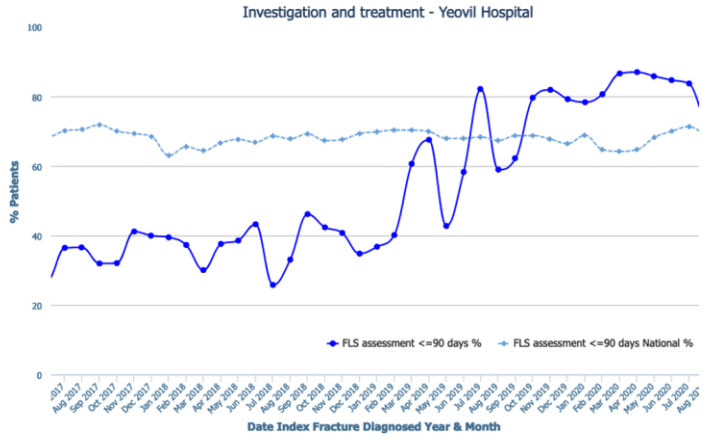
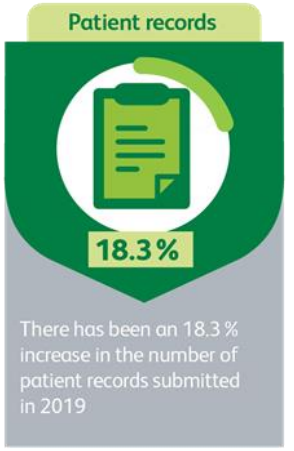


Fig 4. Improvement in KPI 4 by Yeovil District Hospital

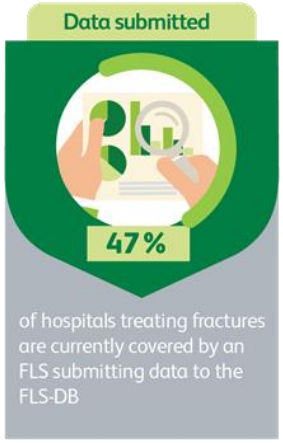
Data completeness and demographics

There has been an 18.3% increase in the number of patient records submitted in 2019 (n=69,771) compared with 2018 (n=58,979). Of those, 1,683 were re-fractures. Given the pressures services were facing during 2020, ensuring this level of data completeness should be commended.

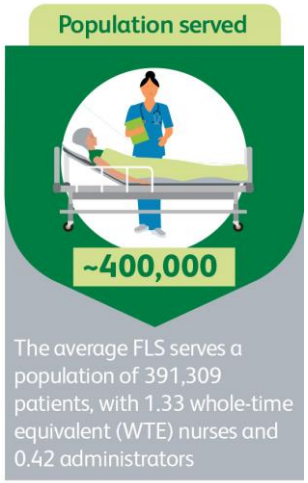


Seventy-five FLSs have submitted patient data since the audit opened in January 2016. This includes 72 FLSs which submitted patient-level data in 2019, compared with 63 in 2018.

Five FLSs submitted fewer than 50 records and were therefore excluded from the remainder of the report, giving 69,771 cases from 67 FLSs used in this report (with two FLSs contributing 2018 data, but no longer participating in 2019). The 69,771 cases submitted are 21.3% of the expected number of individuals with fragility fractures (327,525 based on 171 hospitals from England and Wales submitting 65,505 hip fracture cases to the National Hip Fracture Database (NHFD) admitted to hospital in 2019) and compares with 18% in 2018. Of the 171 NHFD hospitals in England and Wales, 47% are currently covered by an FLS submitting data to the FLS-DB compared with 43% in 2018.



Of the 69,771 patients reported on, there were 19% hip, 10% spine and 71% other fragility fracture as their index fracture (see Appendix 1). Just over half (54%) of patients were under 75 years old.



The average number of patients submitted in 2019 per FLS was 2,168. Of the 63 FLSs that completed the facilities audit, the average population served was 391,309, with 1.33 whole-time equivalent (WTE) nurses and 0.42 administrators per FLS. Nine FLSs were community care-based services and one FLS was primary care based. Forty-eight percent of FLSs had received a block payment, 30% were funded as part of the general hospital contract and 10% were on a fixed-term contract requiring a rebid or renewal. Sixteen FLSs directly prescribed osteoporosis medication with others recommending therapy to other clinicians to prescribe.

Most FLSs (65%) had multiple ways of monitoring patients. There were 57% of FLSs where FLS coordinators were responsible for monitoring, 58% where the task was carried out by specialist nurses, 35% delegated monitoring patients to primary care and 35% by a rheumatologist/orthogeriatrician. Over one third of FLSs delegate patients to primary care for monitoring, highlighting the need for a strong relationship required between primary and secondary care to ensure a satisfactory patient experience and adherence to medication, when prescribed. The FLS-DB team have been working closely with the British Medical Association prescribing committee and Royal College of General Practitioners to produce resources to help patients start and stay on treatment.

57% of FLSs that completed the facilities audit had a governance meeting at least every 6 months.

Case studies across KPIs are available online, on the FLS-DB improvement repository, providing examples of improvement projects that have and have not worked. We encourage FLSs to submit case studies. To do so please complete the form on the improvement repository and send to flsdb@rcplondon.ac.uk.

COVID-19

The pandemic has had a major impact on the delivery of healthcare across the UK. The requirement for NHS trusts to submit to national audits was suspended between 01/04/2020 and 31/07/2020, however we were heartened to see services continued commitment to data entry over this period. At the time of writing this report, a second wave of infections was underway. The focus of the FLS-DB is to ensure patients at risk of future fractures receive basic management to strengthen bones and to prevent fractures and hospital admissions, and this has never been more relevant. Local healthcare providers will need to deploy staff and resources to meet local acute demands, balanced with the need to reduce the burden of fractures in the short and medium term.

A snapshot survey was distributed to FLS-DB users in April 2020 to find how COVID-19 had affected the service delivery. The survey found that 58% of services (52 responses) were experiencing low capacity mainly due to redeployment and 13% of DXA services (11 responses) were suspended. Some services referred to a ‘vast’ reduction in patients due to self-isolation. 21% of services (19 responses) did not have a way to track ‘missed’ patients. Around 50% of services (45 responses) had a way of

capturing 'missed' patients. Methods for capturing missing patients included: telephone consultations; virtual assessments using FRAX; using A&E dashboards to monitor the number of fracture patients; using e-trauma for virtual fracture clinics. Whilst the remaining 30% (28 responses) either did not provide an answer or were in the process of developing a system.

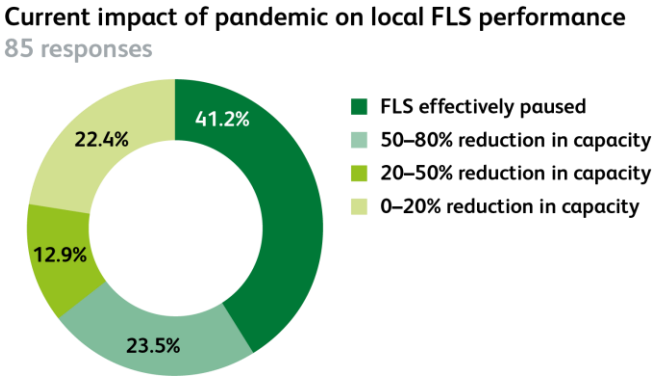


Fig 5. Response from COVID Survey in April 2020

We are grateful to the teams that supplied case studies of how their services adapted to change in the pandemic.

Critically, the KPIs embedded within the FLS-DB will enable FLSs and decision makers to measure changes in their services in real time as they rebuild to maintain and improve patients' outcomes.

Future developments

Vertebral fracture sprint audit

Identifying spinal fractures systematically has proven challenging for FLSs, as shown in this report (Table 1). The pilot for the vertebral fracture sprint audit (VFSA) was run in January 2020, to test the dataset and how many reported vertebral fractures were a practical number to identify. The full audit has been delayed until January 2021. This audit will measure how well FLSs can identify spine fractures from radiology reports against the ROS clinical guidance for the effective identification of vertebral fracture and record the resources required to do this. These outputs will provide essential data to support FLSs' plans to include patients with spine fractures identified using radiological methods in their service specification.

Supporting patients' adherence to therapy in the community

The FFFAP Patient and Carer Panel are working with the team on a resource for patients returning to primary care from secondary care FLSs. In partnership with the British Medical Association GP prescribing committee and Royal College of General Practitioners, a bone health card is available online.

Best practice discharge letters for patients and GPs have also been produced and are available for use.

Following on from the success of the National Audit of Inpatient Falls resources for hospital governors and other healthcare champions, a similar resource aimed at those who are looking to influence and improve the care and management of patients who have sustained a fragility fracture will be produced in 2021.

Recognising the role of practice and community pharmacists, we are piloting medicines optimisation quality improvement for osteoporosis, linking primary care searches for patients who have discontinued therapy with pharmacist-led interventions. The outputs will be sent to local FLSs to facilitate their monitoring.

Results

We welcome the eight new services actively participating in the audit in 2019: Airedale NHS Foundation Trust, Chelsea and Westminster Hospital NHS Foundation Trust, Croydon University Hospital, Ealing Hospital, Enfield Bone Health and Fracture Liaison, Northwick Park Hospital, Royal Wolverhampton Hospital NHS Trust and West Middlesex Hospital.

In Table 2, FLS achievement is shown for each KPI with colour coding of: green as 80% or more achievement, amber as 50–79% achievement and red as <50% achievement; except for KPI 7 where green shows >50% and red <50% achievement. KPI 11 2018 data relates to cases seen in 2017 which have been followed up in the calendar year of 2018; whereas KPI 11 2019 data relates cases seen in 2018 followed up in 2019. The asterisks (*) represent small numbers which have been supressed to maintain confidentiality.

Table 2. Achievement of individual KPIs in 2018 and 2019 by FLSs

	Number of cases submitted		KPI 1. KPIs with >80% complete data (%)		KPI 2. Identification – all fractures (%)		KPI 3. Identification – spine fractures (%)		KPI 4. Time to FLS assessment within 90 days (%)		KPI 5. Time to DXA within 90 days (%)		KPI 6. Falls assessment done or referred (%)		KPI 7. Bone therapy recommended as appropriate (%)		KPI 8. Strength and balance commenced (%)		KPI 9. Recorded follow up 12–16 weeks post index fracture (%)		KPI 10. Patient commenced bone therapy at 16 weeks (%)		KPI 11. Patient confirmed adherence to bone therapy at 12 months* (%)	
FLS name	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019
Airedale NHS Foundation Trust		105		80		7		*		98		61		92		50		0		94		43		
Aneurin Bevan University Health Board	60	501	20	50	2	13	2	18	*	14	29	48	0	8	40	50	0	0	0	23	0	19	0	0
Ashford and St Peter's Hospitals NHS Foundation Trust	815	719	70	80	44	37	19	17	95	96	75	72	100	100	59	55	*	*	43	52	33	37	1	*
Barking Havering and Redbridge University Hospitals NHS Trust	218	64	30	70	8	3	2	2	21	22	65	24	28	89	20	66	*	0	43	*	32	0	7	*
Barnet Hospital	310	418	70	100	16	22	7	9	94	91	68	73	97	92	67	66	8	*	77	65	55	44	73	65

	Number of cases submitted		KPI 1. KPIs with >80% complete data (%)		KPI 2. Identification – all fractures (%)		KPI 3. Identification – spine fractures (%)		KPI 4. Time to FLS assessment within 90 days (%)		KPI 5. Time to DXA within 90 days (%)		KPI 6. Falls assessment done or referred (%)		KPI 7. Bone therapy recommended as appropriate (%)		KPI 8. Strength and balance commenced (%)		KPI 9. Recorded follow up 12–16 weeks post index fracture (%)		KPI 10. Patient commenced bone therapy at 16 weeks (%)		KPI 11. Patient confirmed adherence to bone therapy at 12 months* (%)	
FLS name	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019
Basildon and Thurrock Hospital	131	186	20	30	6	9	10	13	0	0	88		0	0	13	98	*	0	0	0	0	0	0	0
Bedford Hospital	577	701	60	80	40	56	39	51	86	65	0	74	*	3	25	46	0	*	83	61	51	43	0	59
Bradford Teaching Hospitals NHS Foundation Trust	834	607	60	100	50	40	164	124	68	89	53	73	0	*	57	58	13	11	53	59	31	30	53	65
Bromley Healthcare	586	571	70	90	29	32	*	2	98	99	88	88	100	100	49	55	0	0	75	77	55	57	0	9
Broomfield Hospital	490	502	60	60	20	27	*	*	99	98	3	3	0	0	99	100	0	0	0	0	0	0	0	0
Buckinghamshire Healthcare NHS Trust	524	498	60	80	30	29	8	7	100	100	67	62	94	96	85	90	0	0	3	*	3	*	0	*
Cambridge University Hospitals NHS Foundation Trust	946	1289	80	90	48	60	*	*	79	97	68	74	37	64	42	52	23	39	93	96	70	57	26	76
Chelsea and Westminster Hospital NHS Foundation Trust		789		30		69		20		54		18		44		46		*		23		4		
Chesterfield Hospital NHS Foundation Trust	1448	706	20	30	68	35	3	6	4	2	0		0	0	60	60	0	0	0	0	0	0	0	0
Croydon University Hospital		178		80		13		5		78		54		86		53		*		43		37		
Diana Princess of Wales Hospital	805	854	20	50	52	54	12	7	64	67	47	41	32	48	43	62	*	*	27	20	25	18	30	11
Dorset County Hospital	1502	1365	70	80	91	88	46	68	98	77	24	35	40	65	50	58	46	21	89	83	72	61	13	65

	Number of cases submitted		KPI 1. KPIs with >80% complete data (%)		KPI 2. Identification – all fractures (%)		KPI 3. Identification – spine fractures (%)		KPI 4. Time to FLS assessment within 90 days (%)		KPI 5. Time to DXA within 90 days (%)		KPI 6. Falls assessment done or referred (%)		KPI 7. Bone therapy recommended as appropriate (%)		KPI 8. Strength and balance commenced (%)		KPI 9. Recorded follow up 12–16 weeks post index fracture (%)		KPI 10. Patient commenced bone therapy at 16 weeks (%)		KPI 11. Patient confirmed adherence to bone therapy at 12 months* (%)	
FLS name	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019
Ealing Hospital**		482		80		57		*		40		1		100		15		25		67		50		
East Kent Hospitals University NHS Foundation Trust	719	1291	50	50	16	29	8	10	15	29	22	40	66	81	35	15	0	0	0	0	0	0	0	0
East Lancashire Hospitals NHS Trust	435	797	70	80	18	34	1	5	93	97	68	79	83	90	25	31	0	*	61	56	28	39	41	26
East Surrey Hospital	1537	2068	30	80	62	80	10	35	35	43	39	81	46	48	12	42	*	9	29	21	19	16	1	20
East Sussex Healthcare	754	1098	60	50	24	35	2	6	30	6	66	57	97	68	58	49	0	0	50	86	0	*	0	0
Enfield Bone Health and Fracture Liaison		208		90		11		4		51		47		84		36		*		49		38		
Epsom St Helier University Hospitals NHS Trust	799	459	50	90	40	22	9	3	88	89	9	*	100	99	60	79	19	17	50	38	38	36	32	*
Guy's and St Thomas' NHS Foundation Trust	1221	1566	30	40	173	152	123	310	95	87	0	*	54	39	19	19	0	0	0	0	0	0	0	0
James Cook University Hospital	673	1045	40	70	29	43	11	29	80	59	22	41	72	59	32	32	*	3	37	54	35	51	0	27
Medway NHS Foundation Trust	1053	1065	30	60	51	53	8	11	31	66	18	62	57	62	41	30	0	*	26	27	17	15	0	0
Milton Keynes University Hospital Foundation Trust	198	283	40	50	16	19	14	14	73	77	7	31	66	66	48	51	*	21	30	53	29	43	29	*
Morriston Hospital	1028	860	60	90	39	31	6	4	99	99	29	*	28	38	80	75	11	15	100	100	40	21	53	52

	Number of cases submitted		KPI 1. KPIs with >80% complete data (%)		KPI 2. Identification – all fractures (%)		KPI 3. Identification – spine fractures (%)		KPI 4. Time to FLS assessment within 90 days (%)		KPI 5. Time to DXA within 90 days (%)		KPI 6. Falls assessment done or referred (%)		KPI 7. Bone therapy recommended as appropriate (%)		KPI 8. Strength and balance commenced (%)		KPI 9. Recorded follow up 12–16 weeks post index fracture (%)		KPI 10. Patient commenced bone therapy at 16 weeks (%)		KPI 11. Patient confirmed adherence to bone therapy at 12 months* (%)	
FLS name	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019
Musgrove Park Hospital	1903	1982	60	80	83	79	18	77	66	71	37	69	94	97	65	46	4	17	33	65	27	53	32	29
North Bristol NHS Trust	2093	2283	50	80	82	79	12	11	88	93	12	39	44	55	46	50	0	3	15	35	9	17	0	0
North Tees and Hartlepool NHS Foundation Trust	1561	1407	40	40	81	74	15	19	100	100	64	63	69	65	57	63	0	0	0	0	0	0	0	0
North West Anglia NHS Foundation Trust	642	744	70	100	27	30	1	*	87	68	65	36	98	96	33	28	0	*	20	60	18	38	2	20
Northwick Park Hospital**		460		80		35		*		33		*		100		15		57		66		54		
Nottingham FLS	2342	3336	50	70	56	80	0	*	100	99	4	*	29	55	93	86	*	*	1	0	1	0	0	1
Oxfordshire Fracture Prevention Service	3222	3518	60	70	99	99	38	67	80	79	59	62	91	99	71	61	4	*	61	75	54	66	39	42
Pennine Musculoskeletal Partnership LTD	645	1125	40	70	34	56	22	60	40	41	54	64	0	39	22	25	24	18	71	78	39	49	0	45
Poole Hospital NHS Foundation Trust	1373	1590	70	70	29	33	3	6	18	9	23	13	69	65	26	29	8	10	76	71	52	42	38	48
Portsmouth Southeast Hampshire	1920	2167	30	40	54	55	6	6	96	96	33	5	3	1	43	62	*	0	16	5	*	*	0	0
Queen Elizabeth Hospital Lewisham	1335	1166	20	30	86	76	8	7	*	0	0	0	*	2	18	19	0	0	0	0	0	0	0	0
Royal Bolton Hospital	616	1462	60	80	32	75	6	48	97	96	59	60	50	74	65	78	28	20	68	70	49	54	0	53

	Number of cases submitted		KPI 1. KPIs with >80% complete data (%)		KPI 2. Identification – all fractures (%)		KPI 3. Identification – spine fractures (%)		KPI 4. Time to FLS assessment within 90 days (%)		KPI 5. Time to DXA within 90 days (%)		KPI 6. Falls assessment done or referred (%)		KPI 7. Bone therapy recommended as appropriate (%)		KPI 8. Strength and balance commenced (%)		KPI 9. Recorded follow up 12–16 weeks post index fracture (%)		KPI 10. Patient commenced bone therapy at 16 weeks (%)		KPI 11. Patient confirmed adherence to bone therapy at 12 months* (%)	
FLS name	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019
Royal Derby Hospital	1424	1639	50	40	47	55	8	23	72	53	96	91	0	17	73	68	0	0	0	54	0	5	0	0
Royal Surrey County Hospital	537	657	70	60	38	39	20	20	97	97	71	46	89	93	47	56	15	7	71	61	56	49	1	0
Royal United Hospital	2089	2680	50	50	71	93	84	150	94	99	45	51	67	85	63	63	0	*	6	23	4	2	38	3
Royal Wolverhampton Hospital NHS Trust		886		30		38		9		2		*		0		65		0		0		0		
Salford Royal NHS Foundation Trust	920	298	10	70	61	19	10	5	*	5	5	*	*	86	3	31	0	0	*	9	*	*	0	3
Sandwell and West Birmingham Hospitals NHS Trust	323	136	50	70	19	8	14	8	27	39	5	10	99	99	48	68	9	0	36	*	30	*	0	7
St George's Hospital	493	660	30	40	46	60	66	82	0	37	39	0	99	95	49	55	0	*	39	66	0	25	0	0
Stockport FLS	73		30		4		2		79		0		62		21		0		*		*		0	
Sunderland Royal Hospital	998	1049	70	90	51	55	17	33	99	99	75	74	74	82	44	52	*	*	77	80	49	54	0	0
The Haywood Hospital	1872	2162	70	80	51	60	44	62	71	62	79	80	81	75	46	41	2	*	80	82	45	45	68	59
The Hillingdon Hospitals NHS Foundation Trust	241	559	60	100	22	45	2	17	93	94	51	81	95	97	49	69	50	55	52	64	38	37	40	45
The Ipswich Hospital NHS Trust	2000	1946	20	50	80	82	15	14	42	31	45	20	47	44	48	57	*	2	18	29	16	26	13	12

	Number of cases submitted		KPI 1. KPIs with >80% complete data (%)		KPI 2. Identification – all fractures (%)		KPI 3. Identification – spine fractures (%)		KPI 4. Time to FLS assessment within 90 days (%)		KPI 5. Time to DXA within 90 days (%)		KPI 6. Falls assessment done or referred (%)		KPI 7. Bone therapy recommended as appropriate (%)		KPI 8. Strength and balance commenced (%)		KPI 9. Recorded follow up 12–16 weeks post index fracture (%)		KPI 10. Patient commenced bone therapy at 16 weeks (%)		KPI 11. Patient confirmed adherence to bone therapy at 12 months* (%)	
FLS name	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019
The Northumbria Hospital (NSECH)	388	1458	70	100	11	41	0	3	90	93	80	81	0	7	41	32	*	3	46	49	18	32	0	46
The Rotherham NHS Foundation Trust	632	890	60	80	43	74	20	51	68	48	72	41	30	30	57	58	0	*	9	7	8	5	0	7
United Lincolnshire Trust	177		40		4		1		0		8		6		6		0		0		0		0	
University Hospital Lewisham	298	308	50	80	32	39	0	8	71	73	77	79	18	20	30	28	*	*	63	68	51	53	42	37
University Hospital Llandough	826	782	30	60	34	29	5	5	98	100	1	*	45	46	45	69	13	2	39	25	25	16	57	81
University Hospital of North Durham and Darlington Memorial Hospital	2196	2218	30	70	60	61	2	4	8	7	4	10	4	12	12	17	*	19	63	68	46	58	52	47
University Hospitals Birmingham NHS Foundation Trust	1093	1431	70	100	47	60	*	*	93	94	74	71	94	93	47	46	35	29	43	51	35	39	32	32
University Hospitals Bristol NHS Foundation Trust	1549	1523	70	60	111	101	40	42	97	78	66	45	40	72	62	59	7	*	28	10	20	6	21	7
University Hospitals Southampton NHS Foundation Trust	1313	1304	30	60	42	41	4	2	21	100	26	31	10	39	58	56	0	0	38	26	34	19	11	14
West Berkshire FLS	730	1099	70	90	34	51	16	40	98	96	83	81	99	99	57	68	15	16	53	76	47	55	50	54
West Middlesex Hospital		316		60		29		9		79		44		87		69		32		57		27		
West Suffolk NHS Foundation Trust	874	1050	70	60	46	61	12	16	66	60	76	67	55	60	53	52	15	36	86	90	71	76	71	51

	Number of cases submitted		KPI 1. KPIs with >80% complete data (%)		KPI 2. Identification – all fractures (%)		KPI 3. Identification – spine fractures (%)		KPI 4. Time to FLS assessment within 90 days (%)		KPI 5. Time to DXA within 90 days (%)		KPI 6. Falls assessment done or referred (%)		KPI 7. Bone therapy recommended as appropriate (%)		KPI 8. Strength and balance commenced (%)		KPI 9. Recorded follow up 12–16 weeks post index fracture (%)		KPI 10. Patient commenced bone therapy at 16 weeks (%)		KPI 11. Patient confirmed adherence to bone therapy at 12 months* (%)	
FLS name	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019
Weston General Hospital	255	450	60	70	19	34	21	32	92	95	75	80	37	84	52	52	12	5	53	31	26	16	56	27
Wrightington, Wigan and Leigh NHS Foundation Trust	64	98	60	90	4	6	0	0	89	92	64	52	92	95	23	23	0	0	*	39	*	*	0	*
Wye Valley NHS Trust	845	1007	50	50	52	53	2	7	98	100	0	11	73	68	99	97	0	0	0	0	0	0	0	0
Yeovil District Hospital	1454	1493	60	80	100	96	46	54	37	63	28	56	94	93	54	57	4	2	71	76	55	58	41	37
Overall (average)	**N/A**	**N/A**	**44**	**69**	**43**	**49**	**15**	**24**	**67**	**69**	**46**	**46**	**54**	**59**	**50**	**52**	**5**	**6**	**36**	**41**	**25**	**26**	**23**	**19**
Total no. green values	**N/A**	**N/A**	**1**	**31**	**10**	**9**	**3**	**4**	**31**	**29**	**5**	**8**	**19**	**29**	**25**	**43**	**0**	**0**	**6**	**8**	**0**	**0**	**0**	**1**
Total no. amber (orange) values	**N/A**	**N/A**	**38**	**26**	**13**	**23**	**1**	**8**	**11**	**19**	**24**	**23**	**13**	**15**	**N/A**	**N/A**	**1**	**2**	**18**	**26**	**11**	**15**	**9**	**10**
Total no. red values	**N/A**	**N/A**	**22**	**10**	**38**	**35**	**57**	**55**	**19**	**19**	**32**	**34**	**29**	**23**	**36**	**24**	**60**	**65**	**34**	**33**	**46**	**52**	**52**	**42**

**duplicates noted across Ealing and Northwick Park at time of data extraction.

References and bibliography

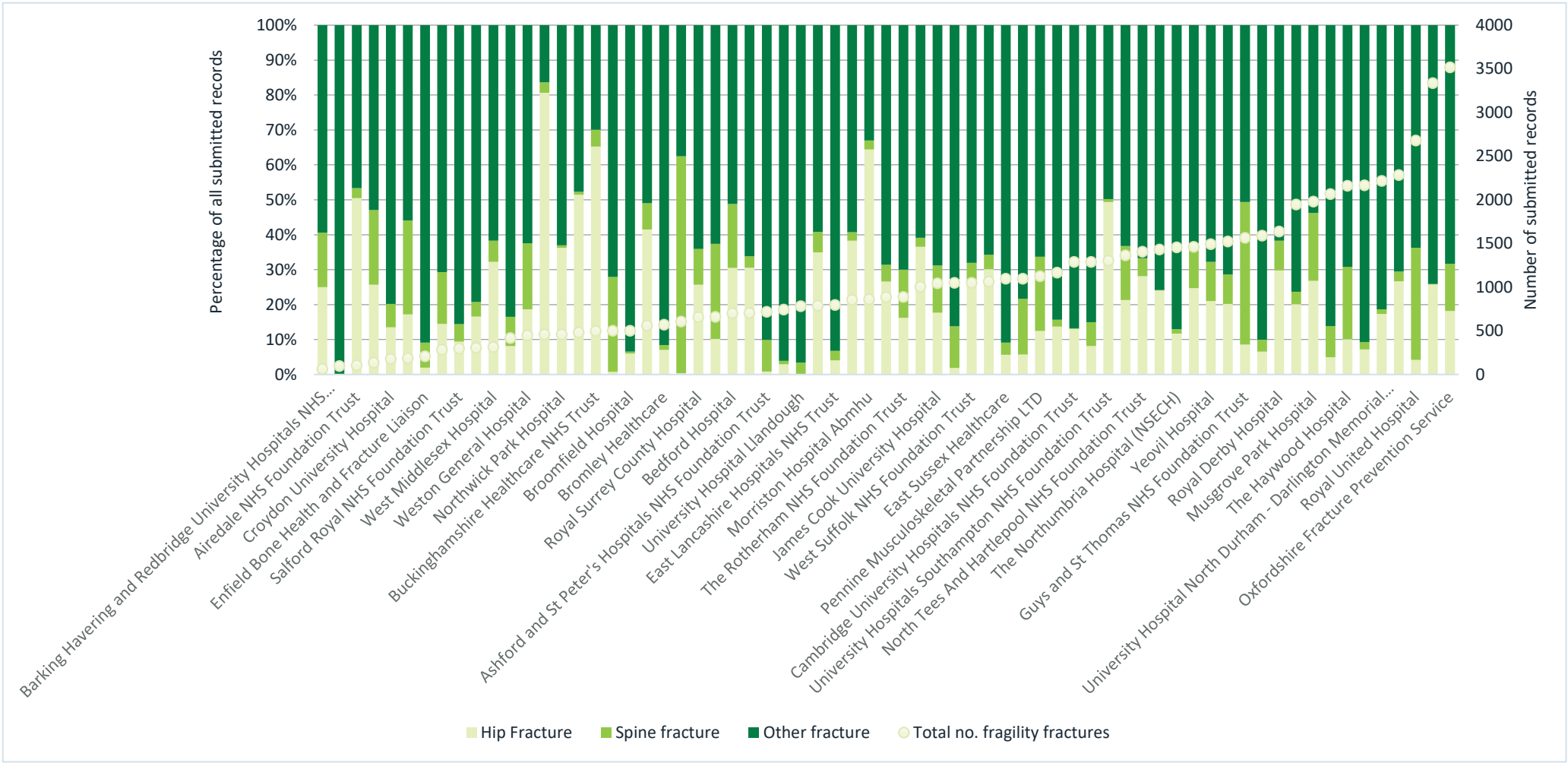
The references cited in this report and bibliography are available online on the RCP website.

Notes on the appendices

Appendix 1. Index fracture site proportion and total number of fragility fracture records submitted by FLSs in 2018

This figure shows the location of the first fracture site (bars) and the total number of cases submitted (blue diamonds) by FLSs. The left vertical axis shows the proportion of patients presented with a hip, spine or other fractures. The right vertical axis shows the total number of cases submitted by each FLS. The figures show that there was a wide variation in the proportion of patients with hip fracture submitted and a low rate of vertebral fractures were identified.

Appendix 1. Index fracture site proportion and total number of fragility fracture records submitted by FLSs in 2019



Appendix 2 – Non-participating trusts and organisations

Trusts / health boards not included in the report (not participating/excluded) are listed below. NHS trusts and organisations where the quality of any local FLS activity could not be audited due to non-participation in the FLS-DB. Non-participation in the audit may be because there is no commissioned FLS or there is a commissioned FLS but it did not participate in the audit in 2019.

Trusts / health boards not participating
Barnsley Hospital NHS Foundation Trust
Barts Health NHS Trust
Betsi Cadwaladr University Health Board
Blackpool Teaching Hospitals NHS Foundation Trust
Bridgewater Community Healthcare NHS Foundation Trust
Brighton and Sussex University Hospitals NHS Trust
Calderdale and Huddersfield NHS Foundation Trust
Countess of Chester Hospital NHS Foundation Trust
Cwn Taf Morgannwg University Health Board
Dartford and Gravesham NHS Trust
Doncaster and Bassetlaw Teaching Hospitals NHS Foundation Trust
Dudley Group NHS Foundation Trust
East and North Hertfordshire NHS Trust

Trusts / health boards not participating	
East Cheshire NHS Trust	
Frimley Health NHS Foundation Trust	
Gateshead Health NHS Foundation Trust	
George Eliot Hospital NHS Trust	
Gloucestershire Hospitals NHS Foundation Trust	
Great Western Hospitals NHS Foundation Trust	
Hampshire Hospitals NHS Foundation Trust	
Harrogate and District NHS Foundation Trust	
Homerton University Hospital NHS Foundation Trust	
Hull University Teaching Hospitals NHS Trust	
Hywel Dda University Health Board	
Imperial College Healthcare NHS Trust	EXCL
James Paget University Hospitals NHS Foundation Trust	
Kettering General Hospital NHS Foundation Trust	
King's College Hospital NHS Foundation Trust	EXCL
Kingston Hospital NHS Foundation Trust	
Lancashire Teaching Hospitals NHS Foundation Trust	
Leeds Teaching Hospitals NHS Trust	
Liverpool University Hospitals NHS Foundation Trust	
Luton and Dunstable University Hospital NHS Foundation Trust	

Trusts / health boards not participating	
Maidstone and Tunbridge Wells NHS Trust	
Manchester University NHS Foundation Trust	
Mid Cheshire Hospitals NHS Foundation Trust	
Mid Yorkshire Hospitals NHS Trust	
Newcastle Upon Tyne Hospitals NHS Foundation Trust	
Norfolk and Norwich University Hospitals NHS Foundation Trust	
North Cumbria Integrated Care NHS Foundation Trust	
North Middlesex University Hospital NHS Trust	EXCL
Northampton General Hospital NHS Trust	
Northern Devon Healthcare NHS Trust	
Pennine Acute Hospitals NHS Trust	
Princess Alexandra Hospital NHS Trust	
Queen Elizabeth Hospital King's Lynn NHS Foundation Trust	
Royal Cornwall Hospitals NHS Trust	
Royal Devon and Exeter NHS Foundation Trust	
Royal Liverpool and Broadgreen University Hospitals NHS Trust	
Salisbury NHS Foundation Trust	
Sheffield Teaching Hospitals NHS Foundation Trust	
Sherwood Forest Hospitals NHS Foundation Trust	
South Warwickshire NHS Foundation Trust	

Trusts / health boards not participating	
Southend University Hospital NHS Foundation Trust	EXCL
Southport and Ormskirk Hospital NHS Trust	
St Helens and Knowsley Teaching Hospitals NHS Trust	
Stockport NHS Foundation Trust	EXCL
Tameside and Glossop Integrated Care NHS Foundation Trust	
Torbay and South Devon NHS Foundation Trust	
University College London Hospitals NHS Foundation Trust	
University Hospitals Coventry and Warwickshire NHS Trust	
University Hospitals of Leicester NHS Trust	
University Hospitals of Morecambe Bay NHS Foundation Trust	
University Hospitals of North Midlands NHS Trust	
University Hospitals Plymouth NHS Trust	
Walsall Healthcare NHS Trust	*
Warrington and Halton Teaching Hospitals NHS Foundation Trust	
West Hertfordshire Hospitals NHS Trust	
Western Sussex Hospitals NHS Foundation Trust	
Whittington Health NHS Trust	
Wirral University Teaching Hospital NHS Foundation Trust	
Worcestershire Acute Hospitals NHS Trust	
Worcestershire Acute Hospitals NHS Trust	

Trusts / health boards not participating

York Teaching Hospital NHS Foundation Trust

EXCL = excluded from report, as site submitted fewer than 50 cases in 2019 at time of data extraction
*Sites with an FLS that have submitted facilities audit data, but no data for patients seen in 2019 at the time of data extraction
(view live data online:
www.fffap.org.uk/FLS/charts.nsf/Benchmarks?ReadForm)

The FLS-DB aims to provide services with the data they need to improve and demonstrate their efficiency.

This report summarises the performance of FLSs in England and Wales.

Get in touch

For further information please contact us – we want to hear from you.

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Royal College of Physicians

Fracture Liaison Service Database (FLS-DB)