Bone Mass Measurements

Overview

Osteoporosis, or “porous bone,” is a disease of the skeletal system characterized by low bone mass and deterioration of bone tissue. Osteoporosis produces an enlargement of the pore spaces in the bone, causing increased fragility and an increased risk for fracture, typically in the wrist, hip, and spine. An estimated 10 million Americans have osteoporosis and over 34 million Americans have low bone mass, placing them at increased risk for osteoporosis. One out of every 2 women and one in 4 men over the age of 50 will have an osteoporosis-related fracture in their lifetime. Osteoporosis is responsible for more than 1.5 million fractures annually—a n event that often leads to a decline in physical health and quality of life, including losing the ability to walk, stand up, or dress, and can lead to premature death.

According to the U.S. Surgeon General’s 2004 report, Bone Health and Osteoporosis: A Report of the Surgeon General, due to the aging of the population and the previous lack of focus on bone health, the number of hip fractures in the U.S. could double or triple by the year 2020. The good news is osteoporosis is a disease that can be prevented and treated. Early diagnosis and treatment can reduce or prevent fractures from occurring. Medicare’s bone mass measurement benefit can aid in the early detection of osteoporosis before fractures occur, provide a precursor to future fractures, and determine rate of bone loss.

Bone Mass Measurement Defined

The term “bone mass measurement,” also known as “bone density study,” is defined as a radiological or radioisotope procedure or other procedure approved by the Food and Drug Administration (FDA) performed on a qualified individual for the purpose of identifying bone mass, detecting bone loss, or determining bone quality. Bone mass measurements are used to evaluate diseases of the bone and/or the responses of the bone disease to treatment; they include a physician’s interpretation. The studies assess bone mass or density associated with such diseases as osteoporosis and other bone abnormalities.

Methods of Bone Mass Measurements

Bone density is usually studied by using one of various types of diagnostic bone mass measurement techniques that have been recognized by the FDA. Bone density can be measured at the wrist, spine, hip, or calcaneus (heel). Various single and combined methods of measurement may be required to diagnose bone disease, monitor the course of bone changes with disease progression, or monitor the course of bone changes with therapy.

Medicare provides coverage for the following types of densitometers:

- A stationary device that is permanently located in an office
- A mobile device that is transported by vehicle from site to site
- A portable device that can be picked up and moved from one site to another

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To ensure accurate measurement and consistent test results, bone density studies should generally be performed for periodic follow-up tests on the same suitably precise instrument and results should be obtained from the same scanner when comparing a patient to a control population.

**Risk Factors**

While anyone can develop osteoporosis, some factors that may put individuals at increased risk for developing the disease include:

- Age 50 or older,
- Female gender,
- Family history of broken bones,
- Personal history of broken bones,
- Caucasian or Asian ethnicity,
- Small-bone structure,
- Low body weight (less than 127 pounds),
- Frequent smoking or drinking, and
- Low-calcium diet.

**IMPORTANT NOTE:** Although the factors listed above may put individuals at increased risk for developing osteoporosis, Medicare does not provide coverage of bone mass measurement for all beneficiaries in these high risk groups. Medicare provides coverage for bone mass measurements performed on qualified beneficiaries when all of the benefit coverage criteria described below are met.

**Coverage Information**

The Balanced Budget Act of 1997 (BBA) standardized Medicare coverage of medically necessary bone mass measurements by providing for coverage under Medicare Part B. This coverage took effect on July 1, 1998. Medicare’s bone mass measurement benefit includes a physician’s interpretation of the results of the procedure.

Medicare pays for bone mass measurements that meet all of the following criteria:

1. Is performed on a qualified individual. A “qualified individual” means a Medicare beneficiary who meets the medical indications for at least one of the five categories listed below:
   - A woman who has been determined by the physician or qualified non-physician practitioner treating her to be estrogen-deficient and at clinical risk for osteoporosis, based on her medical history and other findings;
   - An individual with vertebral abnormalities, as demonstrated by an X-ray to be indicative of osteoporosis, osteopenia (low bone mass), or vertebral fracture;
   - 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 three months;
   - An individual with known primary hyperparathyroidism; or
   - An individual being monitored to assess the response to, or efficacy of, an FDA-approved osteoporosis drug therapy.
In addition, all of the coverage criteria listed below must be met:

2. The individual’s physician or qualified non-physician practitioner treating the beneficiary must provide an order, following an evaluation of the need for a bone mass measurement that includes a determination as to the medically appropriate measurement to be used for the individual.

**NOTE:** A physician or qualified non-physician practitioner treating the beneficiary for the purpose of the bone mass measurement benefit is one who provides a consultation or treats a beneficiary for a specific medical problem, and who uses the results in the management of the patient. For the purposes of the bone mass measurement benefit, qualified non-physician practitioners include physician assistants, nurse practitioners, clinical nurse specialists, and certified nurse midwives.

3. The service must be a radiologic or radioisotopic procedure (or other procedure) that meets the following requirements:
   - Is performed with a bone densitometer (other than dual photon absorptiometry) or a bone sonometer (i.e., ultrasound) device approved or cleared for marketing by the FDA;
   - Is performed for the purpose of identifying bone mass, detecting bone loss, or determining bone quality; and
   - Includes a physician's interpretation of the results of the procedure.

4. The service must be furnished by a qualified supplier or provider of such services under the appropriate level of supervision by a physician.

5. The service must be reasonable and necessary for diagnosing, treating, or monitoring an individual as defined above.

6. The service must be performed at a frequency that conforms to the requirements described below.

Medicare provides coverage of a bone mass measurement that meets the criteria as described above once every 2 years (i.e., at least 23 months have passed following the month in which the last Medicare-covered bone mass measurement was performed).

**NOTE:** If medically necessary, Medicare may provide coverage for a beneficiary more frequently than every two years. (See the text box on this page for examples of situations where Medicare may provide more frequent coverage of bone mass measurements.)

Examples of situations where more frequent bone mass measurements may be medically necessary include, but are not limited to, the following medical conditions:
- Monitoring patients on long-term glucocorticoid (steroid) therapy for more than three months.
- Allowing for a confirmatory baseline bone density study to permit monitoring in the future if certain specified requirements are met.

Medicare provides coverage of bone mass measurements as a Medicare Part B benefit. The coinsurance or copayment applies after the yearly Medicare Part B deductible has been met.
Documentation

Medical record documentation maintained by the treating physician must clearly indicate the medical necessity for ordering bone mass measurements. The documentation may be included in any of the following:

- Patient history and physical,
- Office notes,
- Test results with written interpretation, or
- X-ray/radiology with written interpretation.

NOTE: Since not every woman who has been prescribed estrogen replacement therapy (ERT) may be receiving an “adequate” dose of the therapy, the fact that a woman is receiving ERT should not preclude her treating physician or other qualified treating non-physician practitioner from ordering a bone mass measurement for her. If, however, a bone mass measurement is ordered for a woman following a careful evaluation of her medical need, it is expected that the ordering treating physician (or other qualified treating non-physician practitioner) should document in the patient’s medical record why he or she believes that the patient is estrogen-deficient and at clinical risk for osteoporosis.

Coding and Diagnosis Information

Procedure Codes and Descriptors

Bone mass measurements are performed to establish the diagnosis of osteoporosis and to assess the individual’s risk for subsequent fracture. Bone densitometry includes the use of single energy X-ray absorptiometry (SEXA), dual energy X-ray absorptiometry (DEXA), quantitative computed tomography (QCT), and bone ultrasound densitometry (BUD).

Medicare providers must use the following Healthcare Common Procedure Coding System (HCPCS)/Current Procedural Terminology (CPT) codes listed in Table 1 to report bone mass measurements covered by Medicare:

Table 1 – HCPCS/CPT Codes for Bone Mass Measurements

<table>
<thead>
<tr>
<th>HCPCS/CPT Code</th>
<th>Code Descriptor</th>
</tr>
</thead>
<tbody>
<tr>
<td>G0130</td>
<td>Single energy x-ray absorptiometry (SEXA) bone density study, 1 or more sites; appendicular skeleton (peripheral) (e.g., radius, wrist, heel)</td>
</tr>
<tr>
<td>77078</td>
<td>Computed tomography, bone mineral density study, 1 or more sites; axial skeleton (e.g., hips, pelvis, spine)</td>
</tr>
<tr>
<td>77079</td>
<td>Computed tomography, bone mineral density study, 1 or more sites; appendicular skeleton (peripheral) (e.g., radius, wrist, heel)</td>
</tr>
<tr>
<td>77080</td>
<td>Dual-energy x-ray absorptiometry (DXA), bone density study, 1 or more sites; axial skeleton (e.g., hips, pelvis, spine)</td>
</tr>
<tr>
<td>HCPSC/CPT Code</td>
<td>Code Descriptor</td>
</tr>
<tr>
<td>---------------</td>
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</tr>
<tr>
<td>77081</td>
<td>Dual-energy x-ray absorptiometry (DXA), bone density study, 1 or more sites; appendicular skeleton (peripheral) (e.g., radius, wrist, heel)</td>
</tr>
<tr>
<td>77083</td>
<td>Radiographic absorptiometry (e.g., photodensitometry, radiogrammetry), 1 or more sites</td>
</tr>
<tr>
<td>76977</td>
<td>Ultrasound bone density measurement and interpretation, peripheral site(s), any method</td>
</tr>
</tbody>
</table>

**NOTE:** The following bone mass measurements are noncovered under Medicare because they are not considered reasonable and necessary. [See Section 1862(a)(1)(A) of the Social Security Act]:
- 78350 – Single Photon Absorptiometry, effective January 1, 2007
- 78351 – Dual Photon Absorptiometry, established in 1983

**NOTE:** Monitoring and confirmatory baseline bone mass measurements must be performed with a dual-energy X-ray absorptiometry (axial) test as required by Section 1862(a)(1)(A) of the Act.

### Diagnosis Requirements

Certain bone mass measurement tests are covered when used to screen patients for osteoporosis subject to the frequency standards (see Medicare Benefit Policy Manual, Chapter 15, Section 80.5.5).

Medicare will pay claims for screening tests when coded as follows:
- Contain procedure codes 77078, 77079, 77080, 77081, 77083, 76977, or G0130, and
- Contain a valid ICD-9-CM diagnosis code obtained from the lists of diagnosis codes for the screening benefit’s categories that indicate the reason for the test is postmenopausal female, vertebral fracture, hyperparathyroidism, or steroid therapy.
- Medicare Contractors will maintain a local list of valid codes for the benefit’s screening categories.

Medicare will not pay for claims for screening tests when coded as follows:
- Contain procedure codes 77078, 77079, 77081, 77083, 76977, and G0130, but
- Does not contain a valid ICD-9-CM diagnosis code obtained from the local lists of valid ICD-9-CM diagnosis codes maintained by the contractor that indicate the reason for the test is postmenopausal female, vertebral fracture, hyperparathyroidism, or steroid therapy.

Medicare covers dual-energy X-ray absorptiometry (axial) tests when the tests are used to monitor FDA-approved osteoporosis drug therapy subject to the 2-year frequency standards (see Medicare Benefit Policy Manual, Chapter 15, Section 80.5.5).

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**Coding Tip**

When billing Medicare for bone mass measurements, a procedure code must be billed only once, regardless of the number of sites being tested or included in the study (e.g., if the spine and hip are performed as part of the same study, only one site can be billed).
Medicare will pay claims for monitoring tests when coded as follows:

- Contains procedure code 77080, and
- Contain 733.00, 733.01, 733.02, 733.03, 733.09, 733.90, or 255.0 as the ICD-9-CM diagnosis code.

Medicare will not pay for claims for monitoring tests when coded as follows:

- Contain procedure codes 77078, 77079, 77081, 77083, 76977, or G0130, and
- Contain ICD-9-CM diagnosis codes 733.00, 733.01, 733.02, 733.03, 733.90, or 255.0, but
- Does not contain a valid ICD-9-CM diagnosis code from the local lists of valid ICD-9-CM diagnosis codes maintained by the contractor for the benefit’s screening categories indicating the reason for the test is postmenopausal female, vertebral fracture, hyperparathyroidism, or steroid therapy.

**Billing Requirements**

**Billing and Coding Requirements When Submitting Claims to Carriers/AB Medicare Administrative Contractors (AB MACs)**

When physicians and qualified non-physician practitioners are submitting claims to carriers/AB MACs, they must report the appropriate HCPCS/CPT codes and the appropriate diagnosis code in the HIPAA 837 Professional electronic claim format.

**NOTE:** In those cases where a supplier qualifies for an exception to the ASCA requirement, Form CMS-1500 may be used to submit these claims on paper. Form CMS-1500 has been revised to accommodate the reporting of the National Provider Identifier (NPI). All Medicare providers must use Form CMS-1500 (08-05) when submitting paper claims. Additional information on Form CMS-1500 can be found at http://www.cms.hhs.gov/ElectronicBillingEDITrans/16_1500.asp on the CMS website.

**Billing and Coding Requirements When Submitting Claims to Fiscal Intermediaries/AB Medicare Administrative Contractors (FIs/AB MACs)**

When submitting claims to FIs/AB MACs, Medicare providers must report the appropriate HCPCS/CPT codes (Table 1), revenue code, and the corresponding diagnosis code in the HIPAA 837 Institutional electronic claim format.

**NOTE:** In those cases where an institution qualifies for an exception to the ASCA requirement, Form CMS-1450 may be used to submit these claims on paper. As of May 23, 2007, all Medicare providers must use Form CMS-1450 (UB-04) when submitting paper claims. Additional information on Form CMS-1450 can be found at http://www.cms.hhs.gov/ElectronicBillingEDITrans/15_1450.asp on the CMS website.

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Types of Bills for FIs/AB MACs

The FI/AB MAC will reimburse for bone mass measurement services when submitted on the following Types of Bills (TOBs) and associated revenue codes listed in Table 2:

Table 2 – Facility Types, Types of Bills, and Revenue Codes for Bone Mass Measurements

<table>
<thead>
<tr>
<th>Facility Type</th>
<th>Type of Bill</th>
<th>Revenue Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital Inpatient Part B, including CAH</td>
<td>12X</td>
<td>0320</td>
</tr>
<tr>
<td>Hospital Outpatient</td>
<td>13X</td>
<td>0320</td>
</tr>
<tr>
<td>Skilled Nursing Facility (SNF) Inpatient Part B</td>
<td>22X</td>
<td>0320</td>
</tr>
<tr>
<td>SNF Outpatient</td>
<td>23X</td>
<td>0320</td>
</tr>
<tr>
<td>Rural Health Clinic (RHC)</td>
<td>71X</td>
<td>052X</td>
</tr>
<tr>
<td>Federally Qualified Health Center (FQHC)</td>
<td>73X</td>
<td>052X</td>
</tr>
<tr>
<td>CAH*</td>
<td>85X</td>
<td>0320</td>
</tr>
</tbody>
</table>

*NOTE: Method I – All technical components are paid using standard institutional billing practices.

Method II – Receives payment for which Method I receives payment, plus payment for professional services in one of the following revenue codes: 096X, 097X, and 098X.

NOTE: Effective April 1, 2005, RHCs and FQHCs will no longer have to report additional line items when billing for preventive and screening services on TOBs 71X and 73X. Except for telehealth originating site facility fees reported using revenue code 0780, all charges for RHC/FQHC services must be reported on the revenue code line for the encounter, 052X, or 0900. RHCs and FQHCs will use revenue codes 0521, 0522, 0524, 0525, 0527, and 0528 in lieu of revenue code 0520.

Reimbursement Information

General Information

The Medicare Part B deductible and coinsurance or copayment apply, except for FQHC services. FQHC services are not subject to a deductible.

Reimbursement of Claims by Carriers/AB Medicare Administrative Contractors (AB MACs)

Medicare bases reimbursement for bone mass measurements on the Medicare Physician Fee Schedule (MPFS). Non-assigned claims are subject to the Medicare limiting charge.

Reimbursement of Claims by Fiscal Intermediaries/AB Medicare Administrative Contractors (FIs/AB MACs)

Medicare bases reimbursement for bone mass measurements on the current payment methodologies for radiology services, and according to the type of provider.
Reasons for Claim Denial

The following are examples of situations when Medicare may deny coverage of bone mass measurements:

- The appropriate physician or qualified non-physician practitioner did not order the tests (a physician or qualified non-physician practitioner is one who furnishes a consultation or treats a beneficiary for a specific medical problem and who uses the results in the management of the patient).
- The beneficiary does not meet the criteria of a qualified individual.

Medicare providers may find specific payment decision information on the remittance advice (RA). The RA will include Claim Adjustment Reason Codes (CARCs) and Remittance Advice Remark Codes (RARCs) that provide additional information on payment adjustments. The most current listing of these codes can be found at [http://www.wpc-edi.com/Codes](http://www.wpc-edi.com/Codes) on the Web. Additional information about claims can be obtained from the carrier/AB MAC or FI/AB MAC.

Written Advance Beneficiary Notice of Noncoverage (ABN) Requirements

Please refer to the Advance Beneficiary Notice of Noncoverage (ABN) Reference Section G of this publication.
Bone Mass Measurements

Resource Materials

Beneficiary Notices Initiative Website
http://www.cms.hhs.gov/BNI

Carrier/AB MAC and FI/AB MAC Contact Information
http://www.cms.hhs.gov/MLNProducts/Downloads/CallCenterTollNumDirectory.zip

Electronic Claim Submission Information

Form CMS-1450 Information

Form CMS-1500 Information
http://www.cms.hhs.gov/ElectronicBillingEDITrans/16_1500.asp

Medicare Benefit Policy Manual – Pub. 100-02, Chapter 15, Section 80.5

Medicare Claims Processing Manual – Pub. 100-04, Chapter 13, Section 140

Medicare Fee-For-Service Providers Website
This site contains detailed provider-specific information.
http://www.cms.hhs.gov/center/provider.asp

Medicare Learning Network (MLN)
The Medicare Learning Network (MLN) is the brand name for official CMS educational products and
information for Medicare fee-for-service providers. For additional information visit the Medicare Learning

Medicare Physician Fee Schedule Information
http://www.cms.hhs.gov/PhysicianFeeSched

Medicare Preventive Services General Information
http://www.cms.hhs.gov/PrevntionGenInfo

MLN Matters Article MM 5521, Bone Mass Measurements (BMMs)

MLN Preventive Services Educational Resource Website

NIH Osteoporosis and Related Bone Diseases ~ National Resource Center
This is a website provided by the National Institutes of Arthritis and Musculoskeletal and Skin Diseases.
http://www.niams.nih.gov/Health_Info/Bone/default.asp

Beneficiary-related resources can be found in Reference F of this Guide.
Physician Information Resource for Medicare Website
This site contains physician-specific information, including updates to policies (such as MPFS), regulations, coding and coverage information, program integrity information, and other valuable resources.
http://www.cms.hhs.gov/center/physician.asp

Remittance Advice Information

U.S. Preventive Services Task Force (USPSTF) Guide to Clinical Preventive Services
This website provides the USPSTF written recommendations on screening for osteoporosis.
http://www.ahrq.gov/clinic/cps3dix.htm

Washington Publishing Company (WPC) Code Lists
WPC assists in the maintenance and distribution of HIPAA-related code lists that are external to the X12 family of standards.
http://www.wpc-edi.com/Codes

Beneficiary-related resources can be found in Reference F of this Guide.