

Unrestricted					
Logical Query Indicators Specification					
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GMS Contract

Logical Query Indicators specification

Amendment History:

Version	Date	Amendment History
0.1	04-02-2003	Source document: guidance 02.01.031.doc
0.2	14-02-2003	Source document: GUIDANCE 16.01.03.doc
0.3	10-03-2003	Source document: GUIDANCE 26.02.03.doc Read version 0 codes added
0.3a	13-03-2003	Source document: GUIDANCE 26.02.03.doc Minor typographic corrections Small number of additional codes added
0.4	20-03-2003	Source document: GUIDANCE 26.02.03.doc CTV3 codes added Missing cross references to guidance document inserted Missing Read 4 character codes added
0.4a	26-03-2003	Source document: GUIDANCE 26.02.03.doc Minor errors corrected SCIMP Codes added
0.4b	13-05-2003	Missing indicator COPD6 added
0.5	01-07-2003	Extensive revision on the basis of feedback received from the field (Draft 4b published for consultation in early June)
0.6	14-07-2003	Codes revised on the basis of feedback from PRIMIS Clinical Advisory Group Read and CTV3 Codes from July 2003 release added
0.7	18-07-2003	Queries added for cervical cytology indicator in guidance section 5 'Additional services' Further minor code revisions on basis of feedback from the field.
0.8	19-08-2003	Standard headers and footers added by Document Manager
1.0	19-08-2003	For approval
1.1	03-11-2003	Code content revised to reflect additions issued to Read codes in 1 st October 2003 interim release Modifications on the basis of feedback from the field Modifications reflecting outcome of consultation on issues resolution
1.2	03-11-2003	Added headers and footers to Version 0.4 received from Pete Horsfield on 03/11/03.
2.0	12-11-2003	Amended following review.

Query specification for new GP contract indicators

Explanatory notes

1. Clinical codes quoted are from the October 1st 2003 interim release of Read codes (versions 0 and 2) and clinical terms version 3 (CTV3). Where all child codes are to be included in the extraction a % character is appended to the code stem (*e.g.* F25%). Where the specific code alone is to be extracted trailing spaces are omitted (*e.g.* F25). Code ranges (Read v2 and v0) are specified as start and end codes separated by a hyphen (*e.g.* F2-F46z). This is in accordance with the HQL query convention.
2. In specifying criteria to identify groups of patients, target conditions are expressed as explicit Read code clusters. No attempt has been made to employ proxy or implicit diagnoses.
3. Cross references to the indicator guidance document are included. These are in the form (CHD7), (CHD7a); references with no suffix indicate final numerator queries and references with an alphabetic suffix indicate intermediate and denominator queries.
4. An appendix detailing numerator and denominator queries for each indicator will be produced when final sign-off to this specification is achieved.
5. The specification still requires final QA of detailed content, but largely reflects the tabular and textual indicator specification.
6. Codes are listed as discrete clusters. Unless otherwise indicated the presence in a patient record of any code listed in the cluster will qualify that record for inclusion in or exclusion from (determined by the 'Code criterion' specified) the output of the relevant query.
7. The specification does not include exception codes other than those that can be used to determine whether particular drug interventions are indicated or otherwise (*e.g.* drug allergies and intolerances). Handling of other exception codes in indicator extracts is specified in separate documents.

Query specifications

1. Base population. Agesex breakdown of practice population.

a) Query 1a: Standard 5y agesex breakdown

2. Subsets to support subsequent analyses: Coronary heart disease

a) Query 2a: Patients with coronary heart disease (CHD 1)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	G3-G3401 G342-G366 G38 – G3z	G4-G451 G45Z-G4Z	XE2uV G33..% X200B% X200C% X200E% XaINF G3110 G3400 G3401 X2006 XSDT6	<i>Ever</i>

b) Patients with newly diagnosed angina (CHD 1a)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	G311% G33% G34 G340% G342-G34z G3y G3z	G4 G42% G44% G45-G451 G45Z G47 G4Z	XE2uV G33..% X200B% X200C% G3400 G3401 X2006 XSDT6	<i>Earliest after 01/04/2003</i>

3. Indicator analyses: Coronary heart disease

a) The percentage of patients with newly diagnosed angina (diagnosed after 01/04/03) who are referred for exercise testing and/or specialist assessment.

1) Query 3a/1: Patients with newly diagnosed angina referred for exercise testing: (from output of query 2b) (CHD 2)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	G311% G33% G34 G340% G342-G34z G3y G3z	G4 G42% G44% G45-G451 G45Z G47 G4Z	XE2uV G33..% X200B% X200C% G3400 G3401 X2006 XSDT6	<i>Earliest first or new after 1.4.03</i>
<i>Included</i>	3213% 33B9% 8H44 8HRA 8HVJ 9N0f 8HTJ	3213 33B9 8H44 8HRA 8HVJ 9N0f 8HTJ	33B9.% 8H44. XaCFM XaBTR% XaFs5 XaFs4	<i>Within 3 months prior to or 12 months subsequent to diagnosis</i>

b) The percentage of patients with coronary heart disease, whose notes record smoking status in the past 15 months except those who have never smoked where smoking status should be recorded at least once since diagnosis.

1) Query 3b/1: Never smoked: (from output of query 2a) (CHD 3a)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	G3-G3401 G342-G366 G38 – G3z	G4-G451 G45Z-G4Z	XE2uV G33..% X200B% X200C% X200E% XaINF G3110 G3400 G3401 X2006 XSDT6	<i>Earliest</i>
<i>Included</i>	1371	1371	XE0oh	<i>Latest of 137% (Ub0oo%) since diagnosis</i>

2) Query 3b/2: Smoking history in last 15 months: (from output of query 2a)
(CHD 3b)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	137-137D 137F-137g	137-137D 137F-137g	Ub0oo% (excluding XE0oo, XaIQi%)	<i>In last 15/12</i>

3) Query 3b/3: Combined output (logical OR) of queries 3b/1 and 3b/2 (CHD 3)

c) The percentage of patients with coronary heart disease who smoke, whose notes contain a record that smoking cessation advice has been offered within the last 15 months.

1) Query 3c/1: Patients with CHD who smoke: (from output of query 2a)
(CHD 4a)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	137 1372-1376 137C-137D 137G-137H 137J 137M 137P-137R 137V 137X-137g	137 1372-1376 137C-137D 137G-137H 137J 137M 137P-137R 137V 137X-137g	137R.% XE0og% 137C. 137G. 137M. XaIIu XaItg	<i>Latest of 137% (Ub0oo%)</i>

2) Query 3c/2: Patients who smoke receiving smoking cessation advice or referral in 15/12: (from output of query 3c/1 (CHD 4)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	6791 67A3 8B2B 8CAL 8HTK 13p% 900% 9N4M 9N2k 8H7i	6791 67A3 8B2B 8CAL 8HTK 13p% 900% 9N4M 9N2k 8H7i	6791. 8HTK. XaFw9 Xa1dC% XaIQn XaFst XaEKU XaIQi% XaBUG% XaIye	<i>In last 15/12</i>

d) The percentage of patients with coronary heart disease, whose notes have a record of blood pressure in the previous 15 months

1) Query 3d/1: (From output of query 2a) (CHD 5)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	246 2461-246G 246J 246N-246Z	246 2461-246G 246J 246N-246Z	X773t% (excluding XaI9f, XaI9g) 246..% (excluding 2460., 246H., 246I., 246K., 246L., 246M.)	<i>In last 15/12</i>

e) The percentage of patients with coronary heart disease, in whom the last blood pressure reading (measured in the last 15 months) is 150/90 or less.

1) Query 3e/1: Patients whose latest systolic is 150 or less: (From output of query 2a) (CHD 6a)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Excluded</i>	8BL0	8BL0	XaJ5h	<i>In last 15 /12</i>
<i>Included</i>	246 2461-246G 246J 246N-246Z & value1 <151	246 2461-246G 246J 246N-246Z & value1 <151	X773t% (excluding XaI9f, XaI9g) 246..% (excluding 2460., 246H., 246I., 246K., 246L., 246M.) & value 1 <151	<i>Latest in last 15/12</i>

2) Query 3e/2: Patients whose latest diastolic is 90 or less: (From output of query 2a) (CHD 6b)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Excluded</i>	8BL0	8BL0	XaJ5h	<i>In last 15/12</i>
<i>Included</i>	246 2461-246G 246J 246N-246Z & value2 <91	246 2461-246G 246J 246N-246Z & value2 <91	X773t% (excluding XaI9f, XaI9g) 246..% (excluding 2460., 246H., 246I., 246K., 246L., 246M.) & value 2 <91	<i>Latest in last 15/12</i>

3) Query 3e/3: Combined output (logical AND) of queries 3e/1 and 3e/2 (CHD 6)

f) The percentage of patients with coronary heart disease, whose notes have a record of total cholesterol in the previous 15 months

1) Query 3f/1: (from output of query 2a) (CHD 7)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	44OE 44P-44P4 44PH	44OE 44P-44P4 44PH	XaIRd XE2eD% XaFs9	<i>In last 15/12</i>

g) The percentage of patients with coronary heart disease, whose last measured total cholesterol (measured in last 15 months) is 5 mmol/l or less.

1) Query 3g/1: (from output of query 2a) (CHD 8)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Excluded</i>	8BL1	8BL1	XaJ5i	<i>In last 15/12</i>
<i>Included</i>	44OE 44P-44P4 44PH & value1 < 5.1	44OE 44P-44P4 44PH & value1 < 5.1	XaIRd XE2eD% XaFs9 & value 1 < 5.1	<i>Latest in last 15/12</i>

h) The percentage of patients with coronary heart disease with a record in the last 15 months that aspirin, an alternative anti-platelet therapy, or an anti-coagulant is being taken (unless a contraindication or side effects are recorded).

1) Query 3h/1: Patients with no contraindication / refusal / side effect recorded (from the output of query 2a) (CHD 9a)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Excluded</i>	14LK ZV148 U6051 TJ53	14LK Q545	XaIpk Xa5FM% XE22E% Xa5dp% U6051	<i>Ever</i>
	8I24 8I38 8I66 8I70	8I24 8I38 8I66 8I70	XaDvH XaFsE XaIii XaJ5a	<i>In the last 15 months</i>
	14LP TJ421 U6042 ZV14A	14LP Q565	XaJ60 TJ421 U6042 XaJ8B Xa5yS	<i>Ever</i>
	8I25 8I3E 8I65 8I71	8I25 8I3E 8I65 8I71	XaFsz XaIIn XaIIh XaJ5b	<i>In the last 15 months</i>
	14LQ U6048 ZV14B	14LQ Q566	XaJ8V XaJ3e XaJ5v	<i>Ever</i>
	8I2K 8I3R 8I6B 8I72	8I2K 8I3R 8I6B 8I72	XaJ6Y XaJ6Z XaJ5l XaJ5c	<i>In the last 15 months</i>

2) Query 3h/2: Patients prescribed aspirin, clopidogrel or warfarin or with a record of anti-platelet therapy in the last 15/12 (from the output of 3h/1) (CHD 9)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	67I8 8B63 8B3T	67I8 8B63 8B3T	XaFsi XaF7N XE0hr%	<i>In last 15/12</i>
	bu2% di1% j11% blm% bu4%	bu2% di1% j11% blm% bu4%	bu2..% x04tL% blm..% bu4..%	<i>In last 6/12</i>
	bs1%	bs1%	x01O4%	
	bu5%	bu5%	bu5..%	

i) The percentage of patients with coronary heart disease who are currently treated with a beta blocker (unless a contraindication or side effects are recorded)

1) Query 3i/1: Patients with CHD and no record of refusal / side effect / contraindication to beta blockers: (from output of query 2a) (CHD 10a)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Excluded</i>	14LL TJC6% U60B7 ZV14C	14LL Q562	XaJ5x Xa5jo% Xa5LL% TJC6.% U60B7 XaJ8U	<i>Ever</i>
	8I26 8I36 8I62 8I73	8I26 8I36 8I62 8I73	XaFt0 XaFsB XaFvr XaJ5d	<i>In last 15/12</i>

2) Query 3i/2: Patients receiving beta blockers: (from output of 3i/1) (CHD 10)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	bd%	bd%	bd...%	<i>In last 6/12</i>

j) The percentage of patients with a history of myocardial infarction (diagnosed after 1st April 2003) who are currently treated with an ACE inhibitor.

1) Query 3j/1: Patients with MI diagnosed after 01.04.2003: (from output of query 2a) (CHD 11a)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	G30% G35% G38%	G41 G46 G48 G49	XaIf1 XE0Uh% X200a G35..% XaD2b%	<i>First or new after 01.04.2003</i>

2) Query 3j/2: ACE inhibitor or A2 antagonist contraindicated: (from output of query 3j/1) (CHD 11b)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Excluded</i>	14LM U60C4 ZV14D	14LM Q564	XaJ5y XaJ8Y Xa60w% Xa5cT% XaIrq U60C4	<i>Ever</i>
	8I28 8I3D 8I64 8I74	8I28 8I3D 8I64 8I74	XaG2W XaIIm XaIIf XaJ5e	<i>In last 15/12</i>
	14LN U60CB ZV14E	14LN Q567	XaJ5z XaJ8o XaIzK XaJ8W	<i>Ever</i>
	8I2H 8I3P 8I6C 8I75	8I2H 8I3P 8I6C 8I75	XaInW XaIyw XaJ5m XaJ5f	<i>In last 15/12</i>

3) Query 3j/3: Patients prescribed ACE inhibitor or A2 antagonist: (from output of query 3j/2) (CHD 11)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	bi% bA% bk6%	bi% bA% bk6%	bi...% bA...%	<i>In last 6/12</i>
	bk3-bk5 bk7-bk9 bkB	bk3-bk5 bk7-bk9 bkB	x03j2% x03ls%	

- k) The percentage of patients with coronary heart disease who have a record of influenza vaccination in the preceding 1st September to 31st March. (CHD 12)

1) Query 3k/1: Patients without contra-indication (from output of query 2a)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Excluded</i>	14LJ U60K4 ZV14F	14LJ Q5AB	XaIAA XaJ7u XaJ8X Xa5um% Xa5WJ%	<i>Ever</i>
	8I2F 8I6D 68NE 9OX5	8I2F 8I6D 68NE 9OX5	XaIBI XaIOT 68NE. XaJ5n	<i>In last 15/12</i>

2) Query 3k/2: (from output of query 3k/1)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	n47% 65E ZV048	n47% 65E	n47..% 65E.. ZV048	<i>Between 01.09.cccc and 31.03.cccc</i>

l) The practice has an accurate register of patients with left ventricular dysfunction.

1) Query 3l/1: (from output of query 2a) (LVD 1)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	G58% G5yy9 G5yyA G1yz1	G6A% G6E	G58..% XaIIq XaItG	<i>Ever</i>

m) The percentage of patients with a diagnosis of left ventricular dysfunction (diagnosed after 1/4/03) which has been confirmed by an echocardiogram.

1) Query 3m/1: (from output of query 3l/1) (LVD 2)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	G58% G5yy9 G5yyA G1yz1	G6A% G6E	G58..% XaIIq XaItG	<i>Earliest after 1.4.03</i>
<i>Included</i>	5853 58531 585f 585g 33BD 8HQ7 R1320 R1322	5853 585f 585g 33BD 8HQ7 RD20	X77c1 X77c2 X77c4 X77c5 X77c6 X77c7 X77c8 X77c9 XaJ98 XaJ99 58531 XaIx9 XaION R1320 R1322	<i>Within 3/12 prior or 12/12 subsequent to diagnosis</i>

n) The percentage of patients with a diagnosis of CHD and left ventricular dysfunction who are currently treated with ACE inhibitors (or A2 antagonists).

1) Query 3n/1: Patients with Ace inhibitor / A2 antagonist contraindicated: (from output of query 3l/1) (LVD 3a)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Excluded</i>	14LM U60C4 ZV14D	14LM Q564	XaJ5y XaJ8Y Xa60w% Xa5cT% XaIrq U60C4	<i>Ever</i>
	8I28 8I3D 8I64 8I74	8I28 8I3D 8I64 8I74	XaG2W XaIIm XaIIf XaJ5e	<i>In last 15/12</i>
	14LN U60CB ZV14E	14LN Q567	XaJ5z XaJ8o XaIzK XaJ8W	<i>Ever</i>
	8I2H 8I3P 8I6C 8I75	8I2H 8I3P 8I6C 8I75	XaInW XaIyw XaJ5m XaJ5f	<i>In last 15/12</i>

2) Query 3n/2: The percentage of patients with a diagnosis of left ventricular dysfunction who are currently treated with ACE inhibitors (or A2 antagonists). (from output of query 3nl/1) (LVD 3)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	bi% bA% bk6%	bi% bA% bk6%	bi...% bA...%	<i>In last 6/12</i>
	bk3-bk5 bk7-bk9 bkB	bk3-bk5 bk7-bk9 bkB	x03j2% x03ls%	

4. Subsets to support subsequent analyses: Stroke and transient ischaemic attacks (TIA)

a) Query 4a: Patients with stroke and transient ischaemic attacks: (**STROKE 1**)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	G61% G63y0-G63y1 G64% G66% G6760 G6W G6X	G712 G73% G75	X00D1%	<i>Ever</i>
	G65-G654 G65y-G65zz	G74	XE0VK% excluding X00DW	

5. Indicator analyses: Stroke and transient ischaemic attacks:

a) The percentage of patients with new presumptive stroke (presenting after 01/04/03) who have been referred for confirmation of the diagnosis by CT or MRI scan.

1) Query 5a/1: (from output of query 4a) (**STROKE 2**)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	G61% G63y0-G63y1 G64% G66% G6760 G6W G6X	G712 G73% G75	X00D1%	<i>First or new after 01.04.2003</i>
<i>Included</i>	567-5673 569-5693 5675 567C 5694 8HQ3 8HQ4	567-5673 569-5693 5675 567C 5694 8HQ3 8HQ4	5671. 5672. 5673. 5691. 5692. 5693. XaJEi XaJEh X70oK% 5675. 8HQ3. 8HQ4.	<i>Within 3 months prior to or 12 months subsequent to diagnosis</i>

b) The percentage of patients with TIA or stroke, who have a record of smoking status in the last 15 months, except those who have never smoked where smoking status should be recorded at least once since diagnosis

1) Query 5b/1: Never smoked (from output of query 4a) (STROKE 3a)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	G61% G63y0-G63y1 G64% G66% G6760 G6W G6X	G712 G73% G75	X00D1%	<i>Earliest</i>
	G65-G654 G65y-G65zz	G74	XE0VK% (excluding X00DW)	
<i>Included</i>	1371	1371	XE0oh	<i>Latest of 137% (Ub0oo%) since diagnosis</i>

2) Query 5b/2: Smoking history in last 15 months: (from output of query 4a) (STROKE 3b)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	137-137D 137F-137g	137-137D 137F-137g	Ub0oo% (excluding XE0oo, XaIQi%)	<i>In last 15/12</i>

3) Query 5b/3: Combined output (logical OR) of queries 5b/1 and 5b/2 (STROKE 3)

- c) The percentage of patients with a history of TIA or stroke who smoke and whose notes contain a record that smoking cessation advice has been offered in the last 15 months.

- 1) Query 5c/1: Patients with TIA or stroke who smoke: (from output of query 4a) **(STROKE 4a)**

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	137 1372-1376 137C-137D 137G-137H 137J 137M 137P-137R 137V 137X-137g	137 1372-1376 137C-137D 137G-137H 137J 137M 137P-137R 137V 137X-137g	137R.% XE0og% 137C. 137G. 137M. XaIiu XaItg	<i>Latest of 137% (Ub0oo%)</i>

- 2) Query 5c/2: Patients who smoke receiving smoking cessation advice or referral in 15/12: (from output of query 5c/1) **(STROKE 4)**

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	6791 67A3 8B2B 8CAL 8HTK 13p% 900% 9N4M 9N2k 8H7i	6791 67A3 8B2B 8CAL 8HTK 13p% 900% 9N4M 9N2k 8H7i	6791. 8HTK. XaFw9 Xa1dC% XaIQn XaFst XaEku XaIQi% XaBUG% XaIye	<i>In last 15/12</i>

- d) The percentage of patients with TIA or stroke, who have a record of blood pressure in the notes in the preceding 15 months.

- 1) Query 5d/1: (From output of query 4a) **(STROKE 5)**

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	246 2461-246G 246J 246N-246Z	246 2461-246G 246J 246N-246Z	X773t% (excluding XaI9f, XaI9g) 246..% (excluding 2460., 246H., 246I., 246K., 246L., 246M.)	<i>In last 15/12</i>

e) The percentage of patients with a history of TIA or stroke, in whom the last blood pressure reading (measured in last 15 months) is 150/90 or less.

1) Query 5e/1: Patients whose latest systolic is 150 or less: (From output of query 4a) (**STROKE 6a**)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Excluded</i>	8BL0	8BL0	XaJ5h	<i>In last 15 /12</i>
<i>Included</i>	246 2461-246G 246J 246N-246Z & value 1 <151	246 2461-246G 246J 246N-246Z & value 1 <151	X773t% (excluding XaI9f, XaI9g) 246..% (excluding 2460., 246H., 246I., 246K., 246L., 246M.) & value 1 <151	<i>Latest in last 15/12</i>

2) Query 5e/2: Patients whose latest diastolic is 90 or less: (From output of query 4a) (**STROKE 6b**)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Excluded</i>	8BL0	8BL0	XaJ5h	<i>In last 15 /12</i>
<i>Included</i>	246 2461-246G 246J 246N-246Z & value 2 <91	246 2461-246G 246J 246N-246Z & value 2 <91	X773t% (excluding XaI9f, XaI9g) 246..% (excluding 2460., 246H., 246I., 246K., 246L., 246M.) & value 2 <91	<i>Latest in last 15/12</i>

3) Query 5e/3: Combined output (logical AND) of queries 5e/1 and 5e/2 (**STROKE 6**)

f) The percentage of patients with TIA or stroke, who have a record of total cholesterol in the last 15 months.

1) Query 5f/1: (from output of query 4a) (**STROKE 7**)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	44OE 44P-44P4 44PH	44OE 44P-44P4 44PH	XaIRd XE2eD% XaFs9	<i>In last 15/12</i>

g) The percentage of patients with TIA or stroke, whose last measured total cholesterol (measured in last 15 months) is 5 mmol/l or less.

1) Query 5g/1: (from output of query 4a) (**STROKE 8**)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Excluded</i>	8BL1	8BL1	XaJ5i	<i>In last 15/12</i>
<i>Included</i>	44OE 44P-44P4 44PH & value 1 < 5.1	44OE 44P-44P4 44PH & value 1 < 5.1	XaIRd XE2eD% XaFs9 & value 1 < 5.1	<i>Latest in last 15/12</i>

h) The percentage of patients with a stroke shown to be non-haemorrhagic, or a history of TIA, who have a record that aspirin, an alternative anti-platelet therapy, or an anti-coagulant is being taken (unless a contraindication or side effects are recorded).

1) Query 5h/1: Patients with a stroke shown to be non-haemorrhagic, or a history of TIA with no contraindication / refusal / side effect recorded (from output of query 4a) (**STROKE 9a**)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	G63y0-G63y1 G64% G6760 G6W G6X	G73%	Xa0kZ% G640.% X00D3	<i>Ever</i>
	G65-G654 G65y-G65zz	G74	XE0VK% (excluding X00DW)	
<i>Excluded</i>	14LK ZV148 U6051 TJ53	14LK Q545	XaIpk Xa5FM% XE22E% Xa5dp% U6051	<i>Ever</i>
	8I24 8I38 8I66 8I70	8I24 8I38 8I66 8I70	XaDvH XaFsE XaIii XaJ5a	<i>In the last 15 months</i>
	14LP TJ421 U6042 ZV14A	14LP Q565	XaJ60 TJ421 U6042 XaJ8B Xa5yS	<i>Ever</i>
	8I25 8I3E 8I65 8I71	8I25 8I3E 8I65 8I71	XaFsz XaIIn XaIIh XaJ5b	<i>In the last 15 months</i>
	14LQ U6048 ZV14B	14LQ Q566	XaJ8V XaJ3e XaJ5v	<i>Ever</i>
	8I2K 8I3R 8I6B 8I72	8I2K 8I3R 8I6B 8I72	XaJ6Y XaJ6Z XaJ5l XaJ5c	<i>In the last 15 months</i>

- 2) Query 5h/2: Patients prescribed aspirin, clopidogrel or warfarin in the last 6/12 (from the output of 5h/1) (STROKE 9b)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	bu2% di1% j11% blm% bu4%	bu2% di1% j11% blm% bu4%	bu2..% x04tL% blm..% bu4..%	<i>In last 6/12</i>
	bs1%	bs1%	x01O4%	
	bu5%	bu5%	bu5..%	

- 3) Query 3h/3: Patients recorded as taking OTC aspirin or having been advised to take aspirin in the previous 15/12 (from the output of 5h/1) (STROKE 9c)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	67I8 8B63 8B3T	67I8 8B63 8B3T	XaFsi XaF7N XE0hr%	<i>In last 15/12</i>

- 4) Query 5h/4: Combined output (logical OR) of queries 5h/2 and 5h/3 (STROKE 9)

i) The percentage of patients with TIA or stroke who have had influenza immunisation in the preceding 1st September to 31st March

1) Query 5i/1: Patients without contra-indication (from output of query 4a)
(STROKE 10a)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Excluded</i>	14LJ U60K4 ZV14F	14LJ Q5AB	XaIAA XaJ7u XaJ8X Xa5um% Xa5WJ%	<i>Ever</i>
	8I2F 8I6D 68NE 9OX5	8I2F 8I6D 68NE 9OX5	XaIBI XaIOT 68NE. XaJ5n	<i>In last 15/12</i>

2) Query 5i/2: (from output of query 5i/1) (STROKE 10)

Code criteria	Version 2	CTV3	4-character	Time criteria
<i>Included</i>	n47% 65E ZV048	n47% 65E	n47..% 65E.. ZV048	<i>Between 01.09.cccc and 31.03.cccc</i>

6. Subsets to support subsequent analyses: Established hypertension

a) Query 6a: Patients with established hypertension (BP 1)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	G2 G20% G24-G2z	G3 G31 G35-G3Z	XE0Uc% G24..% G2...% G202. Xa3fQ	<i>Ever</i>

7. Indicator analyses: Established hypertension

a) The percentage of patients with hypertension, whose notes record smoking status at least once

1) Query 7a/1: (from output of query 6a) (BP 2)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	137-137D 137F-137g	137-137D 137F-137g	Ub0oo% (excluding XE0oo, XaIQi%)	<i>Latest of 137% (Ub0oo%) since diagnosis</i>

b) The percentage of patients with hypertension who smoke, whose notes contain a record that smoking cessation advice has been offered at least once

1) Query 7b/1: Patients with hypertension who smoke: (from output of query 6a) (BP 3a)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	137 1372-1376 137C-137D 137G-137H 137J 137M 137P-137R 137V 137X-137g	137 1372-1376 137C-137D 137G-137H 137J 137M 137P-137R 137V 137X-137g	137R.% XE0og% 137C. 137G. 137M. XaIIu XaItg	<i>Latest of 137% (Ub0oo%)</i>

2) Query 7b/2: Patients who smoke receiving smoking cessation advice or referral ever: (from output of query 7b/1 (BP 3))

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	6791 67A3 8B2B 8CAL 8HTK 13p% 900% 9N4M 9N2k 8H7i	6791 67A3 8B2B 8CAL 8HTK 13p% 900% 9N4M 9N2k 8H7i	6791. 8HTK. XaFw9 Xa1dC% XaIQn XaFst XaEKU XaIQi% XaBUG% XaIye	<i>Ever</i>

c) The percentage of patients with hypertension in which there is a record of the blood pressure in the past 9 months.

1) Query 7c/1: (from output of query 6a) (BP 4)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	246 2461-246G 246J 246N-246Z	246 2461-246G 246J 246N-246Z	X773t% (excluding XaI9f, XaI9g) 246..% (excluding 2460., 246H., 246I., 246K., 246L., 246M.)	<i>In last 9/12</i>

d) The percentage of patients with hypertension in whom the last blood pressure (measured in last 9 months) is 150/90 or less.

1) Query 7d/1: Patients whose latest systolic is 150 or less: (From output of query 6a) (BP 5a)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Excluded</i>	8BL0	8BL0	XaJ5h	<i>In last 15/12</i>
<i>Included</i>	246 2461-246G 246J 246N-246Z & value 1 <151	246 2461-246G 246J 246N-246Z & value 1 <151	X773t% (excluding XaI9f, XaI9g) 246..% (excluding 2460., 246H., 246I., 246K., 246L., 246M.) & value 1 <151	<i>Latest in last 9/12</i>

2) Query 7d/2: Patients whose latest diastolic is 90 or less: (From output of query 6a) (BP 5b)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Excluded</i>	8BL0	8BL0	XaJ5h	<i>In last 15/12</i>
<i>Included</i>	246 2461-246G 246J 246N-246Z & value 2 <91	246 2461-246G 246J 246N-246Z & value 2 <91	X773t% (excluding XaI9f, XaI9g) 246..% (excluding 2460., 246H., 246I., 246K., 246L., 246M.) & value 2 <91	<i>Latest in last 9/12</i>

3) Query 7d/3: Combined output (logical AND) of queries 7d/1 and 7d/2 (BP 5)

8. Subsets to support subsequent analyses: Patients with diabetes mellitus aged 17 and over.

a) Query 8a: Patients with diabetes mellitus aged 17 and over. (DM 1)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>				<i>Age > 16</i>
<i>Included</i>	C10%	C2%	X40J4% X40J5% X40J6% X40J7% X40JA% X40JG%	<i>Ever</i>

9. Indicator analyses: Diabetes mellitus

a) The percentage of patients with diabetes whose notes record BMI in the previous 15 months

1) Query 9a/1 (From output of query 8a) (DM 2)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	22K%	22K%	22K..	<i>In last 15/12</i>

b) The percentage of patients with diabetes in whom there is a record of smoking status in the previous 15 months except those who have never smoked where smoking status should be recorded at least once.

1) Query 9b/1: Never smoked (from output of query 8a) (DM 3a)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	1371	1371	XE0oh	<i>Latest of 137% (Ub000%) since diagnosis</i>

2) Query 9b/2: Smoking history in last 15 months: (from output of query 8a)
(DM 3b)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	137-137D 137F-137g	137-137D 137F-137g	Ub0oo% (excluding XE0oo, XaIQi%)	<i>In last 15/12</i>

3) Query 9b/3: Combined output (logical OR) of queries 9b/1 and 9b/2 (DM 3)

c) The percentage of patients with diabetes who smoke and whose notes contain a record that smoking cessation advice has been offered in the last 15 months.

1) Query 9c/1: Patients with diabetes who smoke: (from output of query 8a)
(DM 4a)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	137 1372-1376 137C-137D 137G-137H 137J 137M 137P-137R 137V 137X-137g	137 1372-1376 137C-137D 137G-137H 137J 137M 137P-137R 137V 137X-137g	137R.% XE0og% 137C. 137G. 137M. XaIIu XaItg	<i>Latest of 137% (Ub0oo%)</i>

2) Query 9c/2: Patients who smoke receiving smoking cessation advice or referral in 15/12: (from output of query 9c/1 (DM 4)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	6791 67A3 8B2B 8CAL 8HTK 13p% 900% 9N4M 9N2k 8H7i	6791 67A3 8B2B 8CAL 8HTK 13p% 900% 9N4M 9N2k 8H7i	6791. 8HTK. XaFw9 Xa1dC% XaIQn XaFst XaEku XaIQi% XaBUG% XaIye	<i>In last 15/12</i>

- d) The percentage of diabetic patients who have a record of HbA1c or equivalent in the previous 15 months.

1) Query 9d/1: (from output of query 8a) (DM 5)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	42W% 42c% 44TB 44TC	42W% 42c% 44TB 44TC	X80U3% X772q% XaBLm% XE24t% XaCES%	<i>In last 15/12</i>
	44TD 44Z1%	44TD 44Z1	X772n%	

- e) The percentage of patients with diabetes in whom the last HbA1c is 7.4 or less (or equivalent test / reference range depending on local laboratory) in last 15 months.

1) Query 9e/1: (from output of query 8a) (DM 6)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Excluded</i>	8BL2	8BL2	XaJ5j	In last 15/12
<i>Included</i>	42W% 42c% 44TB 44TC and value1 <7.5	42W% 42c% 44TB 44TC and value1 <7.5	X80U3% X772q% XaBLm% XE24t% XaCES% and value1 <7.5	<i>Latest in last 15/12</i>
	44TD 44Z1% and value1 < 300	44TD 44Z1% and value1 < 300	X772n% and value1 < 300	

f) The percentage of patients with diabetes in whom the last HbA1C is 10 or less (or equivalent test / reference range depending on local laboratory) in last 15 months

1) Query 9f/1: (from output of query 8a) (DM 7)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Excluded</i>	8BL2	8BL2	XaJ5j	In last 15/12
<i>Included</i>	42W% 42c% 44TB 44TC and value1 <10.1	42W% 42c% 44TB 44TC and value1 <10.1	X80U3% X772q% XaBLm% XE24t% XaCES% and value1 <10.1	<i>Latest in last 15/12</i>
	44TD 44Z1% and value1 < 401	44TD 44Z1% and value1 < 401	X772n% and value1 < 401	

g) The percentage of patients with diabetes who have a record of retinal screening in the previous 15 months

1) Query 9g/1: (from output of query 8a) (DM 8)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	2BB% 3128% 3129 312E - 312G 58C1 68A7 68A8 66AD 8H7n 9N1v 9N2U 9N2e 9N2f	2BB% 3128 3129 312E - 312G 58C1 68A7 68A8 66AD 8H7n 9N1v 9N2U 9N2e 9N2f	2BB.%. 3129. 58C1. XE1Oe% XaEJQ XaIij 66AD. XaIPU XaIPm Ua1qM% 9N2U 9N2e 9N2f	<i>Latest in last 15/12</i>

h) The percentage of patients with diabetes with a record of presence or absence of peripheral pulses in the previous 15 months.

1) Query 9h/1: (from output of query 8a) (DM 9)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	24E1 - 24ED 24F1 - 24FD 2G5E - 2G5L 585V - 585Y 585a - 585e	24E1 - 24ED 24F1 - 24FD 2G5E - 2G5L 585V - 585Y 585a - 585e	XE1hO% (excluding XE1hO, 24EZ., XM1Mj, XM1Mk, XM1Ml, XM1Mm) XE1hP% (excluding XE1hP, 24FZ., XM1Mo, XM1Mp, XM1Mq, XM1Mr) XE1R7% (excluding XE1R7, XaIfB, XaIuj, XaIuk) 2G5..% (excluding 2G50., 2G51., 2G52., 2G53., XM1Wt, XaBLd, XaBLE, XaBLf, XaBLg)	<i>Latest in last 15/12</i>

i) The percentage of patients with diabetes with a record of neuropathy testing in the previous 15 months.

1) Query 9i/1: (from output of query 8a) (DM 10)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	311A 29B7-29BC 29B1-29B3 29H1 – 29HB 2G5E - 2G5L	311A 29B7-29BC 29B1-29B3 29H1 – 29HB 2G5E - 2G5L	XaIRE XaIRF XaIeD XaIeE XaIeF XaIeG 29B1. 29B21 29B20 29B3. 29H..% (excluding 29H., 29HZ.) 2G5..% (excluding 2G50., 2G51., 2G52. 2G53., XM1Wt, XaBLd, XaBLE)	<i>Latest in last 15/12</i>

j) The percentage of patients with diabetes who have a record of the blood pressure in the past 15 months

1) Query 9j/1: (from output of query 8a) (DM 11)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	246 2461-246G 246J 246N-246Z	246 2461-246G 246J 246N-246Z	X773t% (excluding XaI9f, XaI9g) 246..% (excluding 2460., 246H., 246I., 246K., 246L., 246M.)	<i>Latest in last 15/12</i>

k) The percentage of patients with diabetes in whom the last blood pressure is 145/85 or less

1) Query 9k/1: Patients whose latest systolic is 145 or less: (From output of query 8a) (DM 12a)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Excluded</i>	8BL0	8BL0	XaJ5h	<i>In last 15 /12</i>
<i>Included</i>	246 2461-246G 246J 246N-246Z & value 1 <146	246 2461-246G 246J 246N-246Z & value 1 <146	X773t% (excluding XaI9f, XaI9g) 246..% (excluding 2460., 246H., 246I., 246K., 246L., 246M.) & value 1 <146	<i>Latest in last 15/12</i>

- 2) Query 9k/2: Patients whose latest diastolic is 85 or less: (From output of query 8a) (DM 12b)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Excluded</i>	8BL0	8BL0	XaJ5h	<i>In last 15 /12</i>
<i>Included</i>	246 2461-246G 246J 246N-246Z & value 2 <86	246 2461-246G 246J 246N-246Z & value 2 <86	X773t% (excluding XaI9f, XaI9g) 246..% (excluding 2460., 246H., 246I., 246K., 246L., 246M.) & value 2 <86	<i>Latest in last 15/12</i>

- 3) Query 9k/3: Combined output (logical AND) of queries 9k/1 and 9k/2 (DM 12)

- l) The percentage of patients with diabetes who have a record of micro-albuminuria testing in the previous 15 months (exception reporting for patients with proteinuria)

- 1) Query 9l/1: Patients with a record of proteinuria. (From output of query 8a) (DM 13a)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Excluded</i>	R110-R1100 R110z C10EK C10FL K190X Kyu5G	RB2-RB20 RB2Z C261	R110. R1100 R110z X30Q1 X30Q2 K190X Kyu5G XaIz0 XaIzM XaIzQ	<i>Ever</i>

2) Query 9l/2: Patients with a record of micro-albuminuria testing. (From output of Query 9l/1) (DM 13)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	467A 46W% 46TC 46N5 - 46N7	467A 46W% 46TC 46N5 - 46N7	467A X77YO XaE6p X773Y XE2n3 46W0. 46W1. XaIz7 XaEMU XaENw	<i>In last 15/12</i>

m) The percentage of patients with diabetes who have a record of serum creatinine testing in the previous 15 months

1) Query 9m/1: (From output of query 8a) (DM 14)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	44J3% 44JC 44JD 44JF	44J3 44JC 44JD 44JF	X771Q XE2q5% XaETQ XaERX	<i>In last 15/12</i>

n) The percentage of patients with diabetes with proteinuria or microalbuminuria who are treated with ACE inhibitors (or A2 antagonists).

1) Query 9n/1: Patients with recorded proteinuria or microalbuminuria (From output of query 8a)

(DM 15a)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	R110-R1100 R110z C10EK C10FL K190X Kyu5G	RB2-RB20 RB2Z C261	R110. R1100 R110z X30Q1 X30Q2 K190X Kyu5G XaIz0 XaIzM XaIzQ	<i>Ever</i>
	R1103 C10EL C10FM	C260	R1103 XaE6p XaE6q X30KI% XaIyz XaIzN XaIzR	

2) Query 9n/2 Patients with Ace Inhibitor / A2 antagonist contraindicated. (From output of query 9n/1) (DM 15b)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Excluded</i>	14LM U60C4 ZV14D	14LM Q564	XaJ5y XaJ8Y Xa60w% Xa5cT% XaIrq U60C4	<i>Ever</i>
	8I28 8I3D 8I64 8I74	8I28 8I3D 8I64 8I74	XaG2W XaIIm XaIIf XaJ5e	<i>In last 15/12</i>
	14LN U60CB ZV14E	14LN Q567	XaJ5z XaJ8o XaIzK XaJ8W	<i>Ever</i>
	8I2H 8I3P 8I6C 8I75	8I2H 8I3P 8I6C 8I75	XaInW XaIyw XaJ5m XaJ5f	<i>In last 15/12</i>

3) Patients treated with ACE inhibitors (or A2 antagonists). (From output of query 9n/2) (DM 15)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	bi% bA% bk6%	bi% bA% bk6%	bi...% bA...%	<i>In last 6/12</i>
	bk3-bk5 bk7-bk9 bkB	bk3-bk5 bk7-bk9 bkB	x03j2% x03ls%	

o) The percentage of patients with diabetes who have a record of total cholesterol in the previous 15 months

1) Query 9o/2: (from output of query 8a) (DM 16)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	44OE 44P-44P4 44PH	44OE 44P-44P4 44PH	XaIRd XE2eD% XaFs9	<i>In last 15/12</i>

p) The percentage of patients with diabetes, whose last measured total cholesterol within previous 15 months is 5 mmol/l or less

1) Query 9p/1: (from output of query 8a) (DM 17)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Excluded</i>	8BL1	8BL1	XaJ5i	<i>In last 15/12</i>
<i>Included</i>	44OE 44P-44P4 44PH & value 1 < 5.1	44OE 44P-44P4 44PH & value 1 < 5.1	XaIRd XE2eD% XaFs9 & value 1 < 5.1	<i>Latest in last 15/12</i>

q) The percentage of patients with diabetes who have a record of influenza vaccination in the preceding 1st September to 31st March

1) Query 9q/1: Patients without contra-indication (from output of query 8a)
(DM 18a)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Excluded</i>	14LJ U60K4 ZV14F	14LJ Q5AB	XaIAA XaJ7u XaJ8X Xa5um% Xa5WJ%	<i>Ever</i>
	8I2F 8I6D 68NE 9OX5	8I2F 8I6D 68NE 9OX5	XaIBI XaIOT 68NE. XaJ5n	<i>In last 15/12</i>

2) Query 9q/2: (from output of query 9q/1) (DM 18)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	n47% 65E ZV048	n47% 65E	n47..% 65E.. ZV048	<i>Between 01.09.cccc and 31.03.cccc</i>

10. Subsets to support subsequent analyses: Chronic Obstructive Pulmonary Disease (COPD).

a) Query 10a: Patients with COPD. (COPD 1)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	H3 H31% (excluding H3101, H31y0) H32% H36-H3z	H4 H41% H42% H46-H4z	H31..% H32..% H3...%	<i>Ever</i>

11. Indicator analyses: Chronic Obstructive Pulmonary Disease

a) The percentage of patients where diagnosis has been confirmed by spirometry including reversibility testing for newly diagnosed patients w.e.f. 1/4/03

1) Query 11a/1: (From output of query 10a) (COPD 2)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	H31% (excluding H3101, H31y0) H32% H36-H3z	H41% H42% H46-H4z	H31..% H32..% H3...%	<i>Earliest since 1.4.03</i>
<i>Included</i>	33G% 33H% 33I% 33J% 33K% 5882. 663J-663K 68M	33G% 33H% 33I% 33J% 33K% 5882. 663J-663K 68M	XaFrV% XaIUy% XaIUa% XaIUc% XaIUe% 5882.% 663J. 663K. XaDvM 68M..	<i>Between 3/12 prior to and 12/12 subsequent to diagnosis</i>

- b) The percentage of all patients with COPD where diagnosis has been confirmed by spirometry including reversibility testing

- 1) Query 11b/1: Spirometry + reversibility testing (From output of query 10a)
(COPD 3)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	H31% (excluding H3101, H31y0) H32% H36-H3z	H41% H42% H46-H4z	H31..% H32..% H3...%	<i>Earliest</i>
<i>Included</i>	33G% 33H% 33I% 33J% 33K% 5882. 663J-663K 68M	33G% 33H% 33I% 33J% 33K% 5882. 663J-663K 68M	XaFrV% XaIUy% XaIUa% XaIUc% XaIUe% 5882.% 663J. 663K. XaDvM 68M..	<i>From 3/12 prior to diagnosis onwards</i>

- c) The percentage of patients with COPD in whom there is a record of smoking status in the previous 15 months

- 1) Query 11c/1: (From output of query 10a) (COPD 4a)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	1371	1371	XE0oh	<i>Latest of 137% (Ub00o%) since diagnosis</i>

- 2) Query 11c/2: (From output of query 10a) (COPD 4b)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	137-137D 137F-137g	137-137D 137F-137g	Ub00o% (excluding XE0oo, XaIQi%)	<i>In last 15/12</i>

- 3) Query 11c/3: (From output of query 10a) (COPD 4)

Combined output (logical OR) of queries 11c/1 and 11c/2

- d) The percentage of patients with COPD who smoke, whose notes contain a record that smoking cessation advice has been offered in the past 15 months.

- 1) Query 11d/1: Patients with COPD who smoke: (from output of query 10a)
(COPD 5a)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	137 1372-1376 137C-137D 137G-137H 137J 137M 137P-137R 137V 137X-137g	137 1372-1376 137C-137D 137G-137H 137J 137M 137P-137R 137V 137X-137g	137R.% XE0og% 137C. 137G. 137M. XaIIu XaItg	<i>Latest of 137% (Ub0oo%)</i>

- 2) Query 11d/2: Patients who smoke receiving smoking cessation advice or referral in last 15/12: (from output of query 11d/1) (COPD 5)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	6791 67A3 8B2B 8CAL 8HTK 13p% 900% 9N4M 9N2k 8H7i	6791 67A3 8B2B 8CAL 8HTK 13p% 900% 9N4M 9N2k 8H7i	6791. 8HTK. XaFw9 Xa1dC% XaIQn XaFst XaEku XaIQi% XaBUG% XaIye	<i>In last 15/12</i>

e) The percentage of patients with COPD with a record of FEV₁ in the previous 27 months

1) Query 11e/1: (from output of query 10a) (COPD 6)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	3398-3399 339M 339O 339R-339U 339a-339b 339e-339f 339j-339m	3398-3399 339M 339O 339R-339U 339a-339b 339e-339f 339j-339m	3398. 3399.% XaJ9B XaJ9C XaJ9D XaJ9E X77RZ X77Rb X77Ra X77Qu XaEFy XaEFz XaIxV XaIxU XaIxR XaIxQ	<i>In last 27/12</i>

f) The percentage of patients with COPD receiving inhaled treatment in whom there is a record that inhaler technique has been checked in the preceding 2 years

1) Query 11f/1: Patients receiving inhaled treatment (from output of query 10a)
(COPD 7a)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	c13% c144-c146 c14f c14j c14t. c19% c1C% c1D% c1E% c311 c313 c315 c318-c31B c31u c31x c31z c32% c33% c519-C51D c51a-c51d c51i c51n c51x c611-c615 c617-c61x c61z c62% c641-c64E c64c-c64h c64k-c64z c651-c65W c65b-c65g c66% c67% c68%	c13% c144-c146 c14f c14j c14t. c19% c1C% c1D% c1E% c311 c313 c315 c318-c31B c31u c31x c31z c32% c33% c519-C51D c51a-c51d c51i c51n c51x c611-c615 c617-c61x c61z c62% c641-c64E c64c-c64h c64k-c64z c651-c65W c65b-c65g c66% c67% c68%	c154.% c15y.% c51A.% c51B.% c31x.% c31z.% c31u.% c31A.% c31B.% c51C.% x01Df% c16z.% c17y.% x01Co% x05Fi% <i>and not in:</i> c13w.%, c13o.%, c13z.%, c51F.% c19..% c1D..% c14t.% c14u.% c14v.% c14j.% c33..% x00zA% <i>and not in:</i> c61y.% x00z6% <i>and not in:</i> c65X.%, c65Y.% x05kq%	<i>In last 6/12</i>

2) Query 11f/2: Inhaler technique checked (from output of query 11f/1) (COPD 7)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	6636 6637 663H 663I 66Y4	6636 6637 663H 663I 66Y4	6636. 6637. 663H. 663I. XaIQ0	<i>In last 24/12</i>

g) The percentage of patients with COPD who have had influenza immunisation in the preceding September to March

1) Query 11g/1: Patients without contra-indication (from output of query 10a)
(COPD 8a)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Excluded</i>	14LJ U60K4 ZV14F	14LJ Q5AB	XaIAA XaJ7u XaJ8X Xa5um% Xa5WJ%	<i>Ever</i>
	8I2F 8I6D 68NE 9OX5	8I2F 8I6D 68NE 9OX5	XaIBI XaIOT 68NE. XaJ5n	<i>In last 15/12</i>

2) Query 11g/2: (from output of query 11g/1) (COPD 8)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	n47% 65E ZV048	n47% 65E	n47..% 65E.. ZV048	<i>Between 01.09.cccc and 31.03.cccc</i>

12. Subsets to support subsequent analyses: Epilepsy

a) Query 12a: Patients with epilepsy (**EPILEPSY 1**)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	F25-F2515 F251y- F25z F1321 SC200	F34% P4D4	F25..% (excluding XaBM2 and XaEIj)	<i>Ever</i>

b) Query 12b: Patients with epilepsy age 16 and over on drug treatment for epilepsy
(from output of query 12a)

(**EPILEPSY 1a**)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>				<i>Age > 15</i>
<i>And</i>	dn%	dn%	x000i%	<i>In last 6/12</i>

13. Indicator analyses: Epilepsy

a) The percentage of patients age 16 and over on drug treatment for epilepsy who have a record of seizure frequency in the previous 15 months

1) Query 13a/1 (from output of query 12b). (**EPILEPSY 2**)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	6675 667F 667P-667V	6675 667F 667P-667V	6675. XaJ7s XaJBc XaJBd XaJBe XaJBf XaJBg XaJBh	<i>In last 15/12</i>

- b) The percentage of patients age 16 and over on drug treatment for epilepsy who have a record of medication review in the previous 15 months.

- 1) Query 13b/1 (from output of query 12b). (EPILEPSY 3)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	8BIF 6677-667A	8BIF 6677-667A	XaIyV 6677. 6678. 6679. 667A.	<i>In last 15/12</i>

- c) The percentage of patients age 16 and over on drug treatment for epilepsy who have been convulsion free for last 12 months recorded in last 15 months.

- 1) Query 13c/1 (from output of query 12b). (EPILEPSY 4)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Excluded</i>	8BL3	8BL3	XaJ5k	<i>In last 15/12</i>
<i>Included</i>	667F	667F	XaJ7s	<i>Latest in last 15/12</i>

14. Subsets to support subsequent analyses: Monitoring of hypothyroidism

a) Query 14a: Patients with hypothyroidism and taking thyroxine (THYROID 1)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Required</i>	C03% C04%	C13%	X40IQ%	<i>Ever</i>
<i>Required</i>	f9%	f9%	x01LI%	<i>In last 6/12</i>

15. Indicator analyses: Hypothyroidism

a) The percentage of patients with hypothyroidism with a record of thyroid function tests in the previous 15 months

1) Query 15b/1: (from output of query 14a) (THYROID 2)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	442%	442%	X77Wg% XE2wy% XE25G X7729% X772A% X772B X772C	<i>In last 15/12</i>

16. Subsets to support subsequent analyses: Cancer

- a) Query 16a: All cancer patients (except non melanomatous skin lesions) diagnosed after 1st April 2003. (CANCER 1)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	B0-B32z B34-B6z0 Byu-Byu41 Byu5-ByuE0	B11-B1BZ B1D-B1Z	X78j7% B50..% X78eE% XE1vZ% XE1vo% X78g1% X78it% X78id% X78iC% X78WM% X78jy% B32..% X78hq% XE1vd% Xa97z% XaBBF% ByuA. ByuC0 XE1vP% XE2rk% XE2vO% XE2vP% XE2vR%	<i>First or new after 01.04.2003</i>

17. Indicator analyses: Cancer

- a) The percentage of patients with cancer diagnosed from 1 April 2003 with a review by the practice, recorded within six months of confirmed diagnosis. This should include an assessment of support needs, if any, and a review of co-ordination arrangements with secondary care

1) Query 17a/1: (from output of query 16a) (CANCER 2)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	B0-B32z B34-B6z0 Byu-Byu41 Byu5-ByuE0	B11-B1BZ B1D-B1Z	X78j7% B50..% X78eE% XE1vZ% XE1vo% X78g1% X78it% X78id% X78iC% X78WM% X78jy% B32..% X78hq% XE1vd% Xa97z% XaBBF% ByuA. ByuC0 XE1vP% XE2rk% XE2vO% XE2vP% XE2vR%	<i>First or new after 01.04.2003</i>
<i>Included</i>	8BAV	8BAV	XaIyc	<i>Within 6/12 subsequent to above date</i>

18. Subsets to support subsequent analyses: People with long term mental health problems who require and have agreed to regular follow up.

- a) Query 18a: People with long term mental health problems who require and have agreed to regular follow up. (MH 1)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	9H6 9H8	9H6 9H8	XaINy XaIWQ	<i>Most recent ever recorded</i>
<i>Excluded</i>	9H7	9H7	XaIRX	<i>Since date of above record</i>

- b) Query 18b: Patients prescribed lithium therapy (MH 1a)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	d6%	d6%	d6...%	<i>In last 6/12</i>

19. Indicator analyses: People with long term mental health problems

- a) The percentage of patients with severe and enduring mental health problems with a review recorded in the preceding 15 months. This review includes a check on the accuracy of prescribed medication, a review of physical health and a review of co-ordination arrangements with secondary care

- 1) Query 19a/1 (from output of query 18a) (MH 2)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	6A6	6A6	XaIyU	<i>In last 15/12</i>

- b) The percentage of patients on lithium therapy with a record of lithium levels checked within the previous 6 months

- 1) Query 19b/1 (from output of query 18b) (MH 3)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	44W8%	44W8	X770t X770u% 44W80 44W81 44W82	<i>In last 6/12</i>

- c) The percentage of patients on lithium therapy with a record of serum creatinine and TSH in the preceding 15 months.

- 1) Query 19c/1: Patients on lithium therapy with a record of serum creatinine in the preceding 15 months. (from output of query 18b) (MH 4a)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	44J3% 44JC 44JD 44JF	44J3 44JC 44JD 44JF	X771Q XE2q5% XaETQ XaERX	<i>In last 15/12</i>

- 2) Query 19c/2: Patients on lithium therapy with a record of TSH in the preceding 15 months. (from output of query 18b) (MH 4b)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	442A% 442K-442T 442W 442X 442e	442A 442K-442T 442W 442X 442e	XE2wy%	<i>In last 15/12</i>

- 3) Query 19c/3: Patients on lithium therapy with a record of serum creatinine and TSH in the preceding 15 months.

Combined output (logical AND) of queries 19c/1 and 19c/2 (MH 4)

d) The percentage of patients on lithium therapy with a record of lithium levels in the therapeutic range within the previous 6 months.

1) Query 19d/1: (from output of query 18b) (MH 5)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	44W8 and value1 = 0.6-1.0 OR 44W80	44W8 and value1 = 0.6-1.0	X770t X770u XE25g and value1 = 0.6-1.0 OR 44W80	<i>Latest in last 6/12</i>

20. Subsets to support subsequent analyses: Patients with asthma excluding patients with asthma who have been prescribed no asthma related drugs in the last twelve months.

- a) Query 20a: Patients with asthma prescribed relevant medication in last 12 months
(ASTHMA 1)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	H33%	H43%	H33..%	<i>Ever</i>
<i>Included</i>	c11-c19 c1B-c1a c3% c41-c43 c5% c6% c7% cA%	c11-c19 c1B-c1a c3% c41-c43 c5% c6% c7% cA%	c1...%	<i>In last 12/12</i>

21. Indicator analyses: Patients with treated asthma

- a) The percentage of patients aged eight and over diagnosed as having asthma from 1st April 2003 where the diagnosis has been confirmed by spirometry or peak flow measurement

- 1) Query 21a/1 Asthmatics aged eight and over (from output of query 20a)
(ASTHMA 2a)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>				<i>Age > 7</i>

2) Query 21a/2 Spirometry or PEFR to confirm diagnosis (from output of query 21a/1)

(ASTHMA 2)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	H33%	H43%	H33..%	<i>Earliest after 1.4.2003</i>
<i>Included</i>	33G% 33H% 33I% 33J% 33K% 5882. 663J-663K 68M	33G% 33H% 33I% 33J% 33K% 5882. 663J-663K 68M	XaFrV% XaIUY% XaIUa% XaIUc% XaIUe% 5882.% 663J. 663K. XaDvM 68M..	<i>From 3/12 prior to diagnosis onwards</i>
	339c-339d 339g 339n 339A-339B 3395 66YX 66YY	339c-339d 339g 339n 339A-339B 3395 66YX 66YY	XaJEg XE2wr XaIxT XaIxS X77RV X77RW XaEHe XaEGA XaIxD%	

b) The percentage of patients with asthma between the ages of 14 and 19 in whom there is a record of smoking status in the previous 15 months

1) Query 21b/1 Asthmatics aged 14-19 (From output of query 20a)

(ASTHMA 3a)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>				<i>Age > 13 Age < 20</i>

2) Query 21b/2 Smoking history in last 15/12 (From output of query 21b/1)

(ASTHMA 3)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	137-137D 137F-137g	137-137D 137F-137g	Ub0oo% (excluding XE0oo, XaIQi%)	<i>In last 15/12</i>

- c) The percentage of patients age 20 and over with asthma whose notes record smoking status in the past 15 months except those who have never smoked where smoking status should be recorded at least once

1) Query 21c/1: Asthmatics over 20 (from output of query 20a) (ASTHMA 4a)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>				<i>Age > 19</i>

2) Query 21c/2: Never smoked (from output of query 21c/1) (ASTHMA 4b)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	1371	1371	XE0oh	<i>Latest of 137% (Ub0oo%) since diagnosis</i>

3) Query 21c/3: Smoking history in last 15 months: (from output of query 21c/1) (ASTHMA 4c)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	137-137D 137F-137g	137-137D 137F-137g	Ub0oo% (excluding XE0oo, XaIQi%)	<i>In last 15/12</i>

4) Query 21c/4: Combined output (logical OR) of queries 21c/2 and 21c/3 (ASTHMA 4)

- d) The percentage of patients with asthma who smoke, and whose notes contain a record that smoking cessation advice has been offered within last 15 months.

- 1) Query 21d/1: Patients with asthma who smoke: (from output of query 20a)
(ASTHMA 5a)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	137 1372-1376 137C-137D 137G-137H 137J 137M 137P-137R 137V 137X-137g	137 1372-1376 137C-137D 137G-137H 137J 137M 137P-137R 137V 137X-137g	137R.% XE0og% 137C. 137G. 137M. XaIIu XaItg	<i>Latest of 137% (Ub0oo%)</i>

- 2) Query 21d/2: Patients who smoke receiving smoking cessation advice or referral in last 15/12: (from output of query 21d/1) (ASTHMA 5)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	6791 67A3 8B2B 8CAL 8HTK 13p% 900% 9N4M 9N2k 8H7i	6791 67A3 8B2B 8CAL 8HTK 13p% 900% 9N4M 9N2k 8H7i	6791. 8HTK. XaFw9 Xa1dC% XaIQn XaFst XaEku XaIQi% XaBUG% XaIye	<i>In last 15/12</i>

- e) The percentage of patients with asthma who have had an asthma review in the last 15 months.

- 1) Query 21e/1 (from output of query 20a) (ASTHMA 6)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	66YJ 66YK 8B3j 9OJA 9OJ2	66YJ 66YK 8B3j 9OJA 9OJ2	XaIeq XaIu5 XaIu6 XaIer XaIfK XE2Nb 9OJ2	<i>In last 15/12</i>

f) The percentage of patients with asthma age 16 and over who have a record of influenza vaccination in the preceding 1st September to 31st March

1) Query 21f/1 Asthmatics aged 16 and over (from output of query 20a)
(ASTHMA 7a)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>				<i>Age > 15</i>

2) Query 21f/2: Patients without contra-indication (from output of query 21f/1)
(ASTHMA 7b)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Excluded</i>	14LJ U60K4 ZV14F	14LJ Q5AB	XaIAA XaJ7u XaJ8X Xa5um% Xa5WJ%	<i>Ever</i>
	8I2F 8I6D 68NE 9OX5	8I2F 8I6D 68NE 9OX5	XaIBI XaIOT 68NE. XaJ5n	<i>In last 15/12</i>

3) Query 21f/3: (from output of query 21f/2) (ASTHMA 7)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	n47% 65E ZV048	n47% 65E	n47..% 65E.. ZV048	<i>Between 01.09.cccc and 31.03.cccc</i>

22. Subsets to support subsequent analyses: Organisational indicators

a) Query 22a: Patients aged 15-75 (from query 1a)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>				<i>Age > 14 Age < 76</i>

b) Query 22b: Patients aged 45 and over (from query 1a)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>				<i>Age > 44</i>

23. Indicator analyses: Organisational indicators

a) The smoking status of patients age 15-75 is recorded for at least 55% of patients

1) Query 23a/1: (from query 22a) (**RECORDS 10**)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	137-137D 137F-137g	137-137D 137F-137g	Ub0oo% (excluding XE0oo, XaIQi%)	<i>Ever</i>

b) There is a record of the blood pressure in the preceding five years for at least 55% of patients aged 45 and over

1) Query 23b/1: (from query 22b) (**RECORDS 11**)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	246 2461-246G 246J 246N-246Z	246 2461-246G 246J 246N-246Z	X773t% (excluding XaI9f, XaI9g) 246..% (excluding 2460., 246H., 246I., 246K., 246L., 246M.)	<i>In the last 5y</i>

c) The smoking status of patients age 15-75 is recorded for at least 75% of patients

1) Query 23c/1: As 23a/1 (**RECORDS 16**)

d) For patients aged 45 and over, there is a record of the blood pressure in the preceding five years for at least 75% of patients

1) Query 23d/1: As 23b/1 (**RECORDS 17**)

24. Subsets to support subsequent analyses: Additional services

a) Query 24a: Female patients aged from 25 to 64 (from query 1a)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>				<i>Age > 24</i> <i>Age < 65</i>
<i>Required</i>				<i>Sex = F</i>

25. Indicator analyses: Additional services

a) The percentage of patients aged from 25 to 64 (in Scotland from 21 to 60) whose notes record that a cervical smear has been performed in the last 5 years Standard 25-80%

1) Query 25a/1 Female patients aged 25-64 who have not had a hysterectomy involving complete removal of the cervix. (From output of query 24a) (**CS 1a**)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Excluded</i>	7E05% 7E040 7E042 7E043 7E046 7E049	7CB2 7CB3 7CB4 7CB5 7CB6 7CB7	XE06Z% XaBEI% XaC3i% XE06b% 7E046%	<i>Ever</i>

2) Query 25a/2 Patients with a record of a smear being taken in the last 5 years (From output of query 25a/1) (**CS 1**)

Code criteria	Version 2	4-character	CTV3	Time criteria
<i>Included</i>	4K22-4K2A 685L 7E2A2 ZV762	4K22-4K2A 685L 34D4	Xa8PI% XE278 XE279 XE27A XE27B 4K25. 4K26. 4K27. X76zx XM1C9 XaFs3 ZV762	<i>In last 5 years</i>