Data and Business Rules – Mental Health Indicator Set					
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New GMS Contract QAIF Implementation Dataset and Business Rules - Mental Health Indicator Set (MH)

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	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 1.1W	17-July-2015	Fields 40&41 added: MH2_COD and MH2_DAT
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 – Mental illness 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)
b) < (less than)
c) = (equil to)
d) ≠ (not equal to)
e) AND
f) OR
g) NOT

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

Current registration status	*Qualifying criteria*
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) Group 1 criteria

Code criteria	*Qualifying diagnostic codes*	*Time criteria*
Included	Read codes v2	*Earliest < (REF_DAT)*
	E10..%, E110.%,E111.%, E1124 E1134 E114. – E117z E11y.% (excluding E11y2) E11z., E11z0, E11zz, E12..%, E13..% (excluding E135.) E2122, Eu2..% Eu30.% Eu31.% Eu323, Eu328, Eu333 Eu32A Eu329	
	('Psychosis, schizophrenia + bipolar affective disease codes)	

ii) Group 2 criteria

Included	Read codes v2	*Latest >= (REF_DAT – 6/12) AND < REF_DAT*
	d6...%	
	(Lithium prescription codes)	
Excluded	Read codes v2	*Latest < (REF_DAT) AND subsequent to above date*
	665B.	
	Code for 'Stopped lithium'	

** N.B. Patients meeting any of the criteria to be included

2) Clinical data extraction criteria

Field Number	*Field name*	*Data item*	*Qualifying criteria*
1	PAT_ID	Patient ID number	Unconditional
2	REG_DAT	Date of patient registration	Latest < (REF_DAT)
3	MHEXC_COD	*Read codes v2*	Latest < (REF_DAT)
		9h9..%	
		(Mental health exception reporting codes)	
4	MHEXC_DAT	Date of MHEXC_COD	Chosen record
5	MH_COD	*Read codes v2*	Earliest < (REF_DAT)
		E10..%, E110.%, E111.%, E1124 E1134 E114. – E117z E11y.% (excluding E11y2) E11z., E11z0, E11zz, E12..%, E13..% (excluding E135.) E2122, Eu2..% Eu30.% Eu31.% Eu323, Eu328, Eu333 Eu32A Eu329	
		('Psychosis, schizophrenia + bipolar affective disease codes)	
6	MH_DAT	Date of MH_COD	Chosen record

7	BMI_COD	Read codes v2	Latest < (REF_DAT)
		22K..% (excluding 22K9., 22K90, 22KA.)	
		(BMI Codes)	
8	BMI_DAT	Date of BMI_COD	Chosen record
9	BP_COD	Read codes v2	Latest < (REF_DAT)
		246..% (excluding 2460., 2468., 246H., 246I., 246K., 246L., 246M., 246h., 246i., 246j., 246k., 246n.%)	
		(BP recording codes)	
10	BP_DAT	Date of BP_COD	Chosen record
11	IFCCHBA_COD	Read codes v2	Latest < (REF_DAT)
		42W5. 42W51	
		(IFCC HbA1c codes)	
12	IFCCHBA_DAT	Date of IFCCHBA_COD	Chosen record

13	MHREM_COD	*Read codes v2*	Latest < (REF_DAT) AND >= MH2_DAT
		E1005 E1015 E1025 E1035 E1055 E1075 E1106 E1116 E1146 E1156 Eu317 E1166 E1176 Eu329 Eu32A Eu26. Eu223	
		(Code for in remission from serious mental illness)	
14	MHREM_DAT	Date of MHREM_COD	Chosen record
15	GLUC_COD	*Read codes v2*	Latest < (REF_DAT)
		44TM. 44f..% 44g..% 44T1. – 44T3. 44TA. 44TE. – 44TK. (excluding 44TJ0, 44TJ1, 44TJ2, 44TJ3, 44TJ4, 44TJ5, 44TJ6, 44TJ7) 44U..% (Excluding 44Uz.) 44V.. – 44V3. 44V6. R102. R10D. R1057 7P172	
		(Blood Glucose Level Codes)	
16	GLUC_DAT	Date of GLUC_COD	Chosen record

17	MH2_COD	Read codes v2	Latest < (REF_DAT)
		E10..%, E110.%, E111.%, E1124, E1134 E114. – E117z, E11y.% (excluding E11y2) E11z., E11z0, E11zz, E12..%, E13..% (excluding E135.), E2122, Eu2..% Eu30.% Eu31.% Eu323, Eu328, Eu333 Eu32A Eu329	
		('Psychosis, schizophrenia + bipolar affective disease codes)	
18	MH2_DAT	Date of MH2_COD	Chosen record

Indicator rulesets

Indicator MH001: The contractor establishes and maintains a register of patients with schizophrenia, bipolar affective disorder and other psychoses and other patients on lithium therapy.

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 MH011: The percentage of patients with schizophrenia, Bipolar affective disorder and other psychoses who have a record of blood pressure and BMI in the preceding 15 months and in addition for those aged 40 or over, a record of blood glucose or HbA1c in the preceding 15 months

a) Denominator ruleset

Rule number	Rule	Action if true	Action if false
1	If MH_DAT = Null	Reject	Next rule
2	If MHREM_DAT = Null	Next rule	Reject
3	If PAT_AGE < 40 AND If BP_DAT >= (REF_DAT – 15 months) AND If BMI_DAT >= (REF_DAT – 15 months)	Select	Next rule
4	If PAT_AGE >= 40 AND If BP_DAT >= (REF_DAT – 15 months) AND If BMI_DAT >= (REF_DAT – 15 months) AND If IFCCHBA_DAT >= (REF_DAT – 15 months	Select	Next rule
5	If PAT_AGE >= 40 AND If BP_DAT >= (REF_DAT – 15 months) AND If BMI_DAT >= (REF_DAT – 15 months) AND If GLUC_DAT >= (REF_DAT – 15 months	Select	Next rule
6	If REG_DAT >= (REF_DAT – 9 months)	Reject	Next rule
7	If MHEXC_DAT >= (REF_DAT – 15 months)	Reject	Next rule
8	If MH_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 PAT_AGE < 40 AND If BP_DAT >= (REF_DAT – 15 months) AND If BMI_DAT >= (REF_DAT – 15 months)	Select	Next rule
2	If PAT_AGE >= 40 AND If BP_DAT >= (REF_DAT – 15 months) AND If BMI_DAT >= (REF_DAT – 15 months) AND If IFCCHBA_DAT >= (REF_DAT – 15 months	Select	Next rule
3	If PAT_AGE >= 40 AND If BP_DAT >= (REF_DAT – 15 months) AND If BMI_DAT >= (REF_DAT – 15 months) AND If GLUC_DAT >= (REF_DAT – 15 months	Select	Reject