

# Specification

Last Updated Date	Version
23rd August 2018	10.3
Change Log – <a href="#">click here</a>	

## Seasonal Influenza Vaccine Uptake Reporting Specification Collection 2018/2019

### SNOMED CT Version – (5 Byte and CTV3 codes in appendix)

Incorporates SNOMED® CT, used by permission of the International Health Terminology Standards Development Organisation. SNOMED CT© was originally created by the College of American Pathologists. SNOMED CT is a registered trademark of the International Health Terminology Standards Development Organisation, all rights reserved.

Relates to:

PHE: *Influenza Vaccine Uptake Survey (GP Patients) 2018/19 Scope*: 636568177046939025\_scoping document 201819\_gp\_flu\_modified\_february-final

PHE/NHS ENGLAND/ DHSC: *Annual\_national\_flu\_programme\_2018-2019* 26/3/2018

Associated Influenza extensional code-list spreadsheet: [PHE\\_FLU\\_SCT\\_codeclusters\\_v1.3\\_23082018](#)

Section 1, Patient selection criteria, and Section 2, Clinical data extraction criteria, define the data that is to be processed using the Ruleset defined in Section 3 and Indicators in Section 4.

This specification is provided to GP Suppliers to enable submission of data to be standardised and quality assured nationally.

**This specification is for vaccine uptake monitoring purposes only. It is important that it is not used for recall or payment purposes. The Pregnancy groups include patients who may have been eligible for a period of time but are no longer eligible. Due to the complications around recording pregnancy, other methods should be used if practices wish to identify patients who are at risk and require vaccination. Any results should be subject to clinical review.**

**PRIMIS - University of Nottingham cannot take any responsibility or liability for use of this specification for any purpose other than its intended use for the Seasonal Influenza Vaccine Uptake Monitoring Programme.**

## Introductory Guidance

This version of the specification has been produced in the SNOMED-CT terminology based on the original specifications written in the legacy terminologies of READ V2 and CTV3. At the time of writing, the whole process concerning the introduction of SNOMED into UK Primary Care IT systems is in a transition period and as such there may be unforeseen complications in the implementation of this specification, however we hope that we have avoided as many of the potential pitfalls as possible. For those people using the specification who are as yet unfamiliar with SNOMED-CT and its component mechanisms we would recommend accessing the various educational resources provided by SNOMED International and NHS Digital.

This particular version of the specification represents the All Patient specification and there is a paired Childrens version.

There are also legacy versions in READ V2/CTV3 for this year which echo the changes in the underlying scope for the programme.

This document is produced with an associated spreadsheet containing all the relevant codes in their codegroups i.e. in an “*extensional*” format. The code clusters within this document have been produced in Expression Constraint Language format which is compatible with machine reading mechanisms. It is of note that the two larger medication clusters are specified only in the extensional format contained in the associated spreadsheet. It is anticipated that future versions of the specification will contain these clusters as Refsets for ease of use.

There are some particular points of note regarding this specification and potential differences from the legacy terminology versions.

A fundamental principle of the earlier specifications was that a patient with a singular condition would only appear in one of the At Risk categories. Whilst this was simple with READ V2, the arrival of CTV3 which has a polyhierarchical structure meant that a condition could appear in two separate At Risk categories. This was finessed with the production of the specification and at the most granular level meant that there were subtle differences in the categorisation of a small number of conditions between the two legacy specifications. This is no longer possible with the more extensive complexity in SNOMED. As such a small number of patients will be represented in more than one At Risk category and there will be subtle variations if one compares the output numbers for At Risk categories between the legacy and SNOMED versions.

Another issue concerns the mapping of the legacy terminologies to SNOMED. Broadly the the hierarchies within SNOMED are more logical and in some cases easier to produce a clear code cluster. However codes may be mapped to different hierarchies than their sibling codes from the legacy terminologies.

The arrangement of some hierarchies has become inverted with children codes becoming parents and vice versa. The legacy synonyms for some codes may be mapped to different codes in different hierarchies and in some cases some individual legacy codes become synonyms of the same code in SNOMED (and not always appropriately). Some terms have been mapped up the hierarchies to more vague parent terms. One result of this is that terms in SNOMED that may not seem appropriate at first sight to be included in this specification, have been included for the sake of legacy codes that have been mapped to them.

A further point is to note is that the medication codes have been listed in dm+d as either AMP or VMP codes and where these are extensive lists only as a pointer to the codes in the associated spreadsheet.

It should also be noted that SNOMED is a dynamic terminology with the ability to retire codes and amend hierarchies on a six monthly basis and as such this could lead to shifts within the lifetime of an individual version of this specification. It remains to be seen how much of an impact this may have.

Lastly, this specification has been produced in a non-naïve format. It could have been that we produced a specification based on a one to one map of the legacy to SNOMED terms. Instead we have written a specification that should function in a fully SNOMED world and as such includes terms in SNOMED that have no maps to legacy terms. In places this includes parent terms. As such we believe that whilst longer in initial production, it will stand the test of time better as users move into the full SNOMED world.

I would like to thank the authoring group at PRIMIS and those who have assisted us over the last few years in being able to arrive at this point.

Finally the original introduction is included as an appendix within the document as many of the points raised there are still of relevance.

Dr Dai Evans  
PRIMIS  
The University of Nottingham

## Contents

Dataset Specification.....	7
1) Patient selection criteria: .....	7
2) Clinical data extraction criteria: .....	8
Patient Details .....	8
Clinical Risk Groups .....	9
Vaccinations.....	21
Contraindications, Declines, No Consent, Allergies .....	23
Carers .....	24
Pregnancy .....	25
Ethnicity.....	28
3) Bandings and Groupings .....	32
Age .....	32
Gender.....	32
Ethnicity .....	33
Pregnant on 31/08/2018 or becoming pregnant between 01/09/2018 and 28/02/2019 (inclusive).....	36
Patients who have received Influenza Vaccination .....	36
Patients who have not had a vaccination due to refusal/declining .....	36
Patients who have an unstated vaccination type .....	36
Indicators.....	37
1 Vaccination status of Practice Population.....	37
2 Vaccination status of patients in one or more Risk Groups .....	39
3. Vaccination status of pregnant women who are not in a clinical risk group ....	40
4. Vaccination status of pregnant women who are in a clinical risk group .....	41
5. Vaccination status of patients with Chronic Heart Disease.....	42
6. Vaccination status of patients with Chronic Respiratory Disease .....	42
7. Vaccination status of patients with Chronic Kidney Disease .....	43
8. Vaccination status of patients with Chronic Liver Disease.....	43
9. Vaccination status of patients with Diabetes .....	44
10. Vaccination status of patients with Immunosuppression .....	44
11. Vaccination status of patients with Chronic Neurological Disease (including Stroke/TIA, Cerebral Palsy or MS).....	45
12. Vaccination status of patients with Asplenia or Dysfunction of the Spleen..	45
13. Vaccination status of patients with Morbid Obesity and in one or more other clinical risk groups .....	46

14. Vaccination status of patients with Morbid Obesity and NOT in any other clinical risk groups .....	46
15. Vaccination status of patients who are carers, aged 5 to under 16 at RUN_DAT, and who are not in an at risk category (including pregnant women) ..	47
16. Vaccination status of patients who are carers, aged 16 to under 65 at Run_Dat, and who are not in an at risk category (including pregnant women) .....	48
17. Vaccination status of patients by gender.....	48
18. Vaccination status of patients aged 16 – 65 in one or more at-risk groups (excluding healthy pregnant women and carers) by ethnicity .....	49
19. Vaccination status of pregnant women by ethnicity.....	49
Appendix A - 5 byte and CCTV3 codes.....	50
References.....	61
Change Log.....	61
Appendix 2 - Original Introduction .....	62

## Dataset Specification

RUN\_DAT is defined as: The date of data extraction

REF\_DAT is defined as: 31/03/2019

START\_DAT is defined as 01/09/2018

CHILD\_DAT is defined at 31/08/2018

AUDITEND\_DAT is defined as:

- 31/10/2018 for the October submission in November 2018
- 30/11/2018 for the November submission in December 2018
- 31/12/2018 for the December 2018 submission in January 2019
- 31/01/2019 for the January submission in February 2019
- 28/02/2019 for the February submission in March 2019

### 1) Patient selection criteria:

a) Registration status:

Current registration status	Qualifying criteria
Currently registered for GMS	Most recent registration date <= (RUN_DAT)

b) Qualifying Criteria:

Action	Criteria
Include	Age >= 6 months at (RUN_DAT) AND Age <65 years at (REF_DAT) in At Risk Category
	Age >=65 years at (REF_DAT)
	((PREGDEL_COD >= 01/01/2018 AND < 01/09/2018) <sup>1</sup> OR ( PREG2_COD >= 01/09/2018 AND <= 28/02/2019))
	Carer <65 years at (REF_DAT)

<sup>1</sup> This group is further filtered – please see [explanatory note](#) beneath field 75

## 2) Clinical data extraction criteria:

### Patient Details

Field Number	Field name	Data item	Qualifying criteria
1	PAT_ID	Patient ID number	Unconditional
2	<a href="#">PAT_AGE</a>	Patients age (years) at RUN_DAT	Unconditional
Note	The Patient age is used to determine the age band of the patient.		
3	<a href="#">PAT_ENDAGE</a>	Patients age (years) at REF_DAT	Unconditional
Note	The Patient End age is used to determine the age band of the patient. The End age is defined by the age of the patient on 31 <sup>st</sup> March 2019. This is only taken into account for the upper limit of the '16 to under 65' age band and the '65 and over' age band		
4	<a href="#">PAT_SEX</a>	Patients age (years) at REF_DAT	Unconditional
Note	Patient sex is extracted for the 2018/2019 gender indicator		
5	PAT_STARTAGE	Patients age (years) at CHILD_DAT	Unconditional
Note	This is used to assist in assessing whether a child is in one of the 6 annual cohorts potentially vaccinated in schools ( >= 4 yrs to <10 yrs)		



## Clinical Risk Groups

Field Number	Field name	Data item	Qualifying criteria
6	AST_COD	<<195967001	Earliest <= AUDITEND_DAT
		(Asthma Diagnosis code)	
Note	The presence of a diagnosis code is required. The patient must also have a code in ASTMED_COD or prescription code in ASTRX_COD to be included in the At Risk Group for Asthma		
7	<a href="#">AST_DAT</a>	Date of AST_COD	Chosen Record
8	ASTMED_COD	(<<170659001 OR 711436000 OR 297280007 OR 170622002 OR 431325008 OR <<266715005) MINUS (858481000000107 OR 170660006)	Latest >= 01/09/2017 AND <= (AUDITEND_DAT)
		(asthma steroid medication administration codes)	
Note	Codes indicating that the patient is currently taking 'oral or inhaled steroids'. The code should be in the last 12 months. However to prevent patients from dropping out of the audit as the vaccination campaign progresses, where their latest asthma medication issue was originally within the 12 month timescale but then subsequently exceeds it, we look back for medications from 01/09/2017.		
	E.g. If we only looked back 12 months from the Audit date, an asthma patient whose last medication was in November 2017 would be included in the October 31st 2018 results (as their latest medication is within the last 12 months), but would then drop out of the November 30 <sup>th</sup> 2018 results (as their latest medication would now be over 12 months ago). By fixing the date we look back for medications to 01/09/2017, we prevent this happening.		
9	<a href="#">ASTMED_DAT</a>	Date of ASTMED_COD	Chosen Record

Field Number	Field name	Data item	Qualifying criteria
10	ASTRX_COD	See associated spreadsheet for extensional list of medication codes	Latest >= 01/09/2017 AND <= (AUDITEND_DAT)
		(Asthma Prescription)	
Note	Inhaled or Oral Steroid Prescription codes. The same logic applies here as in the note to the ASTMED_COD group		
11	<a href="#">ASTRX_DAT</a>	Date of ASTRX_COD	Chosen Record
12	ASTADM_COD	708358003 OR 183478001	Latest <= (AUDITEND_DAT)
		(Asthma Admission codes)	
Note	The presence of an Emergency Asthma Admission to hospital Read code at any time includes the patient in the Asthma At Risk Group, regardless of the presence of a diagnosis (AST_COD), or medication, ( ASTMED_COD), or prescription code, (ASTRX_COD)		
13	<a href="#">ASTADM_DAT</a>	Date of ASTADM_COD	Chosen Record

Field Number	Field name	Data item	Qualifying criteria
14	RESP_COD	<p>(471171000000103 OR 439481000000105 OR 466841000000103 OR 431411000000104 OR 471141000000109 OR 30188007 OR 196124003 OR &lt;&lt;7436001 OR 230494007 OR 526071000000104 OR 233659006 OR 10692761000119107 OR &lt;&lt;8247009 OR &lt;&lt;12295008 OR 123713005 OR 266404004 OR 707553005 OR 18354001 OR &lt;&lt;704345008 OR &lt;&lt;413839001 OR 240702004 OR &lt;&lt;13645005 OR &lt;&lt;102361000119104 OR 599006 OR 733171006 OR 240747003 OR &lt;&lt;233615002 OR 63841001 OR &lt;&lt;133971000119108 OR &lt;&lt;26427008 OR &lt;&lt;196190001 OR 196049002 OR &lt;&lt;69454006 OR 196025000 OR &lt;&lt;20322005 OR &lt;&lt;427896006 OR &lt;&lt;733497009 OR &lt;&lt;52571006 OR &lt;&lt;66987001 OR &lt;&lt;190905008 OR 79031000119101 OR &lt;&lt;427928003 OR &lt;&lt;233750003 OR &lt;&lt;51615001 OR &lt;&lt;724500003 OR &lt;&lt;233703007 OR 196136009 OR 196137000 OR 196138005 OR 196133001 OR 196131004 OR &lt;&lt;312603000 OR 77753005 OR &lt;&lt;430621000 OR &lt;&lt;233727009 OR &lt;&lt;83270006 OR &lt;&lt;86157004 OR &lt;&lt;40122008 OR &lt;&lt;74015002 OR 196135008 OR &lt;&lt;24369008 OR &lt;&lt;699014000 OR &lt;&lt;36485005 OR &lt;&lt;398726004 OR 721076000 OR &lt;&lt;79877004 OR &lt;&lt;75547007 OR &lt;&lt;11296007 OR &lt;&lt;8555001 OR 302108003 OR &lt;&lt;88039007 OR 45145000) MINUS (10613001 OR 196052005 OR &lt;&lt;236302005 OR &lt;&lt;67782005 OR 195990006 OR &lt;&lt;129458007 OR 8549006 OR 79958002 OR 120639003 OR 700249006 OR 64667001 OR 44274007 OR 240629003 OR 233623000 OR 46970008 OR 129452008 OR &lt;&lt;57607007 OR 64880000 OR 206303001 OR 76090006 OR 60485005 OR &lt;&lt;233620002 OR 195896004 OR 35037009 OR 196115007 OR 196116008 OR 7548000 OR 233621003 OR 266370006)</p> <p>(Chronic Respiratory Disease)</p>	Earliest <= AUDITEND_DAT
15	<a href="#">RESP_DAT</a>	Date of RESP_COD	Chosen Record

16	CHD_COD	(<<416091000000102 OR <<204463001 OR <<204464007 OR <<195137008 OR <<266237004 OR <<194926000 OR 78741000119103 OR <<56675007 OR 413439005 OR <<57054005 OR 703169005 OR 703296002 OR <<67189007 OR <<204451006 OR <<17024001 OR 723860000 OR 472810005 OR <<281170005 OR 72092001 OR <<72092001 OR <<17366009 OR <<49436004 OR 195080001 OR 120041000119109 OR <<5370000 OR 276796006 OR <<387732009 OR 442559009 OR <<461089003 OR <<410429000 OR <<698270004 OR <<40172005 OR <<194861007 OR <<998008 OR <<22462001 OR <<87837008 OR <<250993004 OR <<250996007 OR <<297218007 OR <<81577001 OR <<75372006 OR <<70195006 OR <<448725000 OR <<53741008 OR <<204299009 OR <<3545003 OR <<47040006 OR <<39785005 OR <<253329001 OR <<56819008 OR <<40593004 OR <<275905002 OR <<56265001 OR <<84114007 OR <<38481006 OR <<275514001 OR <<31019002 OR <<285781000119100 OR <<233850007 OR <<225566008 OR <<414545008 OR <<45650007 OR 44051003 OR <<11851006 OR <<715535009 OR <<421518007 OR <<699300009 OR 282825002 OR 274096000 OR <<274096000 OR <<19242006 OR <<174810007 OR <<174803001 OR <<253309002 OR 46935006 OR 95281009 OR <<234065001 OR <<72654001 OR <<67391006 OR <<233849007 OR 74615001 OR <<120158008 OR <<253732001 OR <<32413006 OR 44103008 OR <<6210001 OR 71908006 OR <<71908006 OR <<253549006) MINUS (<<251167004 OR 251183004 OR 22271007 OR <<473383000 OR 430402003 OR <<204464007 OR <<16797001 OR 111286002 OR 186813004 OR 127337006 OR <<127337006 OR <<459056003 OR <<373116009 OR <<413444003 OR <<46701001 OR <<194949003 OR <<57231008 OR 53874003 OR <<67189007 OR <<312591002 OR 371817007 OR <<17869006 OR <<204407002 OR 10701000087104 OR 16147005 OR <<72092001 OR <<233931008 OR 251187003 OR 50799005 OR <<278482008 OR <<251165007 OR 251162005 OR 432992007 OR 431262007 OR 431261000 OR 301183007 OR 128562005 OR <<128562005 OR <<64043005 OR <<421869004 OR 698247007 OR <<698247007 OR 10743741000119103 OR <<274121004 OR <<1084791000119106 OR 55565007 OR <<297253000 OR 89819002 OR <<93053007 OR <<33413000 OR <<29320008 OR 194929007 OR 720989003 OR 460618008 OR	Earliest <= AUDITEND_DAT
----	---------	--	-----------------------------

		46397005 OR 73837001 OR 240299002 OR 276512006 OR <<276512006 OR 430901004 OR <<430901004 OR <<4006006 OR 61048000 OR <<9241004 OR <<123597005 OR <<237226002 OR <<78381004 OR 721010003 OR <<233901002 OR 959281000000105 OR <<233908008 OR <<419400008 OR 609507007 OR <<723865005 OR <<723864009 OR 128403000 OR <<128403000 OR 233850007 OR <<461416009 OR <<444036008 OR <<82838007 OR <<414545008 OR <<419166005 OR 81681009 OR <<45650007 OR 186318004 OR <<77863005 OR <<710878005 OR <<33618002 OR 34845009 OR <<22653005 OR 413341007 OR 276514007 OR <<276513001 OR <<413342000 OR <<71792006 OR <<444658006 OR 195070000 OR 233915000 OR 195071001 OR <<12026006 OR <<29717002 OR 958900006 OR 233851006 OR 419752005 OR 233891009 OR 49710005 OR 73028002 OR <<73028002 OR 73774007 OR <<6456007 OR <<67391006 OR 6285003 OR <<6285003 OR <<46220003 OR 278928000 OR 276518005 OR <<52987001 OR <<302131003 OR 29894000 OR 251186007 OR <<186755002 OR <<184004)	
		(Chronic heart disease codes)	
17	CHD_DAT	Date of CHD_COD	Chosen Record
18	CKD_COD	(<<398471000000102 OR <<467521000000106 OR <<112066009 OR <<48713002 OR <<234348004 OR 703310005 OR <<1866009 OR <<175902000 OR <<236519008 OR <<20917003 OR <<236453005 OR <<709044004 OR <<197707007 OR <<236523000 OR <<708127008 OR <<265763003 OR <<48796009 OR <<236505008 OR <<444645005 OR <<425455002 OR <<713504001 OR 449408005 OR 449409002 OR <<429451003 OR <<313030004 OR 81896006 OR <<46177005 OR <<111411000119103 OR 153891000119101 OR 175948009 OR 16652001 OR 723333000 OR 62216007 OR 718141008 OR 716657000 OR <<73305009 OR 268234004 OR <<83866005 OR <<197628008 OR 713887002 OR <<308751000119106 OR <<722948009 OR <<197739000 OR <<197738008 OR <<89681000119101 OR <<85381000119105 OR <<120241000119100 OR <<427555000 OR <<50581000 OR <<399340005 OR <<161665007 OR <<704667004 OR 698810000 OR 721840000 OR 733097003 OR <<123752003 OR <<726082003 OR 40095003 OR 721862000 OR 716999001 OR <<446923008 OR <<236459009 OR <<236508005 OR	Earliest <=AUDITEND_DAT

		285831000119108 OR 285841000119104 OR 286371000119107 OR 290006 OR <<35546006 OR <<367051000119105 OR <<1426004 OR <<295121000119101 OR <<52254009 OR <<718192000 OR <<399190000 OR <<428118009 OR <<441815006 OR <<236392004 OR <<265764009 OR <<269301005 OR <<398887003 OR <<183985008 OR <<425384007 OR <<13335004 OR <<68815009 OR <<265550007 OR <<70536003 OR 236713006) <b>MINUS</b> (197579006 OR 66052004 OR 31881008 OR <<431855005 OR <<431856006 OR <<433144002 OR <<431857002 OR <<433146000 OR 36171008 OR <<49102001 OR <<194779001 OR 194781004 OR 194780003 OR 66610008 OR <<199007008)	
		(Chronic kidney disease diagnostic codes)	
Note	If a patient has any Chronic Kidney disease Read code, they are included in the CKD At Risk Group. CKD stage 3 – 5 codes are handled separately		
19	<a href="#">CKD_DAT</a>	DATE of CKD_COD	Chosen Record
20	CKD15_COD	<<431855005 OR <<431856006 OR <<433144002 OR <<431857002 OR <<433146000 (Chronic kidney disease codes - all stages)	Latest <= AUDITEND_DAT
Note	This Read code group first captures all patients with any stage of CKD recorded. The patient record is then checked to see if the most recent Read code is a Stage 3 – 5. If so, the patient is entered into the CKD risk group. If their most recent code is a 1 – 2, they are not (unless they have been brought into the group by having a CKD code from field 19 above)		
21	<a href="#">CKD15_DAT</a>	Date of CKD15_COD	Chosen Record
22	CKD35_COD	<<433144002 OR <<431857002 OR <<433146000 (Chronic kidney disease codes-stages 3 - 5)	Latest <= AUDITEND_DAT
23	<a href="#">CKD35_DAT</a>	Date of CKD35_COD	Chosen Record

24	CLD_COD	( $\ll$ 432777003 OR $\ll$ 96601000119101 OR $\ll$ 41309000 OR 190944000 OR 31742004 OR $\ll$ 408335007 OR $\ll$ 235890007 OR 123606000 OR 307757001 OR $\ll$ 76783007 OR $\ll$ 328383001 OR 9843006 OR $\ll$ 235494005 OR $\ll$ 432908002 OR $\ll$ 33167004 OR $\ll$ 3650004 OR $\ll$ 204787003 OR $\ll$ 4711003 OR $\ll$ 407000 OR 51038004 OR 370492003 OR 235458006 OR $\ll$ 29633007 OR $\ll$ 59927004 OR $\ll$ 62484002 OR 197367007 OR 197368002 OR 442134007 OR $\ll$ 36760000 OR $\ll$ 432772009 OR 128241005 OR 253807009 OR 197324004 OR 427022004 OR $\ll$ 235910007 OR $\ll$ 213153001 OR $\ll$ 702777009 OR $\ll$ 27280000 OR $\ll$ 28009009 OR $\ll$ 235903001 OR $\ll$ 308129003 OR $\ll$ 235900003 OR $\ll$ 197316009 OR $\ll$ 34742003 OR $\ll$ 174427006 OR $\ll$ 235917005 OR $\ll$ 442191002 OR 197321007 OR 713529007 OR 197361008 OR 197360009 OR 197359004 OR 197362001 OR $\ll$ 428198008 OR $\ll$ 18027006) MINUS ( $\ll$ 9953008 OR $\ll$ 197270009 OR $\ll$ 37871000 OR 297288000 OR $\ll$ 197275004)	Earliest $\leq$ AUDITEND_DAT
		(Chronic Liver disease codes)	
25	CLD_DAT	Date of CLD_COD	Chosen Record
26	DIAB_COD	( $\ll$ 73211009 OR $\ll$ 74627003) MINUS (199225007 OR 199227004 OR 199223000 OR 10754881000119104 OR 76751001 OR $\ll$ 703136005 OR 199226008 OR 199228009 OR $\ll$ 11687002 OR 237613005 OR 237651005 OR $\ll$ 237603002)	Latest $\leq$ AUDITEND_DAT
		(Diabetes diagnosis codes)	
Note	The patient is included if any Diabetes diagnosis Read code is recorded		
27	DIAB_DAT	Date of DIAB_COD	Chosen Record

Field Number	Field name	Data item	Qualifying criteria
28	IMMDX_COD	(<<421695000 OR <<119249001 OR <<420721002 OR <<422003001 OR <<414029004 OR <<421827003 OR 442134007 OR <<442134007 OR <<165816005 OR <<86406008 OR <<71922006 OR 420524008 OR <<420524008 OR <<414644002 OR <<91637004 OR <<420452002 OR <<414825006 OR <<127230005 OR 370388006 OR <<370388006 OR 370391006 OR <<370391006 OR 234535004 OR <<234535004 OR <<81000119104) MINUS (429521000000108 OR 267454002 OR 47144000 OR 129645002 OR 234434003 OR 64249002 OR 720497002 OR 233691007 OR 111037009 OR 129640007 OR <<58648008 OR <<92408009 OR 234418001 OR 234423001 OR 13172003 OR 80369006 OR <<84730007 OR <<397012002 OR 710027002 OR 16196000 OR 419455006 OR 363088000 OR 417389002 OR 417967008 OR 191360002 OR 43355006 OR 711160007 OR 367542003 OR <<367542003 OR 866901000000103 OR 238931006 OR <<29120000 OR 191357009 OR 95733001 OR <<25671008 OR 76762001 OR 79336007 OR <<427245000 OR 275446004 OR <<47986005 OR 234590006 OR <<82966003 OR 191358004 OR 234435002 OR 65230006 OR 61596005 OR 234538002 OR 320150004 OR <<111583006 OR <<277577000 OR 16944002 OR 95624007 OR <<72272002 OR <<105601003 OR 30981000 OR 64936001 OR 88714009 OR 230683002) (Immunosuppression diagnosis codes)	Latest< =AUDITEND_DAT
Note	The patient is included if any immunosuppressant Read code is recorded		
29	<a href="#">IMMDX_DAT</a>	Date of IMMDX_COD	Chosen Record
30	IMMRX_COD	See associated spreadsheet for extensional list of medication codes (Immunosuppression medication codes)	Latest >= 01/03/2018 AND <= (AUDITEND_DAT)



# PRIMIS: Seasonal Flu

Note	<p>The patient is included if a prescription code is recorded in the last six months. The timeframe is limited to six months to increase the specificity of capturing patients that are currently immunosuppressed. For brevity purposes, this group includes some immunosuppressant medication that may only be issued in hospital</p> <p>The Read code should be in the last six months. However to prevent patients from dropping out of the audit as the vaccination campaign progresses, where their latest immunosuppressant medication issue was originally within the six month timescale but then subsequently exceeds it, we look back for medications from 01/03/2018. E.g. If we only looked back six months from the Audit date, an immunosuppression patient whose last medication was in May 2018 would be included in the October 31st 2018 results (as their latest medication is within the last six months), but would then drop out of the November 30<sup>th</sup> 2018 results (as their latest medication would now be over six months ago). By fixing the date we look back for medications to 01/03/2018, we prevent this happening.</p>		
31	<a href="#">IMMRX_DAT</a>	Date of IMMRX_COD	Chosen Record

Field Number	Field name	Data item	Qualifying criteria
32	CNSGROUP_COD	(408371000000100 OR 408581000000109 OR 397031000000105 OR 420071000000107 OR <<456631000000101 OR 718556007 OR 192933004 OR <<73097000 OR 75491005 OR <<75491005 OR <<389098007 OR 277922001 OR <<44913001 OR <<722964001 OR <<95643007 OR 230256009 OR 717943008 OR 315608004 OR <<85102008 OR 223176004 OR 74073002 OR <<230724001 OR <<278849000 OR <<276721005 OR <<274100004 OR <<195185009 OR <<432504007 OR <<276599001 OR <<128188000 OR 109561000 OR <<62914000 OR <253184003 OR <<425919003 OR 111033008 OR 15182000 OR <<277949001 OR 75046006 OR 204062004 OR 204061006 OR <<702611008 OR 371313002 OR <<47032000 OR 230562000 OR <<127551000119100 OR <<172069000 OR <<68186003 OR 230561007 OR 67876003 OR 38353004 OR <<50429003 OR 230594005 OR 943181000000103 OR <<80690008 OR <<52448006 OR <<6118003 OR <<237733001 OR 81308009 OR <<271986005 OR 23853001 OR <<230298007 OR <<230244008 OR 58795000 OR 733490006 OR <<253180007 OR <<55999004 OR 38209007 OR 76349003 OR 16652001 OR 33010005 OR <<33010005 OR <<448045004 OR 719395001 OR 66637005 OR 410057002 OR <<363235000 OR 30915001 OR <<230745008 OR 718713000 OR <<718713000 OR <<389100007 OR 43100002 OR 195239002 OR <<192781003 OR <<22811006 OR <<230192003 OR 14210003 OR <<204036008 OR 38023001 OR 52330001 OR <<91138005 OR 396338004 OR <<396338004 OR 16851005 OR <<37340000 OR 70528007 OR 423144007 OR <<73297009 OR 192904000 OR <<192906003 OR <<192845009 OR <<257277002 OR <<726051002 OR <<193237003 OR 82077006 OR <<82077006 OR 75072002 OR <<75072002 OR 253098009 OR <<128213006 OR 302887008 OR 61200008 OR <<29426003 OR 609557004 OR 77659000 OR <<60389000 OR <<49049000 OR 699184009 OR <<24473007 OR 751371000000107 OR 193177003 OR <<230696001 OR 230329009 OR <<230329009 OR 266253001 OR <<22451001 OR 984681000000101 OR <<54304004 OR <<230363006 OR 129608008 OR <<7379000 OR 719717006 OR <<11538006 OR 192788009 OR 193195000 OR <<230292008 OR 508171000000105 OR 16576004 OR <<192967009 OR	Earliest <= AUDITEND_DAT

		<<192965001 OR 58459009 OR 48522003 OR <<91502009 OR 62158001 OR 15258001 OR 55776008 OR <<26594006 OR <<111496009 OR 230226000 OR <<431034009 OR <<472916000 OR <<29774004 OR 195199008 OR 193497004 OR 21007002 OR 71779008) MINUS (16561007 OR 240078009 OR <<253185002 OR <<58795000 OR 193230001 OR 111506000 OR 702383005 OR 726107008 OR 733489002 OR 230358007 OR <<5724005 OR 86765009 OR 67747009 OR <<16110005 OR <<1534008 OR <<609609004 OR 415176004 OR 698846009 OR <<17940001)	
		(Chronic neurological disease, including Stroke/Tia, Cerebral Palsy and MS codes)	
Note	The above used to be represented by three separate code groups, but have now been merged		
33	<a href="#">CNSGROUP_DAT</a>	Date of CNSGROUP_COD	Chosen Record
34	PNSPLEEN_COD	(861371000000102 OR 234510005 OR <<707147002 OR 262821002 OR <<396331005 OR 275404008 OR 174789007 OR 195340002 OR 161626009 OR 234392002 OR 1027611000000101 OR 58381000 OR <<205735005 OR 23761004 OR <<417357006 OR 300564004 OR 210193004 OR <<234319005 OR 82893001 OR 56338005 OR <<22996003 OR <<81704009 OR <<40108008 OR 61535006) MINUS (11973000 OR <<67061007 OR <<67097003 OR 10806241000119108 OR 72331000119105)	Earliest <= AUDITEND_DAT
		(Asplenia or Dysfunction of the Spleen codes)	
35	PNSPLEEN_DAT	Date of PNSPLEEN_COD	Chosen Record
36	BMI_COD	846931000000101 OR 60621009	LATEST <= AUDITEND_DAT WHERE BMI_VAL <> NULL
37	BMI_DAT	Date of BMI COD	Chosen Record
38	BMI_VAL	Value of BMI_COD	Chosen Record

39	BMI_STAGE	<<6497000 OR <48499001 OR <<35425004 OR 914721000000105 OR 914731000000107 OR 914741000000103	LATEST <= AUDITEND_DAT
		(All BMI coded terms)	
40	BMI_STAGE_DAT	Date of BMI_STAGE	Chosen Record
41	SEV_OBESITY	408512008 OR 914741000000103	Most recent of BMI_STAGE_DAT
		(Severe Obesity code recorded)	
		Note: this code is only selected if it is the latest of the codes within BMI_STAGE (and therefore also SEV_OBESITY_DAT must be <= AUDITEND_DAT)	
42	SEV_OBESITY_DAT	Date of SEV_OBESITY	Chosen.Code
43	DMRES_COD	315051004	LATEST <= AUDITEND_DAT
		(Diabetes resolved codes)	
		Note: these codes are to be used in partnership with DIAB_COD to assess whether the diagnosis of diabetes has resolved	
44	DMRES_DAT	Date of DMRES_COD	Chosen Code
45	PAED_BMICENT	(<<446974000 OR <301331008) MINUS (<<6497000 OR <48499001 OR <<35425004)	LATEST <= AUDITEND_DAT
		(All Child BMI centile coded terms)	
46	PAED_BMICENT_DAT	Date of PAED_BMICENT	Chosen code
47	PAED_SEV_OBESITY	921051000000109	Most recent of PAED_BMICENT
		(Paediatric Severe Obesity code recorded)	
		Note: this code is only selected if it is the latest of the codes within PAED_BMICENT (and therefore also PAED_SEV_OBESITY_DAT must be <= AUDITEND_DAT)	
48	PAED_SEV_OBESITY_DAT	Date of PAED_SEV_OBESITY	Chosen code

## Vaccinations

Field Number	Field name	Data item	Qualifying criteria
49	FLUVAX_COD	(<<412511000000102 OR <<86198006 OR <<955641000000103 OR <<1066171000000108 OR <<955691000000108 OR <<955701000000108) <b>MINUS</b> (<<202301000000106 OR <<442333005 OR <<202311000000108)  (Influenza vaccination administration codes)	Latest > 31/08/2018 and <= AUDITEND_DAT
50	<a href="#">FLUVAX_DAT</a>	Date of FLUVAX_COD	Chosen Record
Note	A Flu Read code recorded in the timeframe is counted as a Seasonal Influenza vaccination given. Note some GP suppliers use a vaccination “node” recording system and the equivalent codes can be substituted. See the associated spreadsheet for detailed concept descriptions.		
51	FLURX_COD	10859911000001105 OR 3255011000001100 OR 4365711000001104 OR 22704311000001109 OR 34680411000001107 OR 27114211000001105 OR 34783811000001108 OR 3255311000001102  (All Influenza vaccination medication codes)	Latest >31/8/2018 and <= AUDITEND_DAT
52	<a href="#">FLURX_DAT</a>	Date of FLURX_COD	Chosen Record
Note	A Flu Prescription Read code recorded in the timeframe is counted as a Seasonal Influenza vaccination given. Note some GP suppliers use a vaccination “node” recording system and the equivalent codes can be substituted. See the associated spreadsheet for detailed concept descriptions.		
53	FLUVAXOHP_COD	<<955641000000103 OR <<1066171000000108 OR <<955701000000108 OR <<955691000000108  Influenza vaccination by other health care provider codes	Latest >31/8/2018 and <= AUDITEND_DAT
54	<a href="#">FLUVAXOHP_DAT</a>	DATE OF FLUVAXOHP_COD	Chosen Record
Note	These codes are a subset of the above FLUVAX code group		
55	LAIVRX_COD	27114211000001105	Latest >31/8/2018 and <= AUDITEND_DAT

		<i>Live attenuated influenza vaccine medication codes (Nasal Fluenz Tetra)</i>	
56	LAIVRX_DAT	DATE OF LAIVRX_COD	Chosen Record
57	ATIVRX_COD	34783811000001108	Latest >31/8/2018 and <= AUDITEND_DAT
		<i>Adjuvanted Trivalent vaccination medication codes (Fluad)</i>	
58	ATIVRX_DAT	DATE OF ATIVRX_COD	Chosen Record
59	NONATIVRX_COD	3255311000001102	Latest >31/8/2018 and <= AUDITEND_DAT
		<i>Non Adjuvanted Trivalent vaccination medication codes (Agrippal)</i>	
60	NONATIVRX_DAT	DATE OF NONATIVRX_COD	Chosen Record
61	QUADIVRX_COD	10859911000001105 OR 3255011000001100 OR 4365711000001104 OR 22704311000001109 OR 34680411000001107	Latest >31/8/2018 and <= AUDITEND_DAT
		<i>Quadrivalent inactivated influenza vaccine (Fluarix, Masta, Mylan, Sanofi)</i>	
62	QUADIVRX_DAT	DATE OF QUADIVRX_COD	Chosen Record
63	LAIV_COD	884861000000100 OR <<868241000000109 OR 884881000000109 OR 955661000000102 OR 1037311000000106 OR 955681000000106 OR 1037331000000103	Latest >31/8/2018 and <= AUDITEND_DAT
		<i>Administration of intranasal influenza vaccination</i>	
64	LAIV_DAT	DATE OF LAIV_COD	Chosen Record

**Contraindications, Declines, No Consent, Allergies**

Field Number	Field name	Data item	Qualifying criteria
65	CONTRA_COD	<<390796006 OR <<294647003 OR <<420113004	Latest <= AUDITEND_DAT
		(Influenza vaccination contraindication or intolerance codes)	
Note	This information is not taken into account for the Uptake survey and is presented in CHART for information to practices		
66	CONTRA_DAT	Date of CONTRA_COD	Chosen Record
67	DECL_COD	<<315640000 OR <<171272004	Latest >=START_DAT and <= AUDITEND_DAT
		(Influenza vaccination declined)	
68	<a href="#">DECL_DAT</a>	Date of DECL_COD	Chosen Record
69	NOCONS_COD	<<171272004 MINUS 515371000000101	Latest > =START_DAT and <= AUDITEND_DAT
		(No Consent codes)	
70	<a href="#">NOCONS_DAT</a>	Date of NOCONS_COD	Chosen Record
71	ALLERG_COD	<<294647003 OR <<420113004	Latest<= AUDITEND_DAT
		(Influenza vaccination allergy)	
Note	This information is not taken into account for the Uptake survey and is presented in CHART for information to practices		
72	ALLERG_DAT	Date of ALLERG_COD	Chosen Record

## Carers

Field Number	Field name	Data item	Qualifying criteria
73	CARER_COD	229774002 OR <<229774002 OR <<824401000000105 OR <<288231000119101 OR <<151921000119105 OR <<407542009 OR <<224484003	Latest<= AUDITEND_DAT
		(Carer codes)	
Note	The patient is only classed as a carer, if the latest code is CARER. A NOTCARER code may be added to the record when the patient is no longer a carer.		
74	<a href="#">CARER_DAT</a>	Date of CARER_COD	Chosen Record
75	NOTCARER_COD	<<199361000000101 OR <<506401000000109	Latest<= AUDITEND_DAT
		(No longer a carer codes)	
Note	The patient is only classed as a carer, if the latest code is CARER . A NOTCARER code may be added to the record when the patient is no longer a carer.		
76	<a href="#">NOTCARER_DAT</a>	Date of NOTCARER_COD	Chosen Record



## Pregnancy

Field Number	Field name	Data item	Qualifying criteria
77	PREGDEL_COD	<p>(&lt;&lt;469431000000102 OR 427991000000106 OR 416571000000106 OR 480551000000102 OR 427511000000106 OR 439801000000103 OR 411131000000109 OR 463841000000106 OR 426631000000100 OR 452521000000103 OR &lt;&lt;424525001 OR &lt;&lt;276445008 OR &lt;&lt;370352001 OR &lt;&lt;364587008 OR &lt;&lt;199745000 OR &lt;&lt;609496007 OR &lt;&lt;451014004 OR &lt;&lt;198832001 OR &lt;&lt;118215003 OR &lt;&lt;236973005 OR &lt;&lt;72059007 OR &lt;&lt;55052008 OR &lt;&lt;362972006 OR &lt;&lt;362973001 OR &lt;&lt;236883005 OR &lt;&lt;118185001 OR &lt;&lt;366321006 OR &lt;386216000 OR &lt;&lt;177128002 OR &lt;&lt;176849008 OR 169960003 OR &lt;&lt;84275009 OR &lt;&lt;450640001 OR &lt;&lt;236991000 OR 236979009 OR &lt;&lt;133906008 OR &lt;&lt;237014000 OR &lt;&lt;363681007 OR &lt;&lt;18114009 OR &lt;&lt;82688001 OR &lt;&lt;372456005 OR &lt;&lt;9221009 OR &lt;&lt;386639001) MINUS (439351000000106 OR &lt;&lt;243828009 OR 49794002 OR &lt;&lt;127376007 OR 289783000 OR 18909006 OR 206057002 OR 53881005 OR 237036002 OR 200101003 OR 200113008 OR 289257009 OR 60001007 OR &lt;&lt;106109006 OR 200058004 OR 200065007 OR 200051005 OR 200107004 OR 64171002 OR 25053000 OR &lt;&lt;65409004 OR 29847008 OR 51154004 OR &lt;&lt;118212000 OR 102874004 OR &lt;&lt;243829001 OR 200069001 OR 237245006)</p> <p>(Pregnancy or Delivery codes recorded between 1<sup>st</sup> January 2018 and 31<sup>st</sup> August 2018 (inclusive))</p>	Latest >= 01/01/2018 AND < START_DAT
Note	This code group contains pregnancy, delivery, miscarriage and termination Read codes. A presence of one of these codes indicates that the patient has been, or is currently pregnant. This group of patients are checked to see if the latest code is a pregnancy code in PREG_COD to determine if the patient is still pregnant on 31st August 2018. A proxy eight month period has been used before the Start date of 1st September. This assumes that the first entry of any pregnancy code is likely to be entered, at the earliest, when the patient is at least four weeks pregnant		
78	<a href="#">PREGDEL_DAT</a>	Date of PREGDEL_COD	Chosen Record

79	PREG_COD	(<<469431000000102 OR 427991000000106 OR 416571000000106 OR 480551000000102 OR 427511000000106 OR 439801000000103 OR 411131000000109 OR 463841000000106 OR 426631000000100 OR 452521000000103 OR <<424525001 OR <<276445008 OR <<370352001 OR <<609496007 OR <<55052008 OR <<118185001 OR 289257009 OR <<289257009 OR <<18114009) MINUS (398831000000101 OR 479451000000101 OR 82661006 OR <<243828009 OR 199677008 OR 199244000 OR 198627000 OR 198917009 OR 198922009 OR 198927003 OR 199099004 OR 199100007 OR 199102004 OR 276580005 OR 49794002 OR <<286996009 OR 249037004 OR <<127376007 OR 199482005 OR 199483000 OR 79290002 OR 289783000 OR 87605005 OR 445548006 OR 118215003 OR <<48782003 OR 198617006 OR <<289261003 OR 199225007 OR 199252002 OR 307337003 OR 34801009 OR <<42571002 OR 199694005 OR 199121007 OR 199122000 OR 199124004 OR 424009001 OR 199577000 OR <<302080006 OR <<289761004 OR <<289258004 OR <<289216002 OR <<249032005 OR <<289232004 OR <<14022007 OR <<199405005 OR <<416402001 OR <<102500002 OR 289677009 OR 289678004 OR 53881005 OR 81448000 OR 199127006 OR 199128001 OR 199130004 OR 199375007 OR 199087006 OR 237036002 OR 199427001 OR <<276508000 OR 199027009 OR <<67480003 OR 199409004 OR 35656003 OR <<38010008 OR 17285009 OR 234380002 OR 307338008 OR <<118216002 OR 199422007 OR 199032005 OR 199117000 OR 106007006 OR 200471007 OR <<87383005 OR 267340006 OR 199192005 OR 198624007 OR 198626009 OR 60000008 OR 199022003 OR 199418002 OR <<289256000 OR 199380003 OR 69532007 OR 237242009 OR 60001007 OR <<106109006 OR 199358001 OR 200288002 OR 200289005 OR 200291002 OR <<15400003 OR 199653002 OR 199413006 OR 9899009 OR <<118212000 OR <<106010004 OR 199093003 OR 199096006 OR 198905007 OR <<198899007 OR 198910006 OR <<169952004 OR <<51195001 OR 200351002 OR 200352009 OR 199646006 OR 102874004 OR <<267272006 OR <<47821001 OR 199063009 OR 152231000119106 OR <<363681007 OR <<9780006 OR 127362006 OR 82634006 OR 22879003 OR 55543007 OR 60328005 OR 30653008 OR 2239004 OR 33348006 OR 80856001 OR 17618008 OR 6867004 OR 15592002 OR 248937008 OR 248896000 OR 199384007 OR <<109894007 OR <<371374003 OR	Latest >= 01/01/2018 AND < START_DATE
----	----------	---	--

PRIMIS: Seasonal Flu

		199468005 OR 199469002 OR 199471002 OR 199582007 OR <<243829001 OR <<15504009 OR 17433009 OR <<41957003 OR 198620003 OR 276881003 OR <<84007008 OR 199889008 OR 289697004 OR 289696008 OR 10761391000119102 OR 199362007 OR 79586000 OR 237254009 OR 199344003 OR <<27215002 OR 199463001 OR 199895009 OR 288261009)	
		(Pregnancy codes recorded between 1 <sup>st</sup> January 2018 and 31 <sup>st</sup> August 2018 (inclusive))	
Note	This code group is used in combination with PREGDEL above to determine if the patient is still pregnant on 31 <sup>st</sup> August 2018. If the latest code recorded out of PREGDEL_COD is PREG_COD, then the patient is regarded as still pregnant		
80	<a href="#">PREG_DAT</a>	Date of PREG_COD	Chosen record
81	PREG2_COD	Code string as PREG_COD (Pregnancy codes recorded between 1 <sup>st</sup> September 2018 and 28 <sup>th</sup> February 2019(inclusive))	Latest >= START_DATE AND <= AUDITEND_DAT
Note	This code group is the same as PREG_COD. A Read code recorded within the timeframe indicates that the patient is pregnant or has been pregnant at some point from 1 <sup>st</sup> September 2018. The patient has therefore been eligible at some point during the stated timeframe. For this reason there is no requirement to check if the patient has a record of a delivery, miscarriage or termination Read code.		
82	<a href="#">PREG2_DAT</a>	Date of PREG2_COD	Chosen record

## Ethnicity

Field Number	Field name	Data item	Qualifying criteria
83	ETH2001_WHIBRIT_COD	<<92391000000108 OR 92571000000102 OR 110761000000106 OR 92561000000109 OR 92541000000108 OR 93921000000101 OR 92551000000106	Latest<= AUDITEND_DAT
		<i>White British Ethnicity</i>	
84	ETH2001_WHIBRIT_DAT	Date of ETH2001_WHIBRIT_COD	
85	ETH2001_WHIRISH_COD	<<92401000000106	Latest<= AUDITEND_DAT
		<i>White Irish Ethnicity</i>	
86	ETH2001_WHIRISH_DAT	Date of ETH2001_WHIRISH_COD	
87	ETH2001_WHIOTHER_COD	88971000000106 OR 88951000000102 OR 93991000000103 OR 88961000000104 OR 94001000000108 OR 92791000000109 OR 93931000000104 OR 93941000000108 OR 88931000000109 OR 88911000000101 OR 93961000000109 OR 93981000000100 OR 94021000000104 OR 94031000000102 OR 94011000000105 OR 92411000000108 OR 94041000000106 OR 94051000000109 OR 88941000000100 OR 88981000000108 OR 88921000000107 OR 110401000000103 OR 93951000000106	Latest<= AUDITEND_DAT
		<i>White – Any other White background Ethnicity</i>	
88	ETH2001_WHIOTHER_DAT	Date of ETH2001_WHIOTHER_COD	
89	ETH2001_MXDWHIBLKCAR_COD	92421000000102	Latest<= AUDITEND_DAT
		<i>Mixed – White and Black Caribbean Ethnicity</i>	

90	ETH2001_MXDWHIBLKCAR_DAT	Date of ETH2001_MXDWHIBLKCAR_COD	
91	ETH2001_MXDWHIBLKAFR_COD	92431000000100	Latest<= AUDITEND_DAT
		<i>Mixed – White and Black African Ethnicity</i>	
92	ETH2001_MXDWHIBLKAFR_DAT	Date of ETH2001_MXDWHIBLKAFR_COD	
93	ETH2001_MXDWHIASN_COD	92441000000109	Latest<= AUDITEND_DAT
		<i>Mixed – White and Asian Ethnicity</i>	
94	ETH2001_MXDWHIASN_DAT	Date of ETH2001_MXDWHIASN_COD	
95	ETH2001_MXDOTHER_COD	92631000000103 OR 92721000000106 OR 186023009 OR <<92451000000107	Latest<= AUDITEND_DAT
		<i>Mixed – Any other mixed background Ethnicity</i>	
96	ETH2001_MXDOTHER_DAT	Date of ETH2001_MXDOTHER_COD	
97	ETH2001_ASNINDIAN_COD	110751000000108	Latest<= AUDITEND_DAT
		<i>Asian or Asian British – Indian Ethnicity</i>	
98	ETH2001_ASNINDIAN_DAT	Date of ETH2001_ASNINDIAN_COD	
99	ETH2001_ASNPAK_COD	92461000000105	Latest<= AUDITEND_DAT
		<i>Asian or Asian British – Pakistani Ethnicity</i>	

100	ETH2001_ASNPAK_DAT	Date of ETH2001_ASNPAK_COD	
101	ETH2001_ASNBANG_COD	92471000000103	Latest<= AUDITEND_DAT
		<i>Asian or Asian British – Bangladeshi Ethnicity</i>	
102	ETH2001_ASNBANG_DAT	Date of ETH2001_ASNBANG_COD	
103	ETH2001_ASNOTHER_COD	(92771000000105 OR 92761000000103 OR 92781000000107 OR <<92481000000101 OR 92751000000101) MINUS 92631000000103	Latest<= AUDITEND_DAT
		<i>Asian or Asian British – Any other Asian background Ethnicity</i>	
104	ETH2001_ASNOTHER_DAT	Date of ETH2001_ASNOTHER_COD	
105	ETH2001_BLKCARIB_COD	107691000000105	Latest<= AUDITEND_DAT
		<i>Black or Black British – Caribbean Ethnicity</i>	
106	ETH2001_BLKCARIB_DAT	Date of ETH2001_BLKCARIB_COD	
107	ETH2001_BLKAFRIC_COD	92491000000104 OR 92731000000108 OR 92711000000100	Latest<= AUDITEND_DAT
		<i>Black or Black British – African Ethnicity</i>	
108	ETH2001_BLKAFRIC_DAT	Date of ETH2001_BLKAFRIC_COD	
109	ETH2001_BLKOTH_COD	110791000000100 OR 92501000000105 OR 92741000000104	Latest<= AUDITEND_DAT
		<i>Black or Black British – Any other Black background Ethnicity</i>	
110	ETH2001_BLKOTH_DAT	Date of ETH2001_BLKOTH_COD	

111	ETH2001_CHINESE_COD	92511000000107	Latest<= AUDITEND_DAT
		<i>Other ethnic groups – Chinese Ethnicity</i>	
112	ETH2001_CHINESE_DAT	Date of ETH2001_CHINESE_COD	
113	ETH2001_OTHER_COD	94151000000105 OR 89001000000105 OR 89011000000107 OR 94081000000103 OR 94091000000101 OR 94111000000106 OR 94071000000100 OR 94101000000109 OR 94121000000100 OR 94061000000107 OR 92521000000101 OR 89021000000101	Latest<= AUDITEND_DAT
		<i>Other ethnic groups – Any other ethnic group Ethnicity</i>	
114	ETH2001_OTHER_DAT	Date of ETH2001_OTHER_COD	
115	NON_ETH2001_COD	(<<976571000000100 OR <976571000000100 OR <<976591000000101 OR <976591000000101 OR <<976611000000109 OR <976611000000109 OR <<372148003 OR <<415229000 OR <415229000) MINUS (365455004 OR 415226007)	Latest<= AUDITEND_DAT
		<i>Any other ethnicity code</i>	
116	NON_ETH2001_DAT	Date of NON_ETH2001_COD	
117	ETH_NOTGIPTREF_COD	312860002	Latest<= AUDITEND_DAT
		<i>Ethnicity not given – patient refused</i>	
118	ETH_NOTGIPTREF_DAT	Date of ETH_NOTGIPTREF_COD	
119	ETH_NOTSTATED_COD	92531000000104 OR 415226007	Latest<= AUDITEND_DAT
		<i>Ethnicity not stated</i>	
120	ETH_NOTSTATED_DAT	Date of ETH_NOTSTATED_COD	
121	ETH_NORECORD_COD	312861003	Latest<= AUDITEND_DAT
		<i>Ethnicity no record</i>	
122	ETH_NORECORD_DAT	Date of ETH_NORECORD_COD	

### 3) Bandings and Groupings

#### Rulesets to define grouping of data extraction criteria

1	Age Bands	
	Band 1	PAT_AGE >=65 and <120 at REF_DAT
	Band 2	PAT_AGE >= 6months < 2 at RUN_DAT
	Band 3	PAT_AGE >=2 and <5 at RUN_DAT
	Band 4	PAT_AGE >=5 and <16 at RUN_DAT
	Band 5	PAT_AGE >=16 at RUN_DAT and <65 at REF_DAT*
	Band 6	PAT_STARTAGE >=4 and <10 at CHILD_DAT

**Note:** Denominators should be defined by their age on date of extraction, but for the upper limit of the '16 to under 65' age band and for the 'aged 65 and over' age band, they should be defined by their age at 31 March 2019 (this fits with the policy i.e. all those aged 65 years or older by the 31 March 2019 are eligible to receive vaccine in the 2018/19 vaccination programme). Band 6 is used to assist defining those children who may have been vaccinated in schools.

2	Gender Bands	
	Band 1 (male)	PAT_SEX = M
	Band 2 (female)	PAT_SEX = F
	Band 3 (unspecified)	PAT_SEX = U OR PAT_SEX = NULL
	Band 4 (unknown)	<i>Please see note below</i>

**Note:** The above gender roles have been written from a MIQUEST perspective where gender can only be M, F, U or NULL. The MIQUEST manual states that U represents "unspecified or unknown". Therefore MIQUEST cannot distinguish between bands 3 and 4 above, and so only band 3 is populated.

If, when reporting flu figures, system suppliers are able to distinguish between unspecified genders and unknown genders, then they should use both bands 3 and 4.



<b>3</b>	<b>Ethnicity</b>		
<b>Rule</b>		<b>True</b>	<b>False</b>
<b>1</b>	ETH2001_WHIBRIT_DAT >= DATES OF ETHNICITY CATEGORIES IN TABLE A	White - British	Next
<b>2</b>	ETH2001_WHIRISH_DAT >= DATES OF ETHNICITY CATEGORIES IN TABLE A	White - Irish	Next
<b>3</b>	ETH2001_WHIOOTHER_DAT >= DATES OF ETHNICITY CATEGORIES IN TABLE A	White - Any other White background	Next
<b>4</b>	ETH2001_MXDWHIBLKCAR_DAT >= DATES OF ETHNICITY CATEGORIES IN TABLE A	Mixed - White and Black Caribbean	Next
<b>5</b>	ETH2001_MXDWHIBLKAFR_DAT >= DATES OF ETHNICITY CATEGORIES IN TABLE A	Mixed - White and Black African	Next
<b>6</b>	ETH2001_MXDWHIASN_DAT >= DATES OF ETHNICITY CATEGORIES IN TABLE A	Mixed - White and Asian	Next
<b>7</b>	ETH2001_MXDOTHER_DAT >= DATES OF ETHNICITY CATEGORIES IN TABLE A	Mixed - Any other mixed background	Next
<b>8</b>	ETH2001_ASNINDIAN_DAT >= DATES OF ETHNICITY CATEGORIES IN TABLE A	Asian or Asian British - Indian	Next
<b>9</b>	ETH2001_ASNPAK_DAT >= DATES OF ETHNICITY CATEGORIES IN TABLE A	Asian or Asian British - Pakistani	Next
<b>10</b>	ETH2001_ASNBANG_DAT >= DATES OF ETHNICITY CATEGORIES IN TABLE A	Asian or Asian British - Bangladeshi	Next
<b>11</b>	ETH2001_ASNOTHER_DAT >= DATES OF ETHNICITY CATEGORIES IN TABLE A	Asian or Asian British - Any other Asian background	Next
<b>12</b>	ETH2001_BLKCARIB_DAT >= DATES OF ETHNICITY CATEGORIES IN TABLE A	Black or Black British - Caribbean	Next
<b>13</b>	ETH2001_BLKAFRIC_DAT >= DATES OF ETHNICITY CATEGORIES IN TABLE A	Black or Black British - African	Next
<b>14</b>	ETH2001_BLKOTH_DAT >= DATES OF ETHNICITY CATEGORIES IN TABLE A	Black or Black British - Any other Black background	Next
<b>15</b>	ETH2001_CHINESE_DAT >= DATES OF ETHNICITY CATEGORIES IN TABLE A	Other ethnic groups - Chinese	Next
<b>16</b>	ETH2001_OTHER_DAT >= DATES OF ETHNICITY CATEGORIES IN TABLE A	Other ethnic groups - Any other ethnic group	Next
<b>17</b>	NON_ETH2001_DAT <> NULL	Patients with any other ethnicity code	Next
<b>18</b>	ETH_NOTGIVPTREF_DAT <> NULL	Ethnicity not given - patient refused	Next
<b>19</b>	ETH_NOTSTATED_DAT <> NULL	Ethnicity not stated	Ethnicity not recorded

Note – Band 20 represents “Ethnicity not recorded”. The rules will allocate a patient to this band if they have no ethnicity code at all, or if they only have an “Ethnicity not recorded” code on their record.

The above rules ensure that if a patient has given their ethnicity, then at a later date, has either a “refused”, “not stated” or “not known” ethnicity code, the earlier ethnicity code will be used.

In the unlikely event that a patient has two of the ethnicity codes in Table A on the same day, the code that appears highest up box Table A will be used.

**TABLE A**

ETH2001\_WHIBRIT\_DAT  
 ETH2001\_WHIIIRISH\_DAT  
 ETH2001\_WHIOOTHER\_DAT  
 ETH2001\_MXDWHIBLKCAR\_DAT  
 ETH2001\_MXDWHIBLKAFR\_DAT  
 ETH2001\_MXDWHIASN\_DAT  
 ETH2001\_MXDOTHER\_DAT  
 ETH2001\_ASNINDIAN\_DAT  
 ETH2001\_ASNPAK\_DAT  
 ETH2001\_ASNBANG\_DAT  
 ETH2001\_ASNOTHER\_DAT  
 ETH2001\_BLKCARIB\_DAT  
 ETH2001\_BLKAFRIC\_DAT  
 ETH2001\_BLKOTH\_DAT  
 ETH2001\_CHINESE\_DAT  
 ETH2001\_OTHER\_DAT

Where a patient has a “Refused” code, this is used even if there are later dated “Not stated” or “Not known” codes. Similarly if a patient has a “Not stated” code, this is used even if there is a later dated “not known” code.

4	Patients with Immunosuppression		True	False
	IMMUNO_GROUP	IF IMMRX_DAT <> NULL	Select	Next
		IF IMMDX_DAT <> NULL	Select	Reject

**Note:** The patient can have either a prescription code or a diagnosis code to be included in the At Risk Group

5	Patients with CKD		True	False
	CKD_GROUP	IF CKD_DAT <> NULL (diagnoses)	Select	Next
		IF CKD15_DAT = NULL (NO STAGES)	Reject	Next
		IF CKD35_DAT >= CKD15_DAT	Select	Reject

**Note:** The patient can have a Chronic Kidney disease code recorded or a Chronic Kidney disease Stage code. However if just the latter, then the latest Stage code must be Stage 3 to 5 .

6	Patients with Asthma		True	False
	AST_GROUP	IF ASTADM_DAT <> NULL	Select	Next
		(IF AST_DAT <> NULL) AND ((IF ASTMED_DAT <> NULL) OR (IF ASTRX_DAT <> NULL))	Select	Reject

**Note:** The patient can have an Emergency Asthma admission code only to be included in the At Risk Group.

Otherwise, the patient must have an Asthma diagnosis code AND either a prescription code or a Read code indicating the patient is on medication for oral or inhaled steroids

<b>7</b>	<b>Patients with CNS Disease (including Stroke/TIA)</b>		<b>True</b>	<b>False</b>
	CNS_GROUP	IF CNSGROUP_DAT <> NULL	<i>Select</i>	<i>Reject</i>

**Note:** This group contains a large number of codes which was previously split into three groups for MIQUEST. PRIMIS have now merged the three groups but have retained the logical grouping's name.

<b>8</b>	<b>Patients who have Chronic Respiratory Disease</b>		<b>True</b>	<b>False</b>
	RESP_GROUP	IF AST_GROUP <> NULL	<i>Select</i>	<i>Next</i>
		IF RESP_DAT <> NULL	<i>Select</i>	<i>Reject</i>

<b>9</b>	<b>Patients with Morbid Obesity</b>		<b>True</b>	<b>False</b>
	BMI_GROUP	IF AGE AT AUDITEND_DAT <18YRS AND PAED_SEV_OBESITY_DAT <> NULL	<i>Select</i>	<i>Next</i>
		IF AGE AT AUDITEND_DAT <18YRS	<i>Reject</i>	<i>Next</i>
		IF SEV_OBESITY_DAT > BMI_DAT	<i>Select</i>	<i>Next</i>
		IF BMI_VAL >=40	<i>Select</i>	<i>Reject</i>

<b>10</b>	<b>Patients with Diabetes</b>		<b>True</b>	<b>False</b>
	DIAB_GROUP	IF DIAB_DAT > DMRES_DAT	<i>Select</i>	<i>Reject</i>

**Note:** If patients have a more recent "diabetes resolved" code than a diabetes diagnosis code they will not be included in DIAB\_GROUP

<b>11</b>	<b>Patients in Any Clinical Risk Group</b>		<b>True</b>	<b>False</b>
	ATRISK_GROUP	IF IMMUNOGROUP <> NULL	<i>Select</i>	<i>Next</i>
		IF CKD_GROUP <> NULL	<i>Select</i>	<i>Next</i>
		IF RESP_GROUP <> NULL	<i>Select</i>	<i>Next</i>
		IF DIAB_GROUP <> NULL	<i>Select</i>	<i>Next</i>
		IF CLD_DAT <> NULL	<i>Select</i>	<i>Next</i>
		IF CNS_GROUP <> NULL	<i>Select</i>	<i>Next</i>
		IF CHD_DAT <> NULL	<i>Select</i>	<i>Next</i>
		IF PNSPLEEN_DAT <> NULL	<i>Select</i>	<i>Reject</i>

**Note:** Patients who are in the Pregnant, Carer, or 65 and over At Risk Groups are **not** included here unless they also fall into one of the above Clinical At Risk Groups. Note also that the BMI\_GROUP representing Morbid Obesity have now been removed from this table to permit assessment for those indicators relating to Morbid Obesity in the presence or absence of other risk factors.

12	<b>Pregnant on 31/08/2018 or becoming pregnant between 01/09/2018 and 28/02/2019 (inclusive)</b>		<b>True</b>	<b>False</b>
	PREG_GROUP	IF PREG2<> NULL	<i>Select</i>	<i>Next</i>
		(IF PREGDEL_DAT<> NULL) AND ((IF PREG_DAT <> NULL) AND (PREG_DAT >= PREGDEL_DAT))	<i>Select</i>	<i>Reject</i>

**Note:** There are two different groups that are combined here:

- Group 1 ("PREG2") is any patient that has a pregnancy Read code recorded from 1st September 2018 to 28<sup>th</sup> February 2019.
- Group 2 is any patient with a pregnancy, delivered, miscarriage or termination code where the latest code recorded between 01/01/2018 and 31/08/2018 is a pregnancy code

Both of these groups are then combined to capture patients that are pregnant at a specified point in time or become pregnant from a specified point

13	<b>Patients who have received Influenza Vaccination</b>		<b>True</b>	<b>False</b>
	FLUVAX_GROUP	IF FLUVAX_DAT <> NULL	<i>Select</i>	<i>Next</i>
		IF FLURX_DAT <> NULL	<i>Select</i>	<i>Reject</i>

**Note:** Combine any Influenza Vaccination Read code given with any Influenza prescription code issues

14	<b>Patients who have not had a vaccination due to refusal/declining</b>		<b>True</b>	<b>False</b>
	FLUDECLINED_GROUP	IF FLUVAX_DAT <> NULL OR FLURX_DAT <> NULL	<i>Reject</i>	<i>Next</i>
		IF DECL_DAT <> NULL OR NOCONS_DAT <> NULL	<i>Select</i>	<i>Reject</i>

**Note:** We are looking for any patient who has NOT had a vaccination in the current flu campaign and who has either a declined or a no consent Read code on their medical record.

15	<b>Patients who have an unstated vaccination type</b>		<b>True</b>	<b>False</b>
	UNSTATVACC_GROUP	IF FLURX_DAT <> NULL	<i>Reject</i>	<i>Next</i>
		IF FLUVAX_DAT <> NULL	<i>Next</i>	<i>Reject</i>
		IF LAIV_DAT <> NULL	<i>Reject</i>	<i>Select</i>

## Indicators 1a, 1b, 1c, 1d, 1e, 1f and 1g

### 1 Vaccination status of Practice Population

Output to be broken down by Age bands 1 – 5 except:

- for numerator 1d for which only Bands 1 & 5 are displayed
- for numerator 1e for which only Bands 1 & 5 are displayed
- for numerator 1f for which only Band 1 is displayed
- for numerator 1g for which only Bands 1 & 5 are displayed

#### DENOMINATOR:

##### a) Registration status

<u><b>Current registration status</b></u>	<u><b>Qualifying criteria</b></u>
Currently registered for GMS	Most recent registration date <= (RUN_DAT)

##### b) Demographic status

<u><b>Action</b></u>	<u><b>Qualifying criteria</b></u>
Excluded	Age < 6 months at (RUN_DAT)

#### NUMERATORS:

1a	Seasonal Influenza vaccination given from 01/09/2018	<b>True</b>	<b>False</b>
	IF FLUVAX_GROUP <> NULL	<i>Select</i>	<i>Reject</i>
1b	Seasonal Influenza vaccination refused/declined for flu program starting 01/09/2018	<b>True</b>	<b>False</b>
	IF FLUDECLINED_GROUP <> NULL	<i>Select</i>	<i>Reject</i>
1c	Seasonal Influenza vaccination given by other healthcare provider from 01/09/2018	<b>True</b>	<b>False</b>
	IF FLUVAXOHP_DAT <> NULL	<i>Select</i>	<i>Reject</i>
1d	Quadrivalent Seasonal Influenza vaccination given from 01/09/2018	<b>True</b>	<b>False</b>
	IF QUADIVRX_DAT <> NULL	<i>Select</i>	<i>Reject</i>
<i>Note only to be displayed for bands 1 &amp; 5</i>			

1e	Trivalent non adjuvant Seasonal Influenza vaccination given from 01/09/2018	<b>True</b>	<b>False</b>
	IF NONATIVRX_DAT <> NULL	<i>Select</i>	<i>Reject</i>
<i>Note only to be displayed for bands 1 &amp; 5</i>			

1f	Adjuvant trivalent Seasonal Influenza vaccination given from 01/09/2018	<b>True</b>	<b>False</b>
	IF ATIVRX_DAT <> NULL	<i>Select</i>	<i>Reject</i>
<i>Note only display for band 1</i>			

1g	Unstated type of Seasonal Influenza vaccination given by from 01/09/2018	<b>True</b>	<b>False</b>
	IF UNSTATVACC_GROUP <> NULL	<i>Select</i>	<i>Reject</i>
<i>Note only to be displayed for bands 1 &amp; 5</i>			

## Indicators 2a, 2b, 2c, 2d, 2e and 2f

### 2 Vaccination status of patients in one or more Risk Groups

Output to be broken down by Age bands 2-5, except for numerators 2d, 2e and 2f for which only age band 5 is needed

#### DENOMINATOR:

2	Summary of Patients in one or more Risk Groups	True	False
	IF PAT_ENDAGE < 65	<i>Next</i>	<i>Reject</i>
	IF ATRISK_GROUP <> NULL	<i>Select</i>	<i>Next</i>
	IF BMI_GROUP <> NULL	<i>Select</i>	<i>Reject</i>

#### NUMERATORS:

2a	Seasonal Influenza vaccination given from 01/09/2018	True	False
	IF FLUVAX_GROUP <> NULL	<i>Select</i>	<i>Reject</i>

2b	Seasonal Influenza vaccination refused/declined for flu program starting 01/09/2018	True	False
	IF FLUDECLINED_GROUP <> NULL	<i>Select</i>	<i>Reject</i>

2c	Seasonal Influenza vaccination given by other healthcare provider from 01/09/2018	True	False
	IF FLUVAXOHP_DAT <> NULL	<i>Select</i>	<i>Reject</i>

2d	Quadrivalent Seasonal Influenza vaccination given from 01/09/2018	True	False
	IF QUADIVRX_DAT <> NULL	<i>Select</i>	<i>Reject</i>
<i>Note only to be displayed for band 5</i>			

2e	Trivalent non adjuvant Seasonal Influenza vaccination given from 01/09/2018	True	False
	IF NONATIVRX_DAT <> NULL	<i>Select</i>	<i>Reject</i>
<i>Note only to be displayed for band 5</i>			

2f	Unstated type of Seasonal Influenza vaccination given by from 01/09/2018	True	False
	IF UNSTATVACC_GROUP <> NULL	<i>Select</i>	<i>Reject</i>
<i>Note only to be displayed for band 5</i>			

**Indicators 3a, 3b and 3c****3. Vaccination status of pregnant women who are not in a clinical risk group****DENOMINATOR:**

3	<b>Pregnant on 31/08/2018 or pregnant between 01/09/2018 and 28/02/2019 (inclusive) with no risk category</b>	<b>True</b>	<b>False</b>
	IF ATRISK_GROUP <> NULL	<i>Reject</i>	<i>Next</i>
	IF PREG_GROUP <> NULL	<i>Select</i>	<i>Reject</i>

**Note:** Because of the unreliability of Morbid Obesity assessment in pregnancy, its testing is not included within this clause.

**NUMERATORS:**

3a	Seasonal Influenza vaccination given from 01/09/2018	<b>True</b>	<b>False</b>
	IF FLUVAX_GROUP <> NULL	<i>Select</i>	<i>Reject</i>

3b	Seasonal Influenza vaccination refused/declined for flu program starting 01/09/2018	<b>True</b>	<b>False</b>
	IF FLUDECLINED_GROUP <> NULL	<i>Select</i>	<i>Reject</i>

3c	Seasonal Influenza vaccination given by other healthcare provider from 01/09/2018	<b>True</b>	<b>False</b>
	IF FLUVAXOHP_DAT <> NULL	<i>Select</i>	<i>Reject</i>



**Indicators 4a, 4b and 4c****4. Vaccination status of pregnant women who are in a clinical risk group****DENOMINATOR:**

4	<b>Pregnant on 31/08/2018 or pregnant between 01/09/2018 and 28/02/2019(inclusive) in a risk category</b>	<b>True</b>	<b>False</b>
	IF PREG_GROUP <> NULL	<i>Next</i>	<i>Reject</i>
	IF ATRISK_GROUP <> NULL	<i>Select</i>	<i>Reject</i>

**Note:** Because of the unreliability of Morbid Obesity assessment in pregnancy, its testing is not included within this clause.

**NUMERATORS:**

4a	Seasonal Influenza vaccination given from 01/09/2018	<b>True</b>	<b>False</b>
	IF FLUVAX_GROUP <> NULL	<i>Select</i>	<i>Reject</i>

4b	Seasonal Influenza vaccination refused/declined for flu program starting 01/09/2018	<b>True</b>	<b>False</b>
	IF FLUDECLINED_GROUP <> NULL	<i>Select</i>	<i>Reject</i>

4c	Seasonal Influenza vaccination given by other healthcare provider from 01/09/2018	<b>True</b>	<b>False</b>
	IF FLUVAXOHP_DAT <> NULL	<i>Select</i>	<i>Reject</i>

**Indicators 5, 5a****5. Vaccination status of patients with Chronic Heart Disease**

Output to be broken down by Age bands 2-5

**DENOMINATOR:**

5	<b>Patients with Chronic Heart Disease</b>	<b>True</b>	<b>False</b>
	IF CHD_DAT <> NULL	<i>Select</i>	<i>Reject</i>

**NUMERATORS:**

5a	Seasonal Influenza vaccination given from 01/09/2017	<b>True</b>	<b>False</b>
	IF FLUVAX_GROUP <> NULL	<i>Select</i>	<i>Reject</i>

**Indicators 6, 6a****6. Vaccination status of patients with Chronic Respiratory Disease**

Output to be broken down by Age bands 2-5

**DENOMINATOR:**

6	<b>Patients with Chronic Respiratory Disease</b>	<b>True</b>	<b>False</b>
	IF RESP_GROUP <> NULL	<i>Select</i>	<i>Reject</i>

**NUMERATORS:**

6a	Seasonal Influenza vaccination given from 01/09/2018	<b>True</b>	<b>False</b>
	IF FLUVAX_GROUP <> NULL	<i>Select</i>	<i>Reject</i>

**Indicators 7, 7a****7. Vaccination status of patients with Chronic Kidney Disease**

Output to be broken down by Age bands 2-5

**DENOMINATOR:**

7	<b>Patients with Chronic Kidney Disease</b>	<b>True</b>	<b>False</b>
	IF CKD_GROUP <> NULL	<i>Select</i>	<i>Reject</i>

**NUMERATORS:**

7a	Seasonal Influenza vaccination given from 01/09/2018	<b>True</b>	<b>False</b>
	IF FLUVAX_GROUP <> NULL	<i>Select</i>	<i>Reject</i>

**Indicators 8, 8a****8. Vaccination status of patients with Chronic Liver Disease**

Output to be broken down by Age bands 2-5

**DENOMINATOR:**

8	<b>Patients with Chronic Liver Disease</b>	<b>True</b>	<b>False</b>
	IF CLD_DAT <> NULL	<i>Select</i>	<i>Reject</i>

**NUMERATORS:**

8a	Seasonal Influenza vaccination given from 01/09/2018	<b>True</b>	<b>False</b>
	IF FLUVAX_GROUP <> NULL	<i>Select</i>	<i>Reject</i>

**Indicators 9, 9a****9. Vaccination status of patients with Diabetes**

Output to be broken down by Age bands 2-5

**DENOMINATOR:**

9	<b>Patients with Diabetes</b>	<b>True</b>	<b>False</b>
	IF DIAB_GROUP <> NULL	<i>Select</i>	<i>Reject</i>

**NUMERATORS:**

9a	Seasonal Influenza vaccination given from 01/09/2018	<b>True</b>	<b>False</b>
	IF FLUVAX_GROUP <> NULL	<i>Select</i>	<i>Reject</i>

**Indicators 10, 10a****10. Vaccination status of patients with Immunosuppression**

Output to be broken down by Age bands 2-5

**DENOMINATOR:**

10	<b>Patients with Immunosuppression</b>	<b>True</b>	<b>False</b>
	IF IMMUNO_GROUP <> NULL	<i>Select</i>	<i>Reject</i>

**NUMERATORS:**

10a	Seasonal Influenza vaccination given from 01/09/2018	<b>True</b>	<b>False</b>
	IF FLUVAX_GROUP <> NULL	<i>Select</i>	<i>Reject</i>

**Indicators 11, 11a****11. Vaccination status of patients with Chronic Neurological Disease (including Stroke/TIA, Cerebral Palsy or MS)**

Output to be broken down by Age bands 2-5

**DENOMINATOR:**

11	<b>Patients with Chronic Neurological Disease (including Stroke/TIA, Cerebral Palsy or MS)</b>	<b>True</b>	<b>False</b>
	IF CNS_GROUP <> NULL	<i>Select</i>	<i>Reject</i>

**NUMERATORS:**

11a	Seasonal Influenza vaccination given from 01/09/2018	<b>True</b>	<b>False</b>
	IF FLUVAX_GROUP <> NULL	<i>Select</i>	<i>Reject</i>

**Indicators 12, 12a****12. Vaccination status of patients with Asplenia or Dysfunction of the Spleen**

Output to be broken down by Age bands 2-5

**DENOMINATOR:**

12	<b>Patients with Asplenia or Dysfunction of the Spleen</b>	<b>True</b>	<b>False</b>
	IF PNSPLEEN_DAT <> NULL	<i>Select</i>	<i>Reject</i>

**NUMERATORS:**

12a	Seasonal Influenza vaccination given from 01/09/2018	<b>True</b>	<b>False</b>
	IF FLUVAX_GROUP <> NULL	<i>Select</i>	<i>Reject</i>

**Indicators 13, 13a****13. Vaccination status of patients with Morbid Obesity and in one or more other clinical risk groups****DENOMINATOR:**

13	<b>Patients with Morbid Obesity and in other clinical risk group</b>	<b>True</b>	<b>False</b>
	IF BMI_GROUP <> NULL	<i>Next</i>	<i>Reject</i>
	IF ATRISK_GROUP <> NULL	<i>Select</i>	<i>Reject</i>

**NUMERATORS:**

13a	Seasonal Influenza vaccination given from 01/09/2018	<b>True</b>	<b>False</b>
	IF FLUVAX_GROUP <> NULL	<i>Select</i>	<i>Reject</i>

**Indicators 14, 14a****14. Vaccination status of patients with Morbid Obesity and NOT in any other clinical risk groups****DENOMINATOR:**

14	<b>Patients with Morbid Obesity and NOT in other clinical risk group</b>	<b>True</b>	<b>False</b>
	IF BMI_GROUP <> NULL	<i>Next</i>	<i>Reject</i>
	IF ATRISK_GROUP <> NULL	<i>Reject</i>	<i>Select</i>

**NUMERATORS:**

14a	Seasonal Influenza vaccination given from 01/09/2018	<b>True</b>	<b>False</b>
	IF FLUVAX_GROUP <> NULL	<i>Select</i>	<i>Reject</i>

**Indicators 15, 15a**

**15. Vaccination status of patients who are carers, aged 5 to under 16 at RUN\_DAT, and who are not in an at risk category (including pregnant women)**

**DENOMINATOR:**

15	<b>Patients meeting Carer Criteria</b>	<b>True</b>	<b>False</b>
	IF AGE_BAND 4 [AGE >=5 AND <16YR] AT RUN_DAT	<i>Next</i>	<i>Reject</i>
	IF ATRISK_GROUP <> NULL	<i>Reject</i>	<i>Next</i>
	IF BMI_GROUP <> NULL	<i>Reject</i>	<i>Next</i>
	IF PREG_GROUP <> NULL	<i>Reject</i>	<i>Next</i>
	IF CARER_DAT = NULL	<i>Reject</i>	<i>Next</i>
	IF CARER_DAT > NOTCARER_DAT	<i>Select</i>	<i>Reject</i>

**NUMERATORS:**

15a	Seasonal Influenza vaccination given from 01/09/2018	<b>True</b>	<b>False</b>
	IF FLUVAX_GROUP <> NULL	<i>Select</i>	<i>Reject</i>

**Indicators 16, 16a****16. Vaccination status of patients who are carers, aged 16 to under 65 at Run\_Dat, and who are not in an at risk category (including pregnant women)****DENOMINATOR:**

16	<b>Patients meeting Carer Criteria</b>	<b>True</b>	<b>False</b>
	IF AGE BAND 5 [AGE >=16 AND <65YR] AT RUN_DAT	<i>Next</i>	<i>Reject</i>
	IF ATRISK_GROUP <> NULL	<i>Reject</i>	<i>Next</i>
	IF BMI_GROUP <> NULL	<i>Reject</i>	<i>Next</i>
	IF PREG_GROUP <> NULL	<i>Reject</i>	<i>Next</i>
	IF CARER_DAT = NULL	<i>Reject</i>	<i>Next</i>
	IF CARER_DAT > NOTCARER_DAT	<i>Select</i>	<i>Reject</i>

**NUMERATORS:**

16a	Seasonal Influenza vaccination given from 01/09/2018	<b>True</b>	<b>False</b>
	IF FLUVAX_GROUP <> NULL	<i>Select</i>	<i>Reject</i>

**Indicators 17, 17a****17. Vaccination status of patients by gender**

Output to be broken down by Gender bands 1-4 **and** by Age Band 1 and Age Band 5. This will result in eight numerator/denominator pairs being reported.

**DENOMINATOR:**

17	<b>Patients in Age Band 1 and Age Band 5</b>	<b>True</b>	<b>False</b>
	IF AGE BAND 1 = TRUE OR AGE BAND 5 = TRUE	<i>Select</i>	<i>Reject</i>

**NUMERATORS:**

17a	Seasonal Influenza vaccination given from 01/09/2018	<b>True</b>	<b>False</b>
	IF FLUVAX_GROUP <> NULL	<i>Select</i>	<i>Reject</i>



**Indicators 18, 18a****18. Vaccination status of patients aged 16 – 65 in one or more at-risk groups (excluding healthy pregnant women and carers) by ethnicity**

Output to be broken down by Ethnicity bands 1-20

**DENOMINATOR:**

18	<b>Patients aged 16yrs – &lt;65 yrs at RUN_DAT</b>	<b>True</b>	<b>False</b>
	IF AGE_BAND 5 AT RUN_DAT	<i>Next</i>	<i>Reject</i>
	IF ATRISK_GROUP <> NULL	<i>Select</i>	<i>Next</i>
	IF BMI_GROUP <> NULL	<i>Select</i>	<i>Reject</i>

**NUMERATORS:**

18a	Seasonal Influenza vaccination given from 01/09/2018	<b>True</b>	<b>False</b>
	IF FLUVAX_GROUP <> NULL	<i>Select</i>	<i>Reject</i>

**Indicators 19, 19a****19. Vaccination status of pregnant women by ethnicity**

Output to be broken down by Ethnicity bands 1-20

**DENOMINATOR:**

19	<b>Pregnant women</b>	<b>True</b>	<b>False</b>
	IF PREG_GROUP <> NULL	<i>Select</i>	<i>Reject</i>

**NUMERATORS:**

19a	Seasonal Influenza vaccination given from 01/09/2018	<b>True</b>	<b>False</b>
	IF FLUVAX_GROUP <> NULL	<i>Select</i>	<i>Reject</i>

## Appendix A - 5 byte and CCTV3 codes

Field Number	Field name	5 Byte Codes	CTV3 Codes
6	AST_COD	H3120, H33%, H3B	H33..%, X1020, Xac33  Exclude: H44..%, H440.%, H441.
8	ASTMED_COD	663F, 663Y, 663g1 - 663g4, 8B62, 8B620	663F., 663Y., 663g1, 663g2, 663g3, XE0hq, XaZqH, Xa6bZ, Xa6ba, XaZHv
10	ASTRX_COD	c1D%, c1c%, c6%, fe%  Exclude: c61U, fe13, fe1z, fe34, fe35, fe38, fe39, fe3p, fe3q, fe3w, fe3x, fe3z, fe46, fe47, fe48, fe49, fe4a, fe4b, fe4c, fe4d, fe4e, fe4f, fe4g, fe4h, fe54, fe55, fe56, fe57, fe58, fe59, fe5a, fe5b, fe5c, fe5d, fe5e, fe5g, fe5h, fe5q, fe5r, fe5s, fe5t, fe5u, fe5v, fe5w, fe5x, fe5y, fe5z, fe63, fe6b, fe6u, fe6y, fe83, fe84, fe85, fe88, fe8u, fe8v, fe8w, fe8x, fe8y	c1D..%, c1c..%, c63..%, c64..%, c67..%, c69..%, c6A..%, c6B..%, fe7..%, fe9..%, x00yP%, x01MW%, x01Mc%, x01Mh%, x01Na%, x01Nb%, x01Nq%, x02IG%
12	ASTADM_COD	663d, 8H2P	663d., 8H2P.

14	RESP_COD	<p>7450%, A115, AD50, AD52, C3503, C370%, C3762, H3%, H40 - H45%, H46, H460z, H464%, H46z%, H47y0, H48 - H4z%, H51y7, H5410, H55, H560, H561, H562, H563%, H57%, H582, H583, H583z, H58y6, H58y7, H591 - H593, H5y12, H5y13, Hy02, Hyu3%, Hyu40, Hyu41, Hyu48, Hyu5%, N0421, N04y0, P861, Q3170, ZV440, ZV45J, ZV461, ZV550</p> <p>Exclude: C3706, H30%, H3101, H33%</p>	<p>7450.%, C370.%, C3701, C3762, H3...%, H31...%, H3120, H31y0%, H32...%, H34...%, H35...%, H44...%, H440.%, H441., H46...%, H464.%, H460z, H46z., Hyu46, H46z0, H47y0, H4y...%, H4y2.%, H5410, H560., H561., H562., H57...%, H571., H57y0, H57y2%, H583.%, H591.%, Hy02., Hyu3., Hyu5., Hyu50, Hyu51, N0421%, Q3170, X100j%, X101U, X102u%, X70Qb, XE0Zf, Xa9Bw%, XaDya%, XaREX, XaX1F, XaX1J, Xac33, Xa0IL, H5630, H5y12%, H5y13%, ZV440, ZV45J, ZV461, ZV550</p> <p>Exclude: H4y20, H5830</p>
16	CHD_COD	<p>33BA, 662h, 662i, 7900%, 7901%, F391B, G1%, G21%, G220, G222, G23%, G3%, G41%, G54%, G55%, G573%, G58%, G5y1, G5y3%, G5y4%, G5y6 - G5y8%, G5yy2, G5yy6, G5yy9 - G5yyE, G72B1, GA, Gyu1%, Gyu3%, Gyu4%, Gyu55 - Gyu5D, Gyu5M - Gyu5T, H5410, L1280, L1281, P5%, P60 - P6X%, P6y, P6y0 - P6y3%, P6y63 - P6y6z, P6yy%, P6z, P6z2., P6z3., P6zz., P71%, P722%, P73%, P74%, PKy5M, SP084, SP085, SP111, TB000, ZV421</p>	<p>79012%, G21...%, G220., G222., G310., G36...%, G55...%, G553., G573.%, G5730%, G5731%, G58...%, Gyu4., Gyu41, H5410, P73%, Pyu28, Pyu2J, TB000, X00y1%, X201f%, X202p%, X202q%, X202u%, X2033, G41y0, X2034%, X203F%, X203G, X203H, X203I, XE0WK, Xa0Cy, Xa0Cz, X777T, X77tW%, X77u9%, X780u%, XE0VA%, XE0VB%, XE2Qh%, XE2uV%, XM0rN, XM0rO, G41...%, G411., Gyu40, Xa3fR, Xa3fS, XM1Qn, XaB0g%, XaDyG, G1...%, XaDyZ%, G1y0., XE0Ua, XaYYq, XaYYs, XaaJL, ZV421</p>

PRIMIS: Seasonal Flu

18	CKD_COD	7B00%, 7B012, 7B015, 7B019, 7B063, 7B0F3, 7L1A0, 7L1A1, 7L1A2, 7L1A4, 7L1A5, 7L1A6, 7L1B%, 7L1C%, 7L1f0, 8L50, G7520, G7521, K01%, K02%, K0320, K0325, K05, K050, K08yA, K0A1%, K0A3%, K0A8, K0D, K0E, Kyu21, SP08%, TB001, TB11., U641., ZV420, ZV56%, ZVu3G  Exclude: SP082, SP084, SP085, SP086, SP089, SP08A, SP08B	7B00., 7B012, 7B063, K01..%, K01x4, K05.., K0A3.%, Kyu21, TB001, X30J0%, X30MN%, XE0Fv%, XE0db%, XE0df%, XaB9D%, XaM41, ZV420, G7520%, X30I8%, X30Km%, 8L50. SP08., SP081, X20lr%, SP08z, U641, X30LY, ZVu3G, TB001, TB11, ZV56%
20	CKD15_COD	1Z1%, K051 - K055	X30In%  Exclude: XE0df%
22	CKD35_COD	1Z12 - 1Z16, 1Z1B - 1Z1L, 1Z1T - 1Z1f, K053 - K055	XaLHI%, XaLHJ%, XaLHK%, XacAM, XacAN, XacAO, XacAV, XacAW, XacAX, XacAb, XacAd, XacAe, XacAf, XacAh, XacAi
24	CLD_COD	7800%, A707%, AyuB1, AyuB2, C3104, C3761, G8522, G8523, J6, J61%, J62, J623, J624, J625, J62y, J62z, J6353 - J6356, J63A, J63B, J6617, J671%, Jyu71, Jyu84, PB61%, PB63%, PB6y1, SP086, SP143  Exclude: J611, J61y1, J61y9, PB630, PB631, PB632, PB633	7800., C3104, C3761, J6..., J610., J613., J614.%, J61y.%, J61y0, J61y2%, J61y3, J61y7, J61z., J62..%, J623., J62y., J6353, J6354, J6355, J6356, J63A., J671.%, Jyu71, PB61.%, PB610, PB612%, PB615, PB616, PB63.%, PB634, PB6y1, X306T, AyuB1, AyuB2, J6143, X306r, XaBE3, XaBM6%, XaQIT, X3072, X3073, X3076, J624.%, X3077, X3078, X3079, X307C, X307J%, X307L%, X307x%, XE0bC, XE0dD, XE1L0, XaREa
26	DIAB_COD	C10%, Cyu2%, L1805 - L1807, L180A, L180B, L180X, Lyu29, PKyP  Exclude: C1098, C10F8, C10J%, C10P%, C10K%	C10..%, X008t, XSETe%  Exclude: L1808, L180%, X40JE, Xaagd%

28	IMMDX_COD	<p>2J30, 2J31, 43C3, A788%, A789%, AyuC%, B6%, B934, B9377, B9378, B9379, B937W, BBr4, BBr40, ByuD%, ByuH6 - ByuH8, ByuHD, C3028, C331, C332, C332z, C333%, C37y8, C37y9, C37yD, C37yE, C390, C3900, C3902, C3904, C3905, C3906, C3907, C3909, C390A, C390y, C390z, C391%, C392%, C393, C395, C396, C397, C398%, C39y0, Cyu00, Cyu01, Cyu02, Cyu03, Cyu05, D4000, D4009, D401%, D41y0, D41y1, D41y2, F38%, Fyu8, Fyu80, Fyu83 - Fyu85, G753, M15y3, PH3yA, PJ535</p> <p>Exclude: F382, C3922, C3926, C3927</p>	<p>43C3., B623.%, B625.%, B6z0., Cyu00, Cyu01, Cyu02, Cyu03, Cyu05, F38.%, Ua14c, Ua19z, X70M6%, X78e1, ByuH6, ByuH7, ByuH8, X20Fr, X20GZ%, XE1vo%, X78e6%, XE20P, Xa0Sr%, Xa0Ty, Xaan6</p> <p>Exclude: F382.%, X00Cs, C3901, C3903, C3908, C390B, F14y0, X20Gj, X20G1, X20Gm, X20Gr%, X20HP</p>
30	IMMRX_COD	<p>h1%, h2%, h3%, h4%, h5%, h62%, h7%, h8%, hh%, j51%, j52%, j59%</p> <p>Exclude: h323, h324, h32D, h32E, h5L%, hhN%</p>	<p>j59.%, x005B%, x01AQ, h8...%, x01AR%, h5...%, x01An%, x02MQ%</p> <p>Exclude: h324.%, h32D., h32E., h5L.%, hhN.%, k38., x0030%, x01AZ%, x01Ah%, x03jY%, x05GP%, x05c1%</p>

32	CNSGROUP_COD	<p>C3510, E004%, E011%, Eu00 - Eu02%, Eu815, Eu817, F036%, F1, F10 - F12%, F13, F130%, F1322, F134, F135, F1350, F135z, F136%, F137%, F13A, F13X, F14 - F16%, F17, F174%, F1y%, F1z, F20 - F23, F24, F240%, F241%, F24y%, F24z, F281%, F283, F2A%, F2B%, F371%, F373, F3749, F3902, F3904, F391%, F3920, F3925, F39B, F4236, Fyu1 - Fyu4%, Fyu55, Fyu74, Fyu77, Fyu83 - Fyu85, Fyu8A, Fyu9%, FyuA1, FyuA3 - FyuA5%, G61%, G63y0, G63y1, G64 - G66%, G6760, G6W, G6X, Gyu62 - Gyu66, Gyu6C, Gyu6F, Gyu6G, P23%, Pyu01, SP100, SP101, ZV12D</p> <p>Exclude: F1372, F1630, F1632, F163z, F164, F16y0, F213, F24y1, F3915, F3916, Fyu15, Fyu20, Fyu24, Fyu25, Fyu2A, G617, G655</p>	<p>Eu02.%, F1...%, F100.%, F1000, F1003%, F101., F1010, F1011, F1012, F1014%, F1015, F1030, F1031, F10y1, F11x8, F11z., F13.., F1322, F1350, F136.%, F137., F14.., F143., F160.%, F1600, F1601, F212., F24..%, F240.%, F241.%, F24yz, F283., F38..%, F3902%, F3904, F3920%, Fyu1.%, Fyu14, Fyu23, Fyu3.%, Fyu8A, Fyu9., G641., G65z0, G65z1, Gyu62, Gyu65, Gyu66, Gyu6C, Gyu6F, P234.%, PKy92, X002U%, X002Y%, X002x, X0030, X003Z%, X003o%, X004V, X0051%, X005K, X005L%, X005N%, X005S, X005b%, X00AZ, F371.%, F373.%, F3748, F3749, Fyu13, Fyu66, X00Aa, F162.%, X00Af, X00Ag%, X00Aq, X00Ar, X00As, X00At, X00Au, X00Av, Xa9BG%, X00B1, X00B2, XE151%, X00D1%, X00E7, X00EG%, X76n9%, XE0VK%, XE15G%, XE15L%, XE150%, XE15T%, XE17f, XE17j, XE17r, XE17t, XE183, XE2Q8%, Xa0ZX%, Xa01L, F391., F3911, F3912, F3913, F3914, F3917, F391y, F391z, X708J%, X708h%, X708p, XE15p, Xa0s2, Xa0s3%, Xa1GB%, Xa3fA, XaB4V%, XaB4W, XaI9b, XaPws, XaQZ4, XaREu, XaX16, XaX9w, XaetB</p> <p>Exclude: F1630, F1632, F163z, F16y0, D41y2, F380.%, F382.%, F1351, F374.%, F13z.%</p>
----	--------------	---	---

PRIMIS: Seasonal Flu

34	PNSPLEEN_COD	14N7, 7840%, 7841, 7841y, 7841z, 78420, 78421, D104, D1040, D1042, D1043, D1046, D1047, D1049 - D104z, D106%, D414, D4154, D4156, D4157, D415A, D415B, Dyu12, G74y6, J690%, PK01, PK06, S7504, S7514  Exclude: 78402	14N7., 7840.%, 78403, 7841.%, 78420, 78421, D106.%, D1063, D1064, D1065, D414., D4154, D4156, D4157, Dyu12, G74y6, PK06., S7504, S7514, X20D1, X20Fm, XE0bK%, XE13k, X20Cn, D1046, D1047, X20Co, X20Cp, X20Cq, X20Cs, X20Ct, XE13l, XE13m, X20Cj, XE13n, Xa0Yy, XE1Mi, Xa0h0, Xa9Ax, Xa9D7, Xa7Ya%, XaDvR
36	BMI_COD	22K, 22KB	22K., XaZcl
39	BMI_STAGE	22K1 - 22K8, 22KC - 22KE	22K1., 22K2., 22K3., 22K4., 22K5., XaCDR, XaJJH, XaJqk, XabHx, XabHy, XabHz
41	SEV_OBESITY	22K7, 22KE	XaJJH, XabHz
43	DMRES_COD	21263, 212H.	XaFsp
45	PAED_BMICENT	22K9%	Xaatm%
47	PAED_SEV_OBESITY	22K9J	XabTk
49	FLUVAX_COD	65E, 65E2%, 65ED%, 65EE%, ZV048	65E., XaLK4, XaZ0d%, Xaa9G%, XaPyT%, XaZfy%, XaaZp, XafhP%, ZV048
51	FLURX_COD	n47%, 34783811000001108, 34680411000001107  Exclude: n47A, n47B, n47r, n47s, n47t	n47.%, 34783811000001108, 34680411000001107  Exclude: n47A., n47B., n47r., n47s., n47t.
	NOTE: the medication codes for the flu vaccinations listed below in fields 57-61 representing adjuvanted trivalent influenza vaccination ATIVRX, QUADIVRX and possibly also NONATIVRX and may not have been released or available in legacy code systems but are represented in the dm+d.		
53	FLUVAXOHP_COD	65E2%, 65ED2, 65ED0, 65ED6-65ED9	XaPyT%, XaaZp, XafhP%, XaZfy
55	LAIVRX_COD	n47I	n47I
57	ATIVRX_COD*	34783811000001108	34783811000001108
59	NONATIVRX_COD	n47f	n47f.
61	QUADIVRX_COD*	n47o, n473, n47j, n47H, 34680411000001107	n47o., n473., n47j., n47H., 34680411000001107

\*There are no READ V2 or CTv3 codes for these two vaccines so we have added the DM&D codes for information.

63	LAIV_COD	65E21, 65E22, 65ED1, 65ED3, 65ED6, 65ED7, 65EE%	Xaac3, Xaac4, Xaac7, Xaac8, Xaeet, Xaeu, Xaa9G%
65	CONTRA_COD	14LJ, 8I2F%, U60K4, ZV14F	Xa5WJ%, Xa5um%, XaIAA, XaIOT%, XaJ7u, XaJ8X  Exclude: XaPwe
67	DECL_COD	68NE%, 90X5%  Exclude: 90X50, 90X55, 90X57	68NE.%, XaIBI%  Exclude: XaX4R, XaadT, XaadV
69	NOCONS_COD	68NE%	68NE., Xaa9f
71	ALLERG_COD	14LJ, U60K4, ZV14F	Xa5WJ%, Xa5um%, XaIAA, XaJ7u, XaJ8X
73	CARER_COD	13HH, 918A%, 918G, 918H, 918W - 918Y, 918a - 918d, 918m, 918y	Ua0VL%, Ub1ju, Ua0bD, Ua0bE
75	NOTCARER_COD	918f%, 918r	XaL1Y%, XaQVL



77	PREGDEL_COD	<p>62%, 633%, 63E%, 7E060, 7E066, 7E070, 7E071, 7E08%, 7E0B%, 7F1%, 7F20 - 7F23%, L0%, L191, L192, L20%, L21%, L264%, L292%, L293%, L295%, L296, L2A - L2z, L3%, L40%, L42%, L440%, L44y%, L44z%, L4y, L4z, Ly0, Ly1, Lyu0%, Lyu2 - Lyu6%, Q48D%, ZV22 - ZV24%, ZV27%, ZV28%</p> <p>Exclude: 6214, 6219, 6294, 62E%, 62H7, 62H8, 62I%, 62J%, 62P%, 62X%, 633A, 7E089, 7F235, L08%, L0A%, L33%, L344%, L345%, L34y%, L34z%, L35%, L354z, L38%, L390%, L391%, L392%, L394%, L39A, L39B, L39y5, Lyu29, Lyu64, Lyu69, ZV233, ZV283, ZV285</p>	<p>621..%, 622Z., 62GB., 62GC., 62GD., 62N..%, 62Q..%, 62R..%, 62RB., 62RC., 62RD., 62RZ., 7E088, 7E0B.%, 7E0B0, 7E0B2, 7F1.., 7F1A1%, 7F1y., 7F1z., X404h%, X404x%, 7F22.%, 7F222, 7F223, 7F23.%, 7F234%, L0...%, L264.%, L29...%, L2A.., L2A0., L2A1., L2A2., L2A3., L2A4., L2A5., L2D.., L2y.., L2z.., L3...%, L31..%, L313.%, L32..%, L36..%, L393.%, L4y.., L4z..%, Lyu2.%, Lyu20, Lyu21, Lyu22, Lyu31, Lyu32, Lyu33, Lyu34, Lyu35, Lyu36, Lyu37, Lyu38, Lyu39, Lyu3A, Lyu3B, Lyu3C, Lyu3D, Lyu3E, Lyu6., Lyu65, Lyu66, Lyu67, X4038%, X4051%, X405w%, X40Ar, X40CB, X40CI%, X40DA%, X40DH%, X40DR%, X40Di%, X74V6%, X74V7, 62H..%, X74Vu%, X76Qk, X76Ql, X76Qt, XE06i%, XE06j, XE0xA%, XE0xH%, XE0xP%, XE1SC%, XE1SH%, XE2QQ%, XE2s1%, Xa05d%, Xa1qM%, Xa36H%, Xa3wK, Xa4S0%, Xa4SU, Xa4SV, Xa4SW%, Xa4WF%, Xa7Yj, Xa85V%, Xa8B0%, XaBFF, XaDtm, XaEFS%, XaIO9, XaLQl, XaPrf, ZV22.%, ZV23.%, ZV24.%, ZV27.%, ZV28.%</p> <p>Exclude: 1521., 6214., X40Af, X40Ag%, 7F1B4, 8572., L08..%, L100.%, L163.%, X40Aw, XM1P9, L38..%, L380., L39..%, Lyu4J, 62H7., 62H8., 6294., X74Vw%, X74Vx%, Xa4TK, Xa41N, XaIRg, ZV233, ZV283, ZV285</p>
----	-------------	---	---

PRIMIS: Seasonal Flu

79	PREG_COD	62, 621 - 62D%, 62F - 62H%, 62K - 62O%, 62U - 62W, 62Y - 62c%, L191, L192, L21%, L295%, L2A - L2z, Lyu2%, Lyu30 - Lyu3E, ZV22%, ZV23%, ZV28%  Exclude: 6214, 6219, 6294, 62H7, 62H8, L2101, L2111, L2121, L213%, L21y1, L21z1, L2951, Lyu29, ZV233, ZV283, ZV285	621..%, 622Z., 62GB., 62GC., 62GD., 62N..%, L2A., L2A0., L2A1., L2A2., L2A3., L2A4., L2A5., L2D., L2y., L2z., Lyu2., Lyu20, Lyu21, Lyu22, Lyu31, Lyu32, Lyu33, Lyu34, Lyu35, Lyu36, Lyu37, Lyu38, Lyu39, Lyu3A, Lyu3B, Lyu3C, Lyu3D, Lyu3E, X40Ar, X40CB, X74V6%, X74V7, 62H%, X74Vu%, X76Qk, X76Q1, X76Qt, XE1SC%, XE1SH%, Xa05d%, Xa4S0%, Xa4SU, Xa4SV, Xa4WF%, Xa7Yj, Xa85V%, XaBFF, XaDtm, XaEFS%, XaIO9, XaLQ1, ZV22.%, ZV23.%, ZV28.%  Exclude: 1521., 6214., X40Af, X40Ag%, 62H7., 62H8., 6294., X74Vw%, X74Vx%, Xa41N, ZV233, ZV283, ZV285
81	PREG2_COD	As per PREG_COD	As per PREG_COD
83	ETH2001_WHIBRIT_COD	9i0, 9i00, 9i20, 9i21, 9i22, 9i23, 9i24, 9i25	XaJQv, XaJRh, XaJRC, XaJRD, XaJRE, XaJRF, XaJRG, XaQEa
85	ETH2001_WHIIRISH_COD	9i1, 9i10	XaJQw, XaQEb
87	ETH2001_WHIOOTHER_COD	9i2, 9i26, 9i27, 9i28, 9i29, 9i2A, 9i2B, 9i2C, 9i2D, 9i2E, 9i2F, 9i2G, 9i2H, 9i2J, 9i2K, 9i2L, 9i2M, 9i2N, 9i2P, 9i2Q, 9i2R, 9i2S, 9i2T	XaJQx, XaJRg, XaJRI, XaJRj, XaJRk, XaJRL, XaJRM, XaJSB, XaJSC, XaJSD, XaJSE, XaJSF, XaJSG, XaJSH, XaJSI, XaJSJ, XaJSK, XaJSL, XaJSM, XaJSN, XaJSO, XaJSP, XaJSQ
89	ETH2001_MXDWHIBLKCAR_COD	9i3	XaJQy
91	ETH2001_MXDWHIBLKAFR_COD	9i4	XaJQz
93	ETH2001_MXDWHIASN_COD	9i5	XaJR0
95	ETH2001_MXDOTHER_COD	9i6, 9i60, 9i61, 9i62, 9i63, 9i64, 9i65, 9iA9, 9iD3, 9SB4	9SB4., XaJR1, XaJRH, XaJRI, XaJRJ, XaJRK, XaJRL, XaJRM, XaJRN, XaJRY
97	ETH2001_ASNINDIAN_COD	9i7	XaJR2
99	ETH2001_ASNPAK_COD	9i8	XaJR3

101	ETH2001_ASNBANG_COD	9i9	XaJR4
103	ETH2001_ASNOTHER_COD	9iA, 9iA1, 9iA2, 9iA3, 9iA4, 9iA6, 9iA7, 9iA8, 9iAA, 9iF0, 9iF1, 9iF2, 9iF3	XaJRd, XaJRe, XaJRf, XaJR5, XaJR0, XaJRP, XaJRQ, XaJRR, XaJRT, XaJRU, XaJRV, XaJRW, XaJRC
105	ETH2001_BLKCARIB_COD	9iB	XaJR6
107	ETH2001_BLKAFRIC_COD	9iC, 9iD0, 9iD1	XM1S3, XaJR7, XaJRX, XaJRZ
109	ETH2001_BLKOTH_COD	9iD, 9iD2, 9iD4	XaJR8, XaJRa, XaJRb
111	ETH2001_CHINESE_COD	9iE	XaJR9
113	ETH2001_OTHER_COD	9iF, 9iF9, 9iFA, 9iFB, 9iFC, 9iFD, 9iFE, 9iFF, 9iFG, 9iFH, 9iFJ, 9iFK	XaJRA, XaJSg, XaJSS, XaJST, XaJSU, XaJSV, XaJSW, XaJSX, XaJSY, XaJSZ, XaJSa, XaJSb
115	NON_ETH2001_COD	134B - 1340, 9S1 -9SC, 9SG- 9SZ, 9T1 -9TC, 9t00 - 9T0H, 9t10 - 9t1F, 9t20 - 9t2J	134B., 134C., 134D., 134E., 134F., 134G., 134H.%, 134I., 134J., 134L., 134M., 134O., 134P., 9S1..%, 9SA..%, 9SZ., XaFwG%, XaFwH%, XaFwz%, XaFx1, 9S42., 9S43., 9S45., XaedV%, XaW95, XaW8w, XaVw5, XaR61, XaR4p, XaR4o, XaN9x, 9T1., 9T11., 9T12., 9T13., 9T14., 9T15., 9T16., 9T17., 9T18., 9T19., 9T1B., XaE4A, 9T1A., 9T1C., 9T1E., 9T1Y., 9T1Z., X76Gp, Xactp, Xacto, Xactn, Xactm, Xactl, Xactk, Xactj, Xacti, Xacth, Xactg, Xactf, Xacte, Xactd, XactL, XactK, XactJ, XactI, XactH, Xacuq, Xacup, Xacuo, Xacun, Xacum, Xacul, Xacuk, Xacuj, Xacui, Xacuc, Xacua, XacuU, XacuT, XacuS, XacuR, XacuQ, Xacvc, Xacvb, Xacva, XacvZ, XacvJ, XacvI, XacvH, XacvG, XacvF, Xacv2, Xacv5, Xacv0, Xacuz, Xacuy, Xacux, Xacuv, Xacuu, Xacut, Xacus, XS7AU

PRIMIS: Seasonal Flu

117	ETH_NOTGIPTREF_COD	9SD	XaE4B
119	ETH_NOTSTATED_COD	134P. , 9iG..	XE0oc, XaJRB
121	ETH_NORECORD_COD	9SE	XaE4C

## References

Document	Version	Author	Date
<i>PHE/ImmForm Influenza vaccine uptake survey (GP Patients) 2018/19 Scope:</i> 636568177046939025-scoping_document_201819_gp_flu_modified_february_final	1.0	Richard Pebody	14/2/18
Seasonal Flu Vaccine Uptake (GP Patients) 2018-19 Dataset			
<a href="#">Green Book Chapter 19</a> Influenza			December 2017
<a href="#">The national flu immunisation programme 2018/19 (Flu letter No 1)</a>	1		26/3/2018

## Change Log

Version	Date	Author	Change summary
10.2	7 <sup>th</sup> August 2018	DE, JR, PM	Changes from previous version 9.4 include: 1. production of SNOMED version 2. changes introduced in the scoping documents
10.3	23 <sup>rd</sup> August 2018	DE	1. addition of V2 and Ctv3 codes (vaccination by pharmacist) to field 53 – vaccination by other health professional; highlighting of SCT code in the relevant field 2. an additional comment in the introduction re the use of dm+d codes 3. a comment re the use of vaccination medication codes in Appendix A Legacy code clusters - field 51 4. addition of dm+d codes to field 51

### Please note:

**Should the survey be extended for a further month, as was the case in the 2010/11 flu season when significant numbers of seasonal flu vaccinations continued into February, the end date for the pregnancy category would need to be revised.**

## Appendix 2 - Original Introduction

Within this specification, we have attempted to translate the higher level subjective clinical guidance given within the Green Book, into the language of the two main Clinical Coding Terminologies currently used in Primary Care, to give a very specific and objective specification that is practical to implement for all GP IT clinical system suppliers in a consistent way.

What we know, is that of the roughly 42,000 diagnostic terms included within Read Version 2, roughly 2,000 of them would explicitly warrant the administration of the influenza vaccine. A further 2,000 are clinically ambiguous in terms of whether or not an influenza vaccine should be administered (e.g. "Congenital malformation of circulatory system, unspecified"). A perfect informatics solution would enable a practice to automatically select patients on the basis of the first group of terms and then be able to choose which of the patients with purely ambiguous terms warranted vaccination. This does not exist currently however, but is partly mitigated by the rarity of many of these conditions and their associated clinical coding terms, bearing in mind this process is for monitoring purposes only.

It should also be noted that one of the underlying principles for this specification is that patients with a single illness that could conceptually be included in two sub-topics is, as far as is possible, only included in one for the purposes of monitoring.

Further, there are limitations imposed by some of the clinical system software engines, in terms of the size of the relevant MIQUEST coding string. A small string search (such as C10% excluding Reaven's syndrome C1098 and C10F8) is easier to handle than a string listing a 100 specific terms scattered across many hierarchies and it can become a rate limiting step. As such, in some hierarchies we have had to adopt a pragmatic solution to defining hierarchies. The most difficult example of this is in the Pregnancy domain, where we have had to take the unusual step of defining a short pregnancy preferred code list to support "data entry" that will be extracted (we shall however extract a slightly wider group).

There are two clinical groups in particular (Neurology and Cardiology), that contain large numbers of rarer diagnoses or conceptually ambiguous terms. Within the resource limitations available, these areas are being honed more closely each year. Both of these areas are affected by the presence of clinical conditions of variable severity that are congenital in origin and coded as such.

The concept of Immune Suppression is also a technically difficult one to represent. For many patients, especially those undergoing chemotherapy or significant radiotherapy, the indication for flu vaccination may be temporary and I feel it may be another area where coding guidance should perhaps be issued.

Within the medication hierarchies, especially immune suppressant drugs there are particular problems. The concept of "immune suppression by a daily dose of 20mg prednisolone" cannot be meaningfully represented by the current system suppliers.

Again, for the reasons given previously, relating to specification complexity, the drug hierarchies have been defined for brevity, but will include drugs that are obsolete or not given in Primary Care. This has no impact on who should, or should not receive influenza vaccination under current Primary Care IT systems.

This, of course, is further complicated by the use of two clinical terminologies and attempting to ensure they are aligned. An example of the problem here would be the use of the descriptive term "Brittle Diabetes", which is a non-diagnostic term in 5 byte (so not included), but a diagnosis in CTV3 (so is included).

The specification has been updated each year to ensure appropriate handling of the biannual READ code updates and obvious anomalies have also been corrected.

For the 2018 / 2019 season, as before the specification detailing with the *Annual Childhood* cohorts (aged 2-9 years inclusive) has been separated out and is considered elsewhere. This document does however still include the detail concerning the indications for vaccinating children who do have clinical risk factors. Of note is that we have aligned this version with rules in the Children's Specification concerning Paediatric Severe Obesity for the under 18's.

It should be noted that whilst the Flu vaccination window associated with the Quality and Outcomes Framework programme runs from 1<sup>st</sup> August, there are no date changes associated with the Vaccine Uptake Monitoring set. Therefore the vaccination window starts at the 1<sup>st</sup> September 2018. Also the reference dates for pregnancy within the current influenza season remain as before.

Lastly, there is the recognition that this is a Vaccine Uptake Monitoring set and not a patient Recall or Payment set. There are subtle differences, not least in the tolerances. We have had an example of a formal complaint originating from a practice using a monitoring set, for patient recall purposes, despite the headline branding and caveats.