Data and Business Rules – Secondary Prevention of Coronary Heart Disease (CHD) Specification					
Author	HSCIC – QOF Business Rules team	Version No	30.0	Version Date	10/10/2014

New GMS Contract QOF Implementation

Dataset and Business Rules
-
Secondary Prevention of Coronary Heart Disease (CHD)
Indicator Set

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Amendment History:

Version	Date	Amendment History
Draft 0.3	21-Jun-2003	From Peter Horsfield
1.0	24-Sep-2003	Standard Headers and footers Applied and set to approved.
1.1	03-Nov-2003	Added headers and footers to Version 0.4 received from Pete Horsfield on 03/11/03.
2.0	12-Nov-2003	Amended following 4 Country review
3.0	20-Jan-2004	Amended following January READ Code Release
4.0	04-Feb-2004	Amended following 4 Country, GPSS and internal review
4.1	09-Apr-2004	SNOMED-CT codes added, 4-byte Read codes removed
4.2	09-Jul-2004	Amended following July READ code release
5.0	27-Sep-2004	Amended following 4 Country Review
5.1	18-Jan-2005	Amended following January READ Code Release
5.2	21-Jun-2005	Amended following 4 Country Review
6.0	21-July-2005	Signed off following 4 Country review
6.1	21-July-2005	Amended following July 2005 Read Code release and January 2005 SNOMED CT release
6.2	21-Aug-2005	Amended following 4 Country review
7.0	23-Sep-2005	Signed off following 4 Country review
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	26-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	IHD_COD: Correct spacing for clarity Addition of missing exercise test codes in CTV3
9.0	30-Nov-2006	Approved by NHSE
9.1	11-Apr-2007	April 2007 Read Code Release
9.2	15-Jun-2007	Following 4-Country Review: Remove 'Eye-drops' Read Codes from BB_COD in CTV3
10.0	18-Jun-2007	Signed off following 4 Country review
10.1	06-Sept-2007	April 2007 SNOMED CT Release
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
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

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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 Four-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
16.1	05-May-2010	Internal NHS IC 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. Document name changed from Coronary Heart Disease to Secondary Prevention of Coronary Heart Disease (CHD).
25.1	17-April-2013	Amendment made to CHD006 to correct brackets
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
27.1	02-December-2013	Update to FLU_COD and TXFLU_COD
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

New GMS contract Q&O framework implementation

Dataset and business rules – Secondary Prevention of Coronary heart disease indicator set

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.

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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.

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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)
b) < (less than)
c) = (equal to)
d) ≠ (not equal to)
e) AND
f) OR
g) NOT

9) Where date criteria are specified with intervals of multiples of months or years these should be interpreted as calendar months or calendar years.

10) The new GMS contract requires that influenza vaccinations should be given between 1st August and 31st March of any given contract year in order to qualify for the relevant indicators. Hence in the contract year 2014 – 2015 the relevant dates will be 1st August 2014 and 31st March 2015 inclusive. In this document these dates are expressed as variable parameters FLU_COM and FLU_END respectively. For the purposes of data extraction these variables will be required to be specified prior to processing the relevant rules.

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Dataset Specification

1) Patient selection criteria:

a) Registration status

Current registration status	*Qualifying criteria*
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

Code criteria	*Qualifying diagnostic codes*		*Time criteria*
Included	*Read codes v2*	*CTV3*	*Earliest <= (ACHIEVEMENT_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% XaYYq XM0rN	

2) Clinical data extraction criteria

Field Number	*Field name*	*Data item*		*Qualifying criteria*
1	PAT_ID	Patient ID number		Unconditional
2	REG_DAT	Date of patient registration		Latest <= ACHIEVEMENT_DAT
3	CHDEXC_COD	*Read codes v2*	*CTV3*	Latest <= ACHIEVEMENT_DAT
		9h0..%	XaJ4J%	
		(*CHD exception reporting codes*)		
4	CHDEXC_DAT	Date of CHDEXC_COD		Chosen record
5	IHD_COD	*Read codes v2*	*CTV3*	Earliest <= ACHIEVEMENT_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% XaYYq XM0rN	
		(*Ischaemic heart disease codes*)		
6	IHD_DAT	Date of IHD_COD		Chosen record
7	MI_COD	*Read codes v2*	*CTV3*	Latest first or new episode <= ACHIEVEMENT_DAT
		G30..% (Excluding G30A.) G35..% G38..% Gyu34 Gyu36	X200E% (excluding XE2aA%)	
		(*Myocardial infarction codes*)		

<table>
<tr><td>8</td><td>MI_DAT</td><td colspan="2">Date of MI_COD</td><td>Chosen record</td></tr>
<tr><td rowspan="3">9</td><td rowspan="3">BP_COD</td><td>Read codes v2</td><td>CTV3</td><td rowspan="3">Latest <= ACHIEVEMENT_DAT</td></tr>
<tr><td>246..% (excluding 2460., 2468. 246H., 246I., 246K., 246L., 246M., 246h., 246i., 246j., 246k.)</td><td>X773t% (excluding XaI9f, XaI9g, X779b, X779R, X779T, X779W, XaYai, XaYg8, XaYg9)
246..% (excluding 2460., 2468., XaCFN, XaCFO, XaZvo, XaZxj)</td></tr>
<tr><td colspan="2">(BP recording codes)</td></tr>
<tr><td>10</td><td>BP_DAT</td><td colspan="2">Date of BP_COD</td><td>Chosen record</td></tr>
<tr><td>11</td><td>BP_SYS</td><td colspan="2">Value 1 of BP_COD
(Systolic BP value)</td><td>Chosen record</td></tr>
<tr><td>12</td><td>BP_DIA</td><td colspan="2">Value 2 of BP_COD
(Diastolic BP value)</td><td>Chosen record</td></tr>
<tr><td rowspan="3">13</td><td rowspan="3">BPEX_COD</td><td>Read codes v2</td><td>CTV3</td><td rowspan="3">Latest <= ACHIEVEMENT_DAT</td></tr>
<tr><td>8I3Y.</td><td>XaJkR</td></tr>
<tr><td colspan="2">(BP recording exception codes)</td></tr>
<tr><td>14</td><td>BPEX_DAT</td><td colspan="2">Date of BPEX_COD</td><td>Chosen record</td></tr>
<tr><td rowspan="3">15</td><td rowspan="3">HTMAX_COD</td><td>Read codes v2</td><td>CTV3</td><td rowspan="3">Latest <= ACHIEVEMENT_DAT</td></tr>
<tr><td>8BL0.</td><td>XaJ5h</td></tr>
<tr><td colspan="2">(Code for maximal BP therapy)</td></tr>
<tr><td>16</td><td>HTMAX_DAT</td><td colspan="2">Date of HTMAX_COD</td><td>Chosen record</td></tr>
<tr><td rowspan="3">17</td><td rowspan="3">TCHEXC_COD</td><td>Read codes v2</td><td>CTV3</td><td rowspan="3">Latest <= ACHIEVEMENT_DAT</td></tr>
<tr><td>8BL1.
8I3C.
8I27.
8I63.
8I76.</td><td>XaJ5i
XaIIl
XaIIg
XaG2V
XaJYw</td></tr>
<tr><td colspan="2">(Codes for exception from serum cholesterol target; expiring)</td></tr>
</table>

18	TCHEXC_DAT	Date of TCHEXC_COD		Chosen record
19	XSAL_COD	*Read codes v2*	*CTV3*	Latest <= ACHIEVEMENT_DAT
		14LK. ZV148 U6051 TJ53.	XaIpk Xa5FM% XE22E% Xa5dp% XaDzd U6051	
		(*Salicylate contra-indications: persistent*)		
20	XSAL_DAT	Date of XSAL_COD		Chosen record
21	TXSAL_COD	*Read codes v2*	*CTV3*	Latest <= ACHIEVEMENT_DAT
		8I24. 8I38. 8I66. 8I70.	XaDvH XaFsE XaIIi XaJ5a	
		(*Salicylate contra-indications: expiring*)		
22	TXSAL_DAT	Date of TXSAL_COD		Chosen record
23	XWAR_COD	*Read codes v2*	*CTV3*	Latest <= ACHIEVEMENT_DAT
		14LP. TJ42.% (excluding TJ420) U6042 ZV14A	XaJ60 TJ42.% (excluding TJ420) U6042 XaJ8B Xa5yP%	
		(*Warfarin contraindications: persistent*)		
24	XWAR_DAT	Date of XWAR_COD		Chosen record
25	TXWAR_COD	*Read codes v2*	*CTV3*	Latest <= ACHIEVEMENT_DAT
		8I25. 8I3E. 8I65. 8I71. 8I2R.	XaFsz XaIIn XaIIh XaJ5b XaKAB	

		8I3d. 8I6N. 8I7A. 8I2o. 8IES. 8I611 8I7R. 8I2u. 8IH1. 8I6s. 8I7V.	XaKAD XaKA7 XaKA0 XaZbj XaZZl XaZbl XaZbr XabEn XabEe XabEp XabEo	
		(*Warfarin contraindications: expiring*)		
26	TXWAR_DAT	Date of TXWAR_COD		Chosen record
27	XCLO_COD	*Read codes v2*	*CTV3*	Latest <= ACHIEVEMENT_DAT
		14LQ. U6048 ZV14B	XaJ8V XaJ3e XaJ5v	
		(*Clopidogrel contraindications: persistent*)		
28	XCLO_DAT	Date of XCLO_COD		Chosen record
29	TXCLO_COD	*Read codes v2*	*CTV3*	Latest <= ACHIEVEMENT_DAT
		8I2K. 8I3R. 8I6B. 8I72.	XaJ6Y XaJ6Z XaJ5l XaJ5c	
		(*Clopidogrel contraindications: expiring*)		
30	TXCLO_DAT	Date of TXCLO_COD		Chosen record
31	OSAL_COD	*Read codes v2*	*CTV3*	Latest <= ACHIEVEMENT_DAT
		67I8. 8B63. 8B3T.	XaFsi XaF7N XE0hr%	
		(*OTC salicylate codes*)		

32	OSAL_DAT	Date of OSAL_COD		Chosen record
33	SAL_COD	*Read codes v2*	*CTV3*	Latest <= ACHIEVEMENT_DAT
		bu2..% di1..% j11..% blm..% bu4..%	bu2..% x04tL% blm..% bu4..%	
		(*Salicylate prescription codes*)		
34	SAL_DAT	Date of SAL_COD		Chosen record
35	CLO_COD	*Read codes v2*	*CTV3*	Latest <= ACHIEVEMENT_DAT
		bu5..% 8B6P.	bu5..% XaJd8	
		(*Clopidogrel prescription codes*)		
36	CLO_DAT	Date of CLO_COD		Chosen record
37	WAR_COD	*Read codes v2*	*CTV3*	Latest <= ACHIEVEMENT_DAT
		bs...% 8B2K.	x01O3% x01O5% XaKAk bs...%	
		(*Warfarin prescription codes*)		
38	WAR_DAT	Date of WAR_COD		Chosen record
39	XBB_COD	*Read codes v2*	*CTV3*	Latest <= ACHIEVEMENT_DAT
		14LL. TJC6.% U60B7 U60B9 - U60BB ZVu6i, ZVu6o, ZVu6q, ZV14C TJC00 TJC02	XaJ5x Xa5jo% Xa5LL% TJC6.% XaQad, XaQac, XaQab U60B7, XaQaf, XaQag, XaQah XaJ8U TJC00 TJC02	

		(*Beta-blocker contraindications: persistent)*		
40	XBB_DAT	Date of XBB_COD		Chosen record
41	TXBB_COD	*Read codes v2*	*CTV3*	Latest <= ACHIEVEMENT_DAT
		8I26. 8I2g. - 8I2i. 8I36. 8IAS. - 8IAV. 8I62. 8I6i. - 8I6k. 8I73. 8I7K. - 8I7M.	XaFt0% XaFsB% XaFvr% XaJ5d%	
		(*Beta-blocker contraindications: expiring)*		
42	TXBB_DAT	Date of TXBB_COD		Chosen record
43	BB_COD	*Read codes v2*	*CTV3*	Latest <= ACHIEVEMENT_DAT
		bd…%	bd…% (excluding k832.%, k83z.%, k83y.%, bd4.., k83.., k85y.%, k85z.%, x01C8%, k8b..%, x03hf%, k8fH., k8fI.)	
		(*Beta-blocker prescription codes*)		
44	BB_DAT	Date of BB_COD		Chosen record
45	XACE_COD	*Read codes v2*	*CTV3*	Latest <= ACHIEVEMENT_DAT
		14LM. U60C4 TJC77 – TJC79 ZV14D K0430	XaJ5y XaJ8Y Xa60w% Xa5cT% XaIrq, U60C4 TJC77 TJC78 TJC79 X70wH XaZ6J	

		(*Ace inhibitor contraindications; persistent*)		
46	XACE_DAT	Date of XACE_COD		Chosen record
47	TXACE_COD	*Read codes v2*	*CTV3*	Latest <= ACHIEVEMENT_DAT
		8I28. 8I3D. 8I64. 8I74.	XaG2W XaIIm XaIIf XaJ5e	
		(*Ace inhibitor contraindications; expiring*)		
48	TXACE_DAT	Date of TXACE_COD		Chosen record
49	XAII_COD	*Read codes v2*	*CTV3*	Latest <= ACHIEVEMENT_DAT
		14LN. U60CB ZV14E	XaJ5z XaJ8o XaIzK XaJ8W Xa619 Xa5cg	
		(*AII antagonist contraindications: persisting*)		
50	XAII_DAT	Date of XACE_COD		Chosen record
51	TXAII_COD	*Read codes v2*	*CTV3*	Latest <= ACHIEVEMENT_DAT
		8I2H. 8I3P. 8I6C. 8I75.	XaInW XaIyw XaJ5m XaJ5f	
		(*AII antagonist contraindications: expiring*)		
52	TXAII_DAT	Date of TXAII_COD		Chosen record
53	ACE_COD	*Read codes v2*	*CTV3*	Latest <= ACHIEVEMENT_DAT
		bi...% bA...% bk6..%	bi...% bA...%	

<table>
<tr><td></td><td></td><td colspan="2">(Ace inhibitor prescription codes)</td><td></td></tr>
<tr><td>54</td><td>ACE_DAT</td><td colspan="2">Date of ACE_COD</td><td>Chosen record</td></tr>
<tr><td rowspan="3">55</td><td rowspan="3">AII_COD</td><td>Read codes v2</td><td>CTV3</td><td rowspan="3">Latest <= ACHIEVEMENT_DAT</td></tr>
<tr><td>bk3.. - bk5z.
bk7.. - bk9z.
bkB..%, bkC..%, bkD..%
bkH..%, bkI..%, bkJ..%</td><td>x03j2%
x03ls%
bkD..%
bkH..%
bkI..%
bkJ..%</td></tr>
<tr><td colspan="2">(AII antagonist prescription codes)</td></tr>
<tr><td>56</td><td>AII_DAT</td><td colspan="2">Date of AII_COD</td><td>Chosen record</td></tr>
<tr><td rowspan="3">57</td><td rowspan="3">XFLU_COD</td><td>Read codes v2</td><td>CTV3</td><td rowspan="3">Latest <= ACHIEVEMENT_DAT</td></tr>
<tr><td>14LJ.
U60K4
ZV14F</td><td>XaIAA
XaJ7u
XaJ8X
Xa5um%
Xa5WJ%</td></tr>
<tr><td colspan="2">(Flu vaccine contraindications: persisting)</td></tr>
<tr><td>58</td><td>XFLU_DAT</td><td colspan="2">Date of XFLU_COD</td><td>Chosen record</td></tr>
<tr><td rowspan="3">59</td><td rowspan="3">TXFLU_COD</td><td>Read codes v2</td><td>CTV3</td><td rowspan="3">Latest <= ACHIEVEMENT_DAT</td></tr>
<tr><td>68NE.
9OX51
8I2F0
8I6D0
68NE0
9OX54
9OX56</td><td>68NE.
XaZ0i
XaZ0j
XaZ0k
Xaa9f
XaadS
XaadU</td></tr>
<tr><td colspan="2">(Flu vaccine contraindications: expiring)</td></tr>
<tr><td>60</td><td>TXFLU_DAT</td><td colspan="2">Date of TXFLU_COD</td><td>Chosen record</td></tr>
</table>

<table>
<tr><td rowspan="3">61</td><td rowspan="3">FLU_COD</td><td>Read codes v2</td><td>CTV3</td><td rowspan="3">Latest <= ACHIEVEMENT_DAT</td></tr>
<tr><td>n47..% (Excluding n47A., n47B., n47r., n47s., n47t.)
65ED., 65E20, 65ED0, 65ED2, 65ED1, 65ED3, 65E21, 65E22</td><td>n47..% (Excluding n47A., n47B., n47r., n47s., n47t.)
XaZ0d, XaZ0e, XaZfY, XaaZp, Xaac3, Xaac4, Xaac7, Xaac8</td></tr>
<tr><td colspan="2">(Flu vaccination codes)</td></tr>
<tr><td>62</td><td>FLU_DAT</td><td colspan="2">Date of FLU_COD</td><td>Chosen record</td></tr>
<tr><td rowspan="3">63</td><td rowspan="3">MIEXC_COD</td><td>Read codes v2</td><td>CTV3</td><td rowspan="3">Latest <= ACHIEVEMENT_DAT</td></tr>
<tr><td>9hM..
9hM0.
9hM1.</td><td>XaRFL
XaRFP
XaRFO</td></tr>
<tr><td colspan="2">(Myocardial infarction exception reporting codes)</td></tr>
<tr><td>64</td><td>MIEXC_DAT</td><td colspan="2">Date of MIEXC_COD</td><td>Chosen record</td></tr>
<tr><td rowspan="3">65</td><td rowspan="3">STAT_COD</td><td>Read codes v2</td><td>CTV3</td><td rowspan="3">Latest <= ACHIEVEMENT_DAT</td></tr>
<tr><td>bxi..%
bxg..%
bxe..%
bxk..%
bxd..%</td><td>bxi..%
x01R2%
x01R3%
bxk..%
bxd..%</td></tr>
<tr><td colspan="2">(Statin Codes)</td></tr>
<tr><td>66</td><td>STAT_DAT</td><td colspan="2">Date of STAT_COD</td><td>Chosen record</td></tr>
<tr><td rowspan="2">67</td><td rowspan="2">XSTAT_COD</td><td>Read codes v2</td><td>CTV3</td><td rowspan="2">Latest <= ACHIEVEMENT_DAT</td></tr>
<tr><td>U60CA
TJC24
TJC25</td><td>XaIsC
TJC24
TJC25
XaIro
Xa5zt
Xa5zu
Xa5zv
Xa5bQ
Xa5bR
Xa5bS</td></tr>
</table>

		Xa5bP	
		(*Statin contraindications; persistent*)	
68	XSTAT_DAT	Date of XSTAT_COD	Chosen record
69	COMBSTATEXC_COD	The latest recording for any of the following: TCHEXC_DAT XSTAT_DAT *(Combined Statin contraindication codes)*	Latest of TCHEXC_DAT (where TCHEXC_DAT > (ACHIEVEMENT_DAT – 12 months)), XSTAT_DAT (Where XSTAT_COD ≠ Null)
70	COMBSTATEXC_DAT	Date of COMBSTATEXC_COD	Chosen record
71	COMBSAL_COD	The latest date of recording for any of the following: SAL_DAT OSAL_DAT *(Combined Salicylate prescription codes)*	Latest of SAL_DAT (where SAL_DAT > (ACHIEVEMENT_DAT – 6 months)) OSAL_DAT (where OSAL_DAT > (ACHIEVEMENT_DAT – 12 months))
72	COMBSAL_DAT	Date of COMBSAL_COD	Chosen record
73	COMBSALEXC_COD	The latest date of recording for any of the following: TXSAL_DAT XSAL_DAT	Latest of TXSAL_DAT (where TXSAL_DAT >

		(Combined Salicylate contraindication codes)	(ACHIEVEMENT_DAT – 12 months)), XSAL_DAT (Where XSAL_COD ≠ Null),
74	COMBSALEXC_DAT	Date of COMBSALEXC_COD	Chosen record
75	COMBCLOEXC_COD	The latest date of recording for any of the following: TXCLO_DAT XCLO_DAT *(Combined Clopidogrel contraindication codes)*	Latest of TXCLO_DAT (where TXCLO_DAT > (ACHIEVEMENT_DAT – 12 months)), XCLO_DAT (Where XCLO_COD ≠ Null)
76	COMBCLOEXC_DAT	Date of COMBCLOEXC_COD	Chosen record
77	COMBBBEXC_COD	The latest date of recording for any of the following: TXBB_DAT XBB_DAT *(Combined Beta-Blocker contraindication codes)*	Latest of TXBB_DAT (where TXBB_DAT > (ACHIEVEMENT_DAT – 12 months)), XBB_DAT (Where XBB_COD ≠ Null)
78	COMBBBEXC_DAT	Date of COMBBBEXC_COD	Chosen record
79	COMBACEEXC_COD	The latest date of recording for any of the following:	Latest of

		TXACE_DAT XACE_DAT *(Combined ACE inhibitor contraindication codes)*	TXACE_DAT (where TXACE_DAT > (ACHIEVEMENT_DAT – 12 months)), XACE_DAT (Where XACE_COD ≠ Null)
80	COMBACEEXC_DAT	Date of COMBACEEXC_COD	Chosen record
81	COMBAIIEXC_COD	The latest recording for any of the following: TXAII_DAT XAII_DAT *(Combined AII antagonist contraindication codes)*	Latest of TXAII_DAT (where TXAII_DAT > (ACHIEVEMENT_DAT – 12 months)), XAII_DAT (Where XAII_COD ≠ Null)
82	COMBAIIEXC_DAT	Date of COMBAIIEXC_COD	Chosen record

Indicator rulesets

1 Indicator CHD001: The contractor establishes and maintains a register of patients with coronary heart disease.

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.

2 Indicator CHD002: The percentage of patients with coronary heart disease in whom the last blood pressure reading (measured in the preceding 12 months) is 150/90 mmHg or less.

a) Denominator ruleset

Rule number	*Rule*	*Action if true*	*Action if false*
1	If BP_SYS <= 150 AND If BP_DIA <= 90 AND If BP_DAT > (PAYMENTPERIODEND_DAT – 12 months)	Select	Next rule
2	If BPEX_DAT> (PAYMENTPERIODEND_DAT – 12 months)	Reject	Next rule
3	If REG_DAT > (PAYMENTPERIODEND_DAT – 9 months)	Reject	Next rule
4	If CHDEXC_DAT > (PAYMENTPERIODEND_DAT – 12 months)	Reject	Next rule
5	If IHD_DAT > (PAYMENTPERIODEND_DAT – 9 months)	Reject	Next rule
6	If HTMAX_DAT > (PAYMENTPERIODEND_DAT – 12 months)	Reject	Select

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

Rule number	*Rule*	*Action if true*	*Action if false*
1	If BP_SYS <= 150 AND If BP_DIA <= 90 AND If BP_DAT > (PAYMENTPERIODEND_DAT – 12 months)	Select	Reject

3 Indicator CHD005: The percentage of patients with coronary heart disease with a record in the preceding 12 months that aspirin, an alternative anti-platelet therapy, or an anti-coagulant is being taken.

a) Denominator ruleset

Rule number	*Rule*	*Action if true*	*Action if false*
1	If SAL_DAT > (PAYMENTPERIODEND_DAT – 12 months) OR If WAR_DAT > (PAYMENTPERIODEND_DAT – 12 months) OR If CLO_DAT > (PAYMENTPERIODEND_DAT – 12 months) OR If OSAL_DAT > (PAYMENTPERIODEND_DAT – 12 months)	Select	Next rule
2	If REG_DAT > (PAYMENTPERIODEND_DAT – 3 months)	Reject	Next rule
3	If CHDEXC_DAT > (PAYMENTPERIODEND_DAT – 12 months)	Reject	Next rule
4	If IHD_DAT > (PAYMENTPERIODEND_DAT – 3 months)	Reject	Next rule
5	If XSAL_COD = Null AND If TXSAL_DAT = Null	Select	Next rule
6	If XSAL_COD = Null AND If TXSAL_DAT <= (PAYMENTPERIODEND_DAT – 12 months)	Select	Next rule
7	If XWAR_COD = Null AND If TXWAR_DAT = Null	Select	Next rule
8	If XWAR_COD = Null AND If TXWAR_DAT<= (PAYMENTPERIODEND_DAT – 12 months)	Select	Next rule
9	If XCLO_COD = Null AND If TXCLO_DAT = Null	Select	Next rule
10	If XCLO_COD = Null AND If TXCLO_DAT<= (PAYMENTPERIODEND_DAT – 12 months)	Select	Reject

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

Rule number	*Rule*	*Action if true*	*Action if false*
1	If SAL_DAT > (PAYMENTPERIODEND_DAT – 12 months) OR If WAR_DAT > (PAYMENTPERIODEND_DAT – 12 months) OR If CLO_DAT > (PAYMENTPERIODEND_DAT – 12 months) OR If OSAL_DAT > (PAYMENTPERIODEND_DAT – 12 months)	Select	Reject

4 Indicator CHD006: The percentage of patients with a history of myocardial infarction (on or after 1 April 2011) currently treated with an ACE-I (or ARB if ACE-I intolerant), aspirin or an alternative anti-platelet therapy, beta-blocker and statin.

Overview

This indicator has been developed to measure the effectiveness of the provision of a clinical care component for patients with myocardial infarction. The aspect that is being measured is that relating to the provision of a set of therapies.
The circumstances that can arise can be summarised as below.

Scenario	Description
A	Patient prescribed all drug therapies
B	Patient contraindicated to all drug therapies
C	Patient has a mixture of drug therapies and contraindications i.e. there are no gaps
D	Gap of therapy or contraindication i.e. the patient is not prescribed a drug and has no valid reason for not receiving it

A) All therapies were considered by the GP and the patient was provided with all 4 therapies i.e. the patient is prescribed an ACE inhibitor (or an ARB) **and** an aspirin or alternative anti-platelet **and** a beta-blocker **and** a statin. For patients prescribed anticoagulant for a pre-existing condition please refer to the associated guidance documents.

B) and C) All therapies were considered but the patient, for valid reasons, did not get provided with the full therapy set. For example the patient was contraindicated to one (or more) of the therapies and therefore could not be prescribed the complete set.

D) Not all the therapies were considered.

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

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 all the specified therapies listed.

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) and
- for items *available over the counter (OTC),* within the last 12 months of the year i.e. (PAYMENTPERIODEND_DAT – 12 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 diagnosed from a specific point in time when the associated clinical guidance was available: patients without a new (not necessarily first) diagnosis of myocardial infarction after **1st April 2011** 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 all of the therapies - maybe because there hasn't been an opportunity in the qualifying year to prescribe them.

- any patient that has a valid myocardial infarction exception code recorded within the preceding 12 months.

- any patient that has been diagnosed with a myocardial infarction within the last 3 months of the year (new diagnosis of myocardial infarction). Newly diagnosed patients may be regarded as exceptions if they fulfil the criteria of the indicator but have not yet been offered all the therapies - maybe because there hasn't been an opportunity in the qualifying year to arrange them.

- any patient for whom all therapies were considered but for valid reasons not all therapies were provided. For example the patient was contraindicated to one (or more) of the therapies and therefore could not be prescribed the complete set.

Indicator CHD006: The percentage of patients with a history of myocardial infarction (on or after 1 April 2011) currently treated with an ACE-I (or ARB if ACE-I intolerant), aspirin or an alternative anti-platelet therapy, beta-blocker and statin.

a) Denominator ruleset

Rule number	*Rule*	*Action if true*	*Action if false*
1	If MI_DAT >= 01.04.2011	Next rule	Reject
2	[If ACE_DAT ≠ Null AND If ACE_DAT > (PAYMENTPERIODEND_DAT – 6 months) OR If AII_DAT ≠ Null AND If AII_DAT > (PAYMENTPERIODEND_DAT – 6 months)] **AND** [If COMBSAL_DAT ≠ Null OR If CLO_DAT ≠ Null AND If CLO_DAT > (PAYMENTPERIODEND_DAT – 6 months) OR If WAR_DAT ≠ Null AND If WAR_DAT > (PAYMENTPERIODEND_DAT – 6 months)] **AND** If BB_DAT ≠ Null AND If BB_DAT > (PAYMENTPERIODEND_DAT – 6 months) **AND** If STAT_DAT ≠ Null AND If STAT_DAT > (PAYMENTPERIODEND_DAT – 6 months)	Select	Next rule

3	**[** (If ACE_DAT ≠ Null AND If ACE_DAT > (PAYMENTPERIODEND_DAT – 6 months)) OR (If AII_DAT ≠ Null AND If AII_DAT > (PAYMENTPERIODEND_DAT – 6 months)) OR (If COMBACEEXC_DAT ≠ Null AND If COMBAIIEXC_DAT ≠ Null) **]** **AND** **[**[If COMBSAL_DAT ≠ Null OR (If CLO_DAT ≠ Null AND If CLO_DAT > (PAYMENTPERIODEND_DAT – 6 months))] OR (If COMBSALEXC_DAT ≠ Null AND If COMBCLOEXC_DAT ≠ Null) OR (If WAR_DAT ≠ Null AND If WAR_DAT > (PAYMENTPERIODEND_DAT – 6 months)) **]** **AND** [(If BB_DAT ≠ Null AND If BB_DAT > (PAYMENTPERIODEND_DAT – 6 months)) OR If COMBBBEXC_DAT ≠ Null] **AND** [(If STAT_DAT ≠ Null AND If STAT_DAT > (PAYMENTPERIODEND_DAT – 6 months)) OR If COMBSTATEXC_DAT ≠ Null]	Reject	Next Rule

4	If REG_DAT > (PAYMENTPERIODEND_DAT – 3 months)	Reject	Next rule
5	If MIEXC_DAT > (PAYMENTPERIODEND_DAT – 12 months)	Reject	Next rule
6	If MI_DAT > (PAYMENTPERIODEND_DAT – 3 months)	Reject	Select

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

Rule number	*Rule*	*Action if true*	*Action if false*
1	[If ACE_DAT ≠ Null AND If ACE_DAT > (PAYMENTPERIODEND_DAT – 6 months) OR If AII_DAT ≠ Null AND If AII_DAT > (PAYMENTPERIODEND_DAT – 6 months)] **AND** [If COMBSAL_DAT ≠ Null OR If CLO_DAT ≠ Null AND If CLO_DAT > (PAYMENTPERIODEND_DAT – 6 months) OR If WAR_DAT ≠ Null AND If WAR_DAT > (PAYMENTPERIODEND_DAT – 6 months)] **AND** If BB_DAT ≠ Null AND If BB_DAT > (PAYMENTPERIODEND_DAT – 6 months) **AND** If STAT_DAT ≠ Null AND If STAT_DAT > (PAYMENTPERIODEND_DAT – 6 months)	Select	Reject

Additional Notes:

Denominator

Exclusion

Rule 1: This rule checks to see if the myocardial infarction diagnosis has been recorded after 1st April 2011. If the diagnosis is after this date 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 purpose of this rule is to identify patients who have successfully achieved the criteria of the indicator and select them into the denominator (and as we shall see below into the numerator).

The intent is to establish whether the patient is currently treated with an ACE inhibitor (or an ARB) **AND** aspirin or an alternative anti-platelet **AND** a beta blocker **AND** a statin. That is they need to satisfy all parts a) to d) below

a) The indicator states that the GP should look to treat a patient with an ACE inhibitor or with an ARB.

To further understand this part of the logic it is broken down below: -

[If ACE_DAT ≠ Null AND
If ACE_DAT > (PAYMENTPERIODEND_DAT – 6 months)

The first two lines check if the patient has a record of being treated with an ACE inhibitor i.e. it is not null and that this treatment occurred in the last 6 months

OR

If AII_DAT ≠ Null AND
If AII_DAT > (PAYMENTPERIODEND_DAT – 6 months)]

If the patient is not treated with an ACE inhibitor or the treatment occurs outside the last 6 months then this part of the logic checks if the patient is being treated with an ARB in the last 6 months.

Therefore to satisfy this ACE/ARB part of the logic the patient must either have a record of ACE treatment in the last 6 months or if not then they must have a record of ARB treatment in the last 6 months.

b) The patient has a record of being prescribed aspirin or an alternative anti-platelet (please note that the timeframe for this appears in the Qualifying Criteria of the cluster itself and incorporates a 6 month window for prescribed items and a 12 month window for over the counter items) or is already being treated with anticoagulant

[If COMBSAL_DAT ≠ Null

OR

If CLO_DAT ≠ Null AND
If CLO_DAT > (PAYMENTPERIODEND_DAT – 6 months)

OR

If WAR_DAT ≠ Null AND
If WAR_DAT > (PAYMENTPERIODEND_DAT – 6 months)]

c) The patient has a record of being prescribed a beta blocker in the last 6 months

If BB_DAT ≠ Null AND
If BB_DAT > (PAYMENTPERIODEND_DAT – 6 months)

d) The patient has a record of being prescribed a statin in the last 6 months

If STAT_DAT ≠ Null AND
If STAT_DAT > (PAYMENTPERIODEND_DAT – 6 months)

Then the patient is selected into the denominator. If the patient does not fulfil this criteria then they are passed on to the next rule.

Exception
It is worth remembering at this point that if a patient is currently treated with **all** the therapies they will have already been **selected** into the denominator in Rule 2.

Rule 3: If the patient has a record of a prescription or a contraindication for **all** therapies in the appropriate timeframes then they are **excepted** from the denominator.

If the patient has no record of having been prescribed a therapy (or has been prescribed the therapy outside the timeframe) **and** has no valid reason for not being prescribed that therapy i.e. being contraindicated, then they are passed on to the next rule.

Rule 4: The purpose of this rule is to identify whether the patient has been registered within the last 3 months of the qualifying year.
If the patient has been registered within the last 3 months of the qualifying year the outcome of the rule is true and the patient is **rejected** from the denominator.
If the patient was registered before the last 3 months of the qualifying year the outcome of the rule is false and the patient is passed on to the next rule.

Rule 5: The purpose of this rule is to identify any patient that has a relevant myocardial infarction exception code recorded in the preceding 12 months.
If an exception code is identified then the outcome of the rule is true and the patient is **rejected** from the denominator.
If no exception codes are identified then the outcome of the rule is false and the patient will be passed on to the next rule.

Rule 6: The aim of this rule is to identify any patient that has been 'recently diagnosed' with myocardial infarction.
If the patient has been diagnosed in the last 3 months, the patient can be excepted and 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 2.

5 Indicator CHD007: The percentage of patients with coronary heart disease who have had influenza immunisation in the preceding 1 August to 31 March.

a) Denominator ruleset

Rule number	*Rule*	*Action if true*	*Action if false*
1	If FLU_DAT >= FLU_COM AND If FLU_DAT <= FLU_END	Select	Next rule
2	If REG_DAT > (PAYMENTPERIODEND_DAT – 3 months)	Reject	Next rule
3	If CHDEXC_DAT > (PAYMENTPERIODEND_DAT – 12 months)	Reject	Next rule
4	If IHD_DAT > (PAYMENTPERIODEND_DAT – 3 months)	Reject	Next rule
5	If XFLU_COD ≠ Null	Reject	Next rule
6	If TXFLU_DAT > (PAYMENTPERIODEND_DAT – 12 months)	Reject	Select

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

Rule number	*Rule*	*Action if true*	*Action if false*
1	If FLU_DAT >= FLU_COM AND If FLU_DAT <= FLU_END	Select	Reject