

Osteoporosis-Associated Fracture
Implementation Guide

2013



Measure Information Form

Measure Set: Osteoporosis-Associated Fracture

Measure Set ID#: OAF-01

Performance Measure Name: Laboratory Investigation for Secondary Causes of Fracture

Description: Patients with fragility fracture who have had appropriate laboratory investigation for secondary causes of fracture ordered or performed prior to discharge from inpatient status.

Rationale: The National Osteoporosis Foundation has released prevalence data estimating that approximately 9 million adults in the United States have osteoporosis and more than 48 million have low bone mass (osteopenia). Hip and vertebral fractures are 2 of the most common fracture sites related to osteopenia/osteoporosis and affect nearly 1 million Americans annually, at a cost (in 2005) of \$19 billion (Warriner). Most of the 1.8 million total annual fractures are related to osteoporosis or osteopenia, yet less than 20% of these fracture patients are ever tested or treated for osteoporosis (Edwards, Majumdar, Andrade). Further, a fragility fracture at any site renders a patient more susceptible to additional fractures over the next decade (Colon-Emeric, Pope), and patients with a fragility fracture should receive further evaluation for osteoporosis and fracture risk (Klotzbuecher).

Often, the first indication that an individual has low bone mass is a fracture. There are many factors and underlying disorders that can cause bone loss and subsequent fracture. Secondary osteoporosis occurs in almost two-thirds of men, more than half of premenopausal and postmenopausal women, and in about one-fifth of postmenopausal women (Painter). It is essential to determine the presence of any underlying cause of fracture, and once a causative factor for fracture has been identified, it is important to treat the underlying cause, since the therapeutic response can be substantial and significant in prevention of future fractures. For example, studies have shown that fracture rates decrease substantially when glucocorticoid therapy is discontinued. In addition, many patients over age 50 have inadequate Vitamin D levels, which contribute towards low levels of calcium in bone. For example in a study of postmenopausal women with osteoporosis, 82% had low 25(OH)D levels (<30 ng/ml) (Gabaroi). Strategies for testing to detect underlying causation for low bone mass have been recommended by The Scientific Advisory Council for Osteoporosis Canada (Papaioannou), the American College of Obstetricians and Gynecologists, the World Orthopedic Osteoporosis Organization (Johnell), Dell RM, et al., and others; their recommendations vary slightly but most agree on a complete blood count, liver function tests, kidney function tests, serum calcium, and measurement of Vitamin D levels. Dosing of Vitamin D at a minimum level of 800IU daily is necessary to achieve therapeutic blood levels that assist in prevention of falls and in optimization of calcium metabolism (Warriner, Dell, Dawson-Hughes, Hanley).

The 2004 Report of the U.S. Department of Health and Human Services, *Bone Health and Osteoporosis: A Report of the Surgeon General*, states that "all patients with low-trauma fractures should be evaluated for other bone diseases and secondary causes of bone loss. They should also be evaluated with respect to the need for additional preventive measures (calcium, vitamin D, exercise, fall prevention) and for drug therapy..."

Type of Measure: Process

Improvement Noted As: An increase in the rate.

Numerator Statement: Patients who have all the specified laboratory tests ordered or performed prior to discharge:

1. Complete blood cell count (CBC)
2. Kidney function test

3. Liver function test
4. Serum calcium
5. 25(OH) Vitamin D level OR Oral Administration of Vitamin D

Included Populations: All the above

Excluded Populations: None

Data Elements:

Laboratory Tests Ordered or Performed Prior to Discharge

Oral Administration of Vitamin D

Denominator Statement: Patients age 50 and over discharged from inpatient status with an ICD-9-CM Principal or Other Diagnosis Code of selected fractures as defined in Table 3.1 Vertebral Fracture, Table 4.1 Hip Fracture, or Table 5.1 Other Fracture

Included Populations: As above

Excluded Populations:

- Age less than 50 years
- “*Comfort Measures Only*” documented
- Enrollment in a clinical trial pertaining to osteoporosis
- Laboratory testing performed in the prior 12 months
- Expired

Data Elements:

- *Admission date*
- *Birthdate*
- *ICD-9-CM Principal Diagnosis Code*
- *ICD-9-CM Other Diagnosis Codes*
- *Comfort Measures Only*
- *Clinical Trial*
- *Laboratory Testing Performed in the Prior 12 Months*
- *Prior Diagnosis of Osteoporosis*
- *Underlying Cause for Osteoporosis*
- *Discharge Date*
- *Discharge Disposition*

Risk Adjustment: No

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records.

Data Accuracy: Variation may exist in the assignment of ICD-9-CM codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: Hospitals may wish to analyze results using the sex, race and Hispanic Ethnicity data to identify any disparities in care.

Sampling: No.

Data Reported As: Aggregate rate generated from count data reported as a proportion

Selected References:

Agency for Healthcare Research and Quality. Osteoporosis in Postmenopausal Women: Diagnosis and Monitoring. Rockville, MD: Agency for Healthcare Research and Quality; 2001.

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Dawson-Hughes B. Serum 25-hydroxyvitamin D and functional outcomes in the elderly. *Am J Clin Nutr* 2008;88(suppl): 537S-40S.

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Majumdar, SR. Recent Trends in Osteoporosis Treatment After Hip Fracture: Improving But Wholly Inadequate. (Editorial) *The Journal of Rheumatology*, February 2008. Downloaded on July 2, 2012 at www.jrheum.com/subscribers/08/02/190.html

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Papaoannou A, Morin S, Cheug AM, Atkinson S, et al. 2012 clinical practice guidelines for the diagnosis and management of osteoporosis in Canada: summary. *Can Med Assoc Journal*, November 23, 2010; 182(17).

Pope R. Multidisciplinary care for osteoporosis: What the primary care physician needs to know. Supplement to The Journal of family Practice July 2009, Vol 58, No. 7.

The American College of Obstetricians and Gynecologists. Osteoporosis Practice Bulletin. Obstetrics and Gynecology Vol 120, No. 3, September 2012.

U.S.Department of Health and Human Services. *Bone Health and Osteoporosis: A Report of the Surgeon General*. Rockville, MD. U.S. Department of Health and Human Services. Office of the Surgeon General, 2004.

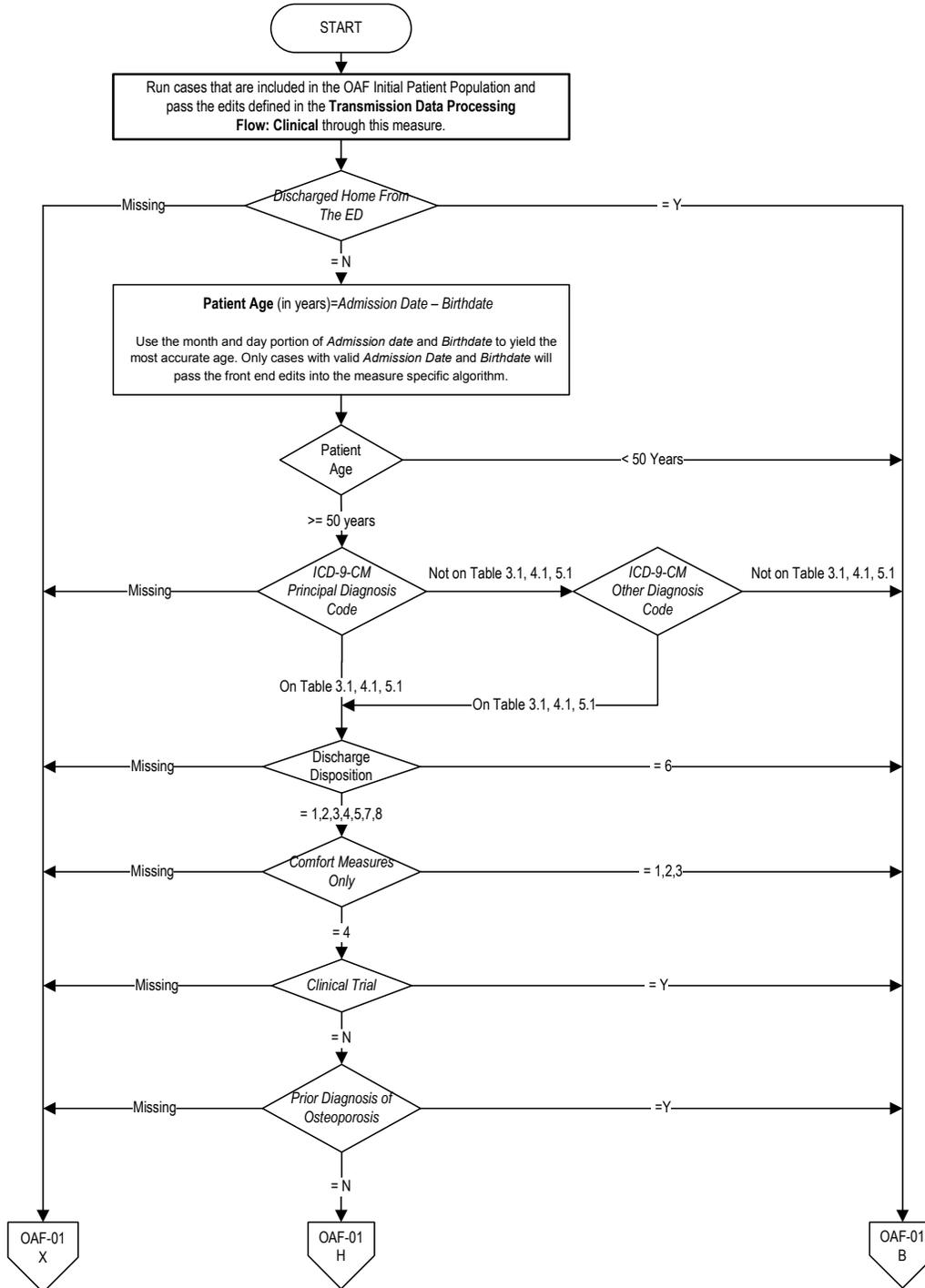
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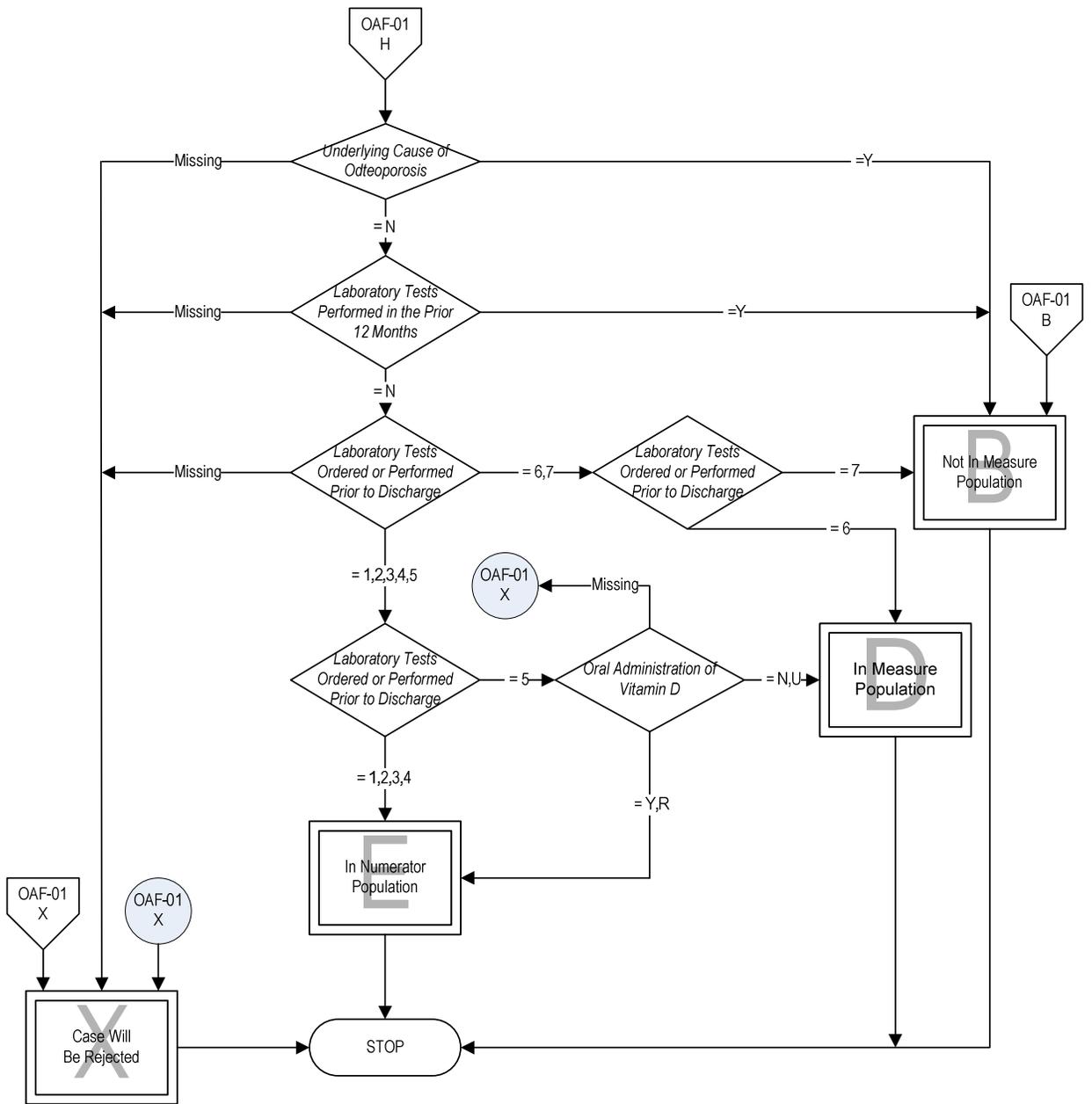
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OAF-01: Laboratory Investigation for Secondary Causes of Osteoporosis

Numerator: Patients who have all the specified laboratory tests ordered or performed prior to discharge.

Denominator: Patients age 50 and over discharged with a Principal ICD-9-CM diagnosis or other ICD-9-CM diagnosis of selected fracture codes as defined in Table 3.1 Vertebral Fracture, 4.1 Hip Fracture, or 5.1 Other Fracture.





Measure Information Form

Measure Set: Osteoporosis-Associated Fracture

Measure Set ID#: OAF-02

Performance Measure Name: Risk Assessment/Treatment After Fracture

Description: Patients age 50 or over with a fragility fracture who have either a dual-energy X-Ray absorptiometry (DXA) scan ordered or performed, or a prescription for FDA-approved pharmacotherapy for osteoporosis, or who are seen by or linked to a fracture liaison service prior to discharge from inpatient status,. If DXA is not available and documented as such, then any other specified fracture risk assessment method may be ordered or performed.

Rationale: Fragility fracture presumes the existence of low bone mass. It has also been shown that patients with fragility fracture often are not tested or treated for osteoporosis, and there is a significant opportunity for improvement in management of these patients. Across multiple studies, the rate of testing and treatment for osteoporosis after fragility fracture is 20% or less.

Lindsay et al, in 2001, reviewed data from four large, 3-year osteoporosis treatment trials conducted at 373 study centers in North America, Europe, Australia, and New Zealand between 1993 and 1998. Among the 2,725 postmenopausal women studied, those with one or more vertebral fracture(s) at the initiation of the study were at five-fold risk of sustaining another vertebral fracture within the following year as compared with those women without vertebral fracture at the start of the study. Therefore, early intervention in the course of treatment for fragility fracture in order to address underlying osteoporosis is advocated.

A prospective cohort study was conducted to assess the effect of two different interventions on the rate of osteoporosis treatment in patients with a fragility fracture. One intervention was immediate care for osteoporosis while hospitalized; the other intervention involved delayed care including recommendations for testing and potential treatment that were communicated to the patient's primary care physician after discharge. Six months after the fracture, the rate of bone mineral density testing was 92% in the immediate care group and 67% in the delayed-care group; both groups showed improvement over the baseline rate of 0%. However, the primary care physician had initiated treatment by six months in only 30% of the delayed-care group, compared with the treatment rate of 67% in the immediate care group. In their prospective, observational study, Dell and colleagues identified a 38% drop in the hip fracture rate among 650,000 men and women older than 50 years enrolled from 2002 to 2007 in the Kaiser Permanente Southern California Healthy Bones program, an osteoporosis prevention and detection program. This resulted in the prevention of 935 hip fractures in 2006, at an estimated cost savings of \$30.8 million.

Further, in a meta-analysis of randomized placebo-controlled trials of FDA-approved agents for treatment of osteoporosis, an 11% reduction in mortality was demonstrated in older, frailer individuals.

It is anticipated that early detection of osteoporosis and early treatment will therefore reduce the occurrence of readmissions for future fracture, will enable significant savings in resource use, and will reduce mortality in older individuals.

Type of Measure: Process

Improvement Noted As: An increase in the rate.

Numerator Statement: Patients who had either a DXA scan ordered or performed, or a prescription for FDA-approved pharmacotherapy for osteoporosis treatment, or those who were seen by, contacted by,

or linked to a fracture liaison service prior to discharge. If DXA is not available and documented as such, then any other specified fracture risk assessment method may be ordered or performed.

Included Populations: As above

Excluded Populations: None

Data Elements:

DXA Scan Ordered or Performed Prior to Discharge

Other Fracture Risk Assessment Method Ordered or Performed Prior to Discharge

FDA-approved Pharmacotherapy for Osteoporosis Treatment

Reason for No DXA Scan

Reason for No FDA-approved Pharmacotherapy for Treatment of Osteoporosis

Fracture liaison service

Denominator Statement: Patients age 50 and over discharged from inpatient status with an ICD-9-CM Principal or Other Diagnosis Code of selected fractures as defined in Table 3.1 Vertebral Fracture, Table 4.1 Hip Fracture, or Table 5.1 Other Fracture,

Included Populations: As above

Excluded Populations:

- Age less than 50 years
- “*Comfort Measures Only*” documented
- Enrollment in a clinical trial pertaining to osteoporosis
- On FDA-Approved pharmacotherapy for osteoporosis treatment as defined in Table 1.1 prior to the fracture date
- Bone Mineral density test documented in the 12 months prior to the fracture
- Expired

Data Elements:

- *Admission date*
- *Birthdate*
- *ICD-9-CM Principal Diagnosis Code*
- *ICD-9-CM Other Diagnosis Code*
- *Comfort Measures Only*
- *Clinical Trial*
- *Bone Mineral Density Test Performed in the 12 Months Prior to the Fracture*
- *On FDA-approved Pharmacotherapy for Treatment of Osteoporosis Prior to Fracture*
- *Discharge Date*
- *Discharge Disposition*

Risk Adjustment: No

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records.

Data Accuracy: Variation may exist in the assignment of ICD-9-CM codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions:

Sampling: No.

Data Reported As: Aggregate rate generated from count data reported as a proportion

Selected References:

Andrade SE. Low frequency of treatment of osteoporosis among postmenopausal women following a fracture. *Arch Intern Med.* 2003;163(17):2052-2057.

Bolland MJ, Grey A, Gamble GD, Reid I. Effect of Osteoporosis Treatment on Mortality: A Meta-Analysis. *J Clin Endocrinol Metab.* March 2010, 95(3): 1174-1181.

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Adapted from: Ott S. Department of Medicine, University of Washington. Osteoporosis and Bone Physiology. <http://courses.washington.edu/bonephys/ophome>. Updated July 2, 2007.

Papaioannou A. The osteoporosis care gap in Canada. *BMC Musculoskelet Disord.* 2004;5(1):11.
Gardner MJ. Interventions to improve osteoporosis treatment following hip fracture. A prospective, randomized trial. *J Bone Joint Surg Am.* 2005;87(1):3-7.

Rozental TD, Makhni EC, Day CS, Bouxsein ML. Improving Evaluation and Treatment for Osteoporosis Following Distal Radial Fractures. *J Bone Joint Surg Am.* 2008; 90: 953-61

Richmond B., Dalinka M., Daffner R., et al. *Osteoporosis and Bone Mineral Density. American College of Radiology, ACR Appropriateness Criteria.* Review Date 2007. Accessed at acr.org July, 2009.

U. S. Preventive Services Task Force. *Screening for Osteoporosis in Postmenopausal Women.* AHRQ Pub. No. 03-511A. 2002.

U.S. Department of Health and Human Services. *Bone Health and Osteoporosis: A Report of the Surgeon General.* Rockville, MD: U.S. Department of Health and Human Services, Office of the Surgeon General; 2004.

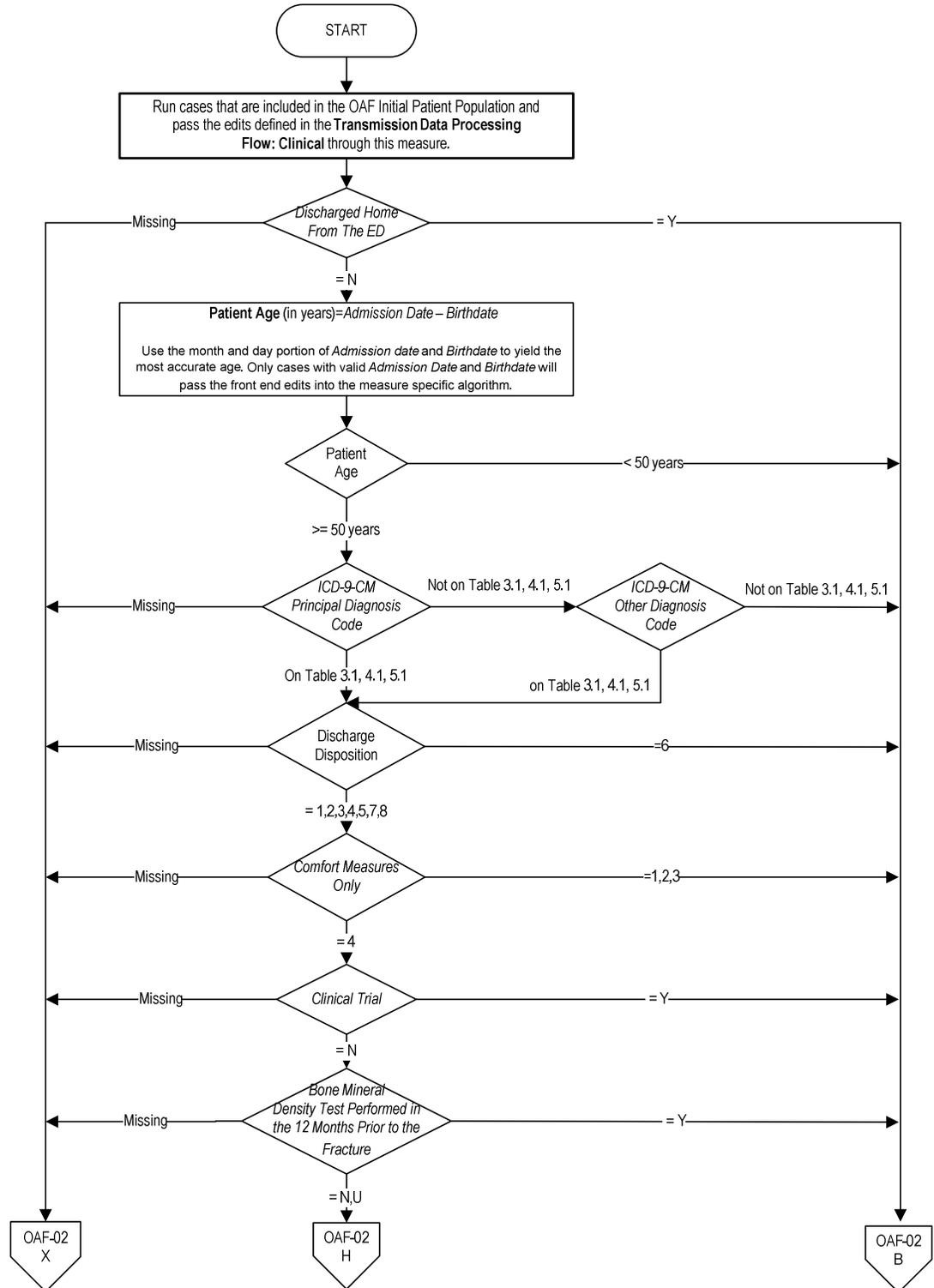
Watts NB, Bilezikian JP, Camacho PM, Greenspan SL, Harris ST, Hodgson SF, Kleerekoper M, Luckey MM, McClung MR, Pollack RP, Petak SM, AACE Osteoporosis Task Force. American Association of Clinical Endocrinologists medical guidelines for clinical practice for the diagnosis and treatment of postmenopausal osteoporosis. *Endocr Pract.* 2010 Nov-Dec;16(Suppl 3):1-37. [209 references]

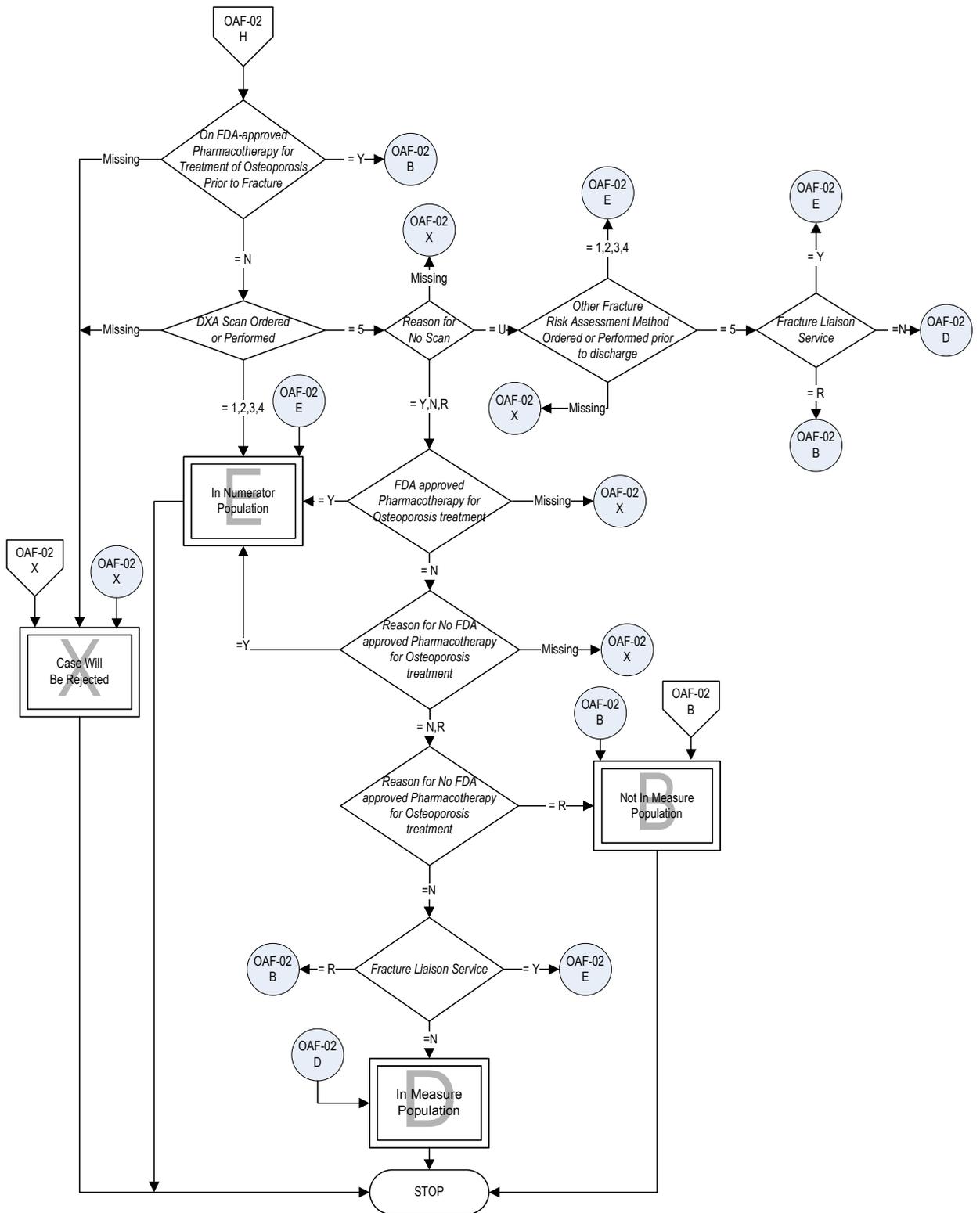
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OAF-02: Risk Assessment / Treatment After Fracture

Numerator: Patients who had either a DXA scan ordered or performed or a prescription for FDA-approved pharmacotherapy for Osteoporosis treatment prior to discharge.

Denominator: Patients age 50 and over discharged with a Principal ICD-9-CM diagnosis or other ICD-9-CM diagnosis of selected fracture codes as defined in Table 3.1 Vertebral Fracture, 4.1 Hip Fracture, or 5.1 Other Fracture.





Measure Information Form

Measure Set: Osteoporosis-Associated Fracture (OAF)

Measure Set ID#: OAF-03

Performance Measure Name: Discharge Instructions – Emergency Department

Description: Patients age 50 or over with a fracture of the vertebra, pelvis, wrist, ankle, or humerus discharged from the Emergency Department to home, or their caregivers, who have received written discharge instructions regarding the need to follow up with a primary care physician, hospital outpatient department or specialist for possible osteoporosis to reduce the risk of future fracture, or who were contacted by a fracture liaison service.

Rationale: Despite ongoing advances in osteoporosis detection and treatment options, studies suggest that osteoporosis continues to be poorly managed, undertreated, and under diagnosed. Between 5.2% to slightly more than 50% of women with fragility fractures are ever screened or treated for osteoporosis. Given the incidence of low-impact, or fragility, fracture, and findings that many patients with fragility fracture are never tested or treated for osteoporosis,¹⁻⁵ improvement in care is a cornerstone of health care's mission.

Type of Measure: Process

Improvement Noted As: An increase in the rate.

Numerator Statement: Patients or their caregivers who have received written discharge instructions regarding the need to follow up with a primary care physician, other specialist physician, or hospital outpatient department for possible osteoporosis to reduce the risk of future fracture, or who were seen by, contacted by, or linked to a fracture liaison service.

Included Populations: As above

Excluded Populations: None

Data Elements:

- *Written Discharge Instructions*
- *Fracture liaison service*

Denominator Statement: Patients age 50 or over discharged to home from the Emergency Department with an ICD-9-CM Principal or Other Diagnosis Code of Fracture of the vertebra, pelvis, wrist, humerus or ankle as defined in Table 3.1 Vertebral Fracture, or Table 5.1 Other Fracture.

Included Populations: Emergency Department patients age 50 or over discharged to home with an ICD-9-CM Principal or Other ICD-9-CM Diagnosis Code of fracture of the vertebra, pelvis, wrist, humerus or ankle as defined in Table 3.1 Vertebral Fracture, or Table 5.1 Other Fracture.

Excluded Populations:

- Age less than 50 years
- “*Comfort Measures Only*” documented
- Participation in a clinical trial pertaining to osteoporosis

Data Elements:

Arrival Date

Birthdate
ICD9-CM Principal Diagnosis Code
ICD9-CM Other Diagnosis Code
Comfort Measures Only
Clinical Trial
Discharge Date
Discharge Disposition

Risk Adjustment: No

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records.

Data Accuracy: Variation may exist in the assignment of ICD-9-CM codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions:

Sampling: No.

Data Reported As: Aggregate rate generated from count data reported as a proportion

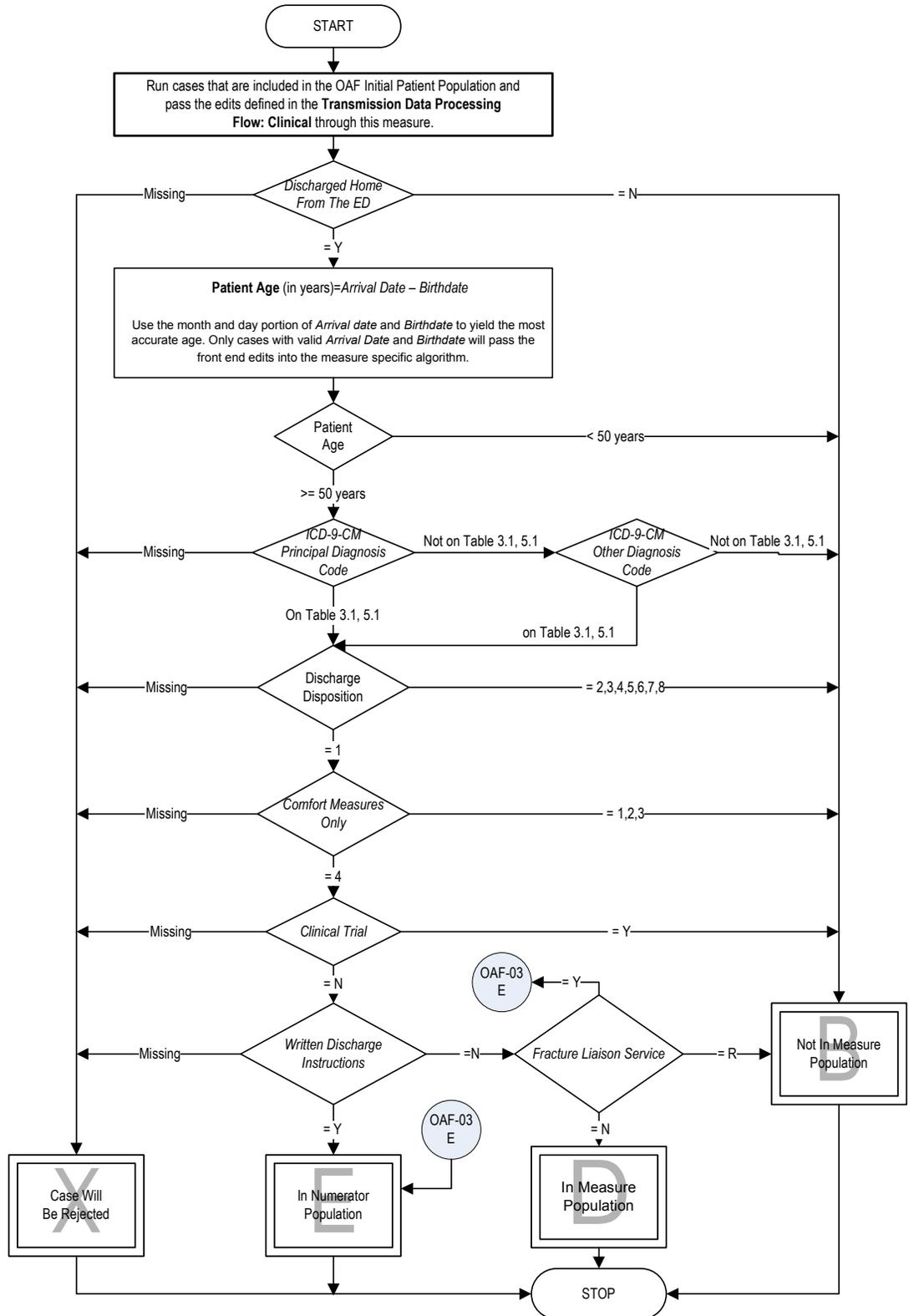
Selected References:

1. Hooven F, Gehlbach SH, Pekow P, Bertone E, Benjamin E. Follow-up treatment for osteoporosis after fracture. *Osteoporosis Int.* 2005;16(3):296-301.
2. Siris ES, Bilezikian JP, Rubin MR, et al. Pins and plaster aren't enough: a call for the evaluation and treatment of patients with osteoporotic fractures. *J Clin Endocrinol Metab.* 2003;88(8):3482-3486.
3. Castel H, Bonneh DY, Sherf M, Liel Y. Awareness of osteoporosis and compliance with management guidelines in patients with newly diagnosed low-impact fractures. *Osteoporosis Int.* 2001;12(7):559-564.
4. Gass M, Dawson-Hughes B. Preventing osteoporosis-related fractures: an overview. *Am J Med.* 2006;119(4)(Suppl 1):S3-S11.
5. Edwards BJ, Bunta AD, Madison LD, et al. An osteoporosis and fracture intervention program increases the diagnosis and treatment for osteoporosis for patients with minimal trauma fractures. *Jt Comm J Qual Patient Saf.* 2005;31(5):267-274.

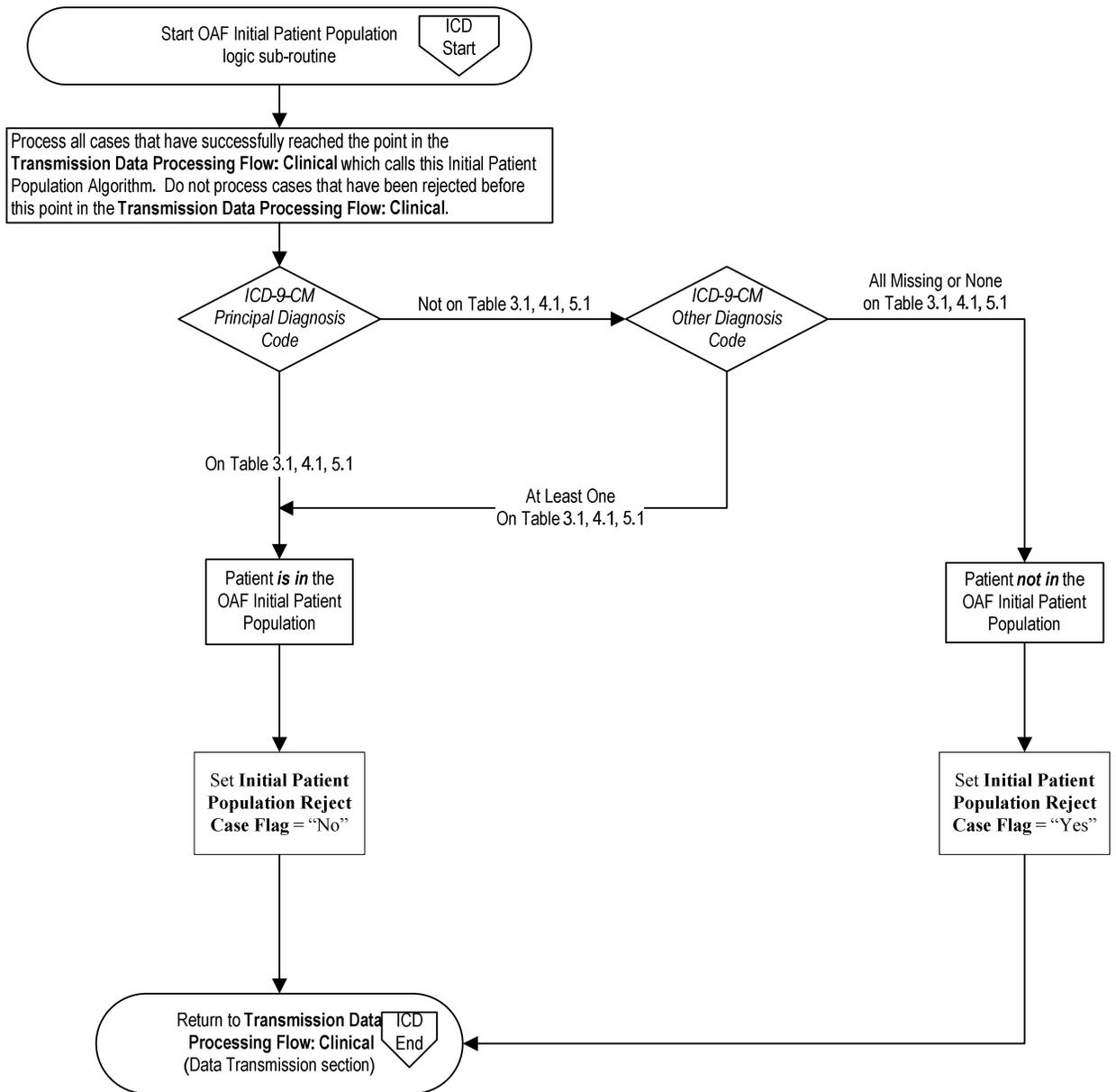
OAF-03: Discharge Instructions – Emergency Department

Numerator: Patients or their caregivers who have received written discharge instructions.

Denominator: Patients age 50 and over discharged with a Principal ICD-9-CM diagnosis or other ICD-9-CM diagnosis of selected fracture codes as defined in Table 3.1 Vertebral Fracture, or 5.1 Other Fracture.



OAF Initial Patient Population Algorithm



Data Dictionary

Data Element List for Osteoporosis-Associated Fracture Measures

Admission Date	All measures
Arrival Date	03
Birthdate	All measures
Bone Mineral Density Test Performed in the 12 Months Prior to the Fracture	02
Clinical Trial	All measures
Comfort Measures Only	All measures
Discharge Date	All measures
Discharge Disposition	All measures
Discharged Home From the ED	03
DXA Scan Ordered or Performed Prior to Discharge	02
FDA-approved Pharmacotherapy for Prevention or Treatment of Osteoporosis	02
Fracture Liaison Service	02. 03
ICD9-CM Other Diagnosis	All measures
ICD9-CM Principal Diagnosis	All measures
Laboratory Testing Performed in the Prior 12 Months	01
Laboratory Tests Ordered or Performed Prior to Discharge	01
On FDA-approved Pharmacotherapy for Treatment of Osteoporosis Prior to Fracture	02
Oral Administration of Vitamin D	01
Other Fracture Risk Assessment Method Ordered or Performed Prior to Discharge	02
Prior Diagnosis of Osteoporosis	01
Reason for No DXA Scan	02
Reason for No FDA-approved Pharmacotherapy for Prevention or Treatment of Osteoporosis	02
Underlying Cause of Osteoporosis	01
Written Discharge Instructions	03

Data Element Name: *Admission Date*

Collected For: The Joint Commission: OAF-01, OAF-02

Definition: The month, day, and year of admission to acute inpatient care.

Suggested Data Collection Question: What is the date the patient was admitted to acute inpatient care?

Format:

Length: 10 – MM-DD-YYYY (includes dashes)

Type: Date

Occurs: 1

Allowable Values:

MM = Month (01-12)

DD = Day (01-31)

YYYY = Year (20xx)

Notes for Abstraction:

- The intent of this data element is to determine the date that the patient was actually admitted to acute inpatient care. Because this data element is critical in determining the population for all measures, the abstractor should NOT assume that the claim information for the admission date is correct. If the abstractor determines through chart review that the date from billing is incorrect, for purposes of abstraction, she/he should correct and override the downloaded value.
 - If using claim information, the ‘Statement Covers Period’ is not synonymous with the ‘Admission Date’ and should not be used to abstract this data element. These are two distinctly different identifiers:
 - The Admission Date (Form Locator 12) is purely the date the patient was admitted as an inpatient to the facility.
 - The Statement Covers Period (“From” and “Through” dates in Form Locator 6) identifies the span of service dates included in a particular claim. The “From” Date is the earliest date of service on the claim.
- For patients who are admitted to Observation status and subsequently admitted to acute inpatient care, abstract the date that the determination was made to admit to acute inpatient care and the order was written. Do not abstract the date that the patient was admitted to Observation.
 - Example:
 - Medical record documentation reflects that the patient was admitted to observation on 04-05-20xx. On 04-06-20xx the physician writes an order to admit to acute inpatient care effective 04-05-20xx. The *Admission Date* would be abstracted as 04-06-20xx; the date the determination was made to admit to acute inpatient care and the order was written.
- If there are multiple inpatient orders, use the order that most accurately reflects the date that the patient was admitted. The admission date should not be abstracted

from the earliest admission order without regards to substantiating documentation. If documentation suggests that the earliest admission order does not reflect the date the patient was admitted to inpatient care, this date should not be used.

Example:

Preoperative Orders are dated as 04-06-20xx with an order to admit to Inpatient. Postoperative Orders, dated 05-01-20xx, state to admit to acute inpatient. All other documentation supports that the patient presented to the hospital for surgery on 05-01-20xx. The admission date would be abstracted as 05-01-20xx.

- For newborns that are born within this hospital, the admission date would be the date the baby was born.

Suggested Data Sources:

ONLY ALLOWABLE SOURCES

1. Physician orders
2. Face Sheet
3. UB-04, Field Location: 12

Excluded Data Sources

UB-04, Field Location: 06

Inclusion Guidelines for Abstraction:

None

Exclusion Guidelines for Abstraction:

- Admit to observation
- Arrival date

Data Element Name: *Arrival Date*

Collected For: OAF-03

Definition: The earliest documented month, day, and year the patient arrived at the hospital.

Suggested Data Collection Question: What was the **earliest** documented date the patient arrived at the hospital?

Format:

Length: 10 – MM-DD-YYYY (includes dashes) or UTD

Type: Date

Occurs: 1

Allowable Values: Enter the earliest documented date

MM = Month (01-12)

DD = Day (01-31)

YYYY = Year (20xx)

UTD = Unable to Determine

Notes for Abstraction:

- If the date of arrival is unable to be determined from medical record documentation, select “UTD”.
- The medical record must be abstracted as documented (taken at “face value”). When the date documented is obviously in error (not a valid format/range or outside of the parameters of care [after the *Discharge Date*]) **and** no other documentation is found that provides this information, the abstractor should select “UTD”.
Examples:
 - Documentation indicates the *Arrival Date* was 03-~~42~~-20xx. No other documentation in the list of ONLY ACCEPTABLE SOURCES provides a valid date. Since the *Arrival Date* is outside of the range listed in the Allowable Values for “Day”, it is not a valid date and the abstractor should select “UTD”.
 - Patient expires on 02-12-20xx and all documentation within the ONLY ACCEPTABLE SOURCES indicates the *Arrival Date* was 03-12-20xx. Other documentation in the medical record supports the date of death as being accurate. Since the *Arrival Date* is after the *Discharge Date* (death), it is outside of the parameter of care and the abstractor should select “UTD”.
- Review the ONLY ACCEPTABLE SOURCES to determine the earliest date the patient arrived at the ED, nursing floor, or observation, or as a direct admit to the cath lab. Use the earliest date documented unless other documentation suggests the patient was not in the hospital on that date. The intent is to utilize any documentation which reflects processes that occurred in the ED or hospital.
 - In determining if there is documentation which suggests the patient was not in the hospital on a given date, sources outside of the ONLY

ACCEPTABLE SOURCES list can be referenced. However, do not use dates described as hospital arrival on these sources for *Arrival Date*.

- Examples:
 - ED ECG dated/timed as 05-07-20xx 2142. ED Greet Date/Time 05-08-20xx 0125. ED Triage Date/Time 05-08-20xx 0130. EMS record shows patient was enroute at 05-08-20xx 0100. Enter 05-08-20xx for *Arrival Date*.
 - ED face sheet noted arrival date/time as 02-27-20xx 2300. The first vitals are recorded at 02-28-20xx 0020. There is no documentation to support that the patient was not in the hospital on 02-27-20xx 2300. Enter 02-27-20xx for *Arrival Date*.
 - ED Triage Date/Time 03-22-20xx 2355. ED rhythm strip dated/timed 03-23-20xx 0030. EMS report indicates patient was receiving EMS care from 0005 through 0025 on 03-23-20xx. Enter 03-23-20xx for *Arrival Date*.
- The source “Emergency department record” includes any documentation from the time period that the patient was an ED patient – e.g., ED face sheet, ED consent/Authorization for treatment forms, ED/Outpatient Registration/sign-in forms, ED vital sign record, triage record, ED physician orders, ECG reports, telemetry/rhythm strips, laboratory reports, x-ray reports.
- Do not use preprinted dates on a vital sign graphic record.
- The source “Procedure notes” refers to procedures such as cardiac cath, endoscopies, and surgical procedures. Procedure notes do not include ECG and x-ray reports.
- The arrival date may differ from the admission date.
- If the patient is in either an outpatient setting of the hospital other than observation status (e.g., dialysis, chemotherapy, cardiac cath) or a SNF unit of the hospital, and is subsequently admitted to acute inpatient, use the date the patient arrived at the ED or on the floor for acute inpatient care as the arrival date.
- **Observation status:**
 - If the patient was admitted to observation from an outpatient setting of the hospital, use the date the patient arrived at the ED or on the floor for observation care as the arrival date.
 - If the patient was admitted to observation from the ED of the hospital, use the date the patient arrived at the ED as the arrival date.

- **Direct Admits:**
 - If the patient is a “Direct Admit” to the cath lab, use the earliest date the patient arrived at the cath lab (or cath lab staging/holding area) as the arrival date.
 - For “Direct Admits” to acute inpatient or observation, use the earliest date the patient arrived at the nursing floor or in observation (as documented in the ONLY ACCEPTABLE SOURCES) as the arrival date.
- If the patient was transferred from your hospital’s satellite/free-standing ED or from another hospital within your hospital’s system (as an inpatient or ED patient), and there is one medical record for the care provided at both facilities, use the arrival date at the first facility.

Suggested Data Sources:

ONLY ACCEPTABLE SOURCES:

- Emergency department record
- Nursing admission assessment/admitting note
- Observation record
- Procedure notes
- Vital signs graphic record

Inclusion Guidelines for Abstraction:

None

Exclusion Guidelines for Abstraction:

Addressographs/Stamps

Data Element Name: *Birthdate*

Collected For: All Records

Definition: The month, day, and year the patient was born.

Note: Patient's age (in years) is calculated by *Admission Date* minus *Birthdate*. The algorithm to calculate age must use the month and day portion of admission date and birthdate to yield the most accurate age.

Suggested Data Collection Question: What is the patient's date of birth?

Format:

Length: 10 – MM-DD-YYYY (includes dashes)

Type: Date

Occurs: 1

Allowable Values:

MM = Month (01-12)

DD = Day (01-31)

YYYY = Year (1880-Current Year)

Notes for Abstraction:

Because this data element is critical in determining the population for all measures, the abstractor should NOT assume that the claim information for the birthdate is correct. If the abstractor determines through chart review that the date is incorrect, she/he should correct and override the downloaded value. If the abstractor is unable to determine the correct birthdate through chart review, she/he should default to the date of birth on the claim information.

Suggested Data Sources:

- Emergency department record
- Face sheet
- Registration form
- UB-04, Field Location: 10

Inclusion Guidelines for Abstraction:

None

Exclusion Guidelines for Abstraction:

None

Data Element Name: *Bone Mineral Density Test Performed in the 12 Months Prior to the Fracture*

Collected For: The Joint Commission: Osteo-02

Definition: Documentation in the medical record by a physician/APN/PA that a bone mineral density test was performed in the 12 months prior to the fracture date, or a copy of the bone mineral density test dated within the 12 months prior to fracture is in the medical record. See Table 6.1 for a listing of acceptable bone mineral density tests, excluding FRAX.

Suggested Data Collection Question: Is there documentation in the medical record by a physician/APN/PA that a bone mineral density test was performed in the 12 months prior to the fracture date, or is there a copy of the bone mineral density test dated within the 12 months prior to fracture in the medical record?

Format:

Length: 1

Type: Alphanumeric

Occurs: 1

Allowable Values:

Y (Yes) There is documentation in the medical record by a physician/APN/PA that a bone mineral density test was performed in the 12 months prior to the fracture date, or a copy of the bone mineral density test dated within the 12 months prior to fracture is in the medical record.

N (No) There is no documentation in the medical record by a physician/APN/PA that a bone mineral density test was performed in the 12 months prior to the fracture date, and a copy of the bone mineral density test dated within the 12 months prior to fracture is not in the medical record.

U (Unable to determine)

Notes for Abstraction:

- Documentation of the date of the bone mineral density test must be specific as to the months elapsed between the date of the scan and the fracture date; documentation cannot be generalized, such as “a few months ago” or “last year”.

Suggested Data Sources:

- Consultation notes
- Discharge instruction sheet
- Discharge summary
- Emergency department record

- History and physical
- Nursing notes
- Physician orders
- Progress notes

Inclusion Guidelines for Abstraction:

- DXA scan done three months ago
- DXA done on (date within last 23 months)
- DX done a few months ago

Exclusion Guidelines for Abstraction:

- DXA last year

Data Element Name: *Clinical Trial*

Collected For: OAF-01, OAF-02, OAF-03

Definition: Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with the same condition as the measure set were being studied (i.e. AMI, CAC, HF, PN, SCIP, STK, VTE, OAF).

Suggested Data Collection Question: During this hospital stay, was the patient enrolled in a clinical trial in which patients with the same condition as the measure set were being studied (i.e. AMI, CAC, HF, PN, SCIP, STK, VTE,OAF)?

Format:

Length: 1

Type: Alphanumeric

Occurs: 1

Allowable Values:

Y (Yes) There is documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with the same condition as the measure set were being studied (i.e. AMI, CAC, HF, PN, SCIP, STK, VTE,OAF).

N (No) There is no documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with the same condition as the measure set were being studied (i.e. AMI, CAC, HF, PN, SCIP, STK, VTE,OAF), or unable to determine from medical record documentation.

Notes for Abstraction:

- To select “Yes” to this data element, BOTH of the following must be true:
 1. **There must be a signed consent form for clinical trial.** For the purposes of abstraction, a clinical trial is defined as an **experimental study** in which research subjects are recruited and assigned a treatment/intervention and their outcomes are measured based on the intervention received. Treatments/interventions most often include use of drugs, surgical procedures, and devices. Often a control group is used to compare with the treatment/intervention. Allocation of different interventions to participants is usually randomized.
 2. **There must be documentation on the signed consent form that during this hospital stay the patient was enrolled in a clinical trial in which patients with the same condition as the measure set were being studied (i.e. AMI, CAC, HF, PN, SCIP, STK, VTE,OAF).** Patients may either be newly enrolled in a clinical trial during the hospital stay or enrolled in a clinical trial prior to arrival and continued active participation in that clinical trial during this hospital stay.

- In the following situations, select "No":
 1. **There is a signed patient consent form for an observational study only.**
Observational studies are non-experimental and involve no intervention (e.g., registries). Individuals are observed (perhaps with lab draws, interviews, etc.), data is collected, and outcomes are tracked by investigators. Although observational studies may include the assessment of the effects of an intervention, the study participants are not allocated into intervention or control groups.
 2. **It is not clear whether the study described in the signed patient consent form is experimental or observational.**
 3. **It is not clear which study population the clinical trial is enrolling.**
Assumptions should not be made if it is not specified.

AMI:

Only capture patients enrolled in clinical trials studying patients with acute myocardial infarction (AMI), ST-elevation myocardial infarction (STEMI), Non ST-elevation MI (NSTEMI), heart attack, or acute coronary syndrome (ACS).

CAC:

Only capture patients enrolled in clinical trials studying children with asthma.

HF:

Only capture patients enrolled in clinical trials studying patients with heart failure (HF).

PN:

Only capture patients enrolled in clinical trials studying patients with pneumonia.

SCIP:

The clinical trial should be relevant to one or more of the SCIP measures.

Some examples may include but are not limited to:

- The clinical trial involved the use of antibiotics.
- The clinical trial involved testing a new beta-blocker.
- The clinical trial involved the use of VTE prophylaxis.

STK:

Only capture patients enrolled in clinical trials studying patients with stroke.

VTE:

Only capture patients enrolled in clinical trials studying patients with VTE (prevention or treatment interventions).

OAF:

Only capture patients enrolled in clinical trials studying patients with osteoporosis-associated (fragility) fracture (prevention or treatment interventions).

Suggested Data Sources:
ONLY ACCEPTABLE SOURCES
Signed consent form for clinical trial

Inclusion Guidelines for Abstraction:
None

Exclusion Guidelines for Abstraction:
None

Data Element Name: *Comfort Measures Only*

Collected For: OAF-01, OAF-02, OAF-03

Definition: Comfort Measures Only refers to medical treatment of a dying person where the natural dying process is permitted to occur while assuring maximum comfort. It includes attention to the psychological and spiritual needs of the patient and support for both the dying patient and the patient's family. Comfort Measures Only is commonly referred to as "comfort care" by the general public. It is not equivalent to a physician order to withhold emergency resuscitative measures such as Do Not Resuscitate (DNR).

Suggested Data Collection Question: When is the earliest physician/APN/PA documentation of comfort measures only?

Format:

Length: 1

Type: Alphanumeric

Occurs: 1

Allowable Values:

- 1 **Day 0 or 1:** The earliest day the physician/APN/PA documented comfort measures only was the day of arrival (Day 0) or day after arrival (Day 1).
- 2 **Day 2 or after:** The earliest day the physician/APN/PA documented comfort measures only was two or more days after arrival day (Day 2+).
- 3 **Timing unclear:** There is physician/APN/PA documentation of comfort measures only during this hospital stay, but whether the earliest documentation of comfort measures only was on day 0 or 1 OR after day 1 is unclear.
- 4 **Not Documented/UTD:** There is no physician/APN/PA documentation of comfort measures only, or unable to determine from medical record documentation.

Notes for Abstraction:

- **Only accept terms identified in the list of inclusions. No other terminology will be accepted.**
- Physician/APN/PA documentation of comfort measures only (hospice, comfort care, etc.) mentioned in the following contexts suffices:
 - Comfort measures only recommendation
 - Order for consultation or evaluation by a hospice care service
 - Patient or family request for comfort measures only
 - Plan for comfort measures only
 - Referral to hospice care service

- Determine the earliest day the physician/APN/PA DOCUMENTED comfort measures only in the ONLY ACCEPTABLE SOURCES. Do not factor in when comfort measures only was actually instituted.
Examples:
 - “Discussed comfort care with family on arrival” noted in day 2 progress note – Select “2”.
 - POLST order for comfort care dated prior to arrival – Select “1”.
- If any of the inclusions are documented in the ONLY ACCEPTABLE SOURCES, select “1”, “2”, or “3” accordingly, unless otherwise specified in this data element.
- Documentation of an Inclusion term in the following situations should be disregarded. Continue to review the remainder of the ONLY ACCEPTABLE SOURCES for acceptable Inclusion terms. If the **ONLY** documentation found is an Inclusion term in the following situations, select value “4”:
 - Documentation that is dated prior to arrival or documentation which refers to the pre-arrival time period (e.g., comfort measures only order in previous hospitalization record, “Pt. on hospice at home” in MD ED note).

EXCEPTION:

State-authorized portable orders (SAPOs). SAPOs are specialized forms, Out-of-Hospital DNR (OOH DNR) or Do Not Attempt Resuscitation (DNAR) orders, or identifiers authorized by state law, that translate a patient’s preferences about specific-end-of-life treatment decisions into portable medical orders.

Examples:

- DNR-Comfort Care form
- MOLST (Medical Orders for Life-Sustaining Treatment)
- POLST (Physician Orders for Life-Sustaining Treatment)
- Pre-printed order forms signed by the physician/APN/PA:
 - Disregard an Inclusion term in a statement that is not part of the order or that is not clearly selected (on a form that offers options to select from).
Examples:
 - Inclusion term used only in the title of the form (e.g., “DNR-Comfort Care” form, option “Comfort Care” is not checked)
 - Inclusion term used only in the pre-printed instruction for completing the form (e.g., “Copy of form to hospice”, “Instructions” section of the form further defines the option “Comfort care”)
 - If there is a specific option for “Comfort Measures Only” (or other Inclusion term) that is **unchecked**, then disregard documentation on that form, regardless of whether that Inclusion term might be used in a different option that is checked.
Example:
 - POLST form - The “Limited Additional Interventions” option checked is described as “In addition to care described in Comfort Measures Only, use medical treatment, antibiotics, ...”.

- Inclusion term clearly described as negative.
 - Examples:
 - "No comfort care"
 - "Not a hospice candidate"
 - "Not appropriate for hospice care"
 - "I offered hospice care consult to discuss end of life issues. Family did not show any interest."
 - "Patient declines hospice care at this time but I feel this will be an important plan of care when his condition deteriorates further"
 - "Comfort care would also be reasonable - defer decision for now"
 - Comfort measures made conditional upon whether or not the patient arrests. Examples:
 - "DNRCCA" (Do Not Resuscitate – Comfort Care Arrest)
 - "Comfort Care Protocol will be implemented in the event of a cardiac arrest or a respiratory arrest"
 - "Family requests comfort measures only should the patient arrest."
- Documentation of "CMO" should be disregarded if documentation makes clear it is not being used as an acronym for Comfort Measures Only (e.g., "hx dilated CMO" – Cardiomyopathy context).
- If there is documentation of an Inclusion term clearly described as negative in one source and an Inclusion term NOT described as negative in another source, that second source would still count for comfort measures only.
 - Examples:
 - On Day 0 the physician documents "The patient is not a hospice candidate." On Day 3, the physician orders a hospice consult. Select "2".
 - On Day 1 the physician documents the patient is comfort measures only. On Day 2 the physician documents "The patient is refusing CMO." Select "1".

Suggested Data Sources:

PHYSICIAN/APN/PA DOCUMENTATION ONLY IN THE FOLLOWING ONLY ACCEPTABLE SOURCES:

- Discharge summary
- DNR/MOLST/POLST forms
- Emergency department record
- Physician orders
- Progress notes

Excluded Data Sources:

Restraint order sheet

Inclusion Guidelines for Abstraction:

- Brain dead
- Brain death
- Comfort care
- Comfort measures

- Comfort measures only (CMO)
- Comfort only
- DNR-CC
- End of life care
- Hospice
- Hospice care
- Organ harvest
- Terminal care

Exclusion Guidelines for Abstraction:

None

Data Element Name: *Discharge Date*

Collected For: OAF-01, OAF-02, OAF-03

Definition: The month, day, and year the patient was discharged from acute care, left against medical advice, or expired during this stay.

Suggested Data Collection Question: What is the date the patient was discharged from acute care, left against medical advice (AMA), or expired?

Format:

Length: 10 – MM-DD-YYYY (includes dashes)

Type: Date

Occurs: 1

Allowable Values:

MM = Month (01-12)

DD = Day (01-31)

YYYY = Year (20xx)

Notes for Abstraction:

Because this data element is critical in determining the population for many measures, the abstractor should NOT assume that the claim information for the discharge date is correct. If the abstractor determines through chart review that the date is incorrect, she/he should correct and override the downloaded value. If the abstractor is unable to determine the correct discharge date through chart review, she/he should default to the discharge date on the claim information.

Suggested Data Sources:

- Discharge summary
- Face sheet
- Nursing discharge notes
- Physician orders
- Progress notes
- Transfer note
- UB-04, Field Location: 6

Inclusion Guidelines for Abstraction:

None

Exclusion Guidelines for Abstraction:

None

Data Element Name: *Discharge Disposition*

Collected For: OAF-01, OAF-02, OAF-03

Definition: The final place or setting to which the patient was discharged on the day of discharge.

Suggested Data Collection Question: What was the patient's discharge disposition on the day of discharge?

Format:

Length: 1

Type: Alphanumeric

Occurs: 1

Allowable Values:

- 1 Home
- 2 Hospice - Home
- 3 Hospice – Health Care Facility
- 4 Acute Care Facility
- 5 Other Health Care Facility
- 6 Expired
- 7 Left Against Medical Advice/AMA
- 8 Not Documented or Unable to Determine (UTD)

Notes for Abstraction:

- **Only use documentation from the day of or the day before discharge** when abstracting this data element.

Example:

Documentation in the Discharge Planning notes on 04-01-20xx state that the patient will be discharged back home. On 04-06-20xx the physician orders and nursing discharge notes on the day of discharge reflect that the patient was being transferred to skilled care. The documentation from 04-06-20xx would be used to select value "5" (Other Health Care Facility).

- Consider discharge disposition documentation in the discharge summary, a post-discharge addendum, or a late entry as day of discharge documentation, regardless of when it was dictated/written.
- The medical record must be abstracted as documented (taken at "face value"). Inferences should not be made based on internal knowledge.

- If there is documentation that further clarifies the level of care that documentation should be used to determine the correct value to abstract. If documentation is contradictory, use the latest documentation.
Examples:
 - Discharge summary dictated 2 days after discharge states patient went “home”. Physician note on day of discharge further clarifies that the patient will be going “home with hospice”. Select value “2” (“Hospice - Home”).
 - Discharge planner note from day before discharge states “XYZ Nursing Home”. Discharge order from day of discharge states “Discharge home”. Contradictory documentation, use latest. Select value “1” (“Home”).
 - Physician order on discharge states “Discharge to ALF”. Discharge instruction sheet completed after the physician order states patient discharged to “SNF”. Contradictory documentation, use latest. Select value “5” (“Other Health Care Facility”).
- If documentation is contradictory, and you are unable to determine the latest documentation, select the disposition ranked highest (top to bottom) in the following list. See Inclusion lists for examples.
 - Acute Care Facility
 - Hospice – Health Care Facility
 - Hospice – Home
 - Other Health Care Facility
 - Home
- Hospice (values “2” and “3”) includes discharges with hospice referrals and evaluations.
- If the medical record states only that the patient is being discharged to another hospital and does not reflect the level of care that the patient will be receiving, select value “4” (“Acute Care Facility”).
- If the medical record identifies the facility the patient is being discharged to by name only (e.g., “Park Meadows”), and does not reflect the type of facility or level of care, select value “5” (“Other Health Care Facility”).
- If the medical record states only that the patient is being “discharged” and does not address the place or setting to which the patient was discharged, select value “1” (“Home”).
- When determining whether to select value “7” (“Left Against Medical Advice/AMA”):
 - Explicit “left against medical advice” documentation is not required. E.g., “Patient is refusing to stay for continued care” – Select value “7”.
 - Documentation suggesting that the patient left before discharge instructions could be given does not count.
 - A signed AMA form is not required, for the purposes of this data element.
- Do not consider AMA documentation and other disposition documentation as “contradictory”. If any source states the patient left against medical advice, select value “7”, regardless of whether the AMA documentation was written last. E.g., AMA form signed and discharge instruction sheet states “Discharged home with belongings” – Select “7”.

Suggested Data Sources:

- Discharge instruction sheet
- Discharge planning notes
- Discharge summary
- Nursing discharge notes
- Physician orders
- Progress notes
- Social service notes
- Transfer record

Excluded Data Sources:

- Any documentation prior to the last two days of hospitalization
- Coding documents
- UB-04

Inclusion Guidelines for Abstraction:**Home (Value 1):**

- Assisted Living Facilities (ALFs) – Includes ALFs and assisted living care at nursing home, intermediate care, and skilled nursing facilities
- Court/Law Enforcement – includes detention facilities, jails, and prison
- Home – includes board and care, foster or residential care, group or personal care homes, retirement communities, and homeless shelters
- Home with Home Health Services
- Outpatient Services including outpatient procedures at another hospital, Outpatient Chemical Dependency Programs and Partial Hospitalization

Hospice – Home (Value 2):

- Hospice in the home (or other “Home” setting as above in Value 1)

Hospice – Health Care Facility (Value 3):

- Hospice - General Inpatient and Respite
- Hospice - Residential and Skilled Facilities
- Hospice - Other Health Care Facilities

Acute Care Facility (Value 4):

- Acute Short Term General and Critical Access Hospitals
- Cancer and Children’s Hospitals
- Department of Defense and Veteran’s Administration Hospitals

Other Health Care Facility (Value 5):

- Extended or Intermediate Care Facility (ECF/ICF)
- Long Term Acute Care Hospital (LTACH)
- Nursing Home or Facility including Veteran’s Administration Nursing Facility
- Psychiatric Hospital or Psychiatric Unit of a Hospital

- Rehabilitation Facility including Inpatient Rehabilitation Facility/Hospital or Rehabilitation Unit of a Hospital
- Skilled Nursing Facility (SNF), Sub-Acute Care or Swing Bed
- Transitional Care Unit (TCU)

Exclusion Guidelines for Abstraction:

None

Data Element Name: *Discharged Home From The ED*

Collected For: Osteo-03

Definition: Patient received care in a dedicated emergency department of the facility and was discharged home from the ED.

Suggested Data Collection Question: Was the patient discharged home from the ED?

Format:

Length: 1

Type: Alphanumeric

Occurs: 1

Allowable Values:

Y (Yes) There is documentation the patient was an ED patient and was discharged home from the ED.

N (No) There is no documentation the patient was an ED patient, OR the patient was an ED patient and was not discharged home from the ED, OR unable to determine from medical record documentation.

Notes for Abstraction:

- For the purposes of this data element an ED patient is defined as any patient receiving care or services in the Emergency Department.
- Patients seen in an Urgent Care, ER Fast Track, etc. are not considered an ED patient unless they received services in the emergency department at the facility (e.g., patient treated at an urgent care and transferred to the main campus ED is considered an ED patient, but a patient seen at the urgent care and transferred to the hospital as a direct admit would not be considered an ED patient).
- Patients presenting to the ED who do not receive care or services in the ED abstract as a “No” (e.g., patient is sent to hospital from physician office and presents to ED triage and is instructed to proceed straight to floor).
- Patients seen in the ED and admitted to inpatient status, abstract as “No”.

ED:

- If a patient is transferred in from any emergency department (ED) or observation unit OUTSIDE of your hospital, select “No”. This applies even if the emergency department or observation unit is part of your hospital’s system (e.g., your hospital’s free-standing or satellite emergency department), has a shared medical record or provider number, or is in close proximity. Select “No”, even if the transferred patient is seen in this facility’s ED.
- If the patient is transferred to your hospital from an outside hospital where he/she was an inpatient or outpatient, select “No”. This applies even if the two hospitals are close in proximity, part of the same hospital system, have the same provider

number, and/or there is one medical record. Select “No”, even if the transferred patient is seen in this facility’s ED.

Suggested Data Sources:

- Emergency department record
- Face sheet
- Registration form

Inclusion Guidelines for Abstraction:

None

Exclusion Guidelines for Abstraction:

- Urgent Care
- Fast Track ED
- Terms synonymous with Urgent Care

Data Element Name: *DXA Scan Ordered or Performed Prior to Discharge*

Collected For: The Joint Commission: Osteo-02

Definition: Evidence that a DXA scan was ordered prior to discharge or that the results of the scan are in the patient's record.

Suggested Data Collection Question: Was a DXA scan ordered or performed prior to discharge?

Format:

Length: 1

Type: Alphanumeric

Occurs: 1

Allowable Values:

- | | |
|---------|---|
| 1 (Yes) | There is an order by a physician/APN/PA for a DXA scan. |
| 2 (Yes) | There are test results from a DXA scan performed in the last 12 months in the record. |
| 3 (Yes) | A prescription for performance of a DXA scan was given to the patient on discharge. |
| 4 (Yes) | Written discharge instructions given to the patient include instructions to follow up with his or her physician for a DXA scan. |
| 5 (No) | There is no order by a physician/APN/PA for a DXA scan, the scan results are not in the record, there is no prescription given to the patient for a DXA scan, and there are no written discharge instructions given to the patient to follow up with his or her physician for a DXA scan. |

Notes for Abstraction:

- Instructions to the patient must be specific for DXA scan; general terms such as "scan" or "BMD test" are unacceptable.

Suggested Data Sources:

- Physician orders
- Laboratory results
- Emergency Department records
- Discharge instructions
- Discharge summary

Inclusion Guidelines for Abstraction:

- Patient instructed to see PCP for follow-up DXA scan

Exclusion Guidelines for Abstraction:

- See own MD for tests
- Prescription given for testing as an outpatient
- BMD test

Data Element Name: *FDA-approved Pharmacotherapy for Treatment of Osteoporosis*

Collected For: The Joint Commission: Osteo-02

Definition: Enumeration of FDA-approved pharmacotherapeutic agents for the prevention or treatment of osteoporosis, as defined in Table 1.1.

Suggested Data Collection Question: Did the patient receive a prescription for an FDA-approved pharmacotherapeutic agent for the treatment of osteoporosis as defined in Table 1.1?

Format:

Length: 1

Type: Alphanumeric

Occurs: 1

Allowable Values:

Y (Yes) There is documentation of FDA-approved pharmacotherapy as defined in Table 1.1 for the treatment of osteoporosis.

N (No) There is no documentation of FDA-approved pharmacotherapy as defined in Table 1.1 for the treatment of osteoporosis, or unable to determine from medical documentation.

Notes for Abstraction:

- Only count those agents specified on Table 1.1. Other agents, such as calcium and Vitamin D and estrogen are not considered specific for osteoporosis treatment.
- If the patient either receives a medication on Table 1.1 while hospitalized, or receives a prescription at discharge, or is given an appointment to return for administration of Reclast or another medication on Table 1.1, select Y, (Yes).

Suggested Data Sources:

- Consultation notes
- Discharge instruction sheet
- Discharge summary
- Emergency department record
- Medication administration records
- History and physical
- Nursing notes
- Physician orders
- Progress notes

Inclusion Guidelines for Abstraction:

- Refer to Table 1.1 for a list of included medications

Exclusion Guidelines for Abstraction:

- On estrogen
- Takes calcium supplements

Data Element Name: *Fracture Liaison Service*

Collected For: The Joint Commission: OAF-02, OAF-03

Definition: A fracture liaison service includes a specialized approach to patients with fragility fractures, whereby such patients receive diagnostic assessment and once diagnosed with osteopenia or osteoporosis, therapeutic treatment. These services may be rendered either independent of or in concert with primary care physicians or other specialized practitioners.

Suggested Data Collection Question: Is there documentation that the patient was seen by, contacted by, or linked to a fracture liaison service?

Format:

Length: 1

Type: Alphanumeric

Occurs: 1

Allowable Values:

Y (Yes) There is documentation that the patient was seen by, contacted by, or received instructions to contact a fracture liaison service.

N (No) There is no documentation that the patient was seen by, contacted by, or received instructions to contact a fracture liaison service.

R (Refused) Patient refused to be seen by, contacted by, or referred to a fracture liaison service.

Notes for Abstraction:

- When determining whether the patient was seen by or contacted by a fracture liaison service, there must be a dated, timed and signed notation that the patient was seen by a practitioner from such a service.
- Fracture liaison services are those whose aim is the detection and treatment of osteoporosis; they are not generalized orthopedic services.
- When determining if a patient was linked to a fracture liaison service, there must be explicit instructions given to the patient to contact the service, listing the service and the telephone number.

Suggested Data Sources:

- Discharge instruction sheet
- Emergency department record
- Nursing notes
- Physician orders
- Progress notes

Inclusion Guidelines for Abstraction:

- Patient instructed to contact XXX fracture service at (Area Code) (XXX-XXXX)
- Patient seen in consultation for wrist fracture; I will telephone her at home to arrange appointment for DXA scan

Exclusion Guidelines for Abstraction:

- Told the patient to contact Dr. X's office in the a.m.
- Will call patient in the a.m.

Data Element Name: *ICD-9-CM Other Diagnosis Codes*

Collected For: CMS/The Joint Commission: All Records

Definition: The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) codes associated with the diagnosis for this hospitalization.

Suggested Data Collection Question: What were the ICD-9-CM other diagnosis codes selected for this medical record?

Format:

Length: 6 (with or without decimal point)

Type: Alphanumeric

Occurs: 24

Allowable Values:

Any valid ICD-9-CM diagnosis code

Notes for Abstraction:

None

Suggested Data Sources:

- Discharge summary
- Face sheet
- UB-04, Field Locations: 67A-Q

Note: Medicare will only accept codes listed in fields A-H

Inclusion Guidelines for Abstraction:

None

Exclusion Guidelines for Abstraction:

None

Data Element Name: *ICD-9-CM Principal Diagnosis Code*

Collected For: All Records

Definition: The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization.

Suggested Data Collection Question: What was the ICD-9-CM code selected as the principal diagnosis for this record?

Format:

Length: 6 (with or without decimal point)

Type: Alphanumeric

Occurs: 1

Allowable Values:

Any valid ICD-9-CM diagnosis code

Notes for Abstraction:

The principal diagnosis is defined in the Uniform Hospital Discharge Data Set (UHDDS) as “that condition established after study to be chiefly responsible for occasioning the admission of the patient to the hospital for care.”

Suggested Data Sources:

- Discharge summary
- Face sheet
- UB-04, Field Location: 67

Inclusion Guidelines for Abstraction:

Refer to Appendix A, for ICD-9-CM Code Tables

Exclusion Guidelines for Abstraction:

Refer to Appendix A, for ICD-9-CM Code Tables

Data Element Name: *Laboratory Testing Performed in the Prior 12 Months*

Collected For: The Joint Commission: OAF-01

Definition: Documentation in the current medical record that all five required laboratory tests were performed in the 12 months prior to the admission date. The five required laboratory tests are:

- Complete blood cell count (CBC)
- Kidney function test
- Liver function test
- Serum calcium
- Vitamin D level (25(OH)D)

Suggested Data Collection Question: Is there documentation in the medical record that all five required laboratory tests were performed within the 12 months prior to admission date?

Format:

Length: 1

Type: Alphanumeric

Occurs: 1

Allowable Values:

- | | |
|---------|--|
| Y (Yes) | There is documentation in the current medical record that all five required laboratory tests were performed within the 12 months prior to admission date. |
| N (No) | There is no documentation in the current medical record that all five required laboratory tests were performed within the 12 months prior to admission date. |

Notes for Abstraction:

- If there is documentation that each of the five required laboratory tests has been performed in the 12 months prior to the date of admission, select “Yes”.
- If the results of all five required laboratory tests are available in the medical record and dated within 12 months prior to the date of admission, select “Yes”.
- If there is a general statement that “all labs were done”, select “No”.
- If the date of laboratory testing is not specified, select “No”.

Suggested Data Sources:

- Admission Note
- History
- Consultation Note
- Progress notes
- Laboratory results
- Emergency Department Record

- Discharge Summary

Inclusion Guidelines for Abstraction:

- Laboratory results in chart for all five tests and dated within 12 months prior to admission
- Medical record documentation of complete blood count (CBC), kidney function, liver function, serum calcium, and Vitamin D level (25[OH]D) performed in the 12 months prior to admission

Exclusion Guidelines for Abstraction:

- All labs done
- Labs done 6 months ago
- Required labs done
- CBC, liver and kidney function, and calcium done 6 months ago

Data Element Name: *Laboratory Tests Ordered or Performed Prior to Discharge*

Collected For: The Joint Commission: Osteo-01

Definition: Evidence that all of the specified laboratory tests were ordered prior to discharge or that all of the specified laboratory results are in the patient's record.

Suggested Data Collection Question: Is there evidence that all of the specified laboratory tests were ordered prior to discharge or that all of the specified laboratory results are in the patient's record?

Format:

Length: 1

Type: Alphanumeric

Occurs: 1

Allowable Values:

- 1 (Yes) There is an order for the specified laboratory tests.
- 2 (Yes) There are results for the specified laboratory tests in the record.
- 3 (Yes) A prescription for performance of the specified laboratory tests was given to the patient on discharge.
- 4 (Yes) Written discharge instructions given to the patient include instructions to follow up with his or her physician for the specified laboratory tests.
- 5 (Partial) The only lab test not ordered or performed is the Vitamin D test, 25(OH)D.
- 6 (No) There is no order for all the specified laboratory tests, the specified laboratory test results are not in the record, there is no prescription given to the patient for the specified laboratory tests, and there are not written discharge instructions given to the patient to follow up with his or her physician for the specified laboratory tests.
- 7 (Refused) There is evidence in the record that the patient refused all laboratory testing for osteoporosis.

Notes for Abstraction:

- The specific laboratory test are (all five):
 - **Complete Blood Count (CBC)**
 - and
 - **Kidney Function Test**-may be either:

- Serum Creatinine
- Kidney Function Panel
- Kidney Panel
- Renal Function Panel

and

- **Liver Function Test**—may be either:

- Liver Panel
- Liver Profile
- Liver Function Panel
- Hepatic Panel
- Hepatic Profile
- All of the following:
 - Bilirubin
 - Alk. Phos
 - AST
 - ALT
 - Total Protein
 - Albumin

and

- **Serum Calcium**

and

- **25(OH) Vitamin D level**

- Instruction to the patient must be specific for the laboratory test to be performed; general terms such as “labs” are unacceptable.
- If some of the laboratory tests are performed while an inpatient and the patient is given a prescription for the remaining laboratory tests on discharge, select value 1, (Yes).

Suggested Data Sources:

- Physician orders
- Laboratory results
- Discharge instructions
- Discharge summary

Inclusion Guidelines for Abstraction:

- Patient instructed to see PCP for CBC, liver and kidney function, serum calcium and Vitamin D level

Exclusion Guidelines for Abstraction:

- See own MD for labs
- Prescription given for labs as an outpatient

Data Element Name: *On FDA-approved Pharmacotherapy for Treatment of Osteoporosis Prior to Fracture*

Collected For: The Joint Commission: Osteo-02

Definition: Enumeration of FDA-approved pharmacotherapeutic agents for the prevention or treatment of osteoporosis, as defined in Table 1.1.

Suggested Data Collection Question: Was the patient on FDA-approved pharmacotherapeutic agent for the treatment of osteoporosis as defined in Table 1.1 immediately prior to the fracture occurrence?

Format:

Length: 1

Type: Alphanumeric

Occurs: 1

Allowable Values:

Y (Yes) The patient was on FDA-approved pharmacotherapy as defined in Table 1.1 for the treatment of osteoporosis immediately prior to the fracture.

N (No) The patient was not on FDA-approved pharmacotherapy as defined in Table 1.1 for the treatment of osteoporosis immediately prior to the fracture.

Notes for Abstraction:

- Only count those agents specified on Table 1.1 Other agents, such as calcium and Vitamin D and estrogen are not considered specific for osteoporosis treatment.
- “Immediately prior to the fracture” means that the medication was being taken by or given to the patient just before the fracture occurred. If the patient was not taking the medication or had a past prescription that was not active, select N (No).

Suggested Data Sources:

- Consultation notes
- History and physical
- Nursing notes
- Admission medication list
- Progress notes

Inclusion Guidelines for Abstraction:

- Refer to Table 1.1 for a list of included medications

Exclusion Guidelines for Abstraction:

- On estrogen
- Takes calcium supplements

Data Element Name: *Oral Administration of Vitamin D*

Collected For: The Joint Commission: OAF-01

Definition: Administration of Vitamin D, alone or in combination with other components, by mouth.

Suggested Data Collection Question: Did the patient receive Vitamin D by mouth while hospitalized at a dose equal to or greater than 800 IU (international units) daily?

Format:

Length: 1

Type: Alphanumeric

Occurs: 1

Allowable Values:

Y (Yes) There is documentation the patient received Vitamin D by mouth at a dose equal to or greater than 800 IU daily.

N (No) There is no documentation that Vitamin D by mouth at a dose equal to or greater than 800 IU. Daily was ordered.

U (Unable to determine)

R (Refused) Vitamin D was ordered in a dose equal to or greater than 800 IU daily, but the patient refused.

Notes for Abstraction:

- Vitamin D must be given by mouth at a dose to equal or exceed 800 IU Daily. Examples of dosing regimens that are acceptable are:
 - 1000 IU daily
 - 400 IU. b.i.d.
 - 10,000 IU weekly
 - 50,000 IU weekly
- Other dosing regimens that calculate to or are ordered at a level of 800 IU or greater per day are also acceptable.
- At least one dose needs to have been administered prior to discharge; orders alone are insufficient.
- The Vitamin D can be administered as a single drug or in combination with another medication, such as Os-Cal Extra D3. The Vitamin D content of common combination medications is listed below (per pill or tablet):
 - Os-Cal Extra D3-600 IU
 - Os-Cal Calcium + D3 – 200 IU
 - Centrum Silver Ultra Women's Tablets – 800 IU
 - Centrum Ultra Women's – 800 IU

Centrum Silver – 500 IU
Centrum Cardio – 200 IU
Centrum Ultra Men's – 600 IU
OneADay Women's – 1000 IU
OneADay Mens – 700 IU

Suggested Data Sources:

- Medication administration records
- Physician orders

Inclusion Guidelines for Abstraction:

- Vitamin D 1000 mg. given

Exclusion Guidelines for Abstraction:

- Vitamin D 400 mg daily

Data Element Name: *Other Fracture Risk Assessment Method Ordered or Performed Prior to Discharge*

Collected For: The Joint Commission: Osteo-02

Definition: Evidence that another fracture risk assessment method as defined in Table 6.1 was ordered by a physician/APN/PA prior to discharge or that the results of the test are in the patient's record.

Suggested Data Collection Question: Is there evidence that another fracture risk assessment method as defined in Table 6.1 was ordered by a physician/APN/PA prior to discharge or that the test results are in the patient's record?

Format:

Length: 1

Type: Alphanumeric

Occurs: 1

Allowable Values:

- | | |
|---------|--|
| 1 (Yes) | There is an order by a physician/APN/PA for an other fracture risk assessment method. |
| 2 (Yes) | There are test results for another fracture risk assessment method in the record. |
| 3 (Yes) | A prescription for performance of another fracture risk assessment method was given to the patient on discharge. |
| 4 (Yes) | Written discharge instructions given to the patient include instructions to follow up with his or her physician for another fracture risk assessment method. |
| 5 (No) | There is no order by a physician/APN/PA for a another fracture risk assessment method, the test results are not in the record, there is no prescription given to the patient for another fracture risk assessment method, and there are no written discharge instructions given to the patient to follow up with his or her physician for another fracture risk assessment method. |

Notes for Abstraction:

None

Suggested Data Sources:

- Physician orders
- Laboratory results
- Emergency Department records

- Discharge instructions
- Discharge summary

Inclusion Guidelines for Abstraction:

- Patient instructed to see PCP for follow-up QUS of the heel
- See private MD for fracture risk assessment

Exclusion Guidelines for Abstraction:

- See own MD for tests
- Prescription given for testing as an outpatient

Data Element Name: *Prior Diagnosis of Osteoporosis*

Collected For: The Joint Commission: Osteo-01

Definition: Documentation in the medical record that there was a diagnosis of osteoporosis prior to the current admission.

Suggested Data Collection Question: Is there documentation in the medical record by a physician/APN/PA that the patient was known to have osteoporosis prior to the current admission?

Format:

Length: 1

Type: Alphanumeric

Occurs: 1

Allowable Values:

Y (Yes) There is documentation by a physician/APN/PA that the patient was known to have osteoporosis prior to the current admission.

N (No) There is no documentation by a physician/APN/PA that the patient was known to have osteoporosis prior to the current admission.

Notes for Abstraction:

- If there is documentation by a physician/APN/PA that the patient is known to have osteoporosis prior to the current admission, select “Yes”.
- If the patient has been taking any FDA-approved medication for the prevention or treatment of osteoporosis prior to admission date, select “Yes”. (See Table 1.1 for a list of FDA-approved medications for osteoporosis).

Suggested Data Sources:

- Admission Note
- History
- Consultation Note
- Progress Notes
- Medication Reconciliation Records
- Emergency Department Record
- Discharge Summary

Inclusion Guidelines for Abstraction:

- Patient is known to have osteoporosis
- Treated with Fosamax for osteoporosis
- Has been on osteoporosis treatment with Reclast for 2 years

Exclusion Guidelines for Abstraction:

- May have osteoporosis

- Family history of osteoporosis
- Rule out osteoporosis

Data Element Name: *Reason for No DXA Scan*

Collected For: The Joint Commission: Osteo-02

Definition: Documentation of a reason for no DXA Scan ordered or performed:

Suggested Data Collection Question: Is there documentation of a reason for no DXA scan documented by a physician/APN/PA?

Format:

Length: 1

Type: Alphanumeric

Occurs: 1

Allowable Values:

Y (Yes) There is documentation of a reason for no DXA scan.

N (No) There is no documentation of a reason for no DXA scan or unable to determine from medical documentation.

U (Unavailable) There is documentation that there is no DXA machine available.

R (Refused) Patient refused bone mineral density testing.

Notes for Abstraction:

- When determining whether there is a reason documented for not prescribing DXA scan, the reason must be explicit (e.g., "Hospital does not have a DXA scanner").

Suggested Data Sources:

- Consultation notes
- Discharge instruction sheet
- Discharge summary
- Emergency department record
- History and physical
- Nursing notes
- Physician orders
- Progress notes

Inclusion Guidelines for Abstraction:

- No DXA at this hospital, to have DXA at outpatient center after discharge
- Refused all further osteoporosis testing

Exclusion Guidelines for Abstraction:

- DXA deferred

Data Element Name: *Reason for No FDA-approved Pharmacotherapy for Treatment of Osteoporosis*

Collected For: The Joint Commission: Osteo-02

Definition: Documentation by a physician/APN/PA of a reason why no FDA-approved pharmacotherapy was prescribed.

Suggested Data Collection Question: Is there documentation of a reason for no FDA-approved pharmacotherapy as defined in Table 1.1 for treatment of osteoporosis documented by a physician/APN/PA or pharmacist?

Format:

Length: 1

Type: Alphanumeric

Occurs: 1

Allowable Values:

Y (Yes) There is documentation of a reason for not prescribing FDA-approved pharmacotherapy as defined in Table 1.1 for the treatment of osteoporosis.

N (No) There is no documentation of a reason for not prescribing FDA-approved pharmacotherapy as defined in Table 1.1 for the treatment of osteoporosis or unable to determine from medical documentation.

R (Refused) Patient refused all osteoporosis medications.

Notes for Abstraction:

- When determining whether there is a reason documented by a physician/APN/PA or pharmacist for not prescribing FDA-approved pharmacotherapy for osteoporosis, the reason must be explicit (e.g., "Allergic to all osteoporosis medication").

Suggested Data Sources:

- Consultation notes
- Discharge instruction sheet
- Discharge summary
- Emergency department record
- Medication administration records
- History and physical
- Nursing notes
- Physician orders
- Progress notes

Inclusion Guidelines for Abstraction:

- Allergic to all osteoporosis meds
- Patient refuses all medications for osteoporosis treatment
- Patient on Estrogen.625 daily

Exclusion Guidelines for Abstraction:

- GI distress from Fosamax
- Cannot tolerate osteoporosis medication

Data Element Name: *Underlying Cause of Osteoporosis*

Collected For: The Joint Commission: Osteo-01

Definition: Documentation in the medical record by a physician/APN/PA of a specific underlying cause for osteoporosis.

Suggested Data Collection Question: Is there documentation in the medical record by a physician/APN/PA of a specific underlying cause for osteoporosis?

Format:

Length: 1

Type: Alphanumeric

Occurs: 1

Allowable Values:

Y (Yes) There is documentation in the medical record by a physician/APN/PA of a specific underlying cause for osteoporosis.

N (No) There is no documentation in the medical record by a physician/APN/PA of a specific underlying cause for osteoporosis.

Notes for Abstraction:

- If the medical record contains entries such as “Osteoporosis due to hyperparathyroidism”, select “Yes”.
- If the medical record entry indicates “old age”, “advanced age”, or similar terminology, select “No”.

Suggested Data Sources:

- Admission Note
- History and Physical
- Consultation Note
- Progress Notes
- Emergency Department Record
- Discharge Summary

Inclusion Guidelines for Abstraction:

- Osteoporosis caused by long-term glucocorticoids
- Osteoporosis due to long-term steroids

Exclusion Guidelines for Abstraction:

- Senile osteoporosis
- Osteoporosis/family history

Data Element Name: *Written Discharge Instructions*

Collected For: The Joint Commission: Osteo-03

Definition: Written discharge instructions or other documentation of educational material given to patient/caregiver addressing the need to follow up with a primary care physician, specialty physician, or hospital outpatient department for possible osteoporosis to reduce the risk of future fracture.

Suggested Data Collection Question: Did the WRITTEN discharge instructions or other documentation of educational material given to the patient/caregiver address the need to follow up with a primary care physician, specialty physician, or hospital outpatient department for possible osteoporosis to reduce the risk of future fracture?

Format:

Length: 1

Type: Alphanumeric

Occurs: 1

Allowable Values:

Y (Yes) WRITTEN discharge instructions/educational material were given to the patient/caregiver that addressed the need to follow up with a primary care physician, specialty physician, or hospital outpatient department for possible osteoporosis to reduce the risk of future fracture.

N (No) WRITTEN discharge instructions/educational material did not address the need to follow up with a primary care physician, specialty physician, or hospital outpatient department for possible osteoporosis to reduce the risk of future fracture, or there were no written discharge instructions or other educational materials given to the patient or caregiver.

Z (Not Applicable) Not Applicable to this patient.

Notes for Abstraction:

- Documentation that addresses compliance issues must include **all** of the following, in order to select “Yes”.
 - The importance of following up with either a primary care physician, specialty physician, or hospital outpatient department.
 - The term “possible osteoporosis” must be included.
 - The terms “reduce the risk of future fracture” must be included.
- Acceptable materials include discharge instruction sheets, brochures, booklets, teaching sheets, videos, CDs, and DVDs.
- Documentation must clearly convey that the patient/caregiver was given a copy of the material to take home. When the material is present in the medical record

and there is no documentation which clearly indicates that a copy was given, the inference should be made that it was given IF the patient's name or the medical record number appears on the material AND hospital staff or the patient/caregiver has signed the material.

- **Use only documentation provided in the medical record itself.** Do not review and use outside materials in abstraction. Do not make assumptions about what content may be covered in material documented as given to the patient/caregiver.
- Written instructions given anytime during the emergency department stay are acceptable.
- If the patient/caregiver refused written discharge instructions/materials which contained all the inclusion terms, and a copy is contained in the medical record, select "Yes".
- The caregiver is defined as the patient's family or any other person (e.g., home health, VNA provider, prison official or other law enforcement personnel) who will be responsible for care of the patient after discharge.
- "Hospital Outpatient Department" is inclusive of specialty clinics for osteoporosis diagnosis/treatment; it does NOT include specialty clinics for orthopedic care.
- "Specialty physician" includes physicians who specialize in diagnosing/managing/treating osteoporosis; it does not include general orthopedic physicians.

Suggested Data Sources:

- Discharge instruction sheet
- Home health referral form
- Nursing notes
- Teaching sheet

Inclusion Guidelines for Abstraction:

None

Exclusion Guidelines for Abstraction:

- Unchecked checkbox next to instruction (e.g., blank checkbox on discharge instruction sheet next to "The need to follow up with a physician or hospital outpatient department for possible osteoporosis to reduce the risk of fracture.").

Code Tables

Table	Medication	Generic Name
Table 1.1	Fosamax®	Alendronate
Table 1.1	Fosamax Plus D (with 2,800 IU or 5,600 IU of Vitamin D3)	Alendronate
Table 1.1	Fosamax®	Alendronate
Table 1.1	Boniva®	Ibandronate
Table 1.1	Boniva®	Ibandronate
Table 1.1	Actonel®	Risedronate
Table 1.1	Actonel® with Calcium	Risedronate
Table 1.1	Atelvia®	Risedronate
Table 1.1	Reclast®	Zoledronic Acid
Table 1.1	Fortical®	Calcitonin
Table 1.1	Miacalcin®	Calcitonin
Table 1.1	Miacalcin®	Calcitonin
Table 1.1	Evista®	Raloxifene
Table 1.1	Forteo®	Teriparatide
Table 1.1	Prolia®	Denosumab

Table	Diagnosis Code	ICD9-CM Description
Table 3.1	8054	Fx lumbar vertebra-clos
Table 3.1	8058	Vertebral fx NOS-closed
Table 3.1	80621	T1-t6 fx-cl/com cord les
Table 3.1	80622	T1-t6 fx-cl/ant cord syn
Table 3.1	80623	T1-t6 fx-cl/cen cord syn
Table 3.1	80624	T1-t6 fx-cl/cord inj NEC
Table 3.1	80625	T7-t12 fx-cl/crd inj NOS
Table 3.1	80626	T7-t12 fx-cl/com crd les
Table 3.1	80627	T7-t12 fx-cl/ant crd syn
Table 3.1	80628	T7-t12 fx-cl/cen crd syn
Table 3.1	80629	T7-t12 fx-cl/crd inj NEC

Table	Diagnosis Code	ICD9-CM Description
Table 4.1	82000	Fx femur intrcaps NOS-cl
Table 4.1	82001	Fx up femur epiphy-clos
Table 4.1	82002	Fx femur, midcervic-clos
Table 4.1	82003	Fx base femoral nck-clos
Table 4.1	82009	Fx femur intrcaps NEC-cl
Table 4.1	82020	Trochanteric fx NOS-clos
Table 4.1	82021	Intertrochanteric fx-cl

Table 4.1	82022	Subtrochanteric fx-close
Table 4.1	8208	Fx neck of femur NOS-cl
Table 4.1	82100	Fx femur NOS-closed
Table 4.1	82101	Fx femur shaft-closed
Table 4.1	733.96	Stress fracture femoral neck
Table 4.1	733.97	Stress fracture femoral shaft

Table	Diagnosis Code	ICD9-CM Description
Table 5.1	8080	Fracture acetabulum-clos
Table 5.1	8082	Fracture of pubis-closed
Table 5.1	80841	Fracture of ilium-closed
Table 5.1	80842	Fracture ischium-closed
Table 5.1	80843	Pelv fx-clos/pelv disrup
Table 5.1	80849	Pelvic fracture NEC-clos
Table 5.1	8088	Pelvic fracture NOS-clos
Table 5.1	733.98	Stress Fx pelvis
Table 5.1	808	Fracture pelvis
Table 5.1	808.2	Fracture pubis, closed
Table 5.1	808.8	Fracture pelvis unspecified, closed
Table 5.1	808.44	Multiple closed fractures pelvis without disruption of pelvic circle
Table 5.1	81200	Fx up end humerus NOS-cl
Table 5.1	81201	Fx surg nck humerus-clos
Table 5.1	81202	Fx anatom nck humerus-cl
Table 5.1	81203	Fx gr tuberos humerus-cl
Table 5.1	81209	Fx upper humerus NEC-cl
Table 5.1	81220	Fx humerus NOS-closed
Table 5.1	81221	Fx humerus shaft-closed
Table 5.1	81240	Fx lower humerus NOS-cl
Table 5.1	81241	Suprcondyl fx humerus-cl
Table 5.1	81242	Fx humer, lat condyl-cl
Table 5.1	81243	Fx humer, med condyl-cl
Table 5.1	81244	Fx humer, condyl NOS-cl
Table 5.1	81249	Fx lower humerus NEC-cl
Table 5.1	81340	Fx lower forearm NOS-cl
Table 5.1	81341	Colles' fracture-closed
Table 5.1	81342	Fx distal radius NEC-cl
Table 5.1	81343	Fx distal ulna-closed
Table 5.1	81344	Fx low radius w ulna-cl
Table 5.1	81350	Fx lower forearm NOS-opn
Table 5.1	81351	Colles' fracture-open
Table 5.1	81352	Fx distal radius NEC-opn
Table 5.1	81353	Fx distal ulna-open

Table 5.1	81354	Fx low radius w ulna-opn
Table 5.1	81380	Fx forearm NOS-closed
Table 5.1	81381	Fx radius NOS-closed
Table 5.1	81382	Fracture ulna NOS-closed
Table 5.1	81383	Fx radius w ulna NOS-cl
Table 5.1	81390	Fx forearm NOS-open
Table 5.1	81391	Fracture radius NOS-open
Table 5.1	81392	Fracture ulna NOS-open
Table 5.1	81393	Fx radius w ulna NOS-opn
Table 5.1	81402	Fx lunate, wrist-closed
Table 5.1	8220	Fracture patella-closed
Table 5.1	8240	Fx medial malleolus-clos
Table 5.1	8242	Fx lateral malleolus-cl
Table 5.1	8244	Fx bimalleolar-closed
Table 5.1	8246	Fx trimalleolar-closed
Table 5.1	8248	Fx ankle NOS-closed
Table 5.1	8249	Fx ankle NOS-open
Table 5.1	733.93	Stress fracture of tibia or fibula

Table	Abbreviation	Description
Table 6.1	DXA (or DEXA) PA Spine	Dual energy X-Ray Absorptiometry, Posterior/Anterior Spine
Table 6.1	DXA (or DEXA) proximal femur and femoral neck and total hip	Dual energy X-Ray Absorptiometry, proximal femur and femoral neck and total hip
Table 6.1	QCT spine	Quantitative Computed Tomography, spine
Table 6.1	QUS heel	Quantitative Ultrasound, heel
Table 6.1	DXA forearm	Dual energy X-Ray Absorptiometry, forearm (radius/ulna)
Table 6.1	SXA/DXA heel	Single energy X-Ray Absorptiometry/Dual energy X-Ray Absorptiometry, heel
Table 6.1	FRAX	Fracture Risk Assessment Tool