

Data and Business Rules – Diabetes Mellitus Indicator Set					
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New GMS Contract QOF Implementation

Dataset and Business Rules

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Diabetes Mellitus Indicator Set

Amendment History:

Version	Date	Amendment History
Draft 0.3	21-Jun-2003	From Peter Horsfield
1.0	24-Sep-2003	Standard Headers and footers Applied and set to approved.
1.1	03-Nov-2003	Added headers and footers to Version 0.4 received from Pete Horsfield on 03/11/03.
2.0	12-Nov-2003	Amended following 4 Country review
3.0	20-Jan-2004	Amended following January READ Code Release
4.0	04-Feb-2004	Amended following 4 Country, GPSS and internal review
4.1	09-Apr-2004	SNOMED-CT codes added, 4-byte Read codes removed
4.2	09-Jul-2004	Amended following July READ code release
5.0	27-Sep-2004	Amended following 4 country review
5.1	18-Jan-2005	Amended following January READ Code Release
5.2	18-Jan-2005	Amended following 4 Country review
6.0	21-July-2005	Signed off following 4 Country review
6.1	21-July-2005	Amended following July 2005 Read Code release and January 2005 SNOMED CT release
6.2	21-Aug-2005	Amended following 4 Country review
7.0	23-Sep-2005	Signed off following 4 Country review
7.1	21-Nov-2005	From Phil Brown
7.2	22-Nov-2005	Amended following review by Peter Horsfield
7.3	3-Dec-2005	Draft revised for internal review
7.4	26-Feb-2006	Amended following internal & 4 Countries review
8.0	15-Mar-2006	Signed off following 4 Country review
8.1	17-May-2006	Responding to queries raised a) Amend wording for Note 3 b) Add 451E. for v2 (and equivalents for other sets) in EGFR_COD
8.5	18-May-2006	Approved by NHSE
8.6	20-Oct-2006	April Read Code Release April SNOMED CT Release October Read Code Release Corrections and amendments following feedback
8.7	13-Nov-2006	DEMEXC_COD: Add missing '.' BMI_COD: Add missing '.' RET_COD: Add missing '.' MALT_COD: Remove duplicate entry of 19518008 Response to queries raised by 4 Country Review: remove Reaven's syndrome from V2.
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
10.1	09-Sept-2007	April 2007 SNOMED CT Release
10.2	23-Sep-2007	October 2007 Read Code Release October 2007 SNOMED CT Release
11.0	28-Nov-2007	Signed off following 4 Country review
11.1	30-Jun-2008	April 2008 Read Code Release April 2008 SNOMED CT Release

		QOF Review 2007
12.0	24-Jul-2008	Signed off following 4 Country review
12.1	06-Oct-2008	October 2008 Read Code Release October 2008 SNOMED CT Release
12.2	01-Dec-2008	Add 66Aq & XaPQH to PP_COD & NPT_COD following review comments
13.0	05-Dec2008	Signed off following 4 Country review
13.1	14-Feb-2009	QOF Review 2008
13.2	09-Mar-2009	Amendment following NHSE review
13.3	27-Apr-2009	Amended following Four-Country Review
14.0	01-May-2009	Signed off following 4 Country review
14.1	25-June-2009	April 2009 Read Code Release
14.2	14-August-2009	Amendment following 4 Country review
15.0	17-August-2009	Sign off following 4 Country review
15.1	12-October-2009	October 2009 Clinical Code Release
15.2	28-October-2009	October 2009 Clinical Code 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
22.0	12-December-2011	Signed off following 4 Country review
23.0	31-May-2012	April 2012 Read Code Release following HSCIC review
24.0	31-October-2012	October 2012 Read Code Release following HSCIC review
25.0	28-March-2013	Signed off following consultation
26.0	01-June-2013	April 2013 Read Code Release following HSCIC review
27.0	25-October-2013	October 2013 Read Code Release following HSCIC review
27.1	02-December-2013	Update to FLU_COD and TXFLU_COD
Dates_1415	17-January-2014	Review of proposed date changes for QOF 2014/15
Jan14_Review	23-January-2014	Internal review of changes for 2014/15
28.0	28-March-2014	Signed off following review and negotiations. Changes made to incorporate new date terminology
29.0	27-June-2014	April 2014 Read Code Release following HSCIC review
30.0	10-October-2014	October 2014 Read Code Release following HSCIC review
30.1	11-December-2014	Update to correct DM014 Denominator Rule 3

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New GMS contract Q&O framework implementation

Dataset and business rules – Diabetes mellitus indicator set

Notes

- 1) QOF has been in operation since 2003 as the landscape within the NHS and Primary Care changes, the QOF dataset and rulesets must change in accordance with that new landscape. QOF is categorised as one of many Quality Services and a Quality Service has a start date (Quality Service Start Date) and an end date (Quality Service End Date). For QOF these reflect the QOF Year (i.e. 1st April to 31st March).
- 2) 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 use of a number of dates. The dates are as follows
 - a) **ACHIEVEMENT_DAT**: The date up to which patient information is considered when determining the output for each extraction.
 - For QOF 2014/15, **ACHIEVEMENT_DAT** will vary for each extraction depending on the reporting period for that extraction, e.g. for the end of **September extraction** it would have a value of **30.09.2014**; for the end of **March extraction** it would have a value of **31.03.2015**.
 - b) **PAYMENTPERIODEND_DAT**: The end date of the period for which payments are made for a given Quality Service. For any given Quality Service there will be one or more payment periods.
 - For QOF 2014/15, **PAYMENTPERIODEND_DAT** is **31.03.2015**
 - c) **QUALITY_SERVICE_START_DAT (QSSD)**: The start of the period during which a GP Practice provides the Quality Service
 - For QOF 2014/15, **QUALITY_SERVICE_START_DAT (QSSD)** is **01.04.2014**, however it is not utilised within the QOF dataset and rulesets.
 - d) **QUALITY_SERVICE_END_DAT (QSED)**: The end of the period during which a GP Practice provides the Quality Service
 - For QOF 2014/15, **QUALITY_SERVICE_END_DAT (QSED)** is **31.03.2015**
- 3) When interpreting these dates midnight is to be taken as meaning
 - a) **for the 'start of a period'**: the midnight is at the start of that day, For example; **"If CSMOK_DAT > (PAYMENTPERIODEND_DAT – 24 months)"**
This example is used to determine if a code has been recorded in the 24 months preceding end of the payment period. If PAYMENTPERIODEND_DAT has a value of 31.03.2015, then this condition uses a value of 31.03.2013, but to be true the recorded code must be **after** 31.03.2013 and therefore this equates to the midnight between 31.03.2013 and 01.04.2013. This means information effective on 31st March will be excluded but information effective on 1st April will be included for the extraction.
 - b) **for the 'end of a period'**: the midnight at the end of that day, For example; **"Earliest <= ACHIEVEMENT_DAT"**
This example is used to determine if a recorded code has been recorded before the achievement date. If ACHIEVEMENT_DAT has a value of 30th September (i.e. the end of September extraction) then this condition uses a value of 30.09.2014, but to be true the recorded code must be **on or before** 30.09.2014 and therefore this equates to the midnight between 30.09.2014 and 01.10.2014. This means information effective on 30th September will be included but information effective on 1st October will be excluded from the extraction.

- c) **for Patient Age:** the midnight at the end of that day, For example;
"Patients age (years) at ACHIEVEMENT_DAT"

This example is used to determine a patients age, in years, at the achievement date. If ACHIEVEMENT_DAT has a value of 30th September (i.e. the end of September extraction) then this condition determines a patient age as of 30.09.2014. Therefore this equates to the midnight between 30.09.2014 and 01.10.2014.

- 4) 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 all of the dates (described in point 2 above) are specified prior to extraction of data and are available for computation in the data extraction routine. The dates are required to be included in the data extraction to support processing of rules that are dependent upon them. 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.
- 5) Clinical codes quoted are (where known) from the October 2014 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 it's 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).
- 6) 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, 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.

- 7) 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
- 8) 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) | |
- 9) Where date criteria are specified with intervals of multiples of months or years these should be interpreted as calendar months or calendar years.
- 10) The new GMS contract requires that influenza vaccinations should be given between 1st August and 31st March of any given contract year in order to qualify for the relevant indicators. Hence in the contract year 2014 – 2015 the relevant dates will be 1st August 2014 and 31st March 2015 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

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

b) Diagnostic code and demographic status

<i>Code criteria</i>	<i>Qualifying diagnostic codes</i>		<i>Time criteria</i>
<i>Included</i>	<i>Read codes v2</i>	<i>CTV3</i>	<i>Latest <= (ACHIEVEMENT_DAT)</i>
	C10.., C109J, C109K, C10C., C10D., C10E.%, C10F.% (Excluding C10F8), C10G.%, C10H.%, C10M.%, C10N.%, PKyP. C10P.%	C10.., XaOPu, XaOPt, X40J4% (Excluding L1805), X40J5% (Excluding L1806), X40J6, X40JA% (Excluding XSETI%, C11y0%), X40JG% (Excluding X40JK), C1010, C1011, C1030, C1031, XaIrf, X40JZ, XSETp, XM1Xk%, X008t, Xaagd%	
	<i>(Diagnostic codes for diabetes mellitus)</i>		
<i>Excluded</i>	<i>Read codes v2</i>	<i>CTV3</i>	<i>Latest <= (ACHIEVEMENT_DAT) AND > Date of diagnostic code above</i>
	21263 212H.	XaFsp	
	<i>(Codes for diabetes resolved)</i>		
<i>Excluded</i>	Age < 17 yrs at ACHIEVEMENT_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 <= (ACHIEVEMENT_DAT)
3	DMEXC_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= (ACHIEVEMENT_DAT)
		9h4..% (excluding 9h43.)	XaJ4Q% (excluding XaX0F)	
		<i>(Diabetes exception reporting codes)</i>		
4	DMEXC_DAT	Date of DMEXC_COD		Chosen record
5	DM_COD	<i>Read codes v2</i>	<i>CTV3</i>	Earliest <= (ACHIEVEMENT_DAT)
		C10.., C109J, C109K, C10C., C10D., C10E.%, C10F.% (Excluding C10F8), C10G.%, C10H.%, C10M.%, C10N.%, PKyP., C10P.%	C10.., XaOPu, XaOPt, X40J4% (Excluding L1805), X40J5% (Excluding L1806), X40J6, X40JA% (Excluding XSETI%, C11y0%), X40JG% (Excluding X40JK), C1010, C1011, C1030, C1031, XaIrf, X40JZ, XSETp, XM1Xk%, X008t, Xaagd%	
		<i>(Codes for diabetes)</i>		
6	DM_DAT	Date of DM_COD		Chosen record
7	DMMAX_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <=

		8BL2.	XaJ5j	(ACHIEVEMENT_DAT)
		(Code for maximum tolerated diabetes treatment)		
8	DMMAX_DAT	Date of DMMAX_COD		Chosen record
9	IFCCHBA_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= (ACHIEVEMENT_DAT)
		42W5.	XaPbt	
		(IFCC HbA1c codes)		
10	IFCCHBA_VAL	Value 1 of IFCCHBA_COD		Chosen record
11	IFCCHBA_DAT	Date of IFCCHBA_COD		Chosen record
12	FEEXC_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= (ACHIEVEMENT_DAT)
		8I6G. 8I3W. 8IAo. 8IB6.	XaJOE XaJix XaWR5 XaWR7	
		(Foot examination exception codes)		
13	FEEXC_DAT	Date of FEEXC_COD		Chosen record
14	BP_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= ACHIEVEMENT_DAT
		246..% (excluding 2460., 2468., 246H., 246I., 246K., 246L., 246M., 246h., 246i., 246j., 246k.)	X773t% (excluding XaI9f, XaI9g, X779b, X779R, X779T, X779W, XaYai, XaYg8, XaYg9) 246..% (excluding 2460., 2468., XaCFN, XaCFO, XaZvo, XaZxj)	
		(BP recording codes)		

15	BP_DAT	Date of BP_COD		Chosen record
16	BP_SYS	Value 1 of BP_COD (Systolic BP value)		Chosen record
17	BP_DIA	Value 2 of BP_COD (Diastolic BP value)		Chosen record
18	BPEX_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= ACHIEVEMENT_DAT
		8I3Y.	XaJkR	
		<i>(BP recording exception codes)</i>		
19	BPEX_DAT	Date of BPEX_COD		Chosen record
20	HTMAX_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= ACHIEVEMENT_DAT
		8BL0.	XaJ5h	
		<i>(Code for maximal BP therapy)</i>		
21	HTMAX_DAT	Date of HTMAX_COD		Chosen record
22	PRT_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= (ACHIEVEMENT_DAT)
		R110. - R1100 R110z C10EK C10FL K190X Kyu5G K08yA	R110. R1100 R110z X30Q1 X30Q2 Kyu5G XaIzM, XaIzQ X30Km%	

		<i>(Codes for proteinuria)</i>		
23	PRT_DAT	Date of PRT_COD		Chosen record
24	MAL_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= (ACHIEVEMENT_DAT)
		R1103 C10EL C10FM	XaE6p, XaE6q X30KI% XaIzN, XaIzR	
		<i>(Codes for microalbuminuria)</i>		
25	MAL_DAT	Date of MAL_COD		Chosen record
26	XACE_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= ACHIEVEMENT_DAT
		14LM. U60C4 TJC77 – TJC79 ZV14D K0430	XaJ5y XaJ8Y Xa60w% Xa5cT% XaIrq U60C4 TJC77 TJC78 TJC79 X70wH XaZ6J	
		<i>(Ace inhibitor contraindications; persistent)</i>		
27	XACE_DAT	Date of XACE_COD		Chosen record

28	TXACE_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= ACHIEVEMENT_DAT
		8I28. 8I3D. 8I64. 8I74.	XaG2W XaIIm XaIIf XaJ5e	
		<i>(Ace inhibitor contraindications; expiring)</i>		
29	TXACE_DAT	Date of TXACE_COD		Chosen record
30	XAI COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= ACHIEVEMENT_DAT
		14LN. U60CB ZV14E	XaJ5z XaJ8o XaIzK XaJ8W Xa619 Xa5cg	
		<i>(AII antagonist contraindications: persisting)</i>		
31	XAI DAT	Date of XACE_COD		Chosen record
32	TXAI COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= ACHIEVEMENT_DAT
		8I2H. 8I3P. 8I6C. 8I75.	XaInW XaIyw XaJ5m XaJ5f	
		<i>(AII antagonist contraindications: expiring)</i>		

33	TXAII_DAT	Date of TXAII_COD		Chosen record
34	ACE_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= ACHIEVEMENT_DAT
		bi...% bA...% bk6..%	bi...% bA...%	
		<i>(Ace inhibitor prescription codes)</i>		
35	ACE_DAT	Date of ACE_COD		Chosen record
36	AII_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= ACHIEVEMENT_DAT
		bk3.. - bk5z. bk7.. - bk9z. bkB..%, bkC..%, bkD..% bkH..%, bkI..%, bkJ..%	x03j2% x03ls% bkD..% bkH..% bkI..% bkJ..%	
		<i>(AII antagonist prescription codes)</i>		
37	AII_DAT	Date of AII_COD		Chosen record
38	CHEXC_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= ACHIEVEMENT_DAT
		U60CA TJC24 TJC25	XaIsC, XaIro Xa5bP% TJC24 TJC25 Xa5zs%	

		<i>(Codes for exception from serum cholesterol target; persisting)</i>		
39	CHEXC_DAT	Date of CHEXC_COD		Chosen record
40	TCHEXC_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= ACHIEVEMENT_DAT
		8BL1. 8I3C. 8I27. 8I63. 8I76.	XaJ5i XaIil XaIIg XaG2V XaJYw	
		<i>(Codes for exception from serum cholesterol target; expiring)</i>		
41	TCHEXC_DAT	TCHEXC_COD		Chosen record
42	XFLU_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= ACHIEVEMENT_DAT
		14LJ. U60K4 ZV14F	XaIAA XaJ7u XaJ8X Xa5um% Xa5WJ%	
		<i>(Flu vaccine contraindications: persisting)</i>		
43	XFLU_DAT	Date of XFLU_COD		Chosen record
44	TXFLU_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <=

		68NE. 90X51 8I2F0 8I6D0 68NE0 90X54 90X56	68NE. XaZ0i XaZ0j XaZ0k Xaa9f XaadS XaadU	ACHIEVEMENT_DAT
		<i>(Flu vaccine contraindications: expiring)</i>		
45	TXFLU_DAT	Date of TXFLU_COD		Chosen record
46	FLU_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= ACHIEVEMENT_DAT
		n47..% (Excluding n47A., n47B., n47r., n47s., n47t.) 65ED., 65E20, 65ED0, 65ED2, 65ED1, 65ED3, 65E21, 65E22	n47..% (Excluding n47A., n47B., n47r., n47s., n47t.) XaZ0d, XaZ0e, XaZfY, XaaZp, Xaac3, Xaac4, Xaac7, Xaac8	
		<i>(Flu vaccination codes)</i>		
47	FLU_DAT	Date of FLU_COD		Chosen record
48	NPTEXC_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= (ACHIEVEMENT_DAT)
		8I6G. 8I3W. 8IAn. 8IB5.	XaJOE XaJix XaWR4 XaWR6	

		<i>(Neuropathy testing exception codes)</i>		
49	NPTEXC_DAT	Date of NPTEXC_COD		Chosen record
50	FRC_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= (ACHIEVEMENT_DAT)
		2G5E. 2G5F. 2G5G. 2G5H. 2G5I. 2G5J. 2G5K. 2G5L. 2G5d. 2G5e.	XaIeH XaIeS XaIeI XaIeJ XaIeL XaIeR XaIeM XaIeK XaX6K XaX6J	
		<i>(Foot Risk Classification)</i>		
51	FRC_DAT	Date of FRC_COD		Chosen record
52	AMPR_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= (ACHIEVEMENT_DAT)
		2G42. 2G44. 2G46.	XaBLT XaBLV XaBLX	
		<i>(Right Foot Amputation Codes)</i>		
53	AMPR_DAT	Date of AMPR_COD		Chosen record
54	AMPL_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= (ACHIEVEMENT_DAT)
		2G43. 2G45. 2G47.	XaBLU XaBLW XaBLY	

		<i>(Left Foot Amputation Codes)</i>		
55	AMPL_DAT	Date of AMPL_COD		Chosen record
56	CHOL2_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= ACHIEVEMENT_DAT
		44OE. 44P.. 44PH. 44PJ. 44PK.	XaJe9 XE2eD, XaFs9 XaIRd, XaLux XSK14	
		<i>(Total cholesterol codes with a value)</i>		
57	CHOL2_DAT	Date of CHOL2_COD		Chosen record
58	CHOL2_VAL	Value 1 of CHOL2_COD <i>(Total cholesterol value)</i>		Chosen record
59	DSEP_COD	<i>Read codes v2</i>	<i>CTV3</i>	Earliest (>=DM_DAT) AND (<=ACHIEVEMENT_D AT)
		8Hj0. 8Hj3. 8Hj4. 8Hj5.	XaKGy%	
		<i>(Referred for diabetes structured education programme)</i>		
60	DSEP_DAT	Date of DSEP_COD		Chosen record
61	DSEPEXC_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= ACHIEVEMENT_DAT
		9OLM. 8IE9. 8IEa.	XaNTH XaXkZ XaZuQ	

		<i>(Diabetes structured education programme exception codes)</i>		
62	DSEPEXC_DAT	Date of DSEPEXC_COD		Chosen record
63	DSEPNAEXC_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= ACHIEVEMENT_DAT
		8I94.	XaadP	
		<i>(Diabetes structured education programme not available codes)</i>		
64	DSEPNAEXC_DAT	Date of DSEPNAEXC_COD		Chosen record
65	CHOLEXC_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= ACHIEVEMENT_DAT
		8I3w.	XaLQd	
		<i>(Codes for cholesterol test declined)</i>		
66	CHOLEXC_DAT	Date of CHOLEXC_COD		Chosen record
67	BLOODEXC_COD	<i>Read codes v2</i>	<i>CTV3</i>	Latest <= ACHIEVEMENT_DAT
		41M..	XaZOq	
		<i>(Codes for blood test declined)</i>		
68	BLOODEXC_DAT	Date of BLOODEXC_COD		Chosen record

Indicator rulesets

- 1 Indicator DM017: The contractor establishes and maintains a register of all patients aged 17 or over with diabetes mellitus, which specifies the type of diabetes where a diagnosis has been confirmed.

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 DM002: The percentage of patients with diabetes, on the register, in whom the last blood pressure reading (measured in the preceding 12 months) is 150/90 mmHg or less.

Overview

This indicator has been developed to measure the effectiveness of the provision of a clinical care component: diabetes management for a patient within Primary Care. The aspect of diabetes management that is being measured is that of blood pressure control.

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 diabetes (i.e. there is evidence anywhere within the patient's electronic health record of a diabetes diagnosis code) that has not been resolved and

Are aged 17 years and over at the time the indicator is measured

Numerator and Denominator

The success criterion for this indicator (**numerator**) is where those patients in the denominator achieve the target blood pressure. Specifically:

The most recent blood pressure reading must be 150/90 or less.

and

This recording must have occurred in the preceding 12 months.

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

Exclusions

For this indicator there are no exclusions.

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 that has a valid blood pressure recording exception code recorded within the preceding 12 months (e.g. the patient refused a recording in the time period)
- any patient who has been registered within the preceding 9 months of the qualifying year (new patient). This indicator is about achieving good blood pressure control – it has been agreed that to do this requires a certain amount of time. New patients may be regarded as exceptions if they have only been registered within the preceding 9 months and have not achieved the target blood pressure.
- any patient that has a valid general diabetes mellitus exception code recorded within the preceding 12 months.

- any patient has been diagnosed with diabetes mellitus within the preceding 9 months of the year (new diagnosis of diabetes). This indicator is about achieving good blood pressure control – it has been agreed that to do this requires a certain amount of time. Newly diagnosed patients may be regarded as exceptions if they have only been diagnosed within the preceding 9 months and have not achieved the target blood pressure.
- any patient who is coded as already on maximum tolerated dose for hypertension (patient can't be given any more medication to reduce the blood pressure)

Note: For the 'new' diabetes patient exception, this is only applicable for the first 'ever' diagnosis of diabetes for the patient. For subsequent diagnosis, this exception rule is not considered.

Indicator DM002: The percentage of patients with diabetes, on the register, in whom the last blood pressure reading (measured in the preceding 12 months) is 150/90 mmHg or less.

a) Denominator ruleset

<u>Rule number</u>	<u>Rule</u>	<u>Action if true</u>	<u>Action if false</u>
1	If (<u>BP_SYS</u> <= 150 AND If <u>BP_DIA</u> <= 90 AND If <u>BP_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 12 months))	Select	Next rule
2	If <u>BPEX_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 12 months)	Reject	Next rule
3	If <u>REG_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 9 months)	Reject	Next rule
4	If <u>DMEXC_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 12 months)	Reject	Next rule
5	If <u>DM_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 9 months)	Reject	Next rule
6	If <u>HTMAX_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 12 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>BP_SYS</u> <= 150 AND If <u>BP_DIA</u> <= 90 AND If <u>BP_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 12 months))	Select	Reject

Additional Notes:

Denominator

Success

Rule 1: The purpose of rule 1 is to immediately identify patients who have successfully achieved the criteria of the indicator and select them into the denominator (and as we shall see below into the numerator).

- Firstly that the latest systolic blood pressure is less than or equal to 150 mm Hg, and
- secondly that the latest diastolic blood pressure is less than or equal to 90mm Hg and
- finally, that this recording has been made within the preceding 12 months.

If these are all true the patient is selected.

If any of these criteria are not met then the patient is checked against subsequent rules. This is usually a case of checking that the patient has some reason to be excepted from the denominator and consequently doesn't affect the achievement of the indicator.

Exceptions

It is worth remembering at this point that if a patient's last blood pressure recording within the preceding 12 months is 150/90 or less they will already have been selected into the denominator in Rule 1.

Rule 2: The purpose of rule 2 is to identify any patient that has a valid blood pressure recording exception code recorded within the preceding 12 months

- If an exception code has been identified the outcome of the rule is true and the patient is **rejected** from the denominator
- If no exception codes have been identified the outcome of the rule is false and the patient will be passed onto the next rule

Rule 3: The purpose of rule 3 is to identify whether the patient has been registered within the preceding 9 months of the qualifying year.

- If the patient has been registered within the preceding 9 months of the qualifying year the outcome of the rule is true and the patient is **rejected** from the denominator
- If the patient was registered before the preceding 9 months of the qualifying year the outcome of the rule is false and the patient will be passed onto next rule.

Rule 4: The purpose of rule 4 is to identify any patient that has a valid diabetes mellitus exception code recorded.

- If an exception code has been identified within the preceding 12 months the outcome of the rule is true and the patient is **rejected** from the denominator
- If no exception codes have been identified the outcome of the rule is false and the patient will be passed onto next rule.

Rule 5: The purpose of rule 5 is to identify whether the patient has been diagnosed with diabetes mellitus within the preceding 9 months of the qualifying year.

- If the patient has been diagnosed with diabetes mellitus within the preceding 9 months of the qualifying year the outcome of the rule is true and the patient is **rejected** from the denominator
- If the patient was diagnosed with diabetes mellitus before the preceding 9 months of the qualifying year the outcome of the rule is false and the patient will be passed onto next rule

Rule 6: The purpose of rule 6 is to identify whether the patient is already on maximum tolerated dose for hypertension.

- If the patient is currently on maximum tolerated dose for hypertension in the qualifying year the outcome of the rule is true and the patient is **rejected** from the denominator
- If the patient is not on maximum tolerated dose for hypertension they are selected to be in the denominator

Numerator

The success criterion for this indicator is as per Denominator Rule 1.

- 3 Indicator DM003: The percentage of patients with diabetes, on the register, in whom the last blood pressure reading (measured in the preceding 12 months) is 140/80 mmHg or less.

Overview

This indicator has been developed to measure the effectiveness of the provision of a clinical care component: diabetes management for a patient within Primary Care. The aspect of diabetes management that is being measured is that of blood pressure control.

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 diabetes (i.e. there is evidence anywhere within the patient's electronic health record of a diabetes diagnosis code) that has not been resolved and

Are aged 17 years and over at the time the indicator is measured

Numerator and Denominator

The success criterion for this indicator (numerator) is where those patients in the denominator achieve the target blood pressure. Specifically:

The most recent blood pressure reading must be 140/80 or less and

This recording must have occurred in the preceding 12 months.

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

Exclusions

For this indicator there are no exclusions.

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 that has a valid blood pressure recording exception code recorded within the preceding 12 months (e.g. the patient refused a recording in the time period)
- any patient who has been registered within the preceding 9 months of the qualifying year (new patient). This indicator is about achieving good blood pressure control – it has been agreed that to do this requires a certain amount of time. New patients may be regarded as exceptions if they have only been registered within the preceding 9 months and have not achieved the target blood pressure.
- any patient that has a valid general diabetes mellitus exception code recorded within the preceding 12 months.

- any patient has been diagnosed with diabetes mellitus within the preceding 9 months of the year (new diagnosis of diabetes). This indicator is about achieving good blood pressure control – it has been agreed that to do this requires a certain amount of time. Newly diagnosed patients may be regarded as exceptions if they have only been diagnosed within the preceding 9 months and have not achieved the target blood pressure.
- any patient who is coded as already on maximum tolerated dose for hypertension (patient can't be given any more medication to reduce the blood pressure)

Note: For the 'new' diabetes patient exception, this is only applicable for the first 'ever' diagnosis of diabetes for the patient. For subsequent diagnosis, this exception rule is not considered.

Indicator DM003: The percentage of patients with diabetes, on the register, in whom the last blood pressure reading (measured in the preceding 12 months) is 140/80 mmHg or less.

a) Denominator ruleset

<u>Rule number</u>	<u>Rule</u>	<u>Action if true</u>	<u>Action if false</u>
1	If (<u>BP_SYS</u> <= 140 AND If <u>BP_DIA</u> <= 80 AND If <u>BP_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 12 months))	Select	Next rule
2	If <u>BPEX_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 12 months)	Reject	Next rule
3	If <u>REG_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 9 months)	Reject	Next rule
4	If <u>DMEXC_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 12 months)	Reject	Next rule
5	If <u>DM_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 9 months)	Reject	Next rule
6	If <u>HTMAX_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 12 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>BP_SYS</u> <= 140 AND If <u>BP_DIA</u> <= 80 AND If <u>BP_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 12 months))	Select	Reject

Additional Notes:

Denominator

Success

Rule 1: The purpose of rule 1 is to immediately identify patients who have successfully achieved the criteria of the indicator and select them into the denominator (and as we shall see below into the numerator).

- Firstly that the latest systolic blood pressure is less than or equal to 140 mm Hg, and
- secondly that the latest diastolic blood pressure is less than or equal to 80mm Hg and
- finally, that this recording has been made within the preceding 12 months.

If these are all true the patient is selected.

If any of these criteria are not met then the patient is checked against subsequent rules. This is usually a case of checking that the patient has some reason to be excepted from the denominator and consequently doesn't affect the achievement of the indicator.

Exceptions

It is worth remembering at this point that if a patient's last blood pressure recording within the preceding 12 months is 140/80 or less they will already have been selected into the denominator in Rule 1.

Rule 2: The purpose of rule 2 is to identify any patient that has a valid blood pressure recording exception code recorded within the preceding 12 months.

- If an exception code has been identified the outcome of the rule is true and the patient is **rejected** from the denominator
- If no exception codes have been identified the outcome of the rule is false and the patient will be passed on to the next rule.

Rule 3: The purpose of rule 3 is to identify whether the patient has been registered within the preceding 9 months of the qualifying year.

- If the patient has been registered within the preceding 9 months of the qualifying year the outcome of the rule is true and the patient is **rejected** from the denominator
- If the patient was registered before the preceding 9 months of the qualifying year the outcome of the rule is false and the patient will be passed on to the next rule.

Rule 4: The purpose of rule 4 is to identify any patient that has a valid diabetes mellitus exception code recorded.

- If an exception code has been identified within the preceding 12 months the outcome of the rule is true and the patient is **rejected** from the denominator
- If no exception codes have been identified the outcome of the rule is false and the patient will be passed on to the next rule.

Rule 5: The purpose of rule 5 is to identify whether the patient has been diagnosed with diabetes mellitus within the preceding 9 months of the qualifying year.

- If the patient has been diagnosed with diabetes mellitus within the preceding 9 months of the qualifying year the outcome of the rule is true and the patient is **rejected** from the denominator
- If the patient was diagnosed with diabetes mellitus before the preceding 9 months of the qualifying year the outcome of the rule is false and the patient will be passed on to the next rule.

Rule 6: The purpose of rule 6 is to identify whether the patient is already on maximum tolerated dose for hypertension.

- If the patient is currently on maximum tolerated dose for hypertension in the qualifying year the outcome of the rule is true and the patient is **rejected** from the denominator
- If the patient is not on maximum tolerated dose for hypertension they are **selected** to be in the denominator

Numerator

The success criterion for this indicator is as per Denominator Rule 1.

- 4 **Indicator DM004:** The percentage of patients with diabetes, on the register, whose last measured total cholesterol (measured within the preceding 12 months) is 5 mmol/l or less.

a) Denominator ruleset

<u>Rule number</u>	<u>Rule</u>	<u>Action if true</u>	<u>Action if false</u>
1	If <u>CHOL2_VAL</u> <= 5 AND If <u>CHOL2_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 12 months)	Select	Next rule
2	If <u>CHOLEXC_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 12 months)	Reject	Next rule
3	If <u>BLOODEXC_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 12 months)	Reject	Next rule
4	If <u>REG_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 9 months)	Reject	Next rule
5	If <u>DMEXC_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 12 months)	Reject	Next rule
6	If <u>DM_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 9 months)	Reject	Next rule
7	If <u>CHEXC_COD</u> ≠ Null OR If <u>TCHEXC_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 12 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>CHOL2_VAL</u> <= 5 AND If <u>CHOL2_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 12 months)	Select	Reject

- 5 Indicator DM006: The percentage of patients with diabetes, on the register, with a diagnosis of nephropathy (clinical proteinuria) or micro-albuminuria who are currently treated with an ACE-I (or ARBs)

a) Denominator ruleset

<u>Rule number</u>	<u>Rule</u>	<u>Action if true</u>	<u>Action if false</u>
1	If <u>PRT_COD</u> = Null AND If <u>MAL_COD</u> = Null	Reject	Next rule
2	If <u>ACE_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 6 months) OR If <u>AII_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 6 months)	Select	Next rule
3	If <u>REG_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 3 months)	Reject	Next rule
4	If <u>DMEXC_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 12 months)	Reject	Next rule
5	If <u>DM_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 3 months)	Reject	Next rule
6	If <u>XACE_COD</u> = Null AND If <u>TXACE_DAT</u> = Null	Select	Next rule
7	If <u>XACE_COD</u> = Null AND If <u>TXACE_DAT</u> <= (<u>PAYMENTPERIODEND_DAT</u> – 12 months)	Select	Next rule
8	If <u>XAII_COD</u> = Null AND If <u>TXAII_DAT</u> = Null	Select	Next rule
9	If <u>XAII_COD</u> = Null AND If <u>TXAII_DAT</u> <= (<u>PAYMENTPERIODEND_DAT</u> – 12 months)	Select	Reject

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>ACE_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 6 months) OR If <u>AII_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 6 months)	Select	Reject

- 6 Indicator DM007: The percentage of patients with diabetes, on the register, in whom the last IFCC-HbA1c is 59 mmol/mol or less in the preceding 12 months.

a) Denominator ruleset

<u>Rule number</u>	<u>Rule</u>	<u>Action if true</u>	<u>Action if false</u>
1	If (<u>IFCCHBA_VAL</u> <= 59 AND If <u>IFCCHBA_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> - 12 months))	Select	Next rule
2	If <u>BLOODEXC_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> - 12 months)	Reject	Next rule
3	If <u>REG_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> - 9 months)	Reject	Next rule
4	If <u>DMEXC_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> - 12 months)	Reject	Next rule
5	If <u>DM_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> - 9 months)	Reject	Next rule
6	If <u>DMMAX_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> - 12 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>IFCCHBA_VAL</u> <= 59 AND If <u>IFCCHBA_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> - 12 months))	Select	Reject

- 7 Indicator DM008: The percentage of patients with diabetes, on the register, in whom the last IFCC-HbA1c is 64 mmol/mol or less in the preceding 12 months.

a) Denominator ruleset

<u>Rule number</u>	<u>Rule</u>	<u>Action if true</u>	<u>Action if false</u>
1	If (<u>IFCCHBA_VAL</u> <= 64 AND If <u>IFCCHBA_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> - 12 months))	Select	Next rule
2	If <u>BLOODEXC_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> - 12 months)	Reject	Next rule
3	If <u>REG_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> - 9 months)	Reject	Next rule
4	If <u>DMEXC_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> - 12 months)	Reject	Next rule
5	If <u>DM_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> - 9 months)	Reject	Next rule
6	If <u>DMMAX_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> - 12 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>IFCCHBA_VAL</u> <= 64 AND If <u>IFCCHBA_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> - 12 months))	Select	Reject

- 8 Indicator DM009: The percentage of patients with diabetes, on the register, in whom the last IFCC-HbA1c is 75 mmol/mol or less in the preceding 12 months.

a) Denominator ruleset

<u>Rule number</u>	<u>Rule</u>	<u>Action if true</u>	<u>Action if false</u>
1	If (<u>IFCCHBA_VAL</u> <= 75 AND If <u>IFCCHBA_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> - 12 months))	Select	Next rule
2	If <u>BLOODEXC_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> - 12 months)	Reject	Next rule
3	If <u>REG_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> - 9 months)	Reject	Next rule
4	If <u>DMEXC_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> - 12 months)	Reject	Next rule
5	If <u>DM_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> - 9 months)	Reject	Next rule
6	If <u>DMMAX_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> - 12 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>IFCCHBA_VAL</u> <= 75 AND If <u>IFCCHBA_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> - 12 months))	Select	Reject

- 9 **Indicator DM012:** The percentage of patients with diabetes, on the register, with a record of a foot examination and risk classification: 1) low risk (normal sensation, palpable pulses), 2) increased risk (neuropathy or absent pulses), 3) high risk (neuropathy or absent pulses plus deformity or skin changes in previous ulcer) or 4) ulcerated foot within the preceding 12 months.

Overview

This indicator has been developed to measure the effectiveness of the provision of a clinical care component for patients with diabetes. The aspect that is being measured is that relating to the provision of foot examination and risk classification.

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 diabetes (i.e. there is evidence anywhere within the patient's electronic health record of a diabetes diagnosis code) that has not been resolved and

Are aged 17 years and over at the time the indicator is measured

Numerator and Denominator

The success criteria for this indicator (numerator) are achieved for those patients in the denominator who have a record of a foot examination and risk classification: 1) low risk (normal sensation, palpable pulses), 2) increased risk (neuropathy or absent pulses), 3) high risk (neuropathy or absent pulses plus deformity or skin changes or previous ulcer) or 4) ulcerated foot within the preceding 12 months.

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

Exclusions

For this indicator there is one exclusion

- Consideration has to be made for those patients who don't require a foot examination and risk classification because they have a record that both feet have been amputated. Any patient that has had both feet amputated is excluded.

Exceptions

Patients that don't achieve the success criteria of the indicator are also checked for valid exceptions.

For this indicator the exceptions are:

- any patient that has a valid foot examination exception code recorded within the preceding 12 months.
- 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 foot examination and risk classification - maybe because there hasn't been an opportunity in the qualifying year to arrange it.

- any patient that has a valid diabetes exception code recorded within the preceding 12 months.
- any patient that has been diagnosed with diabetes within the last 3 months of the year (new diagnosis of diabetes). Newly diagnosed patients may be regarded as exceptions if they fulfil the criteria of the indicator but have not yet had foot examination and risk classification - maybe because there hasn't been an opportunity in the qualifying year to arrange it.

Note: For the 'new' diabetes patient exception, this is only applicable for the first 'ever' diagnosis of diabetes for the patient. For subsequent diagnosis, this exception rule is not considered.

Indicator DM012: The percentage of patients with diabetes, on the register, with a record of a foot examination and risk classification: 1) low risk (normal sensation, palpable pulses), 2) increased risk (neuropathy or absent pulses), 3) high risk (neuropathy or absent pulses plus deformity or skin changes in previous ulcer) or 4) ulcerated foot within the preceding 12 months.

a) Denominator ruleset

<i>Rule number</i>	<i>Rule</i>	<i>Action if true</i>	<i>Action if false</i>
1	If <u>FRC_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 12 months)	Select	Next rule
2	If <u>AMPR_DAT</u> ≠ Null AND If <u>AMPL_DAT</u> ≠ Null	Reject	Next rule
3	If <u>FEEXC_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 12 months)	Reject	Next rule
4	If <u>NPTEXC_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 12 months)	Reject	Next rule
5	If <u>REG_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 3 months)	Reject	Next rule
6	If <u>DMEXC_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 12 months)	Reject	Next rule
7	If <u>DM_DAT</u> > (<u>PAYMENTPERIODEND_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>FRC_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 12 months)	Select	Reject

Additional Notes:

Denominator

Success

Rule 1: The objective of this rule is to identify patients who have a recording of a foot examination and risk classification within the preceding 12 months.

If a foot examination and risk classification has been recorded within the appropriate time frame the patient is selected into the denominator.

If the patient does not have a foot examination and risk classification recorded within the appropriate time frame they are passed on to the next rule.

Exclusions

Rule 2: The objective of this rule is to identify patients who have a recording of both right and left foot amputation. If the patient has a record that both feet have been amputated, the patient can be excluded from the denominator. Otherwise they are passed on to the next rule.

Exceptions

It is worth remembering at this point that if a patient has a recording of a foot examination and risk classification within the preceding 12 months they will already have been selected into the denominator in Rule 1.

Rule 3: The aim of this rule is to identify any patient that has a valid foot examination exception code recorded. If this has been recorded in the preceding 12 months, the patient can be excepted and is not included in the denominator. Otherwise they are passed on to the next rule.

Rule 4: The aim of this rule is to identify any patient that has a valid neuropathy testing exception code recorded. If this has been recorded in the preceding 12 months, the patient can be excepted and is not included in the denominator. Otherwise they are passed on to the next rule.

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. If the patient was not registered in the last 3 months they are passed on to the next rule.

Rule 6: The aim of this rule is to identify any patient that has a valid diabetes exception code recorded. If this has been recorded in the preceding 12 months, the patient can be excepted and is not included in the denominator. Otherwise they are passed on to the next rule.

Rule 7: The aim of this rule is to identify any patient that has been 'recently diagnosed' as a diabetes patient. If the patient has been diagnosed in the last 3 months, the patient can be excepted and the patient should not be included in the denominator. Otherwise the patient is selected into the denominator.

Numerator

The success criterion for this indicator is as per Denominator Rule 1.

- 10 **Indicator DM014:** The percentage of patients newly diagnosed with diabetes, on the register, in the preceding 1 April to 31 March who have a record of being referred to a structured education programme within 9 months after entry on to the diabetes register

Overview

This indicator has been developed to measure the effectiveness of the provision of a clinical care component: diabetes management for a patient within Primary Care. The aspect of diabetes management that is being measured is that of being referred to a structured education programme.

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 diabetes (i.e. there is evidence anywhere within the patient's electronic health record of a diabetes diagnosis code) that has not been resolved and

Are aged 17 years and over at the time the indicator is measured

Numerator and Denominator

The success criterion for this indicator (**numerator**) is achieved for those patients in the denominator who are referred to a structured education programme within 9 months of entry on to the diabetes register.

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

Exclusions

For this indicator the exclusions are

This indicator is specifically looking at patients newly diagnosed with diabetes. Patient's whose earliest diabetes diagnosis is not in the previous 21 months are excluded.

- Consideration has to be made for those patients diagnosed with diabetes within 9 months of the end of the QoF period i.e. the 9 month 'window' for the referral would then span 2 years. If the patient has not been referred to a structured education programme then it would be unreasonable for the patient to be considered unsuccessful until the full 9 months are checked, which can only be done in the next QOF period. Such patients are excluded for this year.
- This indicator is specifically looking for a record of referral to a structured education programme within the current QOF period. Patients with a record of being referred to a structured education programme more than 12 months ago will have been counted as a success in the previous QOF year and are excluded for this year.

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 that has a valid exception code for referral to a diabetes structured education programme recorded within the previous 12 months (e.g. the patient declined a referral to a structured education programme in the time period)
- any patient that has a valid exception code for diabetes structured education programme not available recorded within the previous 12 months.
- 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 been referred to a diabetes structured education programme maybe because there hasn't been an opportunity in the qualifying year to arrange a referral.
- any patient that has a valid general diabetes mellitus exception code recorded within the previous 12 months.
- any patient that has been diagnosed with diabetes mellitus within the previous 3 months of the year (new diagnosis of diabetes). Newly diagnosed patients may be regarded as exceptions if they fulfil the criteria of the indicator but have not yet been referred to a diabetes structured education programme maybe because there hasn't been an opportunity in the qualifying year to arrange a referral.

Note: For the 'new' diabetes patient exception, this is only applicable for the first 'ever' diagnosis of diabetes for the patient. For subsequent diagnosis, this exception rule is not considered.

Indicator DM014: The percentage of patients newly diagnosed with diabetes, on the register, in the preceding 1 April to 31 March who have a record of being referred to a structured education programme within 9 months after entry on to the diabetes register

a) Denominator ruleset

<i>Rule number</i>	<i>Rule</i>	<i>Action if true</i>	<i>Action if false</i>
1	If <u>DM_DAT</u> < 01.04.2013	Reject	Next rule
2	If <u>DM_DAT</u> <= (<u>PAYMENTPERIODEND_DAT</u> - 21 months)	Reject	Next rule
3	If <u>DM_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> - 9 months) AND If <u>DSEP_DAT</u> = Null	Reject	Next rule
4	If <u>DSEP_DAT</u> <= (<u>PAYMENTPERIODEND_DAT</u> - 12 months)	Reject	Next rule
5	If <u>DSEP_DAT</u> <= (<u>DM_DAT</u> + 9 months)	Select	Next rule
6	If <u>DSEPEXC_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> - 12 months)	Reject	Next rule
7	If <u>DSEPNAEXC_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> - 12 months)	Reject	Next rule
8	If <u>REG_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> - 3 months)	Reject	Next rule
9	If <u>DMEXC_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> - 12 months)	Reject	Next rule
10	If <u>DM_DAT</u> > (<u>PAYMENTPERIODEND_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>DSEP_DAT</u> <= (<u>DM_DAT</u> + 9 months)	Select	Reject

Additional Notes:

Denominator

Exclusions

Rule 1: The aim of this rule is to identify patients diagnosed with diabetes after 1st April 2013.

If the patient's earliest diagnosis of diabetes was prior to 1st April 2013 the patient is rejected from the denominator.

If the patient's earliest diagnosis of diabetes is was on or after 1st April 2013 the patient passes onto the next rule.

Rule 2: The aim of this rule is to identify patients diagnosed with diabetes in the previous 21 months.

If the patient's earliest diagnosis of diabetes was more than 21 months ago the patient is rejected from the denominator.

If the patient's earliest diagnosis of diabetes is within the previous 21 months the patient passes onto the next rule.

Rule 3: The aim of this rule is to identify those patients diagnosed with diabetes in the previous 9 months who have not yet been referred to a structured education programme.

If the patient has a diagnosis of diabetes in the last 9 months and **no** record of referral to a structured education programme the patient is rejected from the denominator.

If the patient has a diagnosis of diabetes in the last 9 months **and** a record of referral to a structured education programme the patient passes onto the next rule.

Rule 4: The aim of this rule is to identify patients who were referred to a structured education programme more than 12 months ago.

If a referral to a structured education programme was recorded more than 12 months ago the patient is rejected from the denominator.

If the patient has a record of a referral to a structured education programme in the previous 12 months the patient passes onto the next rule.

Success

Rule 5: The aim of this rule is to identify patients who have been referred to a structured education programme within 9 months of entry on to the diabetes register.

If a referral to a structured education programme has been recorded within the appropriate timeframe the patient is selected into the denominator.

If the patient does not have record of a referral to a structured education programme within the appropriate timeframe they are passed onto the next rule.

Exceptions

Rule 6: The aim of this rule is to identify any patient that has a valid exception code for referral to a diabetes structured education programme recorded. If this has been recorded in the previous 12 months, the patient can be excepted and is not included in the denominator. Otherwise they are passed on to the next rule.

Rule 7: The aim of this rule is to identify any patient that has a valid exception code for diabetes structured education programme not available recorded. If this has been recorded in the previous 12 months, the patient can be excepted and is not included in the denominator. Otherwise they are passed on to the next rule.

Rule 8: 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. If the patient was not registered in the last 3 months they are passed on to the next rule.

Rule 9: The aim of this rule is to identify any patient that has a valid diabetes exception code recorded. If this has been recorded in the previous 12 months, the patient can be excepted and is not included in the denominator. Otherwise they are passed on to the next rule.

Rule 10: The aim of this rule is to identify any patient that has been 'recently diagnosed' as a diabetes patient. If the patient has been diagnosed in the last 3 months, the patient can be excepted and the patient should not be included in the denominator. Otherwise the patient is selected into the denominator.

Numerator

The success criterion for this indicator is as per Denominator Rule 5.

- 11 Indicator DM018: The percentage of patients with diabetes, on the register, who have had influenza immunisation in the preceding 1 August to 31 March.

a) Denominator ruleset

<u>Rule number</u>	<u>Rule</u>	<u>Action if true</u>	<u>Action if false</u>
1	If <u>FLU_DAT</u> >= <u>FLU_COM</u> AND If <u>FLU_DAT</u> <= <u>FLU_END</u>	Select	Next rule
2	If <u>REG_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 3 months)	Reject	Next rule
3	If <u>DMEXC_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 12 months)	Reject	Next rule
4	If <u>DM_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 3 months)	Reject	Next rule
5	If <u>XFLU_COD</u> ≠ Null	Reject	Next rule
6	If <u>TXFLU_DAT</u> > (<u>PAYMENTPERIODEND_DAT</u> – 12 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>FLU_DAT</u> >= <u>FLU_COM</u> AND If <u>FLU_DAT</u> <= <u>FLU_END</u>	Select	Reject