

| <b>Data and Business Rules – Dementia Indicator Set</b> |                                  |            |                 |                 |            |
|---|----------------------------------|------------|-----------------|-----------------|------------|
| Author  | NHS Wales<br>Informatics Service | Version No | 2019-20<br>1.0W | Version<br>Date | 28/10/2019 |

## **New GMS Contract QAIF Implementation**

### **Dataset and Business Rules**

-

### **Dementia Indicator Set (DEM)**

### **Wales**

**Amendment History:**

| Version      | Date             | Amendment History                     |
|--------------|------------------|---------------------------------------|
| 25.0W        | 05-June-2013     | Signed off Welsh Government           |
| 26.0W        | 14-August-2013   | April 2013 read Code Release          |
| 27.0W        |                  | October 2013 read Code Release        |
| 28.0W        | 27-June-2014     | 2014/15 Business rules update         |
| 30.0W        | 20-November-2014 | October 2014 Read Code Release        |
| 2015-16 1.0W | 01-July-2015     | Business Rules update                 |
| 2015-16 2.0W | 04-Dec-2015      | 2015/16 October Business rules update |
| 2016-17 1.0W | 09-June-2016     | 2016-17 Business Rules update         |
| 2017-18 1.0W | 01-July-2017     | 2017-18 Business Rules update         |
| 2018-19 1.0W | 23-July-2018     | 2018-19 Business Rules update         |
| 2019-20 1.0  | 28-Oct-2019      | 2019-20 Business Rules update         |

## **New GMS contract QAIF framework implementation**

### Dataset and business rules – Dementia 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 01.10.2020 equates to midnight on 30.09.2020).
- 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 April 2016 release of Read codes version 2. 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 Flu). 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.

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.

**Dataset Specification****1) Patient selection criteria:**

## a) Registration status

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

## b) Diagnostic code status

| <i>Code criteria</i> | <i>Qualifying diagnostic codes</i>   | <i>Time criteria</i>               |
|----------------------|--|------------------------------------|
| <i>Included</i>      | Read codes v2  | <i>Earliest &lt;<br/>(REF_DAT)</i> |
|                      | A410 A411% Eu02.% E00..% Eu01.% E02y1 E012.% Eu00.%<br>E041. Eu041 F110. – F112. F116 F118 F21y2 |                                    |
|                      | <i>(Dementia codes)</i>  |                                    |

**2) Clinical data extraction criteria**

| <u>Field Number</u> | <u>Field name</u> | <u>Data item</u>   | <u>Qualifying criteria</u> |
|---------------------|-------------------|--|----------------------------|
| 1                   | PAT_ID            | Patient ID number  | Unconditional              |
| 2                   | REG_DAT           | Date of patient registration   | Latest < (REF_DAT)         |
| 3                   | DEMEXC_COD        | <i>Read codes v2</i>   | Latest < (REF_DAT)         |
|                     |                   | 9hD0.<br>9hD1.   |                            |
|                     |                   | <i>(Dementia exception reporting codes)</i>  |                            |
| 4                   | DEMEXC_DAT        | Date of DEMEXC_COD   | Chosen record              |
| 5                   | DEM_COD           | <i>Read codes v2</i>   | Earliest <<br>(REF_DAT)    |
|                     |                   | A410 A411% Eu02.% E00..% Eu01.% E02y1 E012.%<br>Eu00.% E041. Eu041 F110. – F112. F116 F118 F21y2 |                            |
|                     |                   | <i>(Codes for Dementia)</i>  |                            |
| 6                   | DEM_DAT           | Date of DEM_COD  | Chosen record              |



|   |          |  |                    |
|---|----------|--|--------------------|
| 7 | DEMR_COD | <i>Read codes v2</i>                     | Latest < (REF_DAT) |
|   |          | 6AB..                                    |                    |
|   |          | <i>(Code for Dementia health review)</i> |                    |
| 8 | DEMR_DAT | Date of DEMR_COD                         | Chosen record      |

### **Indicator rulesets**

Indicator DEM001: The contractor establishes and maintains a register of patients diagnosed with dementia.

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 DEM002: The percentage of patients diagnosed with dementia whose care has been reviewed in a face-to-face review in the preceding 15 months.

a) Denominator ruleset

| <u>Rule number</u> | <u>Rule</u>  | <u>Action if true</u> | <u>Action if false</u> |
|--------------------|--|-----------------------|------------------------|
| 1                  | If <u>DEMR_DAT</u> >= ( <u>REF_DAT</u> – 15 months)<br>AND<br>If <u>DEMR_DAT</u> >= <u>DEM_DAT</u> | Select                | Next rule              |
| 2                  | If <u>REG_DAT</u> >= ( <u>REF_DAT</u> – 3 months)  | Reject                | Next rule              |
| 3                  | If <u>DEMEXC_DAT</u> >= ( <u>REF_DAT</u> – 15 months)  | Reject                | Next rule              |
| 4                  | If <u>DEM_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>DEMR_DAT</u> >= ( <u>REF_DAT</u> – 15 months)<br>AND<br>If <u>DEMR_DAT</u> >= <u>DEM_DAT</u> | Select                | Reject                 |