



Unrestricted					
Data and Business Rules – Dementia Indicator Set					
Author	Paul Amos	Version No	10.0	Version Date	18-Jun-2007

## **New GP Contract Q&O Framework Implementation**

### **Dataset And Business Rules**

-

### **Dementia Indicator Set**

**Amendment History:**

<b>Version</b>	<b>Date</b>	<b>Amendment History</b>
		The version number starts at 3.1 in order to coincide with existing datasets and business rules.
Draft 3.1	21-Nov-2005	From Phil Brown
Draft 3.2	22-Nov-2005	Amended following review by Peter Horsfield
Draft 3.3	3-Dec-2005	Draft revised for internal review
7.4	24-Feb-2006	Amended following internal & 4 Countries review. Also includes uplifting to 7.4 to bring the 4-Byte documents to the same version number as the 5-Byte/CTV3/SNOMED-CT documents
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 October Read Code Release Corrections and amendments following feedback
8.7	10-Nov-2006	Diagnostic Code Status: Remove redundant "." DEPR_COD: Remove redundant ':' Responding to queries raised by 4 Country Review
9.0	30-Nov-2006	Approved by NHSE
9.1	11-Apr-2007	April 2007 Read Code Release
10.0	18-Jun-2007	Signed off following 4 Country review

## **New GMS contract Q&O 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 01.04.2003 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 April 2006 release of Read codes (version 0). The codes are shown within the document as a 4 character value to show that the Read Code is for a 4-Byte system.
  - i) Where a '%' wildcard is displayed, the Read Code is filled to 4 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 4 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 3.1 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 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

<i>Code criteria</i>	<i>Qualifying diagnostic codes</i>	<i>Time criteria</i>
<i>Included</i>	<i>Read codes v0</i>	<i>Earliest &lt; (REF_DAT)</i>
	E11.% F212 F21Z F371	
	<i>(Dementia codes)</i>	

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	DEMEXC_COD	<i>Read codes v0</i>	Latest < (REF_DAT)
		9hD1 9hD0	
		<i>(Dementia exception reporting codes)</i>	
4	DEMEXC_DAT	Date of DEMEXC_COD	Chosen record
5	DEM_COD	<i>Read codes v0</i>	Earliest < (REF_DAT)
		E11.% F212 F21Z F371	
		<i>(Codes for Dementia)</i>	
6	DEM_DAT	Date of DEM_COD	Chosen record
7	DEMR_COD	<i>Read codes v0</i>	Latest < (REF_DAT)
		6AB.	
		<i>(Code for Dementia health review)</i>	
8	DEMR_DAT	Date of DEMR_COD	Chosen record

### **Indicator rulesets**

- 1 **Indicator DEM 1**: The practice can produce 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.

- 2 Indicator DEM 2: The percentage of patients diagnosed with dementia whose care has been reviewed in the previous 15 months.

a) Denominator ruleset

<i>Rule number</i>	<i>Rule</i>	<i>Action if true</i>	<i>Action if false</i>
1	If <u>DEMR_DAT</u> >= ( <u>REF_DAT</u> - 15 months) AND 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

<i>Rule number</i>	<i>Rule</i>	<i>Action if true</i>	<i>Action if false</i>
1	If <u>DEMR_DAT</u> >= ( <u>REF_DAT</u> - 15 months)	Select	Reject