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
(CAN)

Northern Ireland

Amendment History:

Version	Date	Amendment History
25.0NI	13-May-2013	V25 Department of Health QOF ruleset (28/03/13) used as a base and adapted to reflect the NI 2013/13 agreement - NI indicators IDs updated; 15 mth rules accepted; indicator wording checked
26.0NI	13-Sept-2013	April 2013 Read Code Release following review
27.0NI	12-Nov-2013	November 2013 Read Code Release
28.0NI	14-May-2014	DRAFT business rules update
28.1NI	11-Jun-2014	Reformatting and version update to 28.1 to bring in line with other rulesets
28.2NI	25-Jun-2014	Requested updates from review meeting
29.0NI	24-Oct-2014	April 2014 Read Code Updates
30.0NI	24-Oct-2014	October 2014 Read Code Updates
32.0NI	30-June-2015	April 2015 Read Code Updates
32.1NI	28-Sep-2015	Post review changes 2015/16
33.0NI	07-Jan -2016	October Read Code Updates and V32.1 fixes
34.0NI	06-Sep-2016	Read code changes.
35.0NI	19 Oct 2017	Business rules update
36.0NI	07 Aug 2018	Business rules updated for 2018/2019

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 2015 release of Read codes version 2 and clinical terms version 3 (CTV3).The codes are shown within the document as a 5 character value to show that the Read Code is for a 5-Byte system.

   i)   Where a "%" wildcard is displayed, the Read Code is filled to 5 characters with full stops. When implementing a search for the Read Code, only the non full-stop values should be used in the search, For example, a displayed Read Code of c1...% should be implemented as a search for c1%, i.e. should find c1 and any of its children.

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

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

4) Datasets comprise a specification of two elements:

   a) Patient selection criteria. These are the criteria used to determine the patient population against whom the indicators are to be applied.

   i)   Registration status. This determines the current patient population at the practice.

   ii)   Diagnostic code status. This determines the current patient population (register size) for a given condition.

          There are three scenarios within the diagnostic code status, these are where
          • There is a single morbidity patient population (disease register) required (e.g. within CHD). Where this occurs, a single set of rules for identifying the patient population is provided.

- There is a single co-morbidity patient population (disease register) required (e.g. within Smoking). Where this occurs, a set of rules for each morbidity is provided. A patient must only be included in the patient population (register size) once.
- There are multiple patient populations (disease registers) required (e.g. within Heart Failure). Where this occurs, a single set of rules for each patient population is provided.
 N.B. where there are multiple patient populations (disease registers), it is possible that one or more will also be a co-morbidity patient population (e.g. within Depression).

Where this occurs, details of which register population applies to which indicator(s) are provided. Where the register size applies to an indicator, this is the base denominator population for that indicator.

b) Clinical data extraction criteria. These are the data items to be exported from the clinical system for subsequent processing to calculate points allocations. They are expressed in the form of a MIQUEST "Report-style" extract of data.

The record of each patient that satisfies the appropriate selection criteria for a given indicator will be interrogated against the clinical data criteria (also appropriate to that indicator). A report of the data contained in the selected records will be exported in the form of a fixed-format tabular report. Each selected patient will be represented by a single row in the report, unless the operator "ALL" is used.

The "ALL" statement is used within the Qualifying Criteria for the Clinical data extraction criteria. Typically the selection for a READCODE_COD cluster field is based on a date of "LATEST" or "EARLIEST". The "ALL" statement is used to select all occurrences of any of the codes within the READCODE_COD cluster. It selects an array of instances, of which there may be more than one for each patient.

Rows will contain a fixed number of fields each containing a single data item. The number of fields in each row and their data content will be determined by the clinical data criteria. Data items that match the clinical data criteria will be exported in the relevant field of the report. Where there is no data to match a specific clinical criterion a null field will be exported.

5) Rulesets are specified as multiple rules to be processed sequentially. Processing of rules should terminate as soon as a "Reject" or "Select" condition is encountered.

6) Rules are expressed as logical statements that evaluate as either "true" or "false" The following operators are required to be supported:

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

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

<u>DatasetSpecification</u>

1) <u>Patient selection criteria</u>:

    a) Registration status

<u>Current registration status</u>	<u>Qualifying criteria</u>
Currently registered for GMS	Most recent registration date < (REF_DAT)
Previously registered for GMS	Any sequential pairing of registration date and deregistration date where both of the following conditions are met: registration date < (REF_DAT); and deregistration date >= (REF_DAT)

b) Diagnostic code and demographic status

Code criteria	Qualifying diagnostic codes		Time criteria
	Read codes v2	CTV3	
Required	B0... - B32z. B34.. -B6z0. (excluding B677.) Byu.. - Byu41 Byu5. - ByuE0 K1323 K01w1 68W24 C184.	X78ef% (excluding X00Z9, XaYiK, Xa0KC%, X00Z6%, X78gs%, D41Y1%, Xa0I6%, Xa0SJ%, B934., X20FX, Xa0SY%, C332.%, C3330, Xa34C, X78ha, X78hm, X78hn, Xa0EY, X00ZC, B330., Xa34D), B62y.%, Xa0Dp%, XaabR, THEN ADD B32..%, X00ZB, B691., B582	Latest first or new episode < (REF_DAT) AND >= 01.04.2003

2) Clinical data extraction criteria

Field Number	Fieldname	Data item		Qualifying criteria
1	PAT_ID	Patient ID number		Unconditional
2	REG_DAT	Date of patient registration		Latest < (REF_DAT)
3	CANEXC_CO D	Read codes v2	CTV3	Latest < (REF_DAT)
		9h8..%	XaJ4U%	
		(Cancer exception reporting codes)		
4	CANEXC_DA T	Date of CANEXC_COD		Chosen record
5	CAN_COD	Read codes v2	CTV3	Latest first or new episode < (REF_DAT)
		B0... -B32z. B34.. - B6z0. (excluding B677.) Byu.. - Byu41 Byu5. - ByuE0 K1323 K01w1, 68W24, C184.	X78ef% (excluding X00Z9, XaYiK, Xa0KC%, X00Z6%, X78gs%, D41Y1%, Xa0I6%, Xa0SJ%, B934., X20FX, Xa0SY%, C332.%, C3330, Xa34C, X78ha, X78hm, X78hn, Xa0EY, X00ZC, B330., Xa34D), B62y.%, Xa0Dp%, XaabR, THEN ADD B32..%, X00ZB, B691., B582	
		(Codes for relevant malignancies)		
6	CAN_DAT	Date of CAN_COD		Chosen record

7	MDRV_COD	Read codes v2	CTV3	Earliest < (REF_DAT) AND >= CAN_DAT
		8BAV.	Xalyc	
		(Code for cancer care review)		
8	MDRV_DAT	Date of MDRV_COD		Chosen record

Indicator rulesets

Indicator CAN001: The contractor establishes and maintains a register of all cancer patients defined as a "register of patients with a diagnosis of cancer excluding non - melanotic skin cancers diagnosed on or after 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.

Indicator CAN003: The percentage of patients with cancer, diagnosed within the preceding 15 months, who have a patient review recorded as occurring within 6 months of the contractor receiving confirmation of the diagnosis.

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

The aspect that is being measured is that of the provision of a clinical care component for patients with cancer. The aspect being measured is that relating to a review being recorded.

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 cancer (i.e. there is evidence within the patient's electronic health record of a cancer diagnosis code occurring after 1 April 2003)

Numerator and Denominator
The success criteria for this indicator (numerator) are where those patients in the denominator have had a review recorded within 6 months of the practice receiving confirmation of the diagnosis.

The patients that make up the denominator for this indicator are those patients where it is appropriate for the cancer management to be carried out. This is the relevant disease register adjusted for exclusions and exceptions.

Exclusions
For this indicator there are two exclusions:

- If the patient's latest "first" or "new" episode of cancer is recorded outside the preceding 15 months then they will be excluded

- If the patient's earliest cancer care review (after their latest "first" or "new" episode of cancer) was outside the preceding 15 months then they will be 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 a review - maybe because there hasn't been an opportunity in the qualifying year to arrange it.

- Any patient that has a valid cancer exception code recorded within the preceding 15 months.

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

Indicator CAN003: The percentage of patients with cancer, diagnosed within the preceding 15 months, who have a patient review recorded as occurring within 6 months of the contractor receiving confirmation of the diagnosis.

a)   Denominator ruleset

Rule number	Rule	Action if true	Action if false
1	If CAN_DAT < (REF_DAT – 15 months)	Reject	Next rule
2	If MDRV_DAT < (REF_DAT – 15 months)	Reject	Next rule
3	If MDRV_DAT <= (CAN_DAT + 6 months)	Select	Next rule
4	If REG_DAT >= (REF_DAT – 3 months)	Reject	Next rule
5	If CANEXC_DAT >= (REF_DAT –15 months)	Reject	Next rule
6	If CAN_DAT >= (REF_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 MDRV_DAT <= (CAN_DAT + 6 months)	Select	Reject

Additional

Notes:

Denominator

Exclusions

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 outside the preceding 15 months, then the patient is disregarded and not included in the denominator.
False: If the episode is within the preceding 15 months, then the patient is further considered.

Rule 2: 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 outside the preceding 15 months, then the patient is disregarded and not included in the denominator.
False: If the review is within the preceding 15 months, 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.

Success

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 performed within 6 months of the cancer diagnosis, then the patient 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.

Exceptions

It is worth remembering at this point that if a patient's cancer review meets the success criteria they will have already been selected into the denominator in Rule 3.

Rule 4: The aim of this rule is to identify any patient that "recently registered" at the practice. If the patient has registered at the practice within the last 3 months, the patient should not be included in the denominator.

Rule 5: The aim of this rule is to identify any patient that has an accepted "Cancer exception read code" recorded. If the patient has an acceptable "Cancer exception read code" recorded within the preceding 15 months, the patient should not be included in the denominator.

Rule 6: The aim of this rule is to identify any patient that has been "recently diagnosed" as a Cancer patient. If the patient has been diagnosed within the last 3 months, the patient should not be included in the denominator. Otherwise the patient will be selected into the denominator.

Numerator

The success criterion for this indicator is as per Denominator Rule 3.