



Measure Information

This document contains the information submitted by measure developers/stewards, but is organized according to NQF's measure evaluation criteria and process. The item numbers refer to those in the submission form but may be in a slightly different order here. In general, the item numbers also reference the related criteria (e.g., item 1b.1 relates to sub criterion 1b).

Brief Measure Information

NQF #: 0053

Corresponding Measures:

De.2. Measure Title: Osteoporosis Management in Women Who Had a Fracture

Co.1.1. Measure Steward: National Committee for Quality Assurance

De.3. Brief Description of Measure: The percentage of women age 50-85 who suffered a fracture and who either had a bone mineral density test or received a prescription for a drug to treat osteoporosis.

1b.1. Developer Rationale: The intent of this measure is secondary prevention of fractures through the appropriate diagnosis and treatment of osteoporosis. Detecting osteoporosis and initiating treatment will help to prevent future fractures from occurring. Future fractures, especially in the older population, can cause significant health issues, decline in function, and, in some cases lead to mortality.

S.4. Numerator Statement: Patients who received either a bone mineral density test or a prescription for a drug to treat osteoporosis after a fracture occurs.

S.6. Denominator Statement: Women who experienced a fracture, except fractures of the finger, toe, face or skull. Three denominator age strata are reported for this measure:

Women age 50-64

Women age 65-85

Women age 50-85

S.8. Denominator Exclusions: - Exclude women who had a bone mineral density test during the 24 months prior to the index fracture.

- Exclude women who had a claim/encounter for osteoporosis treatment during 12 months prior to the index fracture.

- Exclude women who received a dispensed prescription or had an active prescription to treat osteoporosis during the 12 months prior to the index fracture.

- Exclude women who are enrolled in a Medicare Institutional Special Needs Plan (I-SNP) or living long-term in an institution any time during the measurement year.

- Exclude women receiving hospice care during the measurement year.

De.1. Measure Type: Process

S.17. Data Source: Claims, Electronic Health Data, Electronic Health Records, Paper Medical Records

S.20. Level of Analysis: Clinician : Group/Practice, Clinician : Individual, Health Plan, Integrated Delivery System

IF Endorsement Maintenance – Original Endorsement Date: Aug 10, 2009 **Most Recent Endorsement Date:** Oct 25, 2018

IF this measure is included in a composite, NQF Composite#/title:

IF this measure is paired/grouped, NQF#/title:

De.4. IF PAIRED/GROUPED, what is the reason this measure must be reported with other measures to appropriately interpret results? N/A

1. Evidence, Performance Gap, Priority – Importance to Measure and Report

Extent to which the specific measure focus is evidence-based, important to making significant gains in healthcare quality, and

improving health outcomes for a specific high-priority (high-impact) aspect of healthcare where there is variation in or overall less-than-optimal performance. **Measures must be judged to meet all sub criteria to pass this criterion and be evaluated against the remaining criteria.**

1a. Evidence to Support the Measure Focus – See attached Evidence Submission Form

[0053_OMW_Evidence_FINAL.docx](#)

1a.1 For Maintenance of Endorsement: Is there new evidence about the measure since the last update/submission?

Do not remove any existing information. If there have been any changes to evidence, the Committee will consider the new evidence. Please use the most current version of the evidence attachment (v7.1). Please use red font to indicate updated evidence.

Yes

1b. Performance Gap

Demonstration of quality problems and opportunity for improvement, i.e., data demonstrating:

- considerable variation, or overall less-than-optimal performance, in the quality of care across providers; and/or
- Disparities in care across population groups.

1b.1. Briefly explain the rationale for this measure (e.g., how the measure will improve the quality of care, the benefits or improvements in quality envisioned by use of this measure)

If a COMPOSITE (e.g., combination of component measure scores, all-or-none, any-or-none), SKIP this question and answer the composite questions.

The intent of this measure is secondary prevention of fractures through the appropriate diagnosis and treatment of osteoporosis. Detecting osteoporosis and initiating treatment will help to prevent future fractures from occurring. Future fractures, especially in the older population, can cause significant health issues, decline in function, and, in some cases lead to mortality.

1b.2. Provide performance scores on the measure as specified (current and over time) at the specified level of analysis. *(This is required for maintenance of endorsement. Include mean, std dev, min, max, interquartile range, scores by decile. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities include.) This information also will be used to address the sub-criterion on improvement (4b1) under Usability and Use.*

HEALTH PLAN LEVEL:

Performance Rates: The following data are extracted from HEDIS data collection for Medicare Advantage Health Plans and reflect the most recent years of measurement for this measure. Performance data are summarized at the health plan level and described by mean, standard deviation, and performance at the 10th, 25th, 50th, 75th and 90th percentile. Data is stratified by year.

YEAR	MEAN	ST DEV	10TH	25TH	50TH	75TH	90TH
2014	35.9%	17.3%	15.8%	22.6%	33.7%	45.9%	58.0%
2015	38.7%	17.9%	17.6%	24.1%	36.4%	49.0%	75.51%
2016	40.0%	19.0%	17.4%	24.6%	38.6%	51.7%	76.4%

The data references are extracted from HEDIS data collection reflecting the most recent years of measurement for this measure. In 2016, HEDIS measures covered 114.2 million commercial health plan beneficiaries and 17.6 million Medicare beneficiaries. Below is a description of the denominator for this measure. It includes the number of health plans reporting the HEDIS measure and the mean eligible population for the measure across these health plans.

Year	N Plans	Avg Eligible Population per Plan	SD
2014	302	570.9	469.1
2015	279	824.5	384.4
2016	277	817.0	402.3

PHYSICIAN LEVEL:

The following data are extracted from Physician Quality Reporting System (PQRS) and reflect claims data for services provided from January 1, 2009 through December 31, 2011 . PQRS refers to the pay-for-reporting incentive program that allowed providers to choose which quality measures to report on. As of 2017, PQRS has been renamed as QPP, the Quality Payment Program. In 2012, of 204,369 eligible providers, only 0.8% chose to report on this measure. Therefore, the performance rates below are reflective of less than one percent of Medicare providers. At the time of data collection this measure applied to women age 50 and older. In 2014 the measure was revised to reflect the added upper age limit. For the next year of quality measurement reporting, the physician level performance will be reported for the 50-85 age strata. This strata was selected for reporting because it is the broadest age

range.

Performance data is summarized at the physician level and described by mean, 10th, 25th, 50th, 75th and 90th percentile.

Performance Rate for all Reporting Providers for 2012

Mean | 10th | 25th | 50th | 75th | 90th

70.0% | 0.00% | 25.0% | 100% | 100% | 100%

The following data (also extracted from PQRS) show the average performance rates for several years prior to 2012.

Average performance rates from 2009-2011

2009 | 56.5%

2010 | 46.8%

2011 | 70.6%

1b.3. If no or limited performance data on the measure as specified is reported in 1b2, then provide a summary of data from the literature that indicates opportunity for improvement or overall less than optimal performance on the specific focus of measurement.

N/A

1b.4. Provide disparities data from the measure as specified (current and over time) by population group, e.g., by race/ethnicity, gender, age, insurance status, socioeconomic status, and/or disability. (*This is required for maintenance of endorsement. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included.*) For measures that show high levels of performance, i.e., “topped out”, disparities data may demonstrate an opportunity for improvement/gap in care for certain sub-populations. This information also will be used to address the sub-criterion on improvement (4b1) under Usability and Use.

Health Plan Reporting:

NCQA does not currently collect performance data stratified by race, ethnicity, or language. Escarce et al. have described in detail the difficulty of collecting valid data on race, ethnicity and language at the health plan level (Escarce, 2011). While not specified in the measure, this measure can also be stratified by demographic variables, such as race/ethnicity, in order to assess the presence of health care disparities. The HEDIS Health Plan Measure Set contains two measures that can assist with stratification to assess health care disparities. The Race/Ethnicity Diversity of Membership and the Language Diversity of Membership were designed to promote standardized methods for collecting these data. These measures follow Office of Management and Budget and Institute of Medicine guidelines for collecting and categorizing race/ethnicity and language data. In addition, NCQA's Multicultural Health Care Distinction Program outlines standards for collecting, storing and using race/ethnicity and language data to assess health care disparities. Based on extensive work by NCQA to understand how to promote culturally and linguistically appropriate services among plans and providers, we have many examples of how health plans have used HEDIS measures to design quality improvement programs to decrease disparities in care.

Escarce JJ, Carreón R, Veselovskiy G, Lawson EH. Collection of race and ethnicity data by health plans has grown substantially, but opportunities remain to expand efforts. Health Aff (Millwood). 2011;30(10):1984-1991. - See more at: <http://www.ajmc.com/publications/issue/2012/2012-7-vol18-n7/exploring-health-plan-perspectives-in-collecting-and-using-data-on-race-ethnicity-and-language/4#sthash.23sL3luc.dpuf>

Physician Level Reporting:

CMS does not currently report performance data stratified by different variables in the PQRS/QPP program, where the measure is in use.

1b.5. If no or limited data on disparities from the measure as specified is reported in 1b.4, then provide a summary of data from the literature that addresses disparities in care on the specific focus of measurement. Include citations. Not necessary if performance data provided in 1b.4

People of all ethnic backgrounds are at risk of osteoporosis; however, non-Hispanic Caucasian and Asian women 50 and older have a higher prevalence of osteoporosis (20 percent), compared with Hispanic (10 percent) and non-Hispanic African American (5 percent) populations (NOF, 2013). Similarly, hip fracture rates are highest for non-Hispanic Caucasian women (140.7 per 100,000) and Asian women (85.4 per 100,000), but still prevalent in African American women (57.3 per 100,000) and Hispanic women (49.7 per

100,000) (Silverman, 1988).

Research suggests that African American women receive less dual-energy x-ray absorptiometry screenings and treatment for osteoporosis. One study found that 30% (21% received test) of African American women were referred to dual-energy x-ray absorptiometry tests compared to 38% (27% received test) of Caucasian women. In addition, for those women who had a confirmed diagnosis of osteoporosis, 78% of African American women were likely to receive a medication compared to 89% of Caucasians (Hamrick, 2012). An earlier study with a smaller sample size found that of those diagnosed with osteoporosis, 62% of African Americans were started on a treatment compared to 83% of Caucasian women (Hamrick, 2006).

In a cohort study of patients identified by the Indiana Health Information Exchange, African American women had the lowest treatment rates for osteoporosis when compared with women of other races. The cohort was comprised of 36,965 patients (10.7% African Americans, 81.3% non-African American, 8.1% unreported) between 2005 and 2011 with at least one osteoporotic event (Liu, 2016). Of the 3,943 African-American women enrolled in the study, 17.6% began treatment within 2 years of the index event compared with 23.7% for non-African American women (p value <.0001) (Liu, 2016). Overall, 23.3% of all patients identified in this cohort received treatment within the 2 years following the index event (Liu, 2016).

These studies highlight an opportunity to improve screening and timely treatment for all individuals with osteoporotic events, but particularly for African American women.

Hamrick I, Cao Q, Agbafé-Mosley D, Cummings DM. Osteoporosis healthcare disparities in postmenopausal women. J Womens Health (Larchmt). 2012 Dec; 21 (12):1232-6. Doi: 10.1089/jwh.2012.3812. Epub 2012 Nov 9.

Hamrick, I, Whetsone LM, Cummings DM. Racial disparity in treatment of osteoporosis after diagnosis. Osteoporos Int. 2006;17 (11): 1653-8. Epub 2006 Jul 27.

Liu Z, Weaver J, De Papp A, Li Z, Martin J, Allen K, Hui S, Imel EA. Disparities in osteoporosis treatments. Osteoporosis International. 2016 Feb 1;27(2):509-19.

National Osteoporosis Foundation (NOF). What is Osteoporosis? <http://nof.org/articles/7> (November 1, 2013)

Silverman, S.L., R.E. Madison. 1988. Decreased incidence of hip fracture in Hispanics, Asians, and blacks: California Hospital Discharge Data. Am J Public Health. 78:1482–83.

2. Reliability and Validity—Scientific Acceptability of Measure Properties

Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. **Measures must be judged to meet the sub criteria for both reliability and validity to pass this criterion and be evaluated against the remaining criteria.**

2a.1. Specifications The measure is well defined and precisely specified so it can be implemented consistently within and across organizations and allows for comparability. eMeasures should be specified in the Health Quality Measures Format (HQMF) and the Quality Data Model (QDM).

De.5. Subject/Topic Area (check all the areas that apply):

Endocrine, Musculoskeletal, Musculoskeletal : Falls and Traumatic Injury, Musculoskeletal : Osteoporosis

De.6. Non-Condition Specific(check all the areas that apply):

Primary Prevention

De.7. Target Population Category (Check all the populations for which the measure is specified and tested if any):

Elderly

S.1. Measure-specific Web Page (Provide a URL link to a web page specific for this measure that contains current detailed specifications including code lists, risk model details, and supplemental materials. Do not enter a URL linking to a home page or to general information.)

N/A

S.2a. If this is an eMeasure, HQMF specifications must be attached. Attach the zipped output from the eMeasure authoring tool (MAT) - if the MAT was not used, contact staff. (Use the specification fields in this online form for the plain-language description of the specifications)

This is not an eMeasure Attachment:

S.2b. Data Dictionary, Code Table, or Value Sets (and risk model codes and coefficients when applicable) must be attached. (Excel or csv file in the suggested format preferred - if not, contact staff)

Attachment Attachment: 0053_OMW_Value_Sets.xlsx

S.2c. Is this an instrument-based measure (i.e., data collected via instruments, surveys, tools, questionnaires, scales, etc.)? Attach copy of instrument if available.

No, this is not an instrument-based measure Attachment:

S.2d. Is this an instrument-based measure (i.e., data collected via instruments, surveys, tools, questionnaires, scales, etc.)? Attach copy of instrument if available.

Not an instrument-based measure

S.3.1. For maintenance of endorsement: Are there changes to the specifications since the last updates/submission. If yes, update the specifications for S1-2 and S4-22 and explain reasons for the changes in S3.2.

Yes

S.3.2. For maintenance of endorsement, please briefly describe any important changes to the measure specifications since last measure update and explain the reasons.

Added an exclusion for patients 65 years of age and older living long-term in institutional settings.

Added an exclusion for patients receiving hospice care.

There would be no benefit to assessing older women in hospice care to see whether they had a bone mineral density test to screen for osteoporosis. Additionally, getting a bone mineral density test to check for osteoporosis typically requires transportation to a health care facility, which may be burdensome for older adults living long-term in institutional settings who may also have trouble tolerating the medications used to treat osteoporosis.

S.4. Numerator Statement (Brief, narrative description of the measure focus or what is being measured about the target population, i.e., cases from the target population with the target process, condition, event, or outcome) DO NOT include the rationale for the measure.

IF an OUTCOME MEASURE, state the outcome being measured. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

Patients who received either a bone mineral density test or a prescription for a drug to treat osteoporosis after a fracture occurs.

S.5. Numerator Details (All information required to identify and calculate the cases from the target population with the target process, condition, event, or outcome such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b)

IF an OUTCOME MEASURE, describe how the observed outcome is identified/counted. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

Patients who received either a bone mineral density test or a prescription for a drug to treat osteoporosis in the six months after a fracture. Appropriate testing or treatment for osteoporosis after the fracture is defined by any of the following criteria:

- A bone mineral density test (see Table OMW-X) in any setting, on earliest date of service with the diagnosis of fracture or in the 180-day (6-month) period after the fracture. If the earliest date of service with the diagnosis of fracture was during an inpatient stay, a bone mineral density test taking place during the inpatient stay counts.

- Osteoporosis therapy, including long-acting injectables, on the earliest date of service with the diagnosis of fracture or in the 180-day (6-month) period after the fracture. If the earliest date of service with the diagnosis of fracture was an inpatient stay, long-acting osteoporosis medication received during the inpatient stay counts.

- A dispensed prescription to treat osteoporosis (see Table OMW-C) on the earliest date of service with the diagnosis of fracture or in the 180-day (6-month) period after the fracture.

Table OMW-X: Bone Mineral Density Tests

Central dual-energy x-ray absorptiometry, computed tomography, single energy x-ray absorptiometry, ultrasound

Table OMW-C: Osteoporosis Medication

Biphosphates: Alendronate, Alendronate-cholecalciferol, Ibandronate, Risedronate, Zoledronic acid

Other: Calcitonin, Denosumab, Raloxifene, Teriparatide

The numerator for this measure can be identified using either administrative claims or review of medical records. The following criteria are used to identify the numerator criteria for each method. *Note this measure has been tested using medical record review at the physician level and administrative data at the health plan level.

For Medical Record Review Methodology (Physician Level)

When using the medical record as the data source, the numerator criteria is met by documentation that a Bone Mineral Density Test was performed or an osteoporosis therapy was prescribed. This may include a prescription given to patient for treatment of osteoporosis at one or more encounters during the reporting period. This measure is also collected in the Quality Payment Program, previously referred to as the Physician Quality Reporting System, using G-codes specific to the quality measure:

- 3095F Central Dual-energy X-Ray Absorptiometry (DXA) results documented
- G8633 Pharmacologic therapy (other than minerals/vitamins) for osteoporosis prescribed

For Administrative Methodology (Health Plan Level)

When using administrative claims as the data source, the numerator criteria is met by one or more codes in the following value sets:

Bone Mineral Density Tests Value Set

Osteoporosis Medications Value Set

A pharmacy claim for a medication listed in Table OMW-C

See S.2b. (Data Dictionary Code Table) for all value sets.

S.6. Denominator Statement (Brief, narrative description of the target population being measured)

Women who experienced a fracture, except fractures of the finger, toe, face or skull. Three denominator age strata are reported for this measure:

Women age 50-64

Women age 65-85

Women age 50-85

S.7. Denominator Details (All information required to identify and calculate the target population/denominator such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b.)

IF an OUTCOME MEASURE, describe how the target population is identified. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

The denominator for this measure is identified by administrative codes which are specific to the level of reporting. When reporting this measure at the health plan level include all individuals with fractures enrolled in the health plan (i.e. all individuals with encounters for fractures in the health plan – inpatient and outpatient). When reporting this measure at the physician level include all individuals with fractures seen by the eligible provider (i.e., all individuals with encounters for fracture with the eligible provider).

Health Plan Level Denominator Details:

Women who had an outpatient visit (see Outpatient Value Set), an observation visit (see Observation Value Set), an ED visit (see ED Value Set), a nonacute inpatient encounter (see Nonacute Inpatient Value Set) or an acute inpatient encounter (see Acute Inpatient Value Set) for a fracture (see Fractures Value Set) during the 12-month window that begins on July 1 of the year prior to the measurement year and ends on June 30 of the measurement year. This is the index fracture. If the patient had more than one fracture during the intake period, include only the first fracture. See S.2b. (Data Dictionary Code Table) for all value sets.

Physician Level Denominator Details:

Women who had a documented patient encounter (See Table 1 for encounter codes) with a fracture diagnosis (See Fracture Value Set).

Table 1: Patient encounter during the reporting period:

CPT Service codes: 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, G0402

CPT Procedure codes: 22310, 22315, 22318, 22319, 22325, 22326, 22327, 22510, 22511, 22513, 22514, 25600, 25605, 25606, 25607, 25608, 25609, 27230, 27232, 27235, 27236, 27238, 27240, 27244, 27245, 27246, 27248

S.8. Denominator Exclusions (*Brief narrative description of exclusions from the target population*)

- Exclude women who had a bone mineral density test during the 24 months prior to the index fracture.
- Exclude women who had a claim/encounter for osteoporosis treatment during 12 months prior to the index fracture.
- Exclude women who received a dispensed prescription or had an active prescription to treat osteoporosis during the 12 months prior to the index fracture.
- Exclude women who are enrolled in a Medicare Institutional Special Needs Plan (I-SNP) or living long-term in an institution any time during the measurement year.
- Exclude women receiving hospice care during the measurement year.

S.9. Denominator Exclusion Details (*All information required to identify and calculate exclusions from the denominator such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b.*)

- 1) Exclude patients with a previous fracture: patients with an outpatient visit (see Outpatient Value Set), an observation visit (see Observation Value Set), an ED visit (see ED Value Set), a nonacute inpatient encounter (see Nonacute Inpatient Value Set) or an acute inpatient encounter (see Acute Inpatient Value Set) for a fracture (see Fractures Value Set) during the 60 days (2 months) prior to the earliest date of service with a diagnosis of fracture. For index fractures requiring an inpatient stay, use the admission date as the earliest date of service with a diagnosis of fracture. For direct transfers, use the first admission date as the earliest date of service with a diagnosis of fracture.
- 2) Exclude patients who had a Bone Mineral Density test (see Bone Mineral Density Tests Value Set) during the 730 days (24 months) prior to the earliest date of service with a diagnosis of fracture.
- 3) Exclude patients who had a claim/encounter for osteoporosis therapy (see Osteoporosis Medications Value Set) or received a dispensed prescription to treat osteoporosis (see Table OMW-C) during the 365 days (12 months) prior to the earliest date of service with a diagnosis of fracture.
- 4) Exclude patients who live long-term in Institutional settings (as identified by the LTI flag in the Medicare Part C monthly membership file) or are enrolled in a Medicare Institutional Special Needs Plan during the measurement year.
- 5) Exclude patients who are in hospice care during the measurement year (as identified by the Medicare plan's enrollment file).

Table OMW-C: Osteoporosis Therapies

Alendronate, Alendronate-cholecalciferol, Ibandronate, Risedronate, Zoledronic acid, Calcitonin, Denosumab, Raloxifene, Teriparatide

The denominator exclusions for this measure can be identified using administrative claims, health plan enrollment data or review of medical record. The following criteria are used to identify the denominator exclusion criteria for each method. *Note this measure has been tested using medical record review at the physician level and administrative data at the health plan level.

For Medical Record Review Methodology (Physician Level)

When using the medical record as the data source, the denominator exclusion criteria can be met by documentation that a previous fracture occurred, a bone mineral density test was performed or an osteoporosis therapy was prescribed during the specified timeframe prior to the fracture. In the Physician Quality Reporting System (PQRS) this exclusion is collected using G-codes specific to quality measurement:

- 3095F or 4005F with 1P: Documentation of medical reason(s) for not performing a bone mineral density test or not prescribing pharmacologic therapy for osteoporosis (i.e. history of fracture in 60 days prior to index fracture, bone mineral density test in 24 months prior to index fracture, or pharmacologic treatment for osteoporosis in 12 months prior to index fracture).

For Administrative Methodology (Health Plan Level)

When using administrative claims as the data source, the denominator exclusion criteria is met using the following value sets referenced above during the specified time frame prior to the fracture.

Outpatient Value Set

ED Value Set

Nonacute Inpatient Value Set

Acute Inpatient Value Set
Fractures Value Set
Bone Mineral Density Tests Value Set
Osteoporosis Medications Value Set
See S.2b. (Data Dictionary Code Table) for all value sets.

S.10. Stratification Information (Provide all information required to stratify the measure results, if necessary, including the stratification variables, definitions, specific data collection items/responses, code/value sets, and the risk-model covariates and coefficients for the clinically-adjusted version of the measure when appropriate – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format with at S.2b.)

N/A

S.11. Risk Adjustment Type (Select type. Provide specifications for risk stratification in measure testing attachment)

No risk adjustment or risk stratification

If other:

S.12. Type of score:

Rate/proportion

If other:

S.13. Interpretation of Score (Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score)

Better quality = Higher score

S.14. Calculation Algorithm/Measure Logic (Diagram or describe the calculation of the measure score as an ordered sequence of steps including identifying the target population; exclusions; cases meeting the target process, condition, event, or outcome; time period for data, aggregating data; risk adjustment; etc.)

Health Plan Level:

Step 1: Identify all female patients who had a new fracture during the intake period (12-month window that begins on July 1 of the year prior to the measurement year and ends on June 30 of the measurement year).

Step 2: Exclude patients who had previous bone mineral density test and patients who had previous osteoporosis treatment. Also exclude patients living long-term in institutional settings and patients receiving hospice care.

Step 3: Of those patients remaining after Step 2 (i.e., the denominator), identify those who received bone mineral density testing or osteoporosis treatment in the 6-month period following the fracture.

Step 4: To calculate the rate, take the number of patients who received testing or treatment and divide by the number of people calculated to be in the denominator.

Physician Level:

Step 1: Identify all female patients in each age strata who had a documented patient encounter with the eligible provider with a new diagnosis of fracture.

Step 2: Exclude patients who had who had previous bone mineral density test and patients who had previous osteoporosis treatment. Also exclude patients living long-term in institutional settings and patients receiving hospice care.

Step 3: Of those patients remaining after Step 2 (i.e., the denominator), identify all patients who had a documented bone mineral density test or pharmacologic treatment after the fracture.

Step 4: To calculate the rate, take the number of patients who received testing or pharmacologic treatment and divide by the number of people calculated to be in the denominator.

S.15. Sampling (If measure is based on a sample, provide instructions for obtaining the sample and guidance on minimum sample size.)

IF an instrument-based performance measure (e.g., PRO-PM), identify whether (and how) proxy responses are allowed.

N/A

S.16. Survey/Patient-reported data (If measure is based on a survey or instrument, provide instructions for data collection and guidance on minimum response rate.)

Specify calculation of response rates to be reported with performance measure results.

N/A

S.17. Data Source (Check ONLY the sources for which the measure is SPECIFIED AND TESTED).

If other, please describe in S.18.

Claims, Electronic Health Data, Electronic Health Records, Paper Medical Records

S.18. Data Source or Collection Instrument (Identify the specific data source/data collection instrument (e.g. name of database, clinical registry, collection instrument, etc., and describe how data are collected.)

If instrument-based, identify the specific instrument(s) and standard methods, modes, and languages of administration.

Health Plan Level:

This measure is based on administrative claims collected in the course of providing care to health plan patients. NCQA collects the Healthcare Effectiveness Data and Information Set (HEDIS) data for this measure directly from Health Maintenance Organizations and Preferred Provider Organizations via NCQA's online data submission system.

Physician Level:

This measure is based on administrative claims to identify the eligible population and medical record documentation collected in the course of providing care to health plan patients to identify the numerator. In the Quality Payment Program, this measure is collected using G-codes specific to quality measurement.

S.19. Data Source or Collection Instrument (available at measure-specific Web page URL identified in S.1 OR in attached appendix at A.1)

No data collection instrument provided

S.20. Level of Analysis (Check ONLY the levels of analysis for which the measure is SPECIFIED AND TESTED)

Clinician : Group/Practice, Clinician : Individual, Health Plan, Integrated Delivery System

S.21. Care Setting (Check ONLY the settings for which the measure is SPECIFIED AND TESTED)

Outpatient Services

If other:

S.22. COMPOSITE Performance Measure - Additional Specifications (Use this section as needed for aggregation and weighting rules, or calculation of individual performance measures if not individually endorsed.)

N/A

2. Validity – See attached Measure Testing Submission Form

0053_-_Testing_Form_v7.1_FINAL-636596510946647046.docx

2.1 For maintenance of endorsement

Reliability testing: If testing of reliability of the measure score was not presented in prior submission(s), has reliability testing of the measure score been conducted? If yes, please provide results in the Testing attachment. Please use the most current version of the testing attachment (v7.1). Include information on all testing conducted (prior testing as well as any new testing); use red font to indicate updated testing.

Yes

2.2 For maintenance of endorsement

Has additional empirical validity testing of the measure score been conducted? If yes, please provide results in the Testing attachment. Please use the most current version of the testing attachment (v7.1). Include information on all testing conducted (prior testing as well as any new testing); use red font to indicate updated testing.

Yes

2.3 For maintenance of endorsement

Risk adjustment: For outcome, resource use, cost, and some process measures, risk-adjustment that includes social risk factors is not

prohibited at present. Please update sections 1.8, 2a2, 2b1,2b4.3 and 2b5 in the Testing attachment and S.140 and S.11 in the online submission form. NOTE: These sections must be updated even if social risk factors are not included in the risk-adjustment strategy. You MUST use the most current version of the Testing Attachment (v7.1) -- older versions of the form will not have all required questions.

No - This measure is not risk-adjusted

3. Feasibility

Extent to which the specifications including measure logic, require data that are readily available or could be captured without undue burden and can be implemented for performance measurement.

3a. Byproduct of Care Processes

For clinical measures, the required data elements are routinely generated and used during care delivery (e.g., blood pressure, lab test, diagnosis, medication order).

3a.1. Data Elements Generated as Byproduct of Care Processes.

Generated or collected by and used by healthcare personnel during the provision of care (e.g., blood pressure, lab value, diagnosis, depression score), Coded by someone other than person obtaining original information (e.g., DRG, ICD-9 codes on claims), Abstracted from a record by someone other than person obtaining original information (e.g., chart abstraction for quality measure or registry)

If other:

3b. Electronic Sources

The required data elements are available in electronic health records or other electronic sources. If the required data are not in electronic health records or existing electronic sources, a credible, near-term path to electronic collection is specified.

3b.1. To what extent are the specified data elements available electronically in defined fields (i.e., data elements that are needed to compute the performance measure score are in defined, computer-readable fields) Update this field for **maintenance of endorsement**.

Some data elements are in defined fields in electronic sources

3b.2. If ALL the data elements needed to compute the performance measure score are not from electronic sources, specify a credible, near-term path to electronic capture, OR provide a rationale for using other than electronic sources. For **maintenance of endorsement**, if this measure is not an eMeasure (eCQM), please describe any efforts to develop an eMeasure (eCQM).

To allow for widespread reporting across physicians and clinical practices, this measure is collected through multiple data sources (administrative data, electronic clinical data, and paper records).

3b.3. If this is an eMeasure, provide a summary of the feasibility assessment in an attached file or make available at a measure-specific URL. Please also complete and attach the NQF Feasibility Score Card.

Attachment:

3c. Data Collection Strategy

Demonstration that the data collection strategy (e.g., source, timing, frequency, sampling, patient confidentiality, costs associated with fees/licensing of proprietary measures) can be implemented (e.g., already in operational use, or testing demonstrates that it is ready to put into operational use). For eMeasures, a feasibility assessment addresses the data elements and measure logic and demonstrates the eMeasure can be implemented or feasibility concerns can be adequately addressed.

3c.1. Required for maintenance of endorsement. Describe difficulties (as a result of testing and/or operational use of the measure) regarding data collection, availability of data, missing data, timing and frequency of data collection, sampling, patient confidentiality, time and cost of data collection, other feasibility/implementation issues.

If instrument-based, consider implications for both individuals providing data (patients, service recipients, respondents) and those whose performance is being measured.

Health Plan Level:

NCQA recognizes that, despite the clear specifications defined for HEDIS measures, data collection and calculation methods may vary, and other errors may taint the results, diminishing the usefulness of HEDIS data for managed care organization (MCO) comparison. In order for HEDIS to reach its full potential, NCQA conducts an independent audit of all HEDIS collection and reporting

processes, as well as an audit of the data which are manipulated by those processes, in order to verify that HEDIS specifications are met. NCQA has developed a precise, standardized methodology for verifying the integrity of HEDIS collection and calculation processes through a two-part program consisting of an overall information systems capabilities assessment followed by an evaluation of the MCO's ability to comply with HEDIS specifications. NCQA-certified auditors using standard audit methodologies will help enable purchasers to make more reliable "apples-to-apples" comparisons between health plans.

The HEDIS Compliance Audit addresses the following functions:

- 1) information practices and control procedures
- 2) sampling methods and procedures
- 3) data integrity
- 4) compliance with HEDIS specifications
- 5) analytic file production
- 6) reporting and documentation

In addition to the HEDIS Audit, NCQA provides a system to allow "real-time" feedback from measure users. Our Policy Clarification Support System receives thousands of inquiries each year on over 100 measures. Through this system NCQA responds immediately to questions and identifies possible errors or inconsistencies in the implementation of the measure. This system is vital to the regular re-evaluation of NCQA measures.

Input from NCQA auditing and the Policy Clarification Support System informs the annual updating of all HEDIS measures including updating value sets and clarifying the specifications. Measures are re-evaluated on a periodic basis and when there is a significant change in evidence. During re-evaluation information from NCQA auditing and Policy Clarification Support System is used to inform evaluation of the scientific soundness and feasibility of the measure.

Physician Level:

Feedback on use of this measure in CMS PQRS program has been positive with few questions raised by participating clinicians to the CMS vendor. NCQA works with the CMS vendor to review any questions or issues raised with the measure on a bi-weekly basis.

3c.2. Describe any fees, licensing, or other requirements to use any aspect of the measure as specified (e.g., value/code set, risk model, programming code, algorithm).

Broad public use and dissemination of these measures is encouraged and NCQA has agreed with NQF that noncommercial uses do not require the consent of the measure developer. Use by health care physicians in connection with their own practices is not commercial use. Commercial use of a measure requires the prior written consent of NCQA. As used herein, "commercial use" refers to any sale, license or distribution of a measure for commercial gain, or incorporation of a measure into any product or service that is sold, licensed or distributed for commercial gain, even if there is no actual charge for inclusion of the measure.

4. Usability and Use

Extent to which potential audiences (e.g., consumers, purchasers, providers, policy makers) are using or could use performance results for both accountability and performance improvement to achieve the goal of high-quality, efficient healthcare for individuals or populations.

4a. Accountability and Transparency

Performance results are used in at least one accountability application within three years after initial endorsement and are publicly reported within six years after initial endorsement (or the data on performance results are available). If not in use at the time of initial endorsement, then a credible plan for implementation within the specified timeframes is provided.

4.1. Current and Planned Use

NQF-endorsed measures are expected to be used in at least one accountability application within 3 years and publicly reported within 6 years of initial endorsement in addition to performance improvement.

Specific Plan for Use	Current Use (for current use provide URL)

4a1.1 For each CURRENT use, checked above (update for maintenance of endorsement), provide:

- Name of program and sponsor
- Purpose
- Geographic area and number and percentage of accountable entities and patients included
- Level of measurement and setting

HEALTH PLAN LEVEL USE:

NCQA STATE OF HEALTH CARE QUALITY REPORT: This measure is publicly reported nationally and by geographic regions in the NCQA State of Health Care annual report. This annual report published by NCQA summarizes findings on quality of care. In 2017, the report included results from calendar year 2016 for health plans covering a record 136 million people, or 43 percent of the U.S. population.

CMS MEDICARE ADVANTAGE STAR RATING: This measure is included in the composite Medicare Advantage Star Rating. CMS calculates a Star Rating (1-5) for all Medicare Advantage health plans based on 53 performance measures. Medicare beneficiaries can view the star rating and individual measure scores on the CMS Plan Compare website. The Star Rating is also used to calculate bonus payments to health plans with excellent performance. The Medicare Advantage Plan Rating program covers 11.5 million Medicare beneficiaries in 455 health plans across all 50 states.

NCQA HEALTH PLAN RATINGS/REPORT CARDS: This measure is used to calculate health plan ratings, which are reported by WebMD and on the NCQA website. These ratings are based on performance on HEDIS measures among other factors. In 2017, a total of 521 Medicare Advantage health plans, 614 commercial health plans and 294 Medicaid health plans across 50 states, D.C., Guam, Puerto Rico, and the Virgin Islands were included in the Ratings.

NCQA ACCOUNTABLE CARE ORGANIZATION ACCREDITATION: This measure is used in NCQA's ACO Accreditation program, that helps health care organizations demonstrate their ability to improve quality, reduce costs and coordinate patient care. ACO standards and guidelines incorporate whole person care coordination throughout the health care system.

NCQA HEALTH PLAN ACCREDITATION: This measure is used in scoring for accreditation of Medicare Advantage Health Plans. In 2012, a total of 170 Medicare Advantage health plans were accredited using this measure among others covering 7.1 million Medicare beneficiaries. Health plans are scored based on performance compared to benchmarks.

NCQA QUALITY COMPASS: This measure is used in Quality Compass which is an indispensable tool used for selecting health plans, conducting competitor analysis, examining quality improvement and benchmarking plan performance. Provided in this tool is the ability to generate custom reports by selecting plans, measures, and benchmarks (averages and percentiles) for up to three trended years. Results in table and graph formats offer simple comparison of plans' performance against competitors or benchmarks.

PHYSICIAN LEVEL USE

CMS QUALITY PAYMENT PROGRAM: This measure is used in the Quality Payment Program (QPP) which is a reporting program that uses a combination of incentive payments and payment adjustments to promote reporting of quality information by eligible professionals (EPs).

4a1.2. If not currently publicly reported OR used in at least one other accountability application (e.g., payment program, certification, licensing) what are the reasons? (e.g., Do policies or actions of the developer/steward or accountable entities restrict access to performance results or impede implementation?)

N/A

4a1.3. If not currently publicly reported OR used in at least one other accountability application, provide a credible plan for implementation within the expected timeframes -- any accountability application within 3 years and publicly reported within 6 years of initial endorsement. (Credible plan includes the specific program, purpose, intended audience, and timeline for implementing the measure within the specified timeframes. A plan for accountability applications addresses mechanisms for data aggregation and reporting.)

N/A

4a2.1.1. Describe how performance results, data, and assistance with interpretation have been provided to those being measured or other users during development or implementation.

How many and which types of measured entities and/or others were included? If only a sample of measured entities were included, describe the full population and how the sample was selected.

Health plans that report HEDIS calculate their rates and know their performance when submitting to NCQA. NCQA publicly reports

rates across all plans and also creates benchmarks in order to help plans understand how they perform relative to other plans. Public reporting and benchmarking are effective quality improvement methods.

4a2.1.2. Describe the process(es) involved, including when/how often results were provided, what data were provided, what educational/explanatory efforts were made, etc.

NCQA publishes HEDIS results annually in our Quality Compass tool. NCQA also presents data at various conferences and webinars. For example, at the annual HEDIS Update and Best Practices Conference, NCQA presents results from all new measures' first year of implementation or analyses from measures that have changed significantly. NCQA also regularly provides technical assistance on measures through its Policy Clarification Support System, as described in Section 3c.1.

4a2.2.1. Summarize the feedback on measure performance and implementation from the measured entities and others described in 4d.1.

Describe how feedback was obtained.

NCQA measures are evaluated regularly using a consensus-based process to consider input from multiple stakeholders, including but not limited to entities being measured. We use several methods to obtain input, including vetting of the measure with several multi-stakeholder advisory panels, public comment posting, and review of questions submitted to the Policy Clarification Support System. This information enables NCQA to comprehensively assess a measure's adherence to the HEDIS Desirable Attributes of Relevance, Scientific Soundness and Feasibility.

4a2.2.2. Summarize the feedback obtained from those being measured.

Questions received through the Policy Clarification Support system have generally centered around clarification on whether certain notation in medical record documentation is sufficient to meet measure criteria. Other questions have sought clarification about the screening methods that satisfy the measure numerator. During a recent public comment session, a majority of comments from measured entities supported updates to the measure to align with the latest clinical recommendations.

4a2.2.3. Summarize the feedback obtained from other users

This measure has been deemed a priority measure by NCQA and other entities, as illustrated by its use in programs.

4a2.3. Describe how the feedback described in 4a2.2.1 has been considered when developing or revising the measure specifications or implementation, including whether the measure was modified and why or why not.

During the measure's last major update in 2014, feedback obtained through the mechanisms described in 4a2.2.1 informed how we revised the measure.

Improvement

Progress toward achieving the goal of high-quality, efficient healthcare for individuals or populations is demonstrated. If not in use for performance improvement at the time of initial endorsement, then a credible rationale describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.

4b1. Refer to data provided in 1b but do not repeat here. Discuss any progress on improvement (trends in performance results, number and percentage of people receiving high-quality healthcare; Geographic area and number and percentage of accountable entities and patients included.)

If no improvement was demonstrated, what are the reasons? If not in use for performance improvement at the time of initial endorsement, provide a credible rationale that describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.

Health Plan Level: From 2014 to 2016, the average performance rate has increased by four percentage points. Since 2013, rates have increased about 18.4 percent for health plans in the 90th percentile (see section 1b.2 for summary of data from health plans). In 2016, a total of 277 Medicare health plans reported data on this measure. These data are nationally representative.

Physician Level: From 2009-2012 the average performance rate has increased by 13.5 percent, which shows steady improvement amongst those providers who chose to report on this measure. In 2012, there were 204, 369 eligible providers who were able to report on this measure and only 0.8% chose to report. Therefore, the 2012 average performance rate is reflective of less than one percent of Medicare providers.

4b2. Unintended Consequences

The benefits of the performance measure in facilitating progress toward achieving high-quality, efficient healthcare for individuals or populations outweigh evidence of unintended negative consequences to individuals or populations (if such

evidence exists).

4b2.1. Please explain any unexpected findings (positive or negative) during implementation of this measure including unintended impacts on patients.

There is a possibility that this measure may inadvertently increase the overuse of bone mineral density tests and approved treatments for osteoporosis and fractures, especially in those who have a limited life expectancy. Although the population of women with recent osteoporotic fractures is least likely to be associated with overuse, the asymptomatic population is more prone to this. To help minimize this, we have an upper age limit of 85 for this measure and specific exclusions for those in hospice care and those living long-term in institutional settings. NCQA is also currently exploring additional exclusions to remove patients with advanced illness from this measure. These exclusions focus the measure on the population that is most likely to benefit from screening and treatment.

4b2.2. Please explain any unexpected benefits from implementation of this measure.

There were no identified unexpected benefits for this measure during implementation.

5. Comparison to Related or Competing Measures

If a measure meets the above criteria and there are endorsed or new related measures (either the same measure focus or the same target population) or competing measures (both the same measure focus and the same target population), the measures are compared to address harmonization and/or selection of the best measure.

5. Relation to Other NQF-endorsed Measures

Are there related measures (conceptually, either same measure focus or target population) or competing measures (conceptually both the same measure focus and same target population)? If yes, list the NQF # and title of all related and/or competing measures.
Yes

5.1a. List of related or competing measures (selected from NQF-endorsed measures)

0037 : Osteoporosis Testing in Older Women (OTO)
0046 : Screening for Osteoporosis for Women 65-85 Years of Age
2416 : Laboratory Investigation for Secondary Causes of Fracture
2417 : Risk Assessment/Treatment After Fracture

5.1b. If related or competing measures are not NQF endorsed please indicate measure title and steward.

N/A

5a. Harmonization of Related Measures

The measure specifications are harmonized with related measures;

OR

The differences in specifications are justified

5a.1. If this measure conceptually addresses EITHER the same measure focus OR the same target population as NQF-endorsed measure(s):

Are the measure specifications harmonized to the extent possible?

Yes

5a.2. If the measure specifications are not completely harmonized, identify the differences, rationale, and impact on interpretability and data collection burden.

Insufficient Space - please see 5b.1.

5b. Competing Measures

The measure is superior to competing measures (e.g., is a more valid or efficient way to measure);

OR

Multiple measures are justified.

5b.1. If this measure conceptually addresses both the same measure focus and the same target population as NQF-endorsed measure(s):

Describe why this measure is superior to competing measures (e.g., a more valid or efficient way to measure quality); OR provide a rationale for the additive value of endorsing an additional measure. (Provide analyses when possible.)

Response to 5a.2 (insufficient space above): There are multiple measures of osteoporosis prevention and management. During the last measure update in 2014, this measure was harmonized to align with applicable existing NQF-endorsed osteoporosis measures where possible given the different measure focus, methods of data collection and level of accountability. Below we describe the harmonization between this measure (0053) and the most closely related measures, 0037, 0046, 2416, 2417.

NCQA OWNED RELATED MEASURES

0037: Osteoporosis Testing in Older Women

0046: Screening for Osteoporosis for Women 65-85 Years of Age

Measures 0037 and 0046 assess the number of women 65-85 who report ever having received a bone density test to check for osteoporosis. These measures focus on screening for osteoporosis in the general population, whereas measure 0053 is focused on secondary prevention in a population of women who have experienced a fracture. Therefore, we consider these measures to be related but not competing. The differences between these two measures are reflective of the different guidelines for general population screening and secondary prevention. Where it is appropriate to the measure focus and evidence, we have aligned the measures.

OTHER RELATED MEASURES

The other osteoporosis management related measures are more narrowly focused than the NCQA measures. These measures (2416, 2417) are hospital-level accountability measures and focus solely on women who were hospitalized for fractures.

2416: Laboratory Investigation for Secondary Causes of Fracture

Measure 2416 assesses the percentage of patients age 50 and over who were hospitalized for a fragility fracture and had the appropriate laboratory investigation for secondary causes of fracture ordered or performed prior to discharge from an inpatient hospitalization. This measure has a different focus from measure 0053 (identifying cause of fracture as opposed to screening/treatment for osteoporosis). While the target population of this measure overlaps with the target population of 0053, measure 2416 is restricted to fractures that require hospitalization whereas 0053 focuses on a broader population. Therefore, we consider these measures to be related but not competing. Measure 2416 captures some of the same quality focus as 0053 but is designed to be appropriate for hospital-level accountability and is therefore restricted to hospitalized individuals. The differences between this measure and 0053 are reflective of the different measure intents and level of accountability.

2417: Risk Assessment/Treatment After Fracture

Measure 2417 assesses the number of patients age 50 and over who were hospitalized for a fragility fracture and have either a dual-energy x-ray absorptiometry (DXA) scan ordered or performed, a prescription for FDA-approved pharmacotherapy, or are linked to a fracture liaison service prior to discharge from an inpatient hospitalization. If DXA is not available and documented, then any other specified fracture risk assessment method may be ordered or performed. This measure has a similar focus to 0053 and an overlapping target population (individuals hospitalized for a fragility fracture). Therefore, this measure could be considered competing with 0053; however, 2417 is designed to focus on hospital-level accountability and therefore is only inclusive of populations and services provided within the hospital setting. Measure 0053 is designed to be broader and capture both outpatient and inpatient populations and services.

Response to 5b.1: This measure conceptually addresses both the same measure focus and the same target population as NQF-endorsed measure: 2417 Risk Assessment/Treatment After Fracture.

Measure 0053 is designed to be as broad as possible to include the largest possible population (all women age 50 and over with a fracture other than face, finger, toe, and skull) and include the broadest possible settings of care (inpatient and outpatient). The measure is designed for both health plan and outpatient physician level accountability. It is focused on guideline recommended care for osteoporosis management after a fracture. Measure 2417 is designed to be appropriate for hospital-level accountability and therefore focuses on a smaller population (all patients 50 and over hospitalized for a fragility fracture) and includes a single setting of care (inpatient). While some post-fracture care occurs in the inpatient setting, much of the responsibility for providing follow-up care for osteoporosis management in women rests with the outpatient care system and providers. Additionally, many patients who suffer a fracture may not be treated with an inpatient hospitalization. Therefore, it is important to have a measure that captures a broader population and settings of care for osteoporosis management following a fracture.

Appendix

A.1 Supplemental materials may be provided in an appendix. All supplemental materials (such as data collection instrument or methodology reports) should be organized in one file with a table of contents or bookmarks. If material pertains to a specific submission form number, that should be indicated. Requested information should be provided in the submission form and required attachments. There is no guarantee that supplemental materials will be reviewed.

No appendix Attachment:

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Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.

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Measure Developer/Steward Updates and Ongoing Maintenance

Ad.2 Year the measure was first released: 2003

Ad.3 Month and Year of most recent revision: 04, 2018

Ad.4 What is your frequency for review/update of this measure? Approximately every 3 years, sooner if clinical guidelines or evidence has changed significantly

Ad.5 When is the next scheduled review/update for this measure? 12, 2019

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