

## Osteoporosis Canada FLS Registry Submission Form

### Instructions

1. Please only submit one form per FLS site/hospital. In the case of two or more separate hospital sites within one single corporation, each site must submit separately.
2. Ensure you've answered all questions (unless you are instructed to skip) and provide further details where requested. Incomplete submissions will be returned and will delay processing of your submission.
3. Email completed submissions to [FLSRegistry@osteoporosis.ca](mailto:FLSRegistry@osteoporosis.ca). This email accepts completed submission forms only. Any questions must be sent to FLS Manager at [fls@osteoporosis.ca](mailto:fls@osteoporosis.ca)

Save the form to your computer and then fill it out. Do not fill out the form online. Persons with an older version of Adobe Reader (i.e. older than Adobe Reader XI) may encounter difficulties saving the form, and are encouraged to download a newer version, which is available for free online.

Date:	
Name:	
Email address:	
Telephone number:	
Name of your FLS:	
FLS Mailing Address:	
Geographic region served by your FLS:	
Name and address of the hospital or institution where your FLS is located:	
Number of hip fractures admitted annually to your hospital or institution (please specify year of the data):	

1. When did your FLS first start assessing/managing fracture patients (month/year)?

2. How many patients did your FLS identify/manage last year (estimate for this year if you are a new FLS)?

The above is:

- A measured outcome  
 A projection, based on:

3. Are the majority of patients enrolled in your FLS a result of:

- A. Referrals received from one of the fracture patient's clinicians (e.g. patient's own orthopaedic surgeon, family physician, emergency room nurse/physician, OPD nurse)

**OR**

- B. Proactive case finding of fracture patients directly from:

- Hospital's orthopaedic department  
 Inpatient only  
 Outpatient only  
 Both inpatient and outpatient  
 Administrative database (please describe):

- Other (please describe):

### **ELIGIBLE PATIENTS**

4. How does your FLS define "fragility fracture"? (please describe)

- Our FLS does not distinguish fractures as fragility or not (all fractures, traumatic or fragility, are enrolled).

5. Fracture types included and/or fracture types excluded:

For spine fractures, please specify clinical (i.e. presenting symptomatically) or radiologic (i.e. incidental finding on x-rays done for other purposes, e.g. chest x-rays) or both clinical and radiologic.



11. In your FLS, who coordinates the osteoporosis care for fracture patients?

- A dedicated FLS coordinator who is allocated exclusively to the FLS functions. Please specify the number of full time equivalents (FTE):

Please describe any non-FLS duties of the FLS coordinator:

- The FLS coordinator is not a dedicated role at our hospital. However, the person performing the FLS functions has protected time within her role which must be dedicated to the FLS functions (please describe):

- The FLS functions are shared among existing hospital personnel (please describe):

- Other (please describe):

12. What is the background of the FLS coordinator(s):

- Nurse practitioner  
 Registered practical nurse (RPN) / Licensed practical nurse (LPN)  
 Registered nurse  
 Our FLS does not have a dedicated FLS coordinator  
 Other, please specify:

**FRACTURE PATIENT IDENTIFICATION DIRECTLY FROM THE ORTHOPAEDIC INPATIENT WARD**

13. Does your FLS do proactive case finding of fracture patients admitted to the hospital's orthopaedic inpatient ward?  Yes  No

*If no, skip questions 14-16 and proceed to question 17.*

For the majority (> 50%) of the hip fracture patients enrolled in your FLS, when is the first contact of the FLS coordinator with the patient?

Before discharge from hospital

- in person  
 other method: please describe

- After discharge from hospital. Please describe:

14. From the patients admitted to the orthopaedic inpatient ward, your FLS proactively identifies:

- Hip fractures only  
 All of the fracture types as indicated in question 5  
 Other, please list:

15. Click the single most common mechanism for identifying hip fracture patients enrolled in your FLS?

- The dedicated FLS coordinator identifies the hip fracture patients admitted to the orthopaedic inpatient ward (click the most common option only).

- in-person on the orthopaedic ward. Please specify when (i.e. which days/time) your FLS coordinator is available to go to the orthopaedic ward:

- when the hip fracture patients are seen in follow-up in the outpatient orthopaedic clinic  
 working from an administrative database. Please describe:

- Referral to the FLS coordinator. Please specify who is responsible for initiating these referrals:

- Referral to the osteoporosis specialist/clinic. Please specify who is responsible for initiating these referrals:

- Physician working for the Osteoporosis/Metabolic Bone Disease Clinic identifies admitted hip fracture patients through frequent visits to the orthopaedic inpatient ward or through an administrative database. Please provide details:

- Inpatient ward clerk through a standardized order set referring the patient automatically and directly to the FLS coordinator or a pre-determined osteoporosis expert or osteoporosis specialty team. Please describe the process and provide a copy of the standardized order set:

- Surgical/orthopaedic nurses working on the orthopaedic inpatient ward are all responsible for the identification of the hip fracture patients. Please describe the process:

- Other (please describe):

16. How many hip fracture patients did your FLS enroll last year (or estimated for this year if you are a new program)?

The above is:

- A measured outcome  
 A projection, based on:

#### **FRACTURE PATIENT IDENTIFICATION DIRECTLY FROM THE ORTHOPAEDIC OUTPATIENT CLINICS**

17. Does your FLS do proactive case finding of fracture patients seen in the hospital's outpatient orthopaedic/fracture clinics? Yes No

*If no, skip questions 18-22 and proceed to question 23.*

18. How many half day orthopaedic/fracture outpatient clinics are held at your hospital in a typical week?

- |  |   |
|--|---|
| <input type="checkbox"/> Monday morning      | <input type="checkbox"/> Thursday afternoon |
| <input type="checkbox"/> Monday afternoon    | <input type="checkbox"/> Friday morning     |
| <input type="checkbox"/> Tuesday morning     | <input type="checkbox"/> Friday afternoon   |
| <input type="checkbox"/> Tuesday afternoon   | <input type="checkbox"/> Saturday morning   |
| <input type="checkbox"/> Wednesday morning   | <input type="checkbox"/> Saturday afternoon |
| <input type="checkbox"/> Wednesday afternoon | <input type="checkbox"/> Sunday morning     |
| <input type="checkbox"/> Thursday morning    | <input type="checkbox"/> Sunday afternoon   |

19. How many half day orthopaedic/fracture outpatient clinics are attended by your FLS at your hospital in a typical week?

- |  |   |
|--|---|
| <input type="checkbox"/> Monday morning      | <input type="checkbox"/> Thursday afternoon |
| <input type="checkbox"/> Monday afternoon    | <input type="checkbox"/> Friday morning     |
| <input type="checkbox"/> Tuesday morning     | <input type="checkbox"/> Friday afternoon   |
| <input type="checkbox"/> Tuesday afternoon   | <input type="checkbox"/> Saturday morning   |
| <input type="checkbox"/> Wednesday morning   | <input type="checkbox"/> Saturday afternoon |
| <input type="checkbox"/> Wednesday afternoon | <input type="checkbox"/> Sunday morning     |
| <input type="checkbox"/> Thursday morning    | <input type="checkbox"/> Sunday afternoon   |

20. From the patients seen in the orthopaedic outpatient clinics, your FLS proactively identifies:

- All the fracture types as indicated in question 5
- Some but not all of the fracture types as indicated in question 5. Please specify:

21. In your FLS, who identifies the orthopaedic outpatient clinic fracture patients? Choose the single most common source of fracture patients enrolled in your FLS from orthopaedic outpatient clinics.

- The dedicated FLS coordinator themselves (select one only)
- in person when they see the patient in the orthopaedic clinics
  - through an administrative database. Please describe the process:

- Referral to the FLS coordinator. Please specify who is responsible for initiating these referrals:

- Referral to an osteoporosis specialist/clinic. Please specify who is responsible for initiating these referrals:

- The identification of fracture patients from orthopaedic outpatient clinics is shared by existing hospital personnel. Please specify:

- Other (please describe):

22. Please describe the identification process for the outpatient orthopaedic clinic fracture patients in more detail:

**FRACTURE PATIENTS IDENTIFIED DIRECTLY FROM AN ADMINISTRATIVE DATABASE**

23. Does your FLS do proactive case finding of fracture patients directly from an administrative database?

Yes  No

*If no, skip questions 24-27 and proceed to question 28.*

24. Please describe the administrative database used:

25. Who is responsible for the initial identification of the fracture patients from the database?

- The dedicated FLS coordinator  
 The orthopaedic surgeon  
 The Osteoporosis/Metabolic Bone Disease specialist  
 Other (please describe):

26. Who is responsible for the first contact with the fracture patients?

- The dedicated FLS coordinator
- The orthopaedic surgeon
- The Osteoporosis/Metabolic Bone Disease specialist
- Other (please describe):

27. Please describe the process of identification/capture of patients in more detail:

**PROACTIVE CASE FINDING OF NON-SPINE FRACTURE PATIENTS IN LOCATIONS OTHER THAN ORTHOPAEDIC SERVICES OR AN ADMINISTRATIVE DATABASE**

28. Does your FLS do proactive case finding of non-spine fracture patients from a location other than orthopaedic services or an administrative database? Yes No

*If no, skip questions 29-31 and proceed to question 32.*

29. Please describe the location/setting where proactive case finding of non-spine fracture patients occurs:

30. In your FLS, who identifies the fracture patients? Choose the most common option only.

- The dedicated FLS coordinator himself/herself) in person at the medical clinic. Please specify the location/type of clinic:

- Referral to the FLS coordinator. Please specify who is responsible for initiating these referrals:

- Referral to the Osteoporosis/Metabolic Bone Disease specialist. Please specify who is responsible for initiating these referrals:

- Other (please describe):

31. Please describe the case finding process of your FLS in detail:

### **VERTEBRAL FRACTURES**

32. Does your FLS assess/manage vertebral fracture patients? Yes No

*If no, skip question 33 and proceed to question 34.*

33. How does your FLS identify vertebral fracture patients? Please click all that apply.

- Referral of vertebral fracture patients to the FLS coordinator. Please specify who is responsible for initiating these referrals:

- Referral of vertebral fracture patients to the Osteoporosis/Metabolic Bone Disease Clinic. Please specify who is responsible for initiating these referrals:

- Spine X-rays are routinely done for all fragility fracture patients seen by our FLS to determine if they have prevalent vertebral fractures

- VFA (Vertebral Fracture Assessment) is part of the routine BMD completed for all fracture patients assessed/managed by our FLS

- New clinical/symptomatic vertebral fracture patients are proactively identified when they present in the following departments of our hospital (click all that apply):

- Emergency department (please describe):

- Inpatient orthopaedic ward (please describe):

- Outpatient orthopaedic clinic (please describe):

Inpatient medical ward (please describe):

Other (please describe):

The FLS coordinator proactively screens ALL diagnostic imaging reports issued by the hospital's Diagnostic Imaging Department (irrespective of who requested the diagnostic imaging study).

No  Yes Please describe the process in detail:

If yes, your FLS may be contacted for further information about your screening process for spine fractures.

*If no, proceed to question 34.*

Please indicate which of the following diagnostic imaging reports are screened by your FLS coordinator:

- Thoracic spine X-rays
- Lumbar spine X-rays
- Chest X-rays
- VFA as part of the BMD (our hospital's BMD unit does not have VFA capability )
- CT spine (our hospital does not have CT scanner )
- CT chest/abdomen (our hospital does not have CT scanner )
- MRI spine (our hospital does not have MRI )
- MRI chest/abdomen (our hospital does not have MRI )
- Other method (please describe):

### **INTERVENTIONS WITHIN THE FLS**

34. Does your FLS refer > 50% of your patients to an osteoporosis specialist/clinic or Metabolic Bone Disease Clinic?  No  Yes

If yes, please specify the criteria for referring patients to the osteoporosis/metabolic bone disease clinic:

- We automatically refer most (> 50%) of the FLS patients to an osteoporosis/metabolic bone disease clinic
- We automatically refer most (> 50%) of the FLS patients who are deemed to be HIGH RISK to an osteoporosis/metabolic bone disease clinic

- Other, please specify

35. In your FLS, who orders the BMD test? Choose the most common option only.

- Nurse practitioner FLS coordinator
- Registered nurse FLS coordinator
- Osteoporosis/Metabolic Bone Disease specialist (may include family physician working for the pre-determined Osteoporosis/Metabolic Bone Disease Clinic)
- Orthopaedic surgeon, coordinated by the FLS coordinator
- Orthopaedic surgeon, at his/her discretion
- Patient's own family physician or primary care nurse practitioner
- Other (please describe):

- Our FLS does not order BMDs

36. In your FLS, are spine X-rays or VFA (Vertebral Fracture Assessment through BMD) routinely done as part of the fracture risk assessment? Yes No

37. In your FLS, what method is used to determine which fragility fracture patients need a first line prescription osteoporosis medication?

- All captured fragility fracture patients are recommended for osteoporosis treatment.
- Our FLS only assesses/manages hip fracture patients. All of our fragility hip fracture patients are recommended for osteoporosis medication.
- Our FLS refers all of the fragility fracture patients automatically to an osteoporosis specialist or Osteoporosis/Metabolic Bone Disease Clinic. Treatment recommendation is left at their discretion.
- Patients who are deemed "high risk" as per CAROC are recommended for osteoporosis medication (BMD testing is required for non-hip, non-spine fracture patients). Please specify who is responsible for determining the patient's fracture risk in your FLS:

- Patients who are deemed "high risk" as per FRAX with BMD are recommended for osteoporosis medication. Occasionally a patient's fracture risk may be done with FRAX without BMD Please specify who is responsible for determining the patient's fracture risk in your FLS:

- Patients who are deemed “high risk” as per FRAX without BMD are recommended for osteoporosis medication. Please specify who is responsible for determining fracture risk for your FLS:

- We leave the fracture risk determination to the radiologist who interprets the patient’s BMD results. The FLS sends a separate report to the family physician indicating the patient’s fracture risk as well as the treatment recommendation specific to this patient.
- We leave the fracture risk determination to the radiologist who interprets the patient’s BMD results. The patient’s family physician makes the decision to initiate osteoporosis treatment based on the BMD report issued by the hospital/diagnostic imaging service.
- Other method (please describe):

- Our FLS does not provide treatment recommendation.

38. Does your FLS do screening blood work?  No  Yes

Which of the following does your FLS routinely do:

- Blood work to ascertain it will be safe to initiate osteoporosis treatment
- Blood work to rule out potential secondary causes of osteoporosis/bone fragility
- We send to the patient’s family physician the list of blood work recommended to be done by our FLS
- We leave the specific blood work to be done at the discretion of the patient’s family physician or osteoporosis specialist
- The blood work is done automatically by the hospital as per their standardized clinical order set
- Other. Please describe:

39. In your FLS, who prescribes the osteoporosis medication for high-risk patients?

Choose the most common option only.

- Nurse practitioner FLS coordinator
- Registered nurse FLS coordinator Our province allows RN prescribing under specific conditions, including in our FLS.
- Osteoporosis/Metabolic Bone Disease specialist (may include family physician working for the pre- determined Osteoporosis/Metabolic Bone Disease Clinic)
- Orthopaedic surgeon, coordinated by the FLS coordinator
- Orthopaedic surgeon, at his/her discretion
- Our FLS sends out a communication to the patient’s family physician with recommendation for osteoporosis treatment. Please provide a copy of a de-identified sample letter.  
Included  No  Yes
- Our FLS leaves the management decisions exclusively to the patient’s own family physician or primary care nurse practitioner

- Other (please describe):

40. For high-risk patients who are already on prescribed first-line osteoporosis treatment at the time of their fracture, our FLS does the following:

- A referral to an osteoporosis specialist is automatically initiated and/or recommended
- An assessment of adherence and persistence with their prescribed osteoporosis medication is done
- If patient has been on osteoporosis treatment for greater than one year and taking it in the appropriate manner, a referral to an osteoporosis specialist is initiated and/or recommended
- If patient is not taking their osteoporosis medication in the correct manner (click all that apply):
- They are provided with information about the benefits of osteoporosis treatment, how to take those medications appropriately and encouraged to improve their adherence/persistence
  - Their primary care provider or osteoporosis specialist is advised of the situation
  - Other. Please specify:

- We do not have specific process for patients already on prescribed first-line osteoporosis treatment. We follow our usual protocols which apply to all FLS patients.
- Other. Please specify:

41. What information/education does your FLS coordinator provide for the patients enrolled in your FLS? Information on (click all that apply):

- Osteoporosis and fragility fractures
- The patient's own fracture risk
- The patient's own risk of falling
- Purpose and results of their investigations, e.g. BMD test
- Modifiable lifestyle risk factors, e.g. nutrition, physical activity, smoking, alcohol
- Risks and benefits of osteoporosis medications
- Other programs and services available locally that may be of help
- Other (please describe):

42. How does your FLS provide patient education? Please click all that apply.

- One on one with the patient or their relative
- By phone
- Information fact sheets and brochures are provided to the patient. These include:
- Osteoporosis Canada brochures and fact sheets
  - Our own locally designed brochures and fact sheets

- Brochures and fact sheets from other organizations. Please specify:

- Our FLS offers a group education class for FLS patients. Please provide details, including duration, frequency, who provides the education and what proportion of FLS patients do you estimate attend:

- Other (please describe):

43. Does your FLS do falls risk screening for the enrolled patients? Yes No

Please specify method:

- We assume all fracture patients are at risk and refer them automatically to a falls prevention program
- We determined number of falls in the past year, excluding the one that led to the current fracture. What is your cut-point for considering the patient to be at high risk for future falls?

- We use a comprehensive falls risk screening method. Please specify:

- Our FLS does not do any fall screening.
- Other. Please describe:

44. What intervention does your FLS do for patients who are identified to be at high risk of falls? Click all that apply.

- Our FLS includes a comprehensive falls prevention program. Please specify:

- Our FLS refers the patient to a local falls prevention program
- Our FLS sends a communication to the patient's primary care provider. They are responsible to determine the best management option for the patient's high risk for falls.

- Our FLS refers the patient to a physiotherapist to help with falls prevention
- Our FLS gives a brochure on falls prevention to the patient.
- Our FLS does not provide any intervention re falls prevention.
- Other. Please describe:

### **COMMUNICATIONS WITH THE PATIENT'S PRIMARY CARE PROVIDER**

45. What is included in your FLS's letter/report to the patient's primary care provider? Click all that apply:

- Results of all investigations performed by the FLS
- A determination of the patient's fracture risk
- Treatment initiated and/or recommended for this patient
- A clear transfer of care communication at the end of the FLS's follow-up period
- An alert regarding those patients who are not adherent or persistent with their prescribed osteoporosis medication
- Our FLS refers all fracture patients automatically to an osteoporosis specialist/clinic. The letter goes directly from the osteoporosis specialist/clinic to the patient's primary care provider.
- The BMD report which is sent to the family physician serves as our final communication to the patient's family physician.
- Our FLS does not issue a report to the patient's primary care provider.
- Other (please describe):

46. Please provide us with a sample of a letter the various types of letters that your FLS sends to the patient's family physician with all personal data removed. **This is mandatory.**

Sample letters attached:  Yes  No

### **PATIENT FOLLOW-UP**

47. How many times does your FLS follow-up directly with patients and/or their close family relative?

- None
- Single follow-up. When (e.g. 3 months after initial visit): 
  - In person
  - By phone
- Multiple follow-ups. When (e.g. 3, 9 months after initial visit): 
  - In person
  - By phone
- Our fracture patients are all referred to an osteoporosis specialist or Osteoporosis/Metabolic Bone Disease Clinic and all follow up is left at the specialist's discretion.

48. What information does your FLS ascertain at the follow-up visit with the patient? Click all that apply:

- An assessment of whether an osteoporosis medication has been prescribed and/or is being taken
- For patients on oral bisphosphonates, an assessment that their medication is being taken in the appropriate manner
- Any new falls
- Any new fractures

49. Our FLS determines persistence (defined as at least 52 weeks post-fracture) with osteoporosis treatment in the following method (click all that apply):

- By direct follow-up visit with the patient, or a close family member, in person or by phone. Please specify at what time point(s):



- By accessing a pharmaceutical administrative database. Please specify at what time point(s):
- Our FLS does not monitor persistence
- Other (please describe)

### **OUTCOME MEASUREMENTS**

50. Does your FLS record/collect and maintain data (e.g. Excel dataset) to monitor your model's effectiveness at closing the post-fracture care gap?  Yes  No

51. What outcomes are you monitoring for your FLS (e.g. proportion of enrolled patients who get BMD testing, proportion of enrolled patients initiated on treatment, etc.)? Please click all that apply.

- None
- BMD completion
- Completed fracture risk assessment as per FRAX or CAROC
- Treatment initiation
  - For all fracture patients, whether deemed high risk or moderate risk. Please specify method:

For "high-risk" fracture patients only. Please specify method:

- Treatment adherence
- Treatment persistence

- Subsequent fractures
- Other (please describe):

52. Does your FLS plan to participate in all of Osteoporosis Canada's national FLS audits? Yes No  
You will need to collect patient data for all of Osteoporosis Canada's core FLS KPIs. For more information, please go to <https://fls.osteoporosis.ca/indicator/>

53. Any further details you may wish to provide about any of the above questions (1-52). Please be specific:

54. Please send any documents (e.g. medical directive, algorithm, etc.) that you feel might support your submission. They will be reviewed if needed. Additional documents are attached Yes No

55. For teams who are submitting, despite awareness that their model does not meet all of OC's Essential Elements of FLS: please attach patient data demonstrating the effectiveness of your model.

Attached Yes No

### **FUNDING ISSUES/CHALLENGES**

56. How is your model funded?

- Integrated within existing services. Please elaborate:

- Dedicated hospital/government funding for the FLS (e.g. to cover the dedicated FLS coordinator's salary)
- Permanent/core funding from government or hospital
- Temporary funding from government or hospital. What is the projected funding end date and do you have a plan to obtain longer term funding for your FLS?  No  Yes Please provide details:

- Research grant funding. What is the projected funding end date and do you have a plan to obtain longer term funding for your FLS?  No  Yes Please provide details:

Is your research project an RCT with a no-FLS control arm? Yes No

- Philanthropic grant funding. What is the projected funding end date and do you have a plan to obtain longer term funding for your FLS?  No  Yes Please provide details:

- Other, please describe, including projected funding end date and any plans to obtain longer term funding:

57. Please list your major challenges and threats:

58. How do you think Osteoporosis Canada can help?

59. Any other comments:

Most submissions, if complete, are typically reviewed within one month of receipt. Where needed, you will be contacted for further clarifications on your model. You will be notified of the outcome of the evaluation promptly once completed. Models meeting all Osteoporosis Canada's Essential Elements of FLS will be featured on both Osteoporosis Canada's FLS Registry and the International Osteoporosis Foundation's Capture the Fracture Map of Best Practice.

- I agree to have our FLS featured on both Osteoporosis Canada's FLS Registry and the International Osteoporosis Foundation's Capture the Fracture Map of Best Practice should our model be assessed as meeting all of Osteoporosis Canada's Essential Elements of FLS.

The Osteoporosis Canada FLS Registry features the hospital's name and address and specifies the type of FLS (inpatient-only, outpatient-only or combined inpatient/outpatient FLS). The International Osteoporosis Foundation's Capture the Fracture Map of Best Practice features the hospital's name and address only.

Any FLS on the FLS Registry will need to submit for renewal of their status, typically every 2 years. The renewals are synchronized with the national FLS audits.

Osteoporosis Canada may use the information provided in the FLS Registry submission forms to generate an overview of FLSs available in Canada and their common processes/protocols. The individual FLS sites themselves would not be identified in the event of any publication.

Thank you for your participation! Please ensure you have answered all questions and submit your completed form to **FLSRegistry@osteoporosis.ca**.

The above email accepts completed submissions only. If you have questions, please contact the FLS Manager at Osteoporosis Canada at [fls@osteoporosis.ca](mailto:fls@osteoporosis.ca)

Are you a member of the Canadian FLS Network? Join today at <https://fls.osteoporosis.ca/join-the-fls-network/canadian-fls-network-registration/>