The Fracture Risk Scale (FRS): A tool for assessing fracture risk in long-term care (LTC)

What is the FRS?

The FRS is a tool for assessing fracture risk for LTC residents. It predicts how likely a LTC resident is to experience a hip fracture within the next year. The FRS was developed by a team of researchers at McMaster University, the GERAS Centre for Aging Research, and the University of Waterloo. It has been validated and approved for use in LTC across Canada.

How does it work?

The FRS uses information from the resident’s assessment with the Resident Assessment Instrument – Minimum Data Set (RAI-MDS). Each resident has a RAI-MDS assessment when they enter the LTC home and every three months after that. The RAI-MDS assesses many areas of health such as memory, pain, falls, and mood. The FRS score is automatically calculated for each resident once the LTC team completes the RAI-MDS assessment.

What does the FRS score mean?

The FRS is scored from 1 to 8, with 1 indicating the lowest risk and 8 indicating the highest risk. Thirteen percent of residents at the highest risk (i.e., with a score of 8) will break a hip in the next year. Compare this with older adults who live in the community: 3% will break a hip in the next 10 years.
BMI = body mass index, a measure of body mass using weight and height

What factors does the FRS use to determine risk?

We developed the FRS by looking at 150 items from the RAI-MDS and seeing which ones were the most important for predicting hip fracture within one year.

The factors that were the most important were:

- if the resident can walk in the LTC home corridor by themselves or requires help
- their body mass index – a measure of body mass using height and weight
- if they have fallen before
- if they have had a fracture before
- whether or not they have memory issues
- their age
- if they tend to wander
- if they transfer to and from bed by themselves or with help

Click here to learn more: hyperlink (https://www.fco.ngo/resources/fracture-risk-factors-ltc-residents-infographic)

What are the benefits of the FRS?

- The FRS helps identify residents who are at high risk for fractures so that strategies can be put in place to prevent fractures
- No extra assessments need to be done – the resident does not need to leave the home to have a bone mineral density scan or have x-rays
- Preventing fractures can improve quality of life and reduce pain, disability, and transfers to hospital
Where can the LTC team find the FRS score?

Ask the LTC health care team what your family member’s FRS score is. If the LTC home uses PointClickCare as their electronic medical record, the FRS Score is found in the “Outcomes Summary Report”. If the home uses another electronic medical record, the FRS Score is found with the other summary scores (e.g., ADL Hierarchy Score, Cognitive Performance Scale).

Now we know the FRS score, what can we do?

Follow the 2015 Recommendations for Fracture Prevention in LTC (hyperlink: https://www.fco.ngo/resources/recommendations-preventing-fracture-long-term-care-infographic) and help high risk residents to:

- Eat calcium-rich foods
- Take calcium and vitamin D supplements
- Protect hips from injury during a fall by wearing hip protector
- Exercise to promote balance & strength
- Participate in multifactorial interventions for falls prevention
- Take osteoporosis medications

Where can I learn more?

- Click here (hyperlink: https://www.gerascentre.ca/fracture-risk-scale) to see an overview of FRS, including a video describing how the LTC team can use it.