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| Data and Business Rules – Osteoporosis: Secondary Prevention of Fragility Fractures (OST) Indicator Set | | | | | |
| Author | HSCIC - QOF Business Rules team | Version No | 30.0 | Version Date | 10/10/2014 |

New GMS Contract QOF Implementation

Dataset and Business Rules

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Osteoporosis: Secondary Prevention of Fragility Fractures (OST)

Amendment History:

| Version | Date | Amendment History |
|----------------|------------------|--|
| 22.0 | 12-December-2011 | New Ruleset Signed off following 4 Country review 2011 The version number starts at 22.0 in order to coincide with existing datasets and business rules. |
| 23.0 | 31-May-2012 | April 2012 Read Code Release following HSCIC review |
| 24.0 | 31-October-2012 | October 2012 Read Code Release following HSCIC review |
| 25.0 | 28-March-2013 | Signed off following consultation. Abbreviation OST added to document title. |
| 26.0 | 01-June-2013 | April 2013 Read Code Release following HSCIC review |
| 27.0 | 25-October-2013 | October 2013 Read Code Release following HSCIC review |
| Dates_1415 | 17-January-2014 | Review of proposed date changes for QOF 2014/15 |
| Jan14_Review | 23-January-2014 | Internal review of changes for 2014/15 |
| 28.0 | 28-March-2014 | Signed off following review and negotiations. Changes made to incorporate new date terminology |
| 29.0 | 27-June-2014 | April 2014 Read Code Release following HSCIC review |
| 30.0 | 10-October-2014 | October 2014 Read Code Release following HSCIC review |

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New GMS contract Q&O framework implementation

Dataset and business rules – Osteoporosis: Secondary Prevention of Fragility Fractures (OST)

Notes

- 1) QOF has been in operation since 2003 as the landscape within the NHS and Primary Care changes, the QOF dataset and rulesets must change in accordance with that new landscape. QOF is categorised as one of many Quality Services and a Quality Service has a start date (Quality Service Start Date) and an end date (Quality Service End Date). For QOF these reflect the QOF Year (i.e. 1st April to 31st March).
- 2) The specified dataset and rulesets are to support analysis of extracted data to reflect the status at a specified point in time of patient records held by the practice. In the context of this document that specified time point is designated the use of a number of dates. The dates are as follows
 - a) **ACHIEVEMENT_DAT**: The date up to which patient information is considered when determining the output for each extraction.
 - For QOF 2014/15, **ACHIEVEMENT_DAT** will vary for each extraction depending on the reporting period for that extraction, e.g. for the end of **September extraction** it would have a value of **30.09.2014**; for the end of **March extraction** it would have a value of **31.03.2015**.
 - b) **PAYMENTPERIODEND_DAT**: The end date of the period for which payments are made for a given Quality Service. For any given Quality Service there will be one or more payment periods.
 - For QOF 2014/15, **PAYMENTPERIODEND_DAT** is **31.03.2015**
 - c) **QUALITY_SERVICE_START_DAT (QSSD)**: The start of the period during which a GP Practice provides the Quality Service
 - For QOF 2014/15, **QUALITY_SERVICE_START_DAT (QSSD)** is **01.04.2014**, however it is not utilised within the QOF dataset and rulesets.
 - d) **QUALITY_SERVICE_END_DAT (QSED)**: The end of the period during which a GP Practice provides the Quality Service
 - For QOF 2014/15, **QUALITY_SERVICE_END_DAT (QSED)** is **31.03.2015**
- 3) When interpreting these dates midnight is to be taken as meaning
 - a) **for the 'start of a period'**: the midnight is at the start of that day, For example; **"If CSMOK_DAT > (PAYMENTPERIODEND_DAT – 24 months)"**
This example is used to determine if a code has been recorded in the 24 months preceding end of the payment period. If PAYMENTPERIODEND_DAT has a value of 31.03.2015, then this condition uses a value of 31.03.2013, but to be true the recorded code must be **after** 31.03.2013 and therefore this equates to the midnight between 31.03.2013 and 01.04.2013. This means information effective on 31st March will be excluded but information effective on 1st April will be included for the extraction.
 - b) **for the 'end of a period'**: the midnight at the end of that day, For example; **"Earliest <= ACHIEVEMENT_DAT"**
This example is used to determine if a recorded code has been recorded before the achievement date. If ACHIEVEMENT_DAT has a value of 30th September (i.e. the end of September extraction) then this condition uses a value of 30.09.2014, but to be true the recorded code must be **on or before** 30.09.2014 and therefore this equates to the midnight between 30.09.2014 and 01.10.2014. This means information

effective on 30th September will be included but information effective on 1st October will be excluded from the extraction.

- c) **for Patient Age:** the midnight at the end of that day, For example;
"Patients age (years) at ACHIEVEMENT_DAT"
 This example is used to determine a patients age, in years, at the achievement date. If ACHIEVEMENT_DAT has a value of 30th September (i.e. the end of September extraction) then this condition determines a patient age as of 30.09.2014. Therefore this equates to the midnight between 30.09.2014 and 01.10.2014.
- 4) To support accurate determination of the population of patients to which the indicators should relate (the denominator population) these rulesets have been compiled with a prior assumption all of the dates (described in point 2 above) are specified prior to extraction of data and are available for computation in the data extraction routine. The dates are required to be included in the data extraction to support processing of rules that are dependent upon them. It is possible that an alternative approach could be adopted in which rules to determine the denominator population by registration status would be applied as a component of rule processing. If this second approach were to be adopted it would be essential to specify default time criteria for determining the registration characteristics of the denominator population during the data extraction process. Additionally there would be a requirement to supplement the dataset and rulesets to support identification of the appropriate denominator population.
- 5) Clinical codes quoted are (where known) from the October 2014 release of Read codes version 2 and clinical terms version 3 (CTV3). The codes are shown within the document as a 5 character value to show that the Read Code is for a 5-Byte system.
- i) Where a '%' wildcard is displayed, the Read Code is filled to 5 characters with full-stops. When implementing a search for the Read Code, only the non full-stop values should be used in the search, For example, a displayed Read Code of c1...% should be implemented as a search for c1%, i.e. should find c1 and any of it's children.
 - ii) Where a range of read codes are displayed, the Read Code is filled to 5 characters with full-stops. When implementing the search, only the non full-stop values should be used in the search, For example, a displayed Read Code range of G342. – G3z.. should find all codes between G342 and G3z (including any children where applicable).
- 6) Datasets comprise a specification of two elements:
- a) Patient selection criteria. These are the criteria used to determine the patient population against whom the indicators are to be applied.
 - i) Registration status. This determines the current patient population at the practice
 - ii) Diagnostic code status. This determines the current patient population (register size) for a given clinical condition

There are three scenarios within the diagnostic code status, these are where

- There is a single morbidity patient population (disease register) required (e.g. within CHD). Where this occurs, a single set of rules for identifying the patient population is provided.
- There is a single co-morbidity patient population (disease register) required (e.g. within Smoking). Where this occurs, a set of rules for each morbidity is provided. A patient must only be included in the patient population (register size) once.

- There are multiple patient populations (disease registers) required (e.g. within Heart Failure). Where this occurs, a single set of rules for each patient population is provided.
N.B. where there are multiple patient populations (disease registers), it is possible that one or more will also be a co-morbidity patient population (e.g. within Depression)

Where this occurs, details of which register population applies to which indicator(s) are provided. Where the register size applies to an indicator, this is the base denominator population for that indicator.

- b) Clinical data extraction criteria. These are the data items to be exported from the clinical system for subsequent processing to calculate points allocations. They are expressed in the form of a MIQUEST 'Report-style' extract of data.

The record of each patient that satisfies the appropriate selection criteria for a given indicator will be interrogated against the clinical data criteria (also appropriate to that indicator). A report of the data contained in the selected records will be exported in the form of a fixed-format tabular report. Each selected patient will be represented by a single row in the report, unless the operator "ALL" is used.

The "ALL" statement is used within the Qualifying Criteria for the Clinical data extraction criteria. Typically the selection for a READCODE_COD cluster field is based on a date of "LATEST" or "EARLIEST". The "ALL" statement is used to select all occurrences of any of the codes within the READCODE_COD cluster. It selects an array of instances, of which there may be more than one for each patient.

Rows will contain a fixed number of fields each containing a single data item. The number of fields in each row and their data content will be determined by the clinical data criteria. Data items that match the clinical data criteria will be exported in the relevant field of the report. Where there is no data to match a specific clinical criterion a null field will be exported.

- 7) Rulesets are specified as multiple rules to be processed sequentially. Processing of rules should terminate as soon as a 'Reject' or 'Select' condition is encountered
- 8) Rules are expressed as logical statements that evaluate as either 'true' or 'false'. The following operators are required to be supported:
- | | |
|---------------------|--------|
| a) > (greater than) | e) AND |
| b) < (less than) | f) OR |
| c) = (equal to) | g) NOT |
| d) ≠ (not equal to) | |
- 9) Where date criteria are specified with intervals of multiples of months or years these should be interpreted as calendar months or calendar years.

Dataset Specification

1) Patient selection criteria

a) Registration status

| <u>Current registration status</u> | <u>Qualifying criteria</u> |
|------------------------------------|---|
| Currently registered for GMS | Most recent registration date <= (ACHIEVEMENT_DAT) |
| Previously registered for GMS | Any sequential pairing of registration date and deregistration date where both of the following conditions are met: registration date <= (ACHIEVEMENT_DAT); and deregistration date > (ACHIEVEMENT_DAT) |

b) Diagnostic code status - the register is made up of two groups of patients:

i) Patients aged 50 – 74

| | | | |
|------------------|---|---|---|
| <i>Included*</i> | <i>Read codes v2</i> | <i>CTV3</i> | Earliest <= (ACHIEVEMENT_DAT) AND >= 01.04.2012 |
| | N331N N331M | XaNSP XaIIp | |
| | <i>(Fragility fracture codes)</i> | | |
| <i>Included*</i> | <i>Read codes v2</i> | <i>CTV3</i> | Earliest <= (ACHIEVEMENT_DAT) |
| | N330.% (Excluding N3308, N3309) N3312 N3313 N3316 N3318 – N331B N331H – N331M NyuB0 NyuB1 NyuB8 N3314 N3315 N3746 NyuB2 | Xa0AZ% (excluding X70Au) XE1GA, N330., N3300, N3304 N330B, N330z, X70CK%, N3313 N3316, N331B, XaD4K, XaD4J XaD4I, NyuB0, NyuB1, NyuB8 XaIIp, XaC12 N3307, N330A N3314, N3315 N3746, X70Av% NyuB2 | |

| | <i>(Osteoporosis codes)</i> | | |
|-------------------|---|-------------------------|---|
| <i>Included*</i> | <i>Read codes v2</i> | <i>CTV3</i> | <i>Earliest <= (ACHIEVEMENT_DAT)</i> |
| | 58EG. 58EM. 58EV. | XaITW XaITb XaPE2 | |
| | <i>(DXA codes) a DXA scan result of osteoporotic without a value</i> | | |
| <i>Included**</i> | <i>Read codes v2</i> | <i>CTV3</i> | <i>Earliest <= (ACHIEVEMENT_DAT)</i> |
| | 58EE. 58EK. 58ES. | XaITZ XaITU XaPDy | |
| | <i>(DXA codes) a DXA scan result with a T score value</i> | | |
| <i>Required</i> | <i>T score value <= -2.5</i> | | <i>Chosen record</i> |
| <i>Excluded</i> | <i>Age < 50 yrs at ACHIEVEMENT_DAT or Age > 74 yrs at ACHIEVEMENT_DAT</i> | | |

*N.B**.* The presence of either 'DXA codes – osteoporotic without an associated value' OR 'DXA codes – with an associated T score value that is <= -2.5' is required

*Codes required to be present from all groups to qualify a patient for inclusion

ii) Patients aged 75 and over

| <i>Code Criteria</i> | <i>Qualifying diagnostic codes</i> | | <i>Time criteria</i> |
|----------------------|------------------------------------|----------------|--|
| <i>Required</i> | <i>Read codes v2</i> | <i>CTV3</i> | Earliest <= (ACHIEVEMENT_DAT) AND >= 01.04.2014 |
| | N331N N331M | XaNSP XaIIp | |
| | <i>(Fragility fracture codes)</i> | | |

| | <i>Read codes v2</i> | <i>CTV3</i> | |
|-----------------|---|---|----------------------------------|
| <i>Required</i> | N330.% (Excluding N3308, N3309) N3312 N3313 N3316 N3318 – N331B N331H – N331M NyuB0 NyuB1 NyuB8 N3314 N3315 N3746 NyuB2 | Xa0AZ% (excluding X70Au) XE1GA, N330., N3300, N3304 N330B, N330z, X70CK%, N3313 N3316, N331B, XaD4K, XaD4J XaD4I, NyuB0, NyuB1, NyuB8 XaIIp, XaC12 N3307, N330A N3314, N3315 N3746, X70Av% NyuB2 | Earliest <= (ACHIEVEMENT_DAT) |
| | <i>(Osteoporosis codes)</i> | | |
| <i>Excluded</i> | Age < 75 yrs at ACHIEVEMENT_DAT | | |

2) Clinical data extraction criteria

| <u>Field Number</u> | <u>Field name</u> | <u>Data item</u> | | <u>Qualifying criteria</u> |
|---------------------|-------------------|---|--|--------------------------------|
| 1 | PAT_ID | Patient ID number | | Unconditional |
| 2 | REG_DAT | Date of patient registration | | Latest <= (ACHIEVEMENT_DAT) |
| 3 | PAT_AGE | Patient age (years) at ACHIEVEMENT_DAT | | Unconditional |
| 4 | OSTEOEXC_COD | <i>Read codes v2</i> | <i>CTV3</i> | Latest <= (ACHIEVEMENT_DAT) |
| | | 9hP..% | XaX3Q% | |
| | | <i>(Osteoporosis exception reporting codes)</i> | | |
| 5 | OSTEOEXC_DAT | Date of OSTEOEXC_COD | | Chosen record |
| 6 | BSA_COD | <i>Read codes v2</i> | <i>CTV3</i> | Latest <= ACHIEVEMENT_DAT |
| | | fo1..% fo4..% fo6..% fo8..% fv1..% fu3..% fu5..% fu9..% fo7..% 8BP1. 8B6c. 8B6b. 8BPW., 8BPX., 8BPZ., 8BPY. | fo1..% fo4..% fo6..% fo8..% fv1..% fu3..% fu5..% fu9..% fo7..% XaKb0 XaR9b XaX0V XaVxl Xaagz, Xaah0, Xaah2, Xaah1 | |

| | | | | |
|----|--------------|--|--|--------------------------------|
| | | | | |
| | | <i>(Bone sparing agent codes)</i> | | |
| 7 | BSA_DAT | Date of BSA_COD | | Chosen record |
| 8 | FF_COD | <i>Read codes v2</i> | <i>CTV3</i> | Earliest <= ACHIEVEMENT_DAT |
| | | N331N N331M | XaNSP XaIip | |
| | | <i>(Fragility fracture codes)</i> | | |
| 9 | FF_DAT | Date of FF_COD | | Chosen record |
| 10 | XBSACAT_COD | <i>Read codes v2</i> | <i>CTV3</i> | Latest <= ACHIEVEMENT_DAT |
| | | 14LT., ZV14K, 14La., 14Lb., 14LW., ZV14H, 14Lc., 14LT0, 14LT3, 14LT2, 14LT4, 14LT1 | XaKar , XaKdW, XaYSa, XaYSb, XaKat, XaKdj, XaZei, XaZef, XaZfj, XaZfi, XaZfk, XaZeh | |
| | | <i>(Bone sparing agent contra-indications: persistent)</i> | | |
| 11 | XBSACAT_DAT | Date of XBSACAT_COD | | Chosen record |
| 12 | TXBSACAT_COD | <i>Read codes v2</i> | <i>CTV3</i> | Latest <= ACHIEVEMENT_DAT |
| | | 8I3e., 8I6R., 8I7E., 8I2V., 8I6p., 8I7P., 8IEH., 8I2l., 8I6q., 8I7Q., 8IED., 8I2m., 8I3h., 8I6V., 8I7H., 8I2Y., 8I2p., 8I2V0, 8IEW., 8I3e0, 8I7S., 8I7E0, 8I612, 8I6R0, 8I2V3, 8I3e3, 8I6R3, 8I7E3, 8I2V2, 8I3e2, 8I6R2, 8I7E2, 8I2V4, 8I3e4, 8I6R4, 8I7E4, 8I3e1, 8I6R1, 8I7E1, 8I2V1 | XaKaQ, XaKaP, XaKaR, XaKaO, XaYSX, XaYSZ, XaYSu, XaYSV, XaYSY, XaYSc, XaYSv, XaYSW, XaKav, XaKax, XaKaw, XaKau, XaZdG, XaZdH, XaZeT, XaZeQ, XaZeX, XaZeV, XaZec, XaZeZ, XaZfm, XaZfa, XaZfg, XaZfd, XaZfl, XaZfZ, XaZff, XaZfc, XaZfn, XaZfb, XaZfh, XaZfe, XaZdJ, XaZeS, XaZea, XaZeW | |
| | | <i>(Bone sparing agent contra-indications: persistent)</i> | | |

| | | | | |
|----|--------------|--|-------------|------------------------------|
| | | | | |
| | | <i>(Bone sparing agent contra-indications: expiring)</i> | | |
| 13 | TXBSACAT_DAT | Date of TXBSACAT_COD | | Chosen record |
| 14 | BSAEXC_COD | <i>Read codes v2</i> | <i>CTV3</i> | Latest <= ACHIEVEMENT_DAT |
| | | 8I615 | Xab9J | |
| | | <i>(Bone sparing agent therapy not indicated)</i> | | |
| 15 | BSAEXC_DAT | Date of BSAEXC_COD | | Chosen record |

Indicator rulesets

- 1 Indicator OST004: The contractor establishes and maintains a register of patients:
 1. Aged 50 or over and who have not attained the age of 75 with a record of a fragility fracture on or after 1 April 2012 and a diagnosis of osteoporosis confirmed on DXA scan, and
 2. Aged 75 or over with a record of a fragility fracture on or after 1 April 2014 and a diagnosis of osteoporosis.

Overview

The terms of this indicator will be satisfied if the practice is able to produce a data extraction according to the above criteria.

No numerator or denominator determination is required.

In patients aged 50-74 the significant aspects are that to qualify on the register the patients must have a diagnosis of osteoporosis anywhere in the record (before ACHIEVEMENT_DAT). They must also have a recording in their record that a DXA scan has confirmed a diagnosis. They must then have a fragility fracture recorded after 1 April 2012.

In patients aged 75 or over the significant aspects are a fragility fracture after 1 April 2014 and a diagnosis of osteoporosis anywhere in the record (before ACHIEVEMENT_DAT).

In summary the business rules for the register will look for the following (before ACHIEVEMENT_DAT):

In patients aged 50-74 years:

- A fragility fracture at any point on or after the implementation date (1st April 2012)
- The earliest DXA scan with a positive result of osteoporosis.
- The earliest diagnosis of osteoporosis

In patients aged 75 years and over:

- A fragility fracture at any point on or after the implementation date (1st April 2014)
- The earliest diagnosis of osteoporosis

2 Indicator OST002: The percentage of patients aged 50 or over and who have not attained the age of 75, with a fragility fracture on or after 1 April 2012, in whom osteoporosis is confirmed on DXA scan, who are currently treated with an appropriate bone-sparing agent.

Overview

This indicator has been developed to measure the effectiveness of the provision of a clinical care component for patients aged between 50 and 74 with a fragility fracture and confirmed osteoporosis. The aspect that is being measured is that relating to treatment with appropriate bone-sparing agents.

Disease register

This indicator is based on the part of the register for patients aged between 50 and 74:

In patients aged 50-74 years:

- A fragility fracture at any point on or after the implementation date (1st April 2012)
- The earliest DXA scan with a positive result of osteoporosis.
- The earliest diagnosis of osteoporosis

Numerator and Denominator

The success criteria for this indicator (**numerator**) are achieved for those patients in the denominator who have a record of a prescription for a bone-sparing agent in the preceding 6 months (relative to PAYMENTPERIODEND_DAT).

The patients that make up the **denominator** for this indicator are those patients where it is appropriate for the care component to be carried out. This is the relevant disease register adjusted for exclusions and exceptions.

Exclusions

For this indicator there is one exclusion

- The indicator is specifically looking at patients aged between 50 and 74 years. Any patients aged under 50 years old and over 74 years old are excluded.

Exceptions

For this indicator the exceptions are:

- any patient who has been registered within the last 3 months of the qualifying year (new patient). New patients may be regarded as exceptions if they fulfil the criteria of the indicator but have not yet had a prescription for bone-sparing agents - maybe because there hasn't been an opportunity in the qualifying year to arrange it.
- any patient that has a relevant bone sparing agent exception code recorded within the preceding 12 months.
- any patient that has a relevant osteoporosis exception code recorded within the preceding 12 months.

- any patient that has been diagnosed with a fragility fracture within the last 3 months of the year (new diagnosis of fragility fracture).
- any patient with a record of a contraindication (persisting or expiring) to bone-sparing treatment.

Please note that a persisting contraindication can be recorded once anywhere in the record whereas an expiring contraindication must be recorded within the last 12 months i.e. ([PAYMENTPERIODEND_DAT](#) – 12 months)

Indicator OST002: The percentage of patients aged 50 or over and who have not attained the age of 75, with a fragility fracture on or after 1 April 2012, in whom osteoporosis is confirmed on DXA scan, who are currently treated with an appropriate bone-sparing agent.

a) Denominator ruleset

| <i>Rule number</i> | <i>Rule</i> | <i>Action if true</i> | <i>Action if false</i> |
|--------------------|---|-----------------------|------------------------|
| 1 | If PAT AGE < 50 OR If PAT AGE >74 | Reject | Next rule |
| 2 | If BSA_DAT > (PAYMENTPERIODEND_DAT – 6 months) | Select | Next rule |
| 3 | If BSAEXC_DAT > (PAYMENTPERIODEND_DAT – 12 months) | Reject | Next rule |
| 4 | If REG_DAT > (PAYMENTPERIODEND_DAT – 3 months) | Reject | Next rule |
| 5 | If OSTEOEXC_DAT > (PAYMENTPERIODEND_DAT – 12 months) | Reject | Next rule |
| 6 | If FF_DAT > (PAYMENTPERIODEND_DAT – 3 months) | Reject | Next rule |
| 7 | If XBSACAT_COD = Null AND If TXBSACAT_DAT = Null | Select | Next rule |
| 8 | If XBSACAT_COD = Null AND If TXBSACAT_DAT <= (PAYMENTPERIODEND_DAT – 12 months) | Select | Reject |

b) Numerator ruleset: To be applied to the above denominator population.

| <i>Rule number</i> | <i>Rule</i> | <i>Action if true</i> | <i>Action if false</i> |
|--------------------|---|-----------------------|------------------------|
| 1 | If BSA_DAT > (PAYMENTPERIODEND_DAT – 6 months) | Select | Reject |

Additional Notes:

Denominator

Exclusions

Rule 1: The aim of this rule is to identify if the patient is aged between 50 and 74 years. Any patient that is aged less than 50 or more than 74 should not be considered for this indicator and therefore should be rejected. If a patient is aged between 50 and 74 years then they are passed on to the next rule.

Success

Rule 2: The aim of this rule is to identify those patients who have a record of a prescription for a bone-sparing agent within the preceding 6 months. If there is such a record then the patient is selected into the denominator otherwise they are passed on to the next rule.

Exceptions

It is worth remembering at this point that if a patient has a recording of a prescription for a bone-sparing agent within the preceding 6 months they will already have been selected into the denominator in Rule 2.

Rule 3: The aim of this rule is to identify any patient that has a relevant bone sparing agent exception code recorded. If this has been recorded in the preceding 12 months, the patient can be excepted and is not included in the denominator. Otherwise they are passed on to the next rule.

Rule 4: The aim of this rule is to identify any patient that 'recently registered' at the practice. If the patient has registered at the practice in the last 3 months, the patient should not be included in the denominator. If the patient was not registered in the last 3 months they are passed on to the next rule.

Rule 5: The aim of this rule is to identify any patient that has a relevant osteoporosis exception code recorded. If this has been recorded in the preceding 12 months, the patient can be excepted and is not included in the denominator. Otherwise they are passed on to the next rule.

Rule 6: The aim of this rule is to identify any patient that has been 'recently diagnosed' with a fragility fracture. If the patient has been diagnosed in the last 3 months, the patient can be excepted and the patient should not be included in the denominator. Otherwise the patient is passed on to the next rule.

Rule 7: The aim of this rule is to identify any patient with a contraindication (persistent or expiring) to bone-sparing treatment.
If a patient does not have a record of either an expiring or persistent contraindication to bone-sparing treatment they are selected into the denominator. Otherwise they are passed on to the next rule.

Rule 8: The aim of this rule is to identify any patient without a persisting contraindication to bone-sparing treatment who has an expiring contraindication to bone-sparing treatment recorded outside the appropriate time frame.

If a patient without a persisting contraindication to bone-sparing treatment has an expiring contraindication to bone-sparing treatment recorded outside the appropriate time frame they are selected into the denominator.

All remaining records can be excepted and are not included in the denominator.

Numerator

The success criterion for this indicator is as per Denominator Rule 2.

3 Indicator OST005: The percentage of patients aged 75 or over with a record of a fragility fracture on or after 1 April 2014 and a diagnosis of osteoporosis, who are currently treated with an appropriate bone-sparing agent.

Overview

This indicator has been developed to measure the effectiveness of the provision of a clinical care component for patients aged 75 years and over who have a fragility fracture. The aspect that is being measured is that relating to treatment with appropriate bone-sparing agents.

Disease register

This indicator is based on the part of the register for patients aged 75 years and over

In patients aged ≥ 75 years:

- A fragility fracture at any point on or after the implementation date (1st April 2014)
- The earliest diagnosis of osteoporosis

Numerator and Denominator

The success criteria for this indicator (**numerator**) are achieved for those patients in the denominator who have a record of a prescription for a bone-sparing agent in the preceding 6 months.

The patients that make up the **denominator** for this indicator are those patients where it is appropriate for the care component to be carried out. This is the relevant disease register adjusted for exclusions and exceptions.

Exclusions

For this indicator there is one exclusion

- The indicator is specifically looking at patients aged 75 years and over. Any patients aged under 75 years old are excluded.

Exceptions

For this indicator the exceptions are:

- any patient who has been registered within the last 3 months of the qualifying year (new patient). New patients may be regarded as exceptions if they fulfil the criteria of the indicator but have not yet had a prescription for bone-sparing agents - maybe because there hasn't been an opportunity in the qualifying year to arrange it.
- any patient that has a relevant bone sparing agent exception code recorded within the preceding 12 months.
- any patient that has a relevant osteoporosis exception code recorded within the preceding 12 months.
- any patient that has been diagnosed with a fragility fracture within the last 3 months of the year (new diagnosis of fragility fracture).

- any patient with a record of a contraindication (persisting or expiring) to bone-sparing treatment.

Please note that a persisting contraindication can be recorded once anywhere in the record whereas an expiring contraindication must be recorded within the last 12 months i.e. ([PAYMENTPERIODEND_DAT](#) – 12 months)

Indicator OST005: The percentage of patients aged 75 or over with a record of a fragility fracture on or after 1 April 2014 and a diagnosis of osteoporosis, who are currently treated with an appropriate bone-sparing agent.

a) Denominator ruleset

| <i>Rule number</i> | <i>Rule</i> | <i>Action if true</i> | <i>Action if false</i> |
|--------------------|--|-----------------------|------------------------|
| 1 | If PAT AGE < 75 | Reject | Next rule |
| 2 | If BSA_DAT > (PAYMENTPERIODEND_DAT – 6 months) | Select | Next rule |
| 3 | If BSAEXC_DAT > (PAYMENTPERIODEND_DAT – 12 months) | Reject | Next Rule |
| 4 | If REG_DAT > (PAYMENTPERIODEND_DAT – 3 months) | Reject | Next rule |
| 5 | If OSTEOEXC_DAT > (PAYMENTPERIODEND_DAT – 12 months) | Reject | Next rule |
| 6 | If FF_DAT > (PAYMENTPERIODEND_DAT – 3 months) | Reject | Next rule |
| 7 | If XBSACAT_COD = Null AND If TXBSACAT_DAT = Null | Select | Next rule |
| 8 | If XBSACAT_COD = Null AND If TXBSACAT_DAT <= (PAYMENTPERIODEND_DAT – 12 months) | Select | Reject |

b) Numerator ruleset: To be applied to the above denominator population.

| <i>Rule number</i> | <i>Rule</i> | <i>Action if true</i> | <i>Action if false</i> |
|--------------------|---|-----------------------|------------------------|
| 1 | If BSA_DAT > (PAYMENTPERIODEND_DAT – 6 months) | Select | Reject |

Additional Notes:

Denominator

Exclusions

Rule 1: The aim of this rule is to identify if the patient is aged 75 years and over. Any patient that is aged less than 75 should not be considered for this indicator and therefore should be rejected. If a patient is aged 75 years and over then they are passed on to the next rule.

Success

Rule 2: The aim of this rule is to identify those patients who have a record of a prescription for a bone-sparing agent within the preceding 6 months. If there is such a record then the patient is selected into the denominator otherwise they are passed on to the next rule.

Exceptions

It is worth remembering at this point that if a patient has a recording of a prescription for a bone-sparing agent within the preceding 6 months they will already have been selected into the denominator in Rule 2.

Rule 3: The aim of this rule is to identify any patient that has a relevant bone sparing agent exception code recorded. If this has been recorded in the preceding 12 months, the patient can be excepted and is not included in the denominator. Otherwise they are passed on to the next rule.

Rule 4: The aim of this rule is to identify any patient that 'recently registered' at the practice. If the patient has registered at the practice in the last 3 months, the patient should not be included in the denominator. If the patient was not registered in the last 3 months they are passed on to the next rule.

Rule 5: The aim of this rule is to identify any patient that has a relevant osteoporosis exception code recorded. If this has been recorded in the preceding 12 months, the patient can be excepted and is not included in the denominator. Otherwise they are passed on to the next rule.

Rule 6: The aim of this rule is to identify any patient that has been 'recently diagnosed' with a fragility fracture. If the patient has been diagnosed in the last 3 months, the patient can be excepted and the patient should not be included in the denominator. Otherwise the patient is passed on to the next rule.

Rule 7: The aim of this rule is to identify any patient with a contraindication (persistent or expiring) to bone-sparing treatment. If a patient does not have a record of either an expiring or persistent contraindication to bone-sparing treatment they are selected into the denominator. Otherwise they are passed on to the next rule.

Rule 8: The aim of this rule is to identify any patient without a persisting contraindication to bone-sparing treatment who has an expiring contraindication to bone-sparing treatment recorded outside the appropriate time frame.

If a patient without a persisting contraindication to bone-sparing treatment has an expiring contraindication to bone-sparing treatment recorded outside the appropriate time frame they are selected into the denominator.

All remaining records can be excepted and are not included in the denominator.

Numerator

The success criterion for this indicator is as per Denominator Rule 2.