

Data and Business Rules – Rheumatoid Arthritis (RA) Indicator Set					
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## **New GMS Contract QOF Implementation**

### **Dataset and Business Rules**

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### **Rheumatoid Arthritis Indicator Set (RA)**

### **Northern Ireland**

## Amendment History:

Version	Date	Amendment History
25.0NI	13-May-2013	V25 Department of Health QOF ruleset (28/03/13) used as a base and adapted to reflect the NI 2013/13 agreement - NI indicators IDs updated; 15 mth rules accepted; indicator wording checked
26.0NI	13-Sept-2013	April 2013 Read Code Release following review
27.0NI	12-Nov-2013	November 2013 Read Code Release
28.0NI	14-May-2014	DRAFT Business rules update
28.1NI	11-Jun-2014	Re-instated RA004 and associated code clusters, some reformatting, version number updated to be in line with other rulesets
28.2NI	27-Jun-2014	Updated the IHD diagnostic codes as requested post review.
	23-Jul-2014	RA003 updated description as indicator now required to look at 3 year window. All rules and descriptions updated to reflect this
29.0NI	24-Oct-2014	April 2014 Read Code Updates
30.0NI	24-Oct-2014	October 2014 Read Code Updates
32.0NI	30-June-2015	April 2015 Read Code Updates
32.1NI	28-Sep-2015	Post review changes 2015/16

## New GMS contract Q&O framework implementation

### Dataset and business rules – Rheumatoid Arthritis (RA) indicator set

#### Notes

- 1) 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 "Reference date" and identified by the abbreviation "REF\_DAT". In interpreting the specification REF\_DAT should be taken to mean midnight of the preceding day (i.e. a REF\_DAT of 01.04.2003 equates to midnight on 31.03.2003).
- 2) 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 that the reference date is specified prior to extraction of data and is available for computation in the data extraction routine. The reference date will also be required to be included in the data extraction to support processing of rules that are dependent upon it. 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.
- 3) Clinical codes quoted are (where known) from the April 2015 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 its 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).

The version number starts at 7.1 in order to coincide with existing datasets and business rules.

- 4) 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.

- 5) 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.
- 6) 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) |        |

- 7) 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 < (REF_DAT)
Previously registered for GMS	Any sequential pairing of registration date and deregistration date where both of the following conditions are met: registration date < (REF_DAT); and deregistration date >= (REF_DAT)

b) Diagnostic code status

<i>Code Criteria</i>	<i>Qualifying diagnostic codes</i>		<i>Time criteria</i>
<i>Included</i>	Read codes v2	CTV3	Earliest < (REF_DAT)
	N040.% N041. N042.% (excluding N0420) N047. N04X. N04y0 N04y2 Nyu11 Nyu12 Nyu1G Nyu10 G5yA., G5y8.	N040.% XE1DU X705I G5y8.	
	<i>(Rheumatoid arthritis codes)</i>		
<i>Excluded</i>	Age < 16 years at REF_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 < (REF_DAT)
3	PAT_AGE	Patients age (years) at REF_DAT		Unconditional
4	RARTHEXC_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest < REF_DAT
		9hR., 9hR0., 9hR1.	XaYSO, XaYSP, XaYSR	
		<i>(Rheumatoid arthritis exception reporting codes)</i>		
5	RARTHEXC_DAT	Date of RARTHEXC_COD		Chosen record
6	RARTH_COD	<i>Read codes v2</i>	<i>CTV3</i>	Earliest < REF_DAT
		N040.% N041. N042.% (excluding N0420) N047. N04X. N04y0 N04y2 Nyu11 Nyu12 Nyu1G Nyu10 G5yA., G5y8.	N040.% XE1DU X705I G5y8.	
		<i>(Rheumatoid arthritis codes)</i>		
7	RARTH_DAT	Date of RARTH_COD		Chosen record

8	CVDASSRA_COD			Latest < (REF_DAT)
		38DP.	XaQVY	
		<i>(CVD risk assessment tool adjusted for RA codes)</i>		
9	CVDASSRA_DAT	Date of CVDASSRA_COD		Chosen record
10	CVDASSRAEXC_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest < (REF_DAT)
		8IEV., 9NSB.	XaZdA, XaZd8	
		<i>(CVD risk assessment tool adjusted for RA exception codes)</i>		
11	CVDASSRAEXC_DAT	Date of CVDASSRAEXC_COD		
12	FRCASSRA_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest < REF_DAT
		38DB., 38DC., 38GR., 38DB0, 38DB1, 38DC0, 38DC1	XaOgD, XaYfo, XaYWc, XaOgr, XaYfp, XaYWb, XaZeJ	
		<i>(Fracture risk assessment tool adjusted for RA codes)</i>		
13	FRCASSRA_DAT	Date of FRCASSRA_COD		Chosen record
14	FRCASSRAEXC_COD	<i>Read codes v2</i>	<i>CTV3</i>	
		9OdB., 9OdC.	XaISb, XaISc	
		<i>(Fracture risk assessment tool adjusted for RA exception codes)</i>		
15	FRCASSRAEXC_DAT	Date of FRCASSRAEXC_COD		Chosen record

16	RARTRVW_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest < REF_DAT
		66HB0	XaZdB	
		<i>(Rheumatoid arthritis review codes)</i>		
17	RARTRVW_DAT	Date of RARTRVW_COD		Chosen record
18	IHD_COD	<i>Read codes v2</i>	<i>CTV3</i>	Earliest < REF_DAT
		G3... - G309. G30B. - G330z (excluding G310.) G33z. - G3401 G342. - G35X. G38.. - G3z.. Gyu3.% (excluding Gyu31)	XE2uV% (excluding Xa07j%, G341.%, X200B%, X200c, G363., Gyu31, X200d, X200e) Ua1eH Xa1dP% G343. XaYYq	
		<i>(Ischaemic heart disease codes)</i>		
19	IHD_DAT	Date of IHD_COD		Chosen record

20	STRT_COD	<p><i>Read codes v2</i></p> <p>G61..% (excluding G617.)                  G63y0 - G63y1                  G64..%                  G66..% (excluding G669.)                  G6760                  G6W..                  G6X..                  G65..- G654.                  G656.- G65zz                  Gyu62 - Gyu66                  Gyu6F                  Gyu6G                  ZV12D                  Fyu55                  G619.</p>	<p><i>CTV3</i></p> <p>X00D1% (Excluding XE1Xs%, F21y2)                  XE0VK% (Excluding F4236)                  XaX16                  G65z0                  G65z1                  Gyu6F                  G641.                  Xa6YV                  Gyu62                  Gyu65                  Gyu66</p>	Earliest < REF_DAT
		<p><i>(Stroke or TIA codes)</i></p>		
		21	STRT_DAT	
22	FHYP_COD	<p><i>Read codes v2</i></p> <p>C3200                  C3201                  C3204                  C3205                  C3203                  C3220</p>	<p><i>CTV3</i></p> <p>C3200%                  XaR4h                  XaR4i                  X40X5                  X40Vm</p>	Earliest < REF_DAT
		<p><i>(Familial Hypercholesterolemia diagnostic codes)</i></p>		
		23	FHYP_DAT	

		<i>Read codes v2</i>	<i>CTV3</i>	
24	OSTEO_COD	N330.% (Excluding N3308, N3309) N3312 N3313 N3316 N3318 - N331B N331H - N331M NyuB 0 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 < REF_DAT
		<i>(Osteoporosis diagnostic codes)</i>		
25	OSTEO_DAT	Date of OSTEO_COD		Chosen record

26	DXA_COD	<i>Read codes v2</i>	<i>CTV3</i>	Earliest < REF_DAT
		58EG. 58EM. 58EV.	XaITW XaITb XaPE2	
		<i>(a DXA scan result of osteoporotic without a value)</i>		
27	DXA_DAT	Date of DXA_COD		Chosen record
28	DXA2_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= (REF_DAT - 27 months)
		58EE. 58EK. 58ES.	XaITZ XaITU XaPDy	
		<i>(a DXA scan result with a T score value)</i>		
29	DXA2_DAT	Date of DXA2_COD		Chosen record
30	DXA2_VAL	Value of DXA2_COD		Chosen record

31	BSA_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest < =(REF_DAT- 27 months) AND >= (REF_DAT - 33 months)
		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>		
32	BSA_DAT	Date of BSA_COD		Chosen record

### Indicator rulesets

Indicator RA001: The contractor establishes and maintains a register of patients aged 16 or over with rheumatoid arthritis.

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.

Indicator RA002: The percentage of patients with rheumatoid arthritis, on the register, who have had a face-to-face review in the preceding 15 months.

## Overview

This indicator has been developed to measure the effectiveness of the provision of a clinical care component for patients on the rheumatoid arthritis register.

The aspect that is being measured is relating to a face to face annual review.

## Disease register

The disease register is made up of patients who are eligible to receive the required care component. In this case:

Patients who have a diagnosis of rheumatoid arthritis (i.e. there is evidence in the patient's electronic health record of a rheumatoid arthritis diagnosis code)

and

Are aged 16 years and over at the time the indicator is measured

## Numerator and Denominator

The success criteria for this indicator (numerator) are achieved for those patients in the denominator who have a record of a face to face annual review within the preceding 15 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 are no exclusions.

## Exceptions

Patients that don't achieve the success criteria of the indicator are also checked for valid exceptions.

For this indicator the exceptions are:

- Any patient who has been registered within the last 3 months (new patient). New patients may be regarded as exceptions if they fulfil the criteria of the indicator but have not yet had a face to face review - maybe because there hasn't been an opportunity in the qualifying year to arrange it.
- Any patient that has a valid rheumatoid arthritis exception code recorded within the preceding 15 months.
- Any patient that has been diagnosed with rheumatoid arthritis within the last 3 months (new diagnosis of rheumatoid arthritis). Newly diagnosed patients may be regarded as exceptions if they fulfil the criteria of the indicator but have not yet had their face to face review - maybe because there hasn't been an opportunity in the qualifying year to arrange it.

Note: For the "new" rheumatoid arthritis patient exception, this is only applicable for the first "ever" diagnosis of rheumatoid arthritis for the patient. For a subsequent diagnosis, this exception rule is not considered.

Indicator RA002: The percentage of patients with rheumatoid arthritis, on the register, who have had a face-to-face review in the preceding 15 months.

a) Denominator ruleset

<u>Rule number</u>	<u>Rule</u>	<u>Action iftrue</u>	<u>Action iffalse</u>
1	If <u>RARTHVRVW_DAT</u> >= ( <u>REF_DAT</u> – 15 months)	Select	Next Rule
2	If <u>REG_DAT</u> >= ( <u>REF_DAT</u> – 3 months)	Reject	Next rule
3	If <u>RARTHEXC_DAT</u> >= ( <u>REF_DAT</u> – 15 months)	Reject	Next rule
4	If <u>RARTH_DAT</u> >= ( <u>REF_DAT</u> – 3 months)	Reject	Select

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

<u>Rule number</u>	<u>Rule</u>	<u>Action iftrue</u>	<u>Action iffalse</u>
1	If <u>RARTHVRVW_DAT</u> >= ( <u>REF_DAT</u> – 15 months)	Select	Reject

**Additional Notes:**

**Denominator Success**

Rule 1: The aim of this rule is to identify if the patient has had a face to face review within the preceding 15 months.

Any patient with a record of a face to face review within the preceding 15 months will be selected into the denominator. Any patient that does not meet this criterion is passed on to the next rule.

**Exceptions**

It is worth remembering at this point that if a patient has a record of a face to face review within the preceding 15 months they will already have been selected into the denominator in Rule 1.

Rule 2: The aim of this rule is to identify any patient that “recently registered” at the practice. If the patient has registered at the practice within the last 3 months, the patient should not be included in the denominator. If the patient was not registered within the last 3 months they are passed on to the next rule.

Rule 3: The aim of this rule is to identify any patient that has a valid rheumatoid arthritis exception code recorded. If this has been recorded within the preceding 15 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 has been “recently diagnosed” with rheumatoid arthritis. If the patient has been diagnosed within the last 3 months, the patient can be excepted and the patient should not be included in the denominator. Otherwise the patient is selected into the denominator.

## Numerator

The success criterion for this indicator is as per Denominator Rule 1.

Indicator RA003NI: The percentage of patients with rheumatoid arthritis aged 30 or over and who have not attained the age of 85 who have had a cardiovascular risk assessment using a CVD risk assessment tool adjusted for RA in the preceding 3 years.

## Overview

This indicator has been developed to measure the effectiveness of the provision of a clinical care component for patients on the rheumatoid arthritis register.

The aspect that is being measured is relating to a cardiovascular risk assessment using a CVD risk assessment tool adjusted for rheumatoid arthritis.

## Disease register

The disease register is made up of patients who are eligible to receive the required care component. In this case:

Patients who have a diagnosis of rheumatoid arthritis (i.e. there is evidence in the patient's electronic health record of a rheumatoid arthritis diagnosis code)  
and

Are aged 16 years and over at the time the indicator is measured

## Numerator and Denominator

The success criteria for this indicator (numerator) are achieved for those patients in the denominator who have a record of a cardiovascular risk assessment using a CVD risk assessment tool adjusted for RA within the preceding 3 years.

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 are three exclusions:

- The indicator is specifically looking at patients aged between 30 and 84 years. Any patients aged under 30 years old are excluded.
- The indicator is specifically looking at patients aged between 30 and 84 years. Any patients aged 85 and over are excluded.
- Consideration has to be made for those patients who: -

Have a diagnosis of CHD (i.e. there is evidence in the patient's electronic health record of a CHD diagnosis code)

and/or

Have a diagnosis of stroke or TIA (i.e. there is evidence in the patient's electronic health record of a stroke or TIA diagnosis code)

and/or

Have a diagnosis of familial hypercholesterolemia (i.e. there is evidence in the patient's

electronic health record of a familial hypercholesterolemia diagnosis code)

## Exceptions

Patients that don't achieve the success criteria of the indicator are also checked for valid exceptions.

For this indicator the exceptions are:

- Any patient that has a relevant CVD risk assessment tool adjusted for RA exception code recorded within the preceding 15 months.
- Any patient who has been registered within the last 3 months (new patient). New patients may be regarded as exceptions if they fulfil the criteria of the indicator but have not yet had a cardiovascular risk assessment using a CVD risk assessment tool adjusted for RA maybe because there hasn't been an opportunity in the qualifying year to arrange this.
- Any patient that has a relevant rheumatoid arthritis exception code recorded within the preceding 15 months.
- Any patient that has been diagnosed with rheumatoid arthritis within the last 3 months (new RA patient). Newly diagnosed patients may be regarded as exceptions if they fulfil the criteria of the indicator but have not yet had a cardiovascular risk assessment using a CVD risk assessment tool adjusted for RA maybe because there hasn't been an opportunity in the qualifying year to arrange this.

Note: For the 'new' rheumatoid arthritis patient exception, this is only applicable for the first 'ever' diagnosis of rheumatoid arthritis for the patient. For a subsequent diagnosis, this exception rule is not considered.

**Indicator RA003NI:** The percentage of patients with rheumatoid arthritis aged 30 or over and who have not attained the age of 85 who have had a cardiovascular risk assessment using a CVD risk assessment tool adjusted for RA in the preceding 3 years.

a) Denominator ruleset

<u>Rule number</u>	<u>Rule</u>	<u>Action if true</u>	<u>Action if false</u>
1	If <u>PAT_AGE</u> < 30	Reject	Next Rule
2	If <u>PAT_AGE</u> >= 85	Reject	Next Rule
3	If ( <u>IHD_DAT</u> ≠ Null) OR If ( <u>STRT_DAT</u> ≠ Null) OR If ( <u>FHYP_DAT</u> ≠ Null)	Reject	Next Rule
4	If <u>CVDASSRA_DAT</u> >= ( <u>REF_DAT</u> – 3 years)	Select	Next Rule
5	If <u>CVDASSRAEXC_DAT</u> >= ( <u>REF_DAT</u> – 15 months)	Reject	Next Rule
6	If <u>REG_DAT</u> >= ( <u>REF_DAT</u> – 3 months)	Reject	Next Rule
7	If <u>RARTEXC_DAT</u> >= ( <u>REF_DAT</u> – 15 months)	Reject	Next Rule
8	If <u>RARTH_DAT</u> >= ( <u>REF_DAT</u> – 3 months)	Reject	Select

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

<u>Rule number</u>	<u>Rule</u>	<u>Action if true</u>	<u>Action if false</u>
1	If <u>CVDASSRA_DAT</u> >= ( <u>REF_DAT</u> – 15 months)	Select	Reject

Additional Notes:

Denominator

Exclusions

Rule 1: The aim of this rule is to identify if the patient is aged under 30 years.

Any patient that is aged less than 30 should not be considered for this indicator and therefore should be rejected. If a patient is aged over 30 years then they are passed on to the next rule.

Rule 2: The aim of this rule is to identify if the patient is aged over 84 years. Any patient that is aged over 84 should not be considered for this indicator and therefore should be rejected. If a patient is aged 84 or less, then they are passed on to the next rule.

Rule 3: The aim of this rule is to identify if the patient has any of the following: -

Have a diagnosis of CHD (i.e. there is evidence in the patient's electronic health record of a CHD diagnosis code)

and/or

Have a diagnosis of stroke or TIA (i.e. there is evidence in the patient's electronic health record of a stroke or TIA diagnosis code)

and/or

Have a diagnosis of familial hypercholesterolemia (i.e. there is evidence in the patient's electronic health record of a familial hypercholesterolemia diagnosis code)

Any patient with any of the above conditions should not be considered for this indicator and therefore should be rejected. If a patient does not have any of the above conditions then they are passed on to the next rule.

### Success

Rule 4: The aim of this rule is to identify if the patient has had a cardiovascular risk assessment using a CVD risk assessment tool adjusted for RA within the preceding 3 years.

Any patient with a record of a CVD risk assessment tool adjusted for RA within the preceding 3 years will be selected into the denominator. Any patient that does not meet this criterion is passed on to the next rule.

### Exceptions

It is worth remembering at this point that if a patient has a record of had a cardiovascular risk assessment using a CVD risk assessment tool adjusted for RA within the preceding 15 months they will already have been selected into the denominator in Rule 4.

Rule 5: The aim of this rule is to identify any patient that has a valid cardiovascular risk assessment exception code recorded within the preceding 15 months. If this has been recorded within the preceding 15 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 'recently registered' at the practice.

If the patient has registered at the practice within the last 3 months, the patient should not be included in the denominator. If the patient was not registered within the last 3 months they are passed on to the next rule.

Rule 7: The aim of this rule is to identify any patient that has a valid rheumatoid arthritis exception code recorded. If this has been recorded within the preceding 15 months, the patient can be excepted and is not included in the denominator. Otherwise they are passed on to the next rule.

Rule 8: The aim of this rule is to identify any patient that has been 'recently diagnosed' with rheumatoid arthritis. If the patient has been diagnosed within the last 3 months, the patient can be excepted and the patient should not be included in the denominator. Otherwise the patient is selected into the denominator.

### Numerator

The success criterion for this indicator is as per Denominator Rule 4.

Indicator RA004: The percentage of patients aged 50 or over and who have not attained the age of 91 with rheumatoid arthritis who have had an assessment of fracture risk using a risk assessment tool adjusted for RA in the preceding 3 years.

## Overview

This indicator has been developed to measure the effectiveness of the provision of a clinical care component for patients on the rheumatoid arthritis register.

The aspect that is being measured is relating to a fracture risk assessment using a risk assessment tool adjusted for rheumatoid arthritis.

## Disease register

The disease register is made up of patients who are eligible to receive the required care component. In this case:

Patients who have a diagnosis of rheumatoid arthritis (i.e. there is evidence in the patient's electronic health record of a rheumatoid arthritis diagnosis code)

and

Are aged 16 years and over at the time the indicator is measured

## Numerator and Denominator

The success criteria for this indicator (numerator) are achieved for those patients in the denominator who have a record of a fracture risk assessment using a risk assessment tool adjusted for RA within the preceding 3 years.

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 are three exclusions:

- The indicator is specifically looking at patients aged between 50 and 90 years. Any patients aged under 50 years are excluded.
- The indicator is specifically looking at patients aged between 50 and 90 years. Any patients aged over 90 years are excluded.
- Any patient with pre-existing osteoporosis or treated with bone sparing agents in the six months outside the preceding 3 year indicator window are excluded.

## Exceptions

Patients that don't achieve the success criteria of the indicator are also checked for valid exceptions.

For this indicator the exceptions are:

- any patient that has a relevant fracture risk assessment tool adjusted for RA exception code recorded within the preceding 36 months.
- any patient who has been registered within the last 3 months (new patient). New

patients may be regarded as exceptions if they fulfil the criteria of the indicator but have not yet had a fracture risk assessment using a tool adjusted for RA maybe because there hasn't been an opportunity in the qualifying year to arrange this.

- any patient that has a relevant rheumatoid arthritis exception code recorded within the preceding 36 months.
- any patient that has been diagnosed with rheumatoid arthritis within the last 3 months (new RA patient). Newly diagnosed patients may be regarded as exceptions if they fulfil the criteria of the indicator but have not yet had a cardiovascular risk assessment using a fracture risk assessment tool adjusted for RA maybe because there hasn't been an opportunity in the qualifying year to arrange this.

Note: For the 'new' rheumatoid arthritis patient exception, this is only applicable for the first 'ever' diagnosis of rheumatoid arthritis for the patient. For a subsequent diagnosis, this exception rule is not considered.

**Indicator RA004:** The percentage of patients aged 50 or over and who have not attained the age of 91 with rheumatoid arthritis who have had an assessment of fracture risk using a risk assessment tool adjusted for RA in the preceding 3 years.

a) Denominator ruleset

<u>Rule number</u>	<u>Rule</u>	<u>Action if true</u>	<u>Action if false</u>
1	If <u>PAT_AGE</u> < 50	Reject	Next Rule
2	If <u>PAT_AGE</u> > 90	Reject	Next Rule
3	If <u>OSTEO_DAT</u> <= ( <u>REF_DAT</u> – 36 months) OR If <u>DXA_DAT</u> <= ( <u>REF_DAT</u> – 36 months) OR If <u>DXA2_VAL</u> < -2.5 OR If <u>BSA_DAT</u> ≠ Null	Reject	Next Rule
4	If <u>FRCASSRA_DAT</u> >= ( <u>REF_DAT</u> – 36 months)	Select	Next Rule
5	If <u>FRCASSRAEXC_DAT</u> >= ( <u>REF_DAT</u> – 36 months)	Reject	Next Rule
6	If <u>REG_DAT</u> >= ( <u>REF_DAT</u> – 3 months)	Reject	Next Rule
7	If <u>RARHEXC_DAT</u> >= ( <u>REF_DAT</u> – 36 months)	Reject	Next Rule
8	If <u>RARTH_DAT</u> >= ( <u>REF_DAT</u> – 3 months)	Reject	Select

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

<u>Rule number</u>	<u>Rule</u>	<u>Action if true</u>	<u>Action if false</u>
1	If <u>FRCASSRA_DAT</u> >= ( <u>REF_DAT</u> – 36 months)	Select	Reject

**Additional Notes:**

**Denominator**

**Exclusions**

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

**Rule 2:** The aim of this rule is to identify if the patient is aged over 90. Any patient that is aged over 90 years should not be considered for this indicator and therefore should be rejected. If a patient is 90 years or less then they are passed on to the next rule.

**Rule 3:** The aim of this rule is to identify if the patient has a pre-existing diagnosis of osteoporosis or was being treated with bone sparing agents in the six months outside the

preceding 36 months indicator window. Any patient which meets either of these criteria should not be considered for this indicator and therefore should be rejected. If a patient does not have pre-existing osteoporosis or treated with bone sparing agents in the six months outside the preceding 36 months indicator window they are passed on to the next rule.

## Success

Rule 4: The aim of this rule is to identify if the patient has had a fracture risk assessment tool adjusted for RA.

Any patient with a record of a fracture risk assessment tool adjusted for RA within the preceding 36 months will be selected into the denominator. Any patient that does not meet this criterion is passed on to the next rule.

## Exceptions

It is worth remembering at this point that if a patient has a record of a fracture risk assessment tool adjusted for RA within the preceding 36 months they will already have been selected into the denominator in Rule 4.

Rule 5: The aim of this rule is to identify any patient that has a valid fracture risk assessment exception code recorded within the preceding 36 months. If this has been recorded within the preceding 36 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 'recently registered' at the practice. If the patient has registered at the practice within the last 3 months, the patient should not be included in the denominator. If the patient was not registered within the last 3 months they are passed on to the next rule.

Rule 7: The aim of this rule is to identify any patient that has a valid rheumatoid arthritis exception code recorded. If this has been recorded within the preceding 36 months, the patient can be excepted and is not included in the denominator. Otherwise they are passed on to the next rule.

Rule 8: The aim of this rule is to identify any patient that has been 'recently diagnosed' with rheumatoid arthritis. If the patient has been diagnosed within the last 3 months, the patient can be excepted and the patient should not be included in the denominator. Otherwise the patient is selected into the denominator.

## Numerator

The success criterion for this indicator is as per Denominator Rule 4.