



Data and Business Rules – Sexual Health Indicator Set					
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New GMS Contract QOF Implementation

Dataset and Business Rules

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Sexual Health Ruleset

Amendment History:

Version	Date	Amendment History
		The version number starts at 13.1 in order to coincide with existing datasets and business rules.
13.1	14-Feb-2009	QOF Review 2008
13.2	09-Mar-2009	Following NHSE review
	21-Apr-2009	Added plain English comments to indicator rules
13.3	27-Apr-2009	Amendments following Four-Country Review
14.0	01-May-2009	Signed off following 4 Country review
14.1	03-June-2009	Amendment to SH3
14.2	25-June-2009	April 2009 Read Code Release
15.0	17-August-2009	Signed off following 4 Country review
15.1	12-October-2009	October 2009 Clinical Codes Release
15.2	28-October-2009	October 2009 Clinical Codes Release review
16.0	02-December-2009	Sign off following 4 Country review
16.1	05-May-2010	Internal NHS IC 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.
19.0	13-December-2010	Signed off following 4 country review.
20.0	13-May-2011	April 2011 Read Code Release following NHS IC review.
21.0	10-November-2011	October 2011 Read Code Release following NHS IC review.

New GMS contract Q&O framework implementation

Dataset and business rules – Sexual Health 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 2011 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 1st September and 31st 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 1st September 2004 and 31st 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

(Note: To be included in the patient population a patient needs to qualify for ONE of the disease areas and not be excluded from other conditions below).

<u>Code Criteria</u>	<u>Qualifying Diagnostic Codes</u>		<u>Time Criteria</u>
<i>Included</i>	<i>Read codes v2</i>	<i>CTV3</i>	Latest >= (REF_DAT - 13 Months) AND < REF_DAT AND >= 01.04.2009
	61F1. 61A1. ga2B. ga2C. ga2D.	XM1W1 Xa1Is 61F1. 61A1. ga2B.%	
	<i>Emergency hormonal contraception</i>		

<i>Included</i>	<i>Read codes v2</i>	<i>CTV3</i>	Latest >= (REF_DAT - 15 Months) AND < REF_DAT AND >= 01.04.2009
	6147. g8...% g9...% gk...%	XE1S1 x002N% gk...%	
	<i>Combined oral contraception</i>		

<i>Included</i>	<i>Read codes v2</i>	<i>CTV3</i>	Latest >= (REF_DAT - 15 Months) AND < REF_DAT AND >= 01.04.2009
	6148. ga1..% ga22. ga23. ga5..% ga8..%	6148. x02ME% ga23.% ga5z.% ga8..%	
	<i>Progestogen only oral contraception</i>		

<i>Included</i>	<i>Read codes v2</i>	<i>CTV3</i>	Latest >= (REF_DAT - 15 Months) AND < REF_DAT AND >= 01.04.2009
	fh1q. fh1r.	fh1q.%	
	<i>Contraceptive patch</i>		

	<i>Read codes v2</i>	<i>CTV3</i>	
<i>Included</i>	6161. pg4..% pg5..% pgC..%	6161. pg4..% pg5..% pgC..%	Latest >= (REF_DAT - 15 Months) AND < REF_DAT AND >= 01.04.2009
	<i>Contraceptive diaphragm</i>		

<i>Included</i>	<i>Read codes v2</i>	<i>CTV3</i>	Latest >= (REF_DAT - 10 years) AND < REF_DAT AND >= 01.04.2009
	6151. 7E090 ZV251 pg3..% 61511	6151. 7E090 ZV251 pg3..% XaXK3	
	<i>IUD</i>		
<i>Excluded</i>	<i>Read codes v2</i>	<i>CTV3</i>	Latest < (REF_DAT) AND > Date of IUD
	6152. 615B. 615Q. 7E092 7E093 7E095	7E093% XaC3g% 615B. 6152.%	
	<i>IUD/IUS Removal</i>		

<i>Included</i>	<i>Read codes v2</i>	<i>CTV3</i>	Latest >= (REF_DAT - 5 years) AND < REF_DAT AND >= 01.04.2009
	7E094 ga26. ga27. 61R..	XaBSw ga26.% XaXLS	
	<i>IUS</i>		
<i>Excluded</i>	<i>Read codes v2</i>	<i>CTV3</i>	Latest < (REF_DAT) AND > Date of IUS
	6152. 615B. 615Q. 7E092 7E093 7E095	7E093% XaC3g% 615B. 6152.%	
	<i>IUD/IUS Removal</i>		

<i>Included</i>	<i>Read codes v2</i>	<i>CTV3</i>	Latest >= (REF_DAT - 12 months) AND < REF_DAT AND >= 01.04.2009
	ga35. ga36. ga61. ga6z.	ga35.% ga6z.%	
	<i>Contraceptive injectable</i>		

<i>Included</i>	Read Codes V2	CTV3	Latest >= (REF_DAT - 3 years) AND < REF_DAT <i>AND</i> >= 01.04.2009
	ga7..% 7G2AG 61KC. 7G2AH 7G2AJ 9kr..	ga7..% XaPwd% XaVyE XaX5O XaXI2	
	<i>Contraceptive implant</i>		
<i>Excluded</i>	<i>Read codes v2</i>	<i>CTV3</i>	Latest < (REF_DAT) AND > Date of Contraceptive Implant
	7G2HB 7G2H7 7G2HA 61KF.	Xa85g% (Excluding 7G2H5) XaW9V	
	<i>Removal of Contraceptive Implant</i>		

<i>Excluded</i>	Sex ≠ 'F'	
<i>Excluded</i>	Age > 54 yrs at REF_DAT	

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	EHC_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest < (REF_DAT)
		61F1. 61A1. ga2B. ga2C. ga2D.	XM1W1 Xa1Is 61F1. 61A1. ga2B.%	
		<i>Emergency hormonal contraception</i>		
4	EHC_DAT	Date of EHC_COD		Chosen record
5	SHEXC_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest < (REF_DAT)
		9hK0. 9hK1.	XaPwz XaPwy	
		Sexual health exceptions		
6	SHEXC_DAT	Date of SHEXC_COD		Chosen record
7	POC_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest < (REF_DAT)

		6148. ga1..% ga22. ga23. ga5..% ga8..%	6148. x02ME% ga23.% ga5z.% ga8..%	
		<i>Progestogen only oral contraception</i>		
8	POC_DAT	Date of POC_COD		Chosen record
9	CP_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest < (REF_DAT)
		fh1q. fh1r.	fh1q.%	
		<i>Contraceptive patch</i>		
10	CP_DAT	Date of CP_COD		Chosen record
11	LARCADV_COD	<i>Read codes v2</i>	<i>CTV3</i>	EARLIEST (>=EHC_DAT) AND (<REF_DAT)
		8CAw. 679K2	XaPnn XaXSf	
		Long-acting reversible method of contraception advice		
12	LARCADV_DAT	Date of LARCADV_COD		Chosen record

13	COC_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest < (REF_DAT)
		6147. g8...% g9...% gk...%	XE1S1 x002N% gk...%	
		<i>Combined oral contraception</i>		
14	COC_DAT	Date of COC_COD		Chosen record
15	LARCADV2_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest < (REF_DAT)
		8CAw. 679K2	XaPnn XaXSf	
		<i>Long-acting reversible method of contraception advice</i>		
16	LARCADV2_DAT	Date of LARCADV2_COD		Chosen record
17	LARCVERB_COD	<i>Read codes v2</i>	<i>CTV3</i>	EARLIEST (>=EHC_DAT) AND (<REF_DAT)
		8CAw1	XaXH3	
		<i>Long-acting reversible method of contraception VERBAL advice</i>		
18	LARCVERB_DAT	Date of LARCVERB_COD		Chosen record
19	LARCWRIT_COD	<i>Read codes v2</i>	<i>CTV3</i>	EARLIEST (>=EHC_DAT) AND (<REF_DAT)
		8CAw2 8CEF. 8CEG.	XaXH4 XaPmZ%	
		<i>Long-acting reversible method of contraception WRITTEN advice</i>		

20	LARCWRIT_DAT	Date of LARCWRIT_COD		Chosen record
21	LARCVERB2_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest < (REF_DAT)
		8CAw1	XaXH3	
		<i>Long-acting reversible method of contraception VERBAL advice</i>		
22	LARCVERB2_DAT	Date of LARCVERB2_COD		Chosen record
23	LARCWRIT2_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest < (REF_DAT)
		8CAw2 8CEF. 8CEG.	XaXH4 XaPmZ%	
		<i>Long-acting reversible method of contraception WRITTEN advice</i>		
24	LARCWRIT2_DAT	Date of LARCWRIT2_COD		Chosen record

Indicator rulesets

- 1 **Indicator SH 1:** The practice can produce a register of women who have been prescribed any method of contraception at least once in the last year, or other appropriate interval e.g. last 5 years for an IUS

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 SH 2. The percentage of women prescribed an oral or patch contraceptive method who have also received information from the practice about long acting reversible methods of contraception 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>COC_DAT</u> >= (<u>REF_DAT</u> – 15 months) OR If <u>POC_DAT</u> >= (<u>REF_DAT</u> – 15 months) OR If <u>CP_DAT</u> >= (<u>REF_DAT</u> – 15 months)	Next Rule	Reject
2	If <u>LARCADV2_DAT</u> >= (<u>REF_DAT</u> – 15 months) OR (If <u>LARCVERB2_DAT</u> >= (<u>REF_DAT</u> – 15 months) AND If <u>LARCWRIT2_DAT</u> >= (<u>REF_DAT</u> – 15 months))	Select	Next rule
3	If <u>REG_DAT</u> >= (<u>REF_DAT</u> – 3 months)	Reject	Next rule
4	If <u>SHEXC_DAT</u> >= (<u>REF_DAT</u> – 15 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>LARCADV2_DAT</u> >= (<u>REF_DAT</u> – 15 months) OR (If <u>LARCVERB2_DAT</u> >= (<u>REF_DAT</u> – 15 months) AND If <u>LARCWRIT2_DAT</u> >= (<u>REF_DAT</u> – 15 months))	Select	Reject

Rule 1: Patients who have been prescribed any of the following in the last 15 months;

- Combined oral contraceptives
- Contraceptive patch
- Progestogen oral contraceptive

True: If the prescription is within 15 months of the end of the current QOF Financial Year, then the patient is further considered.

False: If the prescription is more than 15 months before the end of the current QOF Financial Year, then the patient is disregarded and not included in the denominator.

Please Note: Sexual Health 2 refers to LARCADV2 which is the latest recording of long acting reversible contraceptive advice from the end of the current QOF financial year.

Please be aware that long acting contraceptive advice should be both written and verbal. If LARCADV2 is recorded then this indicates that both verbal and written

advice were given. LARCVERB2 refers to *verbal advice only* and LARCWRIT2 refers to *written advice only* so both codes must be present to indicate both forms of advice have been given.

Rule 2: The patient has had long acting reversible contraception advice in the last 15 months.

True: If the advice is within 15 months of the end of the current QOF Financial Year, then the patient is selected.

False: If the advice outside 15 months of the end of the current QOF financial year, then the patient is further considered.

Rule 3: 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 4: The aim of this rule is to identify any patient that has an accepted 'Sexual Health Exception' Read Code recorded. If the patient has an accepted 'Sexual Health Exception' Read Code recorded in the last 15 months, the patient should not be included in the denominator.

Indicator SH 3: The percentage of women prescribed emergency hormonal contraception at least once in the year by the practice who have received information from the practice about long acting reversible methods of contraception at the time of, or within one month of, the prescription.

a) Denominator ruleset

<u>Rule Number</u>	<u>Rule</u>	<u>Action if true</u>	<u>Action if false</u>
1	If <u>EHC_DAT</u> >= (<u>REF_DAT</u> - 13 Months)	Next Rule	Reject
2	If <u>EHC_DAT</u> >=(<u>REF_DAT</u> - 1 month) AND [(If <u>LARCADV_DAT</u> = Null AND If <u>LARCVERB_DAT</u> = Null AND If <u>LARCWRIT_DAT</u> = Null) OR (If <u>LARCADV_DAT</u> = Null AND If <u>LARCVERB_DAT</u> = Null AND If <u>LARCWRIT_DAT</u> ≠ Null) OR (If <u>LARCADV_DAT</u> = Null AND If <u>LARCVERB_DAT</u> ≠ Null AND If <u>LARCWRIT_DAT</u> = Null)]	Reject	Next rule
3	If <u>LARCADV_DAT</u> < (<u>REF_DAT</u> - 12 months) OR (If <u>LARCVERB_DAT</u> < (<u>REF_DAT</u> - 12 months) AND If <u>LARCWRIT_DAT</u> < (<u>REF_DAT</u> - 12 months))	Reject	Next rule
4	If <u>LARCADV_DAT</u> <=(<u>EHC_DAT</u> + 1 month) OR (If <u>LARCVERB_DAT</u> <=(<u>EHC_DAT</u> + 1 month) AND If <u>LARCWRIT_DAT</u> <=(<u>EHC_DAT</u> + 1 month))	Select	Next rule
5	If <u>REG_DAT</u> >= (<u>REF_DAT</u> - 3 months)	Reject	Next rule
6	If <u>SHEXC_DAT</u> >= (<u>REF_DAT</u> - 15 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>
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1	If <u>LARCADV DAT</u> <=(<u>EHC DAT</u> + 1 month) OR (If <u>LARCVERB DAT</u> <=(<u>EHC DAT</u> + 1 month) AND If <u>LARCWRIT DAT</u> <=(<u>EHC DAT</u> + 1 month))	Select	Reject
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Rule 1: Is the emergency hormonal contraceptive prescribed 13 months before the current QOF financial year

True: If the prescription is more than 13 months before the end of the current QOF Financial Year, then the patient is disregarded and not included in the denominator.

False: If the prescription is within 13 months of the end of the current QOF Financial Year, then the patient is further considered.

Please Note: Sexual Health 3 refers to LARCADV which is the earliest recording of long acting reversible contraceptive advice that has occurred after the latest emergency hormonal contraceptive recording that has occurred before the end of the current QOF financial year.

Please be aware that long acting contraceptive advice should be both written and verbal. If LARCADV is recorded then this indicates that both verbal and written advice were given. LARCVERB refers to *verbal advice only* and LARCWRIT refers to *written advice only* so both codes must be present to indicate both forms of advice have been given.

Rule 2: Is the emergency hormonal contraceptive prescribed within 1 month from the end of the QOF financial year and is the long acting reversible contraceptive advice null.

True: If the emergency health contraception is within 1 month from the end of the of the QOF financial year and there is no recording of long acting reversible contraceptive advice then the patient is disregarded and not included in the denominator.

False: If the emergency health contraceptive is within 1 month of the end of the QOF financial year and there is a recording of long acting reversible contraceptive advice then the patient is further considered.

Rule 3: Is the long acting reversible contraception advice outside 12 months from the end of the QOF financial year.

True: If the long acting reversible advice is outside 12 months from the end of the QOF financial year end, then the patient is disregarded and not included in the denominator.

False: If the long acting reversible advice is within 12 months from the end of the QOF financial year end, then the patient is further considered.

Rule 4: The aim of this rule is to identify whether the long acting reversible contraceptive advice is within 1 month after the date of the emergency hormonal contraceptive recording

True: If the long acting reversible contraceptive advice is within 1 month after the date of the emergency hormonal contraception then the patient is selected.

False: If the long acting reversible contraceptive advice is outside 1 month from the date of the emergency hormonal contraception 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 'Sexual Health Exception' Read Code recorded. If the patient has an accepted 'Sexual Health Exception'

Read Code recorded in the last 15 months, the patient should not be included in the denominator.