



Unrestricted					
Data and Business Rules – Established Cardiovascular Disease Primary Prevention Indicator Set					
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## **New GMS Contract QOF Implementation**

### **Dataset and Business Rules - Established Cardiovascular Disease Primary Prevention Indicator Set**

**Amendment History:**

<b>Version</b>	<b>Date</b>	<b>Amendment History</b>
		The version number starts at 13.1 in order to coincide with existing datasets and business rules.
13.1	14-Feb-2009	QOF Review 2008
13.2	09-Mar-2009	Amendments following NHSE review
13.3	27-Apr-2009	Amendments following Four-Country Review
14.0	01-May-2009	Sign off following 4 Country review
14.1	25-June-2009	April 2009 Read Code Release
14.2	14-August-2009	Amendments following 4 Country Review
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	03-February-2011	Signed off following 4 Country review and further negotiations

### **New GMS contract Q&O framework implementation**

Dataset and business rules – Established Cardiovascular Disease Primary Prevention 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 October 2010 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).
- 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. 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.
- 8) The new GMS contract requires that influenza vaccinations should be given between 1<sup>st</sup> September and 31<sup>st</sup> March of any given contract year in order to qualify for the relevant indicators. Hence in the contract year 2004 – 2005 the relevant dates will be 1<sup>st</sup> September 2004 and 31<sup>st</sup> March 2005 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.

**Dataset Specification**

**1) Patient selection criteria:**

a) Registration status

<i>Current registration status</i>	<i>Qualifying criteria</i>
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

(Note: To be included in the patient population a patient needs to qualify for hypertension and not be excluded from other conditions below).

<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 First or New episode &lt; (REF_DAT) AND &gt;= 01.04.2009</i>
	G2... G20..% G24.. - G2z.. (Excluding G24z1)	XE0Ub XE0Uc% G24..% (excluding 61462) G2...% Xa0Cs XSDSbG202. Xa3fQ	
	<i>(Hypertension diagnosis codes)</i>		
<i>Excluded</i>	<i>Read codes v2</i>	<i>CTV3</i>	<i>Latest &lt; (REF_DAT) AND &gt; Date of diagnostic code above</i>
	21261 212K.	21261	
	<i>(Codes for hypertension resolved)</i>		

<i>Excluded</i>	<i>Read codes v2</i>	<i>CTV3</i>	<i>Earliest &lt; (REF_DAT) AND &lt; Date of Hypertension diagnosis</i>
	G3... - G309. G30B. - G330z G33z. - G3401 G342. - G366. G38.. - G3z.. Gyu3.%	XE2uV% (excluding Xa07j%, G341.%, X200B%, X200c)	
	<i>(Chronic Heart Disease diagnosis codes)</i>		

<i>Excluded</i>	<i>Read codes v2</i>	<i>CTV3</i>	<i>Earliest &lt; (REF_DAT) AND &lt; Date of Hypertension diagnosis</i>
	G61..% (excluding G617.) G63y0 - G63y1 G64..% G66..% G6760 G6W.. G6X.. Gyu62 – Gyu66 Gyu6F Gyu6G ZV125	X00D1% (Excluding XE1Xs%) ZV125	
	<i>(Stroke diagnosis codes)</i>		

<i>Excluded</i>	<i>Read codes v2</i>	<i>CTV3</i>	<i>Earliest &lt; (REF_DAT) AND &lt; Date of Hypertension diagnosis</i>
	G65..- G654. G656.- G65zz F4236 ZV12D	XE0VK% XaX16	
	<i>(TIA diagnosis Codes)</i>		

(Note: To be included in the patient population a patient needs to qualify for hypertension and have a diabetes resolve code).

<i>Excluded</i>	<i>Read codes v2</i>	<i>CTV3</i>	<i>Latest &lt; (REF_DAT)</i> <i>AND &lt; Date of Hypertension</i> <i>diagnosis</i>
	C10E.% C10F.% (excluding C10F8)	X40J4% X40J5% X40J6	
	<i>(Diabetes diagnostic codes)</i>		
<i>Included</i>	<i>Read codes v2</i>	<i>CTV3</i>	<i>Latest &lt; (REF_DAT)</i> <i>AND &gt; Date of Diabetes</i> <i>diagnosis</i>
	21263 212H.	XaFsp	
	<i>(Diabetes resolved codes)</i>		

<i>Excluded</i>	<i>Read codes v2</i>	<i>CTV3</i>	<i>Earliest &lt; (REF_DAT) AND &lt; Date of Hypertension diagnosis</i>
	G73.. G73z.% (Excluding G73z1) Gyu74.,	XEOVP G73z. Gyu74. Xa0IV XEOVR% XaVyB	
	<i>(PVD diagnostic codes)</i>		

<i>Excluded</i>	<i>Read codes v2</i>	<i>CTV3</i>	<i>Earliest &lt; (REF_DAT) AND &lt; Date of Hypertension diagnosis</i>
	C3200 C3201 C3204	C3200% XaR4h XaR4i XaR4k	
	<i>(Familial Hypercholesterolemia diagnostic codes)</i>		

<i>Excluded</i>	<i>Read codes v2</i>	<i>CTV3</i>	<i>Latest first or new &lt; (REF_DAT) AND &lt; Date of Hypertension diagnosis</i>
	1Z12. 1Z13. 1Z14. 1Z15. 1Z16. 1Z1B. – 1Z1L.	XaLHI% XaLHJ% XaLHK%	
	<i>(Chronic Kidney Disease codes 3-5)</i>		
<i>Included</i>	<i>Read codes v2</i>	<i>CTV3</i>	<i>Latest first or new &lt; (REF_DAT) AND &gt; Date of Chronic kidney Disease 3-5</i>
	1Z10. 1Z11. 1Z17. – 1Z1A.	XaLHH% XaLHG%	
	<i>(Chronic Kidney Disease codes 1-2)</i>		

(Note: To be included in the patient population a patient needs to qualify for hypertension and have a CKD code 1-2).

**Clinical data extraction criteria**

<i>Field Number</i>	<i>Field name</i>	<i>Data item</i>		<i>Qualifying criteria</i>
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	HYP_COD	<i>Read codes v2</i>	<i>CTV3</i>	<i>Latest First or New episode &lt; (REF_DAT) AND &gt;= 01.04.2009</i>
		G2... G20..% G24.. - G2z.. (Excluding G24z1)	XE0Ub XE0Uc% G24..% (excluding 61462) G2...% Xa0Cs XSDSb G202. Xa3fQ	
		<i>(Hypertension diagnosis codes)</i>		
5	HYP_DAT	Date of HYP_COD		Chosen record

6	CVDASS_COD	<i>Read codes v2</i>	<i>CTV3</i>	Earliest < (REF_DAT) AND >= (HYP_DAT - 3 months)
		38DR. 662k. - 662n. 38DF. 38DP. 38B10	XaQaG XaKCr XaKCu XaKCs XaKct XaPBq XaQVY XaX25	
		<i>(Cardio Vascular Risk Assessment codes)</i>		
7	CVDASS_DAT	Date of CVDASS_COD		Chosen record
<b>The CVDASS_COD code group below is for use in Scottish Practices Only.</b>				
	CVDASS_COD	<i>Read codes v2</i>	<i>CTV3</i>	Earliest < (REF_DAT) AND >= (HYP_DAT - 3 months)
		662k. - 662n. 38DR. 38DF. 38D6. 38DP. 38B10	XaQaG XaQVY XaKc% XaPBq XaOdJ XaX25	
		<i>(Cardio Vascular Risk Assessment codes) – Scotland only</i>		
	CVDASS_DAT	Date of CVDASS_COD		Chosen record
8	CVDEXC_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest < REF_DAT
		9hJ0. 9hJ1.	XaPx1 XaPx0	

		<i>(Cardio Vascular Disease Risk Assessment exception codes)</i>		
9	CVDEXC_DAT	Date of CVDEXC_COD		Chosen record
10	LSADV_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest < REF_DAT
		67H.. 67H8.	XaEFY XaQaV	
		<i>(Lifestyle Advice codes)</i>		
11	LSADV_DAT	Date of LSADV_COD		Chosen record
12	CVDEXC1_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest < REF_DAT
		9hJ0. 9hJ1. 9Oh9. 8IAK.	XaPx1 XaPx0 XaN8t XaQ9Y	
		<i>(Cardio Vascular Disease Risk Assessment exception codes)</i>		
13	CVDEXC1_DAT	Date of CVDEXC1_COD		Chosen record

**Indicator rulesets**

- 1 **Indicator PP 1:** In those patients with a new diagnosis of hypertension (excluding those with pre-existing CHD, diabetes, stroke and/or TIA) recorded between the preceding 1 April to 31 March: the percentage of patients aged 30 to 74 years who have had a face to face cardiovascular risk assessment at the outset of diagnosis (within three months of the initial diagnosis) using an agreed risk assessment treatment tool.

## 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> >= 75	Reject	Next rule
2	If <u>PAT_AGE</u> < 30	Reject	Next rule
3	If <u>HYP_DAT</u> < ( <u>REF_DAT</u> - 15 months)	Reject	Next rule
4	If <u>CVDASS_DAT</u> <= ( <u>REF_DAT</u> - 12 months)	Reject	Next rule
5	If <u>CVDASS_DAT</u> <= ( <u>HYP_DAT</u> + 3 months) AND If <u>CVDASS_DAT</u> >= ( <u>HYP_DAT</u> - 3 months)	Select	Next rule
6	If <u>REG_DAT</u> >= ( <u>REF_DAT</u> - 3 months)	Reject	Next rule
7	If <u>CVDEXC1_DAT</u> >= ( <u>REF_DAT</u> - 15 months)	Reject	Next rule
8	If <u>HYP_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>CVDASS_DAT</u> <= ( <u>HYP_DAT</u> + 3 months) AND If <u>CVDASS_DAT</u> >= ( <u>HYP_DAT</u> - 3 months)	Select	Reject

**Rule 1:** If the patient is aged 75 or over they are rejected from the denominator.

**Rule 2:** If the patient is aged under 30 they are rejected from the denominator.

**Rule 3:** HYP\_DAT is the date of the earliest episode of hypertension (recorded after the 01.04.2009) that is recorded for the patient before the end of the current QOF Financial Year.  
True: If the episode is more than 15 months before the end of the current QOF Financial Year, then the patient is disregarded and not included in the denominator.  
False: If the episode is within 15 months of the end of the current QOF Financial Year, then the patient is further considered

**Rule 4:** The aim of this rule is to identify any patient who has had a Cardiovascular Risk Assessment outside 12 months from the end of the current QOF financial year.  
True: If the assessment is outside 12 months from the end of the current QOF financial year then the patient is disregarded and not included in the denominator.  
False: If the assessment is within 12 months from the end of the current QOF financial year end then the patient is further considered.

**Rule 5:** This rule uses HYP\_DAT (see details in Rule 1) and CVDASS\_DAT which is the date of the Cardiovascular Risk Assessment.

True: If the assessment is within 3 months either side of the hypertension diagnosis then the patient is selected.

False: If the assessment is not within 3 months either side of the hypertension diagnosis then the patient is further considered.

**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 in the last 3 months, the patient should not be included in the denominator.

**Rule 7:** The aim of this rule is to identify any patient that has an accepted 'CVD Exception' Read Code recorded. If the patient has an accepted 'CVD Exception' Read Code recorded in the last 15 months, the patient should not be included in the denominator.

**Rule 8:** The aim of this rule is to identify any patient that has been 'recently diagnosed' as a hypertension patient. If the patient has been diagnosed in the last 3 months, the patient should not be included in the denominator.

**Indicator PP 2:** The percentage of people diagnosed with hypertension diagnosed after 1 April 2009 who are given lifestyle advice in the last 15 months for: increasing physical activity, smoking cessation, safe alcohol consumption and healthy diet.

a) Denominator ruleset

<u>Rule Number</u>	<u>Rule</u>	<u>Action if true</u>	<u>Action if false</u>
1	If <u>LSADV_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>CVDEXC_DAT</u> >= ( <u>REF_DAT</u> – 15 months)	Reject	Next rule
4	If <u>HYP_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>LSADV_DAT</u> >= ( <u>REF_DAT</u> – 15 months)	Select	Reject

**Rule 1:** LSADV\_DAT is the date of the latest lifestyle advice recorded for the patient before the end of the current QOF Financial Year.

True: If the lifestyle advice recording is within 15 of the current QOF Financial Year, then the patient is further considered.

False: If the lifestyle advice recording is more than 15 months before the end of the current QOF Financial Year, then the patient is disregarded and not included in the denominator.

**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 in the last 3 months, the patient should not be included in the denominator.

**Rule 3:** The aim of this rule is to identify any patient that has an accepted 'CVD Exception' Read Code' recorded. If the patient has an accepted 'CVD Exception' Read Code recorded in the last 15 months, the patient should not be included in the denominator.

**Rule 4:** The aim of this rule is to identify any patient that has been 'recently diagnosed' as a hypertension patient. If the patient has been diagnosed in the last 3 months, the patient should not be included in the denominator.