PUTTING THE BRAKES ON BREAKS
Bone Health Workbook

Dr. Therese Hodgson, OntarioMD Physician Peer Leader
/Pascal Hodgson

FACULTY/PRESENTER DISCLOSURE

Faculty: Dr. Therese Hodgson, Pascal Hodgson

Relationships with commercial interests:

Grants/Research Support: none

Speakers Bureau/Honoraria: Amgen, Allergan, Lundbeck, Pfizer

Consulting Fees: Maritz, Fusion MD, Gila Scientific, Antibody, Inventiv

Other: none

DISCLOSURE OF COMMERCIAL SUPPORT

No Commercial Support

Potential for conflict(s) of interest:

Dr. Therese Hodgson and Pascal Hodgson have not received payment or funding from any organization supporting this program AND/OR organization whose product(s) are being discussed in this program

MITIGATING POTENTIAL BIAS

None

WHY IS IT IMPORTANT?

- Osteoporosis fractures are more common than MI, strokes and breast cancer

COMBINED

- 1 in every 3 women and 1 in every 5 men will sustain an osteoporosis-related fracture in their lifetime

- Osteoporosis and its complications cost $2.1 billion in 2010 to the Canadian health care system

WHY IS IT IMPORTANT?

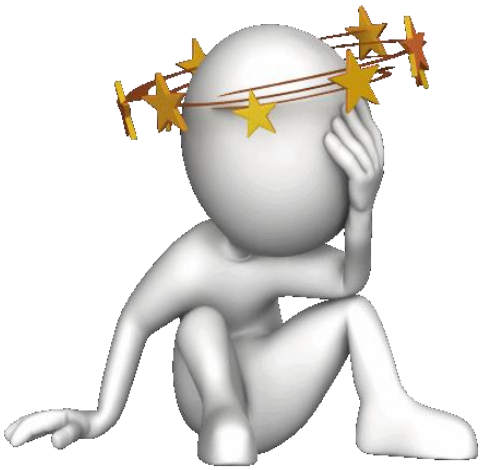
- There are 20,000-30,000 hip fractures in Canada every year

- The cost of a hip fracture is estimated at more than $20,000 in the first year following the fracture and at more than $40,000 if the patient is institutionalized

- Following a fracture, less than 20%

of patients are evaluated for osteoporosis or receive appropriate treatment

WHY IS IT IMPORTANT?



- Falls are the leading cause of injury among older adults in Canada
- 1/3 of patients age 65 and over fall once a year
- 1/4 of these falls will result in injuries
- More than 90% of fractures in elderlies are due to falls

INTRODUCTION

Putting the *Brakes on Breaks* Bone Health Program has 3 main pillars: Falls Prevention, Osteoporosis Identification and Management and Post Fracture Care.

This workbook has been developed to allow customization to serve your organization's needs whether it be as a formal program or adoption of Bone Health EMR modules.

While the prepopulated requisitions in the EMR tools are specific to the Champlain LHIN area, these can be modified to include pre-populated requisitions specific to your area.

We are happy to answer questions as you work through this manual.

Your feedback would be greatly appreciated.

For further information , please contact Dr. Therese Hodgson at therese@hodgson.onmicrosoft.com or your Osteoporosis Canada Regional Integration Lead.

ACKNOWLEDGEMENT

I would like to express my gratitude to the many colleagues and organizations that have helped in the development of the Putting the Brakes on Breaks Workbook. This would not have been possible without all involved.

The support and feedback obtained from the Regional Geriatric Program of Eastern Ontario (RGPEO), the Champlain Fall Prevention Steering Committee and Osteoporosis Canada was of an immense value and helped shaped this workbook in what it has become.

I also wish to thank CognisantMD in making this available through their library, the RGPEO for the production of the paper format and USB keys and for Osteoporosis Canada through their Regional Integration Leads in providing awareness and distribution.

Thank You!

PUTTING THE BRAKES ON BREAKS

LEVERAGING THE ELECTRONIC MEDICAL RECORD
INCORPORATING BEST PRACTICE GUIDELINES INTO CLINICAL PRACTICE WORKFLOW

Champlain LHIN Fall Prevention Steering Committee, Dr. Therese Hodgson , Pascal Hodgson, Amir Afkham

BARRIERS TO BONE HEALTH BEST PRACTICES

- **COMPLEXITY** of patient care
- **TIME** involvement
- **ADHERENCE** to therapy
- **COST** of therapy

INITIAL TESTS WITH FAMILY PHYSICIANS

- 97% reported that they were likely to continue the fall screening using the EMR
- 80% reported that they were likely to do the Fall Risk Assessment in the EMR

STEPS TOWARDS A BEST PRACTICE EMR: FALL PREVENTION

- PDSA cycle (Practice ,Do, Study, Act): "try it out", obtain feedback, refine, try again
- Strategic regional approach: Champlain Fall Prevention Steering Committee
- Review of literature → American/British Geriatric Societies falls prevention algorithms with some augmentation
- Developed Champlain algorithm and a detailed multi-factorial evaluation
- Pilot paper based application in primary/community care setting
- Outcome: recommendation to adapt to an EMR format
- Opportunity: A regional collaboration with LHIN supported community of practice with same EMR
- Engaged: with the LHIN on both the process and technology fronts.
- Proof of concept development

*Champlain Fall Prevention Tools **successfully** integrated into an EMR platform*

***Opportunity** for further expansion, and application of same methodology to other EMRs*

Many of the risks identified are REVERSIBLE Therefore, many falls and injuries from falls are often PREDICTABLE AND PREVENTABLE

PROGRAM'S 3 PILLARS

CHAMPLAIN LHIN FALL PREVENTION

- **SCREEN** for fall risks once per year in patients aged 65+
- Conduct **a COMPREHENSIVE FALL RISK ASSESSMENT** to identify contributory causes and risk factors in those who have fallen
- Implement multidisciplinary management strategies that target **MODIFIABLE RISK FACTORS**

EMR TOOLS *

Reminder for screening
EA-Fall Algorithm
Custom form and EA multifactorial risk assessment
Referral for Fall Clinic

* TELUS Health Practice Solution EMR

OSTEOPOROSIS CANADA 2010 GUIDELINES

- **SCREENING** as per risk factor
- **ASSESSMENT** of BMD result and fracture risk evaluation (CAROC, FRAX)
- **EVALUATE** for evidence of pharmacotherapy
- **LIFESTYLE** modification counselling
- **ADHERENCE** to therapy evaluation

Screening for Osteoporosis
Reminders
Clinical Data Decision Support Tool: BMD
Recalls
Dashboard
Osteoporosis Canada Custom Form and Tool Bar

POST FRACTURE CARE

OSTEOPOROSIS FOUNDATION - 13 BEST STANDARDS

1-Identify
2-Evaluate
3-Fracture Prevention Timing
4-Vertebral Fracture Evaluation
5-Guidelines
6-Secondary Cause Evaluation
7-Fall Prevention
8-Multifactorial Risk Assessment
9-Medication Initiation
10-Medication Review
11-Communication
12-Long-term Management
13-Data Base

EA post fracture
Custom forms
e-consult integration
Dashboard

For more information contact: therese@hodgson.onmicrosoft.com
champlainlhin.on.ca
osteoporosis.ca

DISCLAIMER

The tools demonstrated in this workbook follow guidelines as best as possible. These include the 2010 Osteoporosis Canada guidelines, the Osteoporosis Foundation Best Practice Standards, the Champlain LHIN Fall Prevention Algorithm and Multifactorial Risk Assessment and Choose Wisely.

This workbook and it's related content are meant for guidance in the evaluation and management of fall prevention, osteoporosis management and post fracture care and should not supersede the clinical decision making process based on the patient's individual characteristics.

INSTRUCTIONS

1. The workbook has key questions to help you understand your present state, your intended results and example of metrics analysis.
2. Examples (purple section) are provided to help generate discussion within your team.
3. Links to supporting document and websites are provided through the workbook. If any of the links do not seem to appear, minimize the PPT as the resource document may be hidden behind the PPT slide.
4. Links are available for the videos describing the tools from the PPT.
5. Many of the Zip files containing the tools are already available on the CognisantMD library with additional tools to be added in the near future.
6. For those interested in finding our more on metrics and metrics analysis or if you experience issues with any of the links please contact: therese@hodgson.onmicrosoft.com

INSTRUCTIONS

The workbook is divided in colored sections:

ORANGE: **Your current state**

This section helps you review your current state of bone health activities by understanding best practice standards and by performing a needs assessment for each of the pillars of the program (Fall Prevention, Osteoporosis identification and management and post fracture care).

This section is recommended as you will gain an understanding of your organization's needs

BLUE: **Program's Core Elements**

This section provides you with a description of the Program, the Bone Health 3 pillars (Fall Prevention, Osteoporosis Identification and Management and Post Fracture Care)

BURGUNDY: **EMR tools**

This section provides a description of the EMR tools along with instructional videos. This workbook is provided as a separate unit for those wishing tools for Bone Health Best Practices without setting a formal program.

PURPLE: **Examples**

These slides inserted throughout the workbook provide you with examples for generating Team discussion

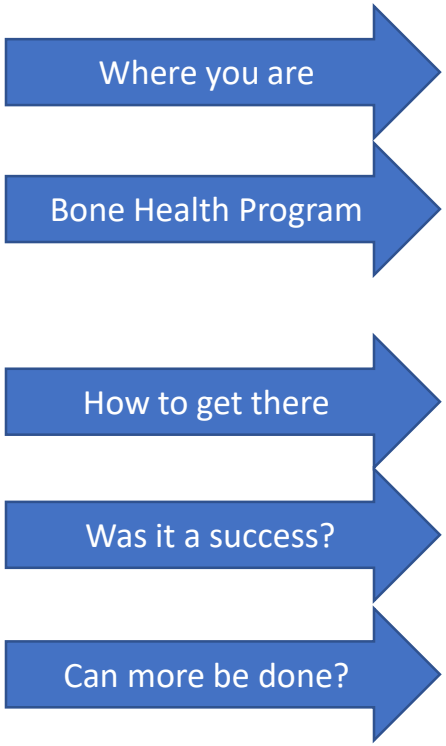
These slides are optional but can help your team identify other elements that were not easily understood or identified.

GREEN: LOGIC program

This section is intended as a review of the elements of LOGIC in program development.

This section is optional but will help you understand how to set up a program with a LOGIC platform.

STEPS IN DEVELOPPING YOUR ORGANIZATION'S BONE HEALTH PROGRAM



1-Perform a needs assessment

2- Review the steps and principles behind program logic model

3-Select the EMR tools needed

4-Perform metrics analysis

5-Assess resource sharing capabilities

STEPS IN IMPLEMENTING BONE HEALTH ACTIVITIES (without a program)

1-**Perform a needs assessment**

2-**Determine what activity is your priority**

3-**Select the EMR tools needed**

4-**Once implemented successfully then choose another activity**

LEARNING MODULE FOR FALLS ASSESMENT - RGPEO - DR. FRANK MOLNAR

Learning Objectives

After completing this module, you will be able to:

- Describe the importance of the Fall Prevention program including the human cost of falls, the economic impact of falls and the critical importance of near falls
- Screen for and clinically assess patients for the three Ps (Postural Hypotension, Pain and Pills) using the Staying Independent Checklist and published standardized balance and mobility assessment tools
- Use the Champlain Fall Prevention Algorithm regarding basic assessment of falls
- Assess beyond the 3 three Ps
- Describe Public Health and Osteoporosis Canada Bone Health recommendations
- Explain when, where and how to refer to Specialized Geriatric Services

Credits:

This Group Learning program meets the certification criteria of the College of Family Physicians of Canada and has been certified by the University of Ottawa's Office of Continuing Professional Development for up to **2 Mainpro+ credits**.

Geriatric Medicine category in Learn.Med

NEEDS ASSESSMENT

NEEDS ASSESSMENT

1-Best Practice Standard of Care for each domain:

i. Fall Prevention
ii. Osteoporosis Identification and Management
iii. Post Fracture Care

2-Needs Assessment for each domain

3-Evaluate Barriers-Find Solutions

4-Assess Data Consistency

5-Review metrics and metrics analysis

BEST PRACTICE STANDARD OF CARE: FALLS PREVENTION

- **Screen**: All patients age 65+ are screened for risks of falls
- **Evaluate**: Of those identified at high risk for fall, a Multifactorial Risk Assessment is performed
- **Prevent**: Modifiable risk factors are identified and changes initiated
- **Prevent**: Community resources such as exercise program are optimized

Supporting resources: click here

BEST PRACTICE STANDARD OF CARE: OSTEOPOROSIS

- **Screen** appropriately
- **Interpret** results accurately
- **Investigate** for secondary causes
- **Initiate** therapy when indicated
- **Evaluate** compliance
- **Reassess** as per guidelines
- **Modify** therapy accordingly
- **Follow-up** as indicated

Supporting resources: click here

BEST PRACTICE STANDARD OF CARE: POST FRACTURE CARE

- **Assess** promptly
- **Evaluate:**
  - ✓ for risks of recurrent falls
  - ✓ for osteoporosis
  - ✓ Investigate for secondary causes
- **Initiate** therapy when indicated
- **Reassess** as per guidelines
- **Modify** therapy accordingly
- **Follow-up** as indicated

Supporting resources: click here

NEEDS ASSESMENT: FALLS

	DO YOU?	Rarely	Sometimes	Frequently	All the time
SCREEN	Screen for falls using a validated tool				
EVALUATE	Review risks factors for patients who fell				
PREVENT	Address modifiable risk factors (at minimum 3 Ps: polypharmacy, postural hypotension, pain and mobility) Refer to community services (Exercise Programs, Falls Prevention Clinics)				

NEEDS ASSESMENT: OSTEOPOROSIS

	DO YOU?	Rarely	Sometimes	Frequently	All the time
SCREEN	Screen for OP with BMD				
INTERPRET	Review BMD using CAROC, FRAX				
INVESTIGATE	For those at moderate or high risk, do you screen for secondary causes				
INITIATE	Initiate pharmacotherapy if indicated				
EVALUATE	Assess compliance to treatment				
REASSESS	Repeat BMD as per guidelines				
MODIFY	Modify therapy if required				

NEEDS ASSESMENT: POST FRACTURE CARE

	DO YOU?	Rarely	Sometimes	Frequently	All the time
ASSESS	Your patients within 8 weeks following a fracture				
EVALUATE	▪ Risk factors for recurrent falls or for patients who fell ▪ Address modifiable risk factors (at minimum 3 Ps: polypharmacy, postural hypotension, pain and mobility)				
EVALUATE	Risks of osteoporosis				
INITIATE	▪ Pharmacotherapy if indicated ▪ Offer hip protectors for those at high risk for falls				
REASSESS	▪ Compliance to treatment ▪ Repeat BMD as per guidelines				
MODIFY	Pharmacotherapy if indicated				

EVALUATE BARRIERS TO SCREENING FOR RISKS OF FALLS-FIND SOLUTIONS

For those answers where you scored “rarely” or “sometimes” draw a list of barriers and possible solutions:

	DO YOU?	Barrier	Solution
SCREEN	Screen for falls using a validated tool		
EVALUATE	Review risks factors for patients who fell		
PREVENT	Address modifiable risk factors (at minimum 3P’s :polypharmacy, postural hypotension, pain and mobility) Refer to community services (Exercise Programs, Falls Prevention Clinics)		

EVALUATE BARRIERS TO OSTEOPOROSIS CARE-FIND SOLUTIONS

	DO YOU?	BARRIER	SOLUTION
SCREEN	Screen for OP with BMD		
INTERPRET	Review BMD using CAROC, FRAX		
INVESTIGATE	For those at moderate or high risk, do you screen for secondary causes		
INITIATE	Initiate pharmacotherapy if indicated		
EVALUATE	Assess compliance to treatment		
MONITOR	Repeat BMD as per guidelines		
MODIFY	Modify therapy if required		

EVALUATE BARRIERS TO POST FRACTURE CARE-FIND SOLUTIONS

	DO YOU?	BARRIER	SOLUTION
ASSESS	Your patients in a timely fashion following a fracture		
EVALUATE	▪ Risk factors for recurrent falls and for patients who fell ▪ Address modifiable risk factors (at minimum 3 Ps: polypharmacy, postural hypotension, pain and mobility)		
EVALUATE	Risks of osteoporosis		
INITIATE	▪ Pharmacotherapy if indicated ▪ Offer hip protectors for those at high risk for falls		
MONITOR	▪ Compliance to treatment ▪ Repeat BMD as per guidelines		
MODIFY	Pharmacotherapy if indicated		

EVALUATE BARRIERS SCREENING FOR RISKS OF FALLS-examples

For those answers where you scored rarely or sometimes, draw a list of barriers and possible solutions

	DO YOU?	Barrier	Solution
SCREEN	Screen for falls	Takes too much time in a busy visit	Screen with use of a tablet at registration; use of a self screening tool(such as Staying Independent Checklist) that the patient completes at home and returns for a specific appointment for review
EVALUATE	Review risks factors for patients who fell	Too complex	Do the major modifiable risks (polypharmacy, pain, postural hypotension)
PREVENT	Address modifiable risk factors	As above	As above
	Refer to community services (Exercise programs, Falls prevention Clinics)	Unaware of what is available	Review available support from LHIN such as www.stopfalls.ca for exercise group options or Champlain Fall Prevention Steering Committee Develop a communication plan

EVALUATE BARRIERS TO OSTEOPOROSIS CARE-examples

	DO YOU?	BARRIER	SOLUTION
SCREEN	Screen for OP with BMD	Time involved to check if due	Add reminder tool
INTERPRET	Review BMD using CAROC, FRAX	Time involvement	Have Team perform CAROC/patient answer FRAX
INVESTIGATE	For those at moderate or high risk, do you screen for secondary causes	Know what to screen for	Add prepopulated lab requisition to EMR
INITIATE	Initiate pharmacotherapy if indicated	Easy for high risk, moderate risk time is consuming	Engage NP to perform evaluation
EVALUATE	Assess compliance to treatment	Time involvement	Add delay reminder tool for admin to call patient
MONITOR	Repeat BMD as per guidelines	Time involvement	Engage NP to perform evaluation
MODIFY	Modify therapy if required	Lack of knowledge	Use EMR tool to guide in decision making process

EVALUATE BARRIERS TO POST FRACTURE CARE-examples

	DO YOU?	BARRIER	SOLUTION
ASSESS	Your patients in a timely fashion following a fracture	Patient not mobile following fracture	Send message to staff to have patient evaluated as soon as possible
EVALUATE	▪ Risk factors for recurrent falls or for patients who fell ▪ And address modifiable risk factors	Focused on pain management	Have automated message for team to perform Falls Risk assessment and 3 Ps
EVALUATE	Risks of osteoporosis	As above	Add Reminder for BMD when fragility fracture populated in CPP
INITIATE	Pharmacotherapy if indicated	As above	Add CDSS (clinical Decision Support System), EA for Team to perform OP evaluation
MONITOR	▪ Compliance to treatment ▪ Repeat BMD as per guidelines	Time element	Automatic delay message to admin
MODIFY	Pharmacotherapy if indicated	Knowledge, time element	Enlist Team to review BMDs

SELECT THE EMR TOOLS TO SUPPORT YOUR PROGRAM

STEPS

1. Print the wish list on the following slides for each member of the Team
2. Have your team watch the videos of the EMR modules pertaining to your organization's priorities
3. Have members select their choice of EMR tool priority based on the results of the Needs Assessment
4. Review team's choices of EMR modules
5. Arrive at consensus
6. Identify gaps in EMR tools needed for your organization's program

EMR WISH LIST: FALLS PREVENTION

TOOL No.	EMR TOOL	LOW PRIORITY	MEDIUM PRIORITY	HIGH PRIORITY
1	OP CANADA CUSTOM FORM			
2	OP CANADA TOOLBAR			
5	FALL SCREENING REMINDER (in Tool Bar)			
6	FALL SCREENING REMINDER (in Reminder Box)			
7	STAY INDEPENDENT CHECKLIST EA			
8	CHAMPLAIN LHIN FALL SCREENING EA			

EMR WISH LIST: FALLS PREVENTION

TOOL No.	EMR TOOL	LOW PRIORITY	MEDIUM PRIORITY	HIGH PRIORITY
9	OCEAN CognisantMD FALL OR NEAR FALL EVALUATION			
10	OCEAN CognisantMD QUICK FALL SCREENING			
11	OCEAN CognisantMD GAIT DIFFICULTY EVALUATION			
12	REFERRAL TO GERIATRIC CENTRAL INTAKE FOR FALL PREVENTION CLINIC			
13	"MY FAVORITES" Tool Bar			
14	QUICK LINKS	n/a	n/a	n/a

EMR WISH LIST: MULTIFACTORIAL RISK ASSESSMENT

TOOL No.	EMR TOOL	LOW PRIORITY	MEDIUM PRIORITY	HIGH PRIORITY
15	OCEAN CognisantMD HANDOUT: OSTEOPOROSIS CANADA TOO FIT TO FALL OR FRACTURE			
16	CHAMPLAIN LHIN MFRA EA			
17	CHAMPLAIN LHIN MFRA CUSTOM FORM			
18	3 P SCREEN			
19	FALL PREVENTION MEDICATION AWARENESS LIST EA			

EMR WISH LIST: MULTIFACTORIAL RISK ASSESSMENT

TOOL No.	EMR TOOL	LOW PRIORITY	MEDIUM PRIORITY	HIGH PRIORITY
20	THE TIMED UP AND GO (TUG) TEST CUSTOM FORM			
21	THE TIMED UP AND GO (TUG) TEST EA			
22	REFERRAL TO GERIATRIC CENTRAL INTAKE FOR FALL PREVENTION CLINIC			
23	FRACTURE PREVENTION FOR LONG TERM CARE FACILITY EA			

EMR WISH LIST: OSTEOPOROSIS IDENTIFICATION AND MANAGEMENT

TOOL No.	EMR TOOL	LOW PRIORITY	MEDIUM PRIORITY	HIGH PRIORITY
24	REMINDER BMD			
25	BMD EA			
26	BMD SCREENING EA			
27	BMD CUSTOM FORM			
28	BMD STAMP			
29	OCEAN CognisantMD: Bone Health and Fracture Risk Assessment			

EMR WISH LIST: POST FRACTURE CARE

TOOL No.	EMR TOOL	LOW PRIORITY	MEDIUM PRIORITY	HIGH PRIORITY
30	FRACTURE IDENTIFICATION EA			
31	POST-FRACTURE CARE EA			
32	POST FRACTURE DASHBOARD			
33	OP FOUNDATION DASHBOARD			

METRICS AND METRICS ANALYSIS

METRICS

- What data do you need to capture?
- How is this data entered?
- Is the data entered in a consistent manner?
- Do you use coding (ICD-9, Snomed)?

METRICS-examples

- What data do you need to capture?
  - Fragility fracture
- How is this data entered?
  - Some write “fragility #”, some “OP fracture”, some just “fracture”
- Is the data entered in a consistent manner?
  - No
- Do you use coding (ICD-9, Snomed)?
  - Some are coded, some not

METRICS ANALYSIS

- What do you want to track?
- What does your system allow you to track presently?
- How easv is it to track?

METRICS ANALYSIS-example

- What do you want to track?
  - ✓ How many patients have sustained a fragility fracture
- What does your system allow you to track presently?
  - ✓ A word search for fractures, a search for CPP entry “fragility fracture”
- How easy is it to track?
  - ✓ Easy to track but data not consistent

ASSESS RESOURCE SHARING CAPABILITIES

RESOURCE SHARING CAPABILITIES

- What can be done in a group session?
- Will community physicians participate?
- Will community patients participate?
  - Initial survey to evaluate before initiating
- How/what/when to advertise?
  - Start with small group, increase as/if success occurs

RESOURCE SHARING CAPABILITIES

- What can be done in a group session?
  - ✓ Osteoporosis education
- Will community physicians participate?
  - ✓ Initial survey to evaluate before initiating
- Will community patients participate?
  - ✓ Initial survey to evaluate before initiating
- How/what/when to advertise?
  - ✓ Start with small group, increase as/if success occurs

APPENDIX

PROGRAM LOGIC MODEL

WHAT IS MODELING?

- Graphic way to organize information and display thinking (visual method of presenting an idea)
- Describes what is planned (“do”) and what results are expected (“get”)
- Quality models are evidence based
- 2 types: theory of change, program logic model
- Begins with results: what are we trying to get?
- Displays relationship between activities and results

KEY ELEMENTS OF PROGRAM LOGIC MODEL

Resources
- Human, financial, organizational, community or system

Activities
- Tools, processes, events, technology, other devices

Outputs
- What the activities will produce or create

Short term Outcomes
- Changes that occurred as a result of the program
- 1-3 years

Intermediate or long-term Outcomes
- 4-6 years
- 7-10 years

Impact
- Ultimate intended change

WHAT IS PROGRAM LOGIC MODEL?

- Provides high level of details between the “Do” and the “Get”
- Begins with the intended results: the “Get”
- Describes the activities at each of the 4 stages of modeling: “the Do”

1. **Design** (Planning Team composition, description of activities, resources, outputs)
2. **Implement** (Go-Live and ongoing)
3. **Evaluate** (Results consists of outcomes and impact)
4. **Adapt** (Allows for critical review, improvements/modification, i.e. PDSA)

Logic Model resource guide: QIIP (HQO; Quality Improvement and Innovation Partnership)

http://www.hqontario.ca/portals/0/Documents/qi/qi-rg-logic-model-1012-en.pdf

http://www.afhto.ca/wp-content/uploads/Program-Planning-and-Evaluation-Framework-February-2016.pdf

DESIGN

DESIGNING YOUR PROGRAM

1. List your organization's **intended results**
   - Having only one or a few intended results can generate a quality program; too many intended results risks focusing on Quantity rather than on Quality
2. Develop your **vision statement**
   - One sentence clearly describing your inspirational end state resulting from your work
3. Establish your **team's structure**
   - Team composition with individual role and responsibilities
4. Review evidence based **inputs**
   - Program logic model relies on evidence based activities

DESIGNING YOUR PROGRAM

4. Develop list of **resources**
   - In order to accomplish your set of activities you will need the following...
5. Describe the intended **activities**
   - In order to address or assess the outputs on the program you will conduct the following…
6. Describe the expected **outputs**:
   - You expect that once completed or underway these activities will produce the following evidence of service delivery…
7. Establish **short term outcomes**
   - You expect that if completed or ongoing, these activities will lead to the following changes in 1-3 years then 4-5 years…
8. Establish **Long term outcomes**
   - You expect that if completed these activities will lead to the following changes in 7-10 years…

LIST YOUR ORGANIZATION'S INTENDED RESULTS

WHAT ARE THE INTENDED RESULTS ? : examples

1. **Decrease rate of fractures**
   i. Fall prevention
   ii. Management of patients at risk of fracture
   iii. Post fracture management
2. **Knowledge enhancement**
   i. Fall screening, Multifactorial assessment, Community resources, Fall prevention clinics
   ii. 2010 Osteoporosis Canada Guidelines, pharmacotherapeutic and lifestyle management
3. **Decrease fracture care gap**
4. **Decrease financial burden of falls and its complication**
5. **Improve quality of life, decreasing functional dependence**

LIST YOUR ORGANIZATION'S INTENDED RESULTS

- 1:
- 2:
- 3:
- 4:

DEVELOP YOUR VISION STATEMENT

VISION STATEMENT

- Establish your organization's vision statement (desired end state) based on the intended results
- One sentence describing the clear and inspirational long-term change, resulting from your work
- Used to lead your group or organization in achieving quality results
- Be clear and simple
- Avoid elaborate language and buzz words
- Easily explained by those involved
- Not to be confused with a mission statement (why you exist)

VISION STATEMENT-example

Our collaborative efforts in screening for falls and attending to the factors related to falls, will prevent further falls and fractures in our patients identified as being at risk for falls.

YOUR ORGANIZATION'S VISION STATEMENT

ESTABLISH YOUR TEAM'S STRUCTURE

ESTABLISH YOUR TEAM'S STRUCTURE

TEAM STRUCTURE

- Sketching out a Planning Team and Adoption Team composition

MEETINGS

- Setting objectives of each meeting
- Develop list of members required at each meeting based on meeting's objectives
- Establish frequency of meetings based on project schedule and dependencies(relationships between activities)

FINAL TEAM STRUCTURE

- Meeting objectives will help on finalizing the Planning Team and Adoption Team composition with roles and responsibilities

DESIGN: example of a draft team structure

Planning Team:

- Executive Director
- Clinician Lead
- Program Director

Implementation Team:

- Executive Director
- Clinician Lead
- Program Director
- Health Educator
- Nurse Practitioner
- Dietician
- Physiotherapist

DESIGN: YOUR ORGANIZATION TEAM'S STRUCTURE

Planning Team:

Implementation Team:

ROLES AND RESPONSIBILITIES: example

EXECUTIVE DIRECTOR

- ALLOCATE RESOURCES
- REVIEWS QUARTERLY REPORTS
- ENABLES CHANGES BASED ON LESSON LEARNED

HEALTH EDUCATOR

- DEVELOPS EDUCATIONAL PAMPHLETS
- LEAD EXERCISE CLASSES
- GROUP EDUCATION: EXERCISE FOR FALL PREVENTION AND OSTEOPOROSIS WEIGHT RESISTANCE EXERCISE

NURSE PRACTITIONER

- PROVIDES COUNSELLING TO PATIENT WITH MODERATE AND HIGH RISK BMD RESULT
- INITIATE PHARMACOTHERAPY WHEN APPROPRIATE
- REVIEWS ADHERENCE TO THERAPY

ROLES AND RESPONSIBILITIES: example

PHARMACIST

- PROVIDES COUNSELLING TO THOSE IDENTIFIED AS EXPERIENCING DIFFICULTY WITH ADHERENCE
- PROVIDES RECOMMENDATION FOR DRUG MODIFICATION FOR THOSE DEEMED TO

ADMIN STAFF

- PROVIDES STAY INDEPENDENT CHECKLIST TO PATIENTS OVER 65 WHO HAVE NOT HAD A SCREENING IN LAST 365 DAYS
- ENTERS DATA FOR THOSE UNABLE TO USE A TABLET

DIETICIAN

- PROVIDES COUNSELLING FOR CALCIUM AND VIT D

ROLES AND RESPONSIBILITIES: example

PHYSICIAN or NP

- IDENTIFIES THOSE AT RISK OF FALLS
- SENDS MESSAGE TO PROGRAM ADMIN FOR:
  - REFERRAL TO FALL PREVENTION PROGRAM
  - REFERRAL TO COMMUNITY EXERCISE PROGRAM
  - MFRA
- MODIFIES MEDICATIONS ASSOCIATED WITH INCREASED RISK FOR FALLS

PROGRAM DIRECTOR

- COORDINATES REFERRALS:
  - COMMUNITY FALL PREVENTION PROGRAM
  - COMMUNITY EXERCISE PROGRAM
- ENSURE DATA CONSISTENCY
- PERFORMS METRICS ANALYSIS
- ADMINISTERS BENEFIT REALIZATION SURVEY

PATIENT

- ANSWERS FALLS SCREENING QUESTIONNAIRE
- CONSIDERS PARTICIPATION IN EDUCATION AND MANAGEMENT AS PER PROGRAM GUIDELINES

REVIEW EVIDENCE BASED INPUTS

LIST YOUR ORGANIZATION EVIDENCE BASED INPUTS

-
-
-
-
-
-

REVIEW EVIDENCE BASED INPUTS-example

➢**2010 OSTEOPOROSIS CANADA GUIDELINES:**

- http://www.osteoporosis.ca/hesionals/guidelinesalth-care-profes/
- http://www.osteoporosis.ca/multimedia/pdf/Quick_Reference_Guide_October_2010.pdf

➢ **OSTEOPOROSIS CANADA TOO FIT TO FRACTURE:**

- http://www.osteoporosis.ca/osteoporosis-and-you/too-fit-to-fracture/
- http://www.osteoporosis.ca/wp-content/uploads/OC-Too-Fit-To-Fracture-Osteo-Exercise-Book.pdf
- http://www.osteoporosis.ca/wp-content/uploads/OC-Too-Fit-to-Fall-or-Fracture.pdf

➢ **OSTEOPOROSIS CANADA BONE FIT:**

- http://www.osteoporosis.ca/programs-and-resources/bonefit/

➢**OSTEOPOROSIS CANADA EMR TOOLS:**

- http://www.osteoporosis.ca/health-care-professionals/osteoporosis-custom-form/

- **IF YOU CAME TO THIS PAGE FROM THE TOOLS IN APPENDIX AND WISH TO RETURN TO WHERE YOU LEFT OFF : click here (slide 90)**

REVIEW EVIDENCE BASED INPUTS-example

- **FRAX (FRACTURE RISK ASSESSMENT TOOL):**
  - http://www.sheffield.ac.uk/FRAX/tool.jsp?country=19

- **OSTEOPOROSIS CANADA'S 10 YEAR FRACTURE RISK ASSESSMENT TOOL**
  - http://www.osteoporosis.ca/multimedia/FractureRiskTool/index.html
  - http://www.osteoporosis.ca/health-care-professionals/clinical-tools-and-resources/fracture-risk-tool/

- **OSTEOPOROSIS CANADA'S CALCIUM CALCULATOR:**
  - http://www.osteoporosis.ca/osteoporosis-canada-calcium-calculator/

- **SELF ADMINISTRATION THERAPY TOOL FOR OSTEOPOROSIS:**
  - http://media.wix.com/ugd/6925b7_8bf1132e3b194dfb9b70a67f1b8480ff.pdf

- **INTERNATIONAL OSTEOPOROSIS FOUNDATION BEST PRACTICE STANDARDS:**
  - http://www.osteoporosis.ca/wp-content/uploads/Appendix-L.pdf

- **IF YOU CAME TO THIS PAGE FROM THE TOOLS IN APPENDIX AND WISH TO WHERE YOU LEFT OFF:** **click here** **(Slide 90)**

REVIEW EVIDENCE BASED INPUTS-example

- **FRACTURE PREVENTION FOR LONG TERM CARE RESIDENTS:**
  - http://media.wix.com/ugd/4542ae_727f997ec88342e092b1209c8e853067.pdf

- **CMAJ PODCAST: PREVENTING FRACTURE IN LONG-TERM CARE: CLINICAL PRACTICE GUIDELINE**
  - https://soundcloud.com/cmajpodcasts/141331-guide

- **OSTEOPOROSIS CANADA'S RECOMMENDATIONS FOR PREVENTING FRACTURE IN LONG-TERM CARE:**
  - https://www.youtube.com/watch?v=4SApjEUOVVY
  - http://media.wix.com/ugd/6925b7_23738d2a7eba4948912ac5b9029de97f.pdf

- **IF YOU CAME TO THIS PAGE FROM THE TOOLS IN APPENDIX AND WISH TO RETURN TO WHERE YOU LEFT OFF :** **click here (slide 90)**

1.http://www.eohu.ca/external_videos/video2.php

REVIEW EVIDENCE BASED INPUTS-example

➢**CHAMPLAIN LHIN FALL PREVENTION SCREENING AND MULTIFACTORIAL ASSESSMENT :**

- http://www.rgpeo.com/en/health-care-practitioners/falls-prevention-program/falls-algorithm-and-tools.aspx
- stopfalls.ca

➢**STAYING INDEPENDENT CHECKLIST:**

- http://www.rgpeo.com/media/70983/final%20staying%20independent%20checklist%20july%202015.pdf

➢**CME MODULE ON FALL ASSESSMENT AND PREVENTION/CHAMPLAIN FALL PREVENTION STRATEGY:**

- Geriatric Medicine category in Learn.Med

➢ **CANADIAN CLINICAL PRACTICE GUIDELINES: DIAGNOSIS AND MANAGEMENT OF OSTEOPOROSIS (WITH REFERENCE TO MEDICATION DISCONTINUATION)**

- http://www.topalbertadoctors.org/download/1907/Osteoporosis%20CPG.pdf?_20160327215420

➢ **CMAJ: RECOMMENDATIONS FOR PREVENTING FRACTURE IN LONG-TERM CARE**

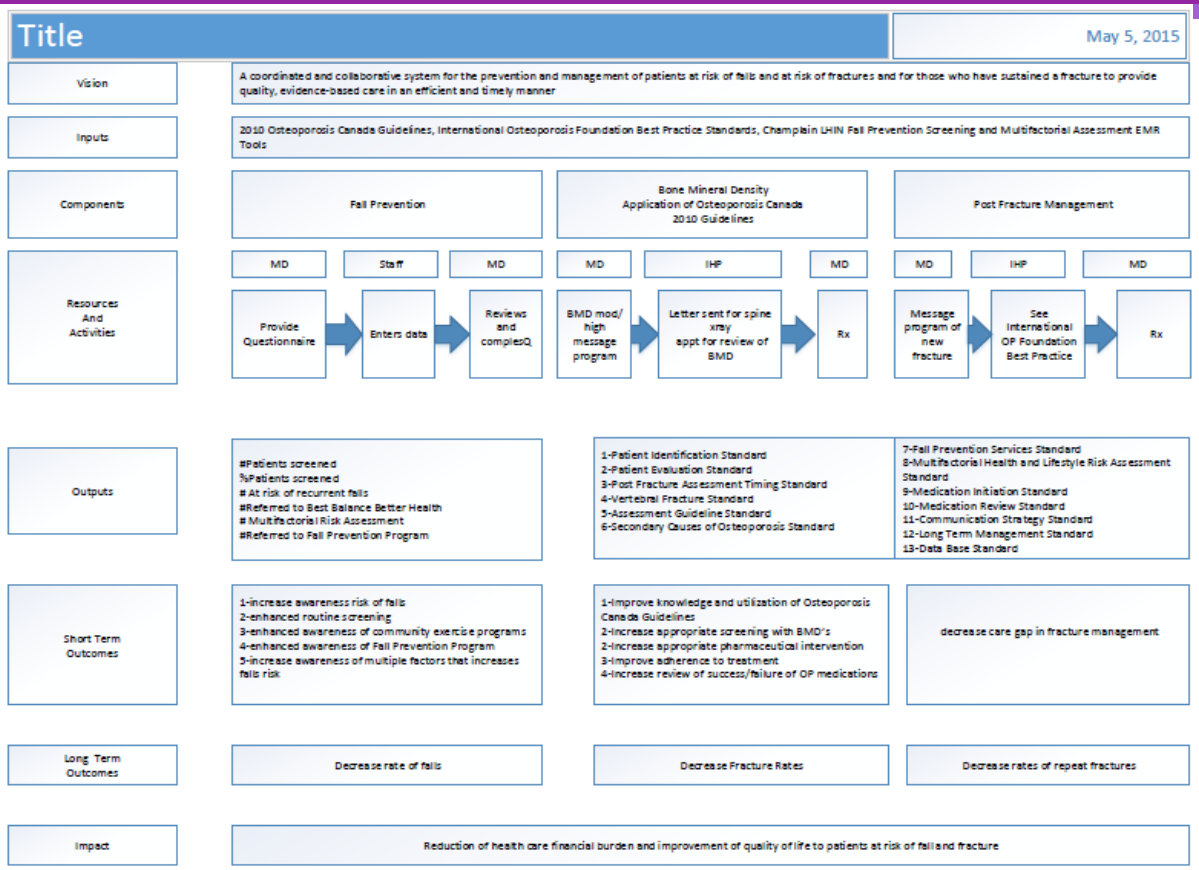
- http://www.cmaj.ca/content/early/2015/09/14/cmaj.141331.full.pdf

➢ **American Geriatric Society/British Geriatric Society Clinical Practice Guideline Prevention of Falls in Older**

- http://www.alabmed.com/uploadfile/2014/0504/20140504033204923.pdf

- **IF YOU CAME TO THIS PAGE FROM THE TOOLS IN APPENDIX AND WISH TO RETURN TO WHERE YOU LEFT OFF : click here (slide 90)**

Bone Health Program Design -example



Bone Health Program Design -example

Resources: in order to accomplish our set of activities we will need the following	Activities: in order to address or assess we will conduct the following activities	Outputs: We expect that once completed or underway these activities will produce the following evidence of service delivery	Short and long term outcomes: We expect that once completed or underway these activities will lead to the following changes in 1-3 years and in 4-6 years	Impact: We expect that once completed or underway these activities will lead to the following changes
MD: provides requisition for BMD	Requisitions for BMD will be given to patients according to OPC 2010 guidelines	# patients screened with BMD #patients found to be at moderate risk #patients found to be at high risk post BMD review	Increase proper screening of bone health with BMD Increase knowledge of at risk for fracture Increase knowledge of management of patients at risk of fracture	Decrease in financial burden of fracture management Improvement in Quality of Life by preventing fracture
Admin: forwards invitation letter and TL spine xray	EMR reminder will be added to PCP participants	# patients sent an invitation letter for TL spine and review #patient who did the TL spine xray # patients who did review (NP, Dietician, Health educator, Pharmacist)	Reduction in first time fragility fracture	
Admin gives appt to patient	Xray for TL spine will be sent to all BMD deemed to be at moderate risk	#patients found to have good evidence of pharmacotherapy # patients adherent to pharmacotherapy at 3 and 12 months		
NP: reviews BMD and provides counselling	Moderate risk BMD results will have a 10 year fracture risk assessment done	# patients who sustained a fracture post initiation of management (pharmacotherapy or lifestyle)		
Nurse: performs exam for evidence of OP	Participating patient will receive information on calcium, vit D, exercise, lifestyle choices, fall prevention, community programs			
Dietician: reviews nutritional intake of Vit D and calcium provides nutritional advise and advise regarding supplements	Cohort will be establish in the EMR and monthly review of the dashboard will be provided to the PCP			
Health education: provides health strategies to prevent falls and improve bone health	EMR dashboard will be developed that will include name, date of BMD, BMD result, fracture risk assessment, date of TL spine xray, Hx of fragility fracture, repeat fracture Hx, Hx parental hip fracture, pharmacotherapy, Ca/VitD/dietary review, lifestyle review,3 month adherence, 12 month adherence, repeat BMD 1-3 years result, success/failure of pharmacotherapy			
Pharmacist: reviews CPP, renal function and provides recommendation to PCP				
Program director: establishes cohort for metrics, reviews success/difficulties/failures				

Bone Health Program Design -example

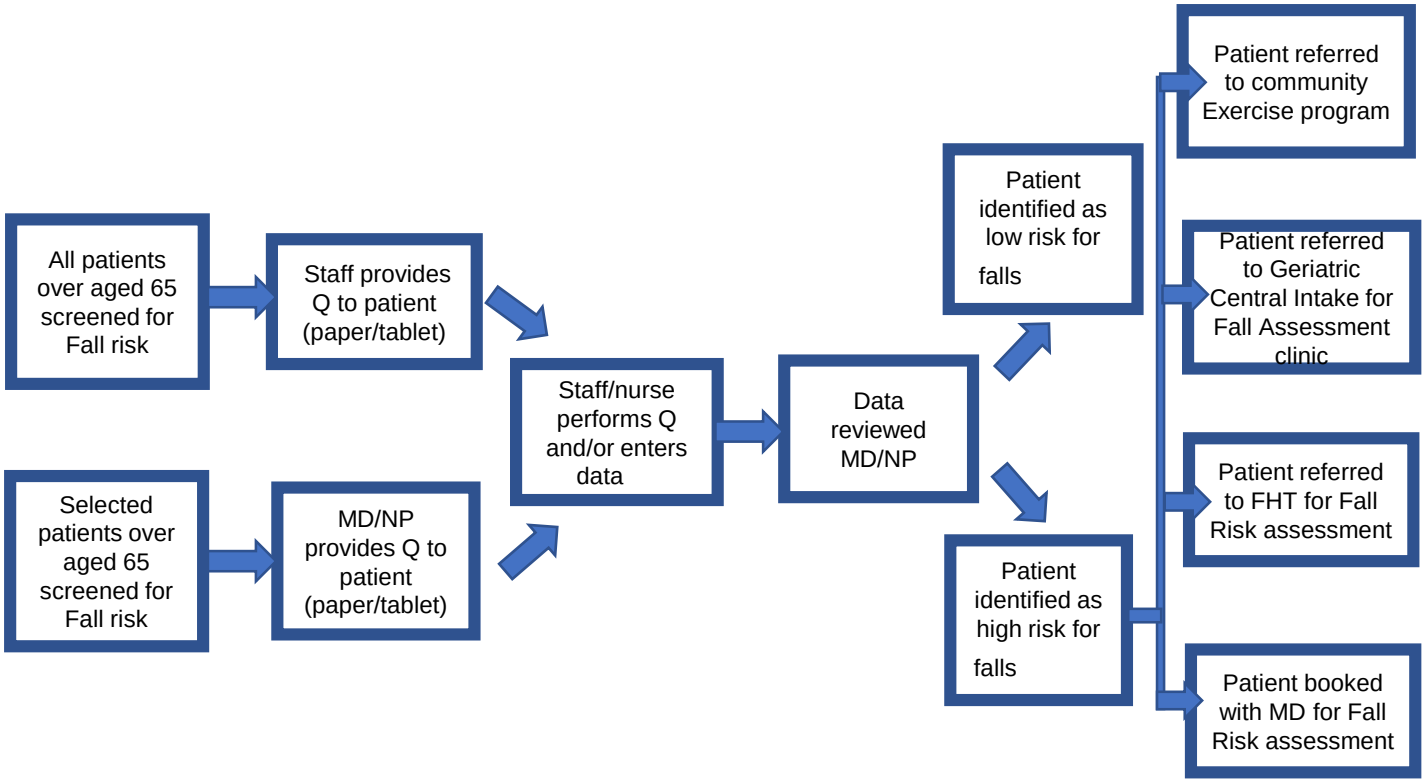
Resources: in order to accomplish our set of activities we will need the following	Activities: in order to address or assess we will conduct the following activities	Outputs: We expect that once completed or underway these activities will produce the following evidence of service delivery	Short and long term outcomes: We expect that once completed or underway these activities will lead to the following changes in 1-3 years and in 4-6 years	Impact: We expect that once completed or underway these activities will lead to the following changes
PCP: send message to Bone Health program when aware of fragility fracture	Patients who sustained a fragility fracture will be sent an invitation letter for review and BMD prior to meeting if appropriate	1-Identification standard: # patients who sustained a fragility fracture 2-patient evaluation standard # patient offered a review +/- repeat BMD	Increase proper screening of bone health with BMD Increase knowledge of at risk for fracture Increase knowledge of management of patients at risk of fracture	Decrease in financial burden of fracture management Improvement in Quality of Life by preventing fracture
NP, Nurse, Dietician, Health Educator, Pharmacist performs Bone Health activities	Secondary causes of osteoporosis will be evaluated EMR Dashboard will be developed to capture the IOF 13 Best Standards	3-post fracture assessment timing standard Time between fracture and evaluation 4-vertebral fracture standards ##patients found to have sustained a vertebral fracture (symptomatic or occult) 5-Assessment guideline standard # patients who attended # who followed the recommendation to have a repeat BMD	Reduction of repeat fragility fracture	
Program Director: establishes cohort and performs metrics	Patient evaluation and management will be performed as per Bone Health section	6-secondary causes of osteoporosis standard # patient who had a requisition given and # patient who did the investigations		
	Cohort will be establish in the EMR and monthly review of the dashboard will be provided to the PCP	7-fall prevention standard: refer to Fall Prevention section 8-Multifactorial Health and Lifestyle Risk Assessment standard:: refer to Fall Prevention section		
		9-medication initiation standard: # patients deemed to benefit from pharmacotherapy 10-medication review standard: # patient adherent to therapy at 3 and 12 months		
		11-communication standard: Monthly metrics and PCP communication tool/activity 12-lomg term management standard 13-Data base standard		

IMPLEMENT

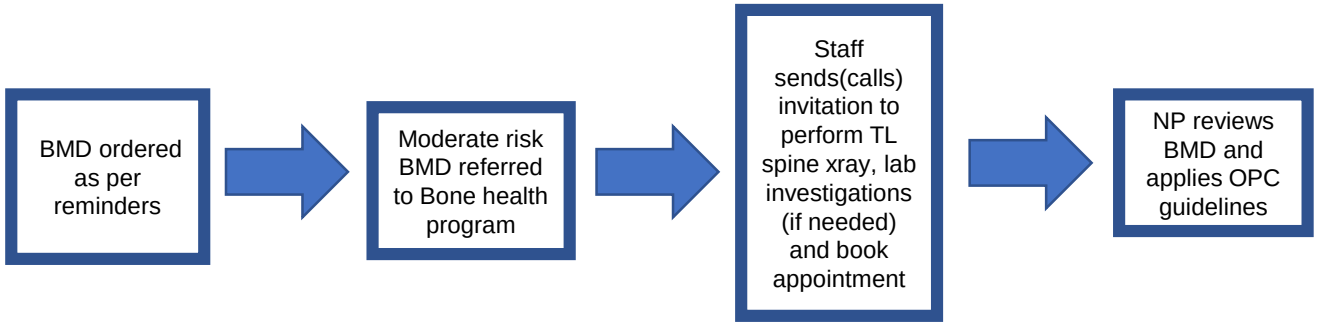
PROCESS MAPPING

- A graphic way to display the activities and the resources required
- Defines what is done and who does what
- Assist the organization in being more effective
- Provides an overview of how the objectives can be achieved

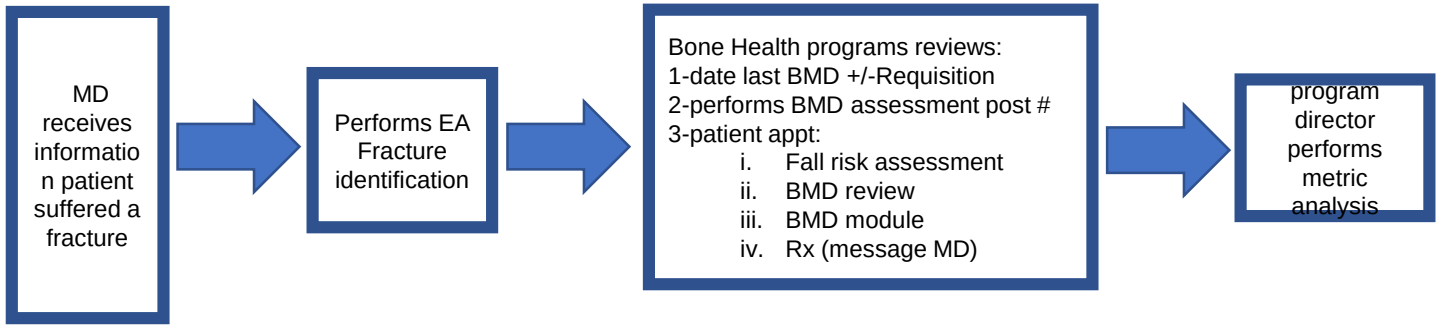
FALL PREVENTION PROCESS MAP- example



BMD-OPC GUIDELINES PROCESS MAP- Example



POST FRACTURE CARE PROCESS MAP- Example



EVALUATE

EVALUATE

- The What?
- The How?
- The When?
- The Why?

EVALUATE

- The What?
  - Start with the “get”
- The How?
  - EMR Tool
- The When?
  - Early, during, throughout
- The Why
  - Identify was is working well, what can be improved

EVALUATE- example

- The What?
  - Start with the “GET”: Decrease the care gap in post fracture care
    - ✓ How many patients who sustained a fragility fracture and are not on a OP medication have pharmacotherapy initiated
- The How?
  - Review EMR tools Post-Fracture Care Dashboard
    - ✓ Physician by-in, Human resource allocation to Program
- The When?
  - Run monthly
    - ✓ address barriers, find solutions
- The Why?
  - Quality Program
    - ✓ Focus on one tasks, e.g. send regular reminders to physicians to notify Bone health lead to perform Post Fracture Care EA

ADAPT

ADAPT

- Review the Why
  - Identify what is working well, what can be improved
- Address the How
  - Identify barriers, address difficulties, communicate solutions
- Initiate PDSA
  - Practice, Do, Study, Act

APPENDIX

EMR TOOLS

EMR TOOLS: FALLS/OSTEOPOROSIS/FRACTURE CARE

TOOL No.	EMR TOOL	TOOL DESCRIPTION	LINK TO VIDEO/RESOURCES
1	OP CANADA CUSTOM FORM to view click here	This is an osteoporosis and falls assessment tool with the aim of improving osteoporosis-related care in family practice **When can you use this form:** • Screening patients without a previous diagnosis of osteoporosis • Reassessing patients for osteoporosis follow up • Reassessing patients with a fall and/or fracture related events **Suggestions for use** • Current patient needs Bone Mineral Density (BMD) test • Assessment/re-assessment of patients ≥ 65 years • Reassessment of patients on osteoporosis treatment • Patients 50 and over with a fragility fracture	Resource: http://www.osteoporosis.ca/health-care-professionals/osteoporosis-custom-form/ Resource: **Go to Step 2** http://www.osteoporosis.ca/health-care-professionals/osteoporosis-custom-form/

EMR TOOLS: FALLS/OSTEOPOROSIS/FRACTURE CARE

TOOL No.	EMR TOOL	TOOL DESCRIPTION	LINK TO VIDEO/RESOURCES
2	OP CANADA TOOLBAR	This toolbar allows the user to launch the Osteoporosis CF, the EA permitting data entry for T score, obtain a T-score flow sheet and graph of hip T-score and lumbar spine T-score and adding osteoporosis to the problem list, coded with either ICD-9 or SNOMED code	Resource: http://www.osteoporosis.ca/health-care-professionals/osteoporosis-custom-form/
3	OP CANADA EMR CUSTOM FORM INSTRUCTION	Instructional 2 pager describing the 20 Steps to Assessing your Patients for Osteoporosis and Falls using the EMR Custom Form along with tips of best use	Resource: http://www.osteoporosis.ca/wp-content/uploads/20_steps_EMR-Osteoporosis-Custom-Form_REV2b.pdf

EMR TOOLS: FALLS/OSTEOPOROSIS/FRACTURE CARE

TOOL No.	EMR TOOL	TOOL DESCRIPTION	LINK TO VIDEO/RESOURCES
4	OP CANADA REGIONAL INTEGRATION LEAD CONTACT INFORMATION	This link provides you with the contact information of the team of Regional Integration Leads (RILs) that can provide guidance in implementing the Osteoporosis Canada EMR tool and establishing pathways for people with osteoporosis and osteoporotic fractures, within your practice.	Resource: **Go to Step 4** http://www.osteoporosis.ca/health-care-professionals/osteoporosis-custom-form/

EMR TOOLS: FALL PREVENTION

TOOL No.	EMR TOOL	TOOL DESCRIPTION	LINK TO VIDEO/RESOURCES
5	FALL SCREENING REMINDER (in Tool Bar)	Tool bar: appears for those over 65 who have not been screened for risk for falls in the last year. Falls screening algorithm EA can be launched from tool bar. Date of the last screen in posted. Tool bar disappears when fall screen is performed; reappears in 11 months.	Video: https://youtu.be/Kb5Vn9qobNw
6	FALL SCREENING REMINDER (in Reminder Box)	Reminder box: reminder to screen for falls for patients over age 65, who have not been screened in the last year.	Video: https://youtu.be/CFN1wSN7BpU

EMR TOOLS: FALL PREVENTION

TOOL No.	EMR TOOL	TOOL DESCRIPTION	LINK TO VIDEO/RESOURCE
7	STAYING INDEPENDENT CHECKLIST EA	EA with the questions of the Stay Independent checklist with automated calculator. Can be launched from the Fall screening tool bar or from the Custom Form list. Can be a self administered questionnaire from a tablet	Resource: https://ocean.cognisantmd.com/questionnaires/preview/QuestionnairePreview.html?ref=canadianStayingIndependentChecklist Video: https://youtu.be/o3-jpfnSx9M
8	CHAMPLAIN LHIN FALL SCREENING EA to view paper version: click here	EA that follows the Champlain LHIN Fall screening algorithm (same video as tool #5) (see in appendix). This launches from F2 or CTRL+shift+i	Video: https://youtu.be/Kb5Vn9qobNw?t=1m24s

EMR TOOLS: FALL PREVENTION

TOOL No.	EMR TOOL	TOOL DESCRIPTION	LINK TO VIDEO/RESOURCE
9	OCEAN CognisantMD FALL OR NEAR FALL EVALUATION	This is a patient self-interviewing questionnaire available for free use with the Ocean tablet. It is also compatible with Ocean Online, which allow the patient to securely complete the form over the web from home or from their mobile device.	Resource: https://ocean.cognisantmd.com/questionnaires/preview/QuestionnairePreview.html?ref=fallOrNearFall
10	OCEAN CognisantMD QUICK FALL SCREENING	This is a patient self-interviewing questionnaire composed of 3 fall risk screening questions available for free use with the Ocean tablet. It is also compatible with Ocean Online, which allow the patient to securely complete the form over the web from home or from their mobile device.	Resource: https://ocean.cognisantmd.com/questionnaires/preview/QuestionnairePreview.html?ref=fallsPreventionScreen

EMR TOOLS: FALL PREVENTION

TOOL No.	EMR TOOL	TOOL DESCRIPTION	LINK TO VIDEO/RESOURCES
11	OCEAN CognisantMD GAIT DIFFICULTY EVALUATION	This is a patient self-interviewing questionnaire evaluating factors contributing to gait difficulties available for free use with the Ocean tablet. It is also compatible with Ocean Online, which allows the patient to securely complete the form over the web from home or from their mobile device	Resource: https://ocean.cognisantmd.com/questionnaires/preview/QuestionnairePreview.html?ref=gaitDisorderInElderly
12	REFERRAL TO GERIATRIC CENTRAL INTAKE FOR FALL PREVENTION CLINIC to view paper version click here	Custom form of the Champlain LHIN Geriatric Central Intake. The video describes the different method of accessing the form and how to fax from your internal server	Video: https://youtu.be/2vsnDrBlhzI

EMR TOOLS: FALL PREVENTION

TOOL No.	EMR TOOL	TOOL DESCRIPTION	LINK TO VIDEO/RESOURCES
13	"MY FAVORITES" Tool Bar	Tool bar composed of the most common EMR activities (SOAP, lab req, OBD LU codes, antenatal requisitions including IPS, Hospitals requisitions for Diagnostic Imaging and Centralized Referral Services such as Knee and Hip Centralized Referral and the Specialized Geriatric Services)	Video: https://youtu.be/0F0DRGxwCVg
14	QUICK LINKS	By clicking on the link on the right will bring you to 4 slides with links to resources as supporting documents for establishing your Bone Health Program	*SLIDE 63 *SLIDE 64 *SLIDE 65 *SLIDE 66
15	OCEAN CognisantMD HANDOUT: OSTEOPOROSIS CANADA TOO FIT TO FALL OR FRACTURE	This is a zip file containing PDFs for the handout in English, Chinese, French and Punjabi describing home exercises to prevent falls	Resource: https://www.cognisantmd.com/library/ **Note:** enter in search "Too Fit to Fall or Fracture"

EMR TOOLS: MULTIFACTORIAL RISK ASSESSMENT

TOOL No.	EMR TOOL	TOOL DESCRIPTION	LINK TO VIDEO/RESOURCES
16	CHAMPLAIN LHIN MFRA EA to view paper version click here	This EA replicates the Champlain LHIN Multifactorial Risk Assessment	Video: https://youtu.be/OB93mO2gfAQ
17	CHAMPLAIN LHIN MFRA CUSTOM FORM to view paper version click here	This custom form replicates the Champlain LHIN Multifactorial Risk Assessment	Video: https://youtu.be/1k1bEjuo73w
18	3 P SCREEN (EA-3P's)	This EA focuses on the 3 modifiable risk factors for falls: Polypharmacy, Postural Hypotension and Pain, Gait, Balance, Mobility Problems	Video: https://youtu.be/agCyAdSbYuI

EMR TOOLS: MULTIFACTORIAL RISK ASSESSMENT

TOOL No.	EMR TOOL	TOOL DESCRIPTION	LINK TO VIDEO/RESOURCES
19	FALL PREVENTION MEDICATION AWARENESS LIST	This is a list of medications associated with falls, ranked in order of risk	Resource: http://www.bgs.org.uk/campaigns/fallsafe/Falls_drug_guide.pdf
20	THE TIMED UP AND GO (TUG) TEST CUSTOM FORM	This custom form walks you through the steps to perform the TUG Test	Video: https://youtu.be/lE6-oXoE0dU
21	THE TIMED UP AND GO (TUG) TEST EA	This custom form walks you through the steps to perform the TUG Test	Video: https://youtu.be/_wcWrHjpKWY

EMR TOOLS: MULTIFACTORIAL RISK ASSESSMENT

TOOL No.	EMR TOOL	TOOL DESCRIPTION	LINK TO VIDEO/RESOURCES
22	REFERRAL TO FALL PREVENTION CLINIC	Specialized Geriatric Services Centralized Referral	See tool #12
23	FRACTURE PREVENTION FOR LONG TERM CARE FACILITY EA	This tool is an Encounter Assistant following the Osteoporosis Canada Guideline for fracture prevention for long term care facility. This can be applied to our frail elderly living at home.	Video: https://youtu.be/Mcw2HeJRaNw

EMR TOOLS: OSTEOPOROSIS IDENTIFICATION AND MANAGEMENT

TOOL No.	EMR TOOL	TOOL DESCRIPTION	LINK TO VIDEO/RESOURCES
24	REMINDER BMD	Will appear for: ➢ patients (male and female) age 65-80 (note the video state age 65 for both male and female; this has been modified to age 65 for women and age 70 for male): i. never had a BMD ii. the last BMD is greater than 5 years iii. the last BMD was greater than 5 years ago and was deemed at low risk iv. the last BMD was greater than 2 years ago and was deemed at moderate risk v. the last BMD was greater than 2 years ago and was deemed at high risk ➢ patients age 40-80 for when fragility fracture, wrist fracture or hip fracture is added to the Problem List and are not already on treatment and the last BMD is greater than 3 years ➢ patients age 50-80 for when hip fracture is added to FHx in CPP and there is no BMD in the previous 3 years **note**: in order for this reminder to capture all items above, one must enter the risk level (low, moderate, high) to the BMD result entry as a text entry	Video: https://youtu.be/mwZqQVx1spo

EMR TOOLS: OSTEOPOROSIS IDENTIFICATION AND MANAGEMENT

TOOL No.	EMR TOOL	TOOL DESCRIPTION	LINK TO VIDEO/RESOURCES
25	BMD EA	EA that provides: i. last BMD result (T score and gm/cm2) ii. links to CAROC and FRAX iii. algorithm that replicates CAROC with the associated change to risk level iv. lists the moderate risk factors for pharmacotherapy decision process v. last eGFR and choice of pharmacotherapy based on the renal function vi. prepopulated lab requisitions for screening for secondary factors and Vitamin D level vii. delay messages for Vit D in 3 months, assessing adherence to therapy in 3 and 12 months viii. Link to ODB LU codes site ix. Link to product monographs x. CF for referral to specialized Geriatric services (such as Fall Prevention Clinic)	Video: https://youtu.be/s0W3_2mLXZs

EMR TOOLS: OSTEOPOROSIS IDENTIFICATION AND MANAGEMENT

TOOL No.	EMR TOOL	TOOL DESCRIPTION	LINK TO VIDEO/RESOURCES
26	BMD SCREENING EA	EA that replicated the Osteoporosis Canada Guidelines for screening under age 50 and age 50-65	Video: https://youtu.be/AUtfsmGIoFU

EMR TOOLS: OSTEOPOROSIS IDENTIFICATION AND MANAGEMENT

TOOL No.	EMR TOOL	TOOL DESCRIPTION	LINK TO VIDEO/RESOURCES
27	BMD CUSTOM FORM	Custom form that provides: i. last BMD result (T score and gm/cm2) ii. links to CAROC and FRAX iii. lists the moderate risk factors for pharmacotherapy decision process iv. last eGFR and choice of pharmacotherapy based on the renal function v. prepopulated lab requisitions for screening for secondary factors and Vitamin D level vi. CF for referral to specialized Geriatric services (such as Fall Prevention Clinic)	Video: https://youtu.be/Y2DVky7IHDg

EMR TOOLS: OSTEOPOROSIS IDENTIFICATION AND MANAGEMENT

TOOL No.	EMR TOOL	TOOL DESCRIPTION	LINK TO VIDEO/RESOURCES
28	BMD Stamp	This stamp is for data entry that allows population of the BMD data (gm/cm2 and T score) on the BMD EA and CF. It allows also permits the algorithm for the reminder box (note: the reminder box algorithm can also be populated with a simple entry of “low”, “moderate” or “high”	Video: https://youtu.be/GaN76lYIJeY

EMR TOOLS: OSTEOPOROSIS IDENTIFICATION AND MANAGEMENT

TOOL No.	EMR TOOL	TOOL DESCRIPTION	LINK TO VIDEO/RESOURCES
29	OCEAN COGNISANT: Bone Health and Fracture Risk Assessment	This is a patient self-interviewing questionnaire reviewing social and dietary history, smoking, medical history and fracture risks . This is available for free use with the Ocean tablet. It is also compatible with Ocean Online, which allows the patient to securely complete the form over the web from home or from their mobile device	Resource: https://ocean.cognisantmd.com/questionnaires/preview/QuestionnairePreview.html?ref=boneHealthAx

EMR TOOLS: POST FRACTURE CARE

TOOL No.	EMR TOOL	TOOL DESCRIPTION	LINK TO VIDEO/RESOURCES
30	FRACTURE IDENTIFICATION EA	EA that lists the date and type of the fragility fracture, if this is a repeat fracture, data entry of osteoporosis medications, prepopulated requisitions (BMD, blood tests and lateral spine xray) and messaging to staff to organize tests and book appointment	Video: https://youtu.be/xb19ghUv1t8
31	POST-FRACTURE CARE EA	EA for data entry of osteoporosis medications (present, initiated or modified) along with messages to staff for Falls screening appointment, 3 Ps, MFRA or referral to community Falls Prevention clinic, delay messages for reviewing adherence to therapy in 3 and 12 months	Video: https://youtu.be/SJxR0jcHyhI

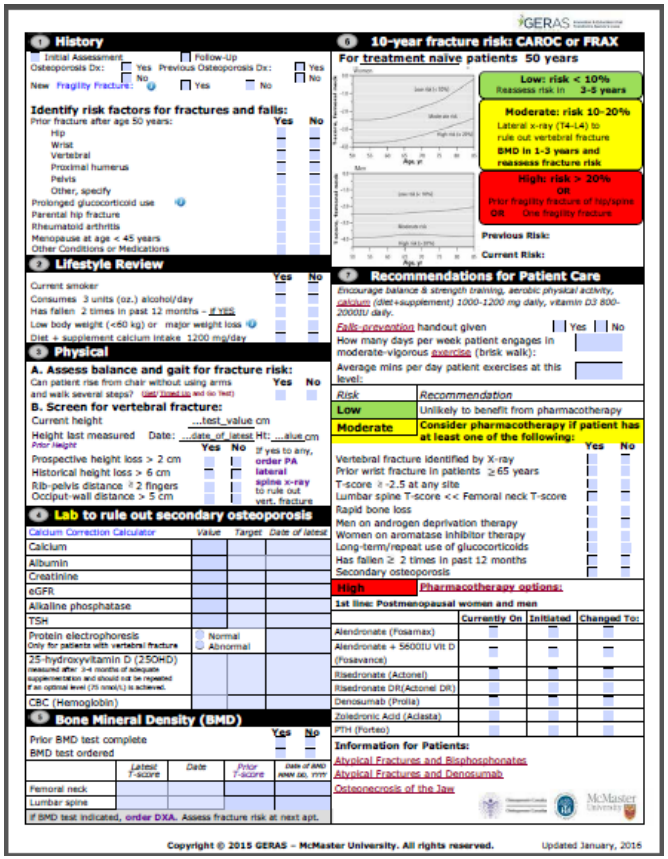
EMR TOOLS: METRICS

TOOL No.	EMR TOOL	TOOL DESCRIPTION	LINK TO VIDEO/RESOURCES
32	Post fracture Dashboard	Search that enables population based management for patients who sustained a fragility fracture. This draws a list of patients who sustained a fragility fracture, the type of fracture, if patients were on OP medications, the type of OP medications, if BMD,TL spine xray and/or blood tests were performed.	Video: https://youtu.be/6qkOIbgi-qM
33	OP Foundation Dashboard	Search that enables population based management for patients who sustained a fragility fracture. Draws a list of patients from a cohort of fragility fractures looking at: last BMD, risk level correction, TL spine xray, blood tests, vit D level, lifestyle review, call back at 3 months and 12 months for adherence. This data can be drawn in an excel format to generate bar graph/pie charts that easily displays the information in a fashion that allows analysis of program's success(see previous video #32 for Dashboard example)	Video: https://youtu.be/HrEFnmR89IA

EMR TOOLS: METRICS

TOOL No.	EMR TOOL	TOOL DESCRIPTION	LINK TO VIDEO/RESOURCES
34	Osteoporosis Canada Custom Form Metrics	Search that enables to draw the metrics of key activities obtained from the Osteoporosis Canada Custom Form: i. Identification of Osteoporosis ii. History of fragility fracture or repeat fragility fracture iii. Presence of risk factors for fracture iv. Presence of modifiable risk factors v. TUG success vi. Presence of physical evidence of possible vertebral fracture vii. BMD ordered viii. Previous and current BMD fracture risk ix. Pharmacotherapy initiated or changed	Video: https://youtu.be/lenxfYthkWA NOTE: MUST USE CUSTOM FORM OPC V-2

OSTEOPOROSIS CANADA CUSTOM FORM



GERAS

1 History

Initial Assessment ☐ Follow-Up

Osteoporosis Dx: ☐ Yes ☐ No Previous Osteoporosis Dx: ☐ Yes ☐ No

New Fragility Fracture: ☐ Yes ☐ No

Identify risk factors for fractures and falls:

Prior fracture after age 50 years:	Yes	No
Hip		
Wrist		
Vertebral		
Proximal humerus		
Pelvis		
Other, specify		
Prolonged glucocorticoid use		
Parental hip fracture		
Rheumatoid arthritis		
Menopause at age < 45 years		
Other Conditions or Medications		

2 Lifestyle Review

	Yes	No
Current smoker		
Consumes 3 units (oz.) alcohol/day		
Has fallen 2 times in past 12 months – If YES		
Low body weight (<60 kg) or major weight loss		
Diet + supplement calcium intake 1200 mg/day		

3 Physical

A. Assess balance and gait for fracture risk:

Can patient rise from chair without using arms and walk several steps? (Get Timed Up and Go Test) Yes ☐ No ☐

B. Screen for vertebral fracture:

Current height ...test_value cm

Height last measured Date: ...date_of_latest Ht: ...alue cm (Prior Height)

	Yes	No
Prospective height loss > 2 cm		
Historical height loss > 6 cm		
Rib-pelvis distance ≯ 2 fingers		
Occiput-wall distance > 5 cm		

If yes to any, order PA lateral spine x-ray to rule out vert. fracture

4 Lab to rule out secondary osteoporosis

Calcium Correction Calculator	Value	Target	Date of latest
Calcium			
Albumin			
Creatinine			
eGFR			
Alkaline phosphatase			
TSH			
Protein electrophoresis (Only for patients with vertebral fracture)	○ Normal ○ Abnormal		
25-hydroxyvitamin D (25OHD) (measured after 3-4 months of adequate supplementation and should not be repeated if an optimal level (75 nmol/L) is achieved.)			
CBC (Hemoglobin)			

5 Bone Mineral Density (BMD)

	Yes	No
Prior BMD test complete		
BMD test ordered		

	Latest T-score	Date	Prior T-score	Date of BMD (DD MMM YYYY)
Femoral neck				
Lumbar spine				

If BMD test indicated, order DXA. Assess fracture risk at next apt.

6 10-year fracture risk: CAROC or FRAX

For treatment naïve patients 50 years

Low: risk < 10%
Reassess risk in 3-5 years

Moderate: risk 10-20%
Lateral x-ray (T4-L4) to rule out vertebral fracture
BMD in 1-3 years and reassess fracture risk

High: risk > 20%
OR
Prior fragility fracture of hip/spine
OR One fragility fracture

Previous Risk:

Current Risk:

7 Recommendations for Patient Care

Encourage balance & strength training, aerobic physical activity, calcium (diet+supplement) 1000-1200 mg daily, vitamin D3 800-2000IU daily.

Falls prevention handout given ☐ Yes ☐ No

How many days per week patient engages in moderate-vigorous exercise (brisk walk):

Average mins per day patient exercises at this level:

Risk	Recommendation
Low	Unlikely to benefit from pharmacotherapy
Moderate	Consider pharmacotherapy if patient has at least one of the following:

	Yes	No
Vertebral fracture identified by X-ray		
Prior wrist fracture in patients ≥ 65 years		
T-score ≯ -2.5 at any site		
Lumbar spine T-score << Femoral neck T-score		
Rapid bone loss		
Men on androgen deprivation therapy		
Women on aromatase inhibitor therapy		
Long-term/repeat use of glucocorticoids		
Has fallen ≥ 2 times in past 12 months		
Secondary osteoporosis		

High Pharmacotherapy options:

1st line: Postmenopausal women and men

	Currently On	Initiated	Changed To:
Alendronate (Fosamax)			
Alendronate + 5600IU Vit D (Fosavance)			
Risedronate (Actonel)			
Risedronate DR(Actonel DR)			
Denosumab (Prolia)			
Zoledronic Acid (Aclasta)			
PTH (Forteo)			

Information for Patients:

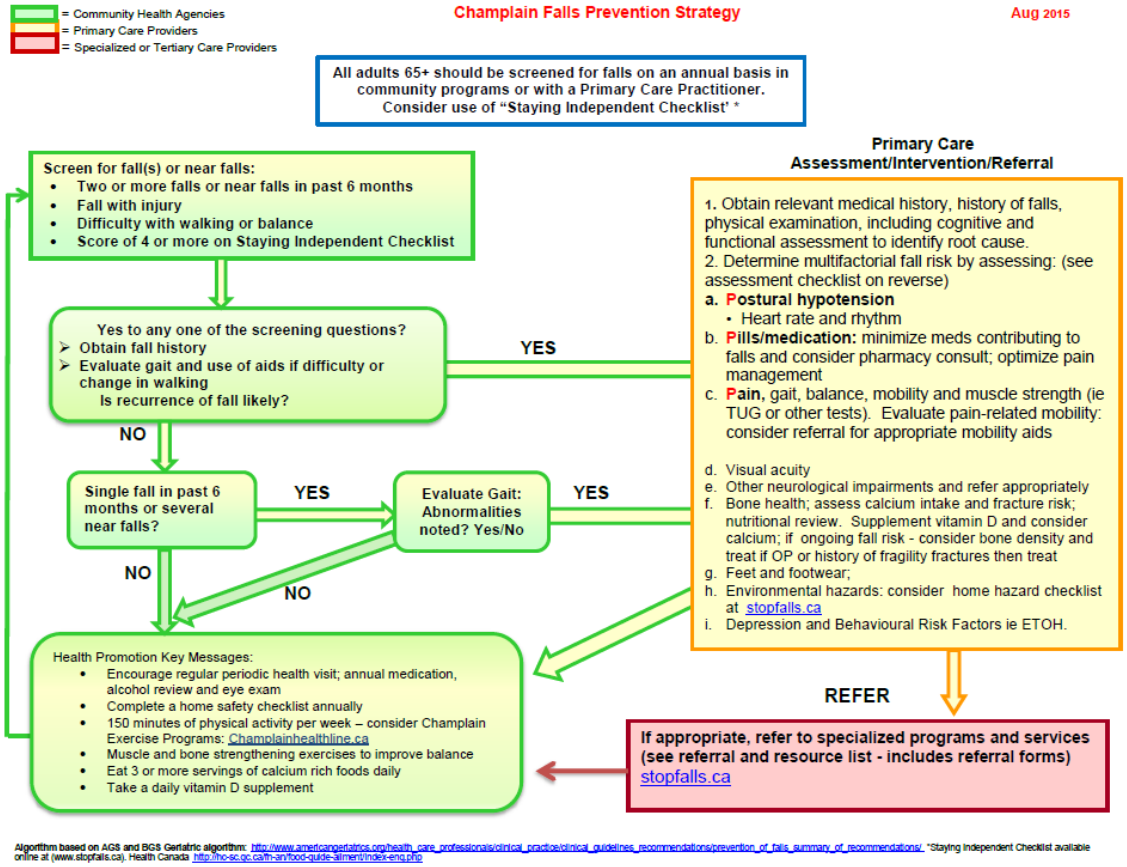
Atypical Fractures and Bisphosphonates
Atypical Fractures and Denosumab
Osteonecrosis of the Jaw

 Updated January, 2016

RETURN TO WHERE YOU LEFT OFF:

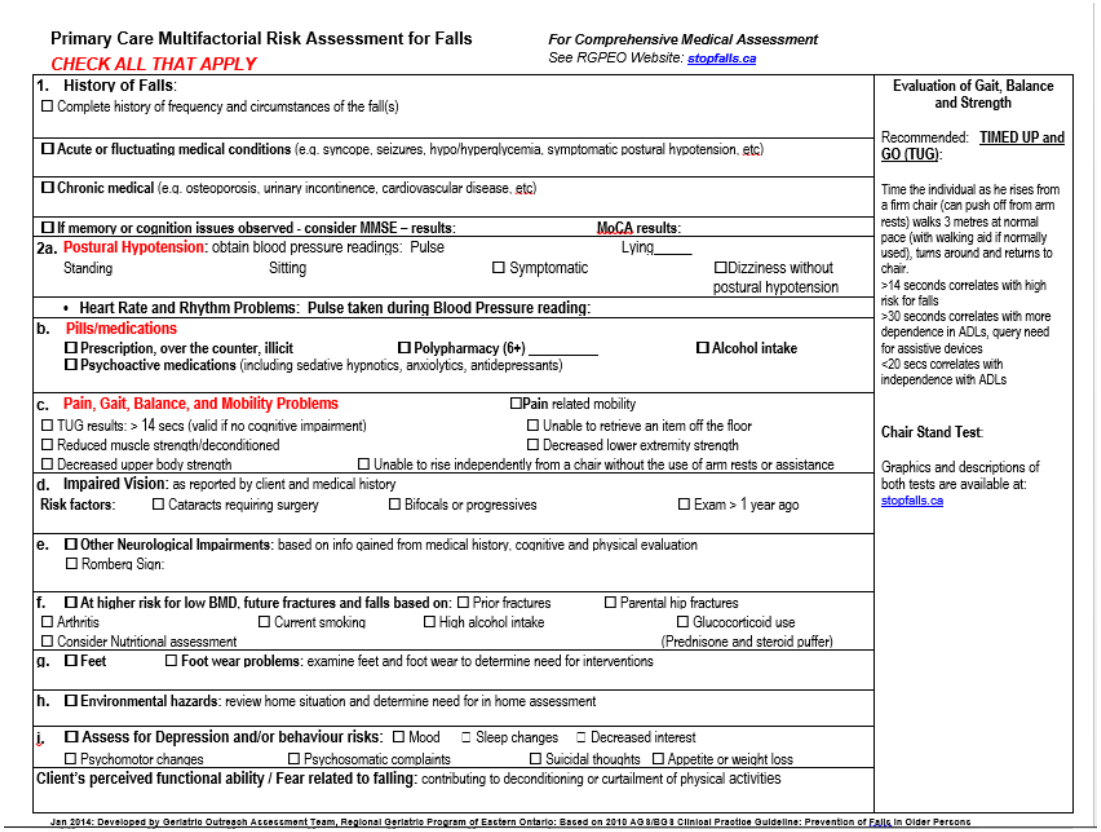
click here

CHAMPLAIN LHIN FALL PREVENTION SCREENING ALGORITHM



RETURN TO WHERE YOU LEFT OFF: click here

CHAMPLAIN LHIN MULTIFACTORIAL RISK ASSESSMENT FOR FALLS



Primary Care Multifactorial Risk Assessment for Falls
CHECK ALL THAT APPLY

For Comprehensive Medical Assessment
See RGPEO Website: stopfalls.ca

1. History of Falls:
☐ Complete history of frequency and circumstances of the fall(s)

☐ **Acute or fluctuating medical conditions** (e.g. syncope, seizures, hypo/hyperglycemia, symptomatic postural hypotension, etc)

☐ **Chronic medical** (e.g. osteoporosis, urinary incontinence, cardiovascular disease, etc)

☐ **If memory or cognition issues observed - consider MMSE – results:** **MoCA results:**

2a. Postural Hypotension: obtain blood pressure readings: Pulse Lying_____
Standing Sitting ☐ Symptomatic ☐Dizziness without postural hypotension

- **Heart Rate and Rhythm Problems: Pulse taken during Blood Pressure reading:**

b. Pills/medications
☐ **Prescription, over the counter, illicit** ☐ **Polypharmacy (6+)** _____ ☐ **Alcohol intake**
☐ **Psychoactive medications** (including sedative hypnotics, anxiolytics, antidepressants)

c. Pain, Gait, Balance, and Mobility Problems ☐**Pain** related mobility
☐ TUG results: > 14 secs (valid if no cognitive impairment) ☐ Unable to retrieve an item off the floor
☐ Reduced muscle strength/deconditioned ☐ Decreased lower extremity strength
☐ Decreased upper body strength ☐ Unable to rise independently from a chair without the use of arm rests or assistance

d. Impaired Vision: as reported by client and medical history
Risk factors: ☐ Cataracts requiring surgery ☐ Bifocals or progressives ☐ Exam > 1 year ago

e. ☐ **Other Neurological Impairments:** based on info gained from medical history, cognitive and physical evaluation
☐ Romberg Sign:

f. ☐ **At higher risk for low BMD, future fractures and falls based on:** ☐ Prior fractures ☐ Parental hip fractures
☐ Arthritis ☐ Current smoking ☐ High alcohol intake ☐ Glucocorticoid use
☐ Consider Nutritional assessment (Prednisone and steroid puffer)

g. ☐ **Feet** ☐ **Foot wear problems:** examine feet and foot wear to determine need for interventions

h. ☐ **Environmental hazards:** review home situation and determine need for in home assessment

i. ☐ **Assess for Depression and/or behaviour risks:** ☐ Mood ☐ Sleep changes ☐ Decreased interest
☐ Psychomotor changes ☐ Psychosomatic complaints ☐ Suicidal thoughts ☐ Appetite or weight loss

Client's perceived functional ability / Fear related to falling: contributing to deconditioning or curtailment of physical activities

Evaluation of Gait, Balance and Strength

Recommended: **TIMED UP and GO (TUG):**

Time the individual as he rises from a firm chair (can push off from arm rests) walks 3 metres at normal pace (with walking aid if normally used), turns around and returns to chair.
>14 seconds correlates with high risk for falls
>30 seconds correlates with more dependence in ADLs, query need for assistive devices
<20 secs correlates with independence with ADLs

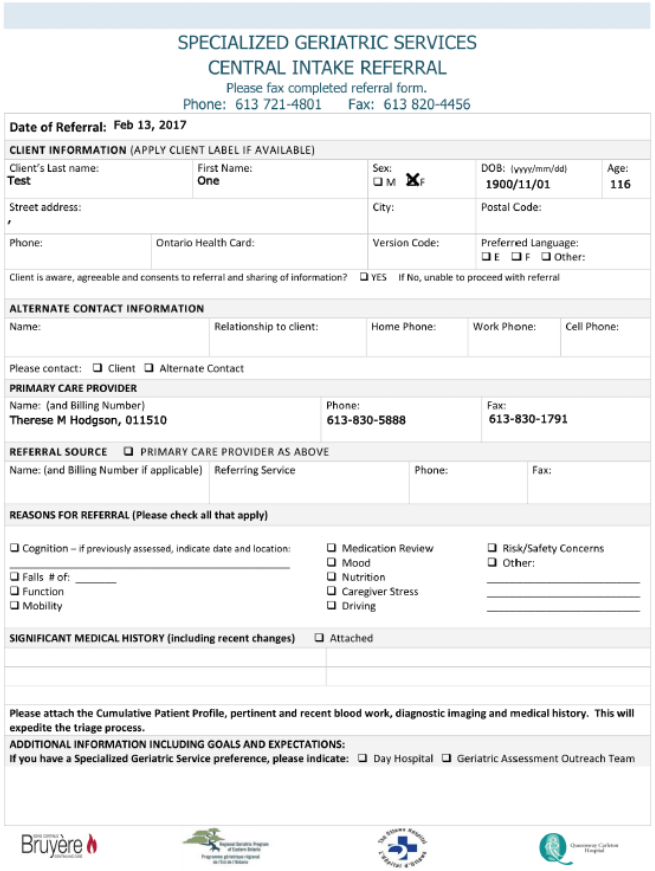
Chair Stand Test:

Graphics and descriptions of both tests are available at: stopfalls.ca

Jan 2014: Developed by Geriatric Outreach Assessment Team, Regional Geriatric Program of Eastern Ontario: Based on 2010 AGS/BGS Clinical Practice Guideline: Prevention of Falls in Older Persons

RETURN TO WHERE YOU LEFT OFF: click here

CHAMPLAIN LHIN MULTIFACTORIAL RISK ASSESSMENT FOR FALLS



SPECIALIZED GERIATRIC SERVICES
CENTRAL INTAKE REFERRAL
Please fax completed referral form.
Phone: 613 721-4801 Fax: 613 820-4456

Date of Referral: Feb 13, 2017

CLIENT INFORMATION (APPLY CLIENT LABEL IF AVAILABLE)

Client's Last name:	First Name:	Sex:	DOB: (yyyy/mm/dd)	Age:
Test	One	☐ M ☒ F	1900/11/01	116

Street address:	City:	Postal Code:
,		

Phone:	Ontario Health Card:	Version Code:	Preferred Language: ☐ E ☐ F ☐ Other:

Client is aware, agreeable and consents to referral and sharing of information? ☐ YES If No, unable to proceed with referral

ALTERNATE CONTACT INFORMATION

Name:	Relationship to client:	Home Phone:	Work Phone:	Cell Phone:

Please contact: ☐ Client ☐ Alternate Contact

PRIMARY CARE PROVIDER

Name: (and Billing Number)	Phone:	Fax:
Therese M Hodgson, 011510	613-830-5888	613-830-1791

REFERRAL SOURCE ☐ PRIMARY CARE PROVIDER AS ABOVE

Name: (and Billing Number if applicable)	Referring Service	Phone:	Fax:

REASONS FOR REFERRAL (Please check all that apply)

☐ Cognition – if previously assessed, indicate date and location: _____
☐ Falls # of: _____
☐ Function
☐ Mobility
☐ Medication Review
☐ Mood
☐ Nutrition
☐ Caregiver Stress
☐ Driving
☐ Risk/Safety Concerns
☐ Other: _____

SIGNIFICANT MEDICAL HISTORY (including recent changes) ☐ Attached

Please attach the Cumulative Patient Profile, pertinent and recent blood work, diagnostic imaging and medical history. This will expedite the triage process.

ADDITIONAL INFORMATION INCLUDING GOALS AND EXPECTATIONS:
If you have a Specialized Geriatric Service preference, please indicate: ☐ Day Hospital ☐ Geriatric Assessment Outreach Team

Bruyère

RETURN TO WHERE YOU LEFT OFF: click here

FALL PREVENTION: LINK TO VIDEO/RESOURCES

➢**CHAMPLAIN LHIN FALL PREVENTION SCREENING AND MULTIFACTORIAL RISK ASSESSMENT (MRFA):**

- http://www.rgpeo.com/en/health-care-practitioners/falls-prevention-program/falls-algorithm-and-tools.aspx
- stopfalls.ca

➢ **CHAMPLAIN LHIN EXERCISE CLASSES FOR SENIORS:**

- http://www.champlainhealthline.ca/libraryContent.aspx?id=20516

➢**STAYING INDEPENDENT CHECKLIST:**

- http://www.rgpeo.com/media/70983/final%20staying%20independent%20checklist%20july%202015.pdf

➢**CME MODULE ON FALL ASSESSMENT AND PREVENTION/CHAMPLAIN FALL PREVENTION STRATEGY:**

- Geriatric Medicine category in Learn.Med

RETURN TO WHERE YOU LEFT OFF : click here

OSTEOPOROSIS: LINK TO VIDEO/RESOURCES

➢**2010 OSTEOPOROSIS CANADA GUIDELINES:**

- http://www.osteoporosis.ca/hesionals/guidelinesalth-care-profes/
- http://www.osteoporosis.ca/multimedia/pdf/Quick_Reference_Guide_October_2010.pdf

RETURN TO WHERE YOU LEFT OFF: click here

POST FRACTURE CARE: LINK TO VIDEO/RESOURCES

➢ **INTERNATIONAL OSTEOPOROSIS FOUNDATION BEST PRACTICE STANDARDS:**

- http://www.osteoporosis.ca/wp-content/uploads/Appendix-L.pdf

RETURN TO WHERE YOU LEFT OFF: click here