**SARS-CoV2 (COVID-19) Vaccine Uptake Reporting Specification**

**Collection 2020/2021**

|  |  |  |
| --- | --- | --- |
| **Last Updated Date** | **Version** |  |
| ***14/1/21*** | 1.1 |  |
| Change Log – [click here](#Change_log) |  |  |

**SNOMED CT Version**

Relates to:

PHE: *COVID-19\_At-Risk dataset V0.3* (4/12/2020) & *COVID-19 - gender and Ethnicity V0.3* [Dataset v0.3]

PHE: Scoping\_Document\_202021\_GP\_COVID\_v1

UK SNOMED edition: Nov 2020 release. dm+d as at 1/12/20\*

Associated COVID19 extensional code-list spreadsheet: **PHE\_COVID\_SCT\_codeclusters\_v1.1\_14012021**\*

**PRIMIS - the University of Nottingham cannot take any responsibility or liability for use of this specification for any purpose other than its Primary intended use for the SARS-CoV2 (COVID-19) Vaccine Uptake Monitoring Programme and associated Recall Programmes.**

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. Elements related to Call & Recall are in Section 5.

This specification is provided to GP Suppliers to enable submission of data to be standardised and quality assured nationally and for the purposes of Patient Recall for the COVID Vaccination Programme.

**Introductory Guidance**

**This document is produced with an associated spreadsheet**, (referenced on the title page) 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 larger medication clusters are specified only in the extensional format contained in the associated spreadsheet.

The code clusters contained within this specification are *based* on those produced for the Influenza Vaccination programme but *have been modified* in the light of available information concerning COVID-19 and recent reviews of the underlying Influenza Specification.

It should be noted that the Vaccination Programme is *currently* designed for those individuals aged 16 and over and the specification has been modified in certain instances to reflect this, although it is recognised that a small number of children at significant risk may be vaccinated on specific clinical advice,

A separate Call & Recall section has been added as an outline schema

It should also be recognised that the circumstances surrounding COVID-19 vaccination programme are evolving. This specification reflects the position as at 8/1/21. A small number of dm+d codes reflecting future vaccines are currently unavailable and will be added as they become available.

Dr Dai Evans & Jennie Johnson

PRIMIS - the University of Nottingham

**Contents**

[Dataset Specification 6](#_Toc61189645)

[1) Patient selection criteria: 6](#_Toc61189646)

[2) Clinical data extraction criteria: 6](#_Toc61189647)

[Patient Details 6](#_Toc61189648)

[Clinical Risk Groups 7](#_Toc61189649)

[Vaccinations 23](#_Toc61189650)

[Carers 28](#_Toc61189651)

[Health and Social Care Workers 29](#_Toc61189652)

[Ethnicity 30](#_Toc61189653)

[Pregnancy 34](#_Toc61189654)

[Extra fields needed for call/recall purposes 38](#_Toc61189655)

[3) Bandings and Groupings 39](#_Toc61189656)

[Age 39](#_Toc61189657)

[Gender 40](#_Toc61189658)

[Ethnicity 41](#_Toc61189659)

[Patients with Immunosuppression 43](#_Toc61189660)

[Patients with CKD 43](#_Toc61189661)

[Patients with Asthma 43](#_Toc61189662)

[Patients with CNS Disease (including Stroke/TIA) 43](#_Toc61189663)

[Patients who have Chronic Respiratory Disease 43](#_Toc61189664)

[Patients with Morbid Obesity 44](#_Toc61189665)

[Patients with Diabetes 44](#_Toc61189666)

[Patients with Severe Mental Health 44](#_Toc61189667)

[Patients who have received at least 1 dose of a COVID Vaccination 44](#_Toc61189668)

[Patients who have received at least 2 doses of a COVID Vaccination 45](#_Toc61189669)

[Patients who have an unstated dose 1 vaccination type 45](#_Toc61189670)

[Patients who have an unstated dose 2 vaccination type 45](#_Toc61189671)

[Patients who are shielding (High Risk from COVID-19) 45](#_Toc61189672)

[Patients who are pregnant 46](#_Toc61189673)

[4) Indicators for Dataset 1 - COVID-19 At-risk 47](#_Toc61189674)

[Section 1. Summary data 47](#_Toc61189675)

[1. Vaccination status of ALL patients 47](#_Toc61189676)

[2. Vaccination status of patients in one or more at-risk group 50](#_Toc61189677)

[Section 2 At-risk Groups 53](#_Toc61189678)

[1. Vaccination status of patients with Chronic Heart Disease 53](#_Toc61189679)

[2. Vaccination status of patients with Chronic Respiratory Disease 53](#_Toc61189680)

[3. Vaccination status of patients with Chronic Kidney Disease 54](#_Toc61189681)

[4. Vaccination status of patients with Chronic Liver Disease 54](#_Toc61189682)

[5. Vaccination status of patients with Diabetes 55](#_Toc61189683)

[6. Vaccination status of patients with Immunosuppression 55](#_Toc61189684)

[7. Vaccination status of patients with Chronic Neurological Disease (including Stroke/TIA, Cerebral Palsy or MS) 56](#_Toc61189685)

[8. Vaccination status of patients with Asplenia or Dysfunction of the Spleen 56](#_Toc61189686)

[9. Vaccination status of patients with Morbid Obesity and in one or more other clinical risk groups 57](#_Toc61189687)

[10. Vaccination status of patients with Morbid Obesity and NOT in any other clinical risk groups 57](#_Toc61189688)

[11. Vaccination status of patients with Learning Disabilities 58](#_Toc61189689)

[12. Vaccination status of patients with Severe Mental Illness 58](#_Toc61189690)

[Section 3 High risk group for COVID (Shielding) 59](#_Toc61189691)

[1. Vaccination of Shielded Individuals (High Risk from COVID-19) 59](#_Toc61189692)

[2. Vaccination of Household contacts of Shielding Patients 59](#_Toc61189693)

[Section 4. Vaccination uptake by Health and Social Care Workers 60](#_Toc61189694)

[1. Care home workers. 60](#_Toc61189695)

[2. Nursing Home workers 60](#_Toc61189696)

[3. Domiciliary Care workers 61](#_Toc61189697)

[Section 5. Carers 61](#_Toc61189698)

[Section 6. Patients in long-stay residential care home or other long-stay facility 62](#_Toc61189699)

[Indicators for Dataset 2 – Ethnicity and Gender 63](#_Toc61189700)

[Section 1. Summary Data 63](#_Toc61189701)

[1. Vaccination status of ALL patients by age band: Aged 16 and over 63](#_Toc61189702)

[2. Vaccination status of patients in one or more at-risk groups by age band: Aged 16 and over 65](#_Toc61189703)

[Section 2. Gender Dataset 68](#_Toc61189704)

[1. Vaccination status of ALL patients by gender: Aged 16 to under 40 68](#_Toc61189705)

[2. Vaccination status of patients at-risk by gender: Aged 16 to under 40 70](#_Toc61189706)

[3. Vaccination status of ALL patients by gender: Aged 40 to under 50 72](#_Toc61189707)

[4. Vaccination status of patients at-risk by gender: Aged 40 to under 50 74](#_Toc61189708)

[5. Vaccination status of ALL patients by gender: Aged 50 to under 65 76](#_Toc61189709)

[6. Vaccination status of patients at-risk by gender: Aged 50 to under 65 78](#_Toc61189710)

[7. Vaccination status of ALL patients by gender: Aged 65 to under 75 80](#_Toc61189711)

[8. Vaccination status of patients at-risk by gender: Aged 65 to under 75 82](#_Toc61189712)

[9. Vaccination status of ALL patients by gender: Aged 75 and over 84](#_Toc61189713)

[10. Vaccination status of patients at-risk by gender: Aged 75 and over 86](#_Toc61189714)

[Section 3. Ethnicity 88](#_Toc61189715)

[1. Vaccination status of ALL patients by ethnic group: Aged 16 to under 40 88](#_Toc61189716)

[2. Vaccination status of at-risk patients by ethnic group: Aged 16-under 40 88](#_Toc61189717)

[3. Vaccination status of ALL patients by ethnic group: Aged 40 to under 50 89](#_Toc61189718)

[4. Vaccination status of at-risk patients by ethnic group: Aged 40 to under 50 89](#_Toc61189719)

[5. Vaccination status of ALL patients by ethnic group: Aged 50 to under 65 90](#_Toc61189720)

[6. Vaccination status of at-risk patients by ethnic group: Aged 50 under 65 90](#_Toc61189721)

[7. Vaccination status of ALL patients by ethnic group: Aged 65 and over 91](#_Toc61189722)

[8. Vaccination status of at-risk patients by ethnic group: Aged 65 and over 91](#_Toc61189723)

[9. Vaccination status of pregnant women NOT in an at-risk group: Aged 16 and over 92](#_Toc61189724)

[10. Vaccination status of pregnant women IN an at-risk group: Aged 16 and over 92](#_Toc61189725)

[5) Call & Recall Section 93](#_Toc61189726)

[5.1 Grouping and Bandings 93](#_Toc61189727)

[5.2 Call & Recall Groups 95](#_Toc61189728)

[5.2.1 Wave 1 95](#_Toc61189729)

[5.2.2 Wave 2 97](#_Toc61189730)

[5.2.3 Wave 3 99](#_Toc61189731)

[5.2.4 Wave 4 101](#_Toc61189732)

[5.2.5 Wave 5 103](#_Toc61189733)

[5.2.6 Wave 6 105](#_Toc61189734)

[5.2.7 Wave 7 107](#_Toc61189735)

[5.2.8 Wave 8 109](#_Toc61189736)

[5.2.9 Wave 9 111](#_Toc61189737)

# Dataset Specification

|  |  |
| --- | --- |
| RUN\_DAT is defined as: The date of data extraction  REF\_DAT is defined as: 31/03/2021  START\_DAT is defined as 01/12/2020 |  |

## 1) **Patient selection criteria:**

1. Registration status:

|  |  |
| --- | --- |
| **Current registration status** | **Qualifying criteria** |
| Currently registered for GMS | Most recent registration date <= RUN\_DAT |

## 2) **Clinical data extraction criteria**:

### Patient Details

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Number** | **Field name** | **Data item** | **Qualifying criteria** |
| 1 | PAT\_ID | Patient ID number | Unconditional |
| 2 | [PAT\_AGE](#Grouping_Age_Band) | Patients age (years) at REF\_DAT | Unconditional |
| Note | The Patient age is used to determine the age band of the patient. | | |
| 3 | [PAT\_SEX](#Grouping_Gender_Band) | Patients sex at REF\_DAT | Latest |

### Clinical Risk Groups

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Number** | **Field name** | **Data item** | **Qualifying criteria** | |
| 4 | ast\_Cod | <<195967001 | | Earliest <= RUN\_DAT |
| *(Asthma Diagnosis code)* | |
| Note | The presence of a diagnosis code is required. The patient must also have continuous or repeated use of systemic steroids to be included in the At-risk Group for Asthma (see fields 8, 10, 12, 14 and 16). | | | |
| 5 | [AST\_DAT](#ASTHMA) | Date of AST\_COD | Chosen Record | |
| 6 | ASTADM\_COD | 708358003 OR 183478001 | Latest <= RUN\_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 prescription code, (ASTRX\_COD) | | | |
| 7 | [astadm\_dat](#ASTHMA) | Date of ASTADM\_COD | Chosen Record | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Number** | **Field name** | **Data item** | **Qualifying criteria** |
| 8 | ASTRXm1\_COD | *See associated spreadsheet for extensional list of medication codes* | **ANY** >= (RUN\_DAT - 30 days) |
| *(Asthma systemic steroid prescription code in month 1)* |
| Note | Continuous or repeated use of systemic steroids is qualified here as a patient having a prescription issued  **each month over a 3 month period** | | |
| 9 | [ASTRXm1\_DAT](#ASTHMA) | Date of ASTRXM1\_COD | Chosen Record |
| 10 | ASTRXM2\_COD | *See associated spreadsheet for extensional list of medication codes* | **ANY** < (RUN\_DAT – 30 days) AND >= (RUN\_DAT – 60 days) |
| *(Asthma systemic steroid prescription code in month 2)* |
| 11 | [ASTRXM2\_DAT](#ASTHMA) | Date of ASTRXM2\_COD | Chosen Record |
| 12 | ASTRXM3\_COD | *See associated spreadsheet for extensional list of medication codes* | **ANY** < (RUN\_DAT – 60 days) AND >= (RUN\_DAT – 90 days) |
| *(Asthma systemic steroid prescription code in month 3)* |
| 13 | [ASTRXM3\_DAT](#ASTHMA) | Date of ASTRXM3\_COD | Chosen Record |

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Number** | **Field name** | **Data item** | **Qualifying criteria** |
| 14 | RESP\_COV\_COD | (<<820361000000105 OR <<30188007 OR <<196124003 OR <<7436001 OR <<230494007 OR <<526071000000104 OR <<737281001 OR <<233659006 OR <<8247009 OR <<12295008 OR <<111901001 OR <<92649001 OR 254628007 OR <<123713005 OR <<63480004 OR 17097001 OR <<18354001 OR <<413839001 OR 240702004 OR <<37180002 OR <<13645005 OR <<102361000119104 OR <<599006 OR <<733171006 OR <<233615002 OR <<63841001 OR <<133971000119108 OR <<26427008 OR <<196190001 OR <<46847001 OR <<196049002 OR <<846634000 OR <<846635004 OR 69454006 OR <<427896006 OR <<233762004 OR <<733497009 OR <<52571006 OR <<87119009 OR <<59128005 OR <<80825009 OR <<190905008 OR <<2912004 OR <<152921000119101 OR <<427928003 OR <<233750003 OR <<51615001 OR <<770674007 OR <<161672008 OR <<371067004 OR <<233703007 OR <<314954002 OR <<146081000119104 OR <<432066002 OR <<363358000 OR <<40122008 OR <<236432001 OR <<24369008 OR <<154283005 OR <<233718008 OR <<36485005 OR <<721076000 OR <<79877004 OR <<75547007 OR <<11296007 OR <<88039007 OR <<233764003) **MINUS** (10613001 OR 196052005 OR 707541006 OR <<67782005 OR 15708009 OR <<57686001 OR 79958002 OR 240629003 OR 46970008 OR 707435002 OR 60125001 OR 206303001 OR 76090006 OR 195896004 OR 735465007 OR 28122003 OR 707551007 OR 233621003 OR 266370006) | Earliest <= RUN\_DAT |
| *(Chronic Respiratory Disease)* |
| 15 | [resp\_cov\_DAT](#Grouping_CRD_Band) | Date of RESP\_COV\_COD | Chosen Record |

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Number** | **Field name** | **Data item** | **Qualifying criteria** |
| 16 | CHD\_COV\_COD | (<<204463001 OR <<204464007 OR <<50570003 OR <<65340007 OR <<8722008 OR <<309814006 OR <<17024001 OR <<723860000 OR <<281170005 OR <<54687002 OR <<65198009 OR <<82608003 OR <<49436004 OR <<5370000 OR <<195126007 OR <<50799005 OR <<387732009 OR <<442559009 OR <<461089003 OR <<410429000 OR <<698270004 OR <<61179004 OR <<233174007 OR <<233847009 OR <<75403004 OR <<253273004 OR <<8186001 OR <<85898001 OR <<83883001 OR <<998008 OR <<128238001 OR <<23627006 OR 46847001 OR <<253438003 OR <<250996007 OR <<297218007 OR <<253334002 OR <<737155005 OR <<762250009 OR <<13213009 OR <<175045009 OR <<448725000 OR <<53741008 OR 67682002 OR 29899005 OR <<233970002 OR <<398274000 OR <<63739005 OR <<12770006 OR <<3545003 OR <<47040006 OR <<105981003 OR <<415991003 OR 414024009 OR <<233848004 OR <<472763005 OR <<471851005 OR <<471863000 OR <<271984008 OR <<39785005 OR 472762000 OR 472764004 OR <<427927008 OR 732230001 OR 66595008 OR 8254003 OR <<40593004 OR 370513009 OR 442298000 OR 27277001 OR <<161666008 OR <<275905002 OR 276637009 OR 56265001 OR 237226002 OR <<78381004 OR 368009 OR <<44241007 OR <609389009 OR <<64715009 OR <<275514001 OR <<31019002 OR <<285781000119100 OR <<225566008 OR <<414545008 OR <<253698005 OR <<275252001 OR <<363436001 OR <<363437005 OR 213037002 OR <<11851006 OR <<195002007 OR 57809008 OR <<233928007 OR 371068009 OR <<4641009 OR <421518007 OR 95437004 OR <<274097009 OR <<699300009 OR <<699297004 OR <<699298009 OR <<448898002 OR <<90154003 OR <<415070008 OR <<400047006 OR <<233889001 OR <<233929004 OR <<66189004 OR 204443008 OR <<274096000 OR 19242006 OR <<76267008 OR <<699352005 OR <<713689002 OR 174810007 OR 450816007 OR 174803001 OR <<23685000 OR <<253339007 OR 128404006 OR 275253006 OR <<274098004 OR 253309002 OR 16573007 OR 46935006 OR <<73774007 OR <<234065001 OR <<240567009 OR <<371037005 OR 371039008 OR <<44902004 OR <<762255004 OR <<60446003 OR <<718212006 OR 204297006 OR <<315026000 OR <<18919000 OR <<32413006 OR <<739024006 OR <<20721001 OR <<253579004 OR <<302131003 OR <<111293003) **MINUS** (<<253687009 OR <<460952008 OR <<430065009 OR 457587000 OR <<430616003 OR <<431238002 OR 457582006 OR <<431189009 OR <<205834002 OR 759971000000107 OR 253608001 OR 253405007 OR 253597007 OR 253384009 OR 722095005 OR 703169005 OR 461388002 OR <<250978003 OR <<449555002 OR <<253612007 OR 301184001 OR <<302968001 OR <<36221001 OR <<72352009 OR <<461093009 OR 253692006 OR <<473372009 OR <<457652006 OR 472835004 OR 55565007 OR 253688004 OR 250982001 OR 92965002 OR 449110001 OR 253685001 OR 759531000000103 OR <<74725000 OR <<37151006 OR 11454006 OR 470751005 OR 264467005 OR <<237342006 OR <<28398002 OR <<462172006 OR <<472775000 OR 472772002 OR <<472774001 OR <<472773007 OR 681211000119101 OR 253607006 OR 715560009 OR <<609458006 OR 609507007 OR 459061001 OR 459060000 OR 10392004 OR <<444036008 OR 59568004 OR <<63467002 OR 253286008 OR <<458088003 OR 724439005 OR 838544003 OR 840303004 OR 838451005 OR 838448003 OR 276514007 OR 461386003 OR 83330001 OR <<195130005 OR 470753008 OR 470752003 OR <<210790008 OR <<233938002 OR 472846001 OR <<59118001 OR 253728007 OR 253291009 OR 82889007 OR <<276741000 OR 472847005 OR 472843009 OR 253691004 OR 253690003 OR <<460370001 OR 471274000 OR 459165008 OR 448478000 OR 459164007 OR 460387004 OR 460312001 OR 460375006 OR 460380002 OR 460307002 OR 460365008 OR 789672007 OR 789671000 OR 789681001 OR 789682008 OR 447924006 OR 278928000 OR 405550001 OR 405551002 OR 405552009 OR 405553004 OR 449116007 OR 301110003 OR <<21112004) | Earliest <= RUN\_DAT |
| *(Chronic heart disease codes)* |
| 17 | CHD\_cov\_DAT | Date of CHD\_COV\_COD | Chosen Record |

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Number** | **Field name** | **Data item** | **Qualifying criteria** |
| 18 | CKD\_cov\_COD | *(398471000000102 OR 112066009 OR 236441006 OR <<365061000000106 OR 236420000 OR <<48713002 OR <<234348004 OR <<846731000000104 OR <<863331000000100 OR <<79827002 OR 440084005 OR <<698306007 OR 197632002 OR <<1866009 OR <<236519008 OR <<20917003 OR <<15859004 OR <<709044004 OR 236525007 OR 197614002 OR <<265763003 OR <<19765000 OR 268854008 OR <<105502003 OR <<385971003 OR 108241001 OR 1035471000000100 OR 449408005 OR 449409002 OR <<429451003 OR <<313030004 OR 428645009 OR 175948009 OR 73305009 OR <<268234004 OR <<703102004 OR 432018009 OR <<83866005 OR <<713887002 OR 308751000119106 OR 722948009 OR 197738008 OR 89681000119101 OR <<427555000 OR 120241000119100 OR <<236506009 OR <<37061001 OR <<865801000000100 OR <<367591000119105 OR 161665007 OR 123752003 OR 726082003 OR <<236508005 OR 710071003 OR <<35546006 OR 367051000119105 OR 1426004 OR <<295121000119101 OR <<52254009 OR 197592009 OR 718192000 OR <<473195006 OR <<865761000000105 OR <<428118009 OR <<441815006 OR <<236392004 OR <<265764009 OR 197654000 OR <<398887003 OR 183985008 OR 225892009 OR 224967001 OR <<865821000000109 OR 425384007 OR <<13335004 OR <<423062001 OR <<853631000000103 OR <<853651000000105 OR <<265550007 OR 234046009 OR <<711446003 OR <<737295003)* ***MINUS*** *(<<431855005 OR <<431856006 OR <<433144002 OR <<431857002 OR <<433146000 OR 367581000119107 OR 236480003 OR 399190000 OR 73286009 OR 4676006)* | Earliest <=RUN\_DAT |
| (*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 | [ckd\_cov\_dat](#Grouping_CKD_Band) | DATE of CKD\_COV\_COD | Chosen Record |

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Number** | **Field name** | **Data item** | **Qualifying criteria** |
| 20 | CKD15\_cod | <<431855005 OR <<431856006 OR <<433144002 OR <<431857002 OR <<433146000 | Latest <= RUN\_DAT |
| *(Chronic kidney disease codes - all stages)* |
| 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 | [CKD15\_DAT](#Grouping_CKD_Band) | Date of CKD15\_COD | Chosen Record |
| 22 | CKD35\_COD | <<433144002 OR <<431857002 OR <<433146000 | Latest <= RUN\_DAT |
| *(Chronic kidney disease codes-stages 3 - 5)* |
| 23 | [CKD35\_DAT](#Grouping_CKD_Band) | Date of CKD35\_COD | Chosen Record |

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Number** | **Field name** | **Data item** | **Qualifying criteria** |
| 24 | CLD\_COD | (713370005 OR 96601000119101 OR <<41309000 OR 190944000 OR 31742004 OR <<235890007 OR 698305006 OR <<328383001 OR 235870003 OR <<235494005 OR <<10295004 OR <<1287007 OR 3650004 OR 204787003 OR <<77480004 OR 719452004 OR 278929008 OR <<407000 OR <<68094008 OR 276668008 OR 51038004 OR <<1512006 OR 720394008 OR 60498001 OR 370492003 OR 235458006 OR 427044009 OR <<29633007 OR <<59927004 OR <<62484002 OR 197367007 OR 197368002 OR 235865005 OR <<36760000 OR 128241005 OR 235877000 OR 427022004 OR <<235910007 OR 704201006 OR <<702777009 OR <<235903001 OR 406584008 OR <<308129003 OR <<235900003 OR 197316009 OR <<34742003 OR <<235917005 OR <<80770009 OR <<444918006 OR <<442191002 OR 197321007 OR 713529007 OR <<86028001 OR 197355005 OR 197361008 OR 197360009 OR 197359004 OR 197362001 OR 197356006 OR 428198008 OR <<18027006 OR <<737297006 OR <<186273003 OR <<66071002 OR <<50711007 OR <<707341005 OR <<7111000119109 OR <<40946000 OR 397575003) **MINUS** (<<9953008 OR <<197270009 OR <<37871000 OR 31155007 OR 297288000 OR <<197275004) | Earliest <= RUN\_DAT |
| *(Chronic Liver disease codes)* |
| 25 | CLD\_DAT | Date of CLD\_COD | Chosen Record |
| 26 | DIAB\_COD | (<<11530004 OR <<73211009 OR <<74627003 OR <<170745003 OR <<170747006 OR 976361000000100 OR 314194001 OR 719566006 OR 170746002 OR 976341000000101 OR 164971000119101) **MINUS** (110996009 OR 199225007 OR 199227004 OR 199223000 OR 76751001 OR <<703136005 OR 199226008 OR 199228009 OR <<11687002 OR 237613005 OR 237651005 OR <<237603002) | Latest <= RUN\_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\_COV\_COD | (767263007 OR <<421695000 OR 402355000 OR <<420721002 OR 778004006 OR 234520000 OR <<234519006 OR 188510001 OR 413834006 OR 121131000119109 OR 402356004 OR <<22098000 OR 234603007 OR <<79369007 OR 236585005 OR 773537001 OR 429490004 OR 414029004 OR <<425835006 OR <<124950009 OR <<428103008 OR <<429450002 OR 429054002 OR 277641001 OR <<111001004 OR 234646005 OR 188738007 OR 127069007 OR <<234336002 OR 442134007 OR <<363138005 OR <<165816005 OR <<281388009 OR 74189002 OR 46923007 OR 188534006 OR 188544008 OR <<86406008 OR <<450907007 OR 127388009 OR <<119250001 OR <<71922006 OR <<363153002 OR <<234532001 OR <<275524009 OR <<83980004 OR 109391009 OR 236512004 OR 446688004 OR <<404156009 OR 25109007 OR <<414644002 OR 188640007 OR 188691005 OR 188660004 OR 188664008 OR 188667001 OR 188663002 OR <<91637004 OR <<52967002 OR <<209962000 OR <<425333006 OR <<128843003 OR <<230687001 OR <<414825006 OR 370388006 OR 370391006 OR 188630009 OR <<285581000000102 OR 269295009 OR 213148006 OR 255048006 OR <<54097007) **MINUS** (267454002 OR 735440005 OR 735442002 OR <<191345000 OR 129645002 OR <<234642007 OR 234434003 OR 64249002 OR 14333004 OR 783205005 OR <<234557006 OR 234562007 OR 111037009 OR 129640007 OR <<818950005 OR 234418001 OR 234423001 OR 129641006 OR 13172003 OR 711526005 OR 80369006 OR 735439008 OR <<84730007 OR 419455006 OR 417389002 OR 417967008 OR 423486005 OR 191360002 OR 43355006 OR 860827002 OR 711160007 OR 860824009 OR <<95416007 OR <<367542003 OR 866901000000103 OR 238931006 OR <<29120000 OR 95733001 OR <<76762001 OR 782866008 OR 402404006 OR 238687000 OR 79336007 OR <<427245000 OR 409089005 OR <<47986005 OR 234589002 OR 234590006 OR 699861000 OR <<21983002 OR 234619000 OR 234620006 OR 191358004 OR 234435002 OR 129639005 OR 234538002 OR 320150004 OR 70910003 OR <<129000002 OR 234586009 OR 111583006 OR 84828003 OR <<56478004 OR 71692003 OR 48813009 OR <<67023009 OR <<866084002 OR 234579001 OR 703538003 OR <<16697871000119100 OR 789697006 OR <<239147000 OR <<277577000 OR <<234427000 OR 783566008 OR 773662009 OR 95624007 OR 46359005 OR 303011007 OR <<414850009 OR <<72272002 OR 829971006 OR <<109992005 OR 234513007 OR 70349007 OR 105602005 OR 105601003 OR 30981000 OR 234556002 OR 239910001 OR <<721307000 OR 88714009 OR <<55444004) | Latest< =RUN\_DAT |
| *(Immunosuppression diagnosis codes)* |
| Note | The patient is included if any immunosuppressant Read code is recorded | | |
| 29 | [IMmDX\_COV\_DAT](#Grouping_Immuno_Band) | Date of IMMDX\_COV\_COD | Chosen Record |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Field Number** | **Field name** | **Data item** | | | **Qualifying criteria** | |
| 30 | IMMRX\_COD | | *See associated spreadsheet for extensional list of medication codes* | | | Latest >= 01/07/2020 AND  <= RUN\_DAT |
| *(Immunosuppression medication codes)* | | |
| Note | The patient is included if a prescription code is recorded anytime from 1st July 2020. For brevity purposes, this group includes some immunosuppressant medication that may only be issued in hospital.  The medication code should be in the last six months, however to prevent patients from dropping out of the audit as the vaccination campaign progresses, we look back for medications from 01/07/2020. This ensures that patients whose latest immunosuppressant medication issue was originally within the six month timescale but then subsequently exceeds it are still included in the at-risk group.  It is not possible to calculate the prescribed daily dose of Prednisolone, therefore patients on Prednisolone have not been included. | | | | | |
| 31 | [IMMRX\_DAT](#Grouping_Immuno_Band) | | Date of IMMRX\_COD | | | Chosen Record |
| 32 | CNS\_COV\_cod | | (408371000000100 OR <<718556007 OR 768555009 OR <<63081009 OR <<204040004 OR 75491005 OR <<76880004 OR <<277922001 OR 111497000 OR 240057006 OR 718221007 OR <<126944002 OR <<717943008 OR 315608004 OR 726704006 OR <<421998001 OR <<85102008 OR 223176004 OR 74073002 OR <<274100004 OR <<432504007 OR 276599001 OR <<109561000 OR <<41283003 OR 45502001 OR <<62914000 OR <<373587001 OR <<253186001 OR <<191475009 OR 78689005 OR <<128209004 OR 230373008 OR <<15182000 OR <<10007009 OR <<253160006 OR <<277949001 OR 75046006 OR <<21111006 OR <<51500006 OR <<41040004 OR <<26595007 OR 193216006 OR <<702611008 OR <<95610008 OR 371313002 OR <<95477007 OR <<230562000 OR <<773306002 OR 240059009 OR <<68186003 OR 764945007 OR 763315005 OR <<230561007 OR <<230594005 OR 773230003 OR <<764525006 OR <<238826008 OR <<40354009 OR <<943181000000103 OR <<80690008 OR 70350007 OR <<52448006 OR 81308009 OR <<271986005 OR <<230298007 OR 230244008 OR <<2593002 OR <<111337001 OR 192754003 OR 192756001 OR 192757005 OR <<84757009 OR 253116006 OR 192928003 OR <<719395001 OR 410057002 OR <<363235000 OR 76043009 OR <<765434008 OR <<30915001 OR <<230745008 OR 718713000 OR 722456001 OR <<371029002 OR <<389100007 OR 724207001 OR 43100002 OR <<195239002 OR <<230232005 OR <<232059000 OR 715419004 OR 60192008 OR 307360006 OR <<22811006 OR 93153005 OR 14210003 OR <<204036008 OR <<770560008 OR <<372062007 OR <<396338004 OR <<765758008 OR <<770655004 OR <<723304001 OR <<16851005 OR <<37340000 OR <<70528007 OR 423144007 OR 230704000 OR <<73297009 OR 192904000 OR <<192906003 OR <<257277002 OR <<240082006 OR <<240086009 OR <<193237003 OR <<82077006 OR <<75072002 OR 253098009 OR <<128213006 OR <<42012007 OR 302887008 OR <<230193008 OR <<766753005 OR <<722110003 OR <<61200008 OR <<29426003 OR <<77659000 OR 62239001 OR <<722599008 OR <<49049000 OR 380941000000104 OR <<699184009 OR <<24473007 OR 751371000000107 OR 13092008 OR <<19972008 OR <<230696001 OR <<230329009 OR 723124007 OR <<31216003 OR 984681000000101 OR <<230363006 OR <<129608008 OR <<236529001 OR <<7379000 OR <<719717006 OR <<768473009 OR 192788009 OR <<68618008 OR 774150004 OR <<253159001 OR <<195243003 OR <<195241001 OR <<240056002 OR <<40700009 OR 508171000000105 OR <<719069008 OR <<1239331000000100 OR <<58459009 OR <<58557008 OR 48522003 OR 230739000 OR <<91502009 OR <<62158001 OR 230375001 OR <<192685000 OR <<38523005 OR <<111496009 OR 230226000 OR <<472916000 OR 262711004 OR <<29774004 OR <<230296006 OR 195199008 OR <<21007002 OR 71779008) **MINUS** (16561007 OR 72986009 OR <<95774001 OR 719517009 OR 717975006 OR 717336005 OR 715374003 OR 827115000 OR 838345001 OR 783065004 OR 827117008 OR 770405003 OR 230306001 OR 770622009 OR <<38281008 OR 13950001 OR <<206226005 OR <<9631000119102 OR 230482003 OR 450418003 OR 838307002 OR 724548002 OR 25113000 OR <<445967004 OR 359683002 OR 312944002 OR 722990003 OR <<703193000 OR 230530003 OR <<68158006 OR 2065009 OR 230304003 OR <<230441003 OR <<65242001 OR 721200000 OR <<78141002 OR 69763009 OR 19373007 OR 84947004 OR 782756008 OR 95656000 OR 783726006 OR <<722623009 OR <<722619001 OR <<93468003 OR 88125005 OR <<609559001 OR <<15699161000119109 OR 26360005 OR <<15699121000119104 OR 783198006 OR 50490005 OR <<93559003 OR 230358007 OR 724274009 OR 724547007 OR 312942003 OR <<6956001 OR 721328009 OR 230524003 OR <<262717000 OR <<49823009 OR <<240313004 OR 724999003 OR 5127009 OR <<50143004 OR <<83886009 OR <<58610003 OR 441636005 OR 206576006 OR <<363222009 OR 702374000 OR 722930000 OR 785722006 OR 16110005 OR 104461000119104 OR 77835008 OR 49605003 OR 76976005 OR 19448008 OR <<15632851000119104 OR <<15632811000119100 OR 194043004 OR 41362007 OR <<75111000 OR <<1534008 OR <<609609004 OR <<111527005 OR 277190002 OR 774154008 OR 774153002 OR <<702355008 OR 415176004 OR 21098003 OR 46252003 OR 423753005 OR 95775000 OR 29145002 OR <<123615007 OR 206188000 OR <<733200004 OR 230308000 OR <<78097002 OR <<17940001 OR 262942001 OR 262940009 OR <<722632006 OR 722631004 OR 722630003 OR 722703002 OR 734022008) | | | Earliest <= RUN\_DAT |
| *(Chronic Neurological Disease including Significant Learning Disorder)* | | |
|  |  | | | | | |
| 33 | [CNS\_COV\_DAT](#Grouping_CNS_Band) | | | Date of CNS\_COV\_COD | | Chosen Record |

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Number** | **Field name** | **Data item** | **Qualifying criteria** |
| 34 | SPLN\_COV\_COD | (861371000000102 OR 197479008 OR 234510005 OR <<702624008 OR <<707147002 OR 262821002 OR <<86715000 OR 717156002 OR <<396331005 OR 45259000 OR <<275404008 OR 197478000 OR 38970002 OR 174789007 OR 195340002 OR 161626009 OR <<234392002 OR 302961007 OR 26682008 OR 58381000 OR <<205735005 OR 23761004 OR 275405009 OR <<95846001 OR 1671000 OR <<700051000 OR 236854007 OR <<417357006 OR 300564004 OR 210193004 OR <<234319005 OR 82893001 OR 56338005 OR <<22996003 OR 75451007 OR 61535006 OR 275403002) **MINUS** (11973000 OR <<67061007 OR <<67097003) | Earliest <= RUN\_DAT |
| *(Asplenia or Dysfunction of the Spleen codes)* |
| 35 | SPLN\_COV\_DAT | Date of SPLN\_COV\_COD | Chosen Record |
| 36 | BMI\_COD | 846931000000101 OR 60621009 | LATEST <= RUN\_DAT  WHERE BMI\_VAL <> NULL |
| 37 | BMI\_DAT | Date of BMI COD | Chosen Record |
| 38 | [BMI\_VAL](#_Patients_with_Morbid) | *Value of BMI\_COD* | Chosen Record |
| 39 | BMI\_STAGE | <<6497000 OR <48499001 OR <<35425004 OR 443371000124107 OR 914721000000105 OR 443381000124105 OR 914731000000107 OR 914741000000103 OR 722595002 | LATEST <= RUN\_DAT |
| *(All BMI coded terms)* |
| 40 | [BMI\_STAGE\_DAT](#_Patients_with_Morbid) | Date of BMI\_STAGE | Chosen Record |

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Number** | **Field name** | **Data item** | **Qualifying criteria** |
| 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 <= RUN\_DAT)* |  |
| 42 | [SEV\_OBESITY\_DAT](#_Patients_with_Morbid) | Date of sEV\_OBESITY | Chosen.Code |
| 43 | DMRES\_COD | 315051004 | LATEST <= RUN\_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](#_Patients_with_Diabetes) | Date of DMRES\_COD | Chosen Code |
| 45 | SEV\_MENTAL\_COD | (<<417601000000102 OR <<191677006 OR <<13746004 OR <<268622001 OR 48500005 OR <<723899008 OR <<698951002 OR <<60123008 OR 1127191000000108 OR <<47447001 OR <<231496004 OR <<278506006 OR <<726772006 OR <<231494001 OR <<307504004 OR <<191672000 OR 191667009 OR <<755301000000102 OR <<231487004 OR <<231485007 OR <<191683009 OR <<69322001 OR 1089511000000100 OR <<191613003 OR <<31027006 OR <<191670008 OR <<191668004 OR <<191604000) **MINUS** (278508007 OR <<786120041000132108) | Latest <= RUN\_DAT |
| *(Severe Mental Illness codes)* |
| *Note: these codes to be used in partnership with SMHRES\_COD to assess whether the condition has resolved* |
| 46 | [SEV\_MENTAL\_DAT](#_12.__Vaccination) | Date of SEV\_MENTAL\_COD | Chosen Record |

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Number** | **Field name** | **Data item** | **Qualifying criteria** |
| 47 | SMHRES\_COD | (<<85248005 OR <<698951002 OR 191565008 OR <<755311000000100 OR <<755301000000102 OR 60401000119104 OR 755331000000108 OR <<191597008 OR 764681000000107 OR 191574005 OR <<4926007 OR 755321000000106 OR <<191588009 OR 764741000000107) **MINUS** (<<5703000 OR 723900003) | Latest <= RUN\_DAT |
| *(Remission codes relating to Severe Mental Illness)* |
| *Note: these codes to be used in partnership with SEV\_MENTAL\_COD* |
| 48 | SMHRES\_DAT | Date of SMHRES\_COD | Chosen Record |
| 49 | SHIELD\_COD | 1300561000000107 | Latest <= RUN\_DAT |
| *(High Risk from COVID-19 code)* |
| *Note: this represents the Clinically Extremely Vulnerable group and is used in conjunction with NONSHIELD\_COD* |
| 50 | [SHIELD\_DAT](#_2.__Vaccination) | Date of SHIELD\_COD | Chosen Record |
| 51 | NONSHIELD\_COD | 1300591000000101 OR 1300571000000100 | Latest<= RUN\_DAT |
| *(Lower Risk from COVID-19 codes)* |
| *Note: used in conjunction with SHIELD\_COD* |
| 52 | [NONSHIELD\_DAT](#_1.__Vaccination) | Date of NONSHIELD\_COD | Chosen Record |
| 53 | HHLD\_IMDEF\_COD | 527401000000103 | Latest <= RUN\_DAT |
| *(to represent household contact of shielding individual)* |
| 54 | [HHLD\_IMDEF\_DAT](#_2.__Vaccination) | Date of HHLD\_IMDEF\_COD | Chosen Record |

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Number** | **Field name** | **Data item** | **Qualifying criteria** |
| 55 | LEARNDIS\_COD | (<<21111006 OR <<51500006 OR <<41040004 OR <<782676009 OR <<110359009 OR 984661000000105 OR 984671000000103 OR 416075005 OR 254268004 OR 254266000 OR 254264002 OR 984681000000101 OR 508171000000105 OR 931001000000105 OR 889211000000104 OR 717223008) MINUS (125521000119101 OR 125511000119108 OR 125501000119105) | Latest <= RUN\_DAT |
| *(Wider Learning Disability)* |
| 56 | LEARNDIS\_DAT | Date of LEARNDIS\_COD | Chosen Record |

### Vaccinations

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Number** | **Field name** | **Data item** | **Qualifying criteria** |
| 57 | COVADM1\_COD | 1324681000000101 or 840534001 | Earliest > 30/11/2020 and <= RUN\_DAT |
| *(First COVID vaccination administration codes)* |
| 58 | [COVADM1\_DAT](#DOSE1GRP) | Date of COVADM1\_COD | Chosen Record |
| 59 | COVADM2\_COD | 1324681000000101 or 1324691000000104 or 840534001 | Latest > (COVADM1\_DAT + 20 days) AND <= RUN\_DAT |
| *(Second COVID vaccination administration codes)* |
| 60 | [COVADM2\_DAT](#DOSE2GRP) | Date of COVADM2\_COD | Chosen Record |

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Number** | **Field name** | **Data item** | **Qualifying criteria** |
| 61 | pfD1rX\_COD | 39115611000001103 | Earliest >30/11/2020 and <= RUN\_DAT |
| *(First Pfizer BioNTech vaccination medication code)* |
| 62 | [pfD1RX\_DAT](#DOSE1GRP) | DATE OF PFD1RX\_COD | Chosen Record |
| 63 | pfD2rX\_COD | 39115611000001103 | Latest > (pfD1RX\_DAT + 20 days) AND <= RUN\_DAT |
| *(Second Pfizer BioNTech vaccination medication code)* |
| 64 | [pfD2RX\_DAT](#DOSE2GRP) | DATE OF PFD2RX\_COD | Chosen Record |
| 65 | AZD1rX\_COD | 39114911000001105 | Earliest >30/11/2020 and <= RUN\_DAT |
| *(First Oxford AstraZeneca vaccination medication code)* |
| 66 | [AZD1RX\_DAT](#DOSE1GRP) | DATE OF AZD1rX\_COD | Chosen Record |
| 67 | AZD2rX\_COD | 39114911000001105 | Latest > (AZD1RX\_DAT + 20 DAYS) AND <= RUN\_DAT |
| *(Second Oxford AstraZeneca vaccination medication code)* |
| 68 | [AZD2RX\_DAT](#DOSE2GRP) | DATE OF AZD2rX\_COD | Chosen Record |

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Number** | **Field name** | **Data item** | **Qualifying criteria** |
| 69 | moD1rX\_COD | *dm+d code when available* | Earliest >30/11/2020 and <= RUN\_DAT |
| *(First Moderna vaccination medication code)* |
| 70 | [moD1RX\_DAT](#DOSE1GRP) | DATE OF moD1rX\_COD | Chosen Record |
| 71 | moD2rX\_COD | *dm+d code when available* | Latest > (moD1RX\_DAT + 20 days) AND <= RUN\_DAT |
| *(Second Moderna vaccination medication code)* |
| 72 | [moD2RX\_DAT](#DOSE2GRP) | DATE OF moD2rX\_COD | Chosen Record |
| 73 | nxD1rX\_COD | *dm+d code when available* | Earliest >30/11/2020 and <= RUN\_DAT |
| *(First Novavax vaccination medication code)* |
| 74 | [nxD1RX\_DAT](#DOSE1GRP) | DATE OF nxD1rX\_COD | Chosen Record |
| 75 | nxD2rX\_COD | *dm+d code when available* | Latest > (nxD1RX\_DAT + 20 days) and <= RUN\_DAT |
| *(Second Novavax vaccination medication code)* |
| 76 | [nxD2RX\_DAT](#DOSE2GRP) | DATE OF nxD2rX\_COD | Chosen Record |
| 77 | jnD1rX\_COD | 39230211000001104 | Earliest >30/11/2020 and <= RUN\_DAT |
| *(First Janssen vaccination medication code – may only be single vaccination)* |
| 78 | [jnD1RX\_DAT](#DOSE1GRP) | DATE OF jnD1rX\_COD | Chosen Record |
| 79 | jnD2rX\_COD | 39230211000001104 | Latest > (jnD1RX\_DAT + 20 days) and <= RUN\_DAT |
| *(Second Janssen vaccination medication code – may only be single vaccination)* |
| 80 | [jnD2RX\_DAT](#DOSE2GRP) | DATE OF jnD2rX\_COD | Chosen Record |

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Number** | **Field name** | **Data item** | **Qualifying criteria** |
| 81 | gsD1rX\_COD | *dm+d code when available* | Earliest >30/11/2020 and <= RUN\_DAT |
| *(First GSK/Sanofi vaccination medication code)* |
| 82 | [gsD1RX\_DAT](#DOSE1GRP) | DATE OF gsD1rX\_COD | Chosen Record |
| 83 | gsD2rX\_COD | *dm+d code when available* | Latest > (gsD1RX\_DAT + 20 days) and <= RUN\_DAT |
| *(Second GSK/Sanofi vaccination medication code)* |
| 84 | [gsD2RX\_DAT](#DOSE2GRP) | DATE OF gsD2rX\_COD | Chosen Record |
| 85 | vlD1rX\_COD | *dm+d code when available* | Earliest >30/11/2020 and <= RUN\_DAT |
| *(First Valneva vaccination medication code)* |
| 86 | [vlD1RX\_DAT](#DOSE1GRP) | DATE OF vlD1rX\_COD | Chosen Record |
| 87 | vlD2rX\_COD | *dm+d code when available* | Latest > (vlD1RX\_DAT + 20 days) and <= RUN\_DAT |
| (*Second Valneva vaccination medication code*) |
| 88 | [vlD2RX\_DAT](#DOSE2GRP) | DATE OF VLD2RX\_COD | Chosen Record |
| Note | 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. | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Number** | **Field name** | **Data item** | **Qualifying criteria** |
| 89 | COVRX1\_COD | 39115611000001103 OR 39114911000001105 OR 39230211000001104 | Earliest >30/11/2020 and <= RUN\_DAT |
| (*First COVID vaccination medication code (any*)) |
| ***All relevant dm+d codes from extensional list as available*** |
| 90 | [COVRX1\_DAT](#_Patients_who_have_1) | DATE OF COVRX1\_COD | Chosen Record |
| 91 | COVRX2\_COD | 39115611000001103 OR 39114911000001105 OR 39230211000001104 | Latest > (COVRX1\_DAT + 20 days) and <= RUN\_DAT |
| *(Second COVID vaccination medication code (any))* |
| ***All relevant dm+d codes from extensional list as available*** |
| 92 | [COVRX2\_DAT](#_Patients_who_have) | DATE OF COVRX2\_COD | Chosen Record |
| Note | Note some GP suppliers use a vaccination “node” recording system and the equivalent mechanism can be utilised. See the associated spreadsheet for detailed concept descriptions. | | |

### Carers

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Number** | **Field name** | **Data item** | **Qualifying criteria** |
| 93 | CARER\_COD | <<133932002 OR 229774002 OR 824401000000105 OR <<224484003 | Latest<= RUN\_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. | | |
| 94 | [CARER\_DAT](#CARER) | Date of CARER\_COD | Chosen Record |
| 95 | NOTCARER\_COD | <<199361000000101 OR 506401000000109 | Latest<= RUN\_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. | | |
| 96 | [NOTCARER\_DAT](#CARER) | Date of NOTCARER\_COD | Chosen Record |

### Health and Social Care Workers

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Number** | **Field name** | **Data item** | **Qualifying criteria** |
| 97 | CAREHOME\_COD | 1092561000000107 OR 158944006 OR 158942005 OR 158943000 | Latest<= RUN\_DAT |
| *(Employed by Care Home codes)* |
| 98 | [CAREHOME\_DAT](#_Health_and_Social) | Date of CAREHOME\_COD | Chosen Record |
| 99 | NURSEHOME\_COD | 1092571000000100 | Latest<= RUN\_DAT |
| *(Employed by nursing home codes)* |
| 100 | [NURSEHOME\_DAT](#_Health_and_Social) | Date of NURSEHOME\_COD | Chosen Record |
| 101 | DOMCARE\_COD | 1092581000000103 | Latest<= RUN\_DAT |
| *(Employed by domiciliary care provider codes)* |
| 102 | [DOMCARE\_DAT](#_Health_and_Social) | Date of DOMCARE\_COD | Chosen Record |
| 103 | LONGRES\_COD | 160734000 OR 394923006 OR 160737007 OR 248171000000108 OR 1024771000000108 OR 224224003 | Latest<= RUN\_DAT |
| *(Patients in long-stay nursing and residential care)* |
| 104 | [LONGRES\_DAT](#LONGSTAY) | Date of LONGRES\_COD | Chosen Record |

### Ethnicity

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Number** | **Field name** | **Data item** | **Qualifying criteria** |
| 105 | ETH2001\_WHIBRIT\_COD | <<92391000000108 OR 92571000000102 OR 110761000000106 OR 92561000000109 OR 92541000000108 OR 93921000000101 OR 92551000000106 | Latest<= RUN\_DAT |
| *White British Ethnicity* |
| 106 | ETH2001\_WHIBRIT\_DAT | Date of ETH2001\_WHIBRIT\_COD |  |
| 107 | ETH2001\_WHIIRISH\_COD | <<92401000000106 | Latest<= RUN\_DAT |
| *White Irish Ethnicity* |
| 108 | ETH2001\_WHIIRISH\_DAT | Date of ETH2001\_WHIIRISH\_COD |  |
| 109 | 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<= RUN\_DAT |
| *White – Any other White background Ethnicity* |
| 110 | ETH2001\_WHIOTHER\_DAT | Date of ETH2001\_WHIOTHER\_COD |  |
| 111 | ETH2001\_MXDWHIBLKCAR\_COD | 92421000000102 | Latest<= RUN\_DAT |
| *Mixed – White and Black Caribbean Ethnicity* |
| 112 | ETH2001\_MXDWHIBLKCAR \_DAT | Date of ETH2001\_MXDWHIBLKCAR\_COD |  |
| **Field Number** | **Field name** | **Data item** | **Qualifying criteria** |
| 113 | ETH2001\_MXDWHIBLKAFR\_COD | 92431000000100 | Latest<= RUN\_DAT |
| *Mixed – White and Black African Ethnicity* |
| 114 | ETH2001\_MXDWHIBLKAFR\_DAT | Date of ETH2001\_MXDWHIBLKAFR\_COD |  |
| 115 | ETH2001\_MXDWHIASN\_COD | 92441000000109 | Latest<= RUN\_DAT |
| *Mixed – White and Asian Ethnicity* |
| 116 | ETH2001\_MXDWHIASN\_DAT | Date of ETH2001\_MXDWHIASN\_COD |  |
| 117 | ETH2001\_MXDOTHER\_COD | 92631000000103 OR 92721000000106 OR 186023009 OR <<92451000000107 | Latest<= RUN\_DAT |
| *Mixed – Any other mixed background Ethnicity* |
| 118 | ETH2001\_MXDOTHER\_DAT | Date of ETH2001\_MXDOTHER\_COD |  |
| 119 | ETH2001\_ASNINDIAN\_COD | 110751000000108 | Latest<= RUN\_DAT |
| *Asian or Asian British – Indian Ethnicity* |
| 120 | ETH2001\_ASNINDIAN\_DAT | Date of ETH2001\_ASNINDIAN\_COD |  |
| 121 | ETH2001\_ASNPAK\_COD | 92461000000105 | Latest<= RUN\_DAT |
| *Asian or Asian British – Pakistani Ethnicity* |
| 122 | ETH2001\_ASNPAK\_DAT | Date of ETH2001\_ASNPAK\_COD |  |
| **Field Number** | **Field name** | **Data item** | **Qualifying criteria** |
| 123 | ETH2001\_ASNBANG\_COD | 92471000000103 | Latest<= RUN\_DAT |
| *Asian or Asian British – Bangladeshi Ethnicity* |
| 124 | ETH2001\_ASNBANG\_DAT | Date of ETH2001\_ASNBANG\_COD |  |
| 125 | ETH2001\_ASNOTHER\_COD | (92771000000105 OR 92761000000103 OR 92781000000107 OR <<92481000000101 OR 92751000000101) MINUS 92631000000103 | Latest<= RUN\_DAT |
| *Asian or Asian British – Any other Asian background Ethnicity* |
| 126 | ETH2001\_ASNOTHER\_DAT | Date of ETH2001\_ASNOTHER\_COD |  |
| 127 | ETH2001\_BLKCARIB\_COD | 107691000000105 | Latest<= RUN\_DAT |
| *Black or Black British – Caribbean Ethnicity* |
| 128 | ETH2001\_BLKCARIB\_DAT | Date of ETH2001\_BLKCARIB\_COD |  |
| 129 | ETH2001\_BLKAFRIC\_COD | 92491000000104 OR 92731000000108 OR 92711000000100 | Latest<= RUN\_DAT |
| *Black or Black British – African Ethnicity* |
| 130 | ETH2001\_BLKAFRIC\_DAT | Date of ETH2001\_BLKAFRIC\_COD |  |
| 131 | ETH2001\_BLKOTH\_COD | 110791000000100 OR 92501000000105 OR 92741000000104 | Latest<= RUN\_DAT |
| *Black or Black British – Any other Black background Ethnicity* |
| 132 | ETH2001\_BLKOTH\_DAT | Date of ETH2001\_BLKOTH\_COD |  |
| **Field Number** | **Field name** | **Data item** | **Qualifying criteria** |
| 133 | ETH2001\_CHINESE\_COD | 92511000000107 | Latest<= RUN\_DAT |
| *Other ethnic groups – Chinese Ethnicity* |
| 134 | ETH2001\_CHINESE\_DAT | Date of ETH2001\_CHINESE\_COD |  |
| 135 | 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<= RUN\_DAT |
| *Other ethnic groups – Any other ethnic group Ethnicity* |
| 136 | ETH2001\_OTHER\_DAT | Date of ETH2001\_OTHER\_COD |  |
| 137 | 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<= RUN\_DAT |
| *Any other ethnicity code* |
| 138 | NON\_ETH2001\_DAT | Date of NON\_ETH2001\_COD |  |
| 139 | ETH\_NOTGIPTREF\_COD | 312860002 | Latest<= RUN\_DAT |
| *Ethnicity not given – patient refused* |
| 140 | ETH\_NOTGIPTREF\_DAT | Date of ETH\_NOTGIPTREF\_COD |  |
| 141 | ETH\_NOTSTATED\_COD | 92531000000104 OR 415226007 | Latest<= RUN\_DAT |
| *Ethnicity not stated* |
| 142 | ETH\_NOTSTATED\_DAT | Date of ETH\_NOTSTATED\_COD |  |
| 143 | ETH\_NORECORD\_COD | 312861003 | Latest<= RUN\_DAT |
| *Ethnicity no record* |
| 144 | ETH\_NORECORD\_DAT | Date of ETH\_NORECORD\_COD |  |

### Pregnancy

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Number** | **Field name** | **Data item** | **Qualifying criteria** |
| 145 | pregdel\_COD | *(<<424525001 OR <<276445008 OR <<370352001 OR <<364587008 OR <<286996009 OR 287976008 OR <<200337002 OR <<199745000 OR <<609496007 OR <<451014004 OR 198832001 OR <<199860006 OR <<236973005 OR 72059007 OR <<55052008 OR <<29682007 OR <<362972006 OR <<362973001 OR <<236883005 OR <<118185001 OR 25825004 OR 30850008 OR <<199375007 OR <386216000 OR <<276508000 OR <<177128002 OR <<176849008 OR 169488004 OR 169960003 OR 199032005 OR <<398307005 OR <<200289005 OR <<84275009 OR 450640001 OR 236979009 OR <<133906008 OR <<237014000 OR 274117006 OR 289209003 OR 310592002 OR 310594001 OR 169501005 OR 169508004 OR <<18114009 OR <<82688001 OR <<372456005 OR 9221009 OR <<386639001 OR <<609446006) MINUS (<<26741000 OR <<109562007 OR <<72014004 OR 39804004 OR 90009001 OR 17588005 OR <<302945005 OR <<243828009 OR <<33552005 OR 49794002 OR 92297008 OR 288259000 OR 32644009 OR 92684002 OR <<127376007 OR 289783000 OR 62131008 OR 109891004 OR 109893001 OR 125586008 OR 128604004 OR 34150001 OR 36697001 OR <<199047001 OR 424009001 OR 27574007 OR <<79114003 OR <<413340008 OR 18909006 OR 206057002 OR <<118178000 OR 417426005 OR 366321006 OR 53881005 OR 268865003 OR 237036002 OR 276879000 OR 47574003 OR 67480003 OR 249141002 OR 90751002 OR 390959009 OR 237261008 OR 445122007 OR 200101003 OR 200113008 OR 171000119107 OR 237355007 OR 289257009 OR 60001007 OR <<106109006 OR 200058004 OR 200065007 OR 200051005 OR 200107004 OR 60601008 OR 64171002 OR 25053000 OR <<65409004 OR 29847008 OR 51154004 OR 41962002 OR <<169632002 OR <<118212000 OR 169958000 OR 289281002 OR 169957005 OR 161000119101 OR 415105001 OR 51195001 OR 200352009 OR 102874004 OR 152231000119106 OR 198912003 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 237208000 OR 102878001 OR <<243829001 OR 59795007 OR 199890004 OR 200069001 OR 27696007 OR <<199461004 OR 237245006 OR 237260009 OR <<31481000 OR 249189006)* | Latest >(RUN\_DAT – 254D) AND <= RUN\_DAT |
| *(Pregnancy or Delivery codes recorded in the 8.5 months before audit run date)* |
| Note | This code group contains pregnancy, delivery, miscarriage and termination Read codes and is used for RECALL purposes. 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. 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 and that the latest a pregnancy extends is 8 months 2 weeks past that date | | |
| 146 | [PREGDEL\_DAT](#Grouping_Pregnancy_Band) | Date of PREGDEL\_COD | Chosen Record |

|  |  |  |  |
| --- | --- | --- | --- |
| 147 | PREG\_COD | *(<<424525001 OR <<276445008 OR <<370352001 OR <<609496007 OR <<55052008 OR <<118185001 OR 25825004 OR 30850008 OR 169488004 OR <<274117006 OR <<289209003 OR <<310592002 OR <<310594001 OR 169501005 OR 169508004 OR <<18114009) MINUS (82661006 OR <<72014004 OR <<39804004 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 92297008 OR 288259000 OR 92684002 OR 249037004 OR <<127376007 OR 199482005 OR 199483000 OR 199485007 OR 79290002 OR 289783000 OR 199266007 OR 87605005 OR 62131008 OR 445548006 OR 106008001 OR 118215003 OR <<48782003 OR 198617006 OR <<289261003 OR 109891004 OR 109893001 OR 199225007 OR 125586008 OR 128604004 OR 199252002 OR 34150001 OR 307337003 OR 34801009 OR 737321001 OR <<42571002 OR 199694005 OR 199121007 OR 199122000 OR 199124004 OR 424009001 OR 27574007 OR <<79114003 OR <<413340008 OR 199577000 OR <<302080006 OR <<289761004 OR <<289258004 OR <<289216002 OR <<249032005 OR <<289232004 OR <<14022007 OR <<199405005 OR <<102500002 OR 289677009 OR 289678004 OR 366321006 OR 53881005 OR 81448000 OR 199127006 OR 199128001 OR 199087006 OR 237036002 OR 199427001 OR 199027009 OR <<67480003 OR 199409004 OR 35656003 OR <<38010008 OR 17285009 OR 234380002 OR 307338008 OR <<118216002 OR 199422007 OR 90751002 OR 199117000 OR 106007006 OR <<87383005 OR 171000119107 OR 267340006 OR 199192005 OR 198624007 OR 198626009 OR 60000008 OR 199022003 OR 199418002 OR <<289256000 OR 199380003 OR 237242009 OR 60001007 OR <<106109006 OR 199358001 OR 200288002 OR 200291002 OR <<15400003 OR 199653002 OR 199413006 OR <<9899009 OR <<169632002 OR <<118212000 OR <<106010004 OR 199093003 OR 199096006 OR 198905007 OR <<198899007 OR 415105001 OR 198910006 OR <<169952004 OR 249206009 OR 249205008 OR <<51195001 OR 199646006 OR 102874004 OR 275306006 OR <<267272006 OR 40791000119105 OR 199063009 OR 152231000119106 OR <<363681007 OR 198912003 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 237208000 OR <<109894007 OR <<371374003 OR 199468005 OR 199469002 OR 199471002 OR 199582007 OR <<243829001 OR <<15504009 OR 17433009 OR 198620003 OR 276881003 OR <<84007008 OR 199362007 OR 79586000 OR 237254009 OR 199344003 OR <<27215002 OR <<199461004 OR 288261009)* | Latest >(RUN\_DAT – 254D) AND <= RUN\_DAT |
| *(Pregnancy codes recorded in the 8.5 months before the audit run date)* |
| Note | This code group is used in combination with PREGDEL above to determine if the patient is still pregnant. If the latest code recorded out of PREGDEL\_COD is PREG\_COD, then the patient is regarded as still pregnant | | |
| 148 | [PREG\_DAT](#Grouping_Pregnancy_Band) | Date of PREG\_COD | Chosen record |

### Extra fields needed for call/recall purposes

Contraindications/Anaphylaxis, Declines

*Note: This information is not taken into account for the PHE Vaccine Uptake survey AND MAY EVOLVE as the vaccination programme proceeds*

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Number** | **Field name** | **Data item** | **Qualifying criteria** |
| 149 | COVCONTRA\_COD | 1324711000000102 | Latest <= RUN\_DAT |
| *(COVID vaccination contraindication codes)* |
| *Note: this element may alter as the vaccination programme proceeds* |
| 150 | COVCONTRA\_DAT | Date of COVCONTRA\_COD | Chosen Record |
| 151 | COV1DECL\_COD | 1324721000000108 OR 1324741000000101 OR 1324811000000107 | Latest <= RUN\_DAT |
| *(First COVID vaccination declined)* |
| 152 | COV1DECL\_DAT | Date of COV1DECL\_COD | Chosen Record |
| 153 | COV2DECL\_COD | 1324751000000103 OR 1324811000000107 | Latest<= RUN\_DAT |
| *(Second COVID vaccination declined)* |
| 154 | COV2DECL\_DAT | Date of COV2DECL\_COD | Chosen Record |

## 3) **Bandings and Groupings**

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

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **1** | Age **Bands**   |  |  | | --- | --- | | **Band 1** | PAT\_AGE <16 at REF\_DAT | | **Band 2** | PAT\_AGE >=16 at RUN\_DAT and <30 at REF\_DAT\* | | **Band 3** | PAT\_AGE >=30 and <40 at REF\_DAT | | **Band 4** | PAT\_AGE >=40 and <50 at REF\_DAT | | **Band 5** | PAT\_AGE >=50 and <55 at REF\_DAT | | **Band 6** | PAT\_AGE >=55 and <60 at REF\_DAT | | **Band 7** | PAT\_AGE >=60 and <65 at REF\_DAT | | **Band 8** | PAT\_AGE >=65 and <70 at REF\_DAT | | **Band 9** | PAT\_AGE >=70 and <75 at REF\_DAT | | **Band 10** | PAT\_AGE >=75 and <80 at REF\_DAT | | **Band 11** | PAT\_AGE >=80 and <85 at REF\_DAT | | **Band 12** | PAT\_AGE >=85 and <120 at REF\_DAT | | **Band 13** | PAT\_AGE >=65 and <120 at REF\_DAT | | **Band 14** | PAT\_AGE >=16 at RUN\_DAT and <40 at REF\_DAT\* | | **Band 15** | PAT\_AGE >=50 and < 65 at REF\_DAT | | **Band 16** | PAT\_AGE >=16 at RUN\_DAT and <50 at REF\_DAT\* | | **Band 17** | PAT\_AGE >=65 and <75 at REF\_DAT | | **Band 18** | PAT\_AGE >=75 at REF\_DAT | |  |  | |

**\*Note:** Denominators should be defined by age on the reference date of 31 March 2021 (REF\_DAT) but for the lower limit of the 16+ age bands, they should be defined by their age on the audit run date (RUN\_DAT).

|  |  |  |
| --- | --- | --- |
|  | Gender **Bands** | |
| **2** | **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) | *Please see note below* |

**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 COVID figures, system suppliers are able to distinguish between unspecified genders and unknown genders, then they should use both bands 3 and 4.

|  |  |  |  |
| --- | --- | --- | --- |
| **3** | Ethnicity | | |
| **Rule** |  | **True** | **False** |
| **1** | ETH2001\_WHIBRIT\_DAT >=  dates of ETHNICITY CATEGORIES IN TABLE A | White - British | Next |
| **2** | ETH2001\_WHIIRISH\_DAT >=  DATES OF ETHNICITY CATEGORIES IN TABLE A | White - Irish | Next |
| **3** | ETH2001\_WHIOTHER\_DAT >=  DATES OF ETHNICITY CATEGORIES IN TABLE A | White - Any other White background | Next |
| **4** | ETH2001\_MXDWHIBLKCAR\_DAT >=  DATES OF ETHNICITY CATEGORIES IN TABLE A | Mixed - White and Black Caribbean | Next |
| **5** | ETH2001\_MXDWHIBLKAFR\_DAT >=  DATES OF ETHNICITY CATEGORIES IN TABLE A | Mixed - White and Black African | Next |
| **6** | ETH2001\_MXDWHIASN\_DAT  DATES OF ETHNICITY CATEGORIES IN TABLE A | Mixed - White and Asian | Next |
| **7** | ETH2001\_MXDOTHER\_DAT >=  DATES OF ETHNICITY CATEGORIES IN TABLE A | Mixed - Any other mixed background | Next |
| **8** | ETH2001\_ASNINDIAN\_DAT >=  DATES OF ETHNICITY CATEGORIES IN TABLE A | Asian or Asian British - Indian | Next |
| **9** | ETH2001\_ASNPAK\_DAT >=  DATES OF ETHNICITY CATEGORIES IN TABLE A | Asian or Asian British - Pakistani | Next |
| **10** | ETH2001\_ASNBANG\_DAT >=  DATES OF ETHNICITY CATEGORIES IN TABLE A | Asian or Asian British - Bangladeshi | Next |
| **11** | ETH2001\_ASNOTHER\_DAT >=  DATES OF ETHNICITY CATEGORIES IN TABLE A | Asian or Asian British - Any other Asian background | Next |
| **12** | ETH2001\_BLKCARIB\_DAT >=  DATES OF ETHNICITY CATEGORIES IN TABLE A | Black or Black British - Caribbean | Next |
| **13** | ETH2001\_BLKAFRIC\_DAT >=  DATES OF ETHNICITY CATEGORIES IN TABLE A | Black or Black British - African | Next |
| **14** | ETH2001\_BLKOTH\_DAT >=  DATES OF ETHNICITY CATEGORIES IN TABLE A | Black or Black British - Any other Black background | Next |
| **15** | ETH2001\_CHINESE\_DAT >=  DATES OF ETHNICITY CATEGORIES IN TABLE A | Other ethnic groups - Chinese | Next |
| **16** | ETH2001\_OTHER\_DAT >=  DATES OF ETHNICITY CATEGORIES IN TABLE A | Other ethnic groups - Any other ethnic group | Next |
| **17** | NON\_ETH2001\_DAT <> NULL | Patients with any other ethnicity code | Next |
| **18** | ETH\_NOTGIVPTREF\_DAT <> NULL | Ethnicity not given - patient refused | Next |
| **19** | 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\_WHIIRISH\_DAT

ETH2001\_WHIOTHER\_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.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Patients with Immunosuppression | | **True** | **False** |
| **4** | IMMUNO\_GROUP | IF IMMRX\_DAT <> NULL | *Select* | *Next* |
| IF IMMDX\_COV\_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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Patients with CKD | | **True** | **False** |
| **5** | CKD\_GROUP | IF CKD\_COV\_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.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Patients with Asthma | | **True** | **False** |
| **6** | AST\_GROUP\* | IF ASTADM\_DAT <> NULL | *Select* | *Next* |
| IF AST\_DAT <> NULL | *Next* | *Reject* |
| IF ASTRXM1 <> NULL | *Next* | *Reject* |
| IF ASTRXM2 <> NULL | *Next* | *Reject* |
| IF ASTRXM3 <> 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 3 prescriptions for oral steroids over a 3 month period (each prescription must fall within separate individual month windows) as an indication of repeated or continuous oral steroids.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **7** | Patients with CNS Disease (including Stroke/TIA) | | **True** | **False** |
| CNS\_GROUP | IF CNS\_COV\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Patients who have Chronic Respiratory Disease | | **True** | **False** |
| **8** | RESP\_GROUP | IF AST\_GROUP <> NULL | *Select* | *Next* |
| IF RESP\_COV\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Patients with Morbid Obesity | | **True** | **False** |
| **9** | BMI\_GROUP | IF SEV\_OBESITY\_DAT > BMI\_DAT | *Select* | *Next* |
| IF BMI\_VAL >=40 | *Select* | *Reject* |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **10** | Patients with Diabetes | | **True** | **False** |
| DIAB\_GROUP | IF DIAB\_DAT > DMRES\_DAT | *Select* | *Reject* |

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **11** | Patients with Severe Mental Health | | **True** | **False** |
| SEVMENT\_GROUP | IF SEV\_MENTAL\_DAT > SMHRES\_DAT | *Select* | *Reject* |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Patients in Any Clinical Risk Group** | | **True** | **False** |
| **12** | ATRISK\_GROUP | IF IMMUNOGROUP <> NULL | *Select* | *Next* |
| IF CKD\_GROUP <> NULL | *Select* | *Next* |
| IF RESP\_GROUP <> NULL | *Select* | *Next* |
| IF DIAB\_GROUP <> NULL | *Select* | *Next* |
| IF CLD\_DAT <>NULL | *Select* | *Next* |
| IF CNS\_GROUP <> NULL | *Select* | *Next* |
| IF CHD\_COV\_DAT <> NULL | *Select* | *Next* |
| IF SPLN\_COV\_DAT <> NULL | *Select* | *Next* |
| IF LEARNDIS\_DAT <> NULL | *Select* | *Next* |
| IF SEVMENT\_GROUP <> NULL | *Select* | *Reject* |

**Note:** Patients who are in the Carer, Health & Social Care (HSC) worker, long-stay care home/facility resident, patients at high-risk of complications from COVID-19 (shielding) or household contacts of high risk patients 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 has been removed from this group and is included as a separate entity where needed to avoid circular arguments in several clauses.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **13** | Patients who have received at least 1 dose of a COVID Vaccination | | **True** | **False** |
| COVAX1D\_GROUP | IF COVRX1\_DAT <> NULL | *Select* | *Next* |
| IF COVADM1\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Patients who have received at least 2 doses of a COVID Vaccination | | **True** | **False** |
| **14** | COVAX2D\_GROUP | IF COVAX1D\_GROUP <> NULL | *Next* | *Reject* |
| IF COVRX2\_DAT <> NULL | *Select* | *Next* |
| IF COVADM2\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Patients who have an unstated dose 1 vaccination type | | **True** | **False** |
| **15** | UNSTATVACC1\_GROUP | IF COVAX1D\_GROUP <> NULL | *Next* | *Reject* |
| IF AZD1RX\_DAT <> NULL | *Reject* | *Next* |
| IF PFD1RX\_DAT <> NULL | *Reject* | *Next* |
| IF MOD1RX\_DAT <> NULL | *Reject* | *Next* |
| IF NXD1RX\_DAT <> NULL | *Reject* | *Next* |
| IF JND1RX \_DAT <> NULL | *Reject* | *Next* |
| IF GSD1RX\_DAT <> NULL | *Reject* | *Next* |
| IF VLD1RX\_DAT <> NULL | *Reject* | *Select* |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Patients who have an unstated dose 2 vaccination type | | **True** | **False** |
| **16** | UNSTATVACC2\_GROUP | IF COVAX2D\_GROUP <> NULL | *Next* | *Reject* |
| IF AZD2RX\_DAT <> NULL | *Reject* | *Next* |
| IF PFD2RX\_DAT <> NULL | *Reject* | *Next* |
| IF MOD2RX\_DAT <> NULL | *Reject* | *Next* |
| IF NXD2RX\_DAT <> NULL | *Reject* | *Next* |
| IF JND2RX \_DAT <> NULL | *Reject* | *Next* |
| IF GSD2RX\_DAT <> NULL | *Reject* | *Next* |
| IF VLD2RX\_DAT <> NULL | *Reject* | *Select* |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Patients who are shielding (High Risk from COVID-19) | | **True** | **False** |
| **17** | SHIELD\_GROUP | IF SHIELD\_DAT = NULL | *Reject* | *Next* |
| IF SHIELD\_DAT <> NULL AND NONSHIELD\_DAT = NULL | *Select* | *Next* |
| IF SHIELD\_DAT > NONSHIELD\_DAT | *Select* | *Reject* |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **18** | Patients who are pregnant | | **True** | **False** |
| PREG\_GROUP | IF PREG\_DAT<> NULL | *Next* | *Reject* |
| IF PREGDEL\_DAT > PREG\_DAT | *Reject* | *Select* |

If no pregnancy code then reject. If a delivery date is present later than a pregnancy date then also reject.

# 4) Indicators for Dataset 1 - COVID-19 At-risk

## Section 1. Summary data

### 1. Vaccination status of ALL patients

Output to be broken down by Age bands 1 – 12

**Denominator:**

a) Registration status

|  |  |
| --- | --- |
| ***Current registration status*** | ***Qualifying criteria*** |
| Currently registered for GMS | Most recent registration date <= RUN\_DAT |

**Numerators:**

|  |  |  |  |
| --- | --- | --- | --- |
| 1a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 1b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 1c | Oxford AZ vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF AZD1RX\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 1d | Oxford AZ vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF AZD2RX\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 1e | Pfizer BioNTech vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF PFD1RX\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 1f | Pfizer BioNTech vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF PFD2RX\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 1g | Moderna vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF MOD1RX\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 1h | Moderna vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF MOD2RX\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 1i | Novavax vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF NXD1RX\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 1j | Novavax vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF NXD2RX\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 1k | Janssen vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF JND1RX\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 1l | Janssen vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF JND2RX\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 1m | GSK/Sanofi vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF GSD1RX\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 1n | GSK/Sanofi vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF GSD2RX\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 1o | Valneva vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF VLD1RX\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 1p | Valneva vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF VLD2RX\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 1q | Unstated type of dose 1 COVID vaccination given from 01/12/2020 | **True** | **False** |
| IF UNSTATVACC1\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 1r | Unstated type of dose 2 COVID vaccination given from 01/12/2020 | **True** | **False** |
| IF UNSTATVACC2\_GROUP <> NULL | *Select* | *Reject* |

### 2. Vaccination status of patients in one or more at-risk group

Output to be broken down by Age bands 1 – 12

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 2 | **Summary of patients in one or more risk groups** | **True** | **False** |
| IF ATRISK\_GROUP <> NULL | *Select* | *Next* |
| IF BMI\_GROUP <> NULL | *Select* | *Reject* |

**Numerators:**

|  |  |  |  |
| --- | --- | --- | --- |
| 2a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 2b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 2c | Oxford AZ vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF AZD1RX\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 2d | Oxford AZ vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF AZD2RX\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 2e | Pfizer BioNTech vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF PFD1RX\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 2f | Pfizer BioNTech vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF PFD2RX\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 2g | Moderna vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF MOD1RX\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 2h | Moderna vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF MOD2RX\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 2i | Novavax vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF NXD1RX\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 2j | Novavax vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF NXD2RX\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 2k | Janssen vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF JND1RX\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 2l | Janssen vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF JND2RX\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 2m | GSK/Sanofi vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF GSD1RX\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 2n | GSK/Sanofi vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF GSD2RX\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 2o | Valneva vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF VLD1RX\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 2p | Valneva vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF VLD2RX\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 2q | Unstated type of dose 1 COVID vaccination given from 01/12/2020 | **True** | **False** |
| IF UNSTATVACC1\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 2r | Unstated type of dose 2 COVID vaccination given from 01/12/2020 | **True** | **False** |
| IF UNSTATVACC2\_GROUP <> NULL | *Select* | *Reject* |

## Section 2 At-risk Groups

### 1. Vaccination status of patients with Chronic Heart Disease

Output to be broken down by Age bands 14, 4, 15 and 13

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 3 | **Patients with Chronic Heart Disease** | **True** | **False** |
| IF CHD\_cov\_DAT <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 3a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 3b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 2. Vaccination status of patients with Chronic Respiratory Disease

Output to be broken down by Age bands 14, 4, 15 and 13

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 4 | **Patients with Chronic Respiratory Disease** | **True** | **False** |
| IF RESP\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 4a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 4b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 3. Vaccination status of patients with Chronic Kidney Disease

Output to be broken down by Age bands 14, 4, 15 and 13

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 5 | **Patients with Chronic Kidney Disease** | **True** | **False** |
| IF CKD\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 5a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 5b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 4. Vaccination status of patients with Chronic Liver Disease

Output to be broken down by Age bands 14, 4, 15 and 13

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 6 | **Patients with Chronic Liver Disease** | **True** | **False** |
| IF CLD\_DAT <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 6a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 6b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 5. Vaccination status of patients with Diabetes

Output to be broken down by Age bands 14, 4, 15 and 13

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 7 | **Patients with Diabetes** | **True** | **False** |
| IF DIAB\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 7a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 7b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 6. Vaccination status of patients with Immunosuppression

Output to be broken down by Age bands 14, 4, 15 and 13

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 8 | **Patients with Immunosuppression** | **True** | **False** |
| IF IMMUNO\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 8a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 8b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 7. Vaccination status of patients with Chronic Neurological Disease (including Stroke/TIA, Cerebral Palsy or MS)

Output to be broken down by Age bands 14, 4, 15 and 13

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 9 | **Patients with Chronic Neurological Disease** (including Stroke/TIA, Cerebral Palsy or MS) | **True** | **False** |
| IF CNS\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 9a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 9b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 8. Vaccination status of patients with Asplenia or Dysfunction of the Spleen

Output to be broken down by Age bands 14, 4, 15 and 13

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 10 | **Patients with Asplenia or Dysfunction of the Spleen** | **True** | **False** |
| IF SPLN\_COV\_DAT <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 10a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 10b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 9. Vaccination status of patients with Morbid Obesity and in one or more other clinical risk groups

Output to be broken down by Age bands 14, 4, 15 and 13

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 11 | **Patients with Morbid Obesity and in other clinical risk group** | **True** | **False** |
| IF BMI\_GROUP <> NULL | *Next* | *Reject* |
| IF ATRISK\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 11a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 11b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 10. Vaccination status of patients with Morbid Obesity and NOT in any other clinical risk groups

Output to be broken down by Age bands 14, 4, 15 and 13

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 12 | **Patients with Morbid Obesity and NOT in other clinical risk group** | **True** | **False** |
| IF BMI\_GROUP <> NULL | *Next* | *Reject* |
| IF ATRISK\_GROUP <> NULL | *Reject* | *Select* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 12a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 12b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 11. Vaccination status of patients with Learning Disabilities

Output to be broken down by Age bands 14, 4, 15 and 13

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 13 | **Patients with Learning Disability** | **True** | **False** |
| IF LEARNDIS\_DAT <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 13a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 13b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 12. Vaccination status of patients with Severe Mental Illness

Output to be broken down by Age bands 14, 4, 15 and 13

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 14 | **Patients with Severe Mental Illness** | **True** | **False** |
| IF SEVMENT\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 14a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 14b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

## Section 3 High risk group for COVID (Shielding)

### 1. Vaccination of Shielded Individuals (High Risk from COVID-19)

Outputs to be broken down by Age Bands 1, 14 and 4-12

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 15 | **Patients who are Shielded**  **(High Risk from COVID-19)** | **True** | **False** |
| IF SHIELD\_GROUP <> NULL | *Select* | *Reject* |

**Numerators:**

|  |  |  |  |
| --- | --- | --- | --- |
| 15a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 15b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 2. Vaccination of Household contacts of Shielding Patients

Outputs to be broken down by Age Bands 1, 16, 15 and 13

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 16 | **Patients who are household contacts of Shielded Patients (High Risk from COVID-19)** | **True** | **False** |
| IF ATRISKGROUP <> NULL | *Reject* | *Next* |
| IF BMI\_GROUP <> NULL | *Reject* | *Next* |
| IF HHLD\_IMDEF\_DAT <> NULL | *Select* | *Reject* |

**Numerators:**

|  |  |  |  |
| --- | --- | --- | --- |
| 16a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 16b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

## Section 4. Vaccination uptake by Health and Social Care Workers

### 1. Care home workers.

Outputs to be broken down by Age Bands 16, 15 and 13

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 17 | **Patients meeting Care home worker criteria** | **True** | **False** |
| IF PAT\_AGE >=16 at RUN\_DAT | *Next* | *Reject* |
| IF CAREHOME\_dat <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 17a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 17b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 2. Nursing Home workers

Outputs to be broken down by Age Bands 16, 15 and 13

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 18 | **Patients meeting Nursing home worker criteria** | **True** | **False** |
| IF PAT\_AGE >=16 at RUN\_DAT | *Next* | *Reject* |
| IF NURSEHOME\_dat <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 18a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 18b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 3. Domiciliary Care workers

Outputs to be broken down by Age Bands 16, 15 and 13

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 19 | **Patients meeting Domiciliary Care Worker Criteria** | **True** | **False** |
| IF PAT\_AGE >=16 at RUN\_DAT | *Next* | *Reject* |
| IF DOMCARE\_dat <> NULL | *Reject* | *Next* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 19a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 19b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

## Section 5. Carers

Outputs to be broken down by Age Bands 16, 15 and 13

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 20 | **Patients meeting Carer Criteria** | **True** | **False** |
| IF PAT\_age >=16 at RUN\_DAT | *Next* | *Reject* |
| IF CARER\_dat = NULL | *Reject* | *Next* |
| if carer\_dat > notcarer\_dat | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 20a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 20b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

## Section 6. Patients in long-stay residential care home or other long-stay facility

Outputs to be broken down by Age Bands 16, 15 and 13

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 21 | **Patients meeting long-stay residential home criteria** | **True** | **False** |
| IF PAT\_AGE >=16 at RUN\_DAT | *Next* | *Reject* |
| IF LONGRES\_DAT <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 21a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 21b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

# Indicators for Dataset 2 – Ethnicity and Gender

## Section 1. Summary Data

### 1. Vaccination status of ALL patients by age band: Aged 16 and over

Output to be broken down by age bands 14, 4, 15, 17 and 18.

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 1 | **Patients aged 16-39** | **True** | **False** |
| IF Age Band 14 = true | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 1a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 1b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 2 | **Patients aged 40-49** | **True** | **False** |
| IF Age Band 4 = true | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 2a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 2b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 3 | **Patients aged 50-64** | **True** | **False** |
| IF Age Band 15 = true | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 3a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 3b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 4 | **Patients aged 65-74** | **True** | **False** |
| IF Age Band 17 = true | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 4a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 4b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 5 | **Patients aged 75 and over** | **True** | **False** |
| IF Age Band 18 = true | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 5a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 5b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 2. Vaccination status of patients in one or more at-risk groups by age band: Aged 16 and over

Output to be broken down by age bands 14, 4, 15, 17 and 18.

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 6 | **Patients at-risk aged 16-39** | **True** | **False** |
| IF Age Band 14 = true | *Next* | *Reject* |
| IF ATRISK\_GROUP <> NULL | *Select* | *Next* |
| IF BMI\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 6a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 6b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 7 | **Patients at-risk aged 40-49** | **True** | **False** |
| IF Age Band 4 = true | *Next* | *Reject* |
| IF ATRISK\_GROUP <> NULL | *Select* | *Next* |
| IF BMI\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 7a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 7b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 8 | **Patients at-risk aged 50-64** | **True** | **False** |
| IF Age Band 15 = true | *Next* | *Reject* |
| IF ATRISK\_GROUP <> NULL | *Select* | *Next* |
| IF BMI\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 8a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 8b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 9 | **Patients at-risk aged 65 - 74** | **True** | **False** |
| IF Age Band 17 = true | *Next* | *Reject* |
| IF ATRISK\_GROUP <> NULL | *Select* | *Next* |
| IF BMI\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 9a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 9b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 10 | **Patients at-risk aged 75 and over** | **True** | **False** |
| IF Age Band 18 = true | *Next* | *Reject* |
| IF ATRISK\_GROUP <> NULL | *Select* | *Next* |
| IF BMI\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 10a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 10b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

## Section 2. Gender Dataset

### 1. Vaccination status of ALL patients by gender: Aged 16 to under 40

Output to be broken down by gender bands 1-4.

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 11 | **Patients in gender band MALE aged 16-39** | **True** | **False** |
| IF GENDER Band MALE = true | *Next* | *Reject* |
| IF Age Band 14 = true | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 11a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 11b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 12 | **Patients in gender band FEMALE aged 16-39** | **True** | **False** |
| IF GENDER Band FEMALE = true | *Next* | *Reject* |
| IF Age Band 14 = true | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 12a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 12b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 13 | **Patients with gender NOT SPECIFIED aged 16-39** | **True** | **False** |
| IF GENDER Band UnSPECIFIED = true | *Next* | *Reject* |
| IF Age Band 14 = true | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 13a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 13b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 14 | **Patients with gender UNKNOWN aged 16-39** | **True** | **False** |
| IF GENDER Band UNKNOWN = true | *Next* | *Reject* |
| IF Age Band 14 = true | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 14a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 14b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 2. Vaccination status of patients at-risk by gender: Aged 16 to under 40

Output to be broken down by gender bands 1- 4.

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 15 | **At-risk MALE patients aged 16-39** | **True** | **False** |
| IF GENDER Band MALE = true | *Next* | *Reject* |
| IF Age Band 14 = true | *Next* | *Reject* |
| IF ATRISK\_GROUP <> NULL | *Select* | *Next* |
| IF BMI\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 15a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 15b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 16 | **At-risk FEMALE patients aged 16-39** | **True** | **False** |
| IF GENDER Band FEMALE = true | *Next* | *Reject* |
| IF Age Band 14 = true | *Next* | *Reject* |
| IF ATRISK\_GROUP <> NULL | *Select* | *Next* |
| IF BMI\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 16a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 16b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 17 | **At-risk UNSPECIFIED gender patients aged 16-39** | **True** | **False** |
| IF GENDER Band UNSPECIFIED = true | *Next* | *Reject* |
| IF Age Band 14 = true | *Next* | *Reject* |
| IF ATRISK\_GROUP <> NULL | *Select* | *Next* |
| IF BMI\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 17a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 17b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 18 | **At-risk UNKNOWN gender patients aged 16-39** | **True** | **False** |
| IF GENDER Band UNKNOWN = true | *Next* | *Reject* |
| IF Age Band 14 = true | *Next* | *Reject* |
| IF ATRISK\_GROUP <> NULL | *Select* | *Next* |
| IF BMI\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 18a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 18b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 3. Vaccination status of ALL patients by gender: Aged 40 to under 50

Output to be broken down by gender bands 1- 4.

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 19 | **Patients in gender band MALE aged 40-49** | **True** | **False** |
| IF GENDER Band MALE = true | *Next* | *Reject* |
| IF Age Band 4 = true | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 19a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 19b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 20 | **Patients in gender band FEMALE aged 40-49** | **True** | **False** |
| IF GENDER Band FEMALE = true | *Next* | *Reject* |
| IF Age Band 4 = true | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 20a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 20b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 21 | **Patients with gender NOT SPECIFIED aged 40-49** | **True** | **False** |
| IF GENDER Band UnSPECIFIED = true | *Next* | *Reject* |
| IF Age Band 4 = true | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 21a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 21b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 22 | **Patients with gender UNKNOWN aged 40-49** | **True** | **False** |
| IF GENDER Band UNKNOWN = true | *Next* | *Reject* |
| IF Age Band 4 = true | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 22a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 22b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 4. Vaccination status of patients at-risk by gender: Aged 40 to under 50

Output to be broken down by gender bands 1- 4.

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 23 | **At-risk MALE patients aged 40-49** | **True** | **False** |
| IF GENDER Band MALE = true | *Next* | *Reject* |
| IF Age Band 4 = true | *Next* | *Reject* |
| IF ATRISK\_GROUP <> NULL | *Select* | *Next* |
| IF BMI\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 23a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 23b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 24 | **At-risk FEMALE patients aged 40-49** | **True** | **False** |
| IF GENDER Band FEMALE = true | *Next* | *Reject* |
| IF Age Band 4 = true | *Next* | *Reject* |
| IF ATRISK\_GROUP <> NULL | *Select* | *Next* |
| IF BMI\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 24a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 24b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 25 | **At-risk UNSPECIFIED gender patients aged 40-49** | **True** | **False** |
| IF GENDER Band UNSPECIFIED = true | *Next* | *Reject* |
| IF Age Band 4 = true | *Next* | *Reject* |
| IF ATRISK\_GROUP <> NULL | *Select* | *Next* |
| IF BMI\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 25a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 25b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 26 | **At-risk UNKNOWN gender patients aged 40-49** | **True** | **False** |
| IF GENDER Band UNKNOWN = true | *Next* | *Reject* |
| IF Age Band 4 = true | *Next* | *Reject* |
| IF ATRISK\_GROUP <> NULL | *Select* | *Next* |
| IF BMI\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 26a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 26b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 5. Vaccination status of ALL patients by gender: Aged 50 to under 65

Output to be broken down by gender bands 1- 4.

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 27 | **Patients in gender band MALE aged 50-64** | **True** | **False** |
| IF GENDER Band MALE = true | *Next* | *Reject* |
| IF Age Band 15 = true | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 27a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 27b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 28 | **Patients in gender band FEMALE aged 50-64** | **True** | **False** |
| IF GENDER Band FEMALE = true | *Next* | *Reject* |
| IF Age Band 15 = true | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 28a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 28b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 29 | **Patients with gender NOT SPECIFIED aged 50-64** | **True** | **False** |
| IF GENDER Band UnSPECIFIED = true | *Next* | *Reject* |
| IF Age Band 15 = true | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 29a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 29b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 30 | **Patients with gender UNKNOWN aged 50-64** | **True** | **False** |
| IF GENDER Band UNKNOWN = true | *Next* | *Reject* |
| IF Age Band 15 = true | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 30a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 30b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 6. Vaccination status of patients at-risk by gender: Aged 50 to under 65

Output to be broken down by gender bands 1- 4.

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 31 | **At-risk MALE patients aged 50-64** | **True** | **False** |
| IF GENDER Band MALE = true | *Next* | *Reject* |
| IF Age Band 15 = true | *Next* | *Reject* |
| IF ATRISK\_GROUP <> NULL | *Select* | *Next* |
| IF BMI\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 31a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 31b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 32 | **At-risk FEMALE patients aged 50-64** | **True** | **False** |
| IF GENDER Band FEMALE = true | *Next* | *Reject* |
| IF Age Band 15 = true | *Next* | *Reject* |
| IF ATRISK\_GROUP <> NULL | *Select* | *Next* |
| IF BMI\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 32a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 32b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 33 | **At-risk UNSPECIFIED gender patients aged 50-64** | **True** | **False** |
| IF GENDER Band UNSPECIFIED = true | *Next* | *Reject* |
| IF Age Band 15 = true | *Next* | *Reject* |
| IF ATRISK\_GROUP <> NULL | *Select* | *Next* |
| IF BMI\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 33a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 33b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 34 | **At-risk UNKNOWN gender patients aged 50-64** | **True** | **False** |
| IF GENDER Band UNKNOWN = true | *Next* | *Reject* |
| IF Age Band 15 = true | *Next* | *Reject* |
| IF ATRISK\_GROUP <> NULL | *Select* | *Next* |
| IF BMI\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 34a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 34b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 7. Vaccination status of ALL patients by gender: Aged 65 to under 75

Output to be broken down by gender bands 1- 4.

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 35 | **Patients in gender band MALE aged 65-74** | **True** | **False** |
| IF GENDER Band MALE = true | *Next* | *Reject* |
| IF Age Band 17 = true | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 35a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 35b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 36 | **Patients in gender band FEMALE aged 65-74** | **True** | **False** |
| IF GENDER Band FEMALE = true | *Next* | *Reject* |
| IF Age Band 17 = true | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 36a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 36b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 37 | **Patients with gender NOT SPECIFIED aged 65-74** | **True** | **False** |
| IF GENDER Band UnSPECIFIED = true | *Next* | *Reject* |
| IF Age Band 17 = true | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 37a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 37b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 38 | **Patients with gender UNKNOWN aged 65-74** | **True** | **False** |
| IF GENDER Band UNKNOWN = true | *Next* | *Reject* |
| IF Age Band 17 = true | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 38a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 38b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 8. Vaccination status of patients at-risk by gender: Aged 65 to under 75

Output to be broken down by gender bands 1- 4.

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 39 | **At-risk MALE patients aged 65-74** | **True** | **False** |
| IF GENDER Band MALE = true | *Next* | *Reject* |
| IF Age Band 17 = true | *Next* | *Reject* |
| IF ATRISK\_GROUP <> NULL | *Select* | *Next* |
| IF BMI\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 39a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 39b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 40 | **At-risk FEMALE patients aged 65-74** | **True** | **False** |
| IF GENDER Band FEMALE = true | *Next* | *Reject* |
| IF Age Band 17 = true | *Next* | *Reject* |
| IF ATRISK\_GROUP <> NULL | *Select* | *Next* |
| IF BMI\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 40a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 40b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 41 | **At-risk UNSPECIFIED gender patients aged 65-74** | **True** | **False** |
| IF GENDER Band UNSPECIFIED = true | *Next* | *Reject* |
| IF Age Band 17 = true | *Next* | *Reject* |
| IF ATRISK\_GROUP <> NULL | *Select* | *Next* |
| IF BMI\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 41a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 41b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 42 | **At-risk UNKNOWN gender patients aged 65-74** | **True** | **False** |
| IF GENDER Band UNKNOWN = true | *Next* | *Reject* |
| IF Age Band 17 = true | *Next* | *Reject* |
| IF ATRISK\_GROUP <> NULL | *Select* | *Next* |
| IF BMI\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 42a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 42b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 9. Vaccination status of ALL patients by gender: Aged 75 and over

Output to be broken down by gender bands 1- 4.

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 43 | **Patients in gender band MALE aged 75 and over** | **True** | **False** |
| IF GENDER Band MALE = true | *Next* | *Reject* |
| IF Age Band 18 = true | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 43a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 43b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 44 | **Patients in gender band FEMALE aged 75 and over** | **True** | **False** |
| IF GENDER Band FEMALE = true | *Next* | *Reject* |
| IF Age Band 18 = true | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 44a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 44b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 45 | **Patients with gender NOT SPECIFIED aged 75 and over** | **True** | **False** |
| IF GENDER Band UnSPECIFIED = true | *Next* | *Reject* |
| IF Age Band 18 = true | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 45a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 45b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 46 | **Patients with gender UNKNOWN aged 75 and over** | **True** | **False** |
| IF GENDER Band UNKNOWN = true | *Next* | *Reject* |
| IF Age Band 18 = true | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 46a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 46b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 10. Vaccination status of patients at-risk by gender: Aged 75 and over

Output to be broken down by gender bands 1- 4.

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 47 | **At-risk MALE patients aged 75 and over** | **True** | **False** |
| IF GENDER Band MALE = true | *Next* | *Reject* |
| IF Age Band 18 = true | *Next* | *Reject* |
| IF ATRISK\_GROUP <> NULL | *Select* | *Next* |
| IF BMI\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 47a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 47b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 48 | **At-risk FEMALE patients aged 75 and over** | **True** | **False** |
| IF GENDER Band FEMALE = true | *Next* | *Reject* |
| IF Age Band 18 = true | *Next* | *Reject* |
| IF ATRISK\_GROUP <> NULL | *Select* | *Next* |
| IF BMI\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 48a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 48b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 49 | **At-risk UNSPECIFIED gender patients aged 75 and over** | **True** | **False** |
| IF GENDER Band UNSPECIFIED = true | *Next* | *Reject* |
| IF Age Band 18 = true | *Next* | *Reject* |
| IF ATRISK\_GROUP <> NULL | *Select* | *Next* |
| IF BMI\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 49a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 49b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 50 | **At-risk UNKNOWN gender patients aged 75 and over** | **True** | **False** |
| IF GENDER Band UNKNOWN = true | *Next* | *Reject* |
| IF Age Band 18 = true | *Next* | *Reject* |
| IF ATRISK\_GROUP <> NULL | *Select* | *Next* |
| IF BMI\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 50a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 50b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

## Section 3. Ethnicity

### 1. Vaccination status of ALL patients by ethnic group: Aged 16 to under 40

Output to be broken down by ethnicity bands 1-20.

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 51 | **Patients aged 16-39** | **True** | **False** |
| IF Age Band 14 = true | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 51a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 51b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 2. Vaccination status of at-risk patients by ethnic group: Aged 16-under 40

Output to be broken down by ethnicity bands 1-20.

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 52 | **At-risk patients aged 16-39** | **True** | **False** |
| IF Age Band 14 = true | *Next* | *Reject* |
| IF ATRISK\_GROUP <> NULL | *Select* | *Next* |
| IF BMI\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 52a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 52b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 3. Vaccination status of ALL patients by ethnic group: Aged 40 to under 50

Output to be broken down by ethnicity bands 1-20.

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 53 | **Patients aged 40-49** | **True** | **False** |
| IF Age Band 4 = true | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 53a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 53b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 4. Vaccination status of at-risk patients by ethnic group: Aged 40 to under 50

Output to be broken down by ethnicity bands 1-20.

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 54 | **At-risk patients aged 40-49** | **True** | **False** |
| IF Age Band 4 = true | *Next* | *Reject* |
| IF ATRISK\_GROUP <> NULL | *Select* | *Next* |
| IF BMI\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 54a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 54b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 5. Vaccination status of ALL patients by ethnic group: Aged 50 to under 65

Output to be broken down by ethnicity bands 1-20.

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 55 | **Patients aged 50-64** | **True** | **False** |
| IF Age Band 15 = true | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 55a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 55b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 6. Vaccination status of at-risk patients by ethnic group: Aged 50 under 65

Output to be broken down by ethnicity bands 1-20.

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 56 | **At-risk patients aged 50-64** | **True** | **False** |
| IF Age Band 15 = true | *Next* | *Reject* |
| IF ATRISK\_GROUP <> NULL | *Select* | *Next* |
| IF BMI\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 56a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 56b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 7. Vaccination status of ALL patients by ethnic group: Aged 65 and over

Output to be broken down by ethnicity bands 1-20.

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 57 | **Patients aged 65 and over** | **True** | **False** |
| IF Age Band 13 = true | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 57a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 57b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 8. Vaccination status of at-risk patients by ethnic group: Aged 65 and over

Output to be broken down by ethnicity bands 1-20.

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 58 | **At-risk patients aged 65 and over** | **True** | **False** |
| IF Age Band 13 = true | *Next* | *Reject* |
| IF ATRISK\_GROUP <> NULL | *Select* | *Next* |
| IF BMI\_GROUP <> NULL | *Select* | *Reject* |

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 58a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 58b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 9. Vaccination status of pregnant women NOT in an at-risk group: Aged 16 and over

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 59 | **Pregnant women NOT in an at-risk group** | **True** | **False** |
| IF PAT\_AGE >=16 at RUN\_DAT | *Next* | *Reject* |
| IF ATRISK\_GROUP <> NULL | *Reject* | *Next* |
| IF PREG\_GROUP <> NULL | *Select* | *Reject* |

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

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 59a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 59b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 10. Vaccination status of pregnant women IN an at-risk group: Aged 16 and over

**Denominator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 60 | **Pregnant women IN an at-risk group** | **True** | **False** |
| IF PAT\_AGE >=16 at RUN\_DAT | *Next* | *Reject* |
| IF PREG\_GROUP <> NULL | *Next* | *Reject* |
| IF ATRISK\_GROUP <> NULL | *Select* | *Reject* |

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

**Numerator:**

|  |  |  |  |
| --- | --- | --- | --- |
| 60a | COVID vaccination at least 1 dose given from 01/12/2020 | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| 60b | COVID vaccination at least 2 doses given from 01/12/2020 | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

# 5) Call & Recall Section

This section has been added to facilitate appropriate patient Call & Recall mechanisms and is a suggested outline scheme that should facilitate such a process.

It follows the current mostly age banded wave approach as at 8/1/21.

The approach taken for the second dose recall includes two timescale flags, one set at 21 days, the other set at 10 weeks.

The “Adverse Reaction” element to COVID vaccination only reflects the current serious anaphylaxis element where patients may need to have an alternative vaccine and therefore teases these patients out for clinical review. It does not reflect other “adverse reactions” as the recorded code can reflect minor adverse events that do not preclude a second dose.

## 5.1 Grouping and Bandings

1. **Vaccination Waves by Priority Group**

|  |  |  |  |
| --- | --- | --- | --- |
| **Wave** | **Risk Group** | | |
| **1** | **Residents & Staff in Care Homes** | **True** | **False** |
| IF LONGRES\_DAT <> NULL | *Select* | *Next* |
| IF CAREHOME\_DAT <> NULL | *Select* | *Next* |
| IF NURSEHOME\_DAT <> NULL | *Select* | *Reject* |
|  | | | |
| **2** | **Frontline H&SC workers or age 80 or over** | **True** | **False** |
| IF AGE >=80YRS AT REF\_DAT | *Select* | *Next* |
| IF DOMCARE\_DAT <> NULL | *Select* | *Reject* |
| *Note: Frontline H&SC workers will be broadly called by employers as this information may not be recorded in GP Systems* | | |
|  | | | |
| **3** | **Patients aged 75 – 79 years** | **True** | **False** |
| IF AGE >=75YRS AND <80 YRS AT REF\_DAT | *Select* | *Reject* |
|  | | | |
| **4** | **Clinically Extremely Vulnerable or age 70 – 74** | **True** | **False** |
| IF AGE >=70YRS AND <75 YRS AT REF\_DAT | *Select* | *Next* |
| IF SHIELDGROUP <> NULL | *Select* | *Reject* |
|  | | | |
| **5** | **Patients aged 65 – 69 years** | **True** | **False** |
| IF AGE >=65YRS AND <70 YRS AT REF\_DAT | *Select* | *Reject* |
|  | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **6** | **Patients aged 16-64 years in a defined At Risk group** | **True** | **False** |
| IF ATRISK\_GROUP <> NULL | *Select* | *Reject* |
|  | | | |
| **7** | **Patients aged 60 – 64 years** | **True** | **False** |
| IF AGE >=60YRS AND <65 YRS AT REF\_DAT | *Select* | *Reject* |
|  | | | |
| **8** | **Patients aged 55 – 59 years** | **True** | **False** |
| IF AGE >=55YRS AND <60 YRS AT REF\_DAT | *Select* | *Reject* |
|  | | | |
| **9** | **Patients aged 50 – 54 years** | **True** | **False** |
| IF AGE >=50YRS AND <55 YRS AT REF\_DAT | *Select* | *Reject* |

1. **Declined Second Vaccination Grouping**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **19** | **Patients who have declined a second vaccination** | | **True** | **False** |
| COVAC2DECL\_GROUP | IF COVAX1D\_GROUP <> NULL | *Next* | *Reject* |
| IF COV2DECL\_DAT <> NULL | *Select* | *Next* |
| IF COV1DECL\_DAT > (COVADM1\_DAT OR COVRX1\_DAT) | *Select* | *Reject* |
| *Note: this means that a patient either has an explicit “declines 2nd COVID vaccination” code or has a “declines COVID vaccination” code after receiving a first vaccination* | | | | |

## 5.2 Call & Recall Groups

### 5.2.1 Wave 1

(Note Waves 6 & 9 have different logic)

**Denominator**

|  |  |  |  |
| --- | --- | --- | --- |
| W1\_DEN | **Wave 1 patients** | **True** | **False** |
| IF WAVE 1 = true | *Select* | *Reject* |

**Numerators**

**Received Dose = 0**

|  |  |  |  |
| --- | --- | --- | --- |
| W1\_DECL1 | **Wave 1, Not Vaccinated, Declined Vaccine** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Reject* | *Next* |
| IF COV1DECL\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| W1\_CALL1 | **Wave 1, Not Vaccinated, Needs Calling** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Reject* | *Next* |
| IF COV1DECL\_DAT <> NULL | *Reject* | *Select* |

**Received Dose = 1**

|  |  |  |  |
| --- | --- | --- | --- |
| W1\_DECL2 | **Wave 1, Vaccinated Once, Declined Vaccine 2** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVAC2DECL\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| W1\_ANAPHL2 | **Wave 1, Vaccinated Once with Anaphylaxis** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVCONTRA\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| W1\_CALL2E | **Wave 1, Vaccinated Once for Early Recall** | **True** | **False** |
| IF (COVRX1\_DAT OR COVADM1\_DAT) > (RUN\_DAT – 20D) | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVCONTRA\_DAT <> NULL | *Reject* | *Next* |
| IF COVAC2DECL\_GROUP <> NULL | *Reject* | *Select* |
| *Note: this finds individuals vaccinated >20 days ago i.e. for early recall* | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| W1\_CALL2L | **Wave 1, Vaccinated Once for Later Recall** | **True** | **False** |
| IF (COVRX1\_DAT OR COVADM1\_DAT) > (RUN\_DAT – 70D) | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVCONTRA\_DAT <> NULL | *Reject* | *Next* |
| IF COVAC2DECL\_GROUP <> NULL | *Reject* | *Select* |
| *Note: this finds individuals vaccinated >70 days ago i.e. for later recall* | | | |

**Dose = 2**

|  |  |  |  |
| --- | --- | --- | --- |
| W1\_COMPLETE | **Wave 1, vaccinated twice** | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 5.2.2 Wave 2

**Denominator**

|  |  |  |  |
| --- | --- | --- | --- |
| W2\_DEN | **Wave 2 patients** | **True** | **False** |
| IF WAVE 2 = true | *Select* | *Reject* |

**Numerators**

**Received Dose = 0**

|  |  |  |  |
| --- | --- | --- | --- |
| W2\_DECL1 | **Wave 2, Not Vaccinated, Declined Vaccine** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Reject* | *Next* |
| IF COV1DECL\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| W2\_CALL1 | **Wave 2, Not Vaccinated, Needs Calling** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Reject* | *Next* |
| IF COV1DECL\_DAT <> NULL | *Reject* | *Select* |

**Received Dose = 1**

|  |  |  |  |
| --- | --- | --- | --- |
| W2\_DECL2 | **Wave 2, Vaccinated Once, Declined Vaccine 2** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVAC2DECL\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| W2\_ANAPHL2 | **Wave 2, Vaccinated Once with Anaphylaxis** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVCONTRA\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| W2\_CALL2E | **Wave 2, Vaccinated Once for Early Recall** | **True** | **False** |
| IF (COVRX1\_DAT OR COVADM1\_DAT) > (RUN\_DAT – 20D) | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVCONTRA\_DAT <> NULL | *Reject* | *Next* |
| IF COVAC2DECL\_GROUP <> NULL | *Reject* | *Select* |
| *Note: this finds individuals vaccinated >20 days ago i.e. for early recall* | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| W2\_CALL2L | **Wave 2, Vaccinated Once for Later Recall** | **True** | **False** |
| IF (COVRX1\_DAT OR COVADM1\_DAT) > (RUN\_DAT – 70D) | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVCONTRA\_DAT <> NULL | *Reject* | *Next* |
| IF COVAC2DECL\_GROUP <> NULL | *Reject* | *Select* |
| *Note: this finds individuals vaccinated >70 days ago i.e. for later recall* | | | |

**Dose = 2**

|  |  |  |  |
| --- | --- | --- | --- |
| W2\_COMPLETE | **Wave 2, vaccinated twice** | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 5.2.3 Wave 3

**Denominator**

|  |  |  |  |
| --- | --- | --- | --- |
| W3\_DEN | **Wave 3 patients** | **True** | **False** |
| IF WAVE 3 = true | *Select* | *Reject* |

**Numerators**

**Received Dose = 0**

|  |  |  |  |
| --- | --- | --- | --- |
| W3\_DECL1 | **Wave 3, Not Vaccinated, Declined Vaccine** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Reject* | *Next* |
| IF COV1DECL\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| W3\_CALL1 | **Wave 3, Not Vaccinated, Needs Calling** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Reject* | *Next* |
| IF COV1DECL\_DAT <> NULL | *Reject* | *Select* |

**Received Dose = 1**

|  |  |  |  |
| --- | --- | --- | --- |
| W3\_DECL2 | **Wave 3, Vaccinated Once, Declined Vaccine 2** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVAC2DECL\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| W3\_ANAPHL2 | **Wave 3, Vaccinated Once with Anaphylaxis** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVCONTRA\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| W3\_CALL2E | **Wave 3, Vaccinated Once for Early Recall** | **True** | **False** |
| IF (COVRX1\_DAT OR COVADM1\_DAT) > (RUN\_DAT – 20D) | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVCONTRA\_DAT <> NULL | *Reject* | *Next* |
| IF COVAC2DECL\_GROUP <> NULL | *Reject* | *Select* |
| *Note: this finds individuals vaccinated >20 days ago i.e. for early recall* | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| W3\_CALL2L | **Wave 3, Vaccinated Once for Later Recall** | **True** | **False** |
| IF (COVRX1\_DAT OR COVADM1\_DAT) > (RUN\_DAT – 70D) | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVCONTRA\_DAT <> NULL | *Reject* | *Next* |
| IF COVAC2DECL\_GROUP <> NULL | *Reject* | *Select* |
| *Note: this finds individuals vaccinated >70 days ago i.e. for later recall* | | | |

**Dose = 2**

|  |  |  |  |
| --- | --- | --- | --- |
| W3\_COMPLETE | **Wave 3, vaccinated twice** | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 5.2.4 Wave 4

**Denominator**

|  |  |  |  |
| --- | --- | --- | --- |
| W4\_DEN | **Wave 4 patients** | **True** | **False** |
| IF WAVE 1 = true | *Select* | *Reject* |

**Numerators**

**Received Dose = 0**

|  |  |  |  |
| --- | --- | --- | --- |
| W4\_DECL1 | **Wave 4, Not Vaccinated, Declined Vaccine** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Reject* | *Next* |
| IF COV1DECL\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| W4\_CALL1 | **Wave 4, Not Vaccinated, Needs Calling** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Reject* | *Next* |
| IF COV1DECL\_DAT <> NULL | *Reject* | *Select* |

**Received Dose = 1**

|  |  |  |  |
| --- | --- | --- | --- |
| W4\_DECL2 | **Wave 4, Vaccinated Once, Declined Vaccine 2** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVAC2DECL\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| W4\_ANAPHL2 | **Wave 4, Vaccinated Once with Anaphylaxis** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVCONTRA\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| W4\_CALL2E | **Wave 4, Vaccinated Once for Early Recall** | **True** | **False** |
| IF (COVRX1\_DAT OR COVADM1\_DAT) > (RUN\_DAT – 20D) | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVCONTRA\_DAT <> NULL | *Reject* | *Next* |
| IF COVAC2DECL\_GROUP <> NULL | *Reject* | *Select* |
| *Note: this finds individuals vaccinated >20 days ago i.e. for early recall* | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| W4\_CALL2L | **Wave 4, Vaccinated Once for Later Recall** | **True** | **False** |
| IF (COVRX1\_DAT OR COVADM1\_DAT) > (RUN\_DAT – 70D) | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVCONTRA\_DAT <> NULL | *Reject* | *Next* |
| IF COVAC2DECL\_GROUP <> NULL | *Reject* | *Select* |
| *Note: this finds individuals vaccinated >70 days ago i.e. for later recall* | | | |

**Dose = 2**

|  |  |  |  |
| --- | --- | --- | --- |
| W4\_COMPLETE | **Wave 4, vaccinated twice** | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 5.2.5 Wave 5

**Denominator**

|  |  |  |  |
| --- | --- | --- | --- |
| W5\_DEN | **Wave 5 patients** | **True** | **False** |
| IF WAVE 1 = true | *Select* | *Reject* |

**Numerators**

**Received Dose = 0**

|  |  |  |  |
| --- | --- | --- | --- |
| W5\_DECL1 | **Wave 5, Not Vaccinated, Declined Vaccine** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Reject* | *Next* |
| IF COV1DECL\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| W5\_CALL1 | **Wave 5, Not Vaccinated, Needs Calling** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Reject* | *Next* |
| IF COV1DECL\_DAT <> NULL | *Reject* | *Select* |

**Received Dose = 1**

|  |  |  |  |
| --- | --- | --- | --- |
| W5\_DECL2 | **Wave 5, Vaccinated Once, Declined Vaccine 2** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVAC2DECL\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| W5\_ANAPHL2 | **Wave 5, Vaccinated Once with Anaphylaxis** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVCONTRA\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| W5\_CALL2E | **Wave 5, Vaccinated Once for Early Recall** | **True** | **False** |
| IF (COVRX1\_DAT OR COVADM1\_DAT) > (RUN\_DAT – 20D) | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVCONTRA\_DAT <> NULL | *Reject* | *Next* |
| IF COVAC2DECL\_GROUP <> NULL | *Reject* | *Select* |
| *Note: this finds individuals vaccinated >20 days ago i.e. for early recall* | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| W5\_CALL2L | **Wave 5, Vaccinated Once for Later Recall** | **True** | **False** |
| IF (COVRX1\_DAT OR COVADM1\_DAT) > (RUN\_DAT – 70D) | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVCONTRA\_DAT <> NULL | *Reject* | *Next* |
| IF COVAC2DECL\_GROUP <> NULL | *Reject* | *Select* |
| *Note: this finds individuals vaccinated >70 days ago i.e. for later recall* | | | |

**Dose = 2**

|  |  |  |  |
| --- | --- | --- | --- |
| W5\_COMPLETE | **Wave 5, vaccinated twice** | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 5.2.6 Wave 6

*Note the extra logic to handle pregnancy*

**Denominator**

|  |  |  |  |
| --- | --- | --- | --- |
| W6\_DEN | **Wave 6 patients** | **True** | **False** |
| IF WAVE 1 = true | *Select* | *Reject* |

**Numerators**

**Received Dose = 0**

|  |  |  |  |
| --- | --- | --- | --- |
| W6\_DECL1 | **Wave 6, Not Vaccinated, Declined Vaccine** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Reject* | *Next* |
| IF COV1DECL\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| W6\_PREG | **Wave 6 patients who are pregnant** | **True** | **False** |
| IF PREG\_GROUP <> NUL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| W6\_CALL1 | **Wave 6, Not Vaccinated, Needs Calling** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Reject* | *Next* |
| IF COV1DECL\_DAT <> NULL | *Reject* | *Next* |
| IF PREG\_GROUP <> NULL | *Reject* | *Select* |

**Received Dose = 1**

|  |  |  |  |
| --- | --- | --- | --- |
| W6\_DECL2 | **Wave 6, Vaccinated Once, Declined Vaccine 2** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVAC2DECL\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| W6\_ANAPHL2 | **Wave 6, Vaccinated Once with Anaphylaxis** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVCONTRA\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| W6\_CALL2E | **Wave 6, Vaccinated Once for Early Recall** | **True** | **False** |
| IF (COVRX1\_DAT OR COVADM1\_DAT) > (RUN\_DAT – 20D) | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVCONTRA\_DAT <> NULL | *Reject* | *Next* |
| IF PREG\_GROUP <> NULL | *Reject* | *Next* |
| IF COVAC2DECL\_GROUP <> NULL | *Reject* | *Select* |
| *Note: this finds individuals vaccinated >20 days ago i.e. for early recall* | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| W6\_CALL2L | **Wave 6, Vaccinated Once for Later Recall** | **True** | **False** |
| IF (COVRX1\_DAT OR COVADM1\_DAT) > (RUN\_DAT – 70D) | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVCONTRA\_DAT <> NULL | *Reject* | *Next* |
| IF PREG\_GROUP <> NULL | *Reject* | *Next* |
| IF COVAC2DECL\_GROUP <> NULL | *Reject* | *Select* |
| *Note: this finds individuals vaccinated >70 days ago i.e. for later recall* | | | |

**Dose = 2**

|  |  |  |  |
| --- | --- | --- | --- |
| W6\_COMPLETE | **Wave 6, vaccinated twice** | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 5.2.7 Wave 7

**Denominator**

|  |  |  |  |
| --- | --- | --- | --- |
| W7\_DEN | **Wave 7 patients** | **True** | **False** |
| IF WAVE 1 = true | *Select* | *Reject* |

**Numerators**

**Received Dose = 0**

|  |  |  |  |
| --- | --- | --- | --- |
| W7\_DECL1 | **Wave 7, Not Vaccinated, Declined Vaccine** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Reject* | *Next* |
| IF COV1DECL\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| W7\_CALL1 | **Wave 7, Not Vaccinated, Needs Calling** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Reject* | *Next* |
| IF COV1DECL\_DAT <> NULL | *Reject* | *Select* |

**Received Dose = 1**

|  |  |  |  |
| --- | --- | --- | --- |
| W7\_DECL2 | **Wave 7, Vaccinated Once, Declined Vaccine 2** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVAC2DECL\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| W7\_ANAPHL2 | **Wave 7, Vaccinated Once with Anaphylaxis** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVCONTRA\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| W7\_CALL2E | **Wave 7, Vaccinated Once for Early Recall** | **True** | **False** |
| IF (COVRX1\_DAT OR COVADM1\_DAT) > (RUN\_DAT – 20D) | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVCONTRA\_DAT <> NULL | *Reject* | *Next* |
| IF COVAC2DECL\_GROUP <> NULL | *Reject* | *Select* |
| *Note: this finds individuals vaccinated >20 days ago i.e. for early recall* | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| W7\_CALL2L | **Wave 7, Vaccinated Once for Later Recall** | **True** | **False** |
| IF (COVRX1\_DAT OR COVADM1\_DAT) > (RUN\_DAT – 70D) | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVCONTRA\_DAT <> NULL | *Reject* | *Next* |
| IF COVAC2DECL\_GROUP <> NULL | *Reject* | *Select* |
| *Note: this finds individuals vaccinated >70 days ago i.e. for later recall* | | | |

**Dose = 2**

|  |  |  |  |
| --- | --- | --- | --- |
| W7\_COMPLETE | **Wave 7, vaccinated twice** | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 5.2.8 Wave 8

**Denominator**

|  |  |  |  |
| --- | --- | --- | --- |
| W8\_DEN | **Wave 8 patients** | **True** | **False** |
| IF WAVE 1 = true | *Select* | *Reject* |

**Numerators**

**Received Dose = 0**

|  |  |  |  |
| --- | --- | --- | --- |
| W8\_DECL1 | **Wave 8, Not Vaccinated, Declined Vaccine** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Reject* | *Next* |
| IF COV1DECL\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| W8\_CALL1 | **Wave 8, Not Vaccinated, Needs Calling** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Reject* | *Next* |
| IF COV1DECL\_DAT <> NULL | *Reject* | *Select* |

**Received Dose = 1**

|  |  |  |  |
| --- | --- | --- | --- |
| W8\_DECL2 | **Wave 8, Vaccinated Once, Declined Vaccine 2** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVAC2DECL\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| W8\_ANAPHL2 | **Wave 8, Vaccinated Once with Anaphylaxis** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVCONTRA\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| W8\_CALL2E | **Wave 8, Vaccinated Once for Early Recall** | **True** | **False** |
| IF (COVRX1\_DAT OR COVADM1\_DAT) > (RUN\_DAT – 20D) | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVCONTRA\_DAT <> NULL | *Reject* | *Next* |
| IF COVAC2DECL\_GROUP <> NULL | *Reject* | *Select* |
| *Note: this finds individuals vaccinated >20 days ago i.e. for early recall* | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| W8\_CALL2L | **Wave 8, Vaccinated Once for Late Recall** | **True** | **False** |
| IF (COVRX1\_DAT OR COVADM1\_DAT) > (RUN\_DAT – 70D) | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVCONTRA\_DAT <> NULL | *Reject* | *Next* |
| IF COVAC2DECL\_GROUP <> NULL | *Reject* | *Select* |
| *Note: this finds individuals vaccinated >70 days ago i.e. for later recall* | | | |

**Dose = 2**

|  |  |  |  |
| --- | --- | --- | --- |
| W8\_COMPLETE | **Wave 8, vaccinated twice** | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

### 5.2.9 Wave 9

*Note the extra logic to handle pregnancy*

**Denominator**

|  |  |  |  |
| --- | --- | --- | --- |
| W9\_DEN | **Wave 9 patients** | **True** | **False** |
| IF WAVE 1 = true | *Select* | *Reject* |

**Numerators**

**Received Dose = 0**

|  |  |  |  |
| --- | --- | --- | --- |
| W9\_DECL1 | **Wave 9, Not Vaccinated, Declined Vaccine** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Reject* | *Next* |
| IF COV1DECL\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| W9\_PREG | **Wave 9 patients who are pregnant** | **True** | **False** |
| IF PREG\_GROUP <> NUL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| W9\_CALL1 | **Wave 9, Not Vaccinated, Needs Calling** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Reject* | *Next* |
| IF COV1DECL\_DAT <> NULL | *Reject* | *Next* |
| IF PREG\_GROUP <> NULL | *Reject* | *Select* |

**Received Dose = 1**

|  |  |  |  |
| --- | --- | --- | --- |
| W9\_DECL2 | **Wave 9, Vaccinated Once, Declined Vaccine 2** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVAC2DECL\_GROUP <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| W9\_ANAPHL2 | **Wave 9, Vaccinated Once with Anaphylaxis** | **True** | **False** |
| IF COVAX1D\_GROUP <> NULL | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVCONTRA\_DAT <> NULL | *Select* | *Reject* |

|  |  |  |  |
| --- | --- | --- | --- |
| W9\_CALL2E | **Wave 9, Vaccinated Once for Early Recall** | **True** | **False** |
| IF (COVRX1\_DAT OR COVADM1\_DAT) > (RUN\_DAT – 20D) | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVCONTRA\_DAT <> NULL | *Reject* | *Next* |
| IF PREG\_GROUP <> NULL | *Reject* | *Next* |
| IF COVAC2DECL\_GROUP <> NULL | *Reject* | *Select* |
| *Note: this finds individuals vaccinated >20 days ago i.e. for early recall* | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| W9\_CALL2L | **Wave 9, Vaccinated Once for Late Recall** | **True** | **False** |
| IF (COVRX1\_DAT OR COVADM1\_DAT) > (RUN\_DAT – 70D) | *Next* | *Reject* |
| IF COVAX2D\_GROUP <> NULL | *Reject* | *Next* |
| IF COVCONTRA\_DAT <> NULL | *Reject* | *Next* |
| IF PREG\_GROUP <> NULL | *Reject* | *Next* |
| IF COVAC2DECL\_GROUP <> NULL | *Reject* | *Select* |
| *Note: this finds individuals vaccinated >70 days ago i.e. for later recall* | | | |

**Dose = 2**

|  |  |  |  |
| --- | --- | --- | --- |
| W9\_COMPLETE | **Wave 9, vaccinated twice** | **True** | **False** |
| IF COVAX2D\_GROUP <> NULL | *Select* | *Reject* |

**CHAN****GE LOG**

|  |  |  |  |
| --- | --- | --- | --- |
| **Version** | **Date** | **Author** | **Change summary** |
| 1.0 | 08/1/21 | DE/JJ | Initial version |
| 1.1 | 14/1/21 | DE | 1. Amendment of dates in [ASTRXM2](#astrxm2) to avoid overlap 2. Amendment of dates in [ASTRXM3](#astrxm3) to avoid overlap 3. Inclusion of additional code in [COV1DECL](#COV1DECL_COD)   & [COV2DECL](#COV2DECL_COD)   1. Addition of new Janssen “Astute” vaccination dm+d code to [JND1RX](#JND1RX) & [JND2RX](#JND2RX) 2. Addition of same code to [COVRX](#COVRX1)1 & [COVRX](#COVRX2_COD)2 |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |