



Vertebral Fracture Sprint Audit (VFSA)

User Guide

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Who should participate in this audit?

To be eligible to participate in the audit you need to be registered on the [Fracture Liaison Service Database \(FLS-DB\)](#). This requires having a fracture liaison service (FLS). A FLS is a service that systematically identifies eligible patients aged 50 years and over who have suffered a fragility fracture, treats or refers them to appropriate services with the aim of reducing their risk of subsequent fractures. This does not have to be a formally commissioned service and many FLSs have used their results from the FLSDB to successfully appeal for commissioning. You are not required to identify vertebral (spine) fractures prior to the audit. In such case, we encourage you to approach your Radiology team to help collect this information.

Should we take part if our FLS is not commissioned to see all vertebral fracture patients?

Yes. To reduce fractures in the future, all FLSs will need to be better prepared to include patients with a vertebral fracture as well as other fracture groups. This audit is about gathering your local data to understand the opportunities to include spines in your FLS and to start getting prepared to do this.

Audit standards

VFSA standards are primarily derived from the [Royal Osteoporosis Society \(ROS\) clinical standards for FLSs](#) and [ROS Clinical Guidance for the Effective Identification of Vertebral Fractures](#). The audit's aim is to find whether FLSs are able to identify incidental vertebral fractures from radiology image reports and the resources required in order to do so.

Audit components

The audit will consist of two elements:

Organisational audit

- Service provision and resources used to carry out the audit

Clinical audit

- Includes radiology image reports for patients aged 50 and over;
- Includes patients who have had *any* imaging test that includes the thoracic and/or lumbar spine (further information on types of scans and searches to use for image reports can be found in the section on 'Specific guidance for questions' below);
- Exclusion criteria: Trauma CT series, known disseminated bony metastases or myeloma.

Organisational audit

Each service needs to complete one organisational audit data collection form online which focuses on service level data.

Data entry

This will be available on the fffap.org.uk under the FLS-DB login. Once logged in you will be able to access both the organisational and clinical data on the left-hand ribbon. The proforma for the organisational audit is available to [download](#).

Clinical audit

Incidental vertebral fractures.

Type of data: retrospective

Data collection

The data for the audit are collected from reviewing radiology image reports (for a list of types of scans to include and how to search radiology reports please refer to the section on 'Specific guidance for questions' below). Services that have the facilities to reread scans may use this method (how you have collected the data will be asked in the organisational audit).

Teams are asked to review radiology image reports and/or reread scans preferably until a minimum of 5 reported vertebral fractures are identified within the radiology image or report (whether they have been confirmed as being a vertebral fracture or not).

Data entry

The webtool will be open from 1 January 2021 to 31 2021. However, a word version of the clinical and organisational audit datasets is [available to download](#) and will be sent directly to FLSs for teams to collect the data locally prior to the webtool opening. All data should be entered via the [crown web tool](#). The audit requires input from clinical staff with image report reading experience and we advise that audit leads identify administrative support for local data entry.

Once logged in you will be able to access both the organisational and clinical data on the left hand ribbon.

Specific guidance for questions

Types of scans to consider

Excluded scans are: Trauma CT series, known disseminated bony metastases or myeloma are excluded from the audit

Consider **including** in the audit any diagnostic imaging scans or examinations that will include the thoracic or lumbar spine in a way that the vertebrae can be assessed for fracture.

These include:

- Computer tomography (CT) examinations
 - Best source examinations: Chest, abdomen, pelvis, spine. These may be coded on some RIS systems as CTCAP, CTAP, CTSPN, CLSPN, CWSPN
 - Secondary source examinations: thorax and virtual colonoscopy. These may be coded on some RIS systems as CCHES, CCHAP, CCOLO

- Magnetic resonance Imaging (MRI) examinations
 - Best source examinations: Thoracic spine, lumbar spine. These may be coded on some RIS systems as MLSPN, MTSPN, MSPNW
 - Secondary source examinations: chest and small bowel studies.
- Radiographs (plain film x-ray examinations)
 - Lumbar, thoracic and whole spine examinations
 - Lateral chest examinations
- DXA examinations referred outside of FLS. For example, Oncology referrals for those taking aromatase inhibitors or androgen deprivation therapy or those taking high dose steroids:
 - Vertebral fracture assessment VFA/IVA

Search terms that may be used in radiology reports to indicate a vertebral fracture

ROS clinical guidance recommends the use of the term 'vertebral fracture' in imaging reports to allow optimal identification of these fractures in FLS. As per the guidance, this should be focusing on moderate/severe vertebral fractures, as these can be reliably identified.

However, there are several key phrases and terms that are commonly used to describe vertebral fractures, with or without the word 'fracture'. These present an opportunity to be identified through this audit and in clinical practice. These include:

- Wedge, wedging, anterior wedging, posterior wedging
- Crush
- Compression
- Collapse, vertebral collapse

The following terms are particularly ambiguous as they may represent a vertebral fracture however they may also represent degenerative remodelling of vertebrae or non-fracture deformities such as Scheuermann's disease, Schmorl's nodes and osteomalacia. Careful scrutiny of the report and/or imaging is advised in these cases. These are:

- End plate depression/end plate deformity
- Loss of vertebral height

References

Royal Osteoporosis Society. Effective secondary prevention of fragility fractures: clinical standards for fracture liaison services. Bath: ROS, 2015. <https://theros.org.uk/media/1776/clinical-standards-report.pdf> [Accessed September 2019].

Royal Osteoporosis Society. Clinical Guidance for the Effective Identification of Vertebral Fractures. Bath: ROS, 2017. <https://theros.org.uk/media/100017/vertebral-fracture-guidelines.pdf> [Accessed September 2019]

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This user guide was prepared by the members of the VFSA within the Fracture Liaison Service Database (FLS-DB) workstream delivery team and Crown Informatics Limited.

Falls and Fragility Fracture Audit Programme (FFFAP)

The Fracture Liaison Service Database (FLS-DB) is commissioned by the Healthcare Quality Improvement Partnership (HQIP) and managed by the Royal College of Physicians (RCP) as part of the FLS-DB Workstream of the Falls and Fragility Programme (FFFAP) alongside the National Hip Fracture Database (NHFD) and National Audit of Inpatient Falls (NAIF). FFFAP aims to improve the delivery of care for patients having falls or sustaining fractures through effective measurement against standards and feedback to providers.

Healthcare Quality Improvement Partnership (HQIP)

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 National Clinical Audit and Patient Outcomes Programme (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 (RCP)

The Royal College of Physicians 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 and education and training, conducts assessments and examinations, quality assures external audit programmes, supports doctors in their practice of medicine, and advises the government, public and the profession on healthcare issues.

Crown Informatics Limited

FLS-DB data collection webtool and the FLS-DB website are provided by Crown Informatics <http://crowninformatics.com/>

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