

20 Steps to Assessing your Patients for Osteoporosis and Falls using an EMR Custom Form (steps 1-15)

1. DETERMINE if this is an initial assessment or if patient has a previous osteoporosis diagnosis
2. Look for fragility fracture
TIP: hovering over any colored wording with an information icon beside it, such as fragility fracture in this case, will give you further information about that area
3. Screen for risk factors to help you stratify fracture risk if new assessment or, if risk has changed if a follow-up assessment
TIP: see box # 6 to give you actual fracture risk based on BMD and risk factors

1 History

Initial Assessment: Osteoporosis Dx: Yes No
 Follow-Up: 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	<input type="checkbox"/>	<input type="checkbox"/>
Wrist	<input type="checkbox"/>	<input type="checkbox"/>
Vertebral	<input type="checkbox"/>	<input type="checkbox"/>
Proximal humerus	<input type="checkbox"/>	<input type="checkbox"/>
Pelvis	<input type="checkbox"/>	<input type="checkbox"/>
Other, specify	<input type="checkbox"/>	<input type="checkbox"/>
Prolonged glucocorticoid use	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Parental hip fracture	<input type="checkbox"/>	<input type="checkbox"/>
Rheumatoid arthritis	<input type="checkbox"/>	<input type="checkbox"/>
Menopause at age < 45 years	<input type="checkbox"/>	<input type="checkbox"/>
Other Conditions or Medications	<input type="checkbox"/>	<input type="checkbox"/>

4. REVIEW lifestyle
5. Pay special attention to any falls, especially > 2 in the past month - If yes, investigate balance/gait, medications
TIP: click on "if YES" to generate a falls assessment algorithm
6. Look for major body weight loss
7. Assess calcium intake and emphasize dietary calcium

2 Lifestyle Review

	Yes	No
Current smoker	<input type="checkbox"/>	<input type="checkbox"/>
Consumes 3 units (oz.) alcohol/day	<input type="checkbox"/>	<input type="checkbox"/>
Has fallen 2 times in past 12 months - if YES	<input type="checkbox"/>	<input type="checkbox"/>
Low body weight (< 60 kg) or major weight loss	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Diet + supplement calcium intake 1200 mg/day	<input type="checkbox"/>	<input type="checkbox"/>

8. CONTINUE assessing risk
9. Conduct a Get/Timed Up and Go Test if needed
TIP: click on red wording for instructions on performing the tests
10. Look for changes in height and rule out vertebral fracture

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: _____ cm
 Height last measured Date: _____ Ht: _____ cm
Prior Height (mm/dd/yyyy)

	Yes	No	If yes to any, order PA lateral spine x-ray to rule out vert. fracture
Prospective height loss > 2 cm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Historical height loss > 6 cm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rib-pelvis distance ≥ 2 fingers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Occiput-wall distance > 5 cm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. RULE OUT secondary factors for osteoporosis
TIP: most recent labs will be pre-populated if these have been done already. If labs are > 1 year, consider repeating
12. Correct calcium based on Albumin level
TIP: click on the "Calcium Correction Calculator" link in blue
13. If no information is available on this patient, order appropriate tests
TIP: click on the "Lab" word in yellow. This will generate a requisition form of all recommended tests except SPEP
Note: SPEP is recommended in the presence of vertebral compression fractures or when lumbar spine BMD is worse than femoral neck by at least one SD.

4 Lab to rule out secondary osteoporosis

Calcium Correction Calculator	Value	Target	Date of latest
Calcium			
Albumin			
Creatinine			
eGFR			
Alkaline phosphatase			
TSH			
Protein electrophoresis	<input type="radio"/> Normal		
<small>Only for patients with vertebral fracture</small>	<input type="radio"/> Abnormal		
25-hydroxyvitamin D (25OHD) measured after 3-4 months of adequate sun/breastmilk and should not be reassessed if an optimal level (75 nmol/L) is achieved.			
CBC (Hemoglobin)			

14. ENTER T-scores to compare changes if previous results are available
TIP: T-scores have to be entered manually as EMR will not pre-populate the information from HMR or PDF reports
15. Determine if a BMD test should be ordered based on assessed risk factors
TIP: you can bring up a requisition form to your preferred location by clicking on "Order DXA", if you set this up with your IT support or EMR provider

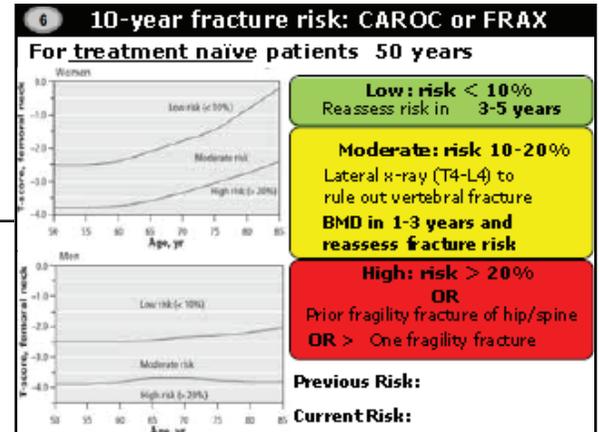
5 Bone Mineral Density (BMD)

	Yes	No		
Prior BMD test complete	<input type="checkbox"/>	<input type="checkbox"/>		
BMD test ordered	<input type="checkbox"/>	<input type="checkbox"/>		
	Latest T-score	Date	Prior T-score	Date of Prior BMD MM/DD, YYYY
Femoral neck				
Lumbar spine				

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

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16. DETERMINE current risk and compare to previous risk, if available, and use the graph to assess where patient is on the risk level curve
TIP: determine if patient is on the higher side of moderate risk vs lower side based on age and femoral neck T-score. Educate patient about change in risk



17. COUNSEL patient regarding his/her risk or any change in risk from previous assessment, as well as exercise, falls prevention and nutrition
TIP: handouts can be generated by clicking on each red wording. Emphasize changes in exercise recommendations that include strength training
18. For patients at moderate risk, determine other risk factors that may warrant consideration of treatment - consider ordering lateral thoracolumbar spine x-ray to rule out compression fracture to help stratify risk further
TIP: click on "PA lateral spine x-ray" in box #3. You can set up with your IT to change to a form for your usual facility for ordering x-rays, as you did in the BMD section

7 Recommendations for Patient Care

Encourage balance & strength training, aerobic physical activity, calcium (diet+supplement) 1000-1200 mg daily, vitamin D3 800-2000 IU 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	<input type="checkbox"/>	<input type="checkbox"/>
Prior wrist fracture in patients ≥65 years	<input type="checkbox"/>	<input type="checkbox"/>
T-score ≥ -2.5 at any site	<input type="checkbox"/>	<input type="checkbox"/>
Lumbar spine T-score << Femoral neck T-score	<input type="checkbox"/>	<input type="checkbox"/>
Rapid bone loss	<input type="checkbox"/>	<input type="checkbox"/>
Men on androgen deprivation therapy	<input type="checkbox"/>	<input type="checkbox"/>
Women on aromatase inhibitor therapy	<input type="checkbox"/>	<input type="checkbox"/>
Long-term/repeat use of glucocorticoids	<input type="checkbox"/>	<input type="checkbox"/>
Has fallen ≥ 2 times in past 12 months	<input type="checkbox"/>	<input type="checkbox"/>
Secondary osteoporosis	<input type="checkbox"/>	<input type="checkbox"/>

19. DETERMINE if treatment will be needed for moderate vs high risk patients
TIP: consider first line therapy if new treatment, or consider if change in therapy to another agent is needed by clicking on "Pharmacotherapy options" (limited use criteria included for those agents that require it)
20. COUNSEL patient around osteoporosis therapies, atypical fractures and/or ONJ
TIP: handouts can be generated by clicking on one of the information points in purple
Note: You can set a "reminder" in your EMR for osteoporosis patients > 65

High Pharmacotherapy options:

1st line: Postmenopausal women and men

	Currently On	Initiated	Changed To:
Alendronate (Fosamax)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alendronate + 5600IU Vit D (Fosavance)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Risedronate (Actonel)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Risedronate DR(Actonel DR)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Denosumab (Prolia)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Zoledronic Acid (Aclasta)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PTH (Forteo)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Information for Patients:
[Atypical Fractures and Bisphosphonates](#)
[Atypical Fractures and Denosumab](#)
[Osteonecrosis of the Jaw](#)