IEHP UM Subcommittee Approved Authorization Guidelines

**DEXA Scan**

**Policy:**

IEHP considers bone mineral density testing using DEXA medically necessary for members who meet any of the following criteria:

- Women aged ≥ 65 years
- Men aged ≥ 70 years
- Individuals being monitored to assess the response to osteoporosis drug therapy
- Vertebral compression fractures
- Osteopenia apparent on x-ray film
- Fragility fractures after age 40
- Family history of osteoporotic fractures in a first-degree relative
- Prolonged immobilization
- Senile fracture of the proximal femur
- Idiopathic fracture

*Or for individuals who are known or suspected to have a condition that may underlie osteoporosis, including the following:*

**Endocrine disease or metabolic cause:**

- Primary hyperparathyroidism
- Primary and secondary hypogonadism
- Hyperadrenocorticism
- Thyrotoxicosis
- Hypophosphatasia
- Cushing’s syndrome
- Hyperprolactinemia
- Untreated early menopause (before age 45)
- Porphyria
- Hemochromatosis

**Nutritional conditions:**

- Malabsorption syndromes
- Severe chronic liver disease (especially primary biliary cirrhosis)
Prolonged parenteral nutrition

Drugs:
- Chronic anticonvulsant therapy of 3 years or more with phenobarbital or phenytoin
- Systematic glucocorticoid therapy equivalent to 5mg of prednisone or greater, per day, for greater than 3 months
- Chemotherapeutic agents which affect bone density
- Lupron therapy in men

Disorders of collagen metabolism:
- Osteogenesis imperfect
- Homocystenuria due to cystathione deficiency
- Ehler’s-Danlos syndrome
- Marfan syndrome
- Menke’s syndrome

Hematologic disorders:
- Hemophilia
- Leukemia and lymphomas
- Multiple myeloma
- Sickle cell disease
- Systemic mastocytosis

Other:
- Chronic renal failure
- Organ transplantation
- Hypercalciuria

IEHP considers bone mineral density testing using DEXA medically necessary for postmenopausal women less than 65 yrs of age and men aged 50-69 who meet two or more of the following risk factors:
- Prolonged low dietary calcium intake
- Excessive alcohol intake (>2 drinks per day)
- Current smoking
- Propensity to fall
- Weight < 57 kg
- Malnutrition
- Vitamin D deficiency
- Rheumatoid arthritis
- Ankylosing spondylitis
- Lupus
- Chronic heparin therapy
- HIV or AIDS
Repeat central bone mineral density testing by DEXA:

- For Members not on therapy related to osteoporosis:
  - For those not at high risk for accelerated bone loss or without significant osteopenia, repeat testing is considered medically necessary every 3-5 years
  - For those with significant osteopenia or at high risk for accelerated bone loss, repeat measurement is considered medically necessary every 2-3 years
- For Members on therapy related to osteoporosis
  - In order to monitor response to therapy, it is considered medically necessary when performed at intervals of 2 years or greater

Centers for Medicare and Medicaid Services (2010):
Medicare will approve bone mineral density measurement every 2 years for the following:

1. A woman who has been determined by the physician or qualified nonphysician practitioner treating her to be estrogen-deficient and at clinical risk for osteoporosis, based on her medical history and other findings.
2. An individual with vertebral abnormalities as demonstrated by an x-ray to be indicative of osteoporosis, osteopenia, or vertebral fracture.
3. An individual receiving (or expecting to receive) glucocorticoid (steroid) therapy equivalent to an average of 5.0 mg of prednisone, or greater, per day, for more than 3 months.
4. An individual with primary hyperparathyroidism.
5. An individual being monitored to assess the response to or efficacy of an FDA-approved osteoporosis drug therapy.

Note: Medicare may pay for more frequent bone mineral density measurements when medically necessary.

Medi-Cal:
DEXA studies are not reimbursable when ordered solely for bone density screening but will be covered in the following medical conditions:

- Significant risk of developing osteoporosis, including:
  1. Primary osteoporosis: Postmenopausal (Type I) vertebral crush fracture syndrome, senile (Type II) fracture of the proximal femur, idiopathic (juvenile and adult)
  2. Endocrine osteoporosis: Hyperparathyroidism, Cushing's syndrome or glucocorticoid administration, hyperthyroidism, hypogonadism
  3. Nutritional osteoporosis: Vitamin C deficiency; malabsorption: calcium deficiency, protein-calorie malnutrition
  4. Hematopoietic osteoporosis: Multiple myeloma, systemic mastocytosis
5. **Immobilization**

6. **Genetic disorders**: Osteogenesis Imperfecta, homocystinuria, Ehlers-Danlos syndrome, Marfan's syndrome, Menke's syndrome

7. **Miscellaneous**: Rheumatoid arthritis, alcoholism, liver disease, diabetes mellitus, prolonged heparin therapy, chronic obstructive pulmonary disease

- A fracture clinically suspected to be a result of undiagnosed osteoporosis
- Established osteoporosis that may require pharmacologic treatment of osteoporosis
- Receiving a medication approved by the FDA for the treatment of osteoporosis

In addition, bone mineral density studies are recommended to confirm the presence of osteoporosis before beginning medical treatment and may help management of those being treated for osteoporosis.

**American College of Preventive Medicine (2009):**

Screening with bone mineral density testing for osteoporosis is recommended in women aged ≥ 65 years and in men aged ≥ 70 years. Younger postmenopausal women and men aged 50-69 years should undergo screening if they have at least one major or two minor risk factors for osteoporosis.

Major risk factors include vertebral compression fracture, fragility fracture after age 40, family history of osteoporotic fracture, systemic glucocorticoid therapy lasting >3 months, malabsorption syndrome, primary hyperparathyroidism, propensity to fall, osteopenia apparent on x-ray film, hypogonadism, and early menopause (before age 45). Minor risk factors include rheumatoid arthritis, past history of hyperthyroidism, chronic anticonvulsant therapy, low dietary calcium intake, smoking, excessive alcohol intake, excessive caffeine intake, weight <57 kg, weight loss >10% of weight at age 25, and chronic heparin therapy.

**American College of Obstetricians and Gynecologists (2004):**

- Bone mineral density testing should be recommended to all postmenopausal women aged 65 years or older
- Bone mineral density testing may be recommended to postmenopausal women younger than 65 years who have 1 or more risk factors for osteoporosis:
  - History of prior fracture, Family history of osteoporosis, Caucasian race, dementia, poor nutrition, smoking, low weight and body mass index, estrogen deficiency, long-term low calcium intake, alcoholism, impaired eyesight despite adequate correction, history of falls, inadequate physical activity.
  - Bone mineral density testing should be performed on all postmenopausal women with fractures to confirm the diagnosis of osteoporosis and determine disease severity

**American Association of Clinical Endocrinologists (2003):**

BMD measurements should be performed in the following settings:
For risk assessment in perimenopausal or postmenopausal women who have risk factors for fractures (including but not limited to body weight <127 pounds) and are willing to consider available interventions

- In women who have x-ray findings that suggest osteoporosis
- In women beginning or receiving long-term glucocorticoid therapy or other drugs associated with bone loss
- In all adult women with symptomatic hyperparathyroidism or other diseases or nutritional conditions associated with bone loss in whom evidence of bone loss would result in adjustment of management
- For establishing skeletal stability and monitoring therapeutic response in women receiving treatment for
- Osteoporosis (baseline measurements should be made before intervention)
- In all women 40 years old or older who have sustained a fracture
- In all women beyond 65 years of age

**National Osteoporosis Foundation (2008):**

- Women age 65 and older and men age 70 and older, regardless of clinical risk factors
- Younger postmenopausal women and men age 50 to 69 about whom you have concern based on their clinical risk factor profile
- Women in the menopausal transition if there is a specific risk factor associated with increased fracture risk such as low body weight, prior low-trauma fracture or high risk medication
- Adults who have a fracture after age 50
- Adults with a condition (e.g., rheumatoid arthritis) or taking a medication (e.g., glucocorticoids in a daily dose ≥ 5 mg prednisone or equivalent for ≥ three months) associated with low bone mass or bone loss
- Anyone being considered for pharmacologic therapy for osteoporosis
- Anyone being treated for osteoporosis, to monitor treatment effect
- Anyone not receiving therapy in whom evidence of bone loss would lead to treatment
- Postmenopausal women discontinuing estrogen should be considered for bone density testing

**Aetna (2009):**

Aetna considers bone mass measurement using the established techniques listed below medically necessary for members who meet any of the following criteria:

- Screening of women who have been determined to be estrogen-deficient (peri- or postmenopausal) (Note: covered for members with preventive services benefits only); or
- Individuals with vertebral abnormalities as demonstrated by an x-ray to be indicative of osteoporosis, osteopenia, or vertebral fracture; or
- Individuals receiving (or expected to receive) glucocorticoid (steroid) therapy equivalent to 5 mg of prednisone or greater, per day, for more than 3 months; or
- Individuals with primary hyperparathyroidism; or
• Individuals being monitored to assess the response to or efficacy of osteoporosis drug therapy (only dual-energy x-ray absorptiometry is considered medically necessary for this indication); or
• Non-traumatic (fragility) fractures; or
• Women with hyperthyroidism; or
• Women on long-term anti-convulsant therapy (e.g., phenytoin, and phenobarbital); or
• Individuals with celiac sprue; or
• Men with hypogonadism or receiving androgen deprivation treatment (e.g., leuprolide, and goserelin); or
• Screening of men greater than 70 years of age (Note: covered for members with preventive services benefits only); or
• Men greater than 50 years of age with specific risk factors for osteoporosis (i.e., low body weight, weight loss, or physical inactivity) (Note: covered for members with preventive services benefits only).

**Anthem (2009):**

• An initial examination in menopausal or post-menopausal women to screen for osteoporosis. No additional criteria are required.
• Individuals (male or female) with clinical evidence of vertebral osteoporosis as indicated by any of the following:
  • Decrease in height of > 1.5 inches; or
  • Presence of kyphosis; or
  • X-ray identification of vertebral compression fractures, osteoporosis, or osteopenia (low bone mass)
• Individuals who are known or suspected to have a condition that may underlie the osteoporosis

**United States Preventive Services Task Force (2002):**

• The U.S. Preventive Services Task Force (USPSTF) recommends that women aged 65 and older be screened routinely for osteoporosis. The USPSTF recommends that routine screening begin at age 60 for women at increased risk for osteoporotic fractures
• The USPSTF makes no recommendation for or against routine osteoporosis screening in postmenopausal women who are younger than 60 or in women aged 60-64 who are not at increased risk for osteoporotic fractures.

**Background:**

Currently, (dual energy X-ray absorptiometry) DEXA is the most widely accepted and used method of screening for osteoporosis. This bone mineral testing should be performed based on a patient’s risk factors and is not indicated unless the results will impact the treatment or management of the patient. DEXA measures bone mineral density and predict the risk of fracture. BMD between 1 and 2.5 standard deviations below the young adult mean (T score) is defined as osteopenia and BMD 2.5 standard deviation or more below the young adult mean is defined as osteoporosis. Both osteopenia and osteoporosis increase the risk of fracture.
Specifically, hip fracture has been noted as a source of significant (accounting for 15-20% of) morbidity and mortality and thoracic fracture closely follows with significant morbidity. More than 1 standard deviation decrease in bone mass poses a 2-fold increase risk of fracture. Since osteoporosis is a preventable disease, screening methods including use of DEXA scan and other pharmacological interventions can reduce the number of complications related to or resulting from it.

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Bibliography:

8. 1558-1560.
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