



Clinical Standards for Fracture Liaison Services in New Zealand

2016

Fracture Liaison Services

A Fracture Liaison Service (FLS) systematically identifies individuals within a local population aged 50 years and over who have suffered a fragility fracture, with the intention of preventing subsequent fractures. A fragility fracture is defined as a fracture resulting from low trauma, such as a fall from standing height¹. The most common skeletal sites of fragility fractures are the hip, wrist, humerus, pelvis or spine. It should be noted that a significant proportion of spine fractures are undiagnosed or do not come to clinical attention².

FLS have been demonstrated in many countries to significantly improve the process of secondary preventive care, which comprises both osteoporosis assessment and management, and interventions to prevent future falls³. FLS reduce re-fracture rates⁴⁻⁷ and are cost-effective⁸⁻¹¹. A study from the Netherlands suggests that FLS may also reduce post-fracture mortality⁷.

FLS must be structured to deliver optimal secondary preventive care in the local context. The FLS model of care has been established in the hospital setting¹², in primary care organisations¹³ and, in the United States, in Health Maintenance Organisations (HMOs)¹⁴. Regardless of the organisational setting, international experience has identified key steps in the development of a high-performing FLS:

- Establish a system-wide, multi-disciplinary stakeholder group to design the local FLS model of care.
- Use iterative quality improvement processes to develop the FLS (e.g. Plan-Do-Study-Act cycles).
- Identify and resource a FLS Lead Clinician (e.g. endocrinologist or GP with a specialist interest).
- Appoint a FLS Coordinator who is typically a Nurse Specialist or Allied Health Professional.
- Develop an integrated care pathway endorsed by local primary and secondary care clinicians.
- Undertake ongoing audit of the FLS to ensure fragility fracture sufferers receive long-term care.

The Minister of Health expected that all District Health Boards (DHBs) had established a fully operating FLS by June 2015 in order to reduce the number of future fractures suffered by older New Zealanders¹⁵. In 2016, an Outcomes and Best Practice Framework for Falls and Fragility Fracture Prevention for Older People in New Zealand (the Outcomes Framework) is in development. The Outcomes Framework will be aligned to the New Zealand Triple Aim for quality improvement¹⁶. These Clinical Standards will support implementation of the Outcomes Framework through the provision of clarity on what a high-performing FLS delivers in the New Zealand context.

Clinical Standards for Fracture Liaison Services

Clinical or Quality Standards for FLS have been developed in Canada¹⁷ and the UK^{18, 19}. The International Osteoporosis Foundation (IOF) has also developed internationally endorsed standards for FLS in the form of the Capture the Fracture[®] Best Practice Framework²⁰⁻²². The purpose of these documents is to set evidence-based standards of post-fracture care that health professionals and patients should expect. In 2015, the National Osteoporosis Society (NOS) in the UK published standards drafted by a multidisciplinary group which were endorsed by all relevant national professional organisations and IOF¹⁹. The NOS standards were based on a so-called '5IQ' approach, relating to the key functions of an FLS:

- Identification
- Investigation
- Information
- Intervention
- Integration
- Quality

This is the approach which underpins the Clinical Standards for FLS in New Zealand. Further, as these standards are adherent to the principles of the IOF Capture the Fracture[®] standards, FLS in New Zealand should consider submitting their service for IOF Best Practice Recognition, as six FLS in New Zealand had done by May 2016²³.

Consultation process

In April 2016, the draft Clinical Standards were emailed to the Presidents or CEOs of all relevant learned societies and organisations in New Zealand, IOF²⁴ and the Fragility Fracture Network (FFN)²⁵. The learned societies and organisations contacted in New Zealand included:

- Accident Compensation Corporation
- Australian and New Zealand Bone and Mineral Society
- Australian and New Zealand Hip Fracture Registry
- Australian and New Zealand Orthopaedic Nurses Association
- Australian and New Zealand Society for Geriatric Medicine
- Endocrine Nurses Society of Australasia
- Fracture Liaison Network New Zealand
- Health Quality & Safety Commission New Zealand
- Ministry of Health
- New Zealand Orthopaedic Association
- New Zealand Osteoporosis Clinical Guidelines Development Group
- New Zealand Rheumatology Association
- New Zealand Society of Endocrinology
- Pharmaceutical Society of New Zealand
- Physiotherapy New Zealand
- Royal New Zealand College of General Practitioners
- Royal Australasian College of Physicians
- Royal Australasian College of Surgeons
- Royal Australian and New Zealand College of Radiologists

Responses were received from 16/19 learned societies and organisations in New Zealand, and from IOF and FFN. Where consensus was evident among consultees or individual organisation's suggestions could clearly improve the clarity and focus of the Clinical Standards, changes were made to the original draft.

In May 2016, the finalised document was subsequently re-issued to the learned societies and organisations to seek their endorsement. The Clinical Standards were published in August 2016.

Endorsing organisations

The following learned societies and organisations endorse the Clinical Standards for Fracture Liaison Services in New Zealand.



Clinical Standards for Fracture Liaison Services in New Zealand

Standard 1: Identification

All men and women aged 50 years and over who suffer a fragility fracture will be systematically and proactively identified by the FLS.

Measurement: The proportion of all fragility fracture patients aged 50 years and over presenting to health care services in the local population that are identified by the FLS. This includes patients presenting with fractures to hospital Emergency Departments (EDs), community-based Accident and Emergency Medical Clinics or General Practitioners (GPs). In the event that the total number of fragility fractures in a local population is unknown, it can be estimated by multiplication of the total number of hip fractures occurring in men and women aged 50 years and over by a factor of 5¹².

Standard 2: Investigation

Fragility fracture sufferers will undergo an assessment for future fracture risk including bone health (i.e. osteoporosis) and falls risk.

Measurement: The proportion of fragility fracture sufferers identified who undergo:

- i. Bone health assessment within 12 weeks of the fracture presentation. The assessment may include use of an absolute fracture risk calculator such as FRAX²⁶, Garvan²⁷ or Q-fracture²⁸. It should be noted that physicians may determine that an individual's clinical history may be sufficient to warrant initiation of osteoporosis treatment without undertaking bone mineral density (BMD) testing to confirm a diagnosis of osteoporosis e.g. among individuals aged 75 years and over, or among those who have undergone BMD testing during the last 2 years. Individuals in whom progression to immediate osteoporosis treatment is deemed clinically appropriate can be considered to have undergone a bone health assessment.
- ii. Falls risk assessment within 12 weeks of the fracture presentation.

N.B. At the time of publication of the Clinical Standards in August 2016, a New Zealand Osteoporosis Clinical Guideline was in development. The Clinical Guideline is scheduled to be published in Q1-2017. Therefore, in the absence of an Osteoporosis Clinical Guideline at the time of publication of these Clinical Standards for FLS, the above wording with regard to bone health assessment is suggested as a 'stop-gap' during 2016. When the NZ Osteoporosis Clinical Guideline is published in early 2017, this Standard will be re-worded to state that bone health assessment should be in accordance with the new Clinical Guidelines.

Standard 3: Information

Fragility fracture sufferers and family members or carers will be provided with information in their own language on bone health, lifestyle measures, nutrition and osteoporosis treatments.

Measurement: The proportion of fragility fracture sufferers identified who receive a package of information which will be delivered and explained by the FLS. The package of information will be provided in a media preferred by the fracture sufferer and family members or carers (i.e. written material or electronic material). The Osteoporosis New Zealand brochure, *All about osteoporosis*, which was endorsed by ACC, the Ministry of Health and Osteoporosis Canterbury provides an illustration of an evidence-based information resource²⁹.

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Standard 4: Intervention

Fragility fracture sufferers determined to be at high risk of suffering future falls and/or fractures will be offered appropriate osteoporosis treatment with PHARMAC subsidised medicines and be referred for interventions to reduce falls risk.

Measurement: The proportion of fragility fracture sufferers investigated who:

- i. Were taking PHARMAC subsidised osteoporosis treatment at the time that the fragility fracture occurred.
- ii. Were not taking treatment for osteoporosis at the time that the fragility fracture occurred, who were subsequently offered PHARMAC subsidised osteoporosis treatment within 12 weeks of the new fracture presentation. There is emerging evidence that initiation of osteoporosis treatment by a FLS in the immediate post-fracture period is associated with improved compliance with therapy³⁰⁻³⁴.
- iii. Are referred for evidence-based interventions to reduce falls risk within 12 weeks of the fracture presentation.

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Standard 5: Integration

The FLS develops a long-term care plan with the fragility fracture sufferer and their GP to reduce risk of falls and fractures, and promote long-term management.

Measurement: To include:

- i. Proportion of fragility fracture sufferers who receive a copy of the long-term care plan which has been agreed between the FLS and the GP.
- ii. Proportion of fragility fracture sufferers who were **offered** osteoporosis treatment who were subsequently **initiated** on osteoporosis treatment within 12 weeks of the fracture presentation. This includes both individuals who received treatment initiated directly by the FLS and individuals who were initiated on treatment by the GP.
- iii. Proportion of all fragility fracture sufferers who were initiated on treatment who continued to take that treatment at 6 months.

Standard 6: Quality

The FLS will undertake an annual performance review, including audit of the quality of FLS service delivery according to adherence with Standards 1 – 5 and maintenance of appropriate Continuing Professional Development (CPD) by FLS staff.

Measurement: To include:

- i. Yearly audit against the Clinical Standards for FLS. The first year of FLS operations will provide a baseline for future evaluation of performance against Standards 1 – 5.
- ii. Review of relevant CPD undertaken by FLS staff and identification of training needs.

Useful resources

The following resources may provide useful insights to healthcare professionals and administrators throughout New Zealand who are engaged in the establishment and development of FLS:

- ANZ Bone and Mineral Society: Position Paper on Secondary Fracture Prevention
<https://www.anzbms.org.au/downloads/ANZBMSPositionPaperonSecondaryFracturePreventionApril2015.pdf>
- Health Quality & Safety Commission New Zealand: The Reducing Harm from Falls programme developed the Ask, assess, act initiative
<http://www.hqsc.govt.nz/our-programmes/reducing-harm-from-falls/projects/ask-assess-act>
- Osteoporosis New Zealand: Fracture Liaison Service resources
<http://osteoporosis.org.nz/resources/health-professionals/fracture-liaison-services>
- International Osteoporosis Foundation: Capture the Fracture® website and Best Practice Framework
<http://capturethefracture.org>

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