

Codes for Reporting Influenza Immunisation Uptake

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A SCIMP document derived from PRIMIS Specifications
V10.2 (adult) 9 Aug 18 and v3.0 (children) 21 Aug 18

There are two significant changes in the 'flu' vaccination campaign this year

- the introduction of three different injectable vaccines to be given to different cohorts.
- the transition from Read to SNOMED CT as the underlying coding system.

Read & SNOMED

SNOMED CT is becoming the preferred coding terminology for our systems. However, the transition from Read to SNOMED CT is being handled by system suppliers 'under the bonnet'. It still appears to users that Read is the only coding system in use. For this reason the rest of this document refers only to Read codes even though the documents upon which it is based now use SNOMED CT codes, with the mapped Read codes relegated to an Annex.

Different Vaccines

The implementation of three distinct injectable vaccine types may cause difficulties in the practical administration of vaccine clinics but should have little effect in how vaccinations are recorded. There are no codes specific to trivalent, quadrivalent or adjuvated vaccines.

It will be appropriate to record manufacturer, batch number & expiry date in the text associated with the 'vaccine administered' code as usual. This will suffice to identify exactly which vaccine was given should the need arise. There is no plan to record uptake by vaccine type in Scotland.

There may be cases where vaccines are prescribed instead of being administered under a PGD, in which case they are selected from a dm+d compliant picking list as in previous years.

So despite these changes the coding of 'flu' vaccination remains basically unaltered from 2017/18

Notes on Use:

- Standard terminology is used. A '%' at the end of a code denotes that code plus all under it in the hierarchy. A hyphen between two codes indicates all codes between these two codes inclusive.
- There are no new codes for 2018/19
- This specification has been designed by PRIMIS+ specifically to report uptake figures for national surveillance. It is not a recall or payment specification. Practice systems may use different codes and therefore give different results for internal audits and call / recall.

Selected guidance from PRIMIS

Identifying patients who are pregnant or immunosuppressed from the multitude of codes that may be used poses particular problems.

If practices wish to rationalise their coding to ensure accurate identification and reporting then the use of Read v2 codes from the list at Annex A is recommended.

Pregnancy

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 to avoid calling patients inappropriately.

Immune Suppression

The concept of immune suppression is technically difficult to represent.

- For many patients, especially those undergoing chemotherapy or significant radiotherapy, the indication for flu vaccination may be temporary and clinical assessment may be required.
- The concept of "immune suppression by a daily dose of 20mg Prednisolone" cannot be meaningfully represented by the current system suppliers.
- Although a drug list has been defined for immunosuppression, some may be obsolete or not given in Primary Care and so not be detected by system searches.

Vaccination codes

Use of any of these codes on or after 1 Sep 18 indicates that a seasonal influenza vaccination has been given

Vaccination Read codes	
65E..	Influenza vaccination
65E2%	Influenza vaccination given by other healthcare provider <i>(details below)</i>
65ED%	Seasonal influenza vaccination <i>(details below)</i>
65EE%	Administration of intranasal influenza vaccination
ZV048	[V]Influenza vaccination
Vaccine medication codes	
n47%	INFLUENZA VACCINES (excluding n47A. Pandemrix Flu Vac (H1N1v) 2009, n47B. Celvapan Flu Vac (H1N1v) 2009, n47r. CELVAPAN (H1N1) suspension for injection vials 5mL, n47s. CELVAPAN (H5N1) suspension for injection vials 5mL, n47t. PANDEMRIX (H5N1) injection vials)
Note that although all the available vaccines are represented in dm+d some of the newer vaccines do not have a Read code and system suppliers may not have made them all available through their prescribing databases.	

Vaccination codes – detail

Vaccination in practice	
65E..	Influenza vaccination
65ED.	Seasonal influenza vaccination
65ED1	Administration of first intranasal seasonal flu vaccination
65ED3	Administration of second intranasal seasonal flu vaccination
65ED4	Administration of first inactivated seasonal flu vaccination
65ED5	Administration of second inactivated seasonal flu vaccination
65EE.	Administration of intranasal influenza vaccination
65EE0	Administration of first intranasal influenza vaccination
65EE1	Administration of second intranasal influenza vaccination
Vaccination while in hospital	
65ED2	Seasonal influenza vaccination given while hospital inpatient
Vaccination by other Health Care Provider (eg School)	
65E20	Seasonal influenza vaccination given by other healthcare provider
65E21	First intranasal seasonal influenza vaccination given by other healthcare provider
65E22	Second intranasal seasonal influenza vaccination given by other healthcare provider
65E23	Second intramuscular seasonal influenza vaccination given by other healthcare provider
65E24	First intramuscular seasonal influenza vaccination given by other healthcare provider
Vaccination by Pharmacist	
65ED0	Seasonal influenza vaccination given by pharmacist
65ED6	First intranasal seasonal influenza vaccination given by pharmacist
65ED7	Second intranasal seasonal influenza vaccination given by pharmacist
65ED8	First inactivated seasonal influenza vaccination given by pharmacist
65ED9	Second inactivated seasonal influenza vaccination given by pharmacist

Allergy / Declined codes

14LJ.	H/O: influenza vaccine allergy
8I2F%	Influenza vaccination contraindicated
U60K4	<input checked="" type="checkbox"/> Influenza vaccine causing adverse effects in therapeutic use
ZV14F	<input type="checkbox"/> Personal history of influenza vaccine allergy
68NE%	No consent - influenza imm.
9OX5.	Influenza vaccination declined
9OX51	Seasonal influenza vaccination declined
9OX52	First intranasal influenza vaccination declined
9OX53	Second intranasal influenza vaccination declined
9OX54	First intranasal seasonal influenza vaccination declined
9OX56	Second intranasal seasonal influenza vaccination declined

At Risk Group - Chronic respiratory disease

An asthma emergency admission code includes a patient in the population regardless of other codes.

Otherwise a patient is included only if they have an asthma diagnosis code AND an asthma medication code in the last year (recorded on or after 1 Sep 2017)

Asthma Emergency Admissions	
663d.	Emergency asthma admission since last appointment
8H2P.	Emergency admission, asthma
Asthma Diagnosis Codes	
H33%	Asthma
H3120	Chronic asthmatic bronchitis
H3B..	Asthma-chronic obstructive pulmonary disease overlap syndrome
Asthma Medication Codes (prescribed after 1 September 2016)	
c6%	Corticosteroids (excluding c61U. BECLOMETHASONE rotahaler device)
fe%	Corticosteroids for clinical use (numerous exclusions)
c1D%	Salmeterol and Fluticasone Propionate
c1c%	Fluticasone+Formoterol
663F.	Oral steroids started
663Y.	Steroid dose inhaled daily
663g1	Using inhaled steroids – normal dose
663g2	Using inhaled steroids – high dose
663g3	Increases inhaled steroids appropriately
663g4	Using inhaled steroids - low dose
8B62.	Steroid prophylaxis
8B620	Oral steroid prophylaxis

Chronic Respiratory Disease	
7450%	Transplantation of lung
A115.	Tuberculous bronchiectasis
AD50.	Sarcoidosis of lung
AD52.	Sarcoidosis of lung with sarcoidosis of lymph nodes
C3503	Idiopathic pulmonary haemosiderosis
C370%	Cystic fibrosis (excluding C3706 Fibrosing colonopathy)
C3762	Alpha-1 antitrypsin deficiency
H3%	Chronic obstructive pulm.dis. (excludes H30%, H33%)
H31%	Chronic bronchitis (excluding H3101 Smokers cough)
H32%	Emphysema
H34%	Bronchiectasis
H35%	Extrinsic allergic alveolitis
H36..	Mild chronic obstructive pulmonary disease
H37..	Moderate chronic obstructive pulmonary disease
H38..	Severe chronic obstructive pulmonary disease
H39..	Very severe chronic obstructive pulmonary disease
H3A..	End stage chronic obstructive airways disease
H3y%	Chronic obstructive airways disease OS
H3z..	Chronic obstructive airways disease.NOS
H40%..	Coal workers' pneumoconiosis
H41%	Asbestosis

H42%	Silica and silicate pneumoconiosis
H43%	Pneumoconiosis due to other inorganic dust
H44%	Pneumopathy due to inhalation of other dust
H45%	Pneumoconiosis NOS
H46..	Respiratory disease due to chemical fumes and vapours
H460z	Bronchitis and pneumonitis due to chemical fumes NOS
H464%	Chronic respiratory conditions due to chemical fumes
H46z%	Respiratory conditions due to chemical fumes NOS
H47y0	Detergent Asthma
H48%	Progressive massive fibrosis
H4y%	Other specified lung diseases due to external agent
H4z..	Lung disease due to external agents NOS
H51y7	Malignant pleural effusion
H5410	Chronic pulmonary oedema
H55..	Postinflammatory pulmonary fibrosis
H560.	Pulmonary alveolar proteinosis
H561.	Idiopathic pulmonary haemosiderosis
H562.	Pulmonary alveolar microlithiasis
H563%	Idiopathic fibrosing alveolitis
H57%	Lung involvement in disease EC
H582.	Compensatory emphysema
H583.	Pulmonary eosinophilia
H583z	Pulmonary eosinophilia NOS
H58y6	Interstitial lung disease due to collagen vascular disease
H58y7	Interstitial lung disease due to connective tissue disease
H591.	Chronic respiratory failure
H592.	Chronic type 1 respiratory failure
H593.	Chronic type 2 respiratory failure
H5y12	Stenosis of trachea
H5y13	Stenosis of bronchus
Hy02.	Chronic pulmonary insufficiency following surgery
Hyu3%	[X]Chronic lower respiratory disease
Hyu40	[X]Pneumoconiosis dust con silica
Hyu41	[X]Pneumoconiosis spc inorg dust
Hyu48	[X]Chronic and other pulmonary manifestations due to radiation
Hyu5%	[X]Other resp dis aff interstit
N0421	Rheumatoid lung disease
N04y0	Rheumatoid lung
P861.	Congenital bronchiectasis
Q3170	Chronic lung disease of prematurity
ZV440	[V] Has tracheostomy
ZV45J	[V] Presence of artificial larynx
ZV461	[V] Respirator dependence
ZV550	[V] Attention to tracheostomy

At Risk Group - Chronic Heart Disease

33BA.	Impaired left ventricular function
662h.	New York Heart Association Classification – Class III
662i.	New York Heart Association Classification – Class IV
7900%	Transplantation of heart and lung
7901%	Other transplantation of heart
F391B	Cardiomyopathy in Duchenne muscular dystrophy
G1%	Chronic rheumatic heart disease
G21%	Hypertensive heart disease
G220.	Malignant hypertensive renal disease
G222.	Hypertensive renal disease with renal failure
G23%	Hypertensive heart + renal dis.
G3%	Ischaemic heart disease
G41%	Chronic pulmonary heart disease
G54%	Other diseases of endocardium
G55%	Cardiomyopathy
G573%	Atrial fibrillation and flutter
G58%	Heart failure
G5y1.	Myocardial degeneration
G5y3%	Cardiomegaly
G5y4%	Post cardiac operation functional disturbance
G5y6.	Rupture of papillary muscle
G5y7.	Sarcoid myocarditis
G5y8.	Rheumatoid myocarditis
G5yy2	Papillary muscle dysfunction
G5yy6	Atrial thrombosis
G5yy9	Left ventricular systolic dysfunction
G5yyA	Left ventricular diastolic dysfunction
G5yyB	Right ventricular diastolic dysfunction
G5yyC	Diastolic dysfunction
G5yyD	Left ventricular cardiac dysfunction
G5yyE	Right ventricular systolic dysfunction
G72B1	Coronary Artery Dissection
GA...	Rheumatic Heart Disease
Gyu1%	[X]Chronic rheumatic heart disease
Gyu3%	[X]Ischaemic heart diseases
Gyu4%	[X]Pulmonary heart disease and diseases of pulmonary circulation
Gyu55	[X]Other nonrheumatic mitral valve disorders
Gyu56	[X]Other aortic valve disorders
Gyu57	[X]Other nonrheumatic tricuspid valve disorders
Gyu58	[X]Other pulmonary valve disorders
Gyu59	[X]Mitral valve disorders in diseases classified elsewhere
Gyu5A	[X]Aortic valve disorders in diseases classified elsewhere
Gyu5B	[X]Tricuspid valve disorders in diseases classified elsewhere
Gyu5C	[X]Pulmonary valve disorders in diseases classified elsewhere
Gyu5D	[X]Multiple valve disorders in diseases classified elsewhere
Gyu5M	[X]Other hypertrophic cardiomyopathy
Gyu5N	[X]Other restrictive cardiomyopathy

Gyu5P	[X]Other cardiomyopathies
Gyu5Q	[X]Cardiomyopathy in infectious and parasitic diseases classified elsewhere
Gyu5R	[X]Cardiomyopathy in metabolic diseases classified elsewhere
Gyu5S	[X]Cardiomyopathy in nutritional diseases classified elsewhere
Gyu5T	[X]Cardiomyopathy in other diseases classified elsewhere
H5410	Chronic pulmonary oedema
L1280	Pre-existing hypertensive heart disease complicating pregnancy, childbirth and the puerperium
L1281	Pre-existing hypertensive heart and renal disease complicating pregnancy, childbirth and the puerperium
P5%	Bulb.cordis/cardiac sept.anom.
P60%	Pulmonary valve anomalies
P61%	Congenital tricuspid atresia and stenosis
P62%	Ebstein's anomaly
P63%	Congenital aortic valve stenosis
P64%	Congenital aortic valve insufficiency
P65%	Congenital mitral stenosis
P66%	Congenital mitral insufficiency
P67%	Hypoplastic left heart syndrome
P68%	Congenital heart disease
P69%	Left ventricular outflow tract obstruction
P6W%	Congenital malformation of aortic and mitral valves unspecified
P6X%	Congenital malformation of tricuspid valve, unspecified
P6y..	Other congenital heart anomaly.
P6y0%	Subaortic stenosis
P6y1%	Cor triatriatum
P6y2%	Pulmonary infundibular stenosis
P6y3%.	Obstructive heart anomaly NEC
P6y63	Ectopia cordis
P6y64	Abdominal heart
P6y6z	Heart or cardiac apex malposition NOS
P6yy%	Other specified heart anomalies
P6z..	Congenital heart anomaly NOS
P6z2.	Acyanotic congenital heart disease NOS
P6z3.	Cyanotic congenital heart disease NOS
P6zz.	Congenital heart anomaly NOS
P71%	Coarctation of Aorta
P722%	Atresia and stenosis of aorta
P73%	Pulmonary artery anomalies
P74%	Anomalies of great veins
PKy5M	Oculofaciocardiodental syndrome
SP084	Heart transplant failure and rejection
SP085	Heart-lung transplant failure and rejection
SP111	Cardiac insufficiency as a complication of care
TB000	Transplantation of heart with complication, without blame
ZV421	[V]Heart transplanted

At Risk Group - Chronic Renal Disease

7B00%	Transplantation of kidney
7B012	Bilateral nephrectomy
7B015	Transplant nephrectomy
7B019	Excision of rejected transplanted kidney
7B063	Exploration of renal transplant
7B0F3	Post-transplantation of kidney examination, recipient
7L1A0	Renal dialysis
7L1A1	Peritoneal dialysis
7L1A2	Haemodialysis NEC
7L1A4	Automated peritoneal dialysis
7L1A5	Continuous ambulatory peritoneal dialysis
7L1A6	Peritoneal dialysis NEC
7L1B%	Placement of ambulatory apparatus for compensation for renal failure
7L1C%	Placement of other apparatus for compensation for renal failure
7L1f0	Extracorporeal albumin haemodialysis
8L50.	Renal transplant planned
G7520	Goodpasture's syndrome
G7521	Goodpasture's disease
K01%	Nephrotic syndrome
K02%	Chronic glomerulonephritis
K0320	Focal membranoproliferative glomerulonephritis
K0325	Other familial glomerulonephritis
K05..	Chronic renal failure
K050.	End stage renal failure
K08yA	Proteinuric diabetic nephropathy
K0A1%	Rapidly progressive nephritic syndrome
K0A3%	Chronic nephritic syndrome
K0A8.	Rapidly progressive glomerulonephritis
K0D ..	End-stage renal disease
K0E..	Acute-on-chronic renal failure
Kyu21	[X]Other chronic renal failure
SP08%	Transplanted organ complication (exclude SP082, SP084, SP085, SP086, SP089, SP08A, SP08B)
TB001	Kidney transplant with complication, without blame
TB11.	Kidney dialysis with complication, without blame
U641.	[X] Kidney dialysis causing abnormal reaction pt/lat comp no misad at time
ZV420	[V]Kidney transplanted
ZV56%	[V] Aftercare involving intermittent dialysis
ZVu3G	[X] Other dialysis

Chronic Kidney Disease (Stage 3 – 5)

A code for Chronic Renal Disease (above) includes a patient in the group automatically. A CKD 3-5 code includes the patient unless a code for CKD 1-2 (1Z10., 1Z11., 1Z17., 1Z18., 1Z19., 1Z1A., K051., K052.) has been added more recently.

1Z12.	Chronic kidney disease stage 3
1Z13.	Chronic kidney disease stage 4
1Z14.	Chronic kidney disease stage 5
1Z15.	Chronic kidney disease stage 3A
1Z16.	Chronic kidney disease stage 3B
1Z1B.	Chronic kidney disease stage 3 with proteinuria
1Z1C.	Chronic kidney disease stage 3 without proteinuria
1Z1D.	Chronic kidney disease stage 3A with proteinuria
1Z1E.	Chronic kidney disease stage 3A without proteinuria
1Z1F.	Chronic kidney disease stage 3B with proteinuria
1Z1G.	Chronic kidney disease stage 3B without proteinuria
1Z1H.	Chronic kidney disease stage 4 with proteinuria
1Z1J.	Chronic kidney disease stage 4 without proteinuria
1Z1K.	Chronic kidney disease stage 5 with proteinuria
1Z1L.	Chronic kidney disease stage 5 without proteinuria
1Z1T.	CKD G3aA1 - chronic kidney disease with glomerular filtration rate category G3a and albuminuria category A1
1Z1V.	CKD G3aA2 - chronic kidney disease with glomerular filtration rate category G3a and albuminuria category A2
1Z1W.	CKD G3aA3 - chronic kidney disease with glomerular filtration rate category G3a and albuminuria category A3
1Z1X.	CKD G3bA1 - chronic kidney disease with glomerular filtration rate category G3b and albuminuria category A1
1Z1Y.	CKD G3bA2 - chronic kidney disease with glomerular filtration rate category G3b and albuminuria category A2
1Z1Z.	CKD G3bA3 - chronic kidney disease with glomerular filtration rate category G3b and albuminuria category A3
1Z1a.	CKD G4A1 - chronic kidney disease with glomerular filtration rate category G4 and albuminuria category A1
1Z1b.	CKD G4A2 - chronic kidney disease with glomerular filtration rate category G4 and albuminuria category A2
1Z1c.	CKD G4A3 - chronic kidney disease with glomerular filtration rate category G4 and albuminuria category A3
1Z1d.	CKD G5A1 - chronic kidney disease with glomerular filtration rate category G5 and albuminuria category A1
1Z1e.	CKD G5A2 - chronic kidney disease with glomerular filtration rate category G5 and albuminuria category A2
1Z1f.	CKD G5A3 - chronic kidney disease with glomerular filtration rate category G5 and albuminuria category A3
K053.	Chronic kidney disease stage 3
K054.	Chronic kidney disease stage 4
K055.	Chronic kidney disease stage 5

At Risk Group - Liver disease

7800%	Transplantation of liver
A707%	Chronic viral hepatitis
AyuB1	[X]Other chronic viral hepatitis
AyuB2	[X]Chronic viral hepatitis, unspecified
C3104	Glycogenesis with hepatic cirrhosis
C3761	Alpha-1 antitrypsin hepatitis
G8522	Oesophageal varices in cirrhosis of the liver
G8523	Oesophageal varices in alcoholic cirrhosis of the liver
J6...	Liver, biliary, pancreas + gi diseases NEC
J61%	Cirrhosis and chronic liver disease (not including J611. Acute alcoholic hepatitis, J61y1 Non-alcoholic fatty liver, J61y9 Fatty change of liver,)
J62..	Liver abscess and sequelae of chronic liver disease
J623.	Portal hypertension
J624.	Hepatorenal syndrome
J625.	[X] Hepatic failure
J62y.	Other sequelae of chronic liver disease
J62z.	Liver abscess and chronic liver disease causing sequelae NOS
J6353	Toxic liver dis with chronic persist.hepatitis
J6354	Toxic liver dis with chronic lobular hepatitis
J6355	Toxic liver dis with chronic active hepatitis
J6356	Toxic liver dis with fibrosis & cirrhosis of liver
J63A.	Hepatic granulomas in sarcoidosis
J63B.	Autoimmune hepatitis
J6617	Primary sclerosing cholangitis
J671%	Chronic pancreatitis
Jyu71	[X]Other and unspecified cirrhosis of liver
Jyu84	[X]Other chronic pancreatitis
PB61%	Biliary atresia
PB63%	Congenital absence of liver & gallbladder (not including: PB630, PB631, PB632, PB633)
PB6y1	Congenital hepatomegaly
SP086	Liver transplant failure and rejection
SP143	Hepatorenal syndrome as a complication of care

At Risk Group - Diabetes

Searches look for the latest of all these codes. If the latest code is a resolved code then the patient will not be included in the diabetes group.

C10%	Diabetes mellitus (excluding C1098 and C10F8 both Reaven's syndrome, C10J% Insulin autoimmune syndrome, C10K% Type A insulin resistance, C10P% Diabetes mellitus in remission)
Cyu2%	[X]Diabetes mellitus
L1805	Pre-existing diabetes mellitus, insulin-dependent
L1806	Pre-existing diabetes mellitus, non-insulin-dependent
L1807	Pre-existing malnutrition-related diabetes mellitus
L180A	Pre-existing Type 1 diabetes mellitus in pregnancy
L180B	Pre-existing Type 2 diabetes mellitus in pregnancy
L180X	Pre-existing diabetes mellitus, unspecified
Lyu29	[X]Pre-existing diabetes mellitus, unspecified
PKyP.	Diabetes insipidus, diabetes mellitus, optic atrophy and deafness

Diabetes Resolved

21263	Diabetes resolved
212H.	Diabetes resolved

At Risk Group - Immunosuppression

Medications causing immunosuppression (prescribed after 1 Mar 2018)	
h1%	Alkylating drugs
h2%	Cytotoxic antibiotics
h3%	Antimetabolites (excluding h323, h324, h32D, h32E)
h4%	Vinca alkaloids + Etoposide
h5%	OTHER CYTOTOXIC DRUGS (excluding h5L%)
h62%	DEXRAZOXANE
h7%	CYTOTOXIC IMMUNOSUPPR
h8%	OTHER IMMUNOSUPPRESSANTS
hh%	OTHER ANTINEOPLASTIC AGENTS (excluding hhN%)
j51%	SODIUM AUROTHIOMALATE
j52%	PENICILLAMINE [MUSCULOSKELETAL USE]
j59%	LEFLUNOMIDE
Immunosuppression Diagnosis codes	
2J30.	Patient immunocompromised
2J31.	Patient immunosuppressed
43C3.	HTLV-3 antibody positive
A788%	Acquired immune deficiency. syndrome
A789%	HIV resulting in other dis
AyuC%	[X]Human immunodeficiency virus disease
B6%	Malignant neoplasm of lymphatic and haemopoietic tissue
B934.	Polycythaemia Vera
B9377	Refractory anaemia with ring sideroblasts
B9378	Refractory anaemia with multilineage dysplasia
B9379	5Q minus syndrome
B937W	Myelodysplastic syndrome, unspecified
BBr4.	[M] Erythroleukaemias
BBr40	[M] Erythroleukaemia
ByuD%	[X]Malignant neoplasms of lymphoid, haematopoietic and related tissue
ByuH6	[X]Neoplasm of uncertain and unknown behaviour of other myelodysplastic syndromes
ByuH7	[X]Other specified neoplasms of uncertain and unknown behaviour of lymphoid, haematopoietic and related tissue
ByuH8	[X]Neoplasm of uncertain and unknown behaviour of lymphoid, haematopoietic and related tissue, unspecified
ByuHD	[X]Myelodysplastic syndrome, unspecified
C3028	Chediak-Higashi Syndrome
C331%	Monoclonal paraproteinaemia
C332.	Other paraproteinaemias
C332z	Paraproteinaemia NOS
C333%	Macroglobulinaemia
C37y8	Haemophagocytic lymphohistiocytosis
C37y9	Haemophagocytic syndrome, infection-associated
C37yD	Tumour lysis syndrome
C37yE	Macrophage activation syndrome
C390.	Deficiencies of humoral immunity
C3900	Hypogammaglobulinaemia NOS

C3902	Selective IgM immunodeficiency
C3904	Other selective immunoglobulin deficiency
C3905	Congenital hypogammaglobulinaemia
C3906	Immunodeficiency with IgM hypergammaglobulinaemia
C3907	Common variable immunodeficiency
C3909	Agammaglobulinaemia NEC
C390A	Dysimmunoglobulinaemia NEC
C390y	Other specified deficiency of humoral immunity
C390z	Deficiency of humoral immunity NOS
C391%	Deficiencies of cell-mediated immunity
C392%	Combined immunity deficiency (excluding C3922 thymic aplasia or dysplasia with immunodeficiency, C3926 adenosine deaminase deficiency, C3927 purine nucleoside phosphorylase deficiency)
C393.	Unspecified immunity deficiency
C395.	Immunodeficiency with short-limbed stature
C396.	Immunodeficiency following hereditary defect in response to Epstein-Barr virus
C397.	Hyper immunoglobulin E syndrome
C398%	Common variable immunodeficiency
C39y0	Lymphocyte function antigen-1 defect
Cyu00	[X] Other immunodeficiencies + predominantly antibody defects
Cyu01	[X] Other combined immunodeficiency disorders
Cyu02	[X] Immunodeficiency associated with other specified major defects
Cyu03	[X] Immunodeficiency associated with major defect, unspecified
Cyu05	[X] Other specified immunodeficiency disorders
D4000	Idiopathic granulocytosis
D4009	Cyclical neutropenia
D401%	Functional disorders of polymorphonuclear neutrophils
D41y0	Hypergammaglobulinaemia
D41y1	Myelofibrosis
D41y2	Pseudocholinesterase deficiency
F38%	Myoneural disorders (excluding F382. Toxic myoneural disorder)
Fyu8.	[X]Diseases of myoneural junction and muscle
Fyu80	[X]Other specified myoneural disorders
Fyu83	[X]Myasthenic syndromes in endocrine diseases classified elsewhere
Fyu84	[X]Other myasthenic syndromes in neoplastic disease classified elsewhere
Fyu85	[X]Myasthenic syndromes in other diseases classified elsewhere
G753.	Lethal midline granuloma
M15y3	Leiner's disease
PH3yA	Bloom syndrome
PJ535	Schwachman-Diamond syndrome

At Risk Group - Asplenia or Dysfunction of the Spleen

14N7.	H/O: splenectomy
7840%	Total excision of spleen (excluding 78402 Excision of accessory spleen)
7841.	Other excision of spleen
7841y	Other specified other excision of spleen
7841z	Other excision of spleen NOS
78420	Transplantation of spleen
78421	Embolisation of spleen
D104.	Thalassaemia
D1040	Thalassaemia Major NEC
D1042	Thalassaemia with haemoglobin S disease
D1043	Alpha thalassaemia
D1046	Beta intermedia thalassaemia
D1047	Beta major thalassaemia
D1049	Delta-beta thalassaemia
D104A	Hereditary leptocytosis
D104z	Thalassaemia NOS
D106%	Sickle-cell anaemia
D414.	Hypersplenism
D4154	Splenic atrophy
D4156	Splenic fibrosis
D4157	Splenic infarction
D415A	Hyposplenism
D415B	Acquired absence of spleen
Dyu12	[X]Other sickle-cell disorders
G74y6	Embolism and thrombosis of the splenic artery
J690%	Coeliac disease
PK01.	Absent spleen
PK06.	Hypoplasia of spleen
S7504	Spleen massive parenchymal disruption without mention of open wound into cavity
S7514	Spleen massive parenchymal disruption with open wound into cavity

At Risk Group - Chronic Neurological disease

Includes Stroke/TIA, Cerebral Palsy and MS codes.

C3510	Hepatolenticular degeneration (Wilson's disease)
E004%	Arteriosclerotic dementia
E011%	Alcohol amnestic syndrome
Eu00%	[X]Dementia in Alzheimer's disease
Eu01%	[X]Vascular dementia
Eu02%	[X]Dementia in other diseases classified elsewhere
Eu815	[X]Severe learning disability
Eu817	[X]Profound learning disability
F036%	Toxic encephalitis
F1...	Hereditary and degenerative diseases of the CNS
F10%	Cerebral degen. usually manifest in childhood to Parkinson's disease
F11%	Other cerebral degenerations
F12%	Parkinson's disease
F13..	Other extrapyramidal disease and abnormal movement disorders
F130%	Other basal ganglia degen. diseases
F1322	Myoclonic encephalopathy
F134.	Huntington's chorea
F135.	Other choreas
F1350	Hemiballismus
F135z	Other choreas NOS
F136%	Idiopathic torsion dystonia
F137%	Symptomatic torsion dystonia (excluding F1372 drug-induced dystonia)
F13A.	Paroxysmal dystonia
F13X.	Dystonia, unspecified
F14%	Spinocerebellar disease
F15%	Anterior horn cell disease
F16%	Other diseases of spinal cord (excluding F1630 myelopathy due to intervertebral disc disease, F1632 myelopathy due to spondylosis, F163z myelopathy due to disease NOS, F164. Brown-Sequard syndrome, F16y0 drug-induced myelopathy)
F17..	Autonomic nervous system dis
F174%	Multiple system atrophy
F1y%	Other specified hereditary or degenerative dis. of the CNS
F1z..	Hereditary and degenerative diseases of the CNS NOS
F20%	Multiple Sclerosis
F21%	Other central nervous system demyelinating diseases (excluding F213. Clinically isolated syndrome)
F22%	Hemiplegia
F23%	Congenital cerebral palsy
F24..	Other paralytic syndromes
F240%	Quadriplegia
F241%	Paraplegia
F24y%	Other specified paralytic syndromes (excluding F24y1 Todd's paralysis)
F24z.	Paralysis NOS
F281%	Anoxic brain damage
F283.	Unspecified encephalopathy
F2A%	Hemiparesis
F2B%	Cerebral palsy
F371%	Polyneuropathy in collagen vascular disease
F373.	Polyneuropathy in malignant disease
F3749	Polyneuropathy in sarcoidosis
F3902	Centronuclear myopathy

F3904	Nemaline body disease
F391%	Hereditary progressive muscular dystrophy (not F3915 Distal (Gower's) muscular dystrophy, F3916 Ocular muscular dystrophy)
F3920	Dystrophia myotonica (Steinert's disease)
F3925	Proximal myotonic myopathy
F39B.	Muscular dystrophy
F4236	Amaurosis fugax
Fyu1%	[X]Systemic atrophies primarily affecting the central nervous system (not Fyu15 [X]Systemic atrophy affecting the central nervous system in myxoedema)
Fyu2%	[X]Extrapyramidal and movement disorders (not Fyu20 [X]Other drug-induced secondary parkinsonism, Fyu24 [X]Other dystonia, Fyu25 [X]Other specified forms of tremor, Fyu2A [X]Dystonia, unspecified)
Fyu3%	[X]Other degenerative diseases of the nervous system
Fyu4%	[X]Demyelinating diseases of the central nervous system
Fyu55	[X]Other transient cerebral ischaemic attacks and related syndromes
Fyu74	[X]Polyneuropathy in neoplastic disease classified elsewhere
Fyu77	[X]Polyneuropathy in systemic connective tissue disorders classified elsewhere
Fyu83	[X]Myasthenic syndromes in endocrine diseases classified elsewhere
Fyu84	[X]Other myasthenic syndromes in neoplastic disease classified elsewhere
Fyu85	[X]Myasthenic syndromes in other diseases classified elsewhere
Fyu8A	[X]Mitochondrial myopathy, not elsewhere classified
Fyu9%	[X] cerebral palsy and other paralytic syndromes
FyuA1	[X]Other hydrocephalus
FyuA3	[X]Hydrocephalus in infectious and parasitic diseases classified elsewhere
FyuA4	[X]Hydrocephalus in neoplastic disease classified elsewhere
FyuA5	[X]Hydrocephalus in other diseases classified elsewhere
G61%	Intracerebral haemorrhage (not including G617. Intracerebral haemorrhage, intravent.)
G63y0	Cerebral infarct due to thrombosis of precerebral arteries
G63y1	Cerebral infarction due to embolism of precerebral arteries
G64%	Cerebral arterial occlusion
G65%	Transient cerebral ischaemia (not including G655. Transient global amnesia)
G66%	Stroke and cerebrovascular accident unspecified
G6760	Cerebral infarction due to cerebral venous thrombosis, nonpyogenic
G6W..	Cerebral infarction due to unspec. occlus. or stenosis of precerebral arteries
G6X..	Cerebral infarction due to unspec. occlusion or stenosis of cerebral arteries
Gyu62	[X]Other intracerebral haemorrhage
Gyu63	[X]Cerebral infarction due to unspec. occlus. or stenosis of cerebral arteries
Gyu64	[X]Other cerebral infarction
Gyu65	[X]Occlusion and stenosis of other precerebral arteries
Gyu66	[X]Occlusion and stenosis of other cerebral arteries
Gyu6C	[X]Sequelae of stroke, not specified as haemorrhage or infarction
Gyu6F	[X]Intracerebral haemorrhage in hemisphere, unspecified
Gyu6G	[X]Cerebral infarct due to unspec. occlus. or stenosis of precerebral arteries
P23%	Congenital hydrocephalus
Pyu01	[X]Other congenital hydrocephalus
SP100	Anoxic brain damage complication
SP101	Cerebral anoxia complication
ZV12D	[V]Personal history of transient ischaemic attack

BMI in Adults

All BMI searches look for the most recent code from those listed below. If the most recent code is from the 'At Risk' list the patient will be included, otherwise they will not.

22K..	Body Mass Index - with value attached
22KB.	Baseline body mass index - with value attached

22K1.	Body Mass Index normal K/M2
22K2.	Body Mass Index high K/M2
22K3.	Body Mass Index low K/M2
22K4.	Body mass index 25-29 - overweight
22K5.	Body mass index 30+ - obesity
22K6.	Body mass index less than 20
22K7.	Body mass index 40+ - severely obese
22K8.	Body mass index 20-24 - normal
22KC.	Obese class I (body mass index 30.0 - 34.9)
22KD.	Obese class II (body mass index 35.0 - 39.9)
22KE.	Obese class III (body mass index equal to or greater than 40.0)

At Risk Group - Morbid Obesity in Adults

22K..	Body Mass Index - with value => 40
22KB.	Baseline body mass index - with value => 40
22K7.	Body mass index 40+ - severely obese
22KE.	Obese class III (body mass index equal to or greater than 40.0)

BMI in Children age 2-9

Age at 1 Sep 18

As with adults the BMI searches look for the most recent code from those listed below. If the most recent code is from the 'At Risk' list the patient will be included, otherwise they will not. Note that in children there is no BMI value taken into account.

22K90	Baseline body mass index centile
22K91	Child body mass index centile
22K92	Child Body Mass Index less than 0.4 th centile
22K93	Child Body Mass Index 0.4 th to 1.9 th centile
22K94	Child Body Mass Index on 2 nd centile
22K95	Child Body Mass Index 3 rd to 8 th centile
22K96	Child Body Mass Index on 9 th centile
22K97	Child Body Mass Index 10 th to 24 th centile
22K98	Child Body Mass Index on 25 th centile
22K99	Child Body Mass Index 26 th to 49 th centile
22K9A	Child Body Mass Index on 50 th centile
22K9B	Child Body Mass Index 51 st to 74 th centile
22K9C	Child Body Mass Index on 75 th centile
22K9D	Child Body Mass Index 76 th to 90 th centile
22K9E	Child Body Mass Index on 91 st centile
22K9F	Child Body Mass Index 92 nd to 97 th centile
22K9G	Child Body Mass Index on 98 th centile
22K9H	Child Body Mass Index 98.1 st to 99.6 th centile
22K9J	Child Body Mass Index greater than 99.6 th centile
22K9K	Down's syndrome body mass index centile

At Risk Group - Morbid Obesity in Children age 2-9

22K9J	Child Body Mass Index greater than 99.6 th centile
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At Risk Group - Carers

Searches look for the latest of all these codes. If the latest code is a 'not a carer' code then the patient will not be included in the carer group.

Is a carer	
13HH.	Looks after chronically sick relative
918A%	Carer
918G.	Is a carer
918H.	Primary carer
918W.	Carer of a person with learning disability
918X.	Carer of a person with physical disability
918Y.	Carer of a person with sensory impairment
918a.	Carer of a person with substance misuse
918b.	Carer of a person with alcohol misuse
918c.	Carer of a person with chronic disease
918d.	Carer of a person with mental health problem
918m.	Carer of a person with a terminal illness
918y.	Carer of person with dementia
Is not a carer	
918f%	Is no longer a carer
918r.	Not a carer

At Risk Group - Pregnancy

The first list contains pregnancy, postnatal and termination Read codes that indicate that the patient has been, or is, pregnant. A proxy eight month period is used before the Start Date of 1 Sep 2018 (the assumption is that the first entry of any pregnancy code will be, at the earliest, when the patient is at least four weeks pregnant).

The second list contains pregnancy and antenatal codes. If the latest of all the codes is from the second list on 1 Sep 2018, the patient is considered still pregnant on 31 Aug 2018.

62%	Patient pregnant (not including 6214., 6219., 6294., 62E%, 62H7., 62H8., 62I%, 62J%, 62P%, 62X%)
633%	Outcome of delivery (not including 633A.)
63E%	Labour details
7E060	Open removal of products of conception from uterus NEC
7E066	Hysterotomy and termination of pregnancy
7E070	Dilation of cervix uteri and curettage of products of conception from uterus
7E071	Curettage of products of conception from uterus NEC
7E08%	Other evacuation of contents of uterus (not including 7E089)
7E0B%	Introduction of abortifacient into uterine cavity
7F1%	Induction and delivery operations
7F20%	Instrumental removal of products of conception from delivered uterus
7F21%	Manual removal of products of conception from delivered uterus
7F22%	Other operations on delivered uterus
7F23%	Immediate repair of obstetric laceration (not including 7F235)
L0%	Pregnancy with abortive outcome (not including L08%, L0A%)
L191.	Continuing pregnancy after abortion of one fetus or more
L192.	Continuing pregnancy after intrauterine death one fetus or more
L20%	Normal delivery in a completely normal case
L21%	Multiple pregnancy
L264%	Intrauterine death
L292%	Maternal pyrexia during labour, unspecified
L293%	Septicaemia during labour
L295%	Elderly primigravida
L296.	Vaginal delivery following previous caesarean section
L2A%	Abnormal findings on antenatal screening of mother
L2B..	Low weight gain in pregnancy
L2C..	Malnutrition in pregnancy
L2D..	Retained intrauterine contraceptive device in pregnancy
L2y..	Other specified risk factors in pregnancy
L2z..	Risk factors in pregnancy NOS
L3%	Complications occurring during labour and delivery (not including L33%, L344%, L345%, L34y%, L34z%, L35%, L38%, L390%, L391%, L392%, L394%, L39A., L39B., L39y5)
L40%	Major puerperal infection
L42%	Puerperal pyrexia of unknown origin
L440%	Cerebrovascular disorders in the puerperium
L44y%	Other complications of the puerperium
L44z%	Complications of the puerperium NOS
L4y..	Other specified complications of the puerperium
L4z..	Complications of the puerperium NOS
Ly0..	Spontaneous vertex delivery
Ly1..	Spontaneous breech delivery
Lyu0%	[X]Pregnancy with abortive outcome
Lyu2%	[X]Other maternal disorders predominantly related to pregnancy (not including Lyu29)
Lyu3%	[X]Maternal care related to the fetus and amniotic cavity and possible delivery problems

Lyu4%	[X]Complications of labour and delivery
Lyu5%	[X]Delivery
Lyu6.	[X]Complications predominantly related to the puerperium (not including Lyu64, Lyu69)
Q48D%	[X] Stillbirth
ZV22%	[V]Normal pregnancy
ZV23%	[V]High-risk pregnancy supervision (excluding ZV233 [V]Grand multiparity)
ZV24%.	[V]Postpartum care and examination
ZV27%	[V]Outcome of delivery
ZV28%	[V]Antenatal screening (excluding ZV283 [V]Screening for malformations using ultrasonics, ZV285 [V]Screening for isoimmunisation)

Having identified women pregnant on 1 August 2017, a second search then looks for the following codes between 1 September 2017 and 31 January 2018 to identify women who become pregnant during the vaccination season.

62...	Patient pregnant
621%	Patient currently pregnant (not 6214. Pregnant-on history, 6219. Patient ?pregnant, 6294. No A/N care: not known preg.)
622%	Antenatal care: gravida No.
623%	A/N care: obstetric risk
624%	A/N care: precious pregnancy
625%	A/N care: social risk
626%	A/N care: medical risk
627%	A/N care: gynae. risk
628%	A/N care: risk NOS
629%	No ante-natal care
62A%	A/N care provider
62B%	Delivery booking place
62C%	Deliv.booking - length of stay
62D%	Parent craft classes
62F%	Antenatal amniocentesis
62G%	Antenatal ultrasound scan
62H%	A/N Rh antibody screen (not 62H7. Rh - 6/12 after anti-D sample, 62H8. Rh - random, non-preg. Sample)
62K%	Antenatal syphilis screen
62L%	Antenatal blood group screen
62M%	Antenatal sickle cell screen
62N%	Antenatal examinations
62O%	Misc. antenatal data
62U%	Downs screen - blood test
62V%	Delivery place planned
62W..	Antenatal blood tests
62Y%	Routine antenatal care
62Z%	Maternal care NOS
62a%	Pregnancy review
62b..	Antenatal HIV screening
62c%	Antenatal screening
L191.	Continuing pregnancy after abortion of one fetus or more
L192.	Continuing pregnancy after intrauterine death one fetus or more
L21%	Multiple pregnancy (not L2101, L2111, L2121, L213%, L21y1, L21z1)
L295%	Elderly primigravida (not L2951 Elderly primigravida – delivered)
L2A%	Abnormal findings on antenatal screening of mother
L2B..	Low weight gain in pregnancy
L2C..	Malnutrition in pregnancy
L2D..	Retained intrauterine contraceptive device in pregnancy
L2y..	Other specified risk factors in pregnancy

L2z..	Risk factors in pregnancy NOS
Lyu2%	<input checked="" type="checkbox"/> Other maternal disorders predominantly related to pregnancy (not Lyu29)
Lyu30	<input checked="" type="checkbox"/> Other multiple gestation
Lyu31	<input checked="" type="checkbox"/> Other complications specific to multiple gestation
Lyu32	<input checked="" type="checkbox"/> Maternal care for other malpresentation of fetus
Lyu33	<input checked="" type="checkbox"/> Maternal care for other abnormalities of cervix
Lyu34	<input checked="" type="checkbox"/> Maternal care for other abnormalities of gravid uterus
Lyu35	<input checked="" type="checkbox"/> Maternal care for other abnormalities of pelvic organs
Lyu36	<input checked="" type="checkbox"/> Maternal care for (suspected) damage to fetus by other medical procedures
Lyu37	<input checked="" type="checkbox"/> Maternal care for other (suspected) fetal abnormality and damage
Lyu38	<input checked="" type="checkbox"/> Maternal care for other isoimmunization
Lyu39	<input checked="" type="checkbox"/> Maternal care for other specified known or suspected fetal problems
Lyu3A	<input checked="" type="checkbox"/> Maternal care for known or suspected fetal problem, unspecified
Lyu3B	<input checked="" type="checkbox"/> Other disorders of amniotic fluid and membranes
Lyu3C	<input checked="" type="checkbox"/> Other placental disorders
Lyu3D	<input checked="" type="checkbox"/> Other premature separation of placenta
Lyu3E	<input checked="" type="checkbox"/> Other antepartum haemorrhage
ZV22%	<input type="checkbox"/> Normal pregnancy
ZV23%	<input type="checkbox"/> High-risk pregnancy supervision (excluding ZV233 <input type="checkbox"/> Grand multiparity)
ZV28%	<input type="checkbox"/> Antenatal screening (excluding ZV283 <input type="checkbox"/> Screening for malformations using ultrasonics, ZV285 <input type="checkbox"/> Screening for isoimmunisation)

Ethnicity

Vaccine uptake by ethnicity is not currently reported in Scotland although it is in England and Wales. Recording of ethnicity is "... an Optional item, but may be made Mandatory at a later date in order to conform to UK-wide requirements." (NHS Scotland ISD)

Read Codes v2	Grouping for Reporting Purposes
9i0 9i00 9i20-25.	White British
9i1, 9i10	White Irish
9i2 9i26-2T.	White Other
9i3	Mixed White & Black – Caribbean
9i4	Mixed White & Black – African
9i5	Mixed White & Asian
9i6 9i60-65 9iA9 9iD3 9SB4	Mixed Other
9i7	Asian or Asian British – Indian
9i8	Asian or Asian British – Pakistani
9i9	Asian or Asian British – Bangladeshi
9iA 9iA1-A4 9iA6-A8 9iAA 9iF0-F3	Asian or Asian British – Other
9iB	Black or Black British – Caribbean
9iC 9iD0-D1	Black or Black British - African
9iD 9iD2 9iD4	Black or Black British - Other
9iE	Chinese
9iF 9iF9-FK	Other Ethnic Category
134B-134O 9S1-9SC 9SG-9SZ 9T1-TC 9t20-9t2J 9t00, 9T0H, 9t10-1F	Other Ethnicity codes RACE: codes Census ethnic groups Census ethnic groups Nationality data Scottish 2011 census groups (not used in Scotland)

Read Codes v2	Ethnicity not recorded
9SD	Ethnic group not given – patient refused
134P.	RACE: not stated
9iG..	Ethnic category not stated – 2001 census
9SE	Ethnic group not recorded

Iain Cromarty
26 Sep 18

Suggested Read Codes used to identify Pregnancy & Ended Pregnancy

Patient pregnant	62...
Missed abortion	L02..
Ectopic pregnancy	L03..
Spontaneous abortion	L04..
Normal delivery in a completely normal case	L20...
Spontaneous breech delivery	Ly1, 7F150
Spontaneous vertex delivery	Ly0..
Normal delivery	7F19
Breech extraction delivery	7F14.
Forceps delivery	L395.
Forceps cephalic delivery	7F16.
Vacuum extractor delivery	L396.
Vacuum delivery	7F17.
Delivery by elective caesarean section	L3983
Elective caesarean section	7F12.
Delivery by emergency caesarean section	L3984
Emergency caesarean section	7F133
Intrauterine death	L264
Termination of pregnancy	7E086

Suggested Codes used to identify Immunosuppression

Patient Immunosuppressed	2J30
Patient Immunocompromised	2J31