



## Michigan Quality Improvement Consortium Guideline

### *Management and Prevention of Osteoporosis*

The following guideline recommends assessment and management of patients with osteopenia and osteoporosis.

Eligible Population	Key Components	Recommendation and Level of Evidence	Frequency
Patients at potential risk for osteoporosis	Assessment	<ul style="list-style-type: none"> <li>■ Assess for loss of height (&gt; 1.5 inches) and back pain.</li> <li>■ Assess other risk factors:               <ul style="list-style-type: none"> <li>◆ Current cigarette smoking</li> <li>◆ Low body weight (&lt;127 lbs or BMI <math>\leq</math> 20)</li> <li>◆ Female gender</li> <li>◆ Menopause</li> <li>◆ Endocrine disorders:                   <ul style="list-style-type: none"> <li>◆ Premature or surgical menopause</li> <li>◆ Chronic corticosteroid therapy</li> <li>◆ Estrogen or testosterone deficiency</li> <li>◆ Excessive thyroid hormone replacement</li> </ul> </li> <li>◆ Calcium or vitamin D deficiency</li> <li>◆ Depo-Provera use</li> </ul> </li> <li>◆ Family history of osteoporosis</li> <li>◆ Caucasian or Asian race</li> <li>◆ Advanced Age (&gt; age 65)</li> <li>◆ History of atraumatic fracture</li> <li>◆ Organ transplant or pending organ transplant</li> <li>◆ Drugs to treat malignancy</li> <li>◆ Inadequate physical activity</li> <li>◆ Excessive alcohol intake (more than two drinks per day)</li> </ul>	◆ Adult height assessments at periodic well exams
	Core Principles of Treatment and Prevention	<p><b>Regardless of risk factors:</b></p> <ul style="list-style-type: none"> <li>◆ Dietary calcium 1200 mg/d and 800 - 1000 IU vitamin D<sub>3</sub> [B]</li> <li>◆ Weight-bearing exercise [A]</li> <li>◆ Address modifiable risk factors above</li> </ul>	<ul style="list-style-type: none"> <li>◆ BMD testing more often than every two years is generally not useful.</li> <li>◆ Consider rechecking BMD after at least two years of pharmacologic treatment to monitor effectiveness. [D]</li> </ul>
Patients requiring therapy to reduce high risk of fracture	Patient Selection for Pharmacological Management Based on DEXA	<ul style="list-style-type: none"> <li>◆ Treatment to prevent fractures in osteopenia [T-score between -1 and -2.0] without risk factors is not useful. [D]</li> <li>◆ Treat patients on corticosteroid therapy with a T-score <math>\leq</math> -1.0. [A]</li> <li>◆ Treat patients with osteopenia and a T-score between -2.0 and -2.5 at increased risk. [D]</li> <li>◆ Patients with osteoporosis [T-score &lt; -2.5] (Osteopenia associated with atraumatic fracture should be treated as osteoporosis [D]).</li> </ul>	
	Pharmacological Management	<ul style="list-style-type: none"> <li>◆ Consider oral biphosphonate, generic if available<sup>1</sup>.</li> <li>◆ Consider referral to endocrine or bone and mineral metabolism specialist if patient does not tolerate treatment or shows progression or recurrent fracture after 2 years on treatment.</li> </ul>	

<sup>1</sup> Use caution in patients with active upper GI disorders. Take medication on an empty stomach with water, remain upright, no food or beverage for 30 minutes, (60 minutes for Ibandronate).

**Levels of Evidence for the most significant recommendations:** A = randomized controlled trials; B = controlled trials, no randomization; C = observational studies; D = opinion of expert panel

This guideline represents core management steps. It is based on The Guide to Clinical Preventive Services 2007, Recommendations of the U.S. Preventive Services Task Force ([www.preventiveservices.ahrq.gov](http://www.preventiveservices.ahrq.gov)) and the Diagnosis and Treatment of Osteoporosis Guideline, Institute for Clinical Systems Improvement, 2008 ([www.icsi.org](http://www.icsi.org)). Individual patient considerations and advances in medical science may supersede or modify these recommendations.