

Data and Business Rules – Atrial fibrillation Indicator Set					
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New GMS Contract QOF Implementation

Dataset and Business Rules

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Atrial Fibrillation Indicator Set

Amendment History:

Version	Date	Amendment History
		The version number starts at 7.1 in order to coincide with existing datasets and business rules.
7.1	21-Nov-2005	From Phil Brown
7.2	22-Nov-2005	Amended following review by Peter Horsfield
7.3	3-Dec-2005	Draft revised for internal review
7.4	23-Feb-2006	Amended following internal & 4 Countries review
8.0	15-Mar-2006	Signed off following 4 Country review
8.1	18-May-2006	Responding to queries raised Amend wording for Note 3
8.5	18-May-2006	Approved by NHSE
8.6	20-Oct-2006	April Read Code Release April SNOMED CT Release October Read Code Release Corrections and amendments following feedback
8.7	13-Nov-2006	Following 4-Country Review: XSAL_COD: Delete 223005004 from SNOMED-CT
9.0	30-Nov-2006	Approved by NHSE
9.1	11-Apr-2007	April 2007 Read Code Release
9.2	11-June-2007	Following 4-Country Review: Changes to the qualifying criteria for AFIB_COD and AFIBDI_COD. Remove G5731 Diagnostic Code Status and AFIB_COD cluster Change date check for "anti-coagulant drug therapy or an anti-platelet drug therapy" (AF03) to 6 months
10.0	18-Jun-2007	Signed off following 4 Country review
10.1	12-Aug-2007	April SNOMED CT update
10.2	23-Sep-2007	October 2007 Read Code Release October 2007 SNOMED CT Release
10.3	27-Nov-2007	Following 4-Country Review: '%' added to 319357003 in SAL_COD
11.0	28-Nov-2007	Signed off following 4 Country review
11.1	30-Jun-2008	April 2008 Read Code Release April 2008 SNOMED CT Release QOF Review 2007 (Replacing AF2 with AF4)
12.0	24-Jul-2008	Signed off following 4 Country review
12.1	06-Oct-2008	October 2008 Read Code Release October 2008 SNOMED CT Release
13.0	05-Dec-2008	Signed off following 4 Country review
13.2	09-Mar-2009	QOF Review 2008
14.0	01-May-2009	Signed off following 4 Country review
14.1	25-June-2009	April 2009 Read Code Release
15.0	17-August-2009	Sign off following 4 Country review
15.1	12-October-2009	October 2009 Clinical Code Release
15.2	28-October-2009	October 2009 Clinical Code Release review
16.0	02-December-2009	Sign off following 4 Country review
17.0	07-May-2010	April 2010 Read Code Release following NHS IC review
18.0	29-October-2010	October 2010 Read Code Release following NHS IC review

19.0	13-December-2010	Signed off following 4 Country review
20.0	13-May-2011	April 2011 Read Code Release following NHS IC review
21.0	10-November-2011	October 2011 Read Code Release following NHS IC review
22.0	12-December-2011	Signed off following 4 Country review
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
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

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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).

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

- 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

<i>Code criteria</i>	<i>Qualifying diagnostic codes</i>		<i>Time criteria</i>
<i>Included</i>	<i>Read codes v2</i>	<i>CTV3</i>	<i>Latest <= (ACHIEVEMENT_DAT)</i>
	G573.% (excluding G5731, G5736)	G5730% G573.%	
	<i>(Atrial fibrillation codes)</i>		
<i>Excluded</i>	<i>Read codes v2</i>	<i>CTV3</i>	<i>Latest <= (ACHIEVEMENT_DAT) AND > Date of diagnostic code above</i>
	212R.	XaLFz	
	<i>(Atrial fibrillation resolved codes)</i>		

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	AFIBEXC_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= (ACHIEVEMENT_DAT)
		9hF1. 9hF0.	XaLFj XaLfi	
		<i>(Atrial fibrillation exception reporting codes)</i>		
4	AFIBEXC_DAT	Date of AFIBEXC_COD		Chosen record
5	AFIB_COD	<i>Read codes v2</i>	<i>CTV3</i>	Earliest <= (ACHIEVEMENT_DAT)
		G573.% (excluding G5731, G5736)	G5730% G573.%	
		<i>(Atrial fibrillation codes)</i>		
6	AFIB_DAT	Date of AFIB_COD		Chosen record
7	XSAL_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= ACHIEVEMENT_DAT
		14LK. ZV148 U6051 TJ53.	XaIpk XaDzd Xa5FM% XE22E% Xa5dp% U6051	
		<i>(Salicylate contra-indications: persistent)</i>		
8	XSAL_DAT	Date of XSAL_COD		Chosen record
9	TXSAL_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= ACHIEVEMENT_DAT
		8I24. 8I38.	XaDvH XaFsE	

		8I66. 8I70.	XaIi XaJ5a	
		<i>(Salicylate contra-indications: expiring)</i>		
10	TXSAL_DAT	Date of TXSAL_COD		Chosen record
11	XWAR_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= ACHIEVEMENT_DAT
		14LP. TJ42.% (excluding TJ420) U6042 ZV14A	XaJ60 TJ42.% (excluding TJ420) U6042 XaJ8B Xa5yP%	
		<i>(Warfarin contraindications: persistent)</i>		
12	XWAR_DAT	Date of XWAR_COD		Chosen record
13	TXWAR_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= ACHIEVEMENT_DAT
		8I25. 8I3E. 8I65. 8I71. 8I2R. 8I3d. 8I6N. 8I7A. 8I2o. 8IES. 8I611 8I7R. 8I2u. 8IH1. 8I6s. 8I7V.	XaFsz XaIIn XaIIh XaJ5b XaKAB XaKAD XaKA7 XaKA0 XaZbj XaZZI XaZbl XaZbr XabEn XabEe XabEp XabEo	
		<i>(Warfarin contraindications: expiring)</i>		

14	TXWAR_DAT	Date of TXWAR_COD		Chosen record
15	XCLO_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= ACHIEVEMENT_DAT
		14LQ. U6048 ZV14B	XaJ8V XaJ3e XaJ5v	
		<i>(Clopidogrel contraindications: persistent)</i>		
16	XCLO_DAT	Date of XCLO_COD		Chosen record
17	TXCLO_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= ACHIEVEMENT_DAT
		8I2K. 8I3R. 8I6B. 8I72.	XaJ6Y XaJ6Z XaJ5I XaJ5c	
		<i>(Clopidogrel contraindications: expiring)</i>		
18	TXCLO_DAT	Date of TXCLO_COD		Chosen record
19	OSAL_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= (ACHIEVEMENT_DAT)
		67I8. 8B63. 8B3T.	XaFsi XaF7N XE0hr%	
		<i>(OTC salicylate codes)</i>		
20	OSAL_DAT	Date of OSAL_COD		Chosen record
21	SAL_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= (ACHIEVEMENT_DAT)
		bu2..% di1..% j11..% blm..% bu4..%	bu2..% x04tL% blm..% bu4..%	
		<i>(Salicylate prescription codes)</i>		

22	SAL_DAT	Date of SAL_COD		Chosen record
23	CLO_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= (ACHIEVEMENT_DAT)
		bu5..% 8B6P.	bu5..% XaJd8	
		<i>(Clopidogrel prescription codes)</i>		
24	CLO_DAT	Date of CLO_COD		Chosen record
25	WAR_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= (ACHIEVEMENT_DAT)
		bs...% 8B2K.	x01O3% x01O5% XaKAK bs...%	
		<i>(Warfarin prescription codes)</i>		
26	WAR_DAT	Date of WAR_COD		Chosen record
27	DIPY_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= (ACHIEVEMENT_DAT)
		bu1..% (excluding bu13., bu1z.) bu4..%	bu1..% (excluding bu1z.) bu4..%	
		<i>(Dipyridamole prescription codes)</i>		
28	DIPY_DAT	Date of DIPY_COD		Chosen record
29	XDIPY_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= ACHIEVEMENT_DAT
		14LX. TJC44 U60C3	Xa61Z Xa5d6 TJC44	
		<i>(Dipyridamole contraindications: persistent)</i>		
30	XDIPY_DAT	Date of XDIPY_COD		Chosen record
31	TXDIPY_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <=

		8I2b. 8I3n. 8I6a. 8I7J.	XaLFv XaLFw XaLFx XaLFy	ACHIEVEMENT_DAT
		<i>(Dipyridamole contraindications: expiring)</i>		
32	TXDIPY_DAT	Date of TXDIPY_COD		Chosen record
33	CHAD_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= ACHIEVEMENT_DAT
		38DE.	XaP9J	
		<i>(Stroke risk assessment using CHADS₂)</i>		
34	CHAD_DAT	Date of CHAD_COD		Chosen record
35	CHAD_VAL	Value of CHAD_COD		Chosen record

Indicator rulesets

- 1 Indicator AF001: The contractor establishes and maintains a register of patients with atrial fibrillation.

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 AF005: In those patients with atrial fibrillation in whom there is a record of a CHADS₂ score of 1, the percentage of patients who are currently treated with anti-coagulation drug therapy or anti-platelet therapy

Overview

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

The aspect that is being measured is that of the provision of anticoagulants or antiplatelets to patients with a record of a CHADS₂ score of 1.

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 atrial fibrillation (i.e. there is evidence in the patient's electronic health record of an atrial fibrillation diagnosis code) that has not been resolved.

Numerator and Denominator

The success criteria for this indicator (**numerator**) are achieved for those patients in the denominator who have a record of being currently treated with anticoagulants or antiplatelets.

Please note that it has been agreed that 'currently treated' is defined as follows:

- For items *prescribed*, within the last 6 months of the year i.e. ([PAYMENTPERIODEND DAT](#) – 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 with a record of a CHADS₂ score of 1: patients with no record of a CHADS₂ score, with a CHADS₂ score of <1 or with a CHADS₂ score of >1 are excluded.

Exceptions

Patients that don't achieve the success criteria of the indicator are checked for valid 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 their stroke risk assessed using the CHADS₂ risk stratification scoring system maybe because there hasn't been an opportunity in the qualifying year to arrange this.

- any patient that has a valid atrial fibrillation exception code recorded within the preceding 12 months.
- any patient that has been diagnosed with atrial fibrillation within the last 3 months of the year (new diagnosis of atrial fibrillation). Newly diagnosed patients may be regarded as exceptions if they fulfil the criteria of the indicator but have not yet had their stroke risk assessed using the CHADS₂ risk stratification scoring system maybe because there hasn't been an opportunity in the qualifying year to arrange this.
- any patient with a record of a contraindication (persisting or expiring) to anticoagulant or antiplatelet 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)

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

Indicator AF005: In those patients with atrial fibrillation in whom there is a record of a CHADS₂ score of 1, the percentage of patients who are currently treated with anti-coagulation drug therapy or anti-platelet therapy.

a) Denominator ruleset

<i>Rule number</i>	<i>Rule</i>	<i>Action if true</i>	<i>Action if false</i>
1	If CHAD_VAL = 1	Next rule	Reject
2	If SAL_DAT > (PAYMENTPERIODEND_DAT - 6 months) OR If WAR_DAT > (PAYMENTPERIODEND_DAT - 6 months) OR If CLO_DAT > (PAYMENTPERIODEND_DAT - 6 months) OR If OSAL_DAT > (PAYMENTPERIODEND_DAT - 12 months) OR If DIPY_DAT > (PAYMENTPERIODEND_DAT - 6 months)	Select	Next rule
3	If REG_DAT > (PAYMENTPERIODEND_DAT - 3 months)	Reject	Next rule
4	If AFIBEXC_DAT > (PAYMENTPERIODEND_DAT - 12 months)	Reject	Next rule
5	If AFIB_DAT > (PAYMENTPERIODEND_DAT - 3 months)	Reject	Next rule
6	If XSAL_COD = Null AND If TXSAL_DAT = Null	Select	Next rule
7	If XSAL_COD = Null AND If TXSAL_DAT <= (PAYMENTPERIODEND_DAT - 12 months)	Select	Next rule
8	If XWAR_COD = Null AND If TXWAR_DAT = Null	Select	Next rule
9	If XWAR_COD = Null AND If TXWAR_DAT <= (PAYMENTPERIODEND_DAT - 12 months)	Select	Next rule
10	If XCLO_COD = Null AND If TXCLO_DAT = Null	Select	Next rule
11	If XCLO_COD = Null AND If TXCLO_DAT <= (PAYMENTPERIODEND_DAT - 12 months)	Select	Next rule
12	If XDIPY_COD = Null AND If TXDIPY_DAT = Null	Select	Next rule
13	If XDIPY_COD = Null AND If TXDIPY_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 SAL_DAT > (PAYMENTPERIODEND_DAT - 6 months) OR	Select	Reject

	If WAR_DAT > (PAYMENTPERIODEND_DAT – 6 months) OR If CLO_DAT > (PAYMENTPERIODEND_DAT – 6 months) OR If OSAL_DAT > (PAYMENTPERIODEND_DAT – 12 months) OR If DIPY_DAT > (PAYMENTPERIODEND_DAT – 6 months)		
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Additional Notes:

Denominator

Exclusion

Rule 1: This rule checks to see if the patient's latest recorded CHADS₂ score is 1. If a patient's latest CHADS₂ score is 1, the outcome of the rule is true and the patient is passed on to the next rule. If the outcome of the rule is false the patient is rejected from the denominator.

Success

Rule 2: The objective of this rule is to identify patients who are currently treated with anticoagulants or antiplatelets.

If a patient has a record of anticoagulant or antiplatelet treatment within the appropriate time frame the patient is selected into the denominator.

If the patient does not have a record of anticoagulant or antiplatelet treatment within the appropriate time frame they are passed on to the next rule.

Exceptions

It is worth remembering at this point that if a patient's latest recorded CHADS₂ score is 1 and they have received the appropriate treatment they will have already been selected into the denominator in Rule 2.

Rule 3: 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 4: The aim of this rule is to identify any patient that has a valid atrial fibrillation 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 5: The aim of this rule is to identify any patient that has been 'recently diagnosed' with atrial fibrillation. 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 selected into the denominator

Rule 6: The aim of this rule is to identify any patient with a contraindication (persistent or expiring) to salicylate treatment. If a patient does not have a record of either an expiring or persistent contraindication to salicylate they are selected into the denominator. Otherwise they are passed on to the next rule.

Rule 7: The aim of this rule is to identify any patient without a persisting contraindication to salicylate treatment who has an expiring contraindication to salicylate treatment recorded outside the appropriate time frame.

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

Rule 8: The aim of this rule is to identify any patient with a contraindication (persistent or expiring) to anticoagulant treatment.

If a patient does not have a record of either an expiring or persistent contraindication to anticoagulant treatment they are selected into the denominator. Otherwise they are passed on to the next rule.

Rule 9: The aim of this rule is to identify any patient without a persisting contraindication to anticoagulant treatment who has an expiring contraindication to anticoagulant treatment recorded outside the appropriate time frame.

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

Rule 10: The aim of this rule is to identify any patient with a contraindication (persistent or expiring) to clopidogrel treatment.

If a patient does not have a record of either an expiring or persistent contraindication to clopidogrel they are selected into the denominator. Otherwise they are passed on to the next rule.

Rule 11: The aim of this rule is to identify any patient without a persisting contraindication to clopidogrel treatment who has an expiring contraindication to clopidogrel treatment recorded outside the appropriate time frame.

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

Rule 12: The aim of this rule is to identify any patient with a contraindication (persistent or expiring) to dipyridamole treatment.

If a patient does not have a record of either an expiring or persistent contraindication to dipyridamole they are selected into the denominator. Otherwise they are passed on to the next rule.

Rule 13: The aim of this rule is to identify any patient without a persisting contraindication to dipyridamole treatment who has an expiring contraindication to dipyridamole treatment recorded outside the appropriate time frame.

If a patient without a persisting contraindication to dipyridamole treatment has an expiring contraindication to dipyridamole 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 AF004: In those patients with atrial fibrillation whose latest record of a CHADS₂ score is greater than 1, the percentage of patients who are currently treated with anti-coagulation therapy.

Overview

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

The aspect that is being measured is that of the provision of anticoagulants to patients with a record of a CHADS₂ score of >1.

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 atrial fibrillation (i.e. there is evidence in the patient's electronic health record of an atrial fibrillation diagnosis code) that has not been resolved.

Numerator and Denominator

The success criteria for this indicator (**numerator**) are achieved for those patients in the denominator who have a record of being currently treated with anticoagulants.

Please note that it has been agreed that 'currently treated' is defined as follows:

- For items *prescribed*, within the last 6 months of the year i.e. ([PAYMENTPERIODEND DAT](#) – 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 with a record of a CHADS₂ score of >1: patients with no record of a CHADS₂ score or with a CHADS₂ score of ≤1 are excluded.

Exceptions

Patients that don't achieve the success criteria of the indicator are checked for valid 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 their stroke risk assessed using the CHADS₂ risk stratification scoring system maybe because there hasn't been an opportunity in the qualifying year to arrange this.

- any patient that has a valid atrial fibrillation exception code recorded within the preceding 12 months.
- any patient that has been diagnosed with atrial fibrillation within the last 3 months of the year (new diagnosis of atrial fibrillation). Newly diagnosed patients may be regarded as exceptions if they fulfil the criteria of the indicator but have not yet had their stroke risk assessed using the CHADS₂ risk stratification scoring system maybe because there hasn't been an opportunity in the qualifying year to arrange this.
- any patient with a record of a contraindication (persisting or expiring) to anticoagulant 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)

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

Indicator AF004: In those patients with atrial fibrillation whose latest record of a CHADS₂ score is greater than 1, the percentage of patients who are currently treated with anti-coagulation therapy

a) Denominator ruleset

<i>Rule number</i>	<i>Rule</i>	<i>Action if true</i>	<i>Action if false</i>
1	If CHAD_VAL > 1	Next rule	Reject
2	If WAR_DAT > (PAYMENTPERIODEND_DAT – 6 months)	Select	Next rule
3	If REG_DAT > (PAYMENTPERIODEND_DAT – 3 months)	Reject	Next rule
4	If AFIBEXC_DAT > (PAYMENTPERIODEND_DAT – 12 months)	Reject	Next rule
5	If AFIB_DAT > (PAYMENTPERIODEND_DAT – 3 months)	Reject	Next rule
6	If XWAR_COD = Null AND If TXWAR_DAT = Null	Select	Next rule
7	If XWAR_COD = Null AND If TXWAR_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 WAR_DAT > (PAYMENTPERIODEND_DAT – 6 months)	Select	Reject

Additional Notes:

Denominator

Exclusion

Rule 1: This rule checks to see if the patient's latest recorded CHADS₂ score is >1. If a patient's latest CHADS₂ score is >1, the outcome of the rule is true and the patient is passed on to the next rule. If the outcome of the rule is false the patient is rejected from the denominator.

Success

Rule 2: The objective of this rule is to identify patients who are currently treated with anticoagulants.

If a patient has a record of anticoagulant treatment within the appropriate time frame the patient is selected into the denominator.

If the patient does not have a record of anticoagulant treatment within the appropriate time frame they are passed on to the next rule.

Exceptions

It is worth remembering at this point that if a patient's latest recorded CHADS₂ score is >1 and they have a record of appropriate treatment they will have already been selected into the denominator in Rule 2.

Rule 3: 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 4: The aim of this rule is to identify any patient that has a valid atrial fibrillation 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 5: The aim of this rule is to identify any patient that has been 'recently diagnosed' with atrial fibrillation. 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 selected into the denominator

Rule 6: The aim of this rule is to identify any patient with a contraindication (persistent or expiring) to anticoagulant treatment. If a patient does not have a record of either an expiring or persistent contraindication to anticoagulant treatment they are selected into the denominator. Otherwise they are passed on to the next rule.

Rule 7: The aim of this rule is to identify any patient without a persisting contraindication to anticoagulant treatment who has an expiring contraindication to anticoagulant treatment recorded outside the appropriate time frame.

If a patient without a persisting contraindication to anticoagulant treatment has an expiring contraindication to anticoagulant 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.