

Key performance indicators (KPIs) for Canadian Fracture Liaison Services (FLSs) v4.0:



Setting the
foundation for
reflective practice
and improvement
for FLSs

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Introduction

This technical document is a guide for existing Fracture Liaison Services (FLSs) in Canada to provide them with the tools required to participate in the Osteoporosis Canada (OC) National FLS Audits. The OC National FLS Audits play a key role in enhancing clinical outcomes for fragility fracture patients and support continuous quality improvement among Canadian FLSs. The OC National FLS Audits evaluate how well we are doing across Canada in ensuring that each fracture patient receives the post-fracture care they need to prevent their next fracture and that no fracture patient is ever “left behind”.

The OC National FLS Audits, with evaluation of all of the core Key Performance Indicators (KPIs), will be conducted every five years. Annual mini-audits, requiring less data, will be conducted on a yearly basis. FLSs are also encouraged to continuously collect and monitor internal data to drive ongoing quality improvement of their FLS between the full Audits. This technical document provides Canadian FLSs with detailed guidance and information to support their participation in the OC National FLS Audits:

1. **Overview of KPIs** that will be measured in the next OC National FLS Audit.
2. **KPI Development Process**, with an explanation of the methodology and rationale used to develop the selected KPIs.
3. **Data Collection and KPI Calculation**, with a description of the specific data that needs to be collected for each KPI and the method by which KPIs will be calculated.
4. **KPI Adjustments and Special Circumstances** and information on how adjustments to KPI reporting will be handled in exceptional cases, including any additional data requirements for qualification for adjustment.
5. **Case Studies** for each KPI to clarify common misunderstandings and address frequently asked questions.
6. **Mini-Audit Process**, outlining the annual mini-audit requirements that must be completed each calendar year.
7. **Bibliography**

For questions or clarifications regarding any aspect of the Audit process, please email us at: FLS@osteoporosis.ca.

Glossary of terms

Fracture Liaison Service

An FLS is a specific systems-based model of care for secondary fracture prevention with a dedicated coordinator who carries out the following core functions:

IDENTIFICATION	<ul style="list-style-type: none"> systematically and proactively identifies patients, aged 50 years and older, presenting to a hospital with a new fragility fracture and/or with a newly reported vertebral fracture
INVESTIGATION	<ul style="list-style-type: none"> organizes appropriate investigations to determine the patient’s fracture risk
INITIATION	<ul style="list-style-type: none"> facilitates the initiation of appropriate osteoporosis medication for high risk patients where pharmacotherapy is recommended.

Essential Elements of FLS

The key components of FLS are listed in Osteoporosis Canada’s Essential Elements of FLS (June 2024) along with their parameters. These parameters are deemed the minimum processes necessary to ensure success of an FLS. For the complete list of the *Essential Elements*, please refer to:

<https://fls.osteoporosis.ca/wp-content/uploads/Osteoporosis-Canada-Essential-Elements-FINAL-June-2024.pdf>

Fragility Fracture (FF)

A fracture that occurs as a result of a fall from standing height or less OR when the force applied to the bone is judged to be insufficient to fracture normal bone. Excluded from the definition of fragility fracture: traumatic fractures, stress fractures, pathologic fractures, peri-prosthetic fractures, avulsion fractures and atypical femoral fractures (whether complete or incomplete)

Fracture Risk Assessment Tools:

1) FRAX (Fracture Risk Assessment Tool)

A web based fracture risk assessment tool that calculates the 10-year probability of a major osteoporotic fracture using clinical risk factors and has been validated in over 78 countries including Canada. FRAX is endorsed and preferred by OC as it is more accurate than CAROC in the fragility fracture population. FRAX can be computed with or without a bone mineral density (BMD) femoral neck T-score measurement. [Frax Calculator | FRAXplus®](#)

2) CAROC

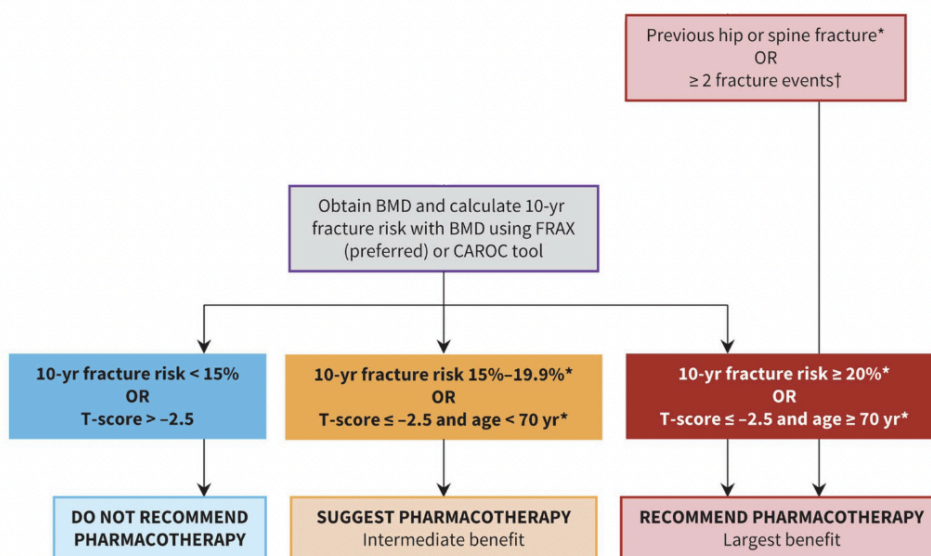
CAROC is a fracture risk assessment tool jointly endorsed by the Canadian Association of Radiologists and OC. CAROC incorporates five key risk factors for future fracture: age, sex, history of prior fragility fractures, glucocorticoid use and BMD femoral neck T-score. CAROC has been validated specifically for use in the Canadian population.

Risk assessment categories, low, moderate and high risk have not been modified to reflect the new fracture risk assessment categories in the 2023 OC Guidelines for management of osteoporosis and fracture prevention. <https://osteoporosis.ca/wp-content/uploads/CAROC.pdf>

Fracture Risk Categories

The 2023 OC Guidelines for management of osteoporosis and fracture prevention outline the need for pharmacotherapy based on fracture risk assessment.

The term **High Risk** will be used in this document for patients where pharmacotherapy is recommended (10-yr fracture risk $\geq 20\%$ OR T-score ≤ -2.5 and age ≥ 70 yr OR previous hip, vertebra or ≥ 2 osteoporosis-related fractures). High Risk is highlighted in light and dark red in the algorithm below.



* Adapted from Figure 1 of Clinical practice guideline for management of osteoporosis and fracture prevention in Canada: 2023 update

Key Performance Indicators (KPIs)

In healthcare, KPIs are specific, measurable elements of practice used to assess quality and safety of care. KPIs are employed to measure the performance of the FLS at the level of the system and serve as valuable tools for facilitating on-going quality improvement of FLSs.

Index Fracture

The fracture that brings a patient to the attention of an FLS and leads to the patient's enrollment into FLS.

Hip Fracture

In this document hip fracture refers to a fracture of the proximal femur

Non-hip, non-spine (NHNS fractures)

In this document, NHNS refers to fractures of the wrist (distal radius), pelvis, and shoulder (proximal humerus).

Persistence

Refers to the continuation of pharmacotherapy for the prescribed duration of time.

Pharmacotherapy (Rx)

In this document, pharmacotherapy will refer to the use of prescription medications to treat osteoporosis and reduce fracture risk. (Refer to the Osteoporosis Canada clinical practice guideline for management of osteoporosis and fracture prevention in Canada:2023 update, for a full list of approved medications)

The need for national FLS audits with consistent and comparable KPIs for FLSs

Participation in a structured audit process is a requirement for all FLSs accepted into the OC FLS Registry and the International Osteoporosis Foundation (IOF) Capture the Fracture FLS map. All FLSs that are part of the Ontario Osteoporosis Strategy participate in their own internal audit and their results are submitted in aggregate form to the OC- FLS Audit Committee for review. All other FLSs must participate in the OC National FLS Audits. The results of these audits will help to identify barriers to success for FLSs and aid in adopting solutions to enhance patient outcomes as part of continuous quality improvement. OC's National FLS Audits are based on a well-defined set of core FLS KPIs that are used to measure the performance of the FLS at the level of the system and provide an opportunity for comparison to other Canadian FLSs. Depending on the FLS's jurisdiction, the Audit results may also allow comparison to other FLSs at a regional or provincial level.

Determining which KPIs to collect and how to calculate them followed a process of a literature review, reviewing documentation from quality frameworks in other countries, review of the IOF's eleven FLS KPIs and consensus discussion within the OC FLS Audit Committee. The Audit Committee is multi-disciplinary in composition, with representation from both long standing and new FLSs across Canada. The Audit Committee strives to balance completeness and alignment with international guidelines, with practicality and acceptability for FLSs in the Canadian healthcare context. These KPIs will be modified over time as new evidence becomes available.

Changes have been made to the core KPIs since the 2023 audit. Please note the following:

1. Shortening of timelines for completion of KPIs
 - KPI 2 timeline shortened from 26 weeks to 16 weeks to align with international standards
 - KPI 4 timeline shortened from 26 weeks to 20 weeks to align more closely with the international standard of 16 weeks.
2. KPI 3 is new to the OC-FLS Audit and recognizes that there may be valid reasons that FLSs do NOT recommend pharmacotherapy in some high risk patients (for example, end of life patients).

Summary: Core KPIs essential for OC National FLS Audit

KPI 1 is calculated separately for hip and NHNS patients. All other KPIs are calculated based on all patients enrolled in your FLS who have a hip (proximal femur), wrist (distal radius), pelvis, or shoulder (proximal humerus) fracture

KPI	Description	Timeline (from date of index fracture)
KPI 1 Enrollment of patients in FLS	1) What percentage of all eligible hip fracture patients were enrolled in FLS? 2) What percentage of all eligible NHNS fracture patients were enrolled in FLS?	Within 12 weeks
KPI 2 Fracture risk assessment	Of those patients enrolled in your FLS, what percentage of patients completed a fracture risk assessment?	Within 16 weeks *
KPI 3 Indicated for pharmacotherapy **	Of those patients who are fracture risk assessed, what percentage meet your FLS's criteria for pharmacotherapy?	Within 20 weeks
KPI 4 Initiation of pharmacotherapy	Of those high risk patients who meet your FLS's criteria for pharmacotherapy, what percentage are initiated or continued on pharmacotherapy?	Within 20 weeks ***
KPI 5 Persistence of pharmacotherapy	Of those high risk patients who met your FLS criteria for pharmacotherapy, and were initiated or continued on pharmacotherapy within 20 weeks of their index fracture, what percentage are still on pharmacotherapy?	At 52 weeks after their index fracture

* The timeline for KPI 2 has been shortened from 26 weeks to 16 weeks to align with international standards

** KPI 3 is new to the OC-FLS audit and recognizes that there may be valid reasons why pharmacotherapy would not be recommended in a high risk patient (e.g. end of life)

*** The timeline for KPI 4 has been shortened from 26 weeks to 20 weeks to align it more closely with the international standard of 16 weeks.

Table 1: Core KPIs (essential)

Overview of core FLS indicators. N will be used to represent the word “Number”

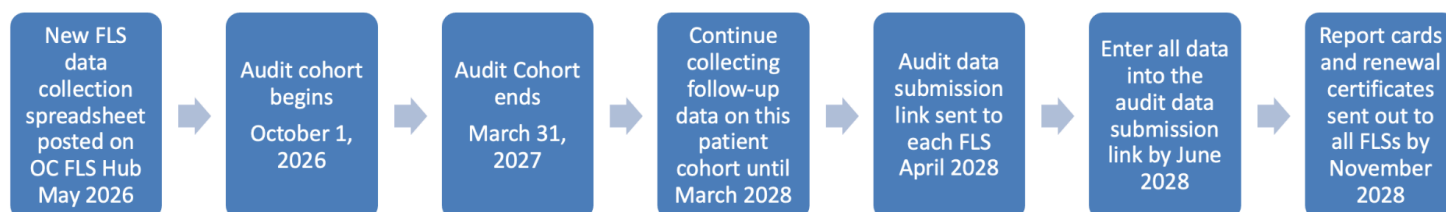
	Numerator	Denominator	KPI
KPI 1 Enrollment in FLS (to be done separately for hip and NHNS)	A N of Fragility Fracture patients enrolled by FLS	B Estimate of N of Fragility Fracture patients in catchment area	KPI 1 $A / B \times 100 = __\%$
		↓	
KPI 2 Fracture Risk Assessment	C N of patients completing Fracture Risk Assessment	A N of Fragility Fracture patients enrolled by FLS	KPI 2 $C / A \times 100 = __\%$
		↓	
KPI 3 Indicated for Pharmacotherapy	D N of patients with a completed fracture risk assessment who are high risk and indicated for pharmacotherapy	C N of patients completing Fracture Risk Assessment	KPI 3 $D / C \times 100 = __\%$
		↓	
KPI 4 Initiation of Pharmacotherapy	E N of high risk patients indicated for pharmacotherapy who are initiated or continued on pharmacotherapy	D N of patients with a completed fracture risk assessment who are high risk and indicated for pharmacotherapy	KPI 4 $E / D \times 100 = __\%$
		↓	
KPI 5 Persistence with Pharmacotherapy	F N of high risk patients initiated on or continued on pharmacotherapy who are still on pharmacotherapy at 52 weeks	E N of high risk patients indicated for pharmacotherapy who are initiated or continued on pharmacotherapy	KPI 5 $F / E \times 100 = __\%$

PLEASE NOTE: The numerators and denominators above MUST comply with the full definitions as described later in this document. Some numerators and denominators may vary depending on the patient stream.

How do I collect and submit data for the OC National FLS Audit?

1. Timeframe of the Audit:

Audit data will be collected from a cohort of patients enrolled into your FLS during a 6-month period and followed for one year after enrollment. This means that from the time you enroll the first patient in this cohort it will be 18 months before you have all the data you need to submit to the Audit. As an example, here is the timeline for an Audit with a cohort of patients enrolled in your FLS from October 1, 2026 to March 31, 2027.



2. Data to be collected:

The data to be collected is indicated by letters A to F in **Table 1: Core KPIs**. We are only asking you to provide the data (numerators and denominators) needed for us to calculate your results for each KPI and will only ask for it at the end of the audit time period (in the above example in April of 2028). The calculations and percentages are displayed for your information but you will not be asked to make these calculations.

3. How to collect your data

You are free to collect and store your data as per your jurisdictions' rules and regulations and to use any type of data collection and storage tool. A revised data collection spreadsheet will be posted on the OC FLS Hub website by May of 2026 for any FLSs that would like to use it. This spreadsheet will replace the spreadsheet developed for the KPI guidance document version 3.0.

4. How to submit your data

An online data submission link will be sent to you from OC shortly after the end of the audit time period that will allow you to enter all your data (in the example above, that would be in April 2028). No patient specific data or patient identifiers will be requested, only aggregate numbers. You will be able to partially complete the data collection and save as you go along until you are ready to submit all your data to OC.

Patient demographics data to be collected

Age (at time of fracture) and fracture type (hip, wrist, shoulder, pelvis)

KPI 1: Enrollment into FLS

Timeline: Within 12 weeks of index fracture

KPI 1 will be assessed separately in two different patient streams:

Patients with hip fractures

Patients with non-hip, non-spine (NHNS) fractures of the wrist, shoulder and pelvis

All other KPIs will be assessed for all hip and NHNS patients included in your FLS. Please note that there is no KPI for spine (vertebral) fractures at this time. We recognize that some FLSs enroll patients < age 50 or with fracture types other than hip, wrist, shoulder and pelvis. However, these patients (age < 50 and other fracture types) should not be included in the data submitted to the National FLS Audit.

The denominator for KPI 1 is an estimate of the total number of fragility fractures in the area served by the FLS. This estimate is derived from the number of hip fracture patients seen by the hospital and collected in the hospital administrative database. It is recognized that some of these hip fracture patients are not eligible to be enrolled in an FLS (trauma related such as a motor vehicle accident or pathological fracture) and therefore it is acknowledged that this denominator will overestimate the true number of patients that an FLS could potentially enroll.

	Patients with hip fracture	Patients with non-hip, non-spine fracture
NUMERATOR^{a,b} A	Number of patients, aged ≥ 50, with a fragility fracture of the hip enrolled in the FLS <u>within 12 weeks</u> of the index fracture.	Number of patients, aged ≥ 50, with a fragility fracture of the shoulder, wrist or pelvis enrolled in the FLS <u>within 12 weeks</u> of the index fracture.
DENOMINATOR^a B	Number of patients admitted/ discharged with a hip fracture, from the hospital’s administrative database ^c X 1.	Number of patients admitted/ discharged with a hip fracture, from the hospital’s administrative database ^c X 1.7.

- a. The time frame, e.g., 6 months, 1 year, etc shall be identical for both the numerator and the denominator.
- b. The above numerators EXCLUDE: traumatic fractures, stress fractures, pathologic fractures, peri-prosthetic fractures, avulsion fractures and atypical femoral fractures (complete or incomplete).
- c. CRITICAL/ESSENTIAL: The hip fracture numbers to be used in the calculation of this denominator should be at the level of the entire healthcare system for the FLS’s catchment area, typically the number of hip fractures admitted to or discharged from the hospital annually. It cannot simply be the number of hip fractures captured²⁴ by the FLS or the number of hip fracture referrals received.

When a patient presents with two different acute fractures at the same time (e.g., a hip fracture and a pelvic fracture occurring from the same fall), the patient can only be counted once. For consistency in the Audit, please classify patients as follows:

- **Inpatient-only and combined inpatient/outpatient FLSs**, patient presenting with a hip + any other fracture: classify as a hip fracture
- **Outpatient-only FLS**, patient presenting with a NHNS fracture + any other fracture: classify as the NHNS fracture
- **If your patient presents with multiple NHNS fractures**, classify them based on only one of the fractures (For example, if they break their wrist and shoulder you would report it as either a wrist OR a shoulder fracture but not both)

Adjustments for KPI 1

- 1) Most hospitals will have a small number of trauma related hip fracture patients and we estimate that to be < 10%. *“My hospital is a major trauma centre and more than 10% of our hip fracture patients are major trauma related. Counting these trauma patients in my KPI 1 denominator does not accurately reflect my FLS performance for KPI 1.”* If this is the situation for your FLS, you still need to report the total number of hip fracture patients seen at your hospital BUT there will be an opportunity for you to record the total number of hip fracture patients that are traumatic. We will then make the adjustment when we calculate your KPI 1. For example, if your FLS has 25% trauma hip fracture patients then we would remove 15% of the hip fractures from your denominator in calculating KPI 1. The number of traumatic hip fracture patients must be reported to us either from the administrative data base OR from a systematic recording by the FLS. This cannot be an estimate based on your opinion.
- 2) *“At my hospital, our FLS does not have the opportunity to see all NHNS patients as a large proportion of these fractures are managed in our community at other hospitals or ambulatory care centres. Our FLS has no opportunity to enroll these patients. Using the number of hip fracture patients seen by our hospital x 1.7 for the denominator to calculate KPI 1 NHNS will underestimate my FLS’s performance.”* Please connect with the OC FLS staff person to have your situation reviewed at the FLS Audit Committee to provide you with guidance.
- 3) *“At my hospital, one out of the five orthopedic surgeons does all their outpatient fracture follow-up in their private office. Our FLS has the opportunity to enroll only 80% of all NHNS fracture patients. Therefore, the way that KPI 1 NHNS is calculated does not accurately reflect my FLS’s performance for KPI 1 NHNS.”* There will be a place to provide us with this information when you submit your audit data. In the example provided above, the KPI 1 NHNS would be prorated to take this situation into account (the denominator would be adjusted to number of hip fractures from the hospital's administrative data base x 1.7 x 0.8).

Benchmarks for KPI 1:

Levels to be reached	Colour	Interpretation
0-49%	RED	Highest priority for service improvement
50-79%	AMBER	Good, room for improvement
≥ 80%	GREEN	Great, at or near optimal

Example of how KPI 1 will be calculated for a combined FLS:

“Our FLS enrolled 154 fragility fracture patients within 12 weeks of their index fracture during the 6 month audit cohort period from Oct 1, 2023 to March 31, 2024. We enrolled 60 hip fracture patients and 89 NHNS fractures. Our hospital admitted 65 hip fracture patients during the same time period”.

The KPI 1 calculations are as follows:

KPI 1 Hip:

NUMERATOR: 60

DENOMINATOR: 65

The KPI 1 Hip would be $60 / 65 = 92\%$

KPI 1 NHNS:

NUMERATOR: 89

DENOMINATOR: 65×1.7

The KPI 1 NHNS would be $89 / 65 \times 1.7 = 81\%$

KPI 2: Fracture Risk Assessment

Timeline: Within 16 weeks of the index fracture

The timeline for KPI 2 has been shortened from 26 weeks to 16 weeks to align with international standards and to reflect the urgency in determining a patient’s future fracture risk, as there is clear research evidence that repeat fractures are most likely to occur in the first two years after an index fracture.

Do not delay fracture risk assessment waiting for a bone density test result - FRAX can be calculated **without** BMD and there is a high correlation to FRAX with BMD. **All hip and spine fracture patients and patients with two or more fracture events**, are automatically fracture risk assessed at high risk and are recommended for pharmacotherapy.

NUMERATOR C	Total number of patients enrolled in your FLS with a hip, wrist, shoulder or pelvic fracture (add the numerators from KPI 1 for hip and for NHNS) who have a fracture risk assessment (FRAX with or without BMD or CAROC) completed <u>within 16 weeks</u> of the index fracture.
DENOMINATOR A	Number of patients enrolled in the FLS <u>within 12 weeks</u> of the index fracture, as per the numerators (hip and NHNS combined) for KPI 1 including those who died.

Benchmarks for KPI 2:

Levels to be reached	Colour	Interpretation
0-84%	RED	Highest priority for service improvement
85-94%	AMBER	Good, room for improvement
≥ 95%	GREEN	Great, at or near optimal

Example of how KPI 2 will be calculated:

“Our FLS enrolled 60 hip fragility fracture patients and 89 NHNS fragility fracture patients within 12 weeks of their index fracture. 100% of the hip fracture patients were automatically fracture risk assessed as high risk as per Osteoporosis Canada 2023 Guideline. 81 of the 89 NHNS fracture patients had a fracture risk assessment completed within 16 weeks of their index fracture”.

The KPI 2 calculation is as follows:

NUMERATOR: 60 (hips) + 81 (NHNS) = 141

DENOMINATOR: 60 (hips) + 89 (NHNS) = 149

The KPI 2 would be $141/149 = 95\%$

KPI 3: Indicated for Pharmacotherapy

Timeline: Within 20 weeks of index fracture

Every FLS will have patients enrolled in their FLS that are assessed to be at high risk for repeat fracture but do not meet their FLS’s criteria for pharmacotherapy. For example, you may find out after you have enrolled a patient that they have a life expectancy of less than one year. It would not be appropriate to start them on pharmacotherapy as medications would not have time to work before the patient died.

You will be asked to provide the reasons why your FLS would not recommend certain patients for pharmacotherapy. The Audit Committee has identified four common reasons to NOT RECOMMEND pharmacotherapy in specific patients at high risk for repeat fracture:

1. End of life with life expectancy of < one year regardless of the underlying medical condition
2. Severe renal failure
3. Patient died
4. Patient out of province or out of country

NUMERATOR D	Number of patients with a fracture risk assessment completed <u>within 16 weeks</u> of their index fractures, who are high risk and indicated for pharmacotherapy as per your FLS's criteria. Includes patients already on pharmacotherapy at time of index fracture.
DENOMINATOR C	Total number of patients enrolled in your FLS with a hip, wrist, shoulder or pelvic fracture (add the numerators from KPI 1 hip and KPI 1 NHNS) who have a fracture risk assessment (FRAX with or without BMD or CAROC) completed <u>within 16 weeks</u> of the index fracture.

Benchmarks for KPI 3: To be determined (As this is a new KPI, benchmarks will be determined after review of the results from the 2028 OC National FLS Audit.)

Example of how KPI 3 will be calculated:

“141 patients (KPI 2 Numerator) had a fracture risk assessment within 16 weeks of their index fracture and 99 of them were considered high risk. We decided that 10 of these patients were not indicated for pharmacotherapy: 7 patients were “end of life”, 1 patient died and 2 patients had severe renal failure.”

The KPI 3 calculation is as follows:
 NUMERATOR: 99 - 10 = 89
 DENOMINATOR: 141

The KPI 3 would be $89/141 = 63\%$

KPI 4: Initiation of Rx

Timeline: 20 weeks

Initiation of pharmacotherapy in high-risk patients will now only be measured in patients who are indicated for pharmacotherapy (numerator from KPI 3). In addition, the timeline has been shortened to 20 weeks to align more closely with international guidelines (where the target is set at 16 weeks). **Patients who are already on pharmacotherapy at the time of enrollment and are continued on pharmacotherapy are automatically included in the numerator for KPI 4.**

NUMERATOR E	Number of high risk patients indicated for pharmacotherapy who are initiated or continued on pharmacotherapy <u>within 20 weeks</u> of index fracture.
DENOMINATOR D	Number of patients with a fracture risk assessment completed <u>within 16 weeks</u> of index fracture who are high risk and indicated for pharmacotherapy as per your FLS's criteria. Includes patients already on pharmacotherapy at time of index fracture.

- a. Initiation may be ascertained by one of the following methods:
 - i. FLS provides the prescription to the patient directly.
 - ii. Patient self-report of treatment initiation.
 - iii. Medication dispensed as per a pharmaceutical or administrative database.

Benchmarks for KPI 4:

Levels to be reached	Colour	Interpretation
0-49%	RED	Highest priority for service improvement
50-79%	AMBER	Good, room for improvement
≥ 80%	GREEN	Great, at or near optimal

Example of how KPI 4 will be calculated:

“Our FLS determined that 89 of our high-risk patients were indicated for pharmacotherapy. Of those 89 patients, 73 patients were initiated or continued on pharmacotherapy within 20 weeks of their index fracture.”

The KPI 4 calculation is as follows:

NUMERATOR: 73
DENOMINATOR: 89

The KPI 4 would be $73/89 = 82\%$

KPI 5: Persistence with Pharmacotherapy

Timeline: 52 weeks

Many patients lose faith in their anti-osteoporosis pharmacotherapy or become concerned about the risk of rare side effects. They decide to stop their pharmacotherapy, often without even consulting with or notifying their healthcare providers.

KPI 5 is ONLY calculated in those high-risk patients indicated for pharmacotherapy who initiated or continued on pharmacotherapy within 20 weeks of their index fracture.

You may find that some high risk patients are initiated on pharmacotherapy AFTER 20 weeks from the date of their index fracture, but these patients should not be included in the numerator for KPI 5.

<p>NUMERATOR F</p>	<p>Number of high risk patients indicated for pharmacotherapy who were initiated on or continued on pharmacotherapy within 20 weeks of their index fracture AND who are still on pharmacotherapy at 52 weeks</p>
<p>DENOMINATOR E</p>	<p>Number of high risk patients indicated for pharmacotherapy who are initiated or continued on pharmacotherapy within 20 weeks of index fracture. Excludes patients who have died.</p>

- a. Persistence may be ascertained by one of the following methods:
- i. Patient self-report of persistence (i.e., still taking the medication).
 - For patients on oral pharmacotherapy, teriparatide or romosozumab, self-report of the last time taken will be sufficient:
 - Within the last week for daily dosing, the last 2 weeks for weekly dosing, or the last 6 weeks for monthly dosing
 - For patients on denosumab, confirmation of the date of last injection or date the medication was dispensed within the last 7 months.
 - For patients on zoledronic acid, confirmation of date of last infusion or date the medication was dispensed within the last 18 months.
 - ii. Medication dispensed, as per a pharmaceutical or administrative database, within the last 3 months for oral pharmacotherapy, within the last 6 weeks for romosozumab or teriparatide OR as above for denosumab or zoledronic acid.

Benchmarks for KPI 5:

Levels to be reached	Colour	Interpretation
0-49%	RED	Highest priority for service improvement
50-79%	AMBER	Good, room for improvement
≥ 80%	GREEN	Great, at or near optimal

Example of how KPI 5 will be calculated:

“Our FLS has 73 high risk patients indicated for pharmacotherapy who were initiated or continued on pharmacotherapy within 20 weeks of their index fracture. 68 of these patients were still on pharmacotherapy at 52 weeks. 2 patients died”

The KPI 5 calculation is as follows:

NUMERATOR: 68
 DENOMINATOR: 73-2= 71

The KPI 5 would be $68/71 = 96\%$

Yearly Mini-Audit

The mini-audit is designed to collect information every year around how many people with fragility fractures are accessing FLS across the country. The mini-audit will take place every year, including during Audit years. This information will be used for **two** purposes:

1. To provide a yearly metrics report to the OC National Board of Directors
2. To maintain contact with each FLS

What data will I be asked to submit?

1. Number of hip, wrist, pelvis, spine, shoulder and other fracture patients enrolled in FLS from April 1 to March 31 (fiscal year).
2. Optional: Share any challenges or questions your FLS may have and provide an opportunity to ask for support

Timelines:

A mini-audit template will be sent out to each FLS in March of each year with the expected submission date of May 31 that same year.

No reports will be sent to you after the mini-audit.

If we identify any concerns about your FLS in the mini-audit, we will reach out to you for additional information and clarification.

Mini-audit example of reporting:

Our FLS enrolled 350 patients into their FLS between April 1 2024 to March 31 2025

The breakdown of fracture types enrolled was: 100 hip, 150 wrist, 20 pelvis, 50 humerus, 10 spine and 20 other fractures.

Contact Information

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Post-fracture Care Gap

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Imminent Fracture Risk

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FLS Clinical Standards and KPIs

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