



Unrestricted					
Data and Business Rules – Cancer Indicator Set					
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**New GMS Contract QOF Implementation**

**Dataset and Business Rules**

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**Cancer Indicator Set**

**Amendment History:**

<b>Version</b>	<b>Date</b>	<b>Amendment History</b>
Draft 0.3	21-Jun-2003	From Pete 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	25-Feb-2006	Amended following internal & 4 Countries review
8.0	15-Mar-2006	Signed off following 4 Country review
8.1	20-Apr-2006	Responding to queries raised a) Amend wording for Note 3 b) Amend Denominator Rule 3 & Numerator Rule 1 for CANCER3 to remove redundant check
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 Amend Cancer 3 rules to identify patients that have a cancer diagnosis within the last 6 months and have no cancer review to date.
8.7	30-Nov-2006	Following the 4-Country Review: Address incorrect cluster hierarchy for Diagnostic Codes and CAN_COD
9.0	30-Nov-2006	Approved by NHSE
9.1	11-Apr-2007	April 2007 Read Code Release
9.2	13-Jun-2007	Following 4-Country Review: Correction in Rule 2 (Cancer 3) to standardise date check
10.0	18-Jun-2007	Signed off following 4 Country review
10.1	20-Aug_2007	April 2007 SNOMED Release
10.2	23-Sep-2007	October 2007 Read Code Release October 2007 SNOMED CT Release
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
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
14.2	14-August-2009	Amendment 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
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

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

### Dataset and business rules – Cancer 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 its children.
  - ii) Where a range of read codes are displayed, the Read Code is filled to 5 characters with full-stops. When implementing the search, only the non full-stop values should be used in the search, For example, a displayed Read Code range of G342. – G3z.. should find all codes between G342 and G3z (including any children where applicable).
- 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 and demographic status

<i>Code criteria</i>	<i>Qualifying diagnostic codes</i>		<i>Time criteria</i>
<i>Required</i>	<i>Read codes v2</i>	<i>CTV3</i>	Latest first or new episode < (REF_DAT) AND >= 01.04.2003
	B0... - B32z. B34.. -B6z0. Byu.. - Byu41 Byu5. - ByuE0	X78ef% (excluding X78gs%, D41y1% Xa0l6%, Xa0SJ%, B934., X20FX, Xa0SY%, C332.%, C3330) THEN ADD B32..% B62y.%	

**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	CANEXC_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest < (REF_DAT)
		9h8..%	XaJ4U%	
		<i>(Cancer exception reporting codes)</i>		
4	CANEXC_DAT	Date of CANEXC_COD		Chosen record
5	CAN_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest first or new episode < (REF_DAT)
		B0... - B32z. B34.. - B6z0. Byu.. - Byu41 Byu5. - ByuE0	X78ef% (excluding X78gs%, D41y1% Xa0l6%, Xa0SJ%, B934., X20FX, Xa0SY% C332.%, C3330) THEN ADD B32..%, B62y.%	
		<i>(Codes for relevant malignancies)</i>		
6	CAN_DAT	Date of CAN_COD		Chosen record
7	MDRV_COD	<i>Read codes v2</i>	<i>CTV3</i>	Earliest < (REF_DAT) AND >= CAN_DAT
		8BAV.	Xalyc	

		<i>(Code for cancer care review)</i>	
8	MDRV_DAT	Date of MDRV_COD	Chosen record

**Indicator rulesets**

- 1 Indicator CANCER 1: The practice can produce a register of all cancer patients defined as a 'register of patients with a diagnosis of cancer excluding non-melanotic skin cancers from 1 April 2003'.

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 CANCER 3:** The percentage of patients with cancer, diagnosed within the previous 18 months, who have a patient review recorded as occurring at 6 months after the practice has received confirmation of the diagnosis.

a) Denominator ruleset

<i>Rule number</i>	<i>Rule</i>	<i>Action if true</i>	<i>Action if false</i>
1	If <u>CAN_DAT</u> < ( <u>REF_DAT</u> – 18 months)	Reject	Next rule
2	IF <u>CAN_DAT</u> >= ( <u>REF_DAT</u> – 6 months) AND IF <u>MDRV_DAT</u> = Null	Reject	Next rule
3	IF <u>MDRV_DAT</u> < ( <u>REF_DAT</u> – 12 months)	Reject	Next rule
4	If <u>MDRV_DAT</u> <= ( <u>CAN_DAT</u> + 6 months)	Select	Next rule
5	If <u>REG_DAT</u> >= ( <u>REF_DAT</u> – 3 months)	Reject	Next rule
6	If <u>CANEXC_DAT</u> >= ( <u>REF_DAT</u> – 15 months)	Reject	Next rule
7	If <u>CAN_DAT</u> >= ( <u>REF_DAT</u> – 3 months)	Reject	Select

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 <u>MDRV_DAT</u> <= ( <u>CAN_DAT</u> + 6 months)	Select	Reject

**Rule 1:** CAN\_DAT is the date of the latest 'first' or 'new' episode of cancer that is recorded for the patient before the end of the current QOF Financial Year.

True: If the episode is more than 18 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 18 months of the end of the current QOF Financial Year, then the patient is further considered.

**Rule 2:** This rule uses CAN\_DAT and MDRV\_DAT to check if the timing of the diagnosis gives a practice the full 6 month review window before the end of the current QOF Financial Year.

True: If the diagnosis is within 6 months of the end of the current QOF Financial Year AND there is no review following that diagnosis before the end of the current QOF Financial Year, then the patient is disregarded and not included in the denominator.

False: If the diagnosis is more than 6 months before the end of the current QOF Financial Year OR there is a review following that diagnosis before the end of the current QOF Financial Year, then the patient is further considered.

**N.B. Patients should be disregarded under this rule, because the review should occur within six months of the diagnosis and this window should not be reduced simply by the diagnosis occurring in the second half of the QOF Financial Year. Therefore it is important that practices are not financially disadvantaged if leaving the review until it is clinically appropriate to be performed.**

**Rule 3:** MDRV\_DAT is the date of the earliest cancer care review that is before the end of the current QOF Financial Year AND falls on or after the cancer diagnosis date used in Rule 1 (i.e. CAN\_DAT) that is recorded for the patient.

True: If the review is more than 12 months before the end of the current QOF Financial Year, then the patient is disregarded and not included in the denominator.

False: If the review is within 12 months of the end of the current QOF Financial Year, then the patient is further considered.

**N.B. Patients should be disregarded under this rule, because the review has fallen in an earlier QOF Financial Year and will have been rewarded for the indicator in that earlier year. This rule is in place to prevent duplicate payments.**

**Rule 4:** MDRV\_DAT is the date of the earliest cancer care review that is before the end of the current QOF Financial Year AND falls on or after the cancer diagnosis date used in Rule 1 (i.e. CAN\_DAT) that is recorded for the patient.

True: If the review is performed within 6 months of the cancer diagnosis, then the patients is to be included in both the numerator and the denominator.

False: If the review is more than 6 months before the cancer diagnosis, then the patient is further considered.

**Rule 5:** 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 6:** The aim of this rule is to identify any patient that has an accepted 'Cancer Exception' Read Code' recorded. If the patient has an accepted 'Cancer Exception' Read Code recorded in the last 15 months, the patient should not be included in the denominator.

**Rule 7:** The aim of this rule is to identify any patient that has been 'recently diagnosed' as an Cancer patient. If the patient has been diagnosed in the last 3 months, the patient should not be included in the denominator.