



East London Database eldb2023 Data and Schema

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Overview

The East London Database is a series of annual databases containing data from the 1st April for patients registered with GP practices within north east London on that date. The coverage has expanded over the years to now include all practices in the North East London ICB area (City & Hackney, Newham, Tower Hamlets, Waltham Forest, Redbridge, Barking & Dagenham, and Havering).

- **eldb2014 eldb2019**: contain data obtained from EMIS for inner east London. Hosted in MS Access and not currently available to external analysts.
- **eldb2020**: contains data from EMIS for inner east London. It is hosted and available to external analysts on our ELDB SQL Server.
- eldb2021: contains data from our copy of the Discovery Data Service for all North East London. It is hosted and available to external analysts on our ELDB SQL Server.
- eldb2022: contains data from our copy of the Discovery Data Service for all North East London. It is hosted and available to external analysts on our ELDB SQL Server.
- eldb2023: contains data from our copy of the Discovery Data Service for all North East London. It is hosted and available to external analysts on our ELDB SQL Server.

Each year contains tables providing the earliest and/or latest codes for the standard QOF registers and clinical measures (Blood Pressure, HbA1c etc) as well as additional register, activity, and status tables. We have made changes and improvements to the schema and included tables for the database each year.

This guide provides information on the data and schema specifically for East London Database 2023 (eldb2023). Please refer to other documents and sources for information about previous years.





Accessing the ELDB Server

The ELDB SQL Server is secured inside a Virtual Private Network (VPN) with Two-Factor Authentication (2FA). Users connect into the VPN using client software installed on their laptop or PC and authenticate using a smart phone app. Querying the data will require appropriate software (such as MS Access, SQL Server Management Studio, Power Query) installed on the user's device. Details are provided in other documents.

Because this setup requires installing software on devices not managed by CEG or QMUL, there is a limit to the amount of support CEG can provide for this process or for resolving problems. CEG can help with connection issues to the VPN and to the ELDB server, and provide a series of guides for this purpose. Installation issues will need to be handle by the device's user or administrator.





eldb2023 Data

eldb2023 contains data derived from the Discovery Data Service (DDS), via the CEG Compass database, for all practices within the North East London ICB area (City & Hackney, Newham, Tower Hamlets, Waltham Forest, Redbridge, Barking & Dagenham, and Havering). Voror, the company managing DDS, receive data on a daily basis from EMIS and TTP, the two clinical system providers in the area, which they process into the DDS. CEG maintain an API to file and update a copy of this data each night into our Compass database. The eldb2023 database has been created from Compass, using purpose built SQL scripts, as a one-off snapshot of the data at 01/04/2023.

The ELDB data is not an exact copy, therefore, of the patient records held on the GP clinical systems. Not all data fields are passed to Voror and the data undergoes a series of transformations on its path to the eldb2023 database. The clinical systems are also designed for managing the healthcare of currently registered patients and so the data they contain is constantly being updated and is not always in sync with DDS and Compass. Compass has been validated as providing results close to those pulled from clinical systems and further validation checks were carried out on the eldb2023 results. Reports derived from eldb2023 should not be compared, however, with reports derived directly from EMIS Web and SystmOne.

Known Data Issues in eldb2023:

Patient Registration – A patient's current practice registration and date is calculated for eldb2023 using the available registration data in Compass. The EMIS API to DDS does not contain the full detailed registration process history which EMIS uses to refine its GP Practice Currently Registered list, particularly in relation to patients moving to or from a practice. The eldb2023 practice lists can therefore include patients that EMIS would define as having moved to another practice. Listsizes with EMIS may differ by ±2%.

Code Episode – EMIS uses the Episode field for an entered clinical code in its QOF syntax to identify patients and diagnosis dates for Depression and Epilepsy. This field indicates whether an entered code relates to a new or first episode of the condition, or an ongoing review. The EMIS API however does not pass this field to DDS. Without this field, the eldb2023 registers derived from Compass can only find the initial diagnosis date of the condition. Furthermore, it means patients with a resolved code followed by a code with a Review or End Episode flag are excluded from EMIS reports but included in Compass based reports.

Code Synonyms – An issue was identified in 2022 with Read synonym codes in Compass mapped to the parent code. This was investigated and the Compass data was re-bulked to correct the problem. A recent validation exercise however has found that issue, or an issue linked to it, may still persist. This is currently being investigated by Voror. The initial issue was that, in some cases, the code synonym had become understood as a separate concept to the parent, particularly in relation to QOF definitions. For instance, E205-2 (Tired all the time) is now a more generalised and less severe finding compared to the parent code E205 Dysthymia. E205, and it's mapped SNOMED code, is therefore in the QOF codeset for Depression, whilst E205-2 is not. By mapping such non-QOF synonyms to QOF codes, the Compass data potentially inflated the counts of Depression, Hypertension, Severe Mental Illness and possibly other registers in eldb2022. The eldb2023 counts are very close to the previous year.





Update Inconsistencies – The data within Compass is updated by DDS in line with changes received from EMIS and SystmOne. Patient records may be updated by practices in order to correct or refine the information. Whilst the initial ELDB is built within a few days and so contains consistent data, tables that are added later may use updated data from Compass and so contain anomalies and inconsistencies when compared to CORE or other registers. This is not a widespread issue and should only affect a handful of patients for any particular register. This includes:

- changes to code or code date inconsistencies may be found with patient inclusion between registers.
- age_at_event when required, build scripts refer to the patient age in CORE, which
 is calculated from the date of birth available in Compass. For age_at_event,
 however, a new calculation is taken from the Compass data which may lead to
 inconsistencies when compared to the age found in CORE.





eldb2023 Structure & Information

All ELDB databases are primarily based on a star schema consisting of a central CORE table, containing every registered patient (1 line per patient), linked by a patient identifier to multiple tables containing the details for patients found for specific Registers, Measures and Activities. Additional columns and Lookup tables are provided where useful to assist with classification and categorisation.

In eldb2023 the database schema, build history and design is set out in the following tables:

Tables

db table

List of all tables within the database

- table name name of table
- table id id of table within server
- create date creation date of table
- last modified last modification date of table
- column count count of columns within table
- row_count count of rows in table
- syntax build syntax for data within table.

Syntax is in the format:

code_clusters [/ resolved_code_clusters] | returned | rundate | parent cohort Example:

AFIB_COD / AFIBRES_COD | E | 2023-04-01 | CORE

- o code_clusters identifier(s) of codesets used to include patients.
- o resolved_code_clusters optional identifier(s) of codesets used to exclude patients as resolved or inappropriate for inclusion, where resolved code comes after the latest inclusion code. Demarcated from code clusters by a '/'.
- o returned 'E' or 'L' to indicate if the earliest or latest code for a patient was returned
- o rundate relative run date set in the query. This will always be the 1st April.
- o parentcohort parent cohort for the table. This is often CORE, but may indicate when an age or gender filter has been applied (eg 'cohort18' or 'core_f').

Columns

db column

List of all columns within the database

- id record id within db_column
- table_name name of containing table
- column id id and order of column within table
- column_name name of column
- datatype column data type
- max_length maximum length of data within column
- is_nullable column may contain NULLs. Yes (1) or No (0).
- is primary key column is included within the table's Primary Key
- is index column is included within a table index
- create date creation date of column
- modify_date last modification date of column





Code Clusters

db cluster

List of all codesets or clusters used within the database

- cluster id identifier of code cluster.
- cluster_description brief description of the code cluster

Clusters suffixed with "_COD" are derived from the Primary Care Domain datasets which can be found at

https://digital.nhs.uk/data-and-information/data-collections-and-data-sets/data-collections/quality-and-outcomes-framework-qof/quality-and-outcome-framework-qof-business-rules/primary-care-domain-reference-set-portal

Clusters suffixed with " CEG" have been defined by CEG.

Codes

db code

List of all codesets or clusters used within the database

- cluster id identifier of code cluster.
- cluster description brief description of the code cluster
- code SNOMED code within code cluster
- code description text description of the code

Database Build Log

db_log

List of all build actions for the database.

- action date date of action
- action type type of action (new, update, delete, publish)
- action info brief description of the action
- action object object (table, column etc) on which the action has occurred.

Table Counts

db counts

Patient counts by Practice for each Register and Activity table within the database.

- area id area id for GP Practice
- ods_code ODS (Organisation Data Service) identifier for the GP Practice.
- practice name GP Practice name.
- clinical_system clinical data system (EMIS, SystmOne) used within the GP Practice. This is based on information from CEG reporting.
- [column for each register/activity table] patient count for table by GP Practice.

Mapping To Previous ELDB Databases

db map

Partial map of reported metrics for eldb2021, eldb2022 and eldb2023. This is mainly designed for internal validation.

- metric id row identifier for metric
- metric metric name
- id metric id
- count id indicator of metric count as table or column within a table
- table_2021 table name for metric within eldb2021
- column_2021 column name for metric within eldb2021





- table_2022 table name for metric within eldb2022
- column_2022 column name for metric within eldb2022
- table_2023 table name for metric within eldb2023
- column_2023 column name for metric within eldb2023





Lookup Tables & Information

Age Bands

lu_ageband

Age banded by a selection age band standards.

- age patient age
- five_year five-year age bands (A:0-4 ~ W:110-114)
- five_year_term five-year age bands text term
- ten year ten-year age bands (A:0-9 ~ L:110-119)
- ten_year_term ten-year age bands text term
- ons_a ONS A age bands (A:0-24 ~ D:65-119)
- ons a term ONS A age bands text term
- ons b ONS B age bands (A:0-24 ~ E:75-119)
- ons_b_term ONS B age bands text term
- ons_c ONS C age bands (A:0-15 ~ I:85-119)
- ons_c_term ONS C age bands text term
- ons_d ONS D age bands (A:0-4 ~ R:85-119)
- ons_d_term ONS D age bands text term
- ons e ONS E age bands (A:0-84 ~ F:105-119)
- ons_e_term ONS E age bands text term
- ons f ONS F age bands (A:0-4 ~ S:90-119)
- ons f term ONS F age bands text term
- ons_g ONS G age bands (A:0-15 ~ C:65-119)
- ons_g_term ONS G age bands text term
- esp_1976 European Std Population 1976 (A:0-4 ~ R:85-111)
- esp 1976 term European Std Population 1976 text term
- esp_2013 European Std Population 2013 (A:0, B:1-4, C:5-9 ~ U:95-111)
- esp_2013_term European Std Population 2013 text term
- eth_band ethnicity report bands (A:0-4 ~ E:65-119)
- eth band term ethnicity report band text term
- profile a population profiling a bands (A:16-18 ~ J:85-119)
- profile_a_term population profiling a bands text term
- profile_b population profiling b bands (A:0-4 ~ K:85-119)
- profile_b_term population profiling b bands text term
- ceg_piqi practice improvement quality indicators age bands (A:0-17 ~ D:65-119)
- ceg_piqi_term practice improvement quality indicators age bands text term

lu_ageband_key

- age std age banding standard
- band banding letter used with the age band standard
- term age band text term

Indices of Multiple Deprivation (IMD)

lu_deprivation

Lower Super Output Area (LSOA) defined in 2011 within northeast London with related Indices of Multiple Deprivation (IMD) based on 2015 and 2019 data. Quintiles (1 as most deprived) calculated within Local Authority, Integrated Care Partnership, east London region and nationally.

• LSOA code 2011 - ONS code (e-code) for LSOA 2011





- LSOA_name_2011 LSOA 2011 name (Local Authority name & identifier)
- IMD 2015 IMD score from 2015 IoD data
- IMD 2019 IMD score from 2019 IoD data
- LA_code_2019 ONS code (e-code) for local authority
- LA_name_2019 Local Authority name
- LA_id Local Authority identifier (CL, HK, NH, TH, WF, BD, HV, RB).
 - CL = City of London
 - o HK = Hackney
 - NH = Newham
 - TH = Tower Hamlets
 - WF = Waltham Forest
 - o BD = Barking & Dagenham
 - HV = Havering
 - RB = Redbridge
- LA quintile 2015 IMD 2015 quintile within Local Authority
- LA_quintile_2019 IMD_2019 quintile within Local Authority
- ICP_id Integrated Care Partnership identifier (CH, BHR, TNW)
 - CH = City & Hackney
 - o BHR = Barking & Dagenham, Havering & Redbridge
 - o TNW = Tower Hamlets, Newham, & Waltham Forest
- ICP_quintile_2015 IMD_2015 quintile within Integrated Care Partnership
- ICP_quintile_2019 IMD_2019 quintile within Integrated Care Partnership
- EL_id east London region identifier (IEL, OEL)
 - o IEL = Inner East London (CH, NH, TH)
 - OEL = Outer East London (WF, BD, HV, RB)
- EL quintile 2019 IMD 2019 quintile within east London region
- NEL_quintile_2019 IMD_2019 quintile within northeast London
- National_quintile_2019 IMD_2019 quintile within England & Wales

Lower Super Output Area (LSOA)

lu Isoa

Lower Super Output Area (LSOA) defined in 2011 within England and Wales with associated local authorities.

- LSOA_code_2011 ONS code (e-code) for LSOA 2011
- LSOA name 2011 LSOA 2011 name (Local Authority name & identifier)
- LA_code_2019 ONS code (e-code) for local authority
- LA_name_2019 Local Authority name

Ethnicity

lu ethnicity

- id row identifier
- code code (SNOMED, Read2, CTV3, EMIS Local)
- dbid database identifier for code
- scheme identifier for code scheme (SNOMED, Read2, CTV3, EMIS Local)
 - 71 = SNOMED
 - o 1040444 = Read 2
 - o 1130062 = CTV3
 - 1335379 = EMIS Local
- scheme id –code scheme identifier text description eg. SN





- Term code text description
- ceg_16 ethnicity categorisation using CEG 16+1
- ceg_16_term CEG ethnicity categories text description
- nhs_5 ethnicity categorisation using NHS 5+1
- nhs_5_term NHS 5+1 ethnicity categories text description
- nhs_16 ethnicity categorisation using NHS 16+1
- nhs_16_term NHS 16+1ethnicity categories text description
- sn_concept SNOMED concept id
- sn_description SNOMED description id
- sn_term SNOMED code term (Includes census 2001 terminlology)

lu_ethnicity_key

- ethnic_std ethnicity standard
- Category category letter used with ethnicity standart
- Term category text term

GP Practice

lu practice

- area_id area identifier for GP Practice (CH, NH, TH, WF, BK, HV, RB). This
 equates to the former CCGs and current Place-Based Partnerships or Areas within
 the North East London ICB. https://northeastlondon.icb.nhs.uk/
 - CH = City & London
 - NH = Newham
 - TH = Tower Hamlets
 - WF = Waltham Forest
 - BK = Barking & Dagenham
 - HV = Havering
 - RB = Redbridge
- area area name
- ods_code ODS (Organisation Data Service) identifier for the GP Practice. https://odsportal.digital.nhs.uk/
- practice_name GP Practice name, as defined for CEG reporting. This may differ from the name on ODS records.
- listsize currently registered patient count for practice at the run date
- status activity status for the practice at the run date (active, inactive)
- start_date date the practice opened
- end date date the practice closed
- pcn_ods ODS identifier for the Primary Care Network (PCN) associated with the practice
- pcn name name of associated PCN
- clinical_system clinical data system used by the practice (EMIS, SystmOne)
- uprn Unique Property Reference Number (UPRN) identifier for the address of the practice. https://uprn.uk/

Smoking

lu_smoking

- id row identifier
- code code (SNOMED, Read2, CTV3, EMIS Local)
- scheme identifier for code scheme (SNOMED, Read2, CTV3, EMIS Local)





- 71 = SNOMED
- o 1040444 = Read 2
- o 1130062 = CTV3
- 1335379 = EMIS Local
- name code text description
- ndasmok_cod code inclusion in National Diabetes Audit (NDA) code cluster (NDASMOK_COD)
- smok_cod code inclusion in Quality Outcomes Framework (QOF) code cluster (SMOK_COD, NULL)
- smok_status_qof Quality Outcomes Framework (QOF) code cluster associated with code (LSMOK_COD, EXSMOK_COD, NSMOK_COD, NULL)
 - LSMOK COD = Smoker
 - EXSMOK_COD = Exsmoker
 - NSMOK = Never Smoked
- smok_status smoking status based on code term and/or QOF code cluster (CSMOK, NONSMOK, EXSMOK, NSMOK, UNKNOWN)
 - CSMOK = Current Smoker
 - NONSMOK = Current Non-Smoker
 - O EXSMOK = Exsmoker
 - NSMOK = Never Smoked
 - UNKNOWN = smoking status cannot be defined
- dbid database identifier for code
- sn dbid database identifier for SNOMED code associated with code

lu_smoking_key

- Id numeric identifier to smoking status
- smok_status smoking status
- name name term for smoking status





CORE

CORE

Regular registration with a start date prior to the run date and an end date NULL or after the run date, at a currently active GP Practice, excluding patients with Date of Death >= run date or with a record indicating patient has died, or identifiable 1 by patient's name as a Dummy/Test patient, or aged >= 120 years.

The details for all patients registered with a NEL GP Practice on the run date.

- relrun_date relative run date for the database build
- person_id identifier of person across multiple NHS organisations. Analogous to NHS Number.
- patient_id identifier of patient at a practice. Analogous to EMIS number.
- age age in years of patient on the run date
- sex sex (Female, Male, Other, Unknown) for patient
- ethnicity_code latest ethnicity SNOMED concept id.
- ceg 16 CEG 16+1 ethnic categorisation, based on ethnicity code
- nhs 5 NHS 5+1 ethnic categorisation, based on ethnicity code
- area_id area id for GP Practice (CH, NH, TH, WF, BK, HV, RB).
- ods_code ODS (Organisation Data Service) identifier for the GP Practice.
- practice_name GP Practice name, as defined for CEG reporting. This may differ from the name on ODS records.
- reg_date calculated registration date for patient at practice
- Isoa_2011 LSOA (Lower Super Output Area) for 2011 relating to the patient's identified current address.
- pt_area_id area_id based on patient's identified current address. NULL means the patient lives outside the North East London ICB area.

Because of the difficulties identifying some registrations, there are some persons (person_id) that appear as multiple patients (patient_id) at different practices. This may be due to patients moving practice; errors in the registration data held by a practice; or a patient deliberately registering and receiving healthcare with multiple practices. It is not possible to better define or clean the data. For most analyses, we recommend using patient_id.

CORE Views

Views are virtual tables within a SQL database that provide a specified subset of the actual data. These Views appear as standard tables within MS Access and can be linked for use in queries in the same way. The eldb2023 database has a series of Views that filter the CORE table to each specific area.

CORE Area – Registration

View based on area id, which is defined by the location of the registered GP Practice.

CORE_BK CORE_CH CORE_HV

_

¹ Names including the words "patient", "testing", "EMIS" etc, as well as names unlikely to be found in real life eg "Micky Mouse" or "Crisp Doritos".





CORE_NH CORE_RB CORE_TH

CORE_WF

CORE Area – Residency

View based on pt_area_id, which is defined by patient's identified current address. These are the patients actually resident within the borough.

CORE_BK_pt CORE_CH_pt CORE_HV_pt CORE_NH_pt

CORE_RB_pt

CORE_TH_pt

CORE_WF_pt





Registers

The register tables contain all patients with a specified diagnosis or long term condition. The business rules syntax used to create the table is provided with cluster_id(s) and date ranges.

Each table has the following fields:

- label descriptive label of the table contents. Be 'diabetes'
- area id area id for GP Practice
- ods_code ODS (Organisation Data Service) identifier for the GP Practice.
- person_id identifier of person
- patient_id identifier of patient at a practice

Additional fields specific to the table are described below.

Anxiety

anxiety

Anxiety code (ANX_CEG) recorded >= last 24 months.

- latest _date latest date of code for register
- latest_code SNOMED concept id for latest code
- latest_name code term for latest code

Anxiety covers a range of Common Mental Health disorders, including

- Generalised Anxiety and Panic Attacks
- o Anxiety associated with specific behaviours or situations
- o Phobias
- Obsessive-Compulsive behaviour (OCD)
- o Post-Trauma Stress (PSTD)
- Occupation-related Stress

Asthma

asthma

Asthma code (AST_COD) excluding patients with a more recent resolved code (ASTRES_COD), and include Asthma Treatment meds code (ASTTRT_COD) recorded >= last 12 months. (QOF)

- earliest_date earliest, ie diagnosis, date of code for register
- earliest_code SNOMED concept id for earliest code
- earliest_name code term for earliest code

Atrial Fibrillation (AF)

atrial fibrillation

Atrial Fibrillation code (AFIB_COD) excluding patients with a more recent resolved code (AFIBRES_COD)

- earliest_date earliest, ie diagnosis, date of code for register
- earliest_code SNOMED concept id for earliest code
- earliest_name code term for earliest code

Autism

autism

Autism code (AUTISM_COD)





- earliest_date earliest, ie diagnosis, date of code for register
- earliest_code SNOMED concept id for earliest code
- earliest name code term for earliest code

Cancer

cancer

Cancer code (CAN COD) recorded >= 2003-04-01

- earliest_date earliest, ie diagnosis, date of code for register
- earliest code SNOMED concept id for earliest code
- earliest_name code term for earliest code

Lung Cancer

cancer_lung

Lung Cancer code (LUNGCAN_COD)

- earliest_date earliest, ie diagnosis, date of code for register
- earliest code SNOMED concept id for earliest code
- earliest name code term for earliest code

Chronic Heart Disease (CHD)

chd

CHD code (CHD_COD)

- earliest_date earliest, ie diagnosis, date of code for register
- earliest code SNOMED concept id for earliest code
- earliest name code term for earliest code

Chronic Kidney Disease (CKD)

ckd

Aged >= 18 years, and CKD code (CKD_COD) excluding patients with a more recent resolved code (CKDRES COD) or a more recent CKD 1 or 2 code (CKD1AND2 COD)

- earliest_date earliest, ie diagnosis, date of code for register
- earliest code SNOMED concept id for earliest code
- earliest name code term for earliest code

Chronic Obstructive Pulmonary Disease (COPD)

copd

COPD code (COPD_COD) excluding patients with a more recent resolved code (COPDRES_COD), and where patients have a previous resolved code (COPDRES_COD), COPD code (COPD COD) after the latest resolved code (COPDRES_COD)

- earliest_date earliest, ie diagnosis, date of code for register
- earliest_code SNOMED concept id for earliest code
- earliest name code term for earliest code

Dementia

dementia

Dementia code (DEM_COD)





- earliest_date earliest, ie diagnosis, date of code for register
- earliest_code SNOMED concept id for earliest code
- earliest_name code term for earliest code

Depression

depression

Aged >= 18 years, and Depression code (DEPR_COD) recorded >= 2006-04-01 excluding patients with a more recent resolved code (DEPRES_COD)

- earliest_date earliest, ie diagnosis, date of code for register
- earliest code SNOMED concept id for earliest code
- earliest_name code term for earliest code
- latest date latest, ie diagnosis, date of code for register
- latest_code SNOMED concept id for latest code
- latest_name code term for latest code

Diabetes Mellitus (DM)

diabetes

Aged >= 18 years, and Diabetes code (DM_COD) excluding patients with a more recent resolved code (DMRES_COD). Selecting most recent Diabetes Type code (DMTYPE1_COD, DMTYPE2_COD) to define diabetes type.

- earliest_date earliest, ie diagnosis, date of code for register
- earliest_code SNOMED concept id for earliest code
- earliest name code term for earliest code
- dm type diabetes type (TYPE 1 or TYPE 2) for each patient.

Eating Disorder

eating_disorder

Eating disorder code (EATINGDIS_CEG) recorded >= last 24 months

- latest _date latest date of code for register
- latest code SNOMED concept id for latest code
- latest name code term for latest code

Epilepsy

epilepsy

Epilepsy code (EPIL_COD) excluding patients with a more recent resolved code (EPILRES_COD), and include Epilepsy Drug meds code (EPILDRUG_COD) recorded >= last 6 months

- earliest_date earliest, ie diagnosis, date of code for register
- earliest_code SNOMED concept id for earliest code
- earliest_name code term for earliest code

Familial Hypercholesteremia (FH)

f hypercholesterolemia

Familial Hypercholestelemia code (FHYP_COD)





- earliest_date earliest, ie diagnosis, date of code for register
- earliest_code SNOMED concept id for earliest code
- earliest name code term for earliest code

Gestational Diabetes

gestational_diabetes

Gestational diabetes code (GESTDIAB_COD)

- earliest_date earliest, ie diagnosis, date of code for register
- earliest_code SNOMED concept id for earliest code
- earliest name code term for earliest code

Heart Failure (HF)

heart failure

Heart failure code (HF_COD) excluding patients with a more recent resolved code (HFRES_COD)

- earliest_date earliest, ie diagnosis, date of code for register
- earliest_code SNOMED concept id for earliest code
- earliest_name code term for earliest code

Hepatitis B

hepatitis_b

Hepatitis B code (HBV_CEG)

- earliest_date earliest, ie diagnosis, date of code for register
- earliest_code SNOMED concept id for earliest code
- earliest_name code term for earliest code
- latest date latest, ie diagnosis, date of code for register
- latest code SNOMED concept id for latest code
- latest name code term for latest code

Hepatitis C

hepatitis c

Hepatitis C code (HCV_CEG)

- earliest_date earliest, ie diagnosis, date of code for register
- earliest_code SNOMED concept id for earliest code
- earliest_name code term for earliest code
- latest date latest, ie diagnosis, date of code for register
- latest_code SNOMED concept id for latest code
- latest_name code term for latest code

Human Immunodeficiency Virus (HIV)

hiv

HIV code (HIV_CEG)

• latest_date – latest date of code for register





- latest_code SNOMED concept id for latest code
- latest name code term for latest code

•

Hypertension (HT)

hypertension

Hypertension (HYP_COD) excluding patients with a more recent resolved code (HYPRES_COD)

- earliest_date earliest, ie diagnosis, date of code for register
- earliest_code SNOMED concept id for earliest code
- earliest_name code term for earliest code

Learning Disabilities (LD)

learning_disabilities

Learning Disabilities code (LD_COD)

- earliest_date earliest, ie diagnosis, date of code for register
- earliest_code SNOMED concept id for earliest code
- earliest name code term for earliest code

Motor Neurone Disease (MND)

motor_neurone_disease

Motor Neurone Disease code (MND_COD)

- earliest_date earliest, ie diagnosis, date of code for register
- earliest_code SNOMED concept id for earliest code
- earliest_name code term for earliest code

Multiple Sclerosis (MS)

multiple_sclerosis

Multiple Sclerosis code (MS_COD)

- earliest_date earliest, ie diagnosis, date of code for register
- earliest_code SNOMED concept id for earliest code
- earliest_name code term for earliest code

Non-Diabetic Hyperglycaemia (NDH)

non_dm_hyperglycaemia

Aged >= 18 years, and Non-Diabetic Hyperglycaemia code (NDH_COD) or IGT code (IGT_COD) or Pre-Diabetes code (PRD_COD) excluding patients with a Diabetes code (DM_COD)

- earliest_date earliest, ie diagnosis, date of code for register
- earliest code SNOMED concept id for earliest code
- earliest name code term for earliest code





Obesity

obesity

Aged >= 18 years, and BMI Value code (BMIVAL_COD) >=30 recorded >= last 12 months, or Non-Value BMI Indicating >= 30 code (BMI30_COD) recorded >= last 12 months

- latest12m_date latest date of code for register in the last 12 months
- latest12m code SNOMED concept id for latest code in the last 12 months
- latest12m name code term for latest code in the last 12 months
- bmi30plus_latest12m_date latest date of code for register in the last 12 months with BMI >=30
- bmi30plus_latest12m_code SNOMED concept id for latest code in the last 12 months with BMI >=30
- bmi30plus_latest12m_name code term for latest code in the last 12 months BMI
 >=30

Osteoporosis

osteoporosis

Osteoporosis code (OSTEO_COD)

- earliest_date earliest, ie diagnosis, date of code for register
- earliest_code SNOMED concept id for earliest code
- earliest_name code term for earliest code

Palliative Care

palliative care

Palliative Care code (PALCARE_COD) excluding patients with a more recent not indicated code (PALCARENI_COD)

- earliest date earliest, ie diagnosis, date of code for register
- earliest_code SNOMED concept id for earliest code
- earliest_name code term for earliest code

Parkinson's Disease

parkinsons_disease

Parkinson's Disease code (PD_COD)

- earliest_date earliest, ie diagnosis, date of code for register
- earliest_code SNOMED concept id for earliest code
- earliest_name code term for earliest code

Peripheral Arterial Disease (PAD)

pad

PAD code (PAD_COD)

- earliest_date earliest, ie diagnosis, date of code for register
- earliest code SNOMED concept id for earliest code
- earliest name code term for earliest code





Personality Disorder

personality_disorder

Personality Disorder code (PERSONALITYDIS_CEG)

- latest_date latest date of code for register
- latest code SNOMED concept id for latest code
- latest name code term for latest code

Psoriasis

psoriasis

Psoriasis code (PSORIASIS_COD)

- earliest date earliest, ie diagnosis, date of code for register
- earliest_code SNOMED concept id for earliest code
- earliest name code term for earliest code

Rheumatoid Arthritis

rh arthritis

Aged >= 16 years, and Rheumatoid Arthritis code (RARTH_COD)

- earliest_date earliest, ie diagnosis, date of code for register
- earliest_code SNOMED concept id for earliest code
- earliest name code term for earliest code

Severe Mental Illness (SMI)

severe_mental_illness

Mental Health code (MH_COD) excluding patients with a more recent remission code (MHREM_COD), and include Lithium meds code (LIT_COD) recorded >= last 6 months excluding patients with a more recent Lithium Stopped code (LITSTP_COD)

- earliest_date earliest, ie diagnosis, date of code for register
- earliest_code SNOMED concept id for earliest code
- earliest_name code term for earliest code
- lithium_latest_date latest, ie prescription, date of code for medication recorded >= last 6 months
- lithium_latest_code SNOMED concept id for latest code medication recorded >= last 6 months
- lithium_latest_name code term for latest code medication recorded >= last 6 months

Mental Health excluding remission + Lithium (6m) excluding Lithium Stopped MH includes both schizophrenia and bipolar disorder and anyone on lithium who is not also coded having these conditions.

Sexually Transmitted Infection (STI)

sti

Sexually Transmitted Infection code (STI_COD)

- latest_date latest date of code for register
- latest_code SNOMED concept id for latest code





• latest_name - code term for latest code

Sickle Cell Disease (SCD)

sickle_cell

Sickle Cell code (SICKLE_COD)

- earliest_date earliest, ie diagnosis, date of code for register
- earliest_code SNOMED concept id for earliest code
- earliest name code term for earliest code

Stroke or Transient Ischaemia Attack (TIA)

stroke_tia

Stroke code (STRK_COD) or TIA code (TIA_COD)

- earliest_date earliest, ie diagnosis, date of code for register
- earliest_code SNOMED concept id for earliest code
- earliest_name code term for earliest code





Measures

Blood related

measures_blood

HbA1c code (IFCCHBAM_COD), Cholesterol code (CHOL2_COD), Fasting Blood Glucose code (FASPLASGLUC_COD), eGFR code (EGFR_COD), Creatine code (CRE_COD), Liver Function Test code (LFT_COD)

- hba1c latest date latest HbA1c IFCC date of code for measure
- hba1c_latest_code SNOMED concept id for latest HbA1c IFCC code
- hba1c_latest_name code term for latest HbA1c IFCC code
- hba1c_latest_value latest HbA1c IFCC value recorded
- chol_latest_date latest Cholesterol date of code for measure
- chol latest code SNOMED concept id for latest Cholesterol code
- chol latest name code term for latest Cholesterol code
- chol latest value latest Cholesterol value recorded
- fbg_latest_date latest fasting blood glucose date of code for measure
- fbg_latest_code SNOMED concept id for latest fasting blood glucose code
- fbg_latest_name code term for latest fasting blood glucose code
- fbg_latest_value latest fasting blood glucose value recorded
- egfr_latest_date latest egfr date of code for measure
- egfr_latest_code SNOMED concept id for latest egfr code
- egfr latest name code term for latest egfr code
- egfr_latest_value latest egfr value recorded
- creat latest date latest creatinine date of code for measure
- creat_latest_code SNOMED concept id for latest creatinine code
- creat_latest_name code term for latest creatinine code
- creat latest value latest creatinine value recorded
- Ift latest date latest liver function test date of code for measure
- Ift latest code SNOMED concept id for latest liver function test code
- Ift latest name code term for latest liver function test code
- Ift latest value latest liver function test value recorded

Body related

measures body

BMI Value code (BMIVAL COD)

- bmi latest date latest BMI date of code for measure
- bmi latest code SNOMED concept id for latest BMI code
- bmi_latest_name code term for latest BMI code
- bmi latest value latest BMI value recorded

Heart related

measures heart

Blood Pressure code (BPVAL COD), Pulse Rate code (PLSRATE COD)

- bp latest date latest Systolic Blood Pressure date of code for measure
- bpsys latest code SNOMED concept id for latest Systolic Blood Pressure code
- bpsys_latest_name code term for latest Systolic Blood Pressure measure
- bpsys_latest_value latest Systolic Blood Pressure value recorded





- bpdia latest date latest Diastolic Blood Pressure date of code for measure
- bpdia_latest_code SNOMED concept id for latest Diastolic Blood Pressure code
- bpdia latest name code term for Diastolic Blood Pressure measure
- bpdia latest value latest Diastolic Blood Pressure value recorded
- pulserate_latest_date latest pulse rate date of code for measure
- pulserate_latest_code SNOMED concept id for latest pulse rate code
- pulserate_latest_name code term for latest pulse rate measure
- pulserate_latest_value latest pulse rate value recorded

Lung related

measures_lung

FEV1/FVC code (FEV1FVC COD), MRC Breathlessness Score code (MRC COD)

- fev1fvc latest date latest FEV1/FVC date of code for measure
- fev1fvc_latest_code SNOMED concept id for latest FEV1/FVC code
- fev1fvc_latest_name code term for latest FEV1/FVC measure
- fev1fvc_latest_value latest FEV1/FVC value recorded
- mrc_latest_date latest MRC date of code for measure
- mrc_latest_code SNOMED concept id for latest MRC code
- mrc_latest_name code term for latest MRC measure
- mrc_latest_value latest MRC value recorded

Risk related

measures risk

CHADSVASC code (CHADVASC_COD), QRISK code (QRISK2AND3SCORE_COD), Clinical Frailty Score code (CLINFRAILSCR_COD), Electronic Frailty Index code (FRAILEFI_CEG), Frailty Status code (MILDFRAIL_COD, MODFRAIL_COD, SEVFRAIL_COD), QDiabetes code (QDIABETES_CEG)

- chadsvasc_latest_date latest CHADS VASC date of code for measure
- chadsvasc_latest_code SNOMED concept id for latest CHADS VASC code
- chadsvasc latest name code term for latest CHADS VASC measure
- chadsvasc_latest_value latest CHADS VASC value recorded
- grisk latest date last Qrisk date of code for measure
- grisk_latest_code SNOMED concept id for latest Qrisk code
- qrisk_latest_name code term for latest Qrisk measure
- grisk latest value latest Qrisk value recorded
- frailty cfs latest date latest Clinical Frailty Score date of code for measure
- frailty_cfs_latest_code SNOMED concept id for latest Clinical Frailty Score code
- frailty_cfs_latest_name code term for latest Clinical Frailty Score measure
- frailty_cfs_latest_value latest Clinical Frailty Score value recorded
- frailty efi latest date latest Electronic Frailty Index date of code for measure
- frailty_efi_latest_code SNOMED concept id for latest Electronic Frailty Index code
- frailty efi latest name code term for latest Electronic Frailty Index measure
- frailty_efi_latest_value latest Electronic Frailty Index value recorded
- frailty_status_latest_date latest Frailty Status date of code for measure
- frailty_status_latest_code SNOMED concept id for latest Frailty Status code
- frailty status latest name code term for latest Frailty Status measure





- frailty_status descriptor of frailty associated with frailty_status_latest_name using Rockwood Frailty Scale terms
- qdiabetes_latest_date latest QDiabetes value date of code for meaure
- qdiabetes_latest_code SNOMED concept id for latest QDiabetes code
- qdiabetes_latest_name code term for latest QDiabetes measure
- qdiabetes_latest_value latest QDiabetes value recorded

The frailty_status column is a simpler frailty classifier column to use. It takes recorded code terms as registered and converts them into their equivalent term according to the Rockwood Frailty Scale. Those are: very fit, well, managing well, vulnerable, mildly frail, Moderately Frail, Severely Frail, Very Severely Frail, Terminally III.





Prescriptions

Antidepressants

prescribed_antidepressants

Anti-depressant medication (BNF 0403) excluding Amitriptyline hydrochloride (BNF 0403010B0) recorded >=last 6 months, selecting latest Repeat prescription or, where no Repeat prescription is found, latest Acute prescription. With earliest date of prescription course, prescription type and count of prescriptions within the course.

- latest6m date latest, ie prescription, date of code recorded >= last 6 months
- latest6m_code SNOMED concept id for latest prescription >= last 6 months
- latest6m_name code term for latest prescription >= last 6 months
- prescription_type type of prescription eg. repeat/acute
- prescription_count number of prescriptions within the prescription course
- prescription_earliest_date earliest, date of prescription course
- bnf_code British National Formulary code

Statins

prescribed_statins

Statins meds code (STAT_COD) recorded >=last 6 months, and earliest recorded

- latest6m_date latest, ie prescription, date of code for statin recorded >= last 6 months
- latest6m_code SNOMED concept id for latest statin prescription >= last 6 months
- latest6m_name code term for latest statin prescription >= last 6 months
- earliest_date earliest, ie prescription, date of code for statin recorded
- earliest_code SNOMED concept id for earliest statin prescription
- earliest name code term for earliest statin prescription





Vaccinations

Covid Immunisation

vaccination_covid

Covid Vaccination code (C19VACC_CEG) or Covid Vaccination meds code (C19VACCMEDS_CEG)

- latest_date latest, ie immunisation, date of code for register
- latest_code SNOMED concept id for latest code
- latest_name code term for earliest code
- code_type indicates if code is an admin (a) or medication (m) code
- vacc_num estimated number of covid vaccinations received





NHS Health Checks

NHS Health Checks done (NHS HC)

nhs_healthcheck

NHS Health Check code (NHSHC_CEG) recorded >= last 5 years. Selecting earliest date from LTC table (hypertension, diabetes, atrial_fibrillation, ckd, stroke_tia, heart_failure, pad, f_hypercholesterolemia, prescribed_statins) as inelig date and table.

- earliest5y date earliest, ie health check, date of code for register in the last 5 years
- earliest5y_code SNOMED concept id for earliest code
- earliest5y_name code term for earliest code
- latest_date latest, ie health check, date of code for register in the last 5 years
- latest_code SNOMED concept id for latest code
- latest name code term for latest code
- inelig_earliest_date earliest date a patient became ineligible for a NHS health check
- inelig_table name/reason of ineligibility
- valid nhshc Y/N column of nhshs validity.

NHS Health Checks declined

nhs healthcheck declined

NHS Health Check Invite code (NHSHCINV_CEG) recorded >= last 5 years. Selecting earliest date from LTC table (hypertension, diabetes, atrial_fibrillation, ckd, stroke_tia, heart_failure, pad, f_hypercholesterolemia, prescribed_statins) as inelig date and table

- latest_date latest date of code for register
- latest_code SNOMED concept id for latest code
- latest name code term for latest code

NHS Health Checks invited

nhs_healthcheck_invite

NHS Health Check Declined code (NHSHCDEC_CEG) recorded >= last 5 years

- latest_date latest date of code for register
- latest code SNOMED concept id for latest code
- latest name code term for latest code
- inelig_earliest_date earliest date a patient became ineligible for an NHS health check
- inelig_table name/reason of ineligibility
- valid_nhshc Y/N column of nhshs validity.

NHS Health Checks eligibility

nhs healthcheck elig2022

All 2022 CORE registers aged >= 40, excluding patients with hypertension, diabetes, ckd, heart failure, pad, familial hypercholestrolemia, stroke tia, chd, arterial fibrillation and statin prescription.





Screening & Checks

Bowel Cancer Screening done

screen_bowel_cancer

Bowel Cancer Screening code (COLCANSCR_COD)

- latest_date latest date of code for register
- latest_code SNOMED concept id for latest code
- latest_name code term for latest code
- age at event age of patient when screening took place

Bowel Cancer Screening declined

screen bowel cancer declined

Bowel Cancer Screening Declined code (COLCANSCRDEC_COD)

- latest_date latest date of code for register
- latest_code SNOMED concept id for latest code
- latest_name code term for latest code

Breast Cancer Screening done

screen_breast_cancer

Female, and Breast Cancer Screening code (BRCANSCR_COD)

- latest_date latest date of code for register
- latest_code SNOMED concept id for latest code
- latest name code term for latest code
- age_at_event age of patient when screening took place

Breast Cancer Screening declined

screen_breast_cancer_declined

Female, and Breast Cancer Screening Declined code (BRCANSCRDEC_COD)

- latest_date latest date of code for register
- latest_code SNOMED concept id for latest code
- latest_name code term for latest code

Cervical Cancer Screening done

screen cervical cancer

Female, and Cervical Cancer Screening code (SMEAR_COD). With exclusion as No Cervix code (NOCX_COD)

- latest_date latest date of code for register
- latest_code SNOMED concept id for latest code
- latest name code term for latest code
- age_at_event age of patient when screening took place
- exclusion_earliest_date latest date of code for exclusion
- exclusion_earliest_code SNOMED concept id for latest exclusion code
- exclusion_earliest_name code term for latest code





Cervical Cancer Screening declined

screen cervical cancer declined

Female, and Cervical Cancer Screening Declined code (CSDEC_COD)

- latest date latest date of code for register
- latest code SNOMED concept id for latest code
- latest name code term for latest code

Diabetic Retinal Screening done

screen diabetic retinal

Diabetic Retinal Screening code (RET COD)

- latest_date latest date of code for register
- latest_code SNOMED concept id for code
- latest name code term for latest code

Diabetic Retinal Screening excepted

screen_diabetic_retinal_excepted

Diabetic Retinal Screening Excepted code (RETEXEC_COD)

- latest_date latest date of code for register
- latest_code SNOMED concept id for latest code
- latest_name code term for latest code

Pulse Check done

screen_pulse_check

Pulse Check code (PULRHYTH_COD)

- latest_date latest date of code for register
- latest_code SNOMED concept id for latest code
- latest_name code term for latest code
- pulse_type standardised descriptor of pulse type associated with latest_name (regular, irregular, irregular, unknown)

The pulse_type column can be used when categorising pulse types or looking at a specific category. Standardised pulse type descriptors in pulse_type are: regular, irregular and irregularly irregular. Code names such as "pulse rhythm" or "pulse rhythm finding" are defined as unknown.

Pulse Checks are done opportunistically, which means there is no declined coding as with other screening services.





Smoking, Alcohol & Drug Use

Smoking

smoking

Smoking codes (SMOK_COD and NDASMOK_COD)

- smoking_status provides smoking status according to latest code (from either SMOK_COD or NDASMOK_COD)
- qof_latest_date latest QOF code date
- qof latest code latest QOF code
- qof_latest_name latest QOF code name
- qof_smoking_status latest smoking status according to latest QOF code (SMOK_CODE). This column can be used when looking at smoking status by QOF definition only.

The QOF only columns have codes from SMOK_COD only. Hence, there will be NULLs in those columns. If you are interested in all current smoking codes, we suggest the use of *smoking_status* column. You should use *qof_smoking_status* when interested in QOF definitions only.

Alcohol

alcohol

Alcohol Consumption code (ALC_COD), Alcohol Audit code (AUDIT_COD), Alcohol Audit-C code (AUDITC_COD), Alcohol FAST code (FAST_COD), Alcohol Advice code (ALCADV_COD), Alcohol Brief Intervention code (ALCBRINT_COD), Alcohol Extend Intervention code (ALCEXINT_COD), Alcohol Referral code (ALCREF_COD), Alcohol Intervention Declined code (ALCINTDEC_COD)

- latest date latest, Alcohol consumption, date of code for register
- latest code SNOMED concept id for latest code
- latest name code term for latest Alcohol consumption code
- latest value latest Alcohol consumption value recorded
- latest_units unit of measure and period associated with latest_value
- latest_units_pw alcohol consumption standardised to per week. See APPX1 ALCOHOL PW
- audit latest date latest, alcohol audit, date of code for register
- audit_latest_code SNOMED concept id for latest code
- audit latest name code term for latest alcohol audit code
- audit_latest_value latest alcohol audit value recorded
- auditc_latest_date latest, alcohol audit-c, date of code for register
- auditc latest code SNOMED concept id for latest code
- auditc latest name code term for latest alcohol audit-c code
- auditc_latest_value latest alcohol audit-c value recorded
- fast_latest_date latest, alcohol FAST, date of code for register
- fast latest code SNOMED concept id for latest code
- fast latest name code term for latest alcohol FAST code
- fast_latest_value latest alcohol FAST value recorded
- advice_latest_date latest, Alcohol Advice, date of code for register
- advice_latest_code SNOMED concept id for latest code





- advice latest name code term for latest Alcohol Advice code
- briefint_latest_date latest, Alcohol Brief Intervention, date of code for register
- briefint_latest_code SNOMED concept id for latest code
- briefint latest name code term for latest Alcohol Brief Intervention code
- extendedint_latest_date latest, Alcohol Extend Intervention, date of code for register
- extendedint_latest_code SNOMED concept id for latest code
- extendedint_latest_name code term for latest Alcohol Extend Intervention code
- referral_latest_date latest, Alcohol Referral code, date of code for register
- referral latest code SNOMED concept id for latest code
- referral_latest_name code term for latest Alcohol Referral code
- declinedint_latest_date atest, Alcohol Intervention Declined, date of code for register
- declinedint_latest_code SNOMED concept id for latest code
- declinedint latest name code term for latest Alcohol Intervention Declined code

Substance Misuse

substance misuse

Illicit Substance Abuse code (ILLSUB_COD) excluding patients with a latest Non-Substance Misuser code (NONILLSUM_CEG), Illegal Substance Use Intervention code (ILLSUBINT_COD)

- latest date latest date of code for register
- latest_code SNOMED concept id for latest code
- latest_name code term for latest code
- int_latest_date latest date of code for intervention
- int_latest_code SNOMED concept id for latest intervention
- int latest name code term for latest intervention code

The PCD provided codeset for Illicit Substance Abuse (ILLSUB_COD) includes codes for non-substance misuse. Patients with these codes as their latest returned code are removed.





Sexual Health

LARC (Long-Acting Reversible Contraception)

larc

IUCD Fitting code (IUCDFIT_CEG) or IUCD Removed code (IUCDREM_CEG) or Implant Fitting code (IMPFIT_CEG) or Implant Removed code (IMPREM_CEG)

- iucdfit_latest_date latest date of code for IUCD fit code
- iucdfit_latest_code SNOMED concept id for latest IUCD fit
- iucdfit latest name code term for latest IUCD fit code
- iucdremoved_latest_date latest date of code for IUCD removed code
- iucdremoved_latest_code SNOMED concept id for latest IUCD removed register
- iucdremoved latest name code term for latest IUCD removed code
- implantfit_latest_date latest date of code for Implant fit code
- implantfit latest code SNOMED concept id for latest Implant fit register
- implantfit_latest_name code term for latest Implant fit code
- implantremoved_latest_date latest date of code for Implant Removed code
- implantremoved_latest_code SNOMED concept id for latest Implant Removed
- implantremoved_latest_name code term for latest Implant Removed code





Lifestyle Status

Homeless

status_homeless

Homelessness code (HOMELESS_COD)

- latest_date latest date of code for register
- latest_code SNOMED concept id for latest code
- latest_name code term for latest code

Housebound

status housebound

Housebound code (HOUSEBOUND_COD)

- latest_date latest date of code for register
- latest_code SNOMED concept id for latest code
- latest_name code term for latest code

Carer

status carer

Carer code (ISACARER_COD) excluding patients with a more recent Not A Carer code (NOTACARER_COD)

- latest_date latest date of code for register
- latest_code SNOMED concept id for latest code
- latest_name code term for latest code

Interpreter needed

status_interpreter

Requires interpreter codes (REQINTERPRETER_CEG, NOINTERPNEEDED_CEG), requires spoken language interpreter codes (SPOKENLANGINTERP_CEG), preferred language codes (SPOKENLANGINTERP_CEG), requires communication support codes including deafblind, sign language, lip-speaker, speech to text reporting and advocate codes (COMSSUPPORT_CEG)

- interpreter_latest_date latest date of code for interpreter needed register
- interpreter latest code SNOMED concept id for latest interpreter needed code
- interpreter_latest_name code term for latest interpreter needed code
- interpreter_lang_latest_date latest date of code for language interpreter register
- interpreter_lang_latest_code SNOMED concept id for latest language interpreter code
- interpreter_lang_latest_name code term for latest language Interpreter code
- preflang latest date latest date of code for preferred language register
- preflang_latest_code SNOMED concept id for latest preferred language code
- preflang_latest_name code term for latest preferred language code
- coms_support_latest_date code term for latest communication support code
- coms_support_latest_code SNOMED concept id for latest communication support code
- coms support latest name code term for latest communication support code





Data Analysis and Information

Mental Health

Mental Health conditions can be difficult to identify within health data. The conditions can be transitory or episodic, meaning coding does not necessarily reflect the patient's current health. The experience and treatment of a mental health issue is also individual to a patient, meaning the presence of a code, particularly for Common Mental Health Disorders, does not provide a clear indication of the severity of the condition, the impact it has on the patient's life and wellbeing, or the way the condition is being managed. Patients may also exhibit multiple mental health problems, which a clinician may choose to code and treat in different ways depending on perceived priorities or causations. Finally, clinicians and patients may prefer to use or accept particular diagnoses, which can affect the coding used in the patient's record.

The eldb2023 database provides mental health data across a series of registers.

Anxiety

The *anxiety* table includes codes associated with the Common Mental Health Disorders, with the exclusion of Depression, as defined by NICE:

generalised anxiety disorder panic disorder obsessive-compulsive disorder (OCD) post-traumatic stress disorder (PTSD) social anxiety disorder depression

Inclusion is for codes recorded in the last 24 months, as a reasonable timeframe for ensuring patients are currently being managed, to some level, for their condition.

Depression

The *depression* table contains all patients who have been coded for depression since 01/04/2006 (QOF definition). The latest code is provided, as well as the earliest, so it is possible to filter for patients who have been recently coded with depression eg in the last 12 or 24 months.

Depression codes, however, are not consistently or regularly re-entered and there are many patients who appear to be receiving ongoing treatment for depression, but who have no recent depression coding. Conversely, the 'depression resolved' code is not consistently applied, so the register will also include patients who are no longer be treated as depressed.

Antidepressants

The **prescribed_antidepressant** table contains all patients who have been prescribed antidepressant medication (BNF 04:03 excluding amitriptyline) in the past six months. Amitriptyline is excluded as it is not recommended for treating depression and is more commonly prescribed for pain relief. Other drugs within this chapter may also be prescribed for conditions other than depression, sometimes with differing dosages:





BNF	VTM	Medication	Depression dosage	Other Conditions + dosage
403010	F0	Clomipramine hydrochloride	Depression >=10mg	Phobic + OCD >=10mg
403010	L0	Doxepin	Depression >=75mg	Pruritus in eczema 3-12mg (cream)
403010	N0	Imipramine hydrochloride	Depression >=75mg	Childhood Bedwetting 25-75mg
403010	X0	Trazodone hydrochloride	Depression >=100mg	Anxiety 75-300mg
403020	K0	Moclobemide	Depression >=150mg	Anxiety 300-600mg
403030	D0	Citalopram hydrobromide	Depression 10-40mg	Panic 10-40mg
403030	Z0	Citalopram hydrochloride	Depression 40mg/1ml	Panic 40mg/1ml
403030	X0	Escitalopram	Depression 5-20mg	Anxiety, OCD & Panic 5-20mg
403030	E0	Fluoxetine hydrochloride	Depression 20-60mg	Bulimia 40-60mg, OCD 20-60mg, Menopause 20mg
403030	L0	Fluvoxamine maleate	Depression 50-300mg	OCD 50-300mg
403030	P0	Paroxetine hydrochloride	Depression 20-50mg	OCD 20-60mg, Panic 10-60mg, Menopause 10mg
403030	Q0	Sertraline hydrochloride	Depression 50-200mg	OCD 50-200mg, Panic, PTSD & Anxiety 25mg-200mg
403040	Y0	Duloxetine hydrochloride	Depression 60mg	Anxiety 30-120mg, DM Neuro 60- 120mg, female incontinence 20- 40mg
403040	W0	Venlafaxine	Depression >=75mg	Anxiety 75-225mg, Panic 37.5mg- 225mg, Menopause 37.5mg-75mg

Patients may be instructed to take multiple tablets per day and may have concurrent prescriptions for different strength medications. The particular dosage shown in the latest6m_name field should only be taken as a rough indicator of the medication dosage that has been advised for the patient and whether they are being treated for a condition other than depression.

The prescribed product shown in the latest6m_code and name is the latest prescription within a prescription course for that medication and dosage. That prescription course may be a Repeat course (allowing the patient to re-order the prescription) or an Acute course (a one-off prescription). The table provides the latest Repeat prescription or, if no Repeat prescription has occurred in the last six months, the latest Acute (one-off) prescription. This is shown in the prescription_type column. The prescription_count gives the number of prescriptions that have been made within the prescription course to date and the prescription earliest date gives the date of the first prescription within the course.

Active Depression

The **prescribed_antidepressants** table can be joined to the **depression table**, in order to identify patients with both a depression code and a current anti-depressant medication. As described above, there is no guarantee however that the patient isn't being medicated for an alternative condition. Attention may want to be given, therefore, to the type of prescription, how long the prescription has been in place and to the dosage.

The **prescribed_antidepressants** table could also be cross-referenced against the **anxiety** and **eating disorders** registers to further identify patients that are possibly receiving the medication for these conditions, rather than depression.

Patients with depression may also follow talking therapies rather than take medication. It is advisable, therefore, to also include patients without an anti-depressant prescription but with a recent depression code.





Eating Disorder

The **eating_disorder** register contains patients with mental health conditions linked to beliefs about their weight or body shape, such as Anorexia Nervosa, Bulimia and Binge Eating. These conditions are not listed by NICE as CMHD.

The register does not include patients with Other Specified Feeding or Eating Disorder (OSFED), whose condition is linked to other beliefs or concerns, or patients with Avoidant/Restrictive Food Intake Disorder (ARFID), who choose to avoid or limit their intake of certain foods. It is expected that these patients will also have more general codes in their records that will place them into the *anxiety* or *severe_mental_illness* registers.

Severe Mental Illness

The **severe_mental_illness** register includes persistent long term mental health conditions, such as schizophrenia and bipolar disorder. It also includes anyone currently prescribed lithium.

Personality Disorder

The **personality_disorder** register is a non-QOF register specific to personality disorders. It uses codes that do not appear in the MH_COD codeset used for **severe_mental_illness**. Patients may have been coded however to appear in both tables.





NHS Health Checks

NHS Health Checks are undertaken on patients who do not have a pre-existing Long Term Condition and/or have not been prescribed statins, as these patients will receive regular checkups within their specific care pathway. On this basis, whilst the GP practice may have carried out the activity, a NHS Health Check recorded for a patient that had one or more of the conditions listed below on the date of the NHS Health Check would not be considered valid for inclusion in the service and payment.

The inelig_earliest_date provides the earliest date at which a patient was diagnosed with a LTC or was prescribed statins and so become ineligible for a NHS Health Check. The **inelig_table** provides the table from which the inelig_earliest_date was derived. The valid_nhshc field provides a Y/N definition of the Health Check validity, based on the inelig_earliest_date compared to the NHS Health Check latest_date.

Conditions that define NHS Health Check ineligibility are: hypertension, diabetes, ckd, heart failure, pad, familial hypercholestrolemia, stroke tia, chd, arterial fibrillation and statin prescription.

Cancer Screening

Cancer screening programmes exist for bowel, breast and cervical cancer for patients in specified age ranges:

Bowel: all patients aged 56y, 58y, 60y-74y. Breast: all female patients aged 50y-70y Cervical: all female patients aged 25y-64y

The cancer screening tables are created from CORE with no age restriction or any other exclusions, except gender in breast cancer screening and cervical screening. The age_at_event column shows the age of the patient when the screening took place in order to assist identification of patients screened within the national programme.

Although patients who have had a colectomy or mammectomy will not be included in the respective screening programmes, the only nationally defined exclusion codeset is for the cervical screening programme. This covers patients with hysterectomies and similar interventions. The exclusion columns in the **screen_cervical_cancer** table refer to the earliest date for this codeset (NOCX_COD). These columns allow for filtering patients that may not have been included in screening programmes or for identifying interventions following a screening.





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Appendix 1: Alcohol Units Per Week

Units per week calculated from an units value and multiplier, both derived from latest_units text.

Find units for value

latest_units contains 'pint' - units = value * 2.3 (assume pint of 4% beer) latest_units contains 'glass' - units = value * 2.3 (assume 175ml glass of medium strength wine) latest_units contains 'bottle' - units = value * 10 otherwise - units = 1

Find multiplier for value

latest_code = SN 105542008 (Teetotaller) - multiplier = 0

latest_code = SN 1082641000000106 (Alcohol units per week) - multiplier = 1

latest_code = SN 266917007 (Trivial drinker - <1u/day) - multiplier = 1

(Units are sometimes given as "/day" but value > 7. All instances of code assumed to be for week)

latest_code = SN 442547005 (Alcohol units consumed on heaviest drinking day) - multiplier = 1.5

(code provides no clear indication for weekly consumption. Estimate as half again per week) latest_units contains no indication of time period - multiplier = 1

(assume value is for week)

latest_units contains 'day' or variation - multiplier = 7

latest_units contains 'week' or variation - multiplier = 1

latest units contains 'fortnight' or variation - multiplier = 1/2

latest_units contains '3 weeks' or variation - multiplier = 1/3

latest_units contains 'month' or variation - multiplier = 1/4

latest_units contains '2 months' or variation - multiplier =1/8

latest_units contains '3 months or variation - multiplier = 1/13

latest_units contains '4 months' or variation - multiplier = 1/17

latest_units contains '6 months' or variation - multiplier = 1/26

latest units contains 'year' or variation - multiplier = 1/52

latest_units contains 'Never' or variation - multiplier = 0

latest_units_pw = latest_value * units * multiplier

if latest_units contains 'occassionally' or variation - **latest_units_pw = 0.55** (Estimate consumption, whatever value will be below 1 unit per week)





Appendix 2: Database Log

id	version	action_date	action_type	action_info	action_object
1	1	11/04/2023	new	database	eldb2023
2	1	11/04/2023	new	user role	db_execute
3	1	11/04/2023	new	user role	db_writecreate
4	1	11/04/2023	new	system table	db_log
5	1	11/04/2023	new	system table	db_table
6	1	11/04/2023	new	system table	db_column
7	1	11/04/2023	new	system table	db_cluster
8	1	11/04/2023	new	stored procedure	usp_Editdblog
9	1	11/04/2023	new	stored procedure	usp_Insertdbdictionary
10	1	11/04/2023	new	CORE table	CORE
18	1	11/04/2023	new	lookup table	lu_ageband
19	1	11/04/2023	new	lookup table	lu_ageband_key
20	1	11/04/2023	new	lookup table	lu_deprivation
21	1	11/04/2023	new	lookup table	lu_ethnicity
22	1	11/04/2023	new	lookup table	lu_ethnicity_key
23	1	11/04/2023	new	lookup table	lu_smoking
24	1	11/04/2023	new	lookup table	lu_smoking_key
25	1	11/04/2023	new	lookup table	lu_practice
26	1	11/04/2023	update	pt_area_id added	CORE
27	1	11/04/2023	new	CORE view	CORE_BK
28	1	11/04/2023	new	CORE view	CORE_CH
29	1	11/04/2023	new	CORE view	CORE_HV
30	1	11/04/2023	new	CORE view	CORE_NH
31	1	11/04/2023	new	CORE view	CORE_RB
32	1	11/04/2023	new	CORE view	CORE_TH
33	1	11/04/2023	new	CORE view	CORE_WF
34	1	11/04/2023	new	stored procedure	usp_BuildBaseTable
35	1	11/04/2023	new	function	GetEarlyLate
36	1	11/04/2023	new	datatype	pkt
37	1	11/04/2023	new	stored procedure	usp_InsertFromPKT
38	1	11/04/2023	new	stored procedure	usp_InsertFrom2PKT
40	1	11/04/2023	new	stored procedure	usp_BuildRegisters
41	1	11/04/2023	new	stored procedure	usp_AddSyntax
42	1	11/04/2023	new	stored procedure	usp_EditSyntax
43	1	11/04/2023	new	stored procedure	usp_ViewSyntax
120	1	11/04/2023	new	table	prescribed_statins
121	1	11/04/2023	update	latest6m added	prescribed_statins
122	1	11/04/2023	update	earliest added	prescribed_statins





134	1	11/04/2023	new	table	asthma
				table	
139	1	12/04/2023 12/04/2023	new	table	epilepsy
145			new		larc
153	1	13/04/2023	new	table	atrial_fibrillation
154	1	13/04/2023	new	table	cancer
155	1	13/04/2023	new	table	chd
156	1	13/04/2023	new	table	ckd
157	1	13/04/2023	new	table	dementia
158	1	13/04/2023	new	table	depression
159	1	13/04/2023	new	table	diabetes
160	1	13/04/2023	new	table	heart_failure
161	1	13/04/2023	new	table	hypertension
162	1	13/04/2023	new	table	learning_disabilities
163	1	13/04/2023	new	table	pad
164	1	13/04/2023	new	table	palliative_care
165	1	13/04/2023	new	table	rh_arthritis
166	1	13/04/2023	new	table	stroke_tia
168	1	13/04/2023	new	table	gestational_diabetes
170	1	13/04/2023	new	table	sickle_cell
171	1	13/04/2023	new	table	eating_disorder
172	1	13/04/2023	new	table	osteoporosis
173	1	13/04/2023	new	table	parkinsons_disease
174	1	13/04/2023	new	table	motor_neurone_disease
175	1	13/04/2023	new	table	multiple_sclerosis
176	1	13/04/2023	new	table	psoriasis
177	1	13/04/2023	new	table	hiv
178	1	13/04/2023	new	table	sti
179	1	13/04/2023	new	table	homeless
180	1	13/04/2023	new	table	housebound
181	1	13/04/2023	new	table	carer
182	4	13/04/2022	new	table	screen_pulse_check
184	1	13/04/2023	new	table	smoking
186	1	13/04/2023	new	table	alcohol
189	1	13/04/2023	new	table	measures_blood
190	1	13/04/2023	update	hba1c_latest added	measures_blood
191	1	13/04/2023	update	chol_latest added	measures_blood
192	1	13/04/2023	update	fbg_latest added	measures_blood
193	1	13/04/2023	update	egfr_latest added	measures_blood
194	1	13/04/2023	update	creat_latest added	measures_blood
195	1	13/04/2023	update	Ift_latest added	measures_blood
190	'	13/04/2023	upuale	ni_ialesi added	ilieasures_blood





196	1	13/04/2023	new	table	measures_body
197	1	13/04/2023	update	bmi_latest added	measures_body
204	1	14/04/2023	new	table	measures_lung
205	1	14/04/2023	update	fev1fvc_latest added	measures_lung
206	1	14/04/2023	update	mrc_latest added	measures_lung
207	1	14/04/2023	update	dm_type added	diabetes
208	1	14/04/2023	update	smoking_status added	smoking
209	1	17/04/2023	new	table	measures_heart
210	1	17/04/2023	update	bpsys_latest added	measures_heart
211	1	17/04/2023	update	bpdia_latest added	measures_heart
212	1	17/04/2023	update	plsrate_latest added	measures_heart
220	1	21/04/2023	new	table	severe_mental_illness
245	1	24/04/2023	new	table	non_dm_hyperglycaemia
248	1	26/04/2023	new	table	cancer_lung
258	1	26/04/2023	new	table	substance_misuse
263	1	27/04/2023	new	table	copd
264	1	27/04/2023	new	table	vaccination_covid
265	1	28/04/2023	new	table	obesity
266	1	28/04/2023	new	table	screen_cervical_cancer
267	1	28/04/2023	new	table	screen_breast_cancer
268	1	28/04/2023	new	table	screen_breast_cancer_declined
269	1	28/04/2023	new	table	screen_bowel_cancer
270	1	28/04/2023	new	table	screen_bowel_cancer_declined
273	1	28/04/2023	new	table	screen_cervical_cancer_dec lined
279	1	28/04/2023	new	table	f_hypercholesterolemia
280	1	28/04/2023	update	pulse_type added	pulse_check
281	1	28/04/2023	new	table	nhs_healthcheck
282	1	28/04/2023	new	table	nhs_healthcheck_declined
283	1	28/04/2023	new	table	nhs_healthcheck_invite
284	1	28/04/2023	update	inelig_earliest_date added	nhs_healthcheck
285	1	28/04/2023	update	inelig_earliest_date added	nhs_healthcheck_invite
286	1	28/04/2023	update	valid_nhshc added	nhs_healthcheck
287	1	28/04/2023	update	valid_invite added	nhs_healthcheck_invite
288	1	02/05/2023	publish	updated on eldb server	eldb2023
289	2	19/05/2023	update	pre 2006-04-01 removed	depression
307	2	30/05/2023	new	table	screen_diabetic_retinal
308	2	30/05/2023	new	table	screen_diabetic_retinal_exc epted
311	2	31/05/2023	new	table	nhs_healthcheck_elig2022
312	2	31/05/2023	update	qof_latest added	smoking





313	2	31/05/2023	new	table	autism
314	2	01/06/2023	update	2022 dates to 2023	db_log
315	2	01/06/2023	publish	updated on eldb server	eldb2023
320	3	07/06/2023	new	table	measures_risk
321	3	07/06/2023	update	chadsvasc_latest added	measures_risk
322	3	07/06/2023	update	qrisk_latest added	measures_risk
326	3	07/06/2023	update	frailty_cfs_latest added	measures_risk
327	3	07/06/2023	update	frailty_efi_latest added	measures_risk
328	3	07/06/2023	update	frailty_status_latest added	measures_risk
330	3	09/06/2023	new	table	referral_social_prescribing
331	3	14/06/2023	update	qdiabetes_latest added	measures_risk
333	3	16/06/2023	new	system table	db_code
334	3	16/06/2023	publish	updated on eldb server	eldb2023
335	4	05/07/2023	new	CORE view	CORE_BK_pt
336	4	05/07/2023	new	CORE view	CORE_CH_pt
337	4	05/07/2023	new	CORE view	CORE_HV_pt
338	4	05/07/2023	new	CORE view	CORE_NH_pt
339	4	05/07/2023	new	CORE view	CORE_RB_pt
340	4	05/07/2023	new	CORE view	CORE_TH_pt
341	4	05/07/2023	new	CORE view	CORE_WF_pt
342	4	13/04/2022	update	recreated as latest 24m	eating_disorder
343	4	16/08/2023	new	table	anxiety
345	4	01/09/2023	new	table	personality_disorder
346	4	01/09/2023	publish	updated on eldb server	eldb2023
349	5	05/09/2023	update	revised codeset	anxiety
350	5	05/09/2023	publish	updated on eldb server	eldb2023
363	6	20/09/2023	update	recreated without age restriction	screen_breast_cancer
364	6	20/09/2023	update	recreated without age restriction	screen_bowel_cancer
365	6	20/09/2023	update	recreated without age restriction	screen_cervical_cancer
366	6	21/09/2023	update	corrected pt_area_id	CORE
367	6	21/09/2022	new	lookup table	lu_lsoa
368	6	21/09/2023	update	CORE view	CORE_BK
369	6	21/09/2023	update	CORE view	CORE_CH
370	6	21/09/2023	update	CORE view	CORE_HV
371	6	21/09/2023	update	CORE view	CORE_NH
372	6	21/09/2023	update	CORE view	CORE_RB
373	6	21/09/2023	update	CORE view	CORE_TH
374	6	21/09/2023	update	CORE view	CORE_WF
375	6	21/09/2023	update	CORE view	CORE_BK_pt





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376	6	21/09/2023	update	CORE view	CORE_CH_pt
377	6	21/09/2023	update	CORE view	CORE_HV_pt
378	6	21/09/2023	update	CORE view	CORE_NH_pt
379	6	21/09/2023	update	CORE view	CORE_RB_pt
380	6	21/09/2023	update	CORE view	CORE_TH_pt
381	6	21/09/2023	update	CORE view	CORE_WF_pt
382	6	27/09/2023	update	recreated without age restriction	screen_breast_cancer_decli ned
383	6	27/09/2023	update	recreated without age restriction	screen_bowel_cancer_decli ned
384	6	27/09/2023	update	recreated without age restriction	screen_cervical_cancer_dec lined
386	6	28/09/2023	new	table	prescribed_antidepressants
387	6	28/09/2023	update	latest added	depression
388	6	01/10/2023	publish	updated on eldb server	eldb2023
406	7	31/10/2023	new	table	status_interpreter
407	7	31/10/2023	publish	updated on eldb server	eldb2023
408	8	28/11/2023	new	table	hepatitis_c
409	8	28/11/2023	new	table	hepatitis_b

Document Version Log

Date	Version	Information
19/06/2023	1	Document Created
31/08/2023	2	Updated for eldb2023.04
		Added Mental Health section
		Added Core Views section
		Removed Table of Contents as it was too difficult to maintain
		Amended formatting and fixed typos
29/09/2023	3	Updated for eldb2023.05 and 06
		Added lu_lsoa
		Added prescribed_antidepressants table
		Removed age restrictions and exclusions from cancer screening tables
		Added Data Analysis and Information section and moved Mental Health and NHS
		HC information into this section.
		Expanded Mental Health information and added Cancer Screening to Data
		Analysis and Information.
		Added Table of Contents
		Added additional information to Known Data Issues in eldb2023
		Added Appendix 2: Database Log
		Amended formatting and fixed typos
31/10/2023	4	Updated for eldb2023.07
		Added status_interpreter
30/11/2023	5	Updated for eldb2023.08
		Added hepatitis_b
		Added hepatitis_c
31/01/2024	6	Added index