NOCA National Office of Clinical Audit | IFLSD Irish Fracture Liaison Service Database

IRISH FRACTURE LIAISON SERVICE DATABASE

NATIONAL REPORT 2025

Supporting bone health and preventing future fractures



REPORT PREPARED BY:

Ursula Kelleher: Assistant Audit Manager, Trauma and Surgery, National Office of Clinical Audit

Dr Mary Walsh: Audit Programme Manager, Trauma and Surgery, National Office of Clinical Audit

Louise Brent: Head of Audit Management, National Office of Clinical Audit

Dr Donncha O'Gradaigh: Irish Fracture Liaison Service Database Clinical Rheumatology Lead, Consultant Rheumatologist, University Hospital Waterford

Professor Tara Coughlan: Irish Hip Fracture Database and Irish Fracture Liaison Service Database Clinical Geriatric Lead, Consultant Orthogeriatrician, Tallaght University Hospital

Mr Terence Murphy: Irish Hip Fracture Database and Irish Fracture Liaison Service Database Clinical Orthopaedic Lead, Consultant Orthopaedic Surgeon, University Hospital Waterford

David Askin: Irish Fracture Liaison Service Database Nursing Representative, Registered Advanced Nurse Practitioner, Fracture Liaison Service, Tallaght University Hospital

Aisling Connolly: Head of Communications, Operations and Quality Assurance, National Office of Clinical Audit

Lucas Codyre: Research Analyst, National Office of Clinical Audit

Mícheál Bailey: Service Improvement Manager, National Clinical Programme for Trauma and Orthopaedic Surgery

Dr Ruth McCullagh: Health and Social Care Professions Representative, Senior Lecturer, MSc Physiotherapy Programme Director, School of Clinical Therapies, University College Cork

NATIONAL OFFICE OF CLINICAL AUDIT (NOCA)

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"Clinical audit is a clinically-led quality improvement process that seeks to improve patient care and outcomes through systematic review of care against explicit specific clinical standards or clinical guidelines and acting to improve care when clinical standards or clinical guidelines are not met. The process involves the selection of aspects of the structure, processes and outcomes of care which are then systematically evaluated against explicit specific clinical standards or clinical guidelines" (Patient Safety (Notifiable Incidents and Open Disclosure) Act, 2023). Following clinical audit, improvements, if required, should be implemented at an individual, team or organisation level and the care then be re-evaluated to confirm improvements (Department of Health and Children, 2008).

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NOCA would also like to acknowledge the work of the National Clinical Programme for Rheumatology, the National Clinical Programme for Trauma and Orthopaedic Surgery and the National Clinical Programme for Older People during the audit's transition to NOCA and look forward to ongoing collaboration to improve patient care as the audit develops. We extend our thanks to Tim Bunning, Principal Consultant and Jonathan Roberts, Technical Consultant, Crown Informatics Limited, for their ongoing support of the IFLSD audit portal. We wish to thank Professor Jan Sorensen, RCSI, for sharing analytical resources from previous reports and Carlo Lodola, NOCA Senior Analyst for performing analytical checks. Mary Landy, who provided us with her own story about recovery after fragility fracture has made a most important contribution to this report, which we gratefully acknowledge. The FLS Team at Our Lady of Lourdes Hospital Drogheda facilitated capturing of the patient story. Anne O'Shea-Clarke (IHFD Public and Patient Interest Representative) reviewed the Report and Summary Report from a lay perspective.

NOCA greatly appreciates the ongoing commitment and support received from the Health Service Executive. We would especially like to thank Dr Colm Henry, Chief Clinical Officer; Dr Orla Healy, National Clinical Director, HSE Quality and Patient Safety; Dr Patricia Kearney, Consultant in Public Health Medicine, HSE National Quality & Patient Safety.

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National Clinical Programme for Rheumatology

National Clinical Programme for Older People

RCSI

For more information about this report, contact:

National Office of Clinical Audit, 4th Floor, 118 St Stephen's Green, Dublin 2, D02 X0N1

Tel: +353 (1) 402 8577

Email: fls@noca.ie

DESIGNED BY SWERVE

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NOCA National Office of Clinical Audit

Professor Tara Coughlan, Mr Terence Murphy
and Dr Donncha O'Gradaigh
National Clinical Leads
Irish Fracture Liaison Service Database
National Office of Clinical Audit
4th Floor, 118 St Stephen's Green
Dublin 2, D02 X0N1

2nd October 2026

Dear Professor Coughlan, Mr Murphy and Dr O'Gradaigh,

On behalf of the NOCA Governance Board, I wish to formally acknowledge receipt of the Irish Fracture Liaison Service Database National Report 2025.

We warmly welcome the Irish Fracture Liaison Service Database (IFLSD) to NOCA's national clinical audit portfolio, following its transition to NOCA governance earlier this year. This first report under NOCA represents an important milestone, building on the foundations established by the former Fracture Liaison Service Database Steering Committee and the National Clinical Programmes.

I wish to thank you and the entire IFLSD team, including Audit Managers Dr Mary Walsh and Ursula Kelleher, the report writing group, hospital audit coordinators and clinical teams for their contributions. We also acknowledge the valuable involvement of Patient and Public Interest Representative Anne O'Shea-Clarke and Mary Landy, who shared her experience of recovery following a fragility fracture.

The report provides important national insights into the identification, assessment and management of patients with fragility fractures. While improvements across eight of the eleven key performance indicators are encouraging, the findings also highlight opportunities to strengthen patient identification, reduce variation and improve access to secondary fracture prevention services.

This letter serves as the formal endorsement of the NOCA Governance Board for the Irish Fracture Liaison Service Database National Report 2025. We look forward to the continued development of this audit and its contribution to improving bone health and preventing further fractures across Ireland.

Yours sincerely,



Dr Brian Creedon
Clinical Director
National Office of Clinical Audit

National Office of Clinical Audit
4th Floor
118 St Stephen's Green
Dublin 2, D02 X0N1
Tel: + (353) 1 402 8577
Email: auditinfo@noca.ie

FOREWORD

This is the first annual report from the Irish Fracture Liaison Service Database (IFLSD) since the database transitioned to the operational management and governance of the National Office of Clinical Audit (NOCA) in March 2026. This report builds on the work of the Fracture Liaison Service Database Steering Committee supported by the National Clinical Programme for Trauma and Orthopaedic Surgery. The transition into NOCA provides a sustainable model to continue this work and aligns with two other national clinical audits: the Irish Hip Fracture Database, which measures the care and outcomes of hip fracture patients; and the Major Trauma Audit, which includes a large cohort of patients injured due to falls.

The National Report 2025 highlights data from 11 participating hospitals and represents 3,894 cases. While this is only a small portion of the overall expected number of cases, it provides insights into where Fracture Liaison Services (FLS) are already yielding a significant impact. Fracture Liaison Services are vital to ensure patients with a fragility fracture are recognised, assessed, treated and followed up. The FLS in Ireland have developed advanced nurse practitioner and clinical nurse specialist roles across a broad range of specialties, supported by leadership from geriatricians, rheumatologists, orthopaedic surgeons, and endocrinologists who collaborate closely with general practitioners, radiologists, and health and social care professionals.

Osteoporosis, fragility fractures and falls represent a significant and growing burden on health services worldwide. FLS provide an opportunity to identify patients at their earliest point of contact with the healthcare system, enabling timely intervention to manage osteoporosis and reduce the risk of subsequent fractures and falls. This report shows that 72% of identified patients were assessed by an FLS practitioner within 90 days of fracture and 79% of identified patients received, or were referred for, a falls risk assessment. Sixty-two per cent of patients were recommended osteoporosis medication.

The progress of FLS developments is aligned with recommendation 15 from the Trauma System for Ireland: Report for the Trauma Steering Group published in 2018, and this is further aligned with the models of care for Older Adults, Rheumatology and Trauma and Orthopaedics.

I would like to acknowledge and commend the Fracture Liaison Service Database Steering Committee who established this work and those who continue to work with NOCA to ensure a smooth transition and continuation of this work with the National Office of Clinical Audit. I would especially like to thank the clinicians and healthcare staff working in fracture liaison services throughout the health service.

Dr Colm Henry
Chief Clinical Officer,
Health Service Executive



"I would like to acknowledge and commend the Fracture Liaison Service Database Steering Committee who established this work and those who continue to work with NOCA to ensure a smooth transition and continuation of this work with the National Office of Clinical Audit. I would especially like to thank the clinicians and healthcare staff working in fracture liaison services throughout the health service."

GLOSSARY OF TERMS AND ACRONYMS

TERM	MEANING
Osteoporosis	A disease characterised by low bone mass and structural deterioration of bone tissue, with a consequent increase in bone fragility and susceptibility to fracture.
Dual Energy X-Ray Absorptiometry Scan (DXA)	A non-invasive, quick and safe imaging technique used to measure the density of bones, primarily the lumbar spine and hips, to diagnose osteoporosis.
Fragility Fracture	A fracture resulting from low-energy trauma — typically a fall from standing height or less — that would not normally cause a fracture in healthy bone.
Secondary Prevention	Interventions to reduce the risk of additional fractures in people who have already sustained a fragility fracture.

ACRONYM	MEANING
ANP	Advanced Nurse Practitioner
cANP	Candidate Advanced Nurse Practitioner
CCO	Chief Clinical Officer
CEO	Chief Executive Officer
CNS	Clinical Nurse Specialist
CNM	Clinical Nurse Manager
DXA	Dual Energy X-Ray Absorptiometry Scan
ED	Emergency Department
FLS	Fracture Liaison Service
FLS-DB	Fracture Liaison Service Database (under former governance)
GP	General Practitioner
HIPE	Hospital In-Patient Enquiry system
HPO	Healthcare Pricing Office
HSCP	Health and Social Care Professional
HSE	Health Service Executive
IHFD	Irish Hip Fracture Database

ACRONYM	MEANING
IFLSD	Irish Fracture Liaison Service Database
IOF	International Osteoporosis Foundation
IT	Information Technology
KPI	Key Performance Indicator
MTA	Major Trauma Audit
NCPOP	National Clinical Programme for Older People
NCPR	National Clinical Programme for Rheumatology
NCPTOS	National Clinical Programme for Trauma and Orthopaedic Surgery
NHS	National Health Service, UK
PDSA	Plan-Do-Study-Act
QI	Quality Improvement
RANP	Registered Advanced Nurse Practitioner
RCSI	Royal College of Surgeons Ireland
RGN	Registered General Nurse

EXECUTIVE SUMMARY

This is the first national report from the Irish Fracture Liaison Service Database (IFLSD) since coming under the governance of the National Office of Clinical Audit (NOCA) in March 2026. This audit was established by the multidisciplinary Fracture Liaison Service Database (FLS-DB) Steering Committee supported by the National Clinical Programme for Trauma and Orthopaedic Surgery (NCPTOS). The data presented in this report were collected under the governance of that Steering Committee. The transition of the IFLSD to NOCA is essential to maintain and grow this audit further.

This report includes data from 11 participating hospitals including 3,894 cases, compared with 10 hospitals and 3,335 cases in 2024. The report presents performance against 11 internationally defined standards from the International Osteoporosis Foundation (IOF), focusing on the identification, assessment, treatment and follow-up of patients. This report compares the 2025 data with the data published in 2024. Each participating hospital will receive their own supplemental report comparing local key performance indicators (KPIs) to the national average. Performance improved across 8 of the 11 KPIs in 2025, demonstrating continued progress in Fracture Liaison Service (FLS) delivery nationally, although substantial differences in hospital-level performance remain.

Fragility fractures are a major and growing burden. Identification of fragility fractures and management of osteoporosis are key priorities for the Health Service Executive (HSE), which has commissioned NOCA to provide clinical audit and performance measurement to support quality improvement efforts in this area. This work aligns with two other audits managed by NOCA, the Irish Hip Fracture Database (IHFD) and the Major Trauma Audit (MTA). The IHFD measures the care and outcomes of hip fracture patients. Hip fractures are significant fragility fractures that are often preceded by earlier fragility fractures. Combining these audits under NOCA's governance provides an opportunity to look at the full continuum of care for patients with fragility fracture. The MTA shows that low falls (falls from standing height or less) account for a substantial proportion of major trauma, particularly among older people. Fractures are among the most common injuries sustained, often occurring alongside other injuries, such as head injuries, highlighting the complex needs of this patient group.

Nationally, participating services identified 29% of the estimated non-hip fragility fracture population. Of patients identified, 72% were assessed by an FLS practitioner within 90 days of fracture, 79% received or were referred for a falls risk assessment, and 62% were recommended anti-osteoporosis medication.

"Performance improved across 8 of the 11 KPIs in 2025, demonstrating continued progress in Fracture Liaison Service (FLS) delivery nationally, although substantial differences in hospital-level performance remain."

Nationally, participating services identified 29% of the estimated non-hip fragility fracture population. Of patients identified, 72% were assessed by an FLS practitioner within 90 days of fracture, 79% received or were referred for a falls risk assessment, and 62% were recommended anti-osteoporosis medication.

These findings demonstrate the important contribution of Fracture Liaison Services to secondary fracture prevention, while highlighting opportunities to improve patient identification and reduce variation in care.

In recent years there have been a number of publications recommending the development and expansion of FLS and bone health assessment nationally, including the National Clinical Programme for Rheumatology *Model of Care for Rheumatology in Ireland* (HSE, 2018), National Clinical Programme for Older People *Specialist Geriatric Care Model of Care* (HSE, 2012) and *Trauma and Orthopaedic Model of Care* (HSE, 2015).

NOCA would like to acknowledge the continued dedication of clinical leads, audit coordinators and hospital teams involved in all the participating hospitals. Their leadership and commitment are crucial to the success of this audit and to improving outcomes for patients with fragility fractures in Ireland.

KEY FINDINGS

•	This report includes data from 11 hospitals contributing to the Irish Fracture Liaison Service Database (IFLSD), compared with 10 hospitals in 2024.
•	A total of 3,894 cases were included in 2025, compared with 3,335 cases in 2024.
•	Eighty-two per cent of cases included in this report were female.
•	Forearm fractures were the most frequently identified fracture type (42%).
•	Thirty-two per cent of patients were admitted to hospital as inpatients for treatment for their fracture.
•	Less than one-third of sites (30%) achieved KPI 1 in 2025, a measure of data completeness, unchanged from 2024.
•	Of expected cases from participating hospitals, 29% were identified (KPI 2), compared with 30% in 2024.
•	Of the expected number of vertebral fractures, 29% were identified (KPI 3), unchanged from 2024.
•	Of identified patients, 72% were assessed by an FLS practitioner within 90 days of fracture (KPI 4), compared with 71% in 2024.
•	More than one-third of patients (36%) who required a Dual Energy X-Ray Absorptiometry Scan (DXA) underwent scanning within 90 days of fracture (KPI 5), compared with 33% in 2024.
•	Of identified patients, 79% received or were referred for a falls risk assessment (KPI 6), an increase from 70% in 2024.
•	Of identified patients, 62% were recommended anti-osteoporosis medication (KPI 7), compared with 57% in 2024.
•	Of patients who had a previous fracture, 34% were on anti-osteoporosis treatment at the time of presentation.
•	Follow-up monitoring at 12–16 weeks post fracture (KPI 9) occurred in half of patients who were prescribed medication (50%), compared with 48% in 2024.
•	Of patients referred for or advised to undertake a strength and balance exercise programme (KPI 8) and who also received a 16-week follow-up call (KPI 9), 24% had started these exercises within 16 weeks of fracture, compared with 20% in 2024.
•	Of those patients who were recommended anti-osteoporosis medication (KPI 10) and who also received a 16-week follow-up call (KPI 9), over one-third (36%) had commenced or continued treatment within 16 weeks of fracture, compared with 35% in 2024.
•	Adherence to anti-osteoporosis medication at 1 year was confirmed for 33% of eligible patients (KPI 11), compared with 31% in 2024.

KEY HIGHLIGHTS 2025

3,894
PATIENTS MANAGED BY FLS

11
ACROSS 11 HOSPITALS

29%
OF EXPECTED FRAGILITY FRACTURES

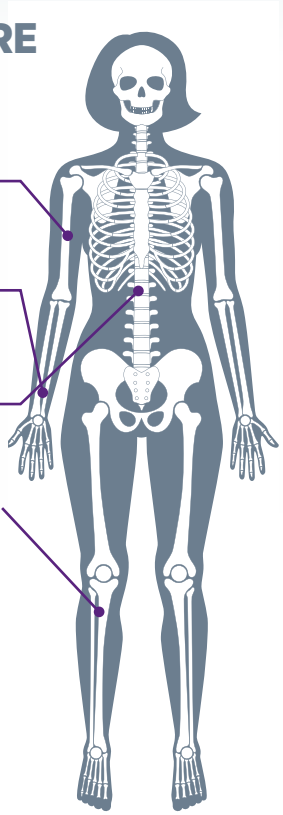
29%
OF EXPECTED VERTEBRAL FRACTURES

CASE MIX

MEDIAN AGE 72

MEDIAN AGE 72

FRACTURE SITE



HUMERUS **19%**

FOREARM **42%**

SPINE **20%**

LOWER LIMB **12%**

OTHER **6%**

FRACTURE RISK FACTORS

- Previous fragility fracture **40%**
- Current/regular oral or IV steroids **5%**
- Alcohol excess (current + previous) **5%**
- Current smoker **11%**
- Secondary causes osteoporosis risk **46%**

FALL RISK FACTORS

- **26%** MEDICATION
- **26%** FEAR OF FALLING
- **15%** GAIT/BALANCE IMPAIRMENT
- **11%** VISUAL IMPAIRMENT
- **7%** CONTINENCE/ URINARY PROBLEMS
- **4%** COGNITIVE IMPAIRMENT
- **3%** ORTHOSTATIC BP DROP

THE PATIENT JOURNEY

WITHIN 90 DAYS OF FRACTURE

72% had FLS assessment

36% received DXA if needed

79% had a falls risk assessment

62% were recommended anti-osteoporosis medication

FOLLOW-UP AT 16 WEEKS AFTER FRACTURE

50% had been followed-up

36% had commenced recommended medication

24% had commenced strength and balance training if recommended

FOLLOW-UP AT 1 YEAR OF PATIENTS IN WHOM MEDICATION WAS RECOMMENDED

38% followed up

33% had confirmed adherence to prescribed anti-osteoporosis medication

KEY RECOMMENDATIONS

RECOMMENDATION 1

Strengthen the identification of non-hip fragility fracture and vertebral fracture patients and support improved case ascertainment across participating Fracture Liaison Services (FLSs).



Participating hospitals will review local case-finding methodologies and referral pathways and identify opportunities to improve patient identification. NOCA will support this through benchmarking, identification of variation in performance, and sharing of learning and effective case-finding approaches across participating services.

RECOMMENDATION 2

Undertake a national organisational survey of participating and non-participating hospitals to establish a baseline of Fracture Liaison Service provision, identify factors influencing variation in service delivery and inform future participation in the Irish Fracture Liaison Service Database (IFLSD).



NOCA will administer an organisational survey that will gather information on workforce, governance arrangements, infrastructure, access to diagnostics and multidisciplinary team supports in participating services, and on current FLS provision and potential future participation in the IFLSD in non-participating hospitals. Findings will be published to support service evaluation, quality improvement and service planning, and to inform future development of the IFLSD.

THE PATIENT PERSPECTIVE

MARY'S STORY

"Hold your head up high, keep moving and keep living."

Recovery is more than healing a fracture

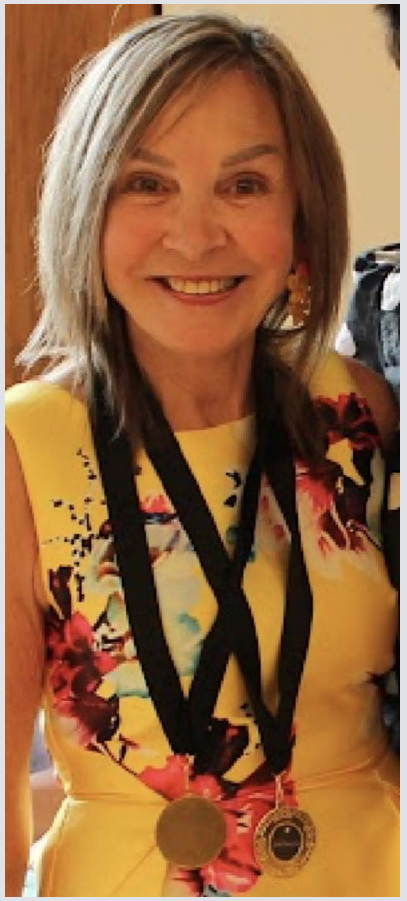
My name is Mary Landy. I am 64 years old and I live on my own. My story really began before I broke my back. In 2016, I had a fall and developed post-concussion syndrome, which left me with memory and concentration problems. I was encouraged to take up dancing and walking. I took up line dancing and discovered walking helped me think more clearly and helped with my concentration. Both became a huge part of my life.

In 2022, while line dancing in Drogheda, I fell backwards doing a swivel step, during a dance called The Cowboy Charleston. I knew immediately that something was wrong. I was brought by ambulance to the Emergency Department at Our Lady of Lourdes Hospital, where an X-ray showed I had broken T12 in my back. I was fitted with a brace and discharged home. I was given painkillers, but I am not a big believer in them. In my opinion, pain is there for a reason. It restricts what your body wants you to do. A painkiller can eliminate that, so you could do more damage. I learned that you need to find a balance. To be honest, the 12 weeks in the brace were soul-destroying. I felt very restricted, but I continued to walk every day. The real shock came when the brace was removed. I went to the fridge to take out a litre of milk and I couldn't lift it. I just went, "My God, what has happened here?" That moment made me realise I had lost significant strength and needed to rebuild it. I joined a gym and slowly rebuilt my muscles. Throughout my recovery, I focused on keeping active because my experience with post-concussion syndrome had already taught me how closely physical and mental health are connected. For me, mental health is very important. I do think it is important not to think, "I have to get through this hurdle and then I start living." You must do as much as you can, without causing injury, particularly to maintain your mental health.

Holding your head up high –Overcoming fear and staying independent

One of the hardest things after my fracture was the fear of falling, which is probably the worst thing. If you have a fear of falling, your instinct is to look to the ground. When you look to the ground, your spine goes to the ground too. You don't think you're doing it, but you are. That is why I keep telling myself to hold my head up high. I'll never be straight; that's a fact. But I'm as straight as I can be.

"Throughout my recovery, I focused on keeping active because my experience with post-concussion syndrome had already taught me how closely physical and mental health are connected. For me, mental health is very important"



Mary Landy with her medals won for dancing.

Living on my own, independence has always mattered to me. While I was wearing the brace, my son had to come over and help wash me. That was difficult. There is your dignity, but I had no option. We got through it and probably bonded more over it. When people saw me in the brace they would think I was struggling and want to help me cross the road. I remember thinking, "I'm well capable of getting across the road." I'd rather be able to do it myself. People would also say, "Relax, sit there; it's 12 weeks; it's not the end of the world". But for me keeping active was important.

After the fracture, I took up ballroom and sequence dancing because posture is such a big part of them. Dancing helped me hold my head up high and walk straighter, while giving me exercise through something I genuinely enjoy. Today, I can honestly say, I might be 64, but I am more active now than I was when I was 24. That doesn't mean there aren't challenges. I still get the occasional twinge in my back. I don't enjoy going downstairs. I hold the handrail. I take my time. I have adapted. But I don't see that as losing anything. It's simply learning to do things differently.

"I still get the occasional twinge in my back. I don't enjoy going downstairs. I hold the handrail. I take my time. I have adapted. But I don't see that as losing anything. It's simply learning to do things differently."

Building the blocks of recovery

Breaking my back led to my osteoporosis diagnosis. Following a DXA scan, my GP referred me to the Fracture Liaison Service (FLS). The FLS played a very important role in my recovery. They looked beyond the scan results and took the time to explain my diagnosis, discuss treatment options and worked with my GP to put a plan in place. I was started on denosumab and later moved to annual zoledronic acid infusions. My GP described my bones as being like an 'Aero' bar. I can see the holes and think of infusion therapy as a little bit of glue into those holes. Keep me going on that and I'll build the muscle around those holes and do the best I can. I have received three infusions of IV zoledronic acid and am due back for a follow-up DXA scan soon.

I think healthcare professionals have to know the person sitting in front of them. Being able to read people is important. Somebody who is very fragile might need a totally different approach to somebody who comes in saying, "What do I have to do to make this better?" I often think about recovery as a series of building blocks. One person might be on block one and somebody else might already be six blocks ahead. The important thing is identifying where that person is and helping them get to the next block. People need clearer direction about what to do next, not to be told "Take it easy," or "You're doing great, keep doing what you're doing." There should be pathways in place to help people move from one building block to the next, whether that is exercise, physiotherapy, support services or something else entirely. Most importantly, one of those building blocks should be mental health.

Mary's reflections and key messages

My message to anyone experiencing a fragility fracture is simple: don't put your life on hold. Don't embrace learned helplessness. If you decide you can't, you won't. For me, whatever promotes good mental health is a very important building block in recovery. In my case it was exercise, walking and winning medals dancing. For somebody else it might be something different.

My message to healthcare professionals is to understand the person behind the fracture. Taking the time to understand where someone is in their recovery and helping them get to the next building block can make all the difference.

"So, hold your head up high, keep moving and keep living."

UNDERSTANDING FLS FROM A PATIENT PERSPECTIVE

ABOUT THE HUMAN SKELETON

The human skeleton is the body's basic frame, made up of around 206 bones along with softer tissues like cartilage and ligaments that help hold everything together. It gives the body its shape and keeps it upright. The skeleton has several important jobs: it supports the body, protects vital organs like the brain and heart, and helps us move by working with muscles and joints. Bones store important minerals such as calcium, and inside some bones a soft tissue called bone marrow also makes blood cells. Following the menopause, and as people age, bones naturally change and can become thinner and weaker, especially if a person does not get enough calcium, vitamin D, protein or weight-bearing exercises (i.e. exercises on your feet). This can make bones more fragile and easier to break, a condition known as osteoporosis. For that reason, looking after your bones throughout life is important to stay strong, active and healthy.

OSTEOPOROSIS AND FRAGILITY FRACTURES

Osteoporosis is a common condition characterised by reduced bone strength, leading to increased fragility and a higher risk of fractures because the bone becomes fragile hence the term 'fragility' (LeBoff, 2022).

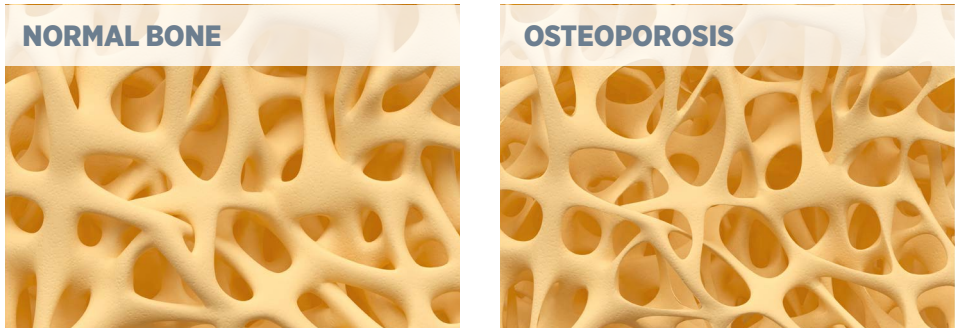


FIGURE 1: NORMAL BONE V OSTEOPOROSIS

Osteoporosis affects a significant proportion of the population, particularly with increasing age, although people of all ages, genders and ethnicities can be impacted. In Ireland it is estimated that between 300,000–500,000 adults aged over 50 have osteoporosis, (Ebrahimiarjestan, 2023), with lifetime fracture risk from this age estimated at one in three for women and one in five for men, (Curtis 2016). Notably, many individuals who experience fractures do not have bone density in the osteoporotic range, highlighting the importance of assessing overall fracture risk rather than relying on bone density alone.

Fragility fractures result from low-energy trauma, such as a fall from standing height or less, and are often the first indication of osteoporosis, a condition that typically remains asymptomatic until a fracture occurs. Diagnosis may be made through bone density (DXA) scanning or following a low-trauma fracture, with hip and vertebral fractures considered diagnostic regardless of bone density results (LeBoff, 2022).

WHAT IS A FRACTURE LIAISON SERVICE?

A Fracture Liaison Service (FLS) is a multidisciplinary service, usually coordinated by a dedicated healthcare professional, and is recognised as one of the most effective approaches to preventing further fractures (Choo *et al*., 2026). These services identify, assess and manage patients aged 50 years and over who have experienced a fragility fracture, with the aim of reducing the risk of future fractures. Strong international evidence shows that coordinated care involving orthopaedic services, osteoporosis management, falls prevention services, and primary care is essential to improving patient outcomes and preventing further fractures (Marsh *et al*., 2011).

The FLS approach is aligned with the vision of Sláintecare (2017), recognising a fragility fracture as an important opportunity to assess bone health and future fracture risk. Through the systematic identification of patients, standardised assessment, and coordinated management across hospital and community services, FLS supports the prevention of further fractures and helps maintain bone health and independence (Dockery *et al*., 2022).

THE IRISH FRACTURE LIAISON SERVICE DATABASE (IFLSD) KEY PERFORMANCE INDICATORS

The Irish Fracture Liaison Service Database (IFLSD) collects, measures and reports data relating to the care provided by participating FLS nationally. The database enables monitoring and comparison of service performance against 11 agreed key performance indicators (KPIs), which are based on the International Osteoporosis Foundation (IOF) Capture the Fracture® Best Practice Framework. These indicators support comparison with national and international benchmarks, help identify variation in care and service provision, and enable participating sites to evaluate their performance against evidence-based standards for preventing further fractures (Javaid *et al*., 2023).

The IOF's **80:50:80** benchmark describes the expected performance of a high-quality FLS: **80%** of expected non-hip fragility fracture patients should be identified by the service, of which at least 20% should be vertebral (spinal) fracture patients, as these fractures are often missed despite carrying a high risk of future fracture. Approximately **50%** of the cases identified by high-performing FLS should require anti-osteoporosis treatment and **80%** of those prescribed this treatment should remain adherent at 12 months.

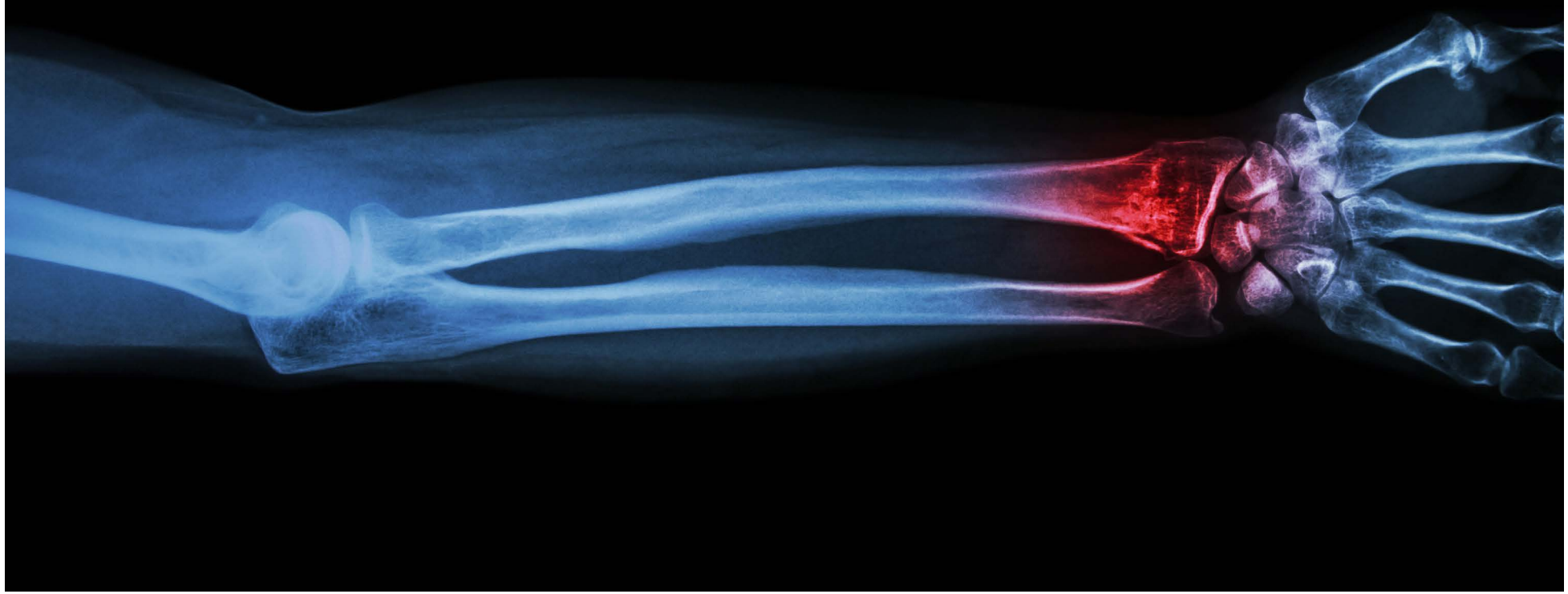
In this report, expected non-hip fragility fracture numbers are estimated using hip fracture activity recorded in each participating hospital's Hospital In-Patient Enquiry (HIPE) system. HIPE is Ireland's national database of inpatient and day case activity in public acute hospitals and provides a standardised source of hospital activity data. These estimates are used to assess IFLSD case finding performance against internationally recognised IOF benchmarks and provide important context for interpreting results at both hospital and national level.

A summary description of each KPI is provided in this chapter (Table 1.1), while the detailed calculation methodology and reporting specifications are outlined in Appendix 2.

TABLE 1.1: SUMMARY OF KPIs, AS PER IOF STANDARDS

KPI	WHAT THIS MEASURES?	WHY THIS MATTERS?
KPI 1: Data completeness	Whether enough information has been recorded to accurately assess FLS performance.	High-quality data are essential for monitoring care and identifying opportunities for improvement.
KPI 2: Identification of fragility fracture patients	The proportion of expected non-hip fragility fracture patients who are identified and managed by an FLS.	Identification is the first step in preventing future fractures.
KPI 3: Identification of vertebral (spinal) fracture patients	The proportion of expected vertebral fracture patients identified by the FLS.	Vertebral fractures carry a high risk of future fracture and are frequently under-recognised.
KPI 4: Timely FLS assessment	Whether patients are assessed by the FLS within 90 days of their fracture.	Early assessment enables timely investigation and intervention to reduce future fracture risk.
KPI 5: Timely DXA scan	Whether patients receive a DXA scan within 90 days when a scan is required.	DXA scanning supports diagnosis, treatment decisions and ongoing monitoring.
KPI 6: Falls risk assessment	Whether patients receive a falls risk assessment, are referred for assessment, or are advised to undergo assessment.	Identifying and addressing falls risk can help prevent future fractures.
KPI 7: Anti-osteoporosis treatment recommended	Whether patients are assessed as requiring anti-osteoporosis medication and receive a treatment recommendation.	Anti-osteoporosis medication is one of the most effective interventions for preventing future fractures.
KPI 8: Strength and balance training started within 16 weeks	Whether patients commence a strength and balance programme within 16 weeks of fracture.	Strength and balance training is a key intervention for reducing falls risk.
KPI 9: Follow-up contact at 12–16 weeks	Whether patients receiving anti-osteoporosis treatment recommendations receive follow-up contact between 12 and 16 weeks after fracture.	Early follow-up supports treatment initiation, adherence and patient education.
KPI 10: Anti-osteoporosis treatment started by first follow-up	Whether patients have started their recommended anti-osteoporosis medication by their first follow-up.	Treatment must be initiated before it can reduce future fracture risk.
KPI 11: Confirmed adherence to anti-osteoporosis medication at 12 months	Whether patients have been followed-up and confirmed to remain on their prescribed anti-osteoporosis medication one year after fracture.	Long-term adherence is necessary to achieve the full fracture-prevention benefits of treatment.

CHAPTER 1
INTRODUCTION



CHAPTER 1: **INTRODUCTION**

Fragility fractures represent a significant and growing burden on the Irish healthcare system, contributing to increased morbidity, mortality, loss of independence and healthcare utilisation. Individuals who sustain a fragility fracture are at high risk of subsequent fractures, however many do not receive appropriate assessment or treatment for underlying osteoporosis or falls risk. This 'secondary prevention gap' remains a recognised deficiency in care both nationally and internationally, (Javaid *et al*, 2023).

In Ireland, fragility fractures account for approximately 2% of healthcare expenditure with annual costs exceeding €400 million, (Willers *et al*, 2022). This burden is expected to increase with population ageing, reinforcing the need for effective secondary prevention.

DEVELOPMENT OF THE IFLSD

Fracture Liaison Services in Ireland have evolved over time through local service innovation, national policy development and the introduction of audit to support improvement. The evolution of the IFLSD has been supported through collaboration between clinicians, national clinical programmes, participating hospitals and established national audits, including the Irish Hip Fracture Database (IHFD), with the shared goal of improving secondary fracture prevention. The transition of the IFLSD to National Office of Clinical Audit (NOCA) governance in 2026 represents the fulfillment of a long-standing objective of the FLS-DB Steering Committee to establish a sustainable national clinical audit for fracture prevention. The timeline below outlines key milestones in the development of the IFLSD, culminating in the transition of the audit to NOCA governance in 2026.

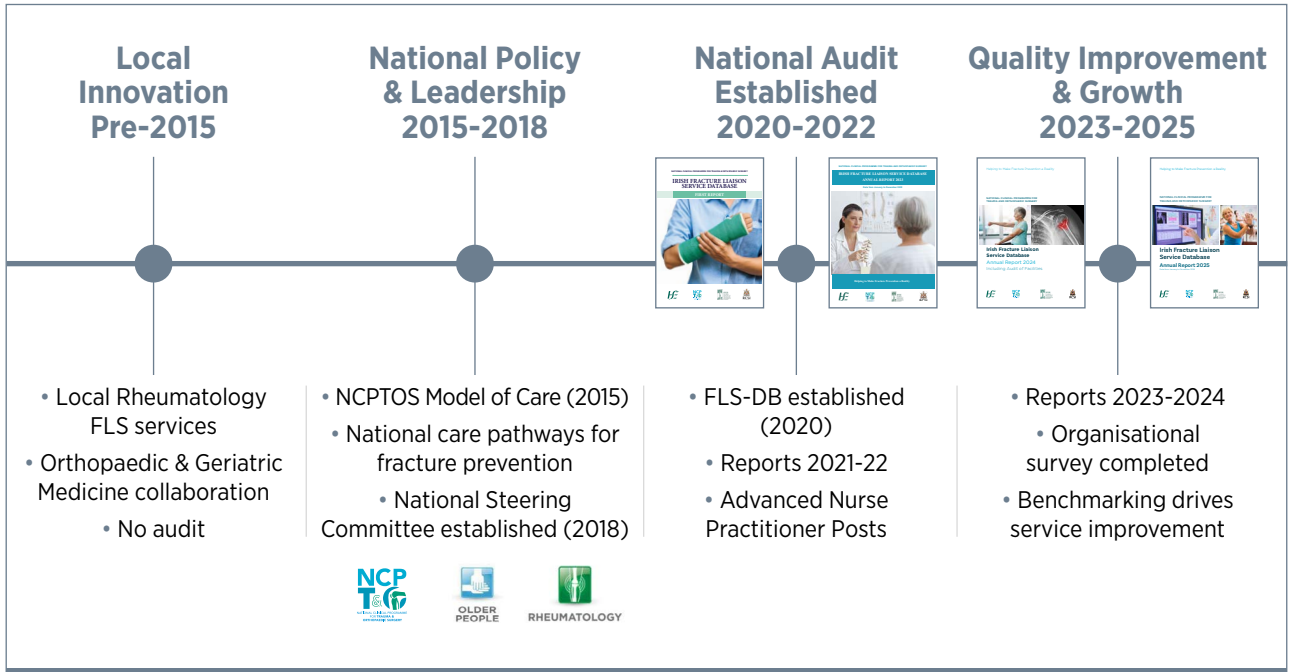


FIGURE 2: IRISH FRACTURE LIAISON SERVICES TIMELINE

Pre-2015: Local service development

Prior to 2015, FLS services were established on a local basis in hospitals including Tallaght University Hospital, Galway University Hospital, University Hospital Waterford and St Vincent's University Hospital (Dockery *et al*, 2022). These services were led by clinicians in rheumatology, endocrinology and geriatric medicine, typically with no specific allocation of time or other resources to meet this service need. While demonstrating clear clinical benefit, they operated without national standardisation or audit infrastructure.

2015–2018: National policy alignment

Early reports such as *The Strategy to Prevent Falls and Fractures, 2008* recognised the role and importance of FLS. National direction for these services was established through the NCPTOS *Model of Care* (2015), the *Model of Care for Rheumatology* (2018) and within the report of the National Trauma Steering group *A Trauma System for Ireland* (2018). The National Clinical Programme for Older People (NCPOP) also emphasised integrated, multidisciplinary care pathways, recognising fragility fracture as a sentinel event requiring systematic bone health assessment and falls assessment through the development of fracture liaison services.

In 2018, a multidisciplinary group of experts across rheumatology, endocrinology, geriatric medicine, orthopaedics, nursing, physiotherapy, general practice and hospital management established the FLS-DB Steering Committee. This group was commissioned by Dr Colm Henry, HSE Chief Clinical Officer, with project oversight to sit with the NCPTOS based at RCSI.

2020–2026: Establishment of national audit infrastructure, expansion and audit-led development

The Irish Fracture Liaison Service Database (IFLSD) was established in 2020 and was one of the first national databases of its kind in the world, following the United Kingdom and preceding similar developments in Australia and New Zealand. Initial funding was secured through a collaboration with pharmaceutical companies (Amgen and UCB), with RCSI and NCPTOS providing governance and data protection oversight for the database. The database was introduced as a national clinical audit to enable structured data collection, benchmarking and reporting across participating sites, and to support evaluation of FLS provision and performance. Subsequent HSE funding was secured in 2023 through the Modernised Care Pathway Programme for a two-year period. Key outputs included four annual reports, an organisational survey, stakeholder engagement across 10 hospital sites, and audit data that supported wider service planning and investment decisions, including the funding of registered advanced nurse practitioner (RANP) posts within FLS.

A national organisational survey conducted in 2023 across participating FLS demonstrated significant variation in service capacity, case-finding ability and expected fracture burden, with direct implications for KPI performance and secondary fracture prevention. (Dockery *et al*., 2022). Key findings included:

- variation in eligibility criteria, with one service only able to capture patients aged over 65 years;
- substantial variation in expected fracture volumes between sites;
- inconsistent access to DXA services, with some sites reporting limited or no local access;
- variation in multidisciplinary team supports, including physiotherapy pathways linked to falls prevention and rehabilitation;
- limited administrative support in over half of services and a lack of prescribing clinicians in some sites;
- ongoing challenges in case-finding, particularly for vertebral fractures and non-hip fragility fractures generally.

March 2026: Transition to NOCA governance

In March 2026, the IFLSD transitioned to the governance and operational management of NOCA following commissioning by the HSE Chief Clinical Officer. The transition was supported initially by the Irish Hip Fracture Database (IHFD) clinical leads and management team. This represented a significant milestone for the audit, strengthening national consistency in governance, data quality, reporting and stakeholder engagement. An IFLSD Governance Committee was established to support the ongoing development of the audit and database, ensuring representation from key stakeholders during the transition period and while new clinical leads are identified. This report is the first annual IFLSD report produced under NOCA governance.

PURPOSE OF THIS REPORT

The purpose of this report is to present and analyse data collected by FLS in participating sites to audit the clinical care provided to patients with a non-hip fragility fracture. The report describes the quality of care delivered during 2025 across 11 participating hospitals providing an FLS service in Ireland and evaluates performance against international best practice standards established by the IOF Capture the Fracture® Best Practice Framework and its associated KPIs. The findings aim to identify opportunities for improvement and support the ongoing enhancement of fracture treatment and secondary fracture prevention services across Ireland. The report was prepared by a multidisciplinary writing group and overseen by the IFLSD Governance Committee.

WHO IS THIS REPORT AIMED AT?

- Patients and their families
- Clinicians
- Nursing
- Six regional public health divisions
- Health and social care professionals
- Hospital managers and service planners
- Department of Health, HSE leadership and policymakers
- National clinical programmes (NCPR, NCPTOS, NCPOP)
- NOCA and audit stakeholders
- Academic organisations and researchers
- Patient advocacy groups.



CHAPTER 2
METHODOLOGY

CHAPTER 2: **METHODOLOGY**

The IFLSD for Ireland is collected via a cloud-based software system online, managed by Crown Informatics Limited, who also manage the FLS and hip fracture databases for the NHS in England and Wales. Before a hospital joins the database, a data agreement is signed by the CEO/General Manager.

The utility of a national database is to monitor adherence to best practice guidance for the care of patients and to use the results to reduce variation in the care that these patients receive. The IFLSD captures data in real time and enables patient-level data to be monitored by each site. Data from the IFLSD are used to inform service planning, support national policy development and underpin quality improvement initiatives.

TABLE 2.1: IFLSD INCLUSION AND EXCLUSION CRITERIA

INCLUSION CRITERIA	EXCLUSION CRITERIA
(i) Patients presenting to participating services/ hospitals	(i) Aged 49 years or under
(ii) Diagnosed with a non-hip fragility fracture between 1 January 2025 and 31 December 2025	(ii) Pathological (fractures due to cancer)
(iii) Aged 50 years and over	(iii) Fractures resulting from high impact trauma/force (e.g. falls from a height over 2 m, car accident)
	(iv) Hip/neck of femur fractures
	(v) Fractures of facial bones, fingers, toes, clavicle, cervical spine and ribs

AIMS AND OBJECTIVES

AIM

To maintain a contemporaneous database of all patients in Ireland aged 50 years and over with a non-hip fragility fracture, referred to or treated in a fracture liaison service, in order to drive continuous quality improvement for better care in line with the Capture the Fracture® Best Practice Framework.

OBJECTIVES:

- **To continue the implementation of the audit at all eligible sites**
- **Stay aligned with the Capture the Fracture® Best Practice Framework as the national standards against which all FLS should compare their performance.**
- **Provide hospitals with reports to support quality assurance, service evaluation, quality improvement and better patient outcomes**
- **Publish an annual report for benchmarking**
- **Conduct organisational surveys every four years**
- **To support the development of a national bone health strategy**
- **To support research using the IFLSD data.**

DATA COLLECTION



The burden of data collection often lies with healthcare professionals who undertake IFLSD audit activities as an additional component of their existing clinical or professional responsibilities. In participating hospitals, data are collected by the local clinician or staff member responsible for coordinating participation in the IFLSD. Within NOCA, this role is referred to as the audit coordinator, although individuals undertaking this role may hold a variety of substantive positions, including advanced nurse practitioner (ANP), clinical nurse specialist (CNS), clinical nurse manager (CNM), registered general nurse (RGN), physiotherapist or other healthcare professional. The term audit coordinator describes an individual's responsibilities in relation to the audit and does not refer to a specific grade, post or dedicated position. Audit coordinators collect data from patients' healthcare records using a standardised national dataset. A customised data collection proforma has been developed for this purpose and outlines the options available to hospitals for submitting data to the national database. From January 2025, a second version of the dataset was implemented (Appendix 1).

Eligible patients are identified by the audit coordinator attending or reviewing outpatient clinic attendances or by receiving reports from hospital IT systems. In many cases, these patients are not admitted to hospital. For this reason, many are not captured on the HIPE system, which is the principal source of information for all publicly funded acute hospitals in Ireland, managed by the Healthcare Pricing Office (HPO).

DATA ENTRY

There are several data entry methods available to participating hospitals. Pseudonymised data is either entered into the database directly or uploaded as a .csv file from an existing hospital system.

TABLE 2.2: DETAILS OF IFLSD DATA ENTRY METHODS

DATA ENTRY METHOD	DETAIL
1. Manual data entry	Audit coordinator completes proforma and enters this data directly into the FLS Database.
2. Excel upload	Audit coordinator enters data into a locally held database, converts this to a .csv file and uploads it to the online FLS Database
3. Existing hospital system	Hospitals' local IT system exports an extract of data matching the FLS dataset and uploads as a .csv file to the online FLS Database

DATA ANALYSIS



Analysis was conducted by the NOCA Data Science Team using IFLSD records captured within the Crown Informatics software. NOCA received the data extract from Crown for the 2025 reporting period on 8 May 2026. The extract included patients with a diagnosis recorded in 2025 for most variables and patients with a diagnosis recorded in 2024 for the 12-month follow-up variables.

Patient demographics were summarised using appropriate descriptive statistics. KPIs were calculated according to nationally approved definitions and reported as percentages, using eligible episodes as the denominator.

Statistical analyses were performed using Stata 19.5 (StataCorp, College Station, TX, USA). Figures and data visualisations were generated using R version 4.5.2 (R Foundation for Statistical Computing, Vienna, Austria).

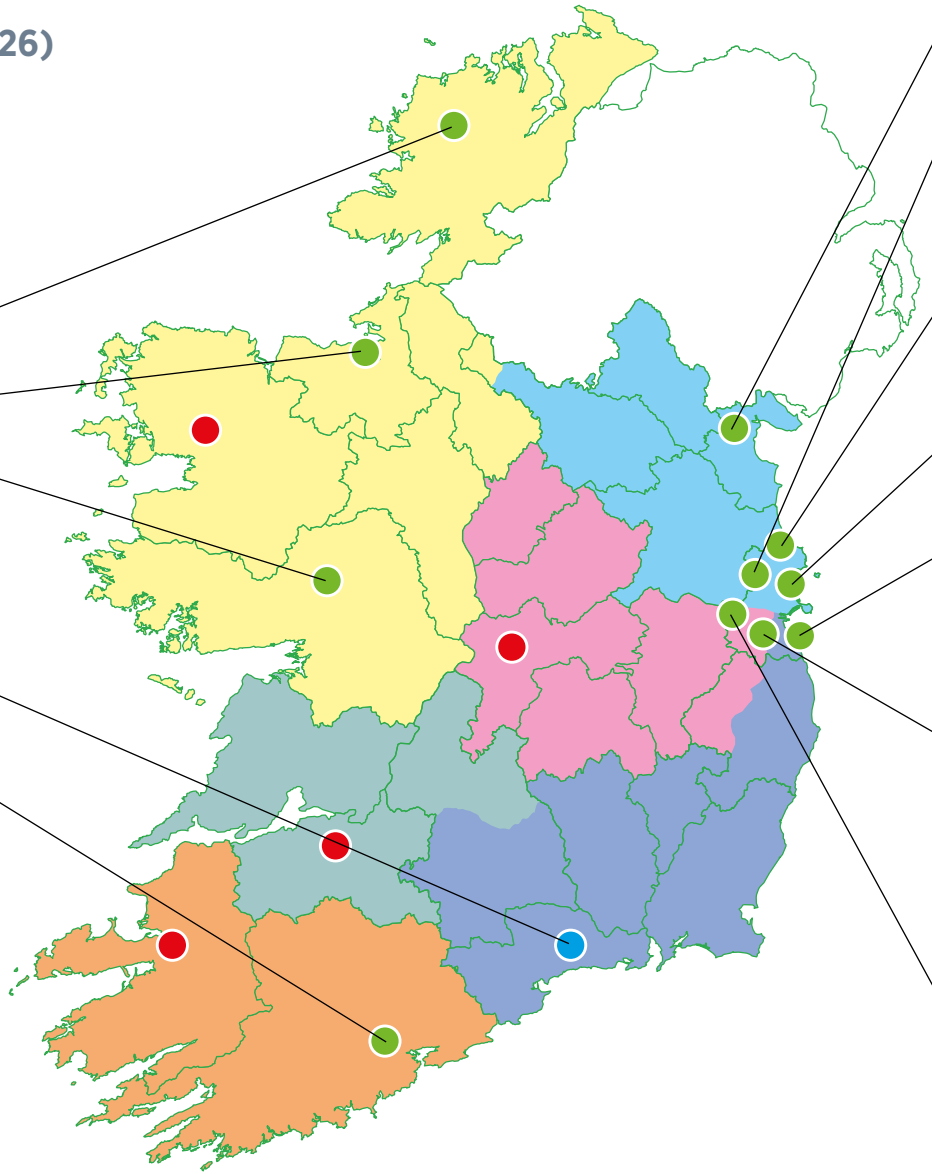
DATA VALIDATION



Data validation is built into the database and alerts users if there is an error when entering data. An alert will appear on the screen for the user if data has been entered incorrectly. For hospitals that upload their data, a data validation report is created by the system that will identify any errors.

HOSPITALS AND PEOPLE THAT WE WORK WITH (2025/2026)

- **FLS INCLUDED IN REPORT**
- **FLS ENGAGED WITH IFLSD BUT UNABLE TO SUBMIT DATA FOR 2025**
- **TRAUMA- RECEIVING HOSPITAL WITH NO FLS**



LETTERKENNY UNIVERSITY HOSPITAL
Mr Syed Nadeem, Orthopaedic Surgeon
Carole McFadden, CNM2 FLS

SLIGO UNIVERSITY HOSPITAL
Dr Grainne O'Malley, Geriatrician
Aoife McPartland, RANP

UNIVERSITY HOSPITAL GALWAY
Prof John Carey, Rheumatologist
Aoife Dempsey, RANP
Catherine Armstrong, CNS Bone Health
Fiona Heaney, CNS Bone Health
Rebecca Egan, DXA Nurse
Kelly Gorham, DXA Nurse
Helga Buechler, DXA Administrator
Clara Linnane, Senior Physiotherapist

UNIVERSITY HOSPITAL WATERFORD
Dr Donncha O'Gradaigh, Rheumatologist
Ursula McGrath, CNM2
Maria Verwijs, CNS FLS Waterford Community Care

CORK UNIVERSITY HOSPITAL
Dr Maire Rafferty, Geriatrician
Dr Evelyn Hannon, Geriatrician
Prof Emer Ahern, Geriatrician
Ken Carroll, cANP
Emmaculate Ngulube, cANP

- **HSE DUBLIN AND MIDLANDS**
- **HSE DUBLIN AND SOUTH EAST**
- **HSE MID WEST**
- **HSE DUBLIN AND NORTH EAST**
- **HSE WEST AND NORTH WEST**
- **HSE SOUTH WEST**

OUR LADY OF LOURDES HOSPITAL, DROGHEDA
Dr Helen O'Brien, Geriatrician
Dr Hannah Smyth, Geriatrician
Bernadette Conlon, RANP

BEAUMONT HOSPITAL
Prof Frances Dockery, Geriatrician
Elaine Butler, RANP,
Eleanor Hogan, RANP
Sherin Boby, DXA CNM
Josy Jose, DXA CNM
Jackie Fitzpatrick, Administrator

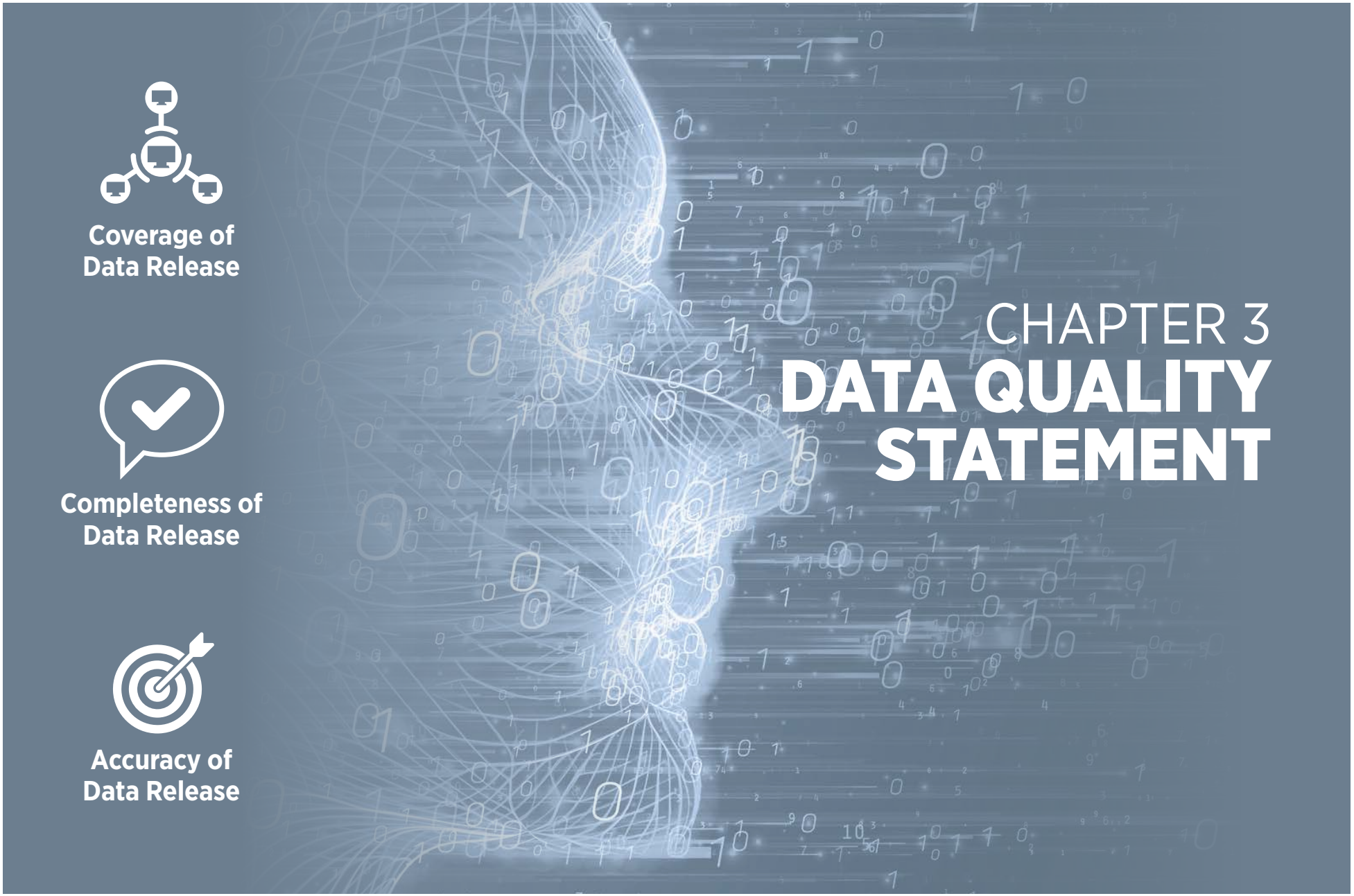
CONNOLLY HOSPITAL
Dr Eithne Murphy, Rheumatologist
Dr Marie O'Connor, Geriatrician
Dr Patrick O'Donoghue, Geriatrician
Mr Paddy Kenny, Orthopaedic Surgeon
Devi Mohan, RANP

MATER MISERICORDIAE UNIVERSITY HOSPITAL
Dr Abuelmagd Abdalla, Rheumatologist
Dr Michael Mara, Orthopaedic Surgeon
Nicola Shorten, RANP

ST VINCENT'S UNIVERSITY HOSPITAL
Dr Rachael Doyle, Geriatrician
Dr Naomi Davey, Geriatrician
Leena Rodrigues, RANP
Ciara Meehan, RANP
Breeda Sweeney, DXA Nurse
Rose Peters, DXA CNM3
Kevin Joy, Administrator

ST JAMES'S HOSPITAL
Dr Kevin McCarroll, Geriatrician
Dr Rosaleen Lannon, Geriatrician
Georgina Steen, RANP
Niamh Maher, CNS Falls/Bone Health
Nessa Fallon, CNS Falls/Bone Health
Claire O'Carroll, CNS Falls/Bone Health
Dhanya Mattews, CNS Falls/Bone Health
Majella Kelly, Administrator
Chloe Brien, Administrator
Annette O'Keefe, Administrator
Niamh Mulhall, Lead Radiographer

TALLAGHT UNIVERSITY HOSPITAL
Prof David Kane, Rheumatologist
Dr Diana Gheta, Rheumatologist
David Askin, RANP
Louise Brennan, CNS FLS
Mairead Flanagan, Administrator



CHAPTER 3
DATA QUALITY STATEMENT

CHAPTER 3: **DATA QUALITY STATEMENT**

This chapter provides an assessment of the quality of the IFLSD data in this report using internationally agreed dimensions of data quality (HIQA, 2018). This report utilises aggregated data, (i.e. high-level data) which is acquired by combining individual level data. Table 3.1 describes the context of the data in this report; Table 3.2 outlines the characteristics of the data quality within this report and Table 3.3 provides an overall assessment of the quality of the data in this report.

TABLE 3.1: CONTEXT OF DATA QUALITY STATEMENT

SCOPE	This data quality statement provides an assessment of the 2025 IFLSD data released in this report. This statement focuses solely on the data quality dimension of 'accuracy and reliability', and specifically on the characteristics of: • coverage of data release • completeness of data release • accuracy of data release. The data presented in this report were collected under the governance of the FLS-DB Steering Committee prior to the transition of the IFLSD to NOCA in March 2026. Before publication, the data underwent validation and quality assurance checks and were reviewed and accepted by NOCA for national reporting purposes.
PURPOSE	This data quality statement will help the reader decide whether the data is fit for the user's specific purpose.
DATA SOURCE	Data for this report have been extracted from the Crown Informatics Database.
TIME FRAME OF DATA RELEASE	Data released in this report are based on IFLSD clinical audit data, where the fracture was diagnosed between 1 January 2025 and 31 December 2025. KPI 11 (follow up) data are based on IFLSD clinical audit data, where the fracture was diagnosed between 1 January 2024 and 31 December 2024. Both reflect data submitted up until 8 May 2026, which was the date of data extraction.
TYPE OF DATA	Final

TABLE 3.2: CHARACTERISTICS OF DATA QUALITY

	**COVERAGE OF DATA RELEASE**	This report includes data from 11 participating FLS sites during 2025. One site commenced data collection in June 2025 and therefore contributed a partial year of data. National coverage remains incomplete as not all geographic areas are represented in the IFLSD. Coverage of case ascertainment is assessed using estimated fragility fracture activity derived from local HIPE hip fracture activity in participating hospitals. During 2025, participating FLS services identified 3,894 non-hip fragility fracture cases, representing 29% of the estimated eligible fragility fracture population and 29% of the estimated vertebral fracture population.
	**COMPLETENESS OF DATA RELEASE**	The IFLSD dataset was developed from the UK Fracture Liaison Service Database and aligned with the IOF Capture the Fracture® Best Practice Framework. The dataset supports reporting across all 11 IOF KPIs. Data completeness is monitored through KPI 1 (Figure 3.1) and through routine quarterly review with participating sites. The dataset was updated for 2025 data collection (Appendix 1). One site was unable to submit complete follow-up data because its local system remained configured to the previous dataset and was excluded from KPI 11 analysis. A second site commenced data collection in June 2025 and was excluded from KPI 1 and KPI 11 analyses. For coverage reasons, the data within this report are reported at an aggregate national level. Each hospital will receive their own supplemental report to compare their service to national data.
	**ACCURACY OF DATA RELEASE**	Data are collected prospectively by trained IFLSD audit coordinators using a standardised national dataset and entered into a secure web-based database. The database contains automated validation rules, mandatory fields, range checks and error reports that identify incomplete or inconsistent records at the point of entry or upload. All users receive training before access is granted. Data are pseudonymised before submission, and patient identifiable information remains within the participating hospital. Prior to publication, NOCA and participating sites reviewed data extracts, validation reports and KPI outputs to confirm that the data were suitable for national reporting.

TABLE 3.3: OVERALL ASSESSMENT OF DATA QUALITY

STRENGTHS OF DATA IN THIS REPORT	• National clinical audit dataset aligned with the IOF Capture the Fracture® Best Practice Framework • Standardised definitions, data collection processes and reporting methodology applied across participating sites • Data collected prospectively by audit coordinators involved in patient care • Built-in database validation rules improve data accuracy and consistency • Monthly engagement between NOCA and participating sites supports ongoing data quality monitoring and resolution of data issues • Site dashboards introduced in 2024 allow hospitals to monitor performance, benchmark and identify data quality issues in real time • All data used in this report underwent validation and review before release • Increased participation from 11 sites and increased case volume in 2025 strengthened the national dataset and enhanced understanding of FLS activity in Ireland.
LIMITATIONS OF DATA IN THIS REPORT	• The IFLSD does not yet include all eligible hospitals nationally and therefore does not represent the complete national fragility fracture population • Case identification remains dependent on local referral pathways, service resources and capacity as well as case-finding processes which vary between sites. • Coverage estimates are based on expected fragility fracture activity derived from HIPE hip fracture data and are therefore estimates rather than directly observed populations • Variation in staffing, DXA access, multidisciplinary team support and administrative resources across sites may influence both data completeness and KPI performance • Some KPIs, particularly follow-up and adherence measures, depend on successful patient contact and may underestimate actual treatment uptake or adherence.

DATA QUALITY AND CASE IDENTIFICATION PERFORMANCE

Key performance indicators 1–3 (Figure 3.1) evaluate data quality and case identification within participating FLS. These indicators measure data completeness and the extent to which patients with non-hip fragility fractures and vertebral fractures are identified and entered into the audit. A summary description of each KPI is provided in Table 1.1, while detailed reporting methodology and calculation specifications are outlined in Appendix 2. Figure 3.1 shows national performance for 2025 compared with 2024 with bars indicating minimum and maximum hospital-level values. Appendix 3: Frequency Tables shows the numerator and denominator for each KPI.

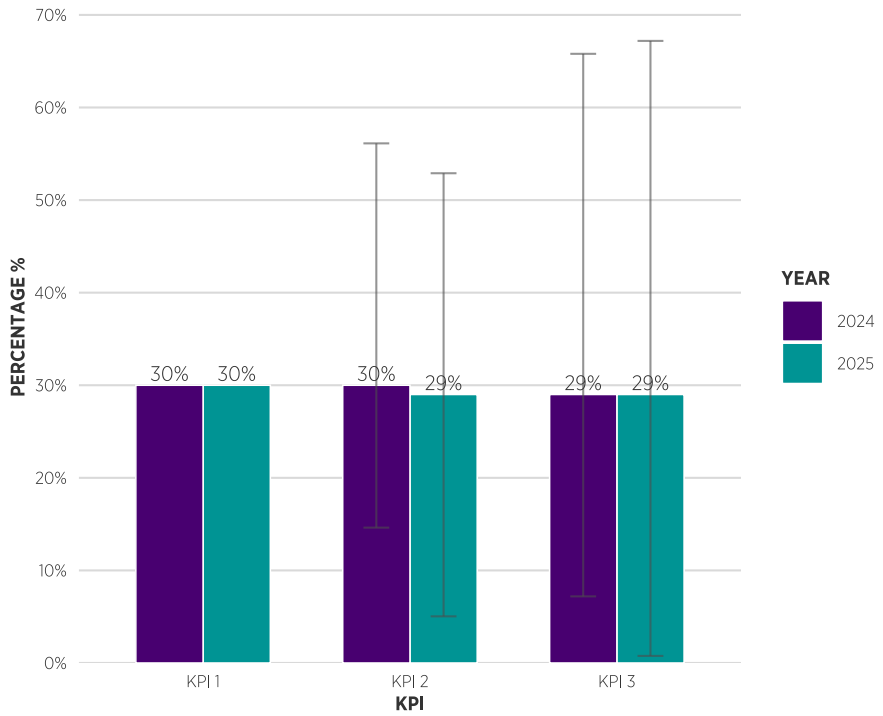


FIGURE 3.1: DATA QUALITY AND CASE IDENTIFICATION PERFORMANCE

KPI 1: COMPLETENESS IS CALCULATED AS THE PERCENTAGE OF KNOWN VALUES ACROSS THE DATA ITEMS INCLUDED IN THIS REPORT.[1]

KPI 1
Data Completeness

Target: Greater than, or equal to, 80% completeness of 8, or more, KPIs.

Data completeness is a fundamental component of audit quality, as accurate and complete data are required to reliably measure performance and identify opportunities for improvement. Within the IFLSD, KPI 1 assesses the completeness of data submitted for the clinical indicators reported throughout this audit and provides important context for interpreting the remaining KPI results.

In 2025, 30% (n=3) of sites achieved the KPI 1 standard of having at least eight clinical KPIs with greater than 80% data completeness. Nationally, 70% of KPI fields had completion rates greater than 80%. Differences in performance between sites highlight opportunities to further strengthen data quality processes and support consistent reporting across the national FLS network.

1. One site was excluded from KPI 1 analysis because it commenced data submission in June 2025. Insufficient data were available for inclusion in the reporting period.

KPI 2: IDENTIFICATION (ALL NON-HIP FRAGILITY FRACTURES) VS. EXPECTED: THE PERCENTAGE OF PATIENT RECORDS SUBMITTED COMPARED WITH THE LOCAL ESTIMATED CASELOAD.



Identification of patients with fragility fractures is the first step in secondary fracture prevention, as patients cannot benefit from assessment, falls prevention or osteoporosis treatment unless they are identified and entered into the FLS pathway. The IOF Capture the Fracture® 80:50:80 framework recommends that high-performing FLSs identify 80% of the expected non-hip fragility fracture population (Willers *et al*., 2022; Javaid *et al*., 2023).

During 2025, 3,894 non-hip fragility fracture patient records were submitted to the IFLSD. This represented 29% of the estimated non-hip fragility fracture caseload expected to present to the 11 participating hospitals, compared with 30% (n=3,335) from 10 hospitals in 2024. While the number of patients captured by the audit increased during the reporting period, the identification rate remained below the IOF benchmark.

Identification rates differed across participating hospitals, ranging from 5% to 53% (Figure 3.1). This may reflect differences in fracture volumes, catchment populations, referral pathways, service configuration, staffing resources, case-finding processes and fracture sites. These findings highlight ongoing opportunities to strengthen and standardise case-finding processes, increase patient access to osteoporosis assessment and treatment, and improve secondary fracture prevention nationally (Choo *et al*., 2026). Interpretation of subsequent KPI results should be considered in the context of this identification rate, as they reflect patients captured by participating services rather than the wider estimated fragility fracture population.

KPI 3: IDENTIFICATION OF VERTEBRAL (SPINE) FRACTURES: THE PERCENTAGE OF PATIENTS WITH A VERTEBRAL (SPINE) FRACTURE IDENTIFIED BY THE FLS COMPARED WITH THE ESTIMATED NUMBER OF VERTEBRAL FRACTURE PATIENTS IN THE LOCAL POPULATION.



Vertebral fractures are an important focus of secondary fracture prevention because they are associated with an increased risk of subsequent fractures and can benefit significantly from osteoporosis treatment (Kanis *et al*., 2018; LeBoff *et al*., 2022). Identification remains challenging, as many vertebral fractures are not diagnosed at the time of injury and are often detected incidentally on imaging performed for other reasons.

In 2025, 29% (n=796) of the estimated vertebral fracture cases (n=2,726) were identified by participating FLS services, unchanged from 2024. Compliance with KPI 3 ranged from 1% to 67% across participating sites (Figure 3.1). This may reflect differences in referral pathways, access to radiology reporting systems, case-finding processes, and service configuration.

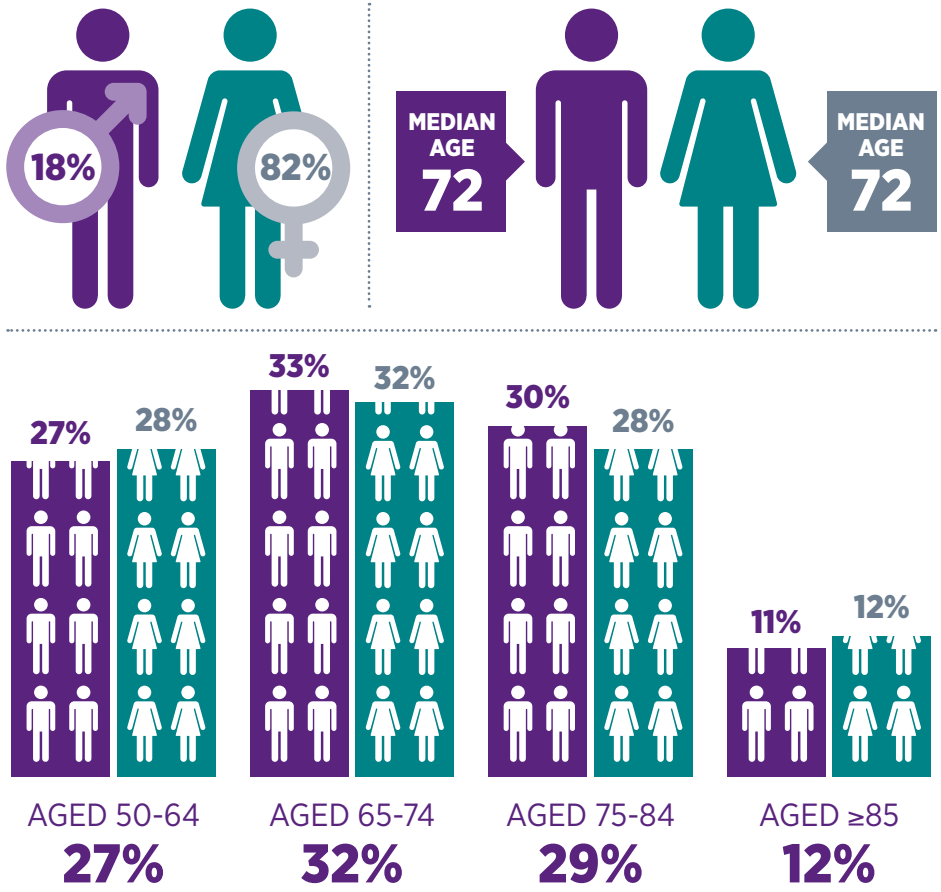


CHAPTER 4
CASE MIX/ DEMOGRAPHICS

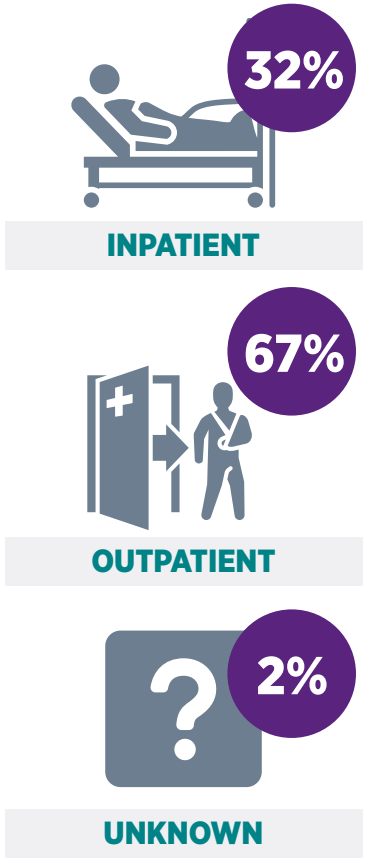
CHAPTER 4: **CASE MIX / DEMOGRAPHICS**

This report captures 3,894 fragility fracture cases across the eleven hospitals. Demographic details of these cases are shown below. Eighty-two per cent of cases included in this report were female. Forearm fractures were the most frequently identified fracture type (42%). Thirty-two per cent of patients were admitted to hospital as inpatients for treatment for their fracture. Further details are presented in Appendix 4. Additional Information. These demographics reflect local case-finding approaches and governance arrangements within the participating FLSs and should not be considered representative of the national fragility fracture population.

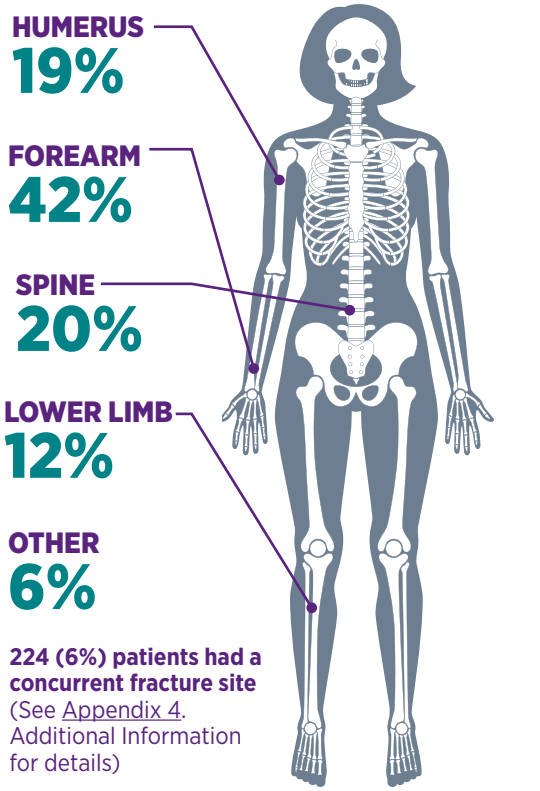
SEX & AGE GROUP



INITIAL FRACTURE TREATMENT LOCATION



FRACTURE SITE



224 (6%) patients had a concurrent fracture site (See Appendix 4. Additional Information for details)

Note: percentages may not add to 100% due to integer rounding

FRACTURE RISK FACTORS

PREVIOUS FRAGILITY FRACTURE
40%



CURRENT/ REGULAR ORAL OR IV STEROIDS
5%



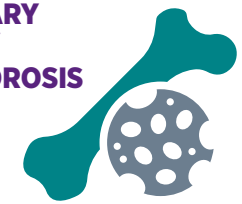
ALCOHOL EXCESS (CURRENT + PREVIOUS)
5%



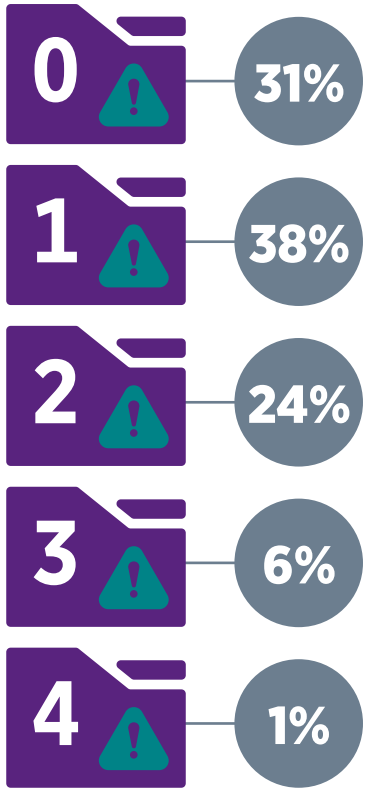
CURRENT SMOKER
11%



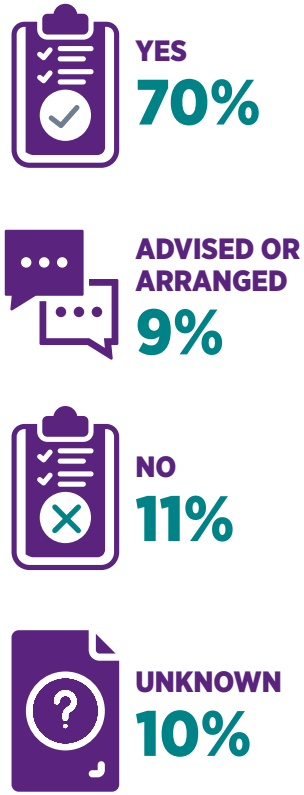
SECONDARY CAUSES / OSTEOPOROSIS RISK
46%



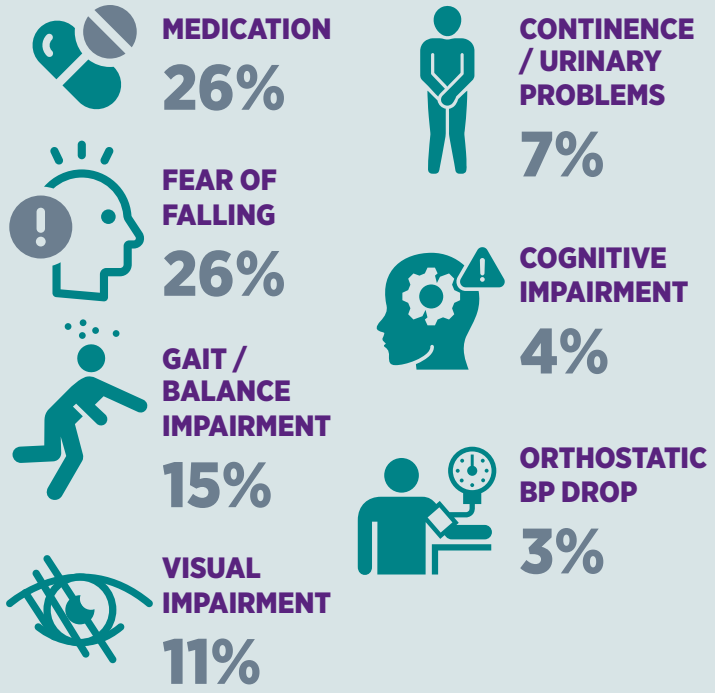
NUMBER OF FRACTURE RISK FACTORS PER PATIENT



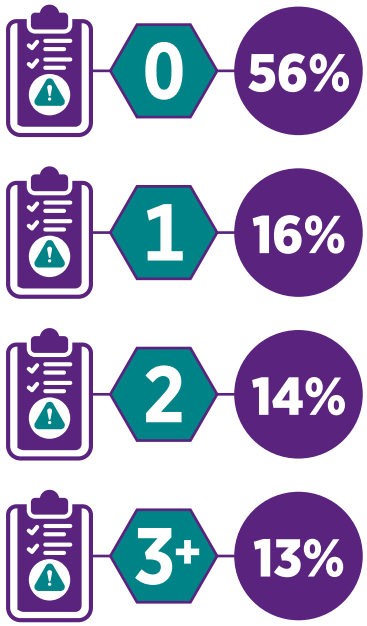
FALLS RISK ASSESSED BY FLS



FALLS RISK FACTOR



NUMBER OF FALLS RISK FACTORS PER PATIENT IN THOSE WITH RISK ASSESSMENT



Note: Total for specific risk factors does not add to 100% due to some patients having no risk factors and some having multiple.



CHAPTER 5
ASSESSMENT AND TREATMENT

CHAPTER 5: **ASSESSMENT AND TREATMENT**

This chapter examines the assessment and treatment processes delivered to the 3,894 patients with non-hip fragility fractures who were identified and included in the audit population.

While KPIs 2 and 3 focus on the identification and capture of fragility fracture patients, KPIs 4–7 (Figure 5.1) evaluate the subsequent clinical pathway. Together, these indicators provide an important measure of how effectively identified patients progress through the core components of secondary fracture prevention. A summary description of each KPI is provided in Table 1.1, while detailed reporting methodology and calculation specifications are outlined in Appendix 2. Figure 5.1 shows national performance for 2025 compared with 2024 with bars indicating minimum and maximum hospital-level values. Appendix 3: Frequency Tables shows the numerator and denominator for each KPI.

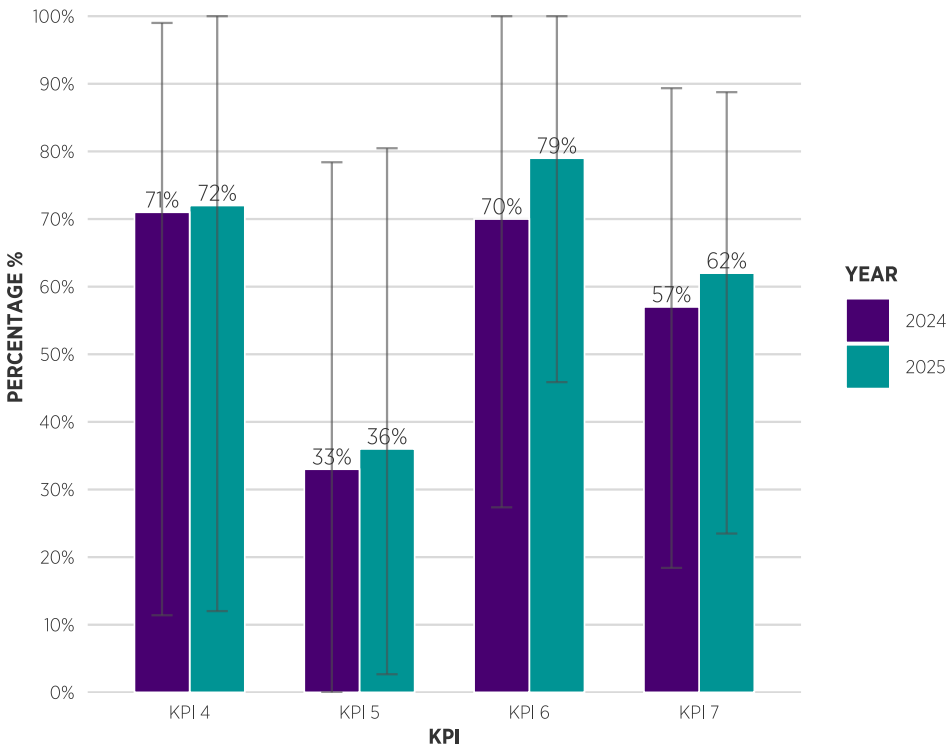


FIGURE 5.1: ASSESSMENT AND TREATMENT PERFORMANCE

KPI 4: TIME TO FLS ASSESSMENT: PERCENTAGE OF PATIENTS WHO WERE ASSESSED BY THE FLS WITHIN 90 DAYS OF THEIR FRACTURE.

KPI 4
Time to FLS Assessment

Timely assessment is a key component of secondary fracture prevention, as the risk of subsequent fracture is highest immediately following a major osteoporotic fracture (Javaid *et al*., 2023). Early FLS review facilitates osteoporosis assessment, future fracture risk evaluation, identification of modifiable risk factors, and initiation of interventions to reduce the risk of further fractures.

In 2025, 72% (n=2,806) of identified patients received an FLS assessment within 90 days of fracture, compared with 71% (n=2,368) in 2024. The hospital-level compliance with KPI 4 ranged from 12% to 100% in 2025 (Figure 5.1), and may reflect differences in referral pathways, case-finding processes and service configuration.

Of the patients assessed in 2025, 40% (n=1,575) reported a previous fragility fracture. Identifying fracture risk factors and a history of previous fragility fracture is a core component of FLS assessment and helps inform subsequent investigation, treatment recommendations and fracture prevention strategies.

KPI 5: TIME TO DXA < 90 DAYS: PERCENTAGE OF PATIENTS WHO HAD A DXA ORDERED OR RECOMMENDED AND WERE SCANNED WITHIN 90 DAYS OF THEIR FRACTURE.

KPI 5
Time to DXA

DXA assessment supports fracture risk assessment, treatment planning and osteoporosis management (Slart *et al*., 2024). While DXA assessment supports clinical decision-making, treatment should not be delayed in patients at high risk of subsequent fracture. Although not all patients require DXA assessment prior to treatment initiation, timely access to DXA services remains an important component of osteoporosis care and secondary fracture prevention (Kanis *et al*., 2020).

In 2025, 61% (n=2,360) of identified patients were recommended, or ordered, a DXA assessment. Of these, 36% (n=848) underwent scanning within 90 days of fracture, compared with 33% (n=667) in 2024. Although this represents a small improvement in timely access to diagnostic assessment through participating fracture liaison services, hospital-level performance ranged from 3% to 80% (Figure 5.1). This may reflect differences in access to radiology and DXA services.

KPI 6: FALLS ASSESSMENT: PERCENTAGE OF PATIENTS WHO RECEIVED A FALLS ASSESSMENT OR WERE REFERRED OR RECOMMENDED FOR A FALLS ASSESSMENT.



Falls risk assessment is an important component of secondary fracture prevention, as many fragility fractures occur following a fall (Montero-Odasso *et al*., 2022).

In 2025, 79% (n=3,081) of patients received or were referred for a falls risk assessment, compared with 70% (n=2,330) in 2024. This represents an improvement in the integration of falls prevention within the FLS pathway and reflects the importance of addressing falls risk alongside bone health to reduce the risk of subsequent fractures (Burke *et al*., 2018). The hospital-level compliance with KPI 6 ranged from 46% to 100% in 2025 (Figure 5.1), which may be due to different levels of access, or referral pathways to falls assessment clinics, physiotherapy or occupational therapy.

In 2025, a total of 2,729 patients had a falls risk assessment performed by the FLS itself with falls risk factors recorded in the IFLSD. The most common risk factors for falls identified were fear of falling and taking medication that increases the risk of falls, both present in 26% of patients assessed.

There is ongoing work within the HSE to develop the Irish National Falls Audit, which will potentially complement the FLS services by identifying variation in falls assessment practices, improving access to falls prevention interventions, and driving consistency in performance against KPI 6, thereby enhancing secondary fracture prevention and patient outcomes.

KPI 7: BONE THERAPY RECOMMENDED: PERCENTAGE OF PATIENTS WHO WERE RECOMMENDED ANTI-OSTEOPOROSIS MEDICATION.



Recommendation of anti-osteoporosis treatment is a key component of secondary fracture prevention and an effective strategy for reducing the risk of subsequent fractures (LeBoff *et al*., 2022). Treatment recommendations are based on individual patient factors, including fracture risk, comorbidities and current therapies. Within the IOF Capture the Fracture® 80:50:80 framework, a high-performing FLS that identifies close to all expected fragility fracture patients would be expected to have approximately 50% of its patients commencing or continuing anti-osteoporosis treatment (Willers *et al*., 2022).

In 2025, 62% (n=2,426) of identified patients were recommended anti-osteoporosis treatment, representing an increase of five percentage points from 2024. Performance across sites ranged from 23% to 89% (Figure 5.1). While the overall national performance on this KPI exceeds the 50% treatment component of the IOF Capture the Fracture® framework, the finding should be interpreted in the context of the national non-hip fragility fracture identification rate of 29%. At site level, nine sites recommended anti-osteoporosis treatment for 50% or more of eligible patients. However, this does not necessarily indicate compliance with the IOF standard for KPI 7, as performance is also influenced by the proportion and characteristics of the non-hip fragility fracture population identified by the service.

Of the 2,426 patients meeting this KPI, 2,040 (84%) specified the bone therapy recommended. Denosumab was the most common treatment recommended (17% of all patients; n=689), followed by Zoledronate (13%; n=526) and Alendronate (13%; n=507). Further detail is available in Appendix 4. Additional Information.

Among patients with a previous fragility fracture, 34% (n=537) were already receiving anti-osteoporosis medication at the time of presentation, compared with 30% (n=388) in 2024. While this represents a modest improvement, almost two-thirds of patients with a previous fragility fracture were not receiving anti-osteoporosis treatment, highlighting ongoing opportunities to improve secondary fracture prevention and reinforcing the important role of FLS in identifying and managing patients at increased fracture risk (Walsh *et al*., 2021a).



CHAPTER 6
OUTCOMES / FOLLOW UP

CHAPTER 6: **OUTCOMES / FOLLOW-UP**

The aim of a fracture liaison service is not only to identify and assess patients but also to support the implementation and ongoing use of evidence-based interventions to reduce future fracture risk.

This chapter examines patient outcomes following assessment through the FLS pathway. The results relate to specific patient groups who progressed through earlier stages of the pathway (KPIs 4–7) and report on KPIs 8–11 (Figure 6.1). These indicators assess progression from treatment recommendation to treatment initiation, engagement with recommended falls prevention interventions, follow-up monitoring and longer-term treatment adherence, all of which are intended to reduce the risk of subsequent fractures. A summary description of each KPI is provided in Table 1.1, while detailed reporting methodology and calculation specifications are outlined in Appendix 2. Figure 6.1 shows national performance for 2025 compared with 2024 with bars indicating minimum and maximum hospital-level values. Appendix 3: Frequency Tables shows the numerator and denominator for each KPI.

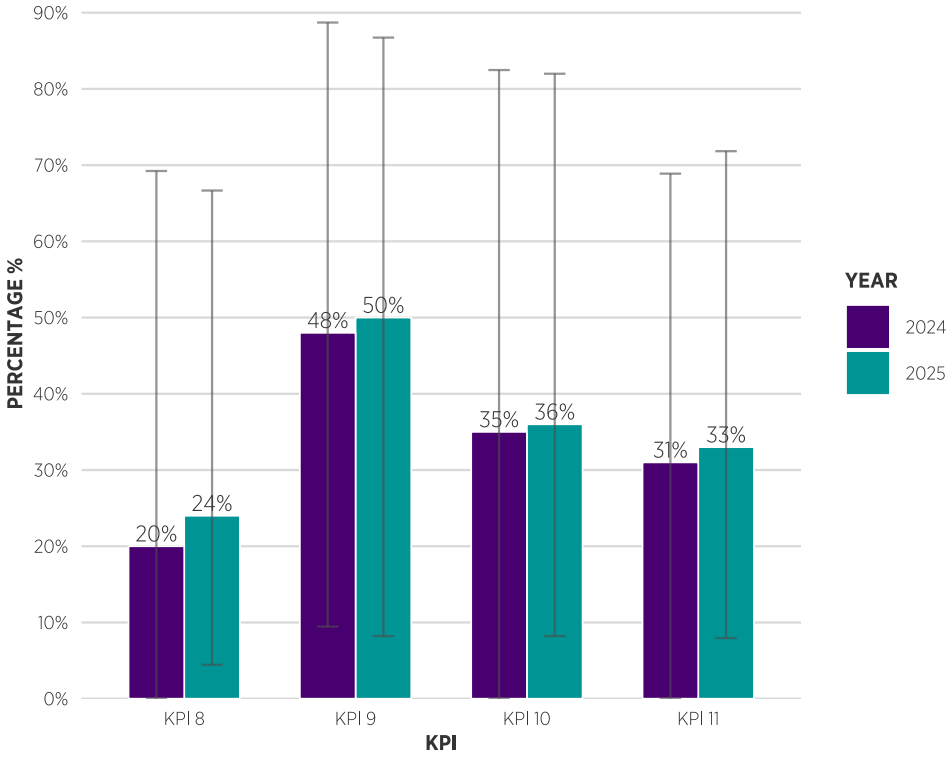


FIGURE 6.1: FOLLOW-UP AND PATIENT OUTCOMES PERFORMANCE

KPI 8: STRENGTH AND BALANCE TRAINING: THE PERCENTAGE OF NON-HIP FRAGILITY FRACTURE PATIENTS WHO HAD STARTED STRENGTH AND BALANCE TRAINING WITHIN 16 WEEKS OF THEIR FRACTURE



Strength and balance training is a key component of falls prevention and secondary fracture prevention, as many fragility fractures occur following a fall. As this KPI applies only to patients who were recommended anti-osteoporosis medication and referred for, or advised to undertake, a strength and balance programme, it does not represent all patients included in the audit.

In 2025, 24% (n=144) of eligible patients (n=607) self-reported that they had commenced a strength and balance exercise programme within 16 weeks of their fracture, compared with 20% (n=120) in 2024. This represents a small improvement in the uptake of falls prevention interventions through the FLS pathway and demonstrates the role of FLS in facilitating access to interventions that may reduce the risk of subsequent falls and fractures. Performance varied across sites, with rates ranging from 4% to 100% (Figure 6.1).

A recent HSE community services falls prevention framework recommends that people at risk of falls undertake an evidence-based multicomponent exercise programme, as these interventions have been shown to reduce overall falls rates (Sherrington et al., 2019; Brennan and McCann, 2025). Currently, the Otago Exercise Programme (OEP) and Falls Management Exercise (FaME) are among the key evidence-based multicomponent falls prevention exercise programmes available in Ireland, although access to these programmes remains limited (Rooney *et al*., 2026). Future work could explore the types of falls prevention exercise programmes undertaken by patients following recommendation by Fracture Liaison Services.

KPI 9: MONITORING CONTACT 12–16 WEEKS POST FRACTURE: THE PERCENTAGE OF PATIENTS WHO WERE FOLLOWED UP WITHIN 16 WEEKS OF THEIR FRACTURE.



Monitoring patients who were recommended anti-osteoporosis medication following FLS assessment is an important component of secondary fracture prevention. Follow-up contact provides an opportunity to confirm whether recommended treatments and interventions have been implemented, identify barriers to treatment initiation, address patient concerns, and reinforce the importance of strength and balance exercise programmes where indicated (Danazumi *et al*., 2024).

Timely follow-up supports the transition from treatment recommendation to treatment initiation, particularly in services where prescribing responsibility rests with the patient's GP or another clinician. Follow-up monitoring also provides an opportunity to reinforce falls prevention advice and support engagement with recommended interventions. However, as this KPI is measured from the date of fracture rather than the date of FLS assessment, the monitoring period may be insufficient in some centres to fully assess longer-term treatment tolerability or adherence.

In 2025, 62% (n=2,405) of patients were eligible for follow-up monitoring. Of these, 50% (n=1,213) received follow-up monitoring within 12–16 weeks of fracture, compared to 48% (n=906) in 2024. There remains site-level differences in achievement of this KPI demonstrated by the range in Figure 6.1 (8% to 87%).

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.



Commencement of anti-osteoporosis treatment following a fragility fracture is one of the most effective interventions for reducing the risk of subsequent fractures, particularly during the period of highest risk immediately following fracture (LeBoff *et al*., 2022). Monitoring treatment initiation is an important function of the FLS, particularly where medication is not prescribed directly by the service. Some patients may not attend their GP, may decline treatment or may have concerns about medication use. As this KPI is measured within 16 weeks of their fracture, some patients may subsequently commence treatment after the reporting period, and therefore the results may underestimate longer-term treatment uptake.

In 2025, 36% (n=868) of patients who were recommended anti-osteoporosis treatment following FLS assessment had commenced or continued treatment within 16 weeks of fracture, compared with 35% (n=668) in 2024. Site-level differences were evident, with performance ranging from 8% to 82% (Figure 6.1), suggesting ongoing challenges in translating treatment recommendations into treatment uptake.

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.[2]



Long-term adherence to anti-osteoporosis medication is essential for sustained fracture prevention, as the benefits of treatment depend on both initiation and continued use over time. Unlike the preceding KPIs, KPI 11 relates to patients from the 2024 fracture cohort who were recommended anti-osteoporosis treatment, and assesses confirmed adherence 1 year following fracture. The IOF Capture the Fracture® 80:50:80 framework suggests that 80% of patients commenced on anti-osteoporosis treatment should remain adherent at 12 months (Willers *et al*., 2022; Javaid *et al*., 2023). However, maintaining osteoporosis treatment over time is recognised as a challenge in routine practice; previous research in Irish primary care found that approximately half of patients newly initiated on oral bisphosphonates or denosumab remained persistent with treatment at two years (Walsh et al., 2021b).

Of the 1,785 patients eligible for 12-month follow-up, 694 patients (38%) had follow-up recorded. Overall, adherence to prescribed anti-osteoporosis medication was confirmed for 33% (n=592) of the eligible cohort, compared with 31% (n=586) in the previous reporting period. Site-level performance ranged from 8% to 72% (Figure 6.1).

Although confirmed adherence improved slightly, it remained below the 80% target recommended by the IOF Capture the Fracture® framework. Two participating sites achieved confirmed adherence rates above 50%, demonstrating that higher levels are achievable within FLS. This finding should be interpreted in the context of available follow-up data, as patients without recorded follow-up cannot be confirmed as adherent. This highlights the ongoing challenge of supporting and monitoring long-term adherence to anti-osteoporosis therapy and underscores the importance of continued patient engagement, follow-up and support within FLS (Choo et al., 2026).

[2] One site was excluded from KPI 11 analysis because it commenced data submission in June 2025. A second site was excluded because audit data could not be uploaded during the reporting period due to IT-related issues.



CHAPTER 7
QUALITY IMPROVEMENT

CHAPTER 7: **QUALITY IMPROVEMENT**

The IFLSD audit supports quality improvement, service assurance and research by providing information on the care delivered to patients with fragility fractures. This chapter focuses on quality improvement (QI) activities arising from audit findings.

QI is a systematic approach to improving the safety, effectiveness, efficiency, patient-centredness and overall quality of healthcare services. While clinical audit measures practice against agreed standards and identifies areas for improvement, QI provides the methods needed to implement, evaluate and sustain change. In this way, audit identifies opportunities for improvement, while QI drives measurable improvements in practice.

The importance of QI continues to grow as healthcare services strive to deliver safer, more effective and person-centred care within increasingly complex systems. Effective QI initiatives help reduce unwarranted variation, improve patient outcomes and experience, optimise resource use, and foster a culture of continuous learning and improvement. They also empower multidisciplinary teams to identify challenges, test solutions and achieve sustainable change.

QI projects generally follow a structured process. The HSE *Quality Improvement Guide and Toolkit* (2024) describes a six-step approach: identifying a quality issue; understanding the problem; developing and testing change ideas; measuring improvement; and sustaining successful interventions. Common methodologies include the Model for Improvement, Plan-Do-Study-Act (PDSA) cycles, process mapping and root cause analysis.

A range of resources are available to support healthcare professionals undertaking QI projects. These include the *HSE Quality Improvement Guide and Toolkit* (2024), the *Royal College of Physicians Ireland QI Learning Hub* and accredited QI training programmes RCPI QI Learning hub and HIQA standards, guidance and quality frameworks that support safer and more effective care. HIQA Data Quality Framework.





AUDIT COORDINATOR WORKSHOP: APRIL 2026

The commitment of IFLSD audit coordinators to continuous quality improvement was demonstrated through their participation in the NOCA Trauma & Surgery Audit Programme Workshop on 10 April 2026. This collaborative event provided an opportunity for audit coordinators from across Ireland, and multiple audits, to share knowledge, develop skills and strengthen professional networks that support national audit and quality improvement activities.

The workshop covered data analysis, audit governance, quality improvement methodologies and approaches to disseminating audit findings through abstracts, posters and publications. These sessions highlighted the role of audit data in driving service improvement and improving patient outcomes.

A dedicated collaborative session between the IFLSD audit coordinators and Irish Hip Fracture Database (IHFD) audit coordinators explored fragility fracture prevention, treatment, rehabilitation, secondary fracture prevention and quality improvement initiatives across Ireland. The session facilitated discussion on shared challenges, examples of best practice and opportunities for future collaboration between FLS sites.

This workshop reflected the collaborative culture underpinning the national IFLSD programme. By bringing together clinical, audit and quality improvement expertise, participants were able to share learning, showcase innovation and identify practical solutions to common challenges. Such engagement is essential to strengthening osteoporosis care and reducing the burden of fragility fractures nationally.

The enthusiasm and willingness of IFLSD audit coordinators to share experiences and support one another was particularly noteworthy. Their active participation demonstrates the commitment across the network to delivering high quality, patient-centred care and using audit data not only for measurement, but also as a driver of continuous improvement.



CHAPTER 8
AUDIT UPDATE

CHAPTER 8: **AUDIT UPDATE**



Building on the work and learning generated through previous Irish Fracture Liaison Service Database reports, this first national report produced under NOCA governance shows an increase year-on-year in fracture numbers identified, and improvements across most Key Performance Indicators. These reflect the growing expertise of Fracture Liaison Services around the country, which have delivered positive change through their commitment, enthusiasm and goodwill.

One of the most striking findings in this report is that 40% of patients identified had previously sustained a fragility fracture. This highlights the ongoing importance of the Irish Fracture Liaison Service Database in helping us understand why repeat fractures occur and how best to protect people from future fractures. Repeat fractures are associated with significant morbidity for individuals and have a considerable impact on families, healthcare services and wider society. The inclusion of fracture and falls risk factor data in this year's report provides valuable new insights into the characteristics of patients attending Fracture Liaison Services and will support future service development, quality improvement initiatives and a deeper understanding of fracture risk at a national level.

This report adopts a national perspective, focusing on overall performance, trends and opportunities for shared learning across participating services. While differences between sites continue to be evident, they provide an opportunity to better understand how Fracture Liaison Services are delivered across the country and to share effective practices that support improved performance. I look forward to seeing how NOCA's expertise in clinical audit, benchmarking and quality improvement will further strengthen the IFLSD and support participating services in the years ahead.

I congratulate NOCA on this report, together with the participating hospitals, Audit Coordinators, clinical leads and multidisciplinary teams whose commitment continues to drive improvements in fracture prevention and patient care. NOCA's expertise in managing national clinical audits will help ensure the continued development of the IFLSD as an essential tool in the fight against osteoporotic fractures in Ireland.

Prof Frances Dockery, Co-chair and Geriatrician Clinical Lead of the Fracture Liaison Service Database from 2019 to 2025.

NATIONAL PROGRESS IN FLS PERFORMANCE

Evidence of ongoing progress was observed during the reporting period, with 8 of the 11 KPIs demonstrating improved performance compared with 2024. These findings reflect the continued commitment of participating sites to data quality, clinical audit and service development, and suggest that engagement with the audit is contributing to measurable improvements in the delivery of FLS nationally.

Differences in performance between participating sites provide an opportunity to learn from services demonstrating positive results. Analysis of audit findings enables the identification of effective practices, service models and approaches to care delivery that may support improved performance. Through continued engagement with participating sites, the IFLSD can better understand these factors and share learning across the national network. This collaborative approach will support further progress, reduce unwarranted variation in care and strengthen secondary fracture prevention for patients with fragility fractures.



CHAPTER 9
RECOMMENDATIONS

CHAPTER 9: **RECOMMENDATIONS**

RECOMMENDATION 1

Strengthen the identification of non-hip fragility fracture and vertebral fracture patients and support improved case ascertainment across participating FLS.

Rationale

In 2025, participating hospitals identified only 29% of the estimated non-hip fragility fracture population and 29% of the estimated vertebral fracture population. A wide range in identification rates was evident across participating hospitals, suggesting differences in case-finding methodologies and referral pathways.

The IOF Capture the Fracture® Best Practice Framework identifies systematic patient identification as a fundamental component of FLS care, supporting improved osteoporosis assessment, treatment initiation and secondary fracture prevention.

What action should be taken?

Participating hospitals will review local case-finding methodologies and referral pathways and identify opportunities to improve the identification of non-hip fragility fracture and vertebral fracture patients.

NOCA will continue to provide benchmarking, identify variation in performance, and facilitate the sharing of learning and effective case-finding strategies between higher and lower performing sites through audit reporting, feedback and quality improvement activities.

Who is responsible for implementation?

Hospital Managers, NOCA/IFLSD Governance Committee.

When should this be implemented?

Actions will be undertaken between January and December 2027. Findings and examples of good practice will be incorporated into audit reporting and quality improvement activities during and following 2027.

Evidence that the action will be effective

More consistent identification and referral processes across participating hospitals, improved capture of non-hip fragility fracture and vertebral fracture patients, and increased access to osteoporosis assessment, falls assessment and secondary fracture prevention interventions.

Who will benefit from the recommendation?

Patients with fragility fractures, FLS teams, participating hospitals and the wider health service through improved access to secondary fracture prevention services and reduced risk of subsequent fractures.

RECOMMENDATION 2

Undertake a national organisational survey of participating and non-participating hospitals to establish a baseline of Fracture Liaison Service provision. The survey will identify factors influencing variation in service delivery, and inform future participation in the Irish Fracture Liaison Service Database (IFLSD). NOCA will publish and disseminate findings to support service evaluation, quality improvement, service planning and future audit development.

Rationale

This report contains data from 11 participating hospitals and does not represent all FLS sites nationally. A wide range of hospital-level KPI results was observed across key performance indicators, suggesting differences in service organisation, workforce, infrastructure and access to supports.

The IOF Capture the Fracture® Best Practice Framework identifies organisational characteristics as a key domain of FLS performance. Previous organisational surveys undertaken prior to the transition of the IFLSD to NOCA governance identified variation in staffing, governance arrangements, multidisciplinary team supports, prescribing pathways, administrative resources and access to DXA services. An updated review is required to establish a current baseline of service provision, understand factors contributing to variation in performance and identify opportunities for future development of both Fracture Liaison Services and the IFLSD.

What actions should be taken?

NOCA will design, co-ordinate and analyse a national organisational survey and support hospitals to complete the survey.

The organisational survey will gather information about:

- workforce, governance arrangements, infrastructure, access to diagnostics and multidisciplinary team supports across participating IFLSD sites;
- current FLS provision and potential future participation in the IFLSD among hospitals not yet participating in the audit.

NOCA will publish and disseminate findings to support FLS teams, hospital managers and REOs to complete service evaluation, quality improvement and service planning. NOCA will use findings to inform future national audit development of the IFLSD.

Who is responsible for implementation?

NOCA/IFLSD Governance Committee.

When should this be implemented?

The organisational survey will be completed and findings published by December 2027.

Evidence that the action will be effective

An understanding of FLS provision nationally, improved understanding of factors contributing to variation in performance, identification of opportunities for service improvement, and support for future expansion of participation in the IFLSD.

Who will benefit from the recommendation?

Patients, Fracture Liaison Service teams, hospital management, national clinical programmes, healthcare planners, policymakers and the wider health service.



CHAPTER 10
CONCLUSION

CHAPTER 10: **CONCLUSION**

The IFLSD National Report 2025 marks an important milestone in the development of secondary fracture prevention services in Ireland. The audit demonstrates the significant contribution Fracture Liaison Services make to the identification, assessment and management of patients following non-hip fragility fracture, while also highlighting opportunities to improve case ascertainment, reduce variation and strengthen access to evidence-based care.

The transition of the IFLSD to NOCA provides a unique opportunity to build on the strong foundations established by the FLS-DB Steering Committee supported by the NCPTOS, and to draw on the experience of related national audits, including the Irish Hip Fracture Database (IHFD) and Major Trauma Audit (MTA). NOCA will continue to develop the IFLSD as a national resource for quality improvement, benchmarking and service evaluation. There is already notable momentum and engagement across participating hospitals, with further sites expressing interest in participating in the audit. Through continued collaboration with clinicians, hospitals, national clinical programmes and other stakeholders, the audit will support the sharing of good practice, provide insight into variation in care and help inform stakeholders involved in the future development of Fracture Liaison Services nationally.

Participating hospitals are encouraged to use their audit findings and benchmarking reports to identify opportunities for improvement, strengthen local pathways of care and support quality improvement initiatives within their services. By using data to understand performance and drive change, hospitals can play a central role in improving secondary fracture prevention and patient outcomes.

As participation grows and the audit matures, the IFLSD will play an increasingly important role in supporting improvements in osteoporosis management, falls prevention and secondary fracture prevention. Through measurement, collaboration and continuous quality improvement, the audit is well positioned to support better outcomes for patients and contribute to reducing the burden of fragility fractures on individuals, families and the wider health service in Ireland.

“Through measurement, collaboration and continuous quality improvement, the audit is well positioned to support better outcomes for patients and contribute to reducing the burden of fragility fractures on individuals, families and the wider health service in Ireland.”



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ACCESSING REPORT APPENDICES

National Office of Clinical Audit (2026)
Irish Fracture Liaison Service Database National Report 2025 - Appendices.
Dublin: National Office of Clinical Audit.
Available at: https://www.noca.ie/publications/publications-listing/P0/category/3

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NOCA National Office of Clinical Audit

Phone: **+353 1 4028577**
Email: **fls@noca.ie**

www.noca.ie