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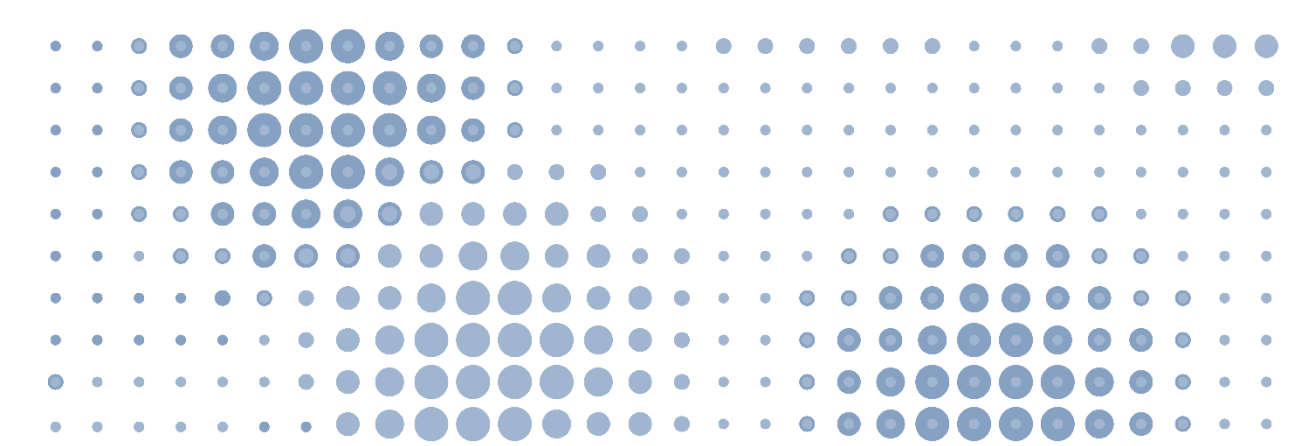
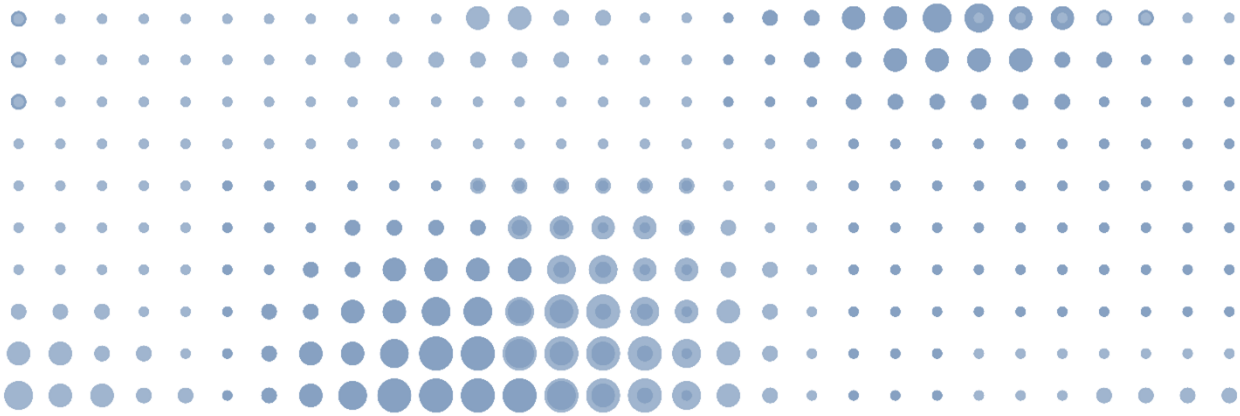


# EHPDCL Data Catalogue



**Version:** **1.1.1**

**Last Updated:** **4 Feb 2026**

***Prepared by EHPDCL Office***

## Amendment History

| Date | Version | Updates |
|---|---|---|
| 20-May-2025 | 1.0.0 | • DCL Data Catalogue (Initial version for EHP data service) |
| 15-Dec-2025 | 1.1.0 | • Added Table of Content section<br>• Added 25 Data Products of Chronic Diseases and Common Cancers |
| 04-Feb-2026 | 1.1.1 | • Appended footnote to X01 - Radiology Image (DICOM) dataset |

# Contents

# Summary of Datasets

The following is the fundamental DCL data provision on structured, textual and image data.

| ID# | Dataset Name | Data Available |
|---|---|---|
| D01 | Patient Demographic | All |
| D02 | Diabetes Mellitus Complication Screening | All |
| D03 | Family Medicine - Patient Disease | All |
| D04 | Family Medicine - Consultation Note ICPC | All |
| D05 | Immunization | 01 Oct 2009 |
| D06 | Diagnosis Progress | All |
| D07 | Procedure Progress | All |
| D08 | Outpatient Appointment and Attendance | 01 Jan 2000 |
| D09 | Accident and Emergency Department Attendance | 01 Jan 2000 |
| D10 | Episode Miscellaneous Information | All |
| D12 | Inpatient Admission, Transfer & Discharge - Episode's Transaction | 01 Jan 1997 |
| D13 | Radiology Appointment | 01 Apr 1999 |
| D14 | Radiology Examination Result | 01 Apr 1999 |
| D15 | Medications - Dispensed Prescription | 01 Jan 2000 |
| D16 | Medications - Multiple Dosage | 01 Jan 2000 |
| D17 | Laboratory Result - Chemical Pathology | 01 Jan 2000 |
| D18 | Laboratory Result - Hematology & Immunology | 01 Jan 2000 |
| D19 | Laboratory Result - Microbiology & Virology | 01 Jan 2000 |
| D20 | Laboratory Result - Bacterial Culture and Sensitivity Test | 01 Jan 2000 |
| D21 | Anatomical Pathology - Specific SNOMED Result | 01 Jan 2000 |
| D23 | Obstetrics | 01 Jan 2002 |
| | | |
| T01 | Radiology Exam Report (TEXT) | 01 Apr 1999 |
| T02 | Laboratory Result (TEXT) | 01 Jan 2000 |
| T03 | Clinical & Discharge Note (TEXT) | 03 Feb 1994 |
| | | |
| X01 | Radiology Image (DICOM) | 01-Jan 2007 |

# Summary of Mapping Tables

The following mapping tables enable the translations from code to description for specific settings. They will be given to researchers while the relevant datasets are selected.

| ID# | Table Name |
|---|---|
| M01 | Family Medicine - Mapping of Disease Element |
| M02 | Family Medicine - Mapping of ICPC Code |
| M03 | Immunization - Mapping of Status |
| M04 | Immunization - Mapping of Vaccine |
| M06 | Procedure Progress - Mapping of Term Id |
| M07 | Accident and Emergency Department Attendance - Mapping of Triage Category |
| M08 | Inpatient Admission, Transfer & Discharge - Specialty Classification |
| M09 | Radiology - Mapping of Examination Details |
| M10 | Medications - Mapping of Drug Item Code |
| M11 | Medications - Mapping of Frequency |
| M12 | Medications - Mapping of Daily Frequency |
| M13 | Medications - Mapping of Supplementary Frequency |
| M14 | Medications - Mapping of Route |
| M15 | Medications - Mapping of British National Formulary (BNF) Code |
| M16 | Mapping of Entity |
| M17 | Bacterial Culture and Sensitivity Test – Mapping of Sensitivity Code |
| M18 | Mapping of IAMS Entity Concept |
| M19 | Mapping of IAMS Concept |
| M20 | Anatomical Pathology - Mapping of Term Id |
| M21 | Mapping of District |
| M22 | Mapping of Service Type |
| M23 | Diagnosis Progress - Mapping of ICD-10 |
| M28 | Mapping of Mode of Delivery |

# Summary of Data Products

The data product is a collection of datasets for a specific disease, which enables researchers to jump start their research studies.

| ID# | Table Name | Datasets |
|---|---|---|
| S01 | Chronic Heart Failure (CHF) | Structured only |
| S02 | Chronic Kidney Disease (CKD) Stage 3A, 3B, 4 & 5 | Structured only |
| S03 | Chronic Obstructive Pulmonary Disease (COPD) | Structured only |
| S04 | Coronary Heart Disease (CHD) | Structured only |
| S05 | Dementia | Structured only |
| S06 | Diabetes Mellitus (DM) | Structured only |
| S07 | Glaucoma | Structured only |
| S08 | Hepatitis B Carriers | Structured only |
| S09 | Hip Fracture (as approximate for Osteoporosis) | Structured only |
| S10 | Hyperlipidemia (HLD) | Structured only |
| S11 | Hypertension (HT) | Structured only |
| S12 | Parkinsonism | Structured only |
| S13 | Stroke | Structured only |
| S14 | Depression | Structured only |
| | | |
| C01 | Colorectal Cancer | Structured only |
| C02 | Breast (Female) Cancer | Structured only |
| C03 | Lung Cancer | Structured only |
| C04 | Prostate Cancer | Structured only |
| C05 | Liver Cancer | Structured only |
| C06 | Nasopharynx Cancer | Structured only |
| C07 | Stomach Cancer | Structured only |
| C08 | Corpus Cancer | Structured only |
| C09 | Ovary Cancer | Structured only |
| C10 | Cervix Cancer | Structured only |
| C11 | Non-Hodgkin Lymphoma | Structured only |

***Important Note:***

1) *For the provision of data products, there will be 2-years gap from current year, i.e. the data will be provided up to 31 Dec 2023 while current year is 2026.*
2) *The dataset includes only HA patients, and their chronic disease status is determined based on a set of operational rules and coding methods recorded in the HA information system. Therefore, patients whose chronic disease status is diagnosed outside HA may not be covered.*
3) *For "Structured only" marked data products, it will default include all structured datasets from D01 to D23. The information in datasets D01–D23 includes all treatment and transaction records, which may not necessarily be related to the treatment of a specific chronic disease.*

# Datasets (D01 – D23, T01 - T03, X01)

## Dataset id: D01

## Dataset name: Patient Demographic

## File name: patient_data.dat.*

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | sex | char(1) | Sex of the patient | "F" = "Female"<br>"M" = "Male" |
| 501 | dob_Y | date | Year of Birth | YYYY-01-01 |
| 3 | pseudo_patient_key | varchar(24) | Masked unique key assigned to each individual patient | |
| 502 | death_date_Y | date | The date of death reported in death registry provided by HKSAR Immigration Department (up to year) [1] | "YYYY-01-01" |
| 503 | diff_in_hour_death_date | integer | Time difference (in hour) between the death date and the timestamp of the first appointment / admission. [2] | A numeric value |
| 504 | death_diag_cd | varchar (4) | The underlying cause of death reported in death registry provided by HKSAR Immigration Department [3] | Example: "A000", "B999" |
| 505 | death_ext_cd | varchar (4) | The external cause of death reported in death registry provided by HKSAR Immigration Department [4] | Example: "V01", "X99" |

*[1] "death_date_Y" is only available for EXPERT service.*

*[2] "diff_in_hour_death_date" is only available for EXPERT service.*

*[3] "death_diag_cd" is only available for EXPERT service.*

*[4] "deat_ext_cd" is only available for EXPERT service.*

## Dataset id: D02

## Dataset name: Diabetes Mellitus Complication Screening[5]

## File name: dmcs_data.dat.*

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | assessment_dtm | datetime year to fraction(3) | Date of first Metabolic Risk Assessment (up to month) | YYYY-MM-01 |
| 188 | dm_flag | char(1) | Diagnosis on Diabetes Mellitus | "Y" = "Yes"<br>Blank = "No" |
| 2 | dx_dtm | datetime year to fraction(3) | Date of diagnosis of Diabetes Mellitus | YYYY-MM-01 |
| 3 | dm_type_cd | char(1) | Type of Diabetes Mellitus | "1" = "Type 2"<br>"2" = "Type 1"<br>"4" = "Gestational"<br>"8" = "Other"<br>"9" ="Unclassified" |
| 4 | dka_hhs_flag | char(1) | Indication on whether the patient has a history of Diabetic Ketoacidosis/ Hyperglycemic hyperosmolar state | "1" = "Yes"<br>"2" = "No"<br>"3" = "Not known" |
| 6 | family_dm_flag | char(1) | Indication on a positive family history of Diabetes Mellitus | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 7 | father_dm_flag | char(1) | Indication on a positive family history of Diabetes Mellitus – Father | "Y" = "Yes"<br>"N" = "No" |
| 8 | mother_dm_flag | char(1) | Indication on a positive family history of Diabetes Mellitus – Mother | "Y" = "Yes"<br>"N" = "No" |
| 9 | sibling_dm_flag | char(1) | Indication on a positive family history of Diabetes Mellitus – Sibling(s) | "Y" = "Yes"<br>"N" = "No" |
| 10 | sibling_dm_affect | integer | Family history of Diabetes Mellitus – Number of sibling(s) affected | |
| 11 | sibling_dm_total | integer | Family History of Diabetes Mellitus – Number of sibling(s) in total | |

*[5] Diabetes Mellitus Complication Screening dataset is only available for EXPERT service.*

| | | | | |
|---|---|---|---|---|
| 12 | child_dm_flag | char(1) | Indication on a positive family history of Diabetes Mellitus – Child(ren) | "Y" = "Yes"<br>"N" = "No" |
| 13 | child_dm_affect | integer | Family History of Diabetes Mellitus – Number of child(ren) affected | |
| 14 | child_dm_total | integer | Family History of Diabetes Mellitus – Number of child(ren) in total | |
| 15 | other_dm_hx_flag | char(1) | Indication on a positive family history of Diabetes Mellitus – Others (DMCS) | "Y" = "Yes"<br>"N" = "No" |
| 174 | ht_flag | char(1) | Diagnosis on Hypertension | "Y" = "Yes"<br>"N" = "No" |
| 175 | ht_dx_year_dtm | datetime year to fraction(3) | Date of diagnosis of Hypertension<br>(up to month) | YYYY-MM-01 |
| 176 | ht_family_hx_flag | char(1) | Indication on any history of Hypertension with first-degree relatives | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 189 | family_hx_premat_cvd_flag | char(1) | Indication on any first degree relative(s) having Ischemic Heart Disease under 55 years of age for male or under 65 years of age for female | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 16 | smoke_status_cd | char(1) | Smoking status of patient | "1" = Non-smoker<br>"2" = "Current Smoker"<br>"3" = "Ex-smoker"<br>"4" = "Passive Smoker"<br>"5" = "Not known" |
| 17 | cig_per_day | Integer | Number of cigarette(s) smoked per day | |
| 18 | smoke_yr | Integer | Number of years of smoking | |
| 19 | smoke_mbr | Integer | Number of smoking family members | |
| 20 | smoke_total_mbr | Integer | Total number of family members | |
| 21 | smoke_in_work | Integer | Total number of smokers in the workplace | |

| | | | | |
|---|---|---|---|---|
| 22 | alcohol_status_cd | char(1) | Alcohol drinking habit of patient | "1" = "Non-drinker"<br>"2" = "Current Drinker"<br>"3" = "Social Drinker"<br>"4" = "Ex-drinker"<br>"5" = "Not known" |
| 191 | phy_act_mod_inten_cd | char(1) | Patient's habit in performing physical activity of moderate intensity | "1" = "None"<br>"2" = "< 150 mins per week"<br>"3" = "At least 150 mins per week" |
| 192 | anti_diabetic_drug_flag | char(1) | Indication on whether the patient is currently on anti-diabetic drug(s) | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 25 | insulin_flag | char(1) | Indication on whether the patient is currently on insulin treatment | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 26 | inject_site_flag | char(1) | Indication on whether the injection site(s) is/are abnormal | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 27 | oha_flag | char(1) | Indication on whether the patient is currently taking Oral Hypoglycemic Agents | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 28 | su_flag | char(1) | Indication on whether the patient is currently on Sulfonylurea | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 29 | metf_flag | char(1) | Indication on whether the patient is currently on Metformin | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 30 | gluco_flag | char(1) | Indication on whether the patient is currently on Glucosidase inhibitor | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 31 | glita_flag | char(1) | Indication on whether the patient is currently on Glitazone | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 32 | megl_flag | char(1) | Indication on whether the patient is currently on Meglitinide | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 33 | anti_htn_flag | char(1) | Indication on whether the patient is currently on anti-hypertensive drug(s) | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 193 | anti_platelet_drug_flag | char(1) | Indication on whether the patient is currently on anti-platelet drug(s) | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |

| | | | | |
|---|---|---|---|---|
| 36 | anti_lipid_flag | char(1) | Indication on whether the patient is currently on lipid lowering drug(s) | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 34 | anti_isch_flag | char(1) | Indication on whether the patient is currently on anti-ischaemic drug(s) [6] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 35 | anti_chf_flag | char(1) | Indication on whether the patient is currently on anti-congestive heart failure drug(s) [6] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 37 | self_monitor_cd | char(1) | Type(s) of self-monitoring test(s) performed per week (if any) | "B" = "Blood"<br>"U" = "Urine"<br>"A" = "Both blood and urine"<br>"N" = "None" |
| 38 | stand_s_bp | integer | Standing systolic blood pressure in mmHg [7] | |
| 39 | stand_d_bp | integer | Standing diastolic blood pressure in mmHg [7] | |
| 40 | lying_s_bp | integer | Lying systolic blood pressure in mmHg [7] | |
| 41 | lying_d_bp | integer | Lying diastolic blood pressure in mmHg [7] | |
| 42 | right_s_bp | integer | Systolic blood pressure of right arm in mmHg [7] | |
| 43 | right_d_bp | integer | Diastolic blood pressure of right arm in mmHg [7] | |
| 44 | left_s_bp | integer | Systolic blood pressure of left arm in mmHg [7] | |
| 45 | left_d_bp | integer | Diastolic blood pressure of left arm in mmHg [7] | |
| 46 | systolic_bp | integer | Systolic blood pressure in mmHg | |
| 47 | diastolic_bp | integer | Diastolic blood pressure in mmHg | |
| 48 | weight | float | Body weight in kilogram (kg) | |
| 49 | height | float | Body height in meter (m) | |
| 50 | bmi | float | Body mass index ($kg/m^2$) | |
| 51 | waist | integer | Waist circumference in centimeter (cm) | |
| 52 | hip | integer | Hip circumference in centimeter (cm) | |

*[6] The data field was obsolete after 2014.*

*[7] The data was available since 2007.*

| | | | | |
|---|---|---|---|---|
| 53 | whr | float | Waist-hip ratio | |
| 54 | abdomen | float | Skinfold thickness of abdomen in millimeter (mm) [8] | |
| 55 | arm | float | Skinfold thickness of arm in millimeter (mm) [8] | |
| 56 | subscapular | float | Skinfold thickness of subscapular in millimeter (mm) [8] | |
| 57 | periodontitis_flag | char(1) | Indication on whether the patient has periodontitis | 1 - Yes<br>2 - No<br>3 - Not known |
| 58 | cxr_cd | char(1) | Result of recent CXR taken | N - Normal<br>A - Abnormal<br>O - Other |
| 59 | ecg_cd | char(1) | Result of recent ECG | N - Normal<br>A - Abnormal<br>O - Other |
| 74 | malb_flag | char(1) | Result of urine dipstix test | "Y" = "Positive"<br>"N" = "Negative"<br>"U" = "Not known" |
| 75 | urine_alb_flag | char(1) | Indication of positive urine albumin | "Y" = "Positive"<br>"N" = "Negative"<br>"U" = "Not known" |
| 76 | urine_rbc_flag | char(1) | Indication of positive urine RBC dipstix | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 77 | urine_ketone_flag | char(1) | Indication of positive urine Ketone dipstix | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 331 | last_lab_result_dtm | datetime year to fraction(3) | Last laboratory result retrieval date (up to month) | YYYY-MM-01 |
| 60 | hba1c | float | Latest HbA1c result from ePR within one year (%) | |
| 194 | hba1c_ind | char(1) | Indication of latest HBA1c result | "0" = "Normal"<br>"1" = "High"<br>"2" = "Low" |
| 195 | hba1c_ref_dtm | datetime year to fraction(3) | Reference date of latest HBA1c result (up to month) | YYYY-MM-01 |
| 61 | fasting_gc | float | Latest Fasting glucose result from ePR within one year (mmol/L) | |

*[8] The data field was obsolete after 2018.*

| | | | | |
|---|---|---|---|---|
| 196 | fasting_glucose_ind | char(1) | Indication of latest fasting glucose result | "0" = "Normal"<br>"1" = "High"<br>"2" = "Low" |
| 197 | fasting_glucose_ref_dtm | datetime year to fraction(3) | Reference date of latest total cholesterol result (up to month) | YYYY-MM-01 |
| 62 | total_clt | float | Latest total cholesterol result from ePR within one year (mmol/L) | |
| 198 | total_cholesterol_ind | char(1) | Indication of latest total cholesterol result | "0" = "Normal"<br>"1" = "High"<br>"2" = "Low" |
| 199 | total_cholesterol_ref_dtm | datetime year to fraction(3) | Reference date of latest total cholesterol result (up to month) | YYYY-MM-01 |
| 63 | ldl_c | float | Latest LDL - C result from ePR within one year (mmol/L) | |
| 200 | ldl_c_ind | char(1) | Indication of latest LDL - C result | "0" = "Normal"<br>"1" = "High"<br>"2" = "Low" |
| 201 | ldl_c_ref_dtm | datetime year to fraction(3) | Reference date of latest LDL - C result (up to month) | YYYY-MM-01 |
| 64 | hdl_c | Float | Latest HDL - C result from ePR within one year (mmol/L) | |
| 202 | hdl_c_ind | char(1) | Indication of latest HDL - C result | "0" = "Normal"<br>"1" = "High"<br>"2" = "Low" |
| 203 | hdl_c_ref_dtm | datetime year to fraction(3) | Reference date of latest HDL - C result (up to month) | YYYY-MM-01 |
| 65 | triglyceride | Float | Latest Triglyceride result from ePR within one year (mmol/L) | |
| 204 | triglyceride_ind | char(1) | Indication of latest Triglyceride result | "0" = "Normal"<br>"1" = "High"<br>"2" = "Low" |
| 205 | triglyceride_ref_dtm | datetime year to fraction(3) | Reference date of latest Triglyceride result (up to month) | YYYY-MM-01 |
| 66 | serum_k | float | Latest Serum K result from ePR within one year (mmol/L) | |
| 206 | serum_k_ind | char(1) | Indication of latest Serum K result | "0" = "Normal"<br>"1" = "High"<br>"2" = "Low" |

| | | | | |
|---|---|---|---|---|
| 207 | serum_k_ref_dtm | datetime year to fraction(3) | Reference date of latest Serum K result (up to month) | YYYY-MM-01 |
| 67 | creatinine | integer | Latest Serum Creatinine result from ePR within one year (umol/L) | |
| 208 | creatinine_ind | char(1) | Indication of latest Serum Creatinine result | "0" = "Normal"<br>"1" = "High"<br>"2" = "Low" |
| 209 | creatinine_ref_dtm | datetime year to fraction(3) | Reference date of latest Serum Creatinine result (up to month) | YYYY-MM-01 |
| 68 | egfr | integer | Latest eGFR result from ePR within one year [9] | |
| 210 | egfr_ref_dtm | datetime year to fraction(3) | Reference date of latest eGFR result (up to month) [9] | YYYY-MM-01 |
| 211 | calc_egfr | integer | Latest calculated eGFR result from ePR within one year (ml/min/1.73m$^2$) | |
| 212 | calc_egfr_ref_dtm | datetime year to fraction(3) | Reference date of latest calculated eGFR result (up to month) | YYYY-MM-01 |
| 72 | creatinine_clear | integer | Latest Creatinine clearance result from ePR within one year (ml/mm) | |
| 223 | creatinine_clearance_ind | char(1) | Indication of latest Creatinine clearance result | "0" = "Normal"<br>"1" = "High"<br>"2" = "Low" |
| 224 | creatinine_clearance_ref_dtm | datetime year to fraction(3) | Reference date of latest Creatinine clearance result (up to month) | YYYY-MM-01 |
| 73 | proteinuria | float | Latest Proteinuria result from ePR within one year (g/d) | |
| 213 | proteinuria_ind | char(1) | Indication of latest Proteinuria result | "0" = "Normal"<br>"1" = "High"<br>"2" = "Low" |
| 214 | proteinuria_ref_dtm | datetime year to fraction(3) | Reference date of latest Proteinuria result (up to month) | YYYY-MM-01 |
| 71 | albumin | integer | Latest Albumin excretion rate result from ePR within one year (mg/d) | |

*[9] The data field was obsolete after 2014.*

| | | | | |
|---|---|---|---|---|
| 215 | albumin_ind | char(1) | Indication of latest Albumin excretion rate result | “0” = “Normal”<br>“1” = “High”<br>“2” = “Low” |
| 216 | albumin_ref_dtm | datetime year to fraction(3) | Reference date of latest Albumin excretion rate result<br>(up to month) | YYYY-MM-01 |
| 69 | urine_alb | float | Latest Urine alb / Cr ratio result from ePR within one year (mg/mmol) | |
| 217 | urine_alb_ind | char(1) | Indication of latest Urine alb / Cr ratio result | “0” = “Normal”<br>“1” = “High”<br>“2” = “Low” |
| 218 | urine_alb_ref_dtm | datetime year to fraction(3) | Reference date of latest Urine alb / Cr ratio result (up to month) | YYYY-MM-01 |
| 70 | urine_alb_con | float | Latest urine albumin concentration result from ePR within one year (mg/L) | |
| 219 | urine_alb_con_ind | char(1) | Indication of latest urine albumin concentration result | “0” = “Normal”<br>“1” = “High”<br>“2” = “Low” |
| 220 | urine_alb_con_ref_dtm | datetime year to fraction(3) | Reference date of latest urine albumin concentration result<br>(up to month) | YYYY-MM-01 |
| 187 | urine_cr_ratio | Float | Latest urine protein / Cr ratio result from ePR within one year (mg/mg Cr) | |
| 221 | urine_cr_ratio_ind | char(1) | Indication of latest urine protein / Cr ratio result | “0” = “Normal”<br>“1” = “High”<br>“2” = “Low” |
| 222 | urine_cr_ratio_ref_dtm | datetime year to fraction(3) | Reference date of latest urine protein / Cr ratio result<br>(up to month) | YYYY-MM-01 |
| 177 | hb | float | Latest Hb result from ePR within one year (g/dL) | |
| 225 | hb_ind | char(1) | Indication of latest Hb result | “0” = “Normal”<br>“1” = “High”<br>“2” = “Low” |
| 226 | hb_ref_dtm | datetime year to fraction(3) | Reference date of latest Hb result<br>(up to month) | YYYY-MM-01 |

| | | | | |
|---|---|---|---|---|
| 178 | hct | float | Latest Hct result from ePR within one year | |
| 227 | hct_ind | char(1) | Indication of latest Hct result | "0" = "Normal"<br>"1" = "High"<br>"2" = "Low" |
| 228 | hct_ref_dtm | datetime year to fraction(3) | Reference date of latest Hct result<br>(up to month) | YYYY-MM-01 |
| 239 | eye_assess_dtm | datetime year to fraction(3) | Assessment date for eye examination<br>(up to month) | YYYY-MM-01 |
| 93 | assess_by_cd | char(1) | Eye assessment done by | "1" = "N/A"<br>"2" = "Fundoscopy by physician"<br>"3" = "Fundus photo reviewed by physician"<br>"4" = "Ophthalmologist"<br>"6" = "Optometrist" |
| 94 | retina_sum_cd | char(1) | Diabetic retinopathy summary after assessment of single or both eyes | "1" = "No retinopathy"<br>"2"= "Non sight threatening retinopathy"<br>"3" = "Sight threatening retinopathy"<br>"4" = "Advanced DM eye disease"<br>"5" = "Currently under ophthalmologist follow up"<br>"U" = "Not known" |
| 183 | uof_flag | char(1) | Indication on whether the patient is currently under follow-up by an ophthalmologist | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 179 | mydriatic_use_r_flag | char(1) | Indication of Mydriatic used at right eye | "Y" = "Yes"<br>"N" = "No" |
| 180 | mydriatic_use_l_flag | char(1) | Indication of Mydriatic used at left eye | "Y" = "Yes"<br>"N" = "No" |
| 237 | glaucoma_r_flag | char(1) | Indication of history of right eye glaucoma | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 238 | glaucoma_l_flag | char(1) | Indication of history of left eye glaucoma | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 78 | vis_acuity_r | float | Best visual acuity of right eye | |

| | | | | |
|---|---|---|---|---|
| 79 | vis_acuity_l | float | Best visual acuity of left eye | |
| 229 | pres_cataract_r_flag | char(1) | Indication of presence of cataract at right eye | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 233 | pres_cataract_l_flag | char(1) | Indication of presence of cataract at left eye | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 80 | cataract_r_flag | char(1) | Indication of cataract at right eye [10] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 81 | cataract_l_flag | char(1) | Indication of cataract at left eye [10] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 82 | cataract_ext_r_flag | char(1) | Indication of cataract extracted at right eye | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 83 | cataract_extr_l_flag | char(1) | Indication of cataract extracted at left eye | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 230 | retina_vis_r_flag | char(1) | Indication of gradable fundus photo at right eye | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 234 | retina_vis_l_flag | char(1) | Indication of gradable fundus photo at left eye | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 86 | maculopathy_r_flag | char(1) | Indication of macular edema or diabetes related lesions at macula at right eye | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 87 | maculopathy_l_flag | char(1) | Indication of macular edema or diabetes related lesions at macula at left eye | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 242 | maculo_exu_isch_r_flag | char(1) | Indication of severe Maculopathy secondary to macular non-perfusion or chronic exudation at right eye | "Y" = "Yes"<br>"N" = "No" |
| 243 | maculo_exu_isch_l_flag | char(1) | Indication of severe Maculopathy secondary to macular non-perfusion or chronic exudation at left eye | "Y" = "Yes"<br>"N" = "No" |

*[10] The data field was obsolete after 2014.*

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|---|---|---|---|---|
| 240 | tra_retin_detach_r_flag | char(1) | Indication of tractional retinal detachment at right eye | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 241 | tra_retin_detach_l_flag | char(1) | Indication of tractional retinal detachment at left eye | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 244 | neovascu_glauc_r_flag | char(1) | Indication of Neovascular Glaucoma at right eye | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 245 | neovascu_glauc_l_flag | char(1) | Indication of Neovascular Glaucoma at left eye | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 232 | grade_diab_retin_r_cd | char(1) | Grade of diabetic retinopathy at right eye | "1" = "No DR"<br>"2" = "Mild NPDR"<br>"3" = "Moderate NPDR"<br>"4"= "Severe NPDR"<br>"5" = "PDR" |
| 236 | grade_diab_retin_l_cd | char(1) | Grade of diabetic retinopathy at left eye | "1" = "No DR"<br>"2" = "Mild NPDR"<br>"3" = "Moderate NPDR"<br>"4"= "Severe NPDR"<br>"5" = "PDR" |
| 88 | laser_r_flag | char(1) | Indication of laser for diabetic retinopathy at right eye [11] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 89 | laser_l_flag | char(1) | Indication of laser for diabetic retinopathy at left eye [11] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 231 | vitrectomy_r_flag | char(1) | Indication of vitrectomy at right eye | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 235 | vitrectomy_l_flag | char(1) | Indication of vitrectomy at left eye | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 246 | anti_vegf_rx_r_flag | char(1) | Indication of anti-Vascular Endothelial Growth Factor (VEGF) Therapy (Rx) at right eye | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 247 | anti_vegf_rx_l_flag | char(1) | Indication of anti-Vascular Endothelial Growth Factor (VEGF) Therapy (Rx) at left eye | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |

*[11] Data is available from October 2013 onwards.*

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|---|---|---|---|---|
| 181 | hrg_r_cd | char(1) | Grade of hypertensive retinopathy of right eye | "1" = "No HR"<br>"2" = "Mild HR"<br>"3" = "Moderate HR"<br>"4" = "Severe HR" |
| 182 | hrg_l_cd | char(1) | Grade of hypertensive retinopathy of left eye | "1" = "No HR"<br>"2" = "Mild HR"<br>"3" = "Moderate HR"<br>"4" = "Severe HR" |
| 90 | glaucoma_flag | char(1) | Indication of glaucoma at either eye [12] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 91 | dmr_r_flag | char(1) | Indication of diabetic retinopathy at right eye [12] | "1" = "Nil"<br>"2" = "NPDR"<br>"3" = "Pre-PDR"<br>"4" = "PDR"<br>"5" = "Not known" |
| 92 | dmr_l_flag | char(1) | Indication of diabetic retinopathy at left eye [12] | "1" = "Nil"<br>"2" = "NPDR"<br>"3" = "Pre-PDR"<br>"4" = "PDR"<br>"5" = "Not known" |
| 84 | retina_r_flag | char(1) | Indication on right retina not being visualized [12] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 85 | retina_l_flag | char(1) | Indication of left retina not being visualized [12] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 95 | either_vis_acuity | float | Best visual acuity of either eye [12] | |
| 96 | i_cataract_flag | char(1) | Indication of cataract at either eye [12] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 97 | i_cataract_ext_flag | char(1) | Indication of cataract extracted at either eye [12] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 98 | i_retina_flag | char(1) | Indication on either retina not being visualized [12] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 99 | i_maculo_flag | char(1) | Indication of maculopathy at either eye [12] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |

*[12] The data field was obsolete after 2014.*

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| 100 | i_laser_flag | char(1) | Indication of laser scars or vitrectomy at either eye [13] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 101 | i_dmr_cd | char(1) | Indication of diabetic retinopathy at either eye [13] | "1" = "Nil"<br>"2" = "NPDR"<br>"3" = "Pre-PDR"<br>"4" = "PDR"<br>"5" = "Not known" |
| 272 | feet_assessment_dtm | datetime year to fraction(3) | Date of lower limb assessment (up to month) | YYYY-MM-01 |
| 122 | footwear_r_flag | char(1) | Indication of footwear problem of right foot | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 123 | footwear_l_flag | char(1) | Indication of footwear problem of left foot | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 251 | monofilament_test_r_cd | char(1) | Protective sensation of right lower limb [14] | "1" = "Normal"<br>"2" = "Abnormal" |
| 263 | monofilament_test_l_cd | char(1) | Protective sensation of left lower limb [14] | "1" = "Normal"<br>"2" = "Abnormal" |
| 253 | hz_tuning_fork_r_cd | char(1) | Abnormal vibration sense measured by 128 Hz tuning fork for right lower limb | "1" = "Normal"<br>"2" = "Diminished"<br>"3" = "Absent" |
| 265 | hz_tuning_fork_l_cd | char(1) | Abnormal vibration sense measured by 128 Hz tuning fork for left lower limb | "1" = "Normal"<br>"2" = "Diminished"<br>"3" = "Absent" |
| 104 | tun_fork_r | integer | Abnormal vibration sense measured in graduated tuning fork for right lower limb | |
| 105 | tun_fork_l | integer | Abnormal vibration sense measured in graduated tuning fork for left lower limb | |
| 102 | vpt_r | integer | Abnormal vibration sense measured in V with biothesiometer for right lower limb | |

*[13] The data field was obsolete after 2014.*

*[14] If protective sensation is absent, the patient is at risk for developing a neuropathic ulcer.*

| | | | | |
|---|---|---|---|---|
| 103 | vpt_l | integer | Abnormal vibration sense measured in V with biothesiometer for left lower limb | |
| 252 | abn_vib_sense_r_flag | char(1) | Indication of abnormal vibration sense at right lower limb | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 264 | abn_vib_sense_l_flag | char(1) | Indication of abnormal vibration sense at left lower limb | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 254 | achilles_reflexes_r_cd | char(1) | Indication of presence of achilles reflexes reflect neuropathy at right lower limb | "1" = "Present"<br>"2" = "Present with reinforcement"<br>"3" = "Absent" |
| 266 | achilles_reflexes_l_cd | char(1) | Indication of presence of achilles reflexes reflect neuropathy at left lower limb | "1" = "Present"<br>"2" = "Present with reinforcement"<br>"3" = "Absent" |
| 110 | pinprick_r_flag | char(1) | Indication of reduced / impaired pinprick sensation at right lower limb | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 111 | pinprick_l_flag | char(1) | Indication of reduced / impaired pinprick sensation at left lower limb | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 249 | abn_temp_r_flag | char(1) | Indication of warm and cool feelings at right lower limb (To compare the quality of temperature sensation on arms, face, trunk) | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 261 | abn_temp_l_flag | char(1) | Indication of warm and cool feelings at left lower limb (To compare the quality of temperature sensation on arms, face, trunk) | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 124 | nail_path_r_flag | char(1) | Indication of nail pathology at right foot | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 125 | nail_path_l_flag | char(1) | Indication of nail pathology at left foot | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 114 | deformity_r_flag | char(1) | Indication of claw toes, hammer toes, crossed toes, bunion or bony prominences at right lower limb | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |

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| 115 | deformity_l_flag | char(1) | Indication of claw toes, hammer toes, crossed toes, bunion or bony prominences at left lower limb | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 116 | callosity_r_flag | char(1) | Indication of corns, callus, high pressure sports at right lower limb | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 117 | callosity_l_flag | char(1) | Indication of corns, callus, high pressure sports at left lower limb | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 118 | skin_infect_r_flag | char(1) | Indication of skin infection at right lower limb | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 119 | skin_infect_l_flag | char(1) | Indication of skin infection at left lower limb | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 250 | fissure_r_flag | char(1) | Indication of cracks or fissures at right lower limb | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 262 | fissure_l_flag | char(1) | Indication of cracks or fissures at left lower limb | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 128 | isch_r_flag | char(1) | Indication of dependency rubor, loss of skin hair, atrophic skin or toe nails at right lower limb | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 129 | isch_l_flag | char(1) | Indication of dependency rubor, loss of skin hair, atrophic skin or toe nails at left lower limb | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 248 | hist_ulcer_r_flag | char(1) | Indication of history of ulcer or amputation which is not due to trauma at right lower limb | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 260 | hist_ulcer_l_flag | char(1) | Indication of history of ulcer or amputation which is not due to trauma at left lower limb | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 108 | ulcer_r_flag | char(1) | Indication of active ulceration at time of examination at right lower limb | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 109 | ulcer_l_flag | char(1) | Indication of active ulceration at time of examination at left lower limb | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |

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|---|---|---|---|---|
| 255 | revascularization_r_flag | char(1) | Indication of history of peripheral revascularization at right lower limb | “Y” = “Yes”<br>“N” = “No”<br>“U” = “Not known” |
| 267 | revascularization_l_flag | char(1) | Indication of history of peripheral revascularization at left lower limb | “Y” = “Yes”<br>“N” = “No”<br>“U” = “Not known” |
| 256 | claudication_r_flag | char(1) | Indication of pain or discomfort at right lower limb, worsened by exercise and relieved with rest | “Y” = “Yes”<br>“N” = “No”<br>“U” = “Not known” |
| 268 | claudication_l_flag | char(1) | Indication of pain or discomfort at left lower limb, worsened by exercise and relieved with rest | “Y” = “Yes”<br>“N” = “No”<br>“U” = “Not known” |
| 257 | rest_pain_r_flag | char(1) | Indication of pain at right foot even when not walking | “Y” = “Yes”<br>“N” = “No”<br>“U” = “Not known” |
| 269 | rest_pain_l_flag | char(1) | Indication of pain at left foot even when not walking | “Y” = “Yes”<br>“N” = “No”<br>“U” = “Not known” |
| 112 | absent_foot_r_flag | char(1) | Indication of pulse abnormality of both posterior tibial and dorsalis pedis at right lower limb | “Y” = “Yes”<br>“N” = “No”<br>“U” = “Not known” |
| 113 | absent_foot_l_flag | char(1) | Indication of pulse abnormality of both posterior tibial and dorsalis pedis at left lower limb | “Y” = “Yes”<br>“N” = “No”<br>“U” = “Not known” |
| 134 | ankle_s_bp_r | integer | Ankle systolic blood pressure of right lower limb | |
| 135 | ankle_s_bp_l | integer | Ankle systolic blood pressure of left lower limb | |
| 258 | brachial_s_bp_r | integer | Brachial systolic blood pressure of right upper limb | |
| 270 | brachial_s_bp_l | integer | Brachial systolic blood pressure of left upper limb | |
| 259 | abi_r | float | Ankle-Brachial Index of right lower limb (Ratio of blood pressure in lower limb to blood pressure in upper limb) | |

| | | | | |
|---|---|---|---|---|
| 271 | abi_l | float | Ankle-Brachial Index of left lower limb (Ratio of blood pressure in lower limb to blood pressure in upper limb) | |
| 106 | numbness_r_flag | char(1) | Indication of numbness at right foot [15] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 107 | numbness_l_flag | char(1) | Indication of numbness at left foot [15] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 120 | ljm_r_flag | char(1) | Indication of loss of right foot joint mobility [15] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 121 | ljm_l_flag | char(1) | Indication of loss of left foot joint mobility [15] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 126 | amputation_r_flag | char(1) | Indication of previous ulcer/amputation at right foot [15] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 127 | amputation_l_flag | char(1) | Indication of previous ulcer/amputation at left foot [15] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 130 | temp_r_cd | char(1) | Temperature of right foot [15] | "1" = "Normal"<br>"2" = "Abnormal" |
| 131 | temp_l_cd | char(1) | Temperature of left foot [15] | "1" = "Normal"<br>"2" = "Abnormal" |
| 132 | ankle_jerks_r_cd | char(1) | Indication of presence of ankle jerks at right foot [15] | "1" = "Present"<br>"2" = "Present with reinforcement"<br>"3" = "Absent" |
| 133 | ankle_jerks_l_cd | char(1) | Indication of presence of ankle jerks at left foot [15] | "1" = "Present"<br>"2" = "Present with reinforcement"<br>"3" = "Absent" |
| 136 | pvd_flag | char(1) | Indication of peripheral vascular disease at lower limb [15] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 137 | foot_cat_cd | char(1) | Foot risk category [15] | "1" = "Low risk"<br>"2" = "At risk"<br>"3" = "High risk" |

*[15] The data field was obsolete after 2014.*

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|---|---|---|---|---|
| 138 | echd_flag | char(1) | Indication of typical angina, ischemic heart disease confirmed with diagnostic tests, history of Myocardial Infarction, Percutaneous Transluminal Coronary Angioplasty, Coronary Artery Bypass Graft | “Y” = “Yes”<br>“N” = “No”<br>“U” = “Not known” |
| 139 | chf_flag | char(1) | Indication of shortness of breath, leg swelling and exercise intolerance with or without diagnosed with echocardiography | “Y” = “Yes”<br>“N” = “No”<br>“U” = “Not known” |
| 145 | tb_hx_flag | char(1) | Indication on whether the patient has a history of tuberculosis | “Y” = “Yes”<br>“N” = “No”<br>“U” = “Not known” |
| 146 | dialysis_flag | char(1) | Indication on whether the patient is undergoing / has undergone renal dialysis | “Y” = “Yes”<br>“N” = “No”<br>“U” = “Not known” |
| 273 | transplant_flag | char(1) | Indication on whether the patient is undergoing / has undergone renal transplant | “Y” = “Yes”<br>“N” = “No”<br>“U” = “Not known” |
| 140 | stroke_hx_flag | char(1) | Indication of history of cerebrovascular disease | “Y” = “Yes”<br>“N” = “No”<br>“U” = “Not known” |
| 141 | cva_haem_flag | char(1) | Indication of history of intracerebral haemorrhage and subarachnoid haemorrhage | “Y” = “Yes”<br>“N” = “No” |
| 142 | cva_isch_flag | char(1) | Indication of history of cerebral thrombosis | “Y” = “Yes”<br>“N” = “No” |
| 143 | cva_unk_flag | char(1) | Indication of history of stroke but not able to confirm whether it is haemorrhagic or ischaemic origin | “Y” = “Yes”<br>“N” = “No” |
| 163 | malignancy_flag | char(1) | Diagnosis of malignancy | “Y” = “Yes”<br>“N” = “No”<br>“U” = “Not known” |
| 274 | malignancy_active_flag | char(1) | Indication of active malignancy | “Y” = “Yes”<br>“N” = “No” |
| 275 | malignancy_palliative_flag | char(1) | Indication of palliative treatment for malignancy | “Y” = “Yes”<br>“N” = “No” |

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|---|---|---|---|---|
| 276 | malignancy_pasthx_flag | char(1) | Indication of history of malignancy | "Y" = "Yes"<br>"N" = "No" |
| 154 | angina_flag | char(1) | Indication of angina [16] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 155 | acs_flag | char(1) | Indication of acute coronary syndrome [16] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 156 | cabg_flag | char(1) | Indication of coronary artery bypass graft / angioplasty [16] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 157 | stroke_recover_flag | char(1) | Indication of stroke with full recovery [16] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 158 | complete_stroke_flag | char(1) | Indication of completed stroke [16] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 159 | laba_flag | char(1) | Indication of below ankle amputation [16] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 160 | laaa_flag | char(1) | Indication of above ankle amputation [16] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 161 | claudication_flag | char(1) | Indication of claudication [16] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 162 | tx_for_pvd_flag | char(1) | Indication of treatment for peripheral vascular disease (Bypass / angioplasty is done) [16] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 307 | nut_assessment_dtm | datetime year to fraction(3) | Date of diet assessment (up to month) | YYYY-MM-01 |
| 277 | nut_consis_carbo_cd | char(1) | Indication on amount of carbohydrates consistently consumed by the patient | "1" = "Good"<br>"2" = "Fair"<br>"3" = "Poor"<br>"4" = "N/A" |
| 278 | nut_carbo_regular_cd | char(1) | Indication on regular consumption of carbohydrates by the patient | "1" = "Good"<br>"2" = "Fair"<br>"3" = "Poor"<br>"4" = "N/A" |

*[16] The data field was obsolete after 2014.*

| | | | | |
|---|---|---|---|---|
| 279 | nut_meal_appropr_cd | char(1) | Indication on appropriate spacing between meals | "1" = "Good"<br>"2" = "Fair"<br>"3" = "Poor"<br>"4" = "N/A" |
| 280 | nut_low_gly_food_cd | char(1) | Indication on food consumption outside the spectrum of white bread, white rice, corn flakes, extruded breakfast cereals, glucose, maltose | "1" = "Good"<br>"2" = "Fair"<br>"3" = "Poor"<br>"4" = "N/A" |
| 281 | nut_incl_veg_fru_whole_cd | char(1) | Indication on consumption of vegetables, fruits, wholegrains | "1" = "Good"<br>"2" = "Fair"<br>"3" = "Poor"<br>"4" = "N/A" |
| 282 | nut_healthy_cook_tech_cd | char(1) | Indication on minimal use of cooking oil, salt, seasonings | "1" = "Good"<br>"2" = "Fair"<br>"3" = "Poor"<br>"4" = "N/A" |
| 283 | nut_appropr_restau_menu_cd | char(1) | Indication on appropriate selection from restaurant menu | "1" = "Good"<br>"2" = "Fair"<br>"3" = "Poor"<br>"4" = "N/A" |
| 284 | nut_use_food_label_cd | char(1) | Indication on making reference to food labels for healthful food choices | "1" = "Good"<br>"2" = "Fair"<br>"3" = "Poor"<br>"4" = "N/A" |
| 285 | nut_adjust_insulin_cd | char(1) | Indication on adjustment of insulin level to match with carbohydrate intake | "1" = "Good"<br>"2" = "Fair"<br>"3" = "Poor"<br>"4" = "N/A" |
| 286 | nut_food_appropr_sick_cd | char(1) | Indication on food selection when the patient is sick | "1" = "Good"<br>"2" = "Fair"<br>"3" = "Poor"<br>"4" = "N/A" |
| 287 | nut_food_appropr_hypogly_cd | char(1) | Indication on food selection when the patient has the feeling of hypoglycaemia | "1" = "Good"<br>"2" = "Fair"<br>"3" = "Poor"<br>"4" = "N/A" |
| 288 | nut_adjust_carbo_exer_cd | char(1) | Indication on adjustment of carbohydrates when the patient is having exercise | "1" = "Good"<br>"2" = "Fair"<br>"3" = "Poor"<br>"4" = "N/A" |
| 289 | nut_adjust_carbo_alcohol_cd | char(1) | Indication on adjustment of insulin level and carbohydrates when the patient is having alcohol | "1" = "Good"<br>"2" = "Fair"<br>"3" = "Poor"<br>"4" = "N/A" |

| | | | | |
|---|---|---|---|---|
| 291 | cmp_nutpre_energy_cd | char(1) | Energy | “1” = “As per meal plan”<br>“2” = “Inadequate”<br>“3” = “Excessive”<br>“4” = “N/A” |
| 292 | cmp_nutpre_ttlfat_cd | char(1) | Total fat | “1” = “As per meal plan”<br>“2” = “Inadequate”<br>“3” = “Excessive”<br>“4” = “N/A” |
| 293 | cmp_nutpre_satfat_cd | char(1) | Saturated fat | “1” = “As per meal plan”<br>“2” = “Inadequate”<br>“3” = “Excessive”<br>“4” = “N/A” |
| 294 | cmp_nutpre_tranfat_cd | char(1) | Trans fat | “1” = “As per meal plan”<br>“2” = “Inadequate”<br>“3” = “Excessive”<br>“4” = “N/A” |
| 295 | cmp_nutpre_cholest_cd | char(1) | Cholesterol | “1” = “As per meal plan”<br>“2” = “Inadequate”<br>“3” = “Excessive”<br>“4” = “N/A” |
| 296 | cmp_nutpre_protein_cd | char(1) | Protein | “1” = “As per meal plan”<br>“2” = “Inadequate”<br>“3” = “Excessive”<br>“4” = “N/A” |
| 297 | cmp_nutpre_carbo_cd | char(1) | Carbohydrate | “1” = “As per meal plan”<br>“2” = “Inadequate”<br>“3” = “Excessive”<br>“4” = “N/A” |
| 298 | cmp_nutpre_sugar_cd | char(1) | Sugar | “1” = “As per meal plan”<br>“2” = “Inadequate”<br>“3” = “Excessive”<br>“4” = “N/A” |
| 299 | cmp_nutpre_fibre_cd | char(1) | Fibre | “1” = “As per meal plan”<br>“2” = “Inadequate”<br>“3” = “Excessive”<br>“4” = “N/A” |
| 300 | cmp_nutpre_sodium_cd | char(1) | Sodium | “1” = “As per meal plan”<br>“2” = “Inadequate”<br>“3” = “Excessive”<br>“4” = “N/A” |

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|---|---|---|---|---|
| 301 | med_nut_dia_diet_flag | char(1) | Indication on whether the patient is assigned with diabetics diet | "Y" = "Yes"<br>"N" = "No" |
| 302 | med_nut_dia_diet_kcal | float | Diet designed for diabetic patients (kcal/day) | |
| 303 | med_nut_weight_reduce_flag | char(1) | Indication of diet designed for weight reduction | "Y" = "Yes"<br>"N" = "No" |
| 304 | med_nut_dia_lipid_low_flag | char(1) | Indication of diet designed for lowering serum lipid level | "Y" = "Yes"<br>"N" = "No" |
| 305 | med_nut_dia_stop_hyper_flag | char(1) | Indication on diet designed for better control of blood pressure | "Y" = "Yes"<br>"N" = "No" |
| 306 | med_nut_others_flag | char(1) | Indication on other types of nutrition therapy | "Y" = "Yes"<br>"N" = "No" |
| 167 | chd_flag | char(1) | Indication of typical angina, ischemic heart disease confirmed with diagnostic tests, history of myocardial infarction , percutaneous transluminal coronary angioplasty, coronary artery bypass graft | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 168 | stroke_flag | char(1) | Indication of history of cerebrovascular disease | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 316 | pad_flag | char(1) | Indication of peripheral arterial disease at lower limb | "Y" = "Yes"<br>"N" = "No"<br>"S" = "Suspected"<br>"U" = "Not known" |
| 308 | risk_ht_retin_flag | char(1) | Indication of retinal complications due to severe blood pressure | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 309 | risk_diab_retin_cd | char(1) | Indication on retinal complications due to poor control of diabetes mellitus | "1" = "No retinopathy"<br>"2" = "Non sight threatening retinopathy"<br>"3" = "Sight threatening retinopathy"<br>"4"= "Advanced eye disease"<br>"U" = "Not known" |

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|---|---|---|---|---|
| 310 | albuminuria_cd | char(1) | Albuminuria derived by deriving rules | “1” = “(A1) Normal”<br>“2” = “(A2) Microalbuminuria”<br>“3” = “(A3) Macroalbuminuria / Proteinuria”<br>“U” = “Not known” |
| 311 | mod_albumin_cd | char(1) | If the system derived result of 'Albuminuria' was 'Not known', user can override the result by manually selecting the appropriate option. | “1” = “(A1) Normal”<br>“2” = “(A2) Microalbuminuria”<br>“3” = “(A3) Macroalbuminuria / Proteinuria”<br>“U” = “Not known” |
| 312 | ckd_cd | char(1) | Chronic Kidney Disease derived by deriving rules | “1” = “G1 (Normal or high)”<br>“2” = “G2 (Mildly decreased)”<br>“3” = “G3a (Mildly to moderately decreased)”<br>“4” = “G3b (Moderately to severely decreased)”<br>“5” = “G4(Severely decreased)”<br>“6” = “G5 (Kidney failure)”<br>“U” = “Not known” |
| 313 | foot_risk_cat_cd | char(1) | Modified foot risk category according to American Diabetes Association | “0” = “no LOPS/PAD/hx of ulcer/amputation”<br>“1” = “LOPS or LOPS with deformity”<br>“2” = “PAD or PAD with LOPS”<br>“3” = “History of ulcer or amputation”<br>“U” = “Not known” |
| 314 | foot_pathology_flag | char(1) | Indication of pathology including deformity, dry skin, callus, infection, fissure, ischemic changes at lower limb(s) | “Y” = “Yes”<br>“N” = “No”<br>“U” = “Not known” |
| 315 | lops_flag | char(1) | Indication on loss of protective sensation | “Y” = “Yes”<br>“N” = “No”<br>“U” = “Not known” |

| | | | | |
|---|---|---|---|---|
| 317 | hist_ulcer_amp_flag | char(1) | Indication of history of lower limb ulcer or amputation | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 165 | nephropathy_cd | char(1) | Type of kidney disease(s) caused by damage to small blood vessels, if any [17] | "M" = "Microalbuminuria"<br>"P" = "Macroalbuminuria / proteinuria"<br>"C" = "CKD"<br>"E" = "ESRF"<br>"U" = "Not known"<br>"N" = "No"<br>"I" = "Incipient"<br>"O" = "Overt" |
| 169 | sum_smoke_flag | char(1) | Indication of smoking habit | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 170 | htn_flag | char(1) | Indication of:<br>- "SBP = 140" or "DBP = 90" for non-diabetic patients;<br>- "SBP = 130" or "DBP = 80" for diabetic patients or patient is having anti-hypertension drugs | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 184 | diabetes_cd | char(1) | Normal level for fasting blood glucose [18] | "N" = "No"<br>"T" = "Impaired glucose tolerance"<br>"I" = "Impaired fasting glucose"<br>"Y" = "Yes"<br>"U" = "Not known"<br>"D" = "Diabetes" |

*[17] The data field was obsolete after 2014.*

*[18] Normal level for fasting blood glucose should be less than 5.6. Impaired Fasting Glucose is between 5.6 and 6.9. For diabetes, fasting blood glucose is 7 or above; or that the patient is on anti-diabetic drugs or insulin treatment.*

| | | | | |
|---|---|---|---|---|
| 171 | obesity_flag | char(1) | Level of obesity [19] | "S" = "Severely obese"<br>"M" = "Moderately obese"<br>"O" = "Overweight"<br>"N" = "Optimal"<br>"D" = "Underweight"<br>"U" = "Not known" |
| 172 | central_obesity_flag | char(1) | Indication on normal waist circumference [20] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 173 | dyslipidaemia_flag | char(1) | Indication on consumption of lipid-lowering drugs;<br>OR:<br>- "LDL-C = 2.6 mmol/l", "TG = 1.7 mmol/l"; OR<br>- "HDL-C < 1.0 mmol/l" for male / "HDL-C < 1.3 mmol/l" for female | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 166 | foot_problem_cd | char(1) | Overall risk level of foot problems [21] | "1" = "Low risk"<br>"2" = "At risk"<br>"3" = "High risk"<br>"U" = "Not known" |
| 186 | risk_level_cd | char(1) | Overall risk level after assessment | "1" = "Low risk"<br>"2" = "Medium risk"<br>"3" = "High risk"<br>"4" = "Very high risk"<br>"5" = "Not known" |
| 318 | dietitian_everatt_flag | char(1) | Indication on having ever attended an appointment with a dietitian | "Y" = "Yes"<br>"N" = "No" |
| 319 | dietitian_reqref_flag | char(1) | Indication on required referral to a dietitian | "Y" = "Yes"<br>"N" = "No" |

*[19] The patient is severely obese if his/her Body Mass Index (BMI) is 32.5 or above; moderately obese if his/her BMI is between 27.5 and 32.5; overweight if his/her BMI is between 23 and 27.5; optimal if his/her BMI is between 18.5 and 23; underweight if his/her BMI is below 18.5. "Not known" is indicated if BMI is blank.*

*[20] The waist circumference is normal if it is 90 cm or above for male / 80 cm or above for female. "Not known" is indicated if waist circumference is blank.*

*[21] The data field was obsolete after 2014.*

| | | | | |
|---|---|---|---|---|
| 320 | podiatrist_everatt_flag | char(1) | Indication on having ever attended an appointment with a podiatrist | "Y" = "Yes"<br>"N" = "No" |
| 321 | podiatrist_reqref_flag | char(1) | Indication on required referral to a podiatrist | "Y" = "Yes"<br>"N" = "No" |
| 322 | nurse_everatt_flag | char(1) | Indication on having ever attended an appointment with a nurse educator | "Y" = "Yes"<br>"N" = "No" |
| 323 | nurse_reqref_flag | char(1) | Indication on required referral to a nurse educator | "Y" = "Yes"<br>"N" = "No" |
| 324 | ophthalmologist_everatt_flag | char(1) | Indication on having ever attended an appointment with an Ophthalmologist | "Y" = "Yes"<br>"N" = "No" |
| 325 | ophthalmologist_reqref_flag | char(1) | Indication on required referral to an Ophthalmologist | "Y" = "Yes"<br>"N" = "No" |
| 147 | dietitian_attd_flag | char(1) | Indication on any attendance of appointment(s) with a Dietitian [22] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 148 | dm_nurse_attd_flag | char(1) | Indication on any attendance of appointment(s) with a Diabetes Mellitus nurse [22] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 149 | podiatrist_attd_flag | char(1) | Indication on any attendance of appointment(s) with a podiatrist [22] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 150 | oph_flag | char(1) | Indication on any attendance of appointment(s) with an ophthalmologist [22] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 151 | podiatrist_need_flag | char(1) | Indication on any referral to a podiatrist needed [22] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 152 | oph_need_flag | char(1) | Indication on any referral to an ophthalmologist needed [22] | "Y" = "Yes"<br>"N" = "No"<br>"U" = "Not known" |
| 153 | share_care_cd | char(1) | Indication on enrolment status in Shared Care Programme [22] | "1" = "Already enrolled"<br>"2" = "To be enrolled"<br>"3" = "Not eligible" |

*[22] The data field was obsolete after 2014.*

| | | | | |
|---|---|---|---|---|
| 185 | pep_flag | char(1) | Indication on enrolment status in Patient Empowerment Programme | "Y" = "Yes"<br>"N" = "No" |
| 326 | nahc_wound_flag | char(1) | Indication of wound care at nurse and allied health clinics | "Y" = "Yes"<br>"N" = "No" |
| 327 | pscc_flag | char(1) | Indication of Patient Support Call Centre | "Y" = "Yes"<br>"N" = "No" |
| 328 | sccp_flag | char(1) | Indication of Smoking Counseling and Cessation Programme | "Y" = "Yes"<br>"N" = "No" |
| 329 | nahx_flag | char(1) | Indication of Nurse and Allied Health Clinics Programme [23] | "Y" = "Yes"<br>"N" = "No" |
| 330 | scp_flag | char(1) | Indication of Shared Care Programme [23] | "Y" = "Yes"<br>"N" = "No" |
| 333 | pseudo_record_key | varchar(24) | Masked record key | |
| 334 | pseudo_episode_key | varchar(24) | Masked episode number | |
| 335 | pseudo_patient_key | varchar(24) | Masked unique key assigned to each individual patient | |
| 501 | diff_in_hour_assessment_dtm | integer | Time difference (in hour) between the date of first metabolic risk assessment and the timestamp of the first appointment / admission [24] | A numeric value |

*[23] The data field was obsolete after September 2015 due to cessation of Programme.*

*[24] "diff_in_hour_assessment_dtm" is only available for EXPERT service.*

## Dataset id: D03

## Dataset name: Family Medicine - Patient Disease[25]

## File name: fm_pat_disease.dat.*

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | result_date | date | Date of the patient disease result (up to month) | YYYY-MM-01 |
| 501 | diff_in_hour_result_dtm | integer | Time difference (in hour) between the date of the patient disease result and the timestamp of the first appointment / admission[26] | A numeric value |
| 2 | element_id | integer | Disease element | Refer to "Family Medicine - Mapping of Disease Element" |
| 3 | result | varchar(30) | Structured result of the disease element | Example: “99 [U/L]”, “Positive” |
| 4 | pseudo_record_key | varchar(64) | Masked record key of the patient disease element | |
| 5 | pseudo_patient_key | varchar(24) | Masked unique key assigned to each individual patient | |

*[25] Family Medicine - Patient Disease dataset is only available for EXPERT service.*

*[26] “diff_in_hour_result_date” is only available for EXPERT service.*

## Dataset id: D04

## Dataset name: Family Medicine – Consultation Note ICPC[27]

## File name: fm_cn_problem.dat.*

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 6 | src_create_dtm | datetime year to fraction(3) | Creation date and time of the ICPC code (up to month) | YYYY-MM-01 |
| 501 | diff_in_hour_creation_dtm | integer | Time difference (in hour) between the creation date time and the timestamp of the first appointment / admission [28] | A numeric value |
| 1 | icpc | varchar(4) | FM Module: Symptom or Illness (ICPC Code) | Refer to "Mapping of ICPC Code" |
| 4 | pseudo_record_key | varchar(152) | Masked record key | |
| 5 | pseudo_patient_key | varchar(24) | Masked unique key assigned to each individual patient | |

*[27] Family Medicine – Consultation Note ICPC dataset is only available for EXPERT service.*

*[28] "diff_in_hour_creation_dtm" is only available for EXPERT service.*

## Dataset id: D05

## Dataset name: Immunization[29]

## File name: immu_data.dat.*

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | injection_dtm | datetime year to fraction(3) | Injection date (up to month) | YYYY-MM-01 |
| 501 | diff_in_hour_injection_dtm | integer | Time difference (in hours) between the injection date time and the timestamp of the first appointment / admission[30] | A numeric value |
| 2 | injection_cd | integer | Injection Code | Refer to "Immunization - Mapping of Vaccine" |
| 3 | status_cd | integer | Status of the vaccination | Refer to "Immunization - Mapping of Status" |
| 5 | pseudo_record_key | varchar(24) | Masked record key | |
| 6 | pseudo_patient_key | varchar(24) | Masked unique key assigned to each individual patient | |

*[29] Immunization dataset is only available for EXPERT service.*

*[30] "diff_in_hour_injection_dtm" is only available for EXPERT service.*

## Dataset id: D06

## Dataset name: Diagnosis Progress

## File name: mdl_dx_progress.dat.*

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | reference_dtm | datetime year to fraction(3) | Reference date of the diagnosis record (up to month) [31] | YYYY-MM-01 |
| 501 | diff_in_hour_reference_dtm | integer | Time difference (in hour) between the reference date time and the timestamp of the first appointment / admission[32] | A numeric value |
| 2 | term_id | integer | Diagnosis Term ID | Refer to "Diagnosis Progress – Mapping of ICD-10" |
| 3 | final_rank | smallint | Indication on whether the diagnosis is a “principal diagnosis” | “1” = “principal diagnosis”<br>Non “1” = “not principal diagnosis” |
| 4 | src_case_type | char(1) | Patient Type | “I” = “IP case”<br>“O” = “OP case”<br>“A” = “A&E case” |
| 5 | status_cd | char(1) | Status Code | “A” = “Active”<br>“I” = “Inactive”<br>“R” = “Resolved” |
| 6 | pseudo_record_key | varchar(44) | Masked record key | |
| 7 | pseudo_episode_key | varchar(24) | Masked episode number | |
| 8 | pseudo_patient_key | varchar(24) | Masked unique key assigned to each individual patient | |

*[31] ”Reference_dtm” is the datetime of record creation. It will be replaced by discharge datetime for inpatient episodes and/or admission datetime for A&E episodes, if available.*

*[32] “diff_in_hour_reference_dtm” is only available for EXPERT service.*

## Dataset id: D07

## Dataset name: Procedure Progress

## File name: mdl_px_progress.dat.*

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 3 | entry_dtm | datetime year to fraction(3) | Date of procedure (up to month) | YYYY-MM-01 |
| 501 | diff_in_hour_entry_dtm | integer | Time difference (in hour) between the procedure date time and the timestamp of the first appointment / admission[33] | A numeric value |
| 1 | term_id | integer | Procedure Term ID | Refer to "Procedure Progress – Mapping of ICD-9-CM" |
| 5 | pseudo_record_key | varchar(44) | Masked record key | |
| 7 | pseudo_episode_key | varchar(24) | Masked episode number | |
| 8 | pseudo_patient_key | varchar(24) | Masked unique key assigned to each individual patient | |

*[33] "diff_in_hour_entry_dtm" is only available for EXPERT service.*

## Dataset id: D08

## Dataset name: Outpatient Appointment and Attendance

## File name: opas_case_data.dat.*

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 3 | appo_dtm | datetime year to fraction(3) | Appointment date (up to month) | YYYY-MM-01 |
| 503 | diff_in_hour_appo_dtm | integer | Time difference (in hour) between the appointment date time and the timestamp of the first appointment / admission[34] | A numeric value |
| 501 | cal_appo_age_year | smallint | Age of the patient on the day of appointment [35] | |
| 9 | eis_spec_id | integer | HA-wide standardized specialty ID | Refer "Specialty Classification" |
| 11 | appo_type_ind | integer | Appointment Type | "0"= "First Attendant"<br>"1"= "Follow-up"<br>"2" ="Follow-up" |
| 8 | service_type_cd | varchar(4) | Service type | Refer to "Mapping of Service Type" |
| 6 | pay_cd_group | varchar(10) | Paycode (EIS) | "PA" = "Public Assistance"<br>"OTH"= "Non-Public Assistance" |
| 502 | district_board | varchar(15) | District of residence | Refer to "Mapping of District of Residence" |
| 12 | pseudo_record_key | varchar(24) | Masked record key | |
| 13 | pseudo_episode_key | varchar(24) | Masked episode number | |
| 14 | pseudo_patient_key | varchar(24) | Masked unique key assigned to each individual patient | |

*[34] "diff_in_hour_appo_dtm" is only available for EXPERT service.*

*[35] "cal_appo_age_year" is derived by dividing the difference between the "appo_dtm" and the patient's date of birth (in month) by a constant "365.25" and rounded down to the nearest whole number.*

## Dataset id: D09

## Dataset name: Accident and Emergency Department Attendance

## File name: aeis_case_data.dat.*

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | admission_dtm | datetime year to fraction(3) | Accident and Emergency attendance date (up to month) | YYYY-MM-01 |
| 503 | diff_in_hour_admission_dtm | integer | Time difference (in hour) between the attendance date time and the timestamp of the first appointment / admission[36] | A numeric value |
| 11 | dischg_dtm | datetime year to fraction(3) | Accident and Emergency discharge date (up to month) [37] | YYYY-MM-01 |
| 504 | diff_in_hour_dischg_dtm | integer | Time difference (in hour) between the discharge date time and the timestamp of the first appointment / admission[38] | A numeric value |
| 501 | cal_adm_age_year | smallint | Age on attendance (year) [39] | |
| 3 | triage_cat_cd | char(1) | Triage category | Refer to "Accident and Emergency Department Attendance - Mapping of Triage Category" |

*[36] "diff_in_hour_admission_dtm" is only available for EXPERT service.*

*[37] "dischg_dtm" is only available for EXPERT service.*

*[38] "diff_in_hour_dischg_dtm" is only available for EXPERT service.*

*[39] "cal_adm_age_year" is derived by dividing the difference between the "admission_dtm" and the patient's date of birth (in month) by a constant "365.25" and rounded down to the nearest whole number.*

| | | | | |
|---|---|---|---|---|
| 505 | dischg_cd | smallint | Type of case during discharge[40] | "1" = "Admit to own hospital"<br>"2" = "Admit to other HA hospitals"<br>"3" = "Home"<br>"4 "= "Death"<br>"5" = "Other" |
| 502 | district_board | varchar(15) | District of residence | Refer to "Mapping of District of Residence" |
| 6 | pseudo_record_key | varchar(24) | Masked record key | |
| 7 | pseudo_episode_key | varchar(24) | Masked episode number | |
| 8 | pseudo_patient_key | varchar(24) | Masked unique key assigned to each individual patient | |

*[40] "dischg_cd" is only available for EXPERT service.*

## Dataset id: D10

## Dataset name: Episode Miscellaneous Information [41]

## File name: map_case_misc_info.dat.*

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 501 | elderly_home_flag | char(1) | Indicator for Elderly Home | "Y" |
| 2 | pseudo_episode_key | varchar(24) | Masked episode number | |

*[41] Episode Miscellaneous Information dataset is only available for EXPERT service.*

## Dataset id: D12

## Dataset name: Inpatient Admission, Transfer & Discharge – Episode's Transaction

## File name: ipas_case_data1.dat.*

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 4 | admission_dtm | datetime year to fraction(3) | Admission date (up to month) | YYYY-MM-01 |
| 503 | diff_in_hour_admission_dtm | integer | Time difference (in hour) between the admission date time and the timestamp of the first appointment / admission[42] | A numeric value |
| 6 | dischg_dtm | datetime year to fraction(3) | Discharge Date (up to month) | YYYY-MM-01 |
| 13 | total_los | smallint | Length of stay (in days) of discharge episode | |
| 2 | mvt_count | integer | A sequence number that is incremental in accordance with the patient movement within an episode [43] | |
| 501 | cal_adm_age_year | smallint | Age of the patient on the day of appointment [44] | |
| 5 | source_ind | char(1) | Admission source indicator | "3" – A&E referral<br>"4" – OPD referral<br>"5" – Transferred in<br>"8" – New born<br>"0" – Others |
| 15 | eis_spec_id | smallint | HA-wide standardized specialty ID | Refer to Specialty Classification |
| 16 | eis_sub_spec_id | smallint | HA-wide standardized sub-specialty ID | Refer to "Specialty Classification" |
| 11 | care_categy_cd | varchar(20) | Ward Care Type | "AG" = "ACUTE"<br>"CONV" = "Conv/Reh"<br>"INF" = "Infirmary"<br>"OTH" = "Others" |

*[42] "diff_in_hour_admission_dtm" is only available for EXPERT service.*

*[43] "mvt_count" is only available for EXPERT service.*

*[44] "cal_adm_age_year" is derived by dividing the difference between the "admission_dtm" and the patient's date of birth (in month) by a constant "365.25" and rounded down to the nearest whole number.*

| | | | | |
|---|---|---|---|---|
| 12 | sub_care_categy_cd | varchar(20) | Ward Sub Care Type of the ACUTE ward care type | "GEN" = "General"<br>"CONV" = "Conv/Reh"<br>"INF" = "Infirmary"<br>"ICU" = "Intensive Care Unit"<br>"HDU" = "High Dependency Unit"<br>"OTH" = "Others" |
| 7 | dischg_cd | char(1) | Type of case during discharge | "1" = "Transfer to other HA hospitals"<br>"2" = "Discharged home"<br>"3 "= "Death"<br>"4" = "Other" |
| 14 | type | char(1) | Type of episode's transaction[45] | "A" = "Admission"<br>"D" = "Discharge"<br>"T" = "Transfer in"<br>"O" = "Transfer out" |
| 502 | district_board | varchar(15) | District of residence | Refer to "Mapping of District of Residence" |
| 17 | pseudo_record_key | varchar(64) | Masked record key | |
| 18 | pseudo_episode_key | varchar(24) | Masked episode number | |
| 19 | pseudo_patient_key | varchar(24) | Masked unique key assigned to each individual patient | |

*[45] "Transfer in" and "Transfer out" types are only available for EXPERT service.*

## Dataset id: D13

## Dataset name: Radiology Appointment [46]

## File name: ris2_appt_data.dat.*

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | exam_cd | varchar(15) | Standardized Examination Code scheduled in the examination | Example: “1301”, “4101” |
| 2 | exam_cd_lookup_key | varchar(44) | Masked reference key to Examination Details | Refer to “Mapping of Examination Details” |
| 4 | accession_no | varchar(24) | Unique identifier of the set of image study | |
| 6 | pseudo_record_key | varchar(64) | Masked record key | |
| 7 | pseudo_patient_key | varchar(24) | Masked unique key assigned to each individual patient | |

*[46] Radiology Appointment dataset is only available for EXPERT service.*

## Dataset id: D14

## Dataset name: Radiology Examination Result

## File name: ris2_exam_result_data.dat.*

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 5 | exam_dtm | datetime year to fraction(3) | Date of patient registration for taking radiology examination (up to month) | YYYY-MM-01 |
| 502 | diff_in_hour_exam_dtm | integer | Time difference (in hour) between the exam date time and the timestamp of the first appointment / admission[47] | A numeric value |
| 1 | exam_cd | varchar(15) | Standardized code of radiology examination | Example: “1301”, “4101” |
| 2 | exam_cd_lookup_key | varchar(44) | Masked reference key for looking up examination details | Refer to “Mapping of Examination Details” |
| 3 | attd_status_cd | char(2) | Examination status code | ""“AT” = “Attended the appointment section” “OTH” = “Others” |
| 501 | cal_exam_age_yr | smallint | Age of patient on the day of appointment [48] | |
| 8 | accession_no | varchar(24) | Masked unique identifier of the set of image study [49] | Refer to “Radiology Image (DICOM)” |
| 11 | pseudo_record_key | varchar(44) | Masked record key to identify the radiology examination [50] | Refer to “Radiology Exam Report (TEXT)” |
| 12 | pseudo_episode_key | varchar(24) | Masked episode number assigned to the patient upon an examination request | |
| 13 | pseudo_episode_key2 | varchar(24) | Masked episode number assigned to the patient upon attendance for the examination [51] | |
| 14 | pseudo_patient_key | varchar(24) | Masked unique key assigned to each individual patient | |

*[47] “diff_in_hour_exam_dtm” is only available for EXPERT service.*

*[48] “cal_exam_age_yr” is derived by dividing the difference between the “exam_dtm” and the patient’s date of birth (in month) by a constant “365.25” and rounded down to the nearest whole number.*

*[49] “accession_no” is only available for EXPERT service.*

*[50] “pseudo_record_key” is only available for EXPERT service.*

*[51] Data is available from 2016 onwards.*

## Dataset id:D15

## Dataset name: Medications - Dispensed Prescription

## File name: phs_presc_data.dat.*

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | disp_dtm | datetime year to fraction(3) | Dispensing date of drug items (up to month) | YYYY-MM-01 |
| 501 | diff_in_hour_dispense_dtm | integer | Time difference (in hour) between the dispensing date time and the timestamp of the first appointment / admission[52] | A numeric value |
| 2 | item_cd | varchar(6) | Drug item code defined by HA Pharmacy Office [53] | Refer to "Mapping of Drug Item Code" |
| 3 | bnfno_p | varchar(11) | BNF Therapeutic Classification (code) of the drug item code | Refer to "Medications - Mapping of British National Formulary (BNF) Code" |
| 20 | presc_start_dtm | datetime year to fraction(3) | Prescription start date (up to month) | YYYY-MM-01 |
| 21 | presc_end_dtm | datetime year to fraction(3) | Prescription end date (up to month) | YYYY-MM-01 |
| 22 | presc_duration_day | smallint | The duration (in days) of a drug item dispensed | |
| 4 | phs_tran_status | char(1) | The transaction status of a dispensed record [54] | "I" = "Issued"<br>"V" = "Vetted"<br>"N" = "Keep record only" |
| 14 | route | varchar(7) | The route form of the drug intake by patient | Refer to "Medications - Mapping of Route" |
| 9 | disp_qty_abs | float | Total dispensed quantity of drug item | Any positive value |
| 5 | dosage_cd | varchar(6) | The dosage level of a drug item for each intake by the patient [55] | Example: "100 MG", "10" |

*[52] "diff_in_hour_dispense_dtm" is only available for EXPERT service.*

*[53] "Dressing", "Consumable" and "Medical Gas" are excluded.*

*[54] Suspended records are excluded. "phs_tran_status" is only available for EXPERT service.*

*[55] If 'dosage_cd' is blank, please refer to 'dosage_value' and 'disp_dos_unit' for dosage data.*

| | | | | |
|---|---|---|---|---|
| 12 | mod_baseunit | varchar(4) | Base unit of drug item | Example: “GRAM”, “TAB” |
| 15 | dosage_value | decimal(19,4) | Dosage Value | |
| 16 | disp_dos_unit | varchar(15) | Dosage Unit | Example: “TABLET(S)”, “ML” |
| 6 | freq_cd | varchar(7) | The intake frequency of drug item by the patient | Refer to “Mapping of Frequency” and “Mapping of Daily Frequency” |
| 17 | supp_freq_cd | varchar(5) | Supplementary frequency code | Refer to “Mapping of Supplementary Frequency” |
| 18 | supp_freq_input_1 | integer | Input for supplementary frequency 1 | |
| 19 | supp_freq_input_2 | integer | Input for supplementary frequency 2 | |
| 25 | multi_dose_ind | smallint | Indicator for PRN flag [56] | “0” = “NO”<br>“1” = “YES” |
| 29 | pseudo_record_key | varchar(44) | Masked record key | Refer to “Medications - Multiple Dosage” |
| 30 | pseudo_patient_key | varchar(24) | Masked unique key assigned to each individual patient | |
| 33 | pseudo_episode_key | varchar(24) | Masked episode number | |

*[56] When ‘multi_dose_ind’ = “1”, please refer to the ‘Medication – Multiple Dosage’ dataset for the ‘PRN’ flag.*

## Dataset id: D16

## Dataset name: Medications - Multiple Dosage [57]

## File name: phs_multi_dose.dat.*

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | prn_flag | char(1) | PRN flag indicator | "Y" = "Yes"<br>"N" = "No" |
| 4 | pseudo_record_key | varchar(44) | Masked record key | |

*[57] Medications - Multiple Dosage dataset is not available for EXPERT service.*

**Dataset id:** **D17, D18, D19**

**Dataset name:** **Laboratory Result - Chemical Pathology [58]**

**Laboratory Result - Hematology & Immunology [58]**

**Laboratory Result - Microbiology & Virology [58]**

**File name:** **lis_cps_result_data.dat.***

**lis_hms_result_data.dat.***

**lis_mbs_result_data.dat.***

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | reference_dtm | datetime year to fraction(3) | Reference date for laboratory result (up to month) [59] | YYYY-MM-01 |
| 502 | diff_in_hour_reference_dtm | integer | Time difference (in hour) between the reference date time and the timestamp of the first appointment / admission[60] | A numeric value |
| 501 | sequence_no | integer | A sequence order number by reference datetime among all laboratory result datasets[61] | |
| 2 | entity_id | integer | Identifier for laboratory test | Refer to "Mapping of Entity" |
| 4 | result_str | varchar(100) | Laboratory test result | Example: "0.1 L", "99 H" |
| 5 | result_flagging | varchar(5) | LIS Result Flagging | "L" = "Low"<br>"H" = "High" |

[58].*Laboratory Result - Chemical Pathology, Hematology & Immunology, and Microbiology & Virology datasets are not available for EXPERT service.*

[59] *"reference_dtm" is the datetime of specimen collection. If specimen collection datetime is not available, it will be replaced by specimen acknowledgement datetime. If specimen acknowledgement date time is not available, it will be replaced by specimen registration datetime.*

*[60] "diff_in_hour_reference_dtm" is only available for EXPERT service.*

*[61] "sequence_no" is the sequence order number assigned to the laboratory result according to its reference datetime (up to time level) among all laboratory result datasets viz. 'Laboratory Result - Chemical Pathology', 'Laboratory Result - Hematology & Immunology', 'Laboratory Result - Microbiology & Virology', 'Anatomical Pathology - Specific SNOMED Result' and 'Laboratory result (text)'.*

| | | | | |
|---|---|---|---|---|
| 8 | test_unit | varchar(50) | Test unit | Example: “mmol/L”, “x10^9/L” |
| 9 | derived_numeric | decimal(11,4) | Numeric result extracted from result string [62] | |
| 11 | si_unit | varchar(50) | SI unit | Example: “mmol/L”, “x10^9/L” |
| 12 | si_numeric | decimal(11,4) | Numeric result in SI unit | |
| 13 | pseudo_record_key1 | varchar(44) | Masked LIS request number | |
| 17 | pseudo_episode_key | varchar(24) | Masked episode number | |
| 18 | pseudo_patient_key | varchar(24) | Masked unique key assigned to each individual patient | |

*[62] Data is available from 2016 onwards.*

## Dataset id: D20

## Dataset name: Laboratory Result - Bacterial Culture and Sensitivity Test[63]

## File name: lis_culture_result_data.dat.*

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | reference_dtm | datetime year to fraction(3) | Reference date for laboratory result (up to month) [64] | YYYY-MM-01 |
| 502 | diff_in_hour_reference_dtm | integer | Time difference (in hour) between the reference date time and the timestamp of the first appointment / admission[65] | A numeric value |
| 501 | sequence_no | integer | A sequence order number by reference datetime among all laboratory result datasets [66] | |
| 2 | entity_id | integer | Identifier for laboratory test | Refer to "Mapping of Entity" |
| 3 | organism_entity_id | integer | Identifier for organism | Refer to "Mapping of Entity" |
| 4 | antibiotic_entity_id | integer | Identifier for antibiotic | Refer to "Mapping of Entity" |
| 5 | specimen_entity_id | integer | Identifier for specimen (MBS and VRS only) | Refer to "Mapping of Entity" |
| 6 | sensitivity_cd | varchar(2) | Standardized sensitivity code | Refer to "Mapping of Sensitivity Code" |
| 8 | pseudo_record_key1 | varchar(44) | Masked LIS request number | |
| 10 | organism_seq_id | smallint | Sequence number of organism found | |

*[63] Laboratory Result - Bacterial Culture and Sensitivity Test dataset is not available for EXPERT service.*

*[64] "reference_dtm" is the datetime of specimen collection. If specimen collection datetime is not available, it will be replaced by specimen acknowledgement datetime. If specimen acknowledgement date time is not available, it will be replaced by specimen registration datetime.*

*[65] "diff_in_hour_reference_dtm" is only available for EXPERT service.*

*[66] "sequence_no" is the sequence order number assigned to the laboratory result according to its reference datetime (up to time level) among all laboratory result datasets viz. 'Laboratory Result - Chemical Pathology', 'Laboratory Result - Hematology & Immunology', 'Laboratory Result - Microbiology & Virology', 'Anatomical Pathology - Specific SNOMED Result' and 'Laboratory result (text)'*

| | | | | |
|---|---|---|---|---|
| 11 | orgranism_sub_seq_id | smallint | Sequence number of sub organism found | |
| 13 | pseudo_episode_key | varchar(24) | Masked episode number | |
| 14 | pseudo_patient_key | varchar(24) | Masked unique key assigned to each individual patient | |

## Dataset id: D21

## Dataset name: Anatomical Pathology - Specific SNOMED Result [67]

## File name: lis_snomed_result.dat.*

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | reference_dtm | datetime year to fraction(3) | Reference date for laboratory result (up to month) [68] | YYYY-MM-01 |
| 502 | diff_in_hour_reference_dtm | integer | Time difference (in hour) between the reference date time and the timestamp of the first appointment / admission[69] | A numeric value |
| 501 | sequence_no | integer | A sequence order number by reference datetime among all laboratory result datasets [70] | |
| 2 | topology_term_id_lookup_key1 | varchar(24) | First lookup key for topology Term ID | Refer to Mapping of "Anatomical Pathology - Mapping of Term Id" |
| 3 | topology_term_id_lookup_key2 | varchar(24) | Second lookup key for topology Term ID [71] | Refer to Mapping of "Anatomical Pathology - Mapping of Term Id" |
| 4 | topology_term_id | integer | Identifier to look up topology result [72] | Refer to "Mapping of IAMS Concept" |

*[67] Anatomical Pathology - Specific SNOMED Result dataset is only available for EXPERT service.*

*[68] "reference_dtm" is the datetime of specimen collection. If specimen collection datetime is not available, it will be replaced by specimen acknowledgement datetime. If specimen acknowledgement date time is not available, it will be replaced by specimen registration datetime.*

*[69] "diff_in_hour_reference_dtm" is only available for EXPERT service.*

*[70] "sequence_no" is the sequence order number assigned to the laboratory result according to its reference datetime (up to time level) among all laboratory result datasets viz. 'Laboratory Result - Chemical Pathology', 'Laboratory Result - Hematology & Immunology', 'Laboratory Result - Microbiology & Virology', 'Anatomical Pathology - Specific SNOMED Result' and 'Laboratory result (text)'.*

*[71] "Topology_term_id_lookup_key2" is useful when ""topology_term_id_lookup_key1" is empty.*

*[72] "Topology_term_id" can be blank before pathology data standardization project in 2017. Please refer to "topology_term_id_lookup_key1" and/or "topology_term_id_lookup_key2" if necessary.*

| | | | | |
|---|---|---|---|---|
| 5 | morphology_term_id_lookup_key1 | varchar(24) | First lookup key for morphology Term ID | Refer to Mapping of "Anatomical Pathology - Mapping of Term Id" |
| 6 | morphology_term_id_lookup_key2 | varchar(24) | Second lookup key for morphology Term ID [73] | Refer to Mapping of "Anatomical Pathology - Mapping of Term Id" |
| 7 | morphology_term_id | integer | Identifier to look up morphology result [74] | Refer to "Mapping of IAMS Concept" |
| 8 | pseudo_record_key1 | varchar(44) | Masked LIS request number | |
| 10 | pseudo_episode_key | varchar(24) | Masked episode number | |
| 11 | pseudo_patient_key | varchar(24) | Masked unique key assigned to each individual patient | |

*[73] "Morphology_term_id_lookup_key2" is useful when ""morphology_term_id_lookup_key1" is empty.*

*[74] "Morphology_term_id" can be blank before pathology data standardization project in 2017. Please refer to "morphology_term_id_lookup_key1" and/or "morphology_term_id_lookup_key2" if necessary.*

## Dataset id: D23

## Dataset name: Obstetrics [75]

## File name: obcis_mother_case_data.dat.*

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | deliver_dtm | datetime year to fraction(3) | The date of baby delivery (up to year) | YYYY-01-01 |
| 501 | diff_in_hour_deliver_dtm | integer | Time difference (in hour) between the deliver date time and the timestamp of the first appointment / admission | A numeric value |
| 3 | maturity | smallint | The duration between conception and birth (in completed weeks) | 20-44 |
| 12 | parity_no | smallint | The number of pregnancies completed, regardless of livebirth or stillbirth. | 0 -99 |
| 16 | lookup_key_of_mode_of_delivery | varchar(44) | Masked look up key to the Mode of delivery of the baby | Refer to "Mapping of Mode of Delivery" |
| 22 | birth_wgt | integer | Weight of the baby (in grams) at birth | 300-7000 |
| 23 | apgar_1 | smallint | Score of the baby assessed in terms of "Appearance, Pulse, Grimace, Activity, and Respiration" at 1 minute after birth | 0-10,<br>99 for unknown |
| 24 | apgar_5 | smallint | Score of the baby assessed in terms of "Appearance, Pulse, Grimace, Activity, and Respiration" at 5 minute after birth | 0-10,<br>99 for unknown |
| 25 | pseudo_episode_key | varchar(24) | Masked episode number | |
| 26 | pseudo_patient_key | varchar(24) | Masked unique key assigned to each individual patient | |
| 27 | pseudo_record_key | varchar(24) | Masked record key | |

*[75] Obstetrics dataset is only available for EXPERT service. The data is available from 2002 onwards in DCL.*

## Dataset id: T01

## Dataset name: Radiology Exam Report (TEXT) [76]

## File name: ris2_exam_text.dat*

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | rpt_text | text | Body text of the examination report | |
| 2 | pseudo_record_key | varchar(44) | Masked record key of radiology examination record | |

*[76] Radiology Exam Report (TEXT) dataset is only available for EXPERT service.*

## Dataset id: T02

## Dataset name: Laboratory Result (TEXT) [77]

## File name: lis_free_text_result.dat.*

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | reference_dtm | datetime year to fraction(3) | Reference date for laboratory result (up to month) [78] | YYYY-MM-01 |
| 502 | diff_in_hour_reference_dtm | integer | Time difference (in hour) between the reference date time and the timestamp of the first appointment / admission | A numeric value |
| 501 | sequence_no | integer | A sequence order number by reference datetime among all laboratory result datasets [79] | |
| 2 | entity_id | integer | Identifier for laboratory test | Refer to "Mapping of Entity" |
| 3 | sub_entity_id | integer | Identifier for sub-result section of laboratory test | Refer to "Mapping of Entity" |
| 4 | report_type_id | smallint | Report Type ID | "1" = "Amended Report<br>"2" = "Supplementary Amended Report"<br>"3" = "Final Report"<br>"4" = "Supplementary Final Report" |
| 6 | pseudo_record_key1 | varchar(44) | Masked LIS request number | |
| 10 | pseudo_episode_key | varchar(24) | Masked episode number | |
| 11 | pseudo_patient_key | varchar(24) | Masked unique key assigned to each individual patient | |
| 12 | result_varchar | text | Body text of the laboratory result (for those up to 255 characters) | |

*[77] Laboratory Result (TEXT) dataset is only available for EXPERT service.*

*[78] "reference_dtm" is the datetime of specimen collection. If specimen collection datetime is not available, it will be replaced by specimen acknowledgement datetime. If specimen acknowledgement datetime is not available, it will be replaced by specimen registration datetime.*

*[79] "sequence_no" is the sequence order number assigned to the laboratory result according to its reference datetime (up to time level) among all laboratory result datasets viz. 'Laboratory Result - Chemical Pathology', 'Laboratory Result - Hematology & Immunology', 'Laboratory Result - Microbiology & Virology', 'Anatomical Pathology - Specific SNOMED Result' and 'Laboratory result (text)'.*

| | | | | |
|---|---|---|---|---|
| 13 | text_result | text | Body text of the laboratory result (for those more than 255 characters) | |

## Dataset id: T03

## Dataset name: Clinical & Discharge Note (TEXT) [80]

## File name: clinical_note.dat*

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | create_dtm | datetime year to fraction(3) | Record creation date time (up to month) | YYYY-MM-01 |
| 501 | diff_in_hour_create_dtm | integer | Time difference (in hour) between the reference date time and the timestamp of the first appointment / admission | A numeric value |
| 2 | note_type | char(1) | Document type | "C" = "Clinical Note"<br>"D" = "Discharge Note" |
| 6 | consult_text | text | Body text of the clinical documentation | |
| 3 | pseudo_record_key | varchar(64) | Masked record key | |
| 4 | pseudo_episode_key | varchar(24) | Masked episode number | |
| 5 | pseudo_patient_key | varchar(24) | Masked unique key assigned to each individual patient | |

*[80] Clinical & Discharge Note (TEXT) dataset is only available for EXPERT service.*

## Dataset id: X01

## Dataset name: Radiology Image (DICOM) [81][82][83][84]

## File name: N/A (Refer to the data structure as below)

| # | Data Field | Data Type | Data Description | Data Structure |
|---|---|---|---|---|
| 1 | pseudo_patient_key | varchar(24) | Masked unique key assigned to each individual patient | Folder Name |
| 2 | accession_no | varchar(44) | Masked unique identifier of the set of image study | Sub Folder Name |
| 3 | fullpathname_image | text | Full path name of the binary image file | Full Path Name of Image File |

*[81] Radiology Image (DICOM) dataset is only available for EXPERT service.*

*[82] In terms of lossless images, DCL can provide 2 years HA radiology images and 1 year HA radiology CT thin-cut images as of the data extraction date. For lossy images: DCL can provide HA radiology images.*

*[83] Images with burned in contents in pixel data or sensitive contents may not be provided.*

*[84] Image data (in DICOM format) extraction time varies according to the required volume, and the data will be provided in phases throughout the project period.*

# Mapping Tables (M01 – M28)

## Table id: M01

## Table name: Family Medicine - Mapping of Disease Element

## File name: map_fm_disease_element.dat

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | element_id | integer | Element ID | |
| 2 | element_name | varchar(30) | Element name | Example: “HDL-Cholesterol”, “Red Blood Cell (RBC)” |
| 3 | unit | varchar(20) | Unit of the disease element [*85*] | Example: “mmol/L”, “x10^12/L” |

## Table id: M02

## Table name: Family Medicine – Mapping of ICPC Code

## File name: map_icpc.dat

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | icpc | char(4) | FM Module: Symptom or Illness (ICPC Code) | Example: “K86”, “T90” |
| 2 | icpc_desc | varchar(100) | FM Module: Symptom or Illness (ICPC Description) | Example: “HYPERTENSION UNCOMPLICATED”, “DIABETES NON-INSULIN DEPENDENT” |

## Table id: M03

## Table name: Immunization – Mapping of Status

## File name: map_immu_status.dat

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | injection_code | Integer | Injection Code | Refer to "Mapping of Vaccine" |

*[85] The unit of the disease element is not a standardized unit which could be an abbreviated description.*

| | | | | |
|---|---|---|---|---|
| 2 | status_code | Integer | Status Code | |
| 3 | description | varchar(20) | Sequence of Dose | Example: “1st Dose”, “2nd Dose” |

## Table id: M04

## Table name: Immunization – Mapping of Vaccine

## File name: map_immu_vaccine.dat

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | injection_code | integer | Injection Code | |
| 2 | description | varchar(35) | Description of the vaccine | Example: “Seasonal Influenza 2019/2020”, “Hepatitis B” |

## Table id: M06

## Table name: Procedure Progress - Mapping of Term Id

## File name: map_icd9_proc.dat

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | term_id | integer | Procedure Term ID | |
| 2 | full_desc | varchar(255) | HKCTT full description of Procedure | Example: “Haemodialysis for chronic care”, “Cardiotocography” |

## Table id: M07

## Table name: Accident and Emergency Department Attendance – Mapping of Triage Category

## File name: map_ae_triage_cat.dat

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | triage_cat_cd | char(1) | Triage Category | |

| | | | | |
|---|---|---|---|---|
| 2 | triage_cat_desc | varchar(30) | Triage Category Description | "1" = "Critical"<br>"2" = "Emergent"<br>"3" = "Urgent"<br>"4" = "Semi-urgent"<br>"5" = "Non-urgent" |

## Table id: M08

## Table name: Specialty Classification

## File name: dim_unit_m.dat

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | unit_id | smallint | Unit ID | |
| 3 | unit_full_name | varchar(50) | Unit full name | Example: "Medicine", "Rehabilitation" |

## Table id: M09

## Table name: Radiology - Mapping of Examination Details

## File name: map_ris_exam.dat

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | exam_cd_lookup_key | varchar(44) | Masked reference key to link up with examination details | |
| 2 | ris_exam_desc | varchar(40) | Description of the examination | Example: "Abdomen", "Elbow" |
| 3 | ris_exam_cat1 | varchar(10) | Examination Category | "S1" = "General Radiography"<br>"S2" = "Fluoro. Exam. +- Contrast"<br>"S3" = "Ultrasonography"<br>"S4" = "Computed Tomography"<br>"S5" = "Breast Imaging"<br>"S6" = "Angiographic Exam. and I.R."<br>"S7" = "Non-Vascular Invasive & IR Pro"<br>"S8" = "Magnetic Resonance Imaging"<br>"S9" = "Nuclear Medicine"<br>Empty = "unknown" |

## Table id: M10

## Dataset name: Medications - Mapping of Drug Item Code

## File name: phs_drugs.dat

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | Itemcode | varchar(6) | Drug item code defined by HA Pharmacy Office | Example: “PARA01”, “PIPE08” |
| 2 | drugname | varchar(59) | Drug name | Example: “PARACETAMOL”, “PIPERACILLIN + TAZOBACTAM” |
| 3 | tradename_n | char(20) | Trade name | Example: “PANADOL”, “TAZOCIN” |
| 4 | formcode_n | char(3) | Form code | Example: “TAB”, “INJ” |
| 5 | strength_n | varchar(59) | Strength of the item | Example: “500MG”, “4.5G” |

## Table id: M11

## Table name: Medications - Mapping of Frequency

## File name: phs_freq.dat

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | freq_code | varchar(7) | Frequency Code | Example: “8AM”, “6H” |
| 2 | eng_txt | varchar(42) | Frequency Description | Example: “AT 8 A.M.”, “EVERY SIX HOURS” |

## Table id: M12

## Table name: Medications - Mapping of Daily Frequency

## File name: phs_daily_freq.dat

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | freq_cd | varchar(5) | Frequency Code | Example: “77”, “43” |

| | | | | |
|---|---|---|---|---|
| 2 | freq_desc | varchar(80) | Frequency Description | Example: “ONCE PER DAY”, “EVERY__HOUR(S)” |

## Table id: M13

## Table name: Medications - Mapping of Supplementary Frequency

## File name: phs_supp_freq.dat

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | freq_cd | varchar(5) | Supplementary frequency code | Example: “10”, “23” |
| 2 | freq_desc | varchar(132) | Supplementary frequency description | Example: “EVERY TUESDAY”, “__DOSE(S) PER DAY” |

## Table id: M14

## Table name: Medications - Mapping of Route

## File name: phs_route.dat

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | route | varchar(7) | Route Code | Example: “INJ”, “PO” |
| 2 | route_desc | varchar(12) | Route Description | Example: “INJECTION”, “ORAL” |

## Table id: M15

## Table name: Medications - Mapping of British National Formulary (BNF) Code

## File name: phs_bnfde.dat

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 1 | bnf_no | varchar(11) | British Nation Formulary Code | Example: “3.9.1”, “9.6.3” |
| 2 | bnf_desc | varchar(80) | Description | Example: “COUGH SUPPRESSANTS”, “VITAMIN C” |

## Table id: M16

## Table name: Mapping of Entity

## File name: entity_id.dat

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | entity_id | integer | Identifier for laboratory test | |
| 2 | entity_desc | varchar(255) | Description of the identifier for laboratory test | Example: “Haemoglobin, Blood”, “WBC” |

## Table id: M17

## Table name: Bacterial Culture and Sensitivity Test – Mapping of Sensitivity Code

## File name: code_sensitivity.dat

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | sensitivity_cd | varchar(10) | Sensitivity code | Example: “P”, “N” |
| 2 | sensitivity | varchar(80) | Sensitivity description | Example: “Positive”, “Negative” |

## Table id: M18

## Table name: Mapping of IAMS Entity Concept

## File name: iams_entity_concept.dat

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | entity_id | integer | Identifier for laboratory test | |

| | | | | |
|---|---|---|---|---|
| 2 | term_id | integer | Identifier for laboratory test in HKCTT | Refer to “Mapping of IAMS Concept” |

## Table id: M19

## Dataset name: Mapping of IAMS Concept

## File name: iams_concept.dat

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | term_id | integer | Identifier for laboratory test in HKCTT | |
| 2 | full_desc | varchar(255) | Description of Term ID | Example: “Hemoglobin [Mass/volume] in Blood”, “Diabetes mellitus” |
| 3 | nature | varchar(20) | Nature of IAMS concept | Example: “Lab. Test”, “Dx” |

## Table id: M20

## Table name: Anatomical Pathology - Mapping of Term Id

## File name: ap_operation_list_master.dat

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | snomed_term_id_lookup_key | varchar(24) | Lookup key for topology or morphology Term ID | |
| 2 | term_id | integer | Term ID for topology or morphology | Refer to “Mapping of IAMS Concept” |

## Table id: M21

## Table name: Mapping of District of Residence

## File name: map_pmi_district.dat

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 1 | district_board | varchar(15) | 18 Board District | Example: “CENTRAL & WEST.”, “KOWLOON CITY” |
| 2 | district_area | varchar(50) | Area of Board District | Example: “HONG KONG”, “KOWLOON” |

## Table id: M22

## Table name: Mapping of Service Type

## File name: map_service_type.dat

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | service_type_cd | varchar(4) | Service Type Code | Example: “S”, “CGAT” |
| 2 | eis_desc | varchar(150) | Description | Example: “SOP - single specialty clinic”, “Community Geriatric Assessment Team” |

## Table id: M23

## Table name: Diagnosis Progress - Mapping of ICD-10

## File name: map_icd10_diag.dat

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | term_id | integer | Diagnosis Term ID | |
| 2 | icd10_cd | char(7) | ICD10 Code | Example: “E14”, “I10” |
| 3 | full_desc | varchar(255) | HKCTT full description of Diagnosis | Example: “Diabetes mellitus”, “Hypertension” |

## Table id: M28

## Table name: Mapping of Mode of Delivery

## File name: map_obcis_icd9.dat

| # | Data Field | Data Type | Data Description | Permissible Value |
|---|---|---|---|---|
| 1 | lookup_key_of_mode_of_delivery | varchar(44) | Masked look up key to the Mode of Delivery | |
| 2 | short_desc | varchar(50) | Mode of delivery | Example: “NSD”, “Vacuum extraction” |

# Data Product (S01 – S14, C01 – C11)

## Product id: S01

## Product name: Chronic Heart Failure (CHF)

| Dataset | Included in Data Product |
|---|---|
| Structured | D01 to D23 |
| Textual | N/A |
| Image | N/A |

## Product definition:

Chronic Heart Failure patients were included by coded Chronic Heart Failure principal/secondary diagnosis (i.e. ICD9-CM and ICPC2) in A&E/IP/DP/SOPC or GOPC/FMSC.

**Coded CHF Diagnosis (ICD9-CM)**

| Setting | ICD9-CM Code | Description |
|---|---|---|
| A&E / IP / DP / SOPC | 422.x | Acute Myocarditis |
| | 428.x | Heart Failure |
| | 425.x | Cardiomyopathy |
| | 785.51 | Cardiogenic Shock |
| | 398.91 | Rheumatic Heart Failure (Congestive) |
| | 402.01 | Malignant Hypertensive Heart Disease with Congestive Heart failure |
| | 402.11 | Benign Hypertensive Heart Disease with Congestive Heart failure |
| | 402.91 | Unspecified Hypertensive Heart Disease with Congestive heart Failure |
| | 404.01 | Hypertensive Heart and Renal Disease, Malignant, with Congestive heart Failure |
| | 404.03 | Hypertensive Heart and Renal Disease, Malignant, with Congestive heart Failure and Renal Failure |
| | 404.11 | Hypertensive Heart and Renal Disease, Benign, with Congestive Heart failure |
| | 404.13 | Hypertensive Heart and Renal Disease, Benign, with Congestive Heart failure and Renal Failure |
| | 404.90 | Hypertensive Heart and Renal Disease, Unspecified, without Mention of Congestive Heart Failure or Renal Failure |
| | 404.91 | Hypertensive Heart and Renal Disease, Unspecified, with Congestive heart Failure |
| | 404.93 | Hypertensive Heart and Renal Disease, Unspecified, with Congestive heart Failure and Renal Failure |
| | 414.8x | Other Specified Forms of Chronic Ischemic Heart Disease / ischemic cardiomyopathy |
| | 277.39 | Hereditary cardiac amyloidosis |
| | 429.4x | Functional disturbances following cardiac surgery |
| | 429.0x | Myocarditis, unspecified |
| | 429.83 | Takotsubo syndrome/ Stress induced cardiomyopathy |

| | | |
|---|---|---|
| | 425.7x | Nutritional and metabolic cardiomyopathy |

**Coded CHF Diagnosis (ICPC2)**

| Setting | ICPC2 Code | Description |
|---|---|---|
| GOPC / FMSC | K77 | Heart Failure |

# Product id: S02

# Product name: Chronic Kidney Disease (CKD) Stage 3A, 3B, 4 & 5

| Dataset | Included in Data Product |
|---|---|
| Structured | D01 to D23 |
| Textual | N/A |
| Image | N/A |

## Product definition:

CKD patients were included by coded an index creatinine pre-defined reading (Day 0) with eGFR and ≥1 confirmatory creatinine pre-defined reading with eGFR between Days 90 – 180.

**General Principle**

1) Staging Definition:
   - Based on two confirmatory eGFR reading:
     - Index reading (Day 0)
     - Confirmatory reading (Day 90 - 180)

2) eGFR Calculation for data before 2018 (MDRD Equation)
   - $175 \times (\text{Creatinine} / 88.4)^{-1.154} \times (\text{Age})^{-0.203} \times (0.742 \text{ if female}) \times (1.210 \text{ if black})$
   - Creatinine in µmol/L (88.4 µmol/L = 1 mg/dL)
   - Assuming all HA patients are non-black

3) eGFR Calculation for data from 2018 onwards (CKD-EPI Equation)
   - $141 \times \min(Scr/\kappa,1)^{\alpha} \times \max(Scr/\kappa,1)^{-1.209} \times 0.993^{Age} \times (1.018 \text{ if female}) \times (1.159 \text{ if black})$
   - Scr is serum creatinine (mg/dL), κ is 0.7 for females and 0.9 for males, α is -0.329 for females
   - Assuming all HA patients are non-black

**CKD Patient Staging Definition**

| CKD Patient Staging | Index Reading | Confirmatory Reading |
|---|---|---|
| Stage 5 (eGFR <15) | eGFR <15 (Day 0) | ≥1 reading eGFR <15 (Day 90–180) |
| Stage 4 (eGFR 15 – 29) | eGFR ≥15 and <30 (Day 0) | ≥1 reading eGFR <30 (Day 90–180) |
| Stage 3B (eGFR 30 – 44) | eGFR ≥30 and <45 (Day 0) | ≥1 reading eGFR <45 (Day 90–180) |
| Stage 3A (eGFR 45 – 59) | eGFR ≥45 and <60 (Day 0) | ≥1 reading eGFR <60 (Day 90–180) |

## Product id: S03

## Product name: Chronic Obstructive Pulmonary Disease (COPD)

| Dataset | Included in Data Product |
|---|---|
| Structured | D01 to D23 |
| Textual | N/A |
| Image | N/A |

## Product definition:

COPD patients (aged ≥40) were included by coded COPD diagnosis (principal/secondary) in IP/DP/SOPC or GOPC/FMSC.

**Coded COPD Diagnosis (ICD9-CM)**

| Setting | ICD9-CM Code | Description |
|---|---|---|
| IP / DP / SOPC | 491.x<br><br>Excludes<br>491.8 | Chronic bronchitis |
| | 492.x<br><br>Excludes<br>492.0,<br>492.8 | Emphysema |
| | 496 | Chronic obstructive lung disease, NOS |

**Coded COPD Diagnosis (ICPC2)**

| Setting | ICPC2 Code | Description |
|---|---|---|
| GOPC / FMSC | R79 | Chronic bronchitis |
| | R95 | COPD |

## Product id: S04

## Product name: Coronary Heart Disease (CHD)

| Dataset | Included in Data Product |
|---|---|
| Structured | D01 to D23 |
| Textual | N/A |
| Image | N/A |

## Product definition:

Coronary Heart Disease were included by having hospitalization with coded CHD principal/secondary diagnosis or having antiplatelets drugs from OPD with nitrates prescribed in the past 5 years.

**Coded CHD Diagnosis (ICD9-CM)**

| Setting | ICD9-CM Code | Description |
|---|---|---|
| IP / DP | 410.x | Acute myocardial infarction |
| | 411.x | Other acute/subacute ischemic heart disease |
| | 412.x | Old myocardial infarction |
| | 413.x | Angina pectoris |
| | 414.x | Chronic ischemic heart disease |

**Antiplatelets Drugs (Drug Name)**

| Setting | Drug Name |
|---|---|
| OPD MED / PAE specialty (includes outpatient clinics under SOPC, GOPC, FMSC, CGAT, CVMO, GDH, and MOE records) | Aspirin/Plavix |
| | Nitrate |

## Product id: S05

## Product name: Dementia

| Dataset | Included in Data Product |
|---|---|
| Structured | D01 to D23 |
| Textual | N/A |
| Image | N/A |

## Product definition:

Dementia patients were included by coded Dementia diagnosis code in (IP-PSY/SOP-PSY/PDH) or (IP/SOP) or (GOP) or dementia drugs.

**Coded Dementia Diagnosis (ICD10)**

| Setting | ICD10 Code | Description |
|---|---|---|
| IP-PSY / SOP-PSY / PDH | F00.xx | Dementia in Alzheimer disease |
| | F01.xx | Vascular dementia |
| | F02.xx | Dementia in other diseases classified elsewhere |
| | F03.xx | Unspecified dementia |
| | G30.xx | Alzheimer disease |
| | A81.0 | Creutzfeldt-Jakob disease |
| | F05.1 | Delirium superimposed on dementia |
| | F06.8 | Other specified mental disorders due to brain damage and dysfunction and to physical disease |

**Coded Dementia Diagnosis (ICD9-CM)**

| Setting | ICD9-CM Code | Description |
|---|---|---|
| IP / SOP (all specialties, except PSY) | 046.1 | Jakob-Creutzfeldt disease |
| | 049.9 | Dementia related to viral encephalitis |
| | 086.1 | Dementia related to Chagas' disease |
| | 086.5 | Dementia related to African trypanosomiasis |
| | 090.40 | Dementia paralytica juvenilis |
| | 094.1 | Dementia in neurosyphilis |
| | 239.9 | Dementia related to neoplasia |
| | 244.9 | Dementia related to hypothyroidism |
| | 265.2 | Dementia related to niacin deficiency |
| | 266.2 | Dementia related to vitamin B12 deficiency |
| | 275.1 | Dementia related to hepatoenticular degeneration |
| | 275.4 | Dementia related to hypercalcemia |

| | | |
|---|---|---|
| | 290.0 | Senile dementia, uncomplicated |
| | 290.1 | Presenile dementia |
| | 290.10 | Presenile dementia, uncomplicated |
| | 290.11 | Presenile dementia with delirium |
| | 290.12 | Presenile dementia with delusional features |
| | 290.13 | Presenile dementia with depressive feature |
| | 290.2 | Senile dementia with delusional or depressive features |
| | 290.20 | Senile dementia with delusional feature |
| | 290.21 | Senile dementia with depressive feature |
| | 290.3 | Senile dementia with delirium |
| | 290.4 | Arteriosclerotic dementia |
| | 290.40 | Vascular dementia, uncomplicated |
| | 290.41 | Vascular dementia with delirium |
| | 290.42 | Vascular dementia with delusion |
| | 290.43 | Vascular dementia with depressed mood |
| | 290.8 | Dementia in Alzheimer's disease atypical or mixed type |
| | 290.9 | Dementia in Alzheimer's disease |
| | 294.1 | Dementia in other condition |
| | 294.8 | Dementia, organic brain syndrome |
| | 298.9 | Dementia |
| | 330.1 | Dementia related to cerebral lipidosis |
| | 331.0 | Alzheimer's disease |
| | 331.3 | Dementia related to normal pressure hydrocephalus |
| | 340 | Dementia related to multiple sclerosis |
| | 345.90 | Dementia related to epilepsy |
| | 348.1 | Dementia related to cerebral anoxia |
| | 348.8 | Other conditions of brain |
| | 446.0 | Dementia related to polyarteritis nodosa |
| | 586 | Uraemic dementia |
| | 648.40 | Dementia for maternal care |
| | 710.0 | Dementia related to systemic lupus erythematosus |
| | 977.9 | Dementia related to drug intoxication |
| | 989.9 | Dementia related to nonmedicinal substance intoxication |

**Coded Dementia Diagnosis (ICPC2)**

| Setting | ICPC2 Code | Description |
|---|---|---|
| GOP | P70 | Dementia |

**Dementia Drugs (Drug Name)**

| Setting | Drug Name |
|---|---|
| IP / SOP / PDH | Donepezil |
| | Rivastigmine |
| | Galantamine |
| | Memantine |
| M&G patients<br>(i.e. IP-MED / SOP-MED patients prescribed ≥12 weeks +/- prn manner) | Quetiapine |
| | Risperidone |
| | Haloperidol |
| | Trazodone |

## Product id: S06

## Product name: Diabetes Mellitus (DM)

| Dataset | Included in Data Product |
|---|---|
| Structured | D01 to D23 |
| Textual | N/A |
| Image | N/A |

## Product definition:

Diabetes Mellitus patients were included by having DM drugs from SOPC/GOPC/FMSC or with coded DM diagnosis in GOPC/FMSC.

**DM Drugs (BNF Category)**

| Setting | BNF Category | Description |
|---|---|---|
| GOPC / SOPC / FMSC | 6.1.1.1 | Short-acting insulins |
| | 6.1.1.2 | Intermediate and long-acting insulins |
| | 6.1.2.1 | Sulfonylureas |
| | 6.1.2.2 | Biguanides |
| | 6.1.2.3 | Other antidiabetic drugs |

**Coded DM Diagnosis (ICPC2)**

| Setting | ICPC2 Code | Description |
|---|---|---|
| FMSC / SOPC | T89 | Diabetes insulin dependent |
| | T90 | Diabetes non-insulin dependent |

## Product id: S07

## Product name: Glaucoma

| Dataset | Included in Data Product |
|---|---|
| Structured | D01 to D23 |
| Textual | N/A |
| Image | N/A |

## Product definition:

Glaucoma patients were included by having Glaucoma drugs in IPDP/SOPC/FMSC/GOPC or coded Glaucoma diagnosis in IPDP/SOPC or Glaucoma-related procedure.

**Glaucoma Drugs (BNF Category)**

| Setting | BNF Category | Description |
|---|---|---|
| IPDP / GOPC / SOPC / FMSC | 11.6 | Treatment of glaucoma<br><br>Excludes the following drug items:<br>Acetazolamide,<br>Physostigmine eyedrops,<br>Adrenaline eyedrops,<br>Dichlorphenamide |

**Coded Glaucoma Diagnosis (ICD9-CM)**

| Setting | ICD9-CM Code | Description |
|---|---|---|
| IPDP / SOPC | 365.x | Glaucoma |

**Glaucoma Related Procedure (ICD9)**

| ICD9 Code | Description |
|---|---|
| 12.51 | Goniopuncture without goniotomy |
| 12.52 | Goniotomy without goniopuncture |
| 12.53 | Goniotomy with goniopuncture |
| 12.54 | Trabeculotomy ab externo |
| 12.55 | Cyclodialysis |
| 12.56 | Trabeculoplasty by laser |
| 12.59 | Other facilitation of intraocular circulation |
| 12.61 | Trephination of sclera with iridectomy |
| 12.62 | Thermocauterization of sclera with iridectomy |

| | |
|---|---|
| 12.63 | Iridencleisis and iridotasis |
| 12.64 | Trabeculotomy ab externo |
| 12.65 | Other scleral fistulization with iridectomy |
| 12.66 | Postoperative revision of scleral fistulization procedure |
| 12.67 | Management of postoperative hypotony/fistula using tamponade device |
| 12.69 | Other scleral fistulizing procedure |
| 12.71 | Cyclodiathermy |
| 12.72 | Cyclocryotherapy |
| 12.73 | Cyclophotocoagulation |
| 12.74 | Diminution of ciliary body, not otherwise specified |
| 12.79 | Other glaucoma procedures |
| 12.89 | Other operations on sclera |
| 95.26 | Tonography, provocarive tests, and other glaucoma testing |
| 12.10 | Iridotomy by laser |
| 12.36 | Iridoplasty & coreoplasty by laser |
| 12.39 | Other iridoplasty |

## Product id: S08

## Product name: Hepatitis B Carriers

| Dataset | Included in Data Product |
|---|---|
| Structured | D01 to D23 |
| Textual | N/A |
| Image | N/A |

## Product definition:

Chronic Hepatitis B Carriers patients were included by having relevant positive lab results with/without HBV drugs or chronic HBV diagnosis code in IP/DP/SOPC or GOPC/FMSC.

**Hep-B Relevant Lab Test Result (Test Description)**

| Lab Test | Test Result |
|---|---|
| HBsAg | Any positive value |

**Coded Hep-B Diagnosis (ICD9-CM)**

| Setting | ICD9-CM Code | Description |
|---|---|---|
| Any HA setting | 070.22 | Chronic viral hepatitis B with hepatic coma |
| | 070.23 | Chronic viral hepatitis B with hepatic coma and hepatitis delta |
| | 070.32 | Chronic viral hepatitis B infection |
| | 070.33 | Chronic viral hepatitis B infection with hepatitis delta |
| | V02.61 | Viral hepatitis B carrier |

**Hep-B Drugs (Drug Name)**

| Setting | Drug Name |
|---|---|
| Any HA setting | Lamivudine* |
| | Telbivudine<br>(also licensed for HIV use) |
| | Entecavir |
| | Adefovir<br>(changed to non-formulary on 2019.04.13) |
| | Tenofovir Alafenamide* |
| | Tenofovir Disoproxil Fumurate* |
| | Pegylated interferon alfa-2a |

**Excludes HIV patients on Tenofovir/Lamivudine+Emtricitabine combinations.*

## Product id: S09

## Product name: Hip Fracture (as approximate for Osteoporosis)

| Dataset | Included in Data Product |
|---|---|
| Structured | D01 to D23 |
| Textual | N/A |
| Image | N/A |

## Product definition:

Hip Fracture patients were included by coded hip fracture principal diagnosis during hospitalization or hip fracture-related procedure code.

**Coded Hip Fracture Diagnosis (ICD9-CM)**

| Setting | ICD9-CM Code | Description |
|---|---|---|
| IP / DP | 820.x | Fracture of neck of femur |

**Hip Fracture Related Procedure (ICD9)**

| ICD9 Code | Description |
|---|---|
| 77.85 | Other partial ostectomy of femur |
| 79.05 | Closed reduction of fracture of femur without internal fixation |
| 79.15 | Closed reduction of fracture of femur with internal fixation |
| 79.25 | Open reduction of fracture of femur without internal fixation |
| 79.35 | Open reduction of fracture of femur with internal fixation |
| 81.52 | Partial hip replacement |

## Product id: S10

## Product name: Hyperlipidemia (HLD)

| Dataset | Included in Data Product |
|---|---|
| Structured | D01 to D23 |
| Textual | N/A |
| Image | N/A |

## Product definition:

Hyperlipidemia (HLD) patients were included by coded HLD diagnosis in A&E/IP/DP/SOPC or GOPC/FMSC.

**Coded HLD Diagnosis (ICD9-CM)**

| Setting | ICD9-CM Code | Description |
|---|---|---|
| A&E / IP / DP / SOPC | 272.0 | Pure hypercholesterolemia |
| | 272.1 | Pure hyperglyceridemia |
| | 272.2 | Mixed hyperlipidemia |
| | 272.3 | Hyperchylomicronemia |
| | 272.4 | Other and unspecified hyperlipidemia |

**Coded HLD Diagnosis (ICPC2)**

| Setting | ICD9-CM Code | Description |
|---|---|---|
| GOPC / FMSC | T93 | Lipid disorder |

## Product id: S11

## Product name: Hypertension (HT)

| Dataset | Included in Data Product |
|---|---|
| Structured | D01 to D23 |
| Textual | N/A |
| Image | N/A |

## Product definition:

Hypertension patients were included by having HT drugs from SOPC/GOPC/FMSC or with coded HT diagnosis in GOPC/FMSC.

**HT Drugs (BNF Category)**

| Setting | BNF Category | Description |
|---|---|---|
| GOPC | 2.2.1 | Thiazides and related diuretics |
| | 2.2.4 | Potassium sparing diuretics and compounds |
| | 2.4 | Beta-adrenoceptor blocking drugs<br><br>Excludes the following drug items:<br>Carvedilol Tablet,<br>Nadolol Tablet,<br>Pindolol Tablet,<br>Sotalol HCL Tablet,<br>Sotalol HCL Injection,<br>Sotalol HCL Syrup,<br>Propranolol HCL Tablet,<br>Propranolol HCL Injection,<br>Propranolol HCL Syrup,<br>Propranolol HCL Suspension,<br>Propranolol HCL Solution,<br>Propranolol HCL S.R. |
| | 2.5.1 | Vasodilator antihypertensive drugs |
| | 2.5.2 | Centrally-acting antihypertensive drugs |
| | 2.5.3 | Adrenergic neurone blocking drugs |
| | 2.5.4 | Alpha-adrenoceptor blocking drugs<br><br>Excludes the following drug items:<br>Prazosin (HCL) Tablet,<br>Terazosin HCL Tablet |
| | 2.5.5.1 | Angiotensin-converting enzyme inhibitors |
| | 2.5.5.2 | Angiotensin-II receptor antagonists |
| | 2.5.5.3 | Renin inhibitors |

| | | |
|---|---|---|
| | 2.6.2 | Calcium-channel blockers<br><br>Excludes the following drug items<br>Verapamil HCL Tablet,<br>Verapamil HCL Injection,<br>Verapamil HCL SR |
| FMSC | 2.2.1 | Thiazides and related diuretics |
| | 2.2.4 | Potassium sparing diuretics and compounds |
| | 2.4 | Beta-adrenoceptor blocking drugs<br><br>Excludes the following drug items:<br>Carvedilol Tablet,<br>Nadolol Tablet,<br>Pindolol Tablet,<br>Sotalol HCL Tablet,<br>Sotalol HCL Injection,<br>Sotalol HCL Syrup |
| | 2.5.1 | Vasodilator antihypertensive drugs |
| | 2.5.2 | Centrally-acting antihypertensive drugs |
| | 2.5.3 | Adrenergic neurone blocking drugs |
| | 2.5.4 | Alpha-adrenoceptor blocking drugs |
| | 2.5.5.1 | Angiotensin-converting enzyme inhibitors |
| | 2.5.5.2 | Angiotensin-II receptor antagonists |
| | 2.6.2 | Calcium-channel blockers |
| | 2.2.3 | Potassium-sparing diuretics and aldosterone antagonists<br><br>Includes only the following drug items:<br>Spironolactone Tablet,<br>Spironolactone Syrup |
| SOPC | 2.2.1 | Thiazides and related diuretics |
| | 2.2.4 | Potassium sparing diuretics and compounds |
| | 2.4 | Beta-adrenoceptor blocking drugs<br><br>Excludes the following drug items:<br>Carvedilol Tablet,<br>Nadolol Tablet,<br>Pindolol Tablet,<br>Sotalol HCL Tablet,<br>Sotalol HCL Injection,<br>Sotalol HCL Syrup |
| | 2.5.1 | Vasodilator antihypertensive drugs |
| | 2.5.2 | Centrally-acting antihypertensive drugs |
| | 2.5.3 | Adrenergic neurone blocking drugs |
| | 2.5.4 | Alpha-adrenoceptor blocking drugs |
| | 2.5.5.1 | Angiotensin-converting enzyme inhibitors |
| | 2.5.5.2 | Angiotensin-II receptor antagonists |
| | 2.5.5.3 | Renin inhibitors |

| | | |
|---|---|---|
| | 2.6.2 | Calcium-channel blockers<br><br>Excludes the following drug items<br>Verapamil HCL Tablet,<br>Verapamil HCL Injection,<br>Verapamil HCL SR |
| | N/A | Further excludes the following drug items:<br><br>Esmolol HCL Injection,<br>Esmolol HCL in NaCl (No preservative) Infusion,<br>Labetalol HCL Injection,<br>Metoprolol Tartrate Injection,<br>Propranolol HCL Injection,<br>Sotalol HCL Injection,<br>Bosentan Tablet,<br>Dihydroergotamine Mesylate Injection,<br>Hydralazine HCL Injection,<br>Iloprost Trometamol Injection,<br>Iloprost Trometamol Infusion,<br>Nitroprusside Dihydrate Sodium Injection,<br>Sildenafil (Citrate) Tablet,<br>Sildenafil (Citrate) Suspension,<br>Tolazoline HCL Injection,<br>Clonidine HCL Injection,<br>Guanfacine Monosulphate Injection,<br>Phenoxybenzamine HCL Injection,<br>Phentolamine Methanesukohonate Injection,<br>Urapidil HCL Injection,<br>Tinzaparin Injection,<br>Diltiazem HCL Injection,<br>Nimodipine 50ml Injection,<br>Verapamil HCL Injection |

**Coded HT Diagnosis (ICPC2)**

| Setting | ICPC2 Code | Description |
|---|---|---|
| FMSC / SOPC | K86 | Hypertension uncomplicated |
| | K87 | Hypertension complicated |

## Product id: S12

## Product name: Parkinsonism

| Dataset | Included in Data Product |
|---|---|
| Structured | D01 to D23 |
| Textual | N/A |
| Image | N/A |

## Product definition:

Parkinsonism patients were included by coded Parkinsonism principal/secondary diagnosis in A&E/IP/DP/SOPC or having Parkinsonism drugs in A&E/IP/DP/SOPC/FMSC/GOPC.

**Coded Parkinsonism Diagnosis (ICD9-CM)**

| Setting | ICD9-CM Code | Description |
|---|---|---|
| A&E / IP / DP / SOPC | 332.x | Parkinson's disease |
| | 333.0 | Other degenerative diseases of basal ganglia |

**Coded Parkinsonism Diagnosis (ICPC2)**

| Setting | ICPC2 Code | Description |
|---|---|---|
| GOPC / FMSC | N87 | Parkinsonism |

**Parkinsonism Drugs (BNF Category)**

| Setting | BNF Category | Description |
|---|---|---|
| A&E / IP / DP / SOPC / FMSC / GOPC | 4.9.1 | Dopaminergic drugs |
| | 4.9.2 | Dopamine receptor agonists |
| | N/A | Further excludes the following drug items:<br><br>Artane,<br>Cogentin,<br>Bromocriptine,<br>Amantadine |

## Product id: S13

## Product name: Stroke

| Dataset | Included in Data Product |
|---|---|
| Structured | D01 to D23 |
| Textual | N/A |
| Image | N/A |

## Product definition:

Stroke patients were included by coded stroke principal diagnosis and status marked as acute during hospitalization (IP/DP).

**Coded Stroke Diagnosis (ICD9-CM)**

| Setting | Ranking | ICD9-CM Code | Description |
|---|---|---|---|
| IP / DP | Principal | 430 | Subarachnoid haemorrhage, non-traumatic |
| | | 431 | Intracerebral haemorrhage, non-traumatic |
| | | 433.91 | Occlusion and stenosis of precerebral artery with cerebral infarction |
| | | 434.11 | Cerebral embolism with infarction |
| | | 434.91 | Cerebral artery occlusion with cerebral infarction |
| | | 435.0 | Basilar artery syndrome |
| | | 435.9 | Transient cerebral ischaemia |
| | | 436 | Acute cerebrovascular disease |

## Product id: S14

## Product name: Depression

| Dataset | Included in Data Product |
|---|---|
| Structured | D01 to D23 |
| Textual | N/A |
| Image | N/A |

## Product definition:

Depression patients were included by coded Depression diagnosis or diagnosis with depression related drugs prescription.

**Coded Depression Diagnosis (ICD9-CM)**

| Setting | ICD9-CM Code | Description |
|---|---|---|
| IP-MED / SOPC-MED<br><br>OR<br><br>IP-PAE/SOPC-PAE (no medication duration requirement) | 292.84 | Drug-induced organic affective syndrome |
| | 296.2 | Major depressive disorder, single episode |
| | 296.20 | Major depressive disorder, single episode, unspecified degree |
| | 296.21 | Major depressive disorder, single episode, mild degree |
| | 296.22 | Major depressive disorder, single episode, moderate degree |
| | 296.23 | Major depressive disorder, single episode, severe degree, without mention of psychotic behavior |
| | 296.24 | Major depressive disorder, single episode, severe degree, specified as with psychotic behavior |
| | 296.25 | Major depressive disorder, single episode, in partial or unspecified remission |
| | 296.26 | Major depressive disorder, single episode in fill remission |
| | 296.3 | Major depressive disorder, recurrent episode |
| | 296.30 | Major depressive disorder, recurrent episode, unspecified degree |
| | 296.31 | Major depressive disorder, recurrent episode, mild degree |
| | 296.32 | Major depressive disorder, recurrent episode, moderate degree |
| | 296.33 | Major depressive disorder, recurrent episode, severe degree, without mention of psychotic behavior |
| | 296.34 | Major depressive disorder, recurrent episode, severe degree, specified as with psychotic behavior |
| | 296.35 | Major depressive disorder, recurrent episode, in partial or unspecified remission |
| | 296.36 | Major depressive disorder, recurrent episode, in full remission |
| | 296.82 | Atypical depressive disorder |
| | 298.0 | Depressive type psychosis |
| | 300.4 | Neurotic depression |
| | 301.12 | Chronic depressive personality disorder |

| | | |
|---|---|---|
| | 311 | Depressive disorder, not elsewhere classified |

**Coded Depression Diagnosis (ICPC2)**

| Setting | ICPC2 Code | Description |
|---|---|---|
| GOPC / FMSC | P76 | Depressive disorder |

**Coded Depression Diagnosis (ICD10)**

| Setting | ICD10 Code | Description |
|---|---|---|
| IP-PSY / SOPC-PSY / PDH-PSY | F32 | Depressive episode |
| | F33 | Recurrent depressive disorder |
| | F34.1 | Dysthymia with antidepressant prescription (please see table below) |

**Antidepression Prescription (Drug Name)**

| Drug Name |
|---|
| Sertraline (HCL) tablet |
| Trimipramine Maleate tablet |
| Amitriptyline |
| Amitriptyline HCL injection |
| Fluoxetine (HCL) liquid |
| Fluoxetine (HCL) Dispersible Disp tab |
| Maprotiline HCL tablet |
| Phenazopyridine HCL tablet |
| Duloxetine (HCL) delayed release |
| Faxine (HCL) tablet |
| Escitalopram (oxalate) tablet |
| Citalopram (HBR) tablet |
| Mirtazapine Orodispersible Orodistab |
| Trazodone HCL tablet |
| Venlafaxine (HCL) tablet |
| Faxine (HCL) tablet |
| Venlafaxine (HCL) tablet |
| Mirtazapine tablet |
| Dothiepin (Dosulepin) HCL tablet |
| Mirtazapine Orodispersible Orodistab |
| Trimipramine Maleate tablet |
| Imipramine HCL tablet |
| Lithium Carbonate tablet |
| Lithium Sulphate SR |
| Mianserin HCL tablet |
| Mirtazapine Orodispersible Orodistab |

| |
|---|
| Moclobemide tablet |
| Paroxetine (HCL) CR |
| Bupropion HCL (Wellbutrin SR) S.R. |
| Mirtazapine Orodispersible Orodistab |
| Bupropion HCL (Zyban) S.R. |
| Desvenlafaxine (Succinate) ER |
| Vortioxetine (HBR) tablet |
| Sertraline (HCL) tablet |
| Trazodone HCL tablet |
| Trimipramine Maleate tablet |
| Amitriptyline HCL tablet |
| Bupropion HCL (Wellbutrin SR) S.R. |
| Bupropion (Zyban) |
| Bupropion HCL (Wellbutrin XL) ER |
| Bupropion (Wellbutrin XL) |
| Citalopram (HBR) tablet |
| Desvenlafaxine (Succinate) ER |
| Dothiepin (Dosulepin) HCL capsule |
| Dothiepin (Dosulepin) HCL tablet |
| Doxepin (HCL) capsule |
| Fluoxetine (HCL) capsule |
| Clomipramine HCL tablet |
| Fluoxetine (HCL) capsule |
| Clomipramine HCL tablet |
| Duloxetine (HCL) delayed release |
| Fluvoxamine Maleate tablet |
| Nortriptyline (HCL) tablet |
| Paroxetine (HCL) tablet |
| Doxepin (HCL) capsule |
| Escitalopram (Oxalate) tablet |
| Fluvoxamine Maleate tablet |
| Lithium Carbonate C.R. |
| Nortriptyline (HCL) tablet |
| Venlafaxine (HCL) extended release |
| Agomelatine tablet |
| Amineptine HCL tablet |
| Deanxit (or equiv) tablet |
| Flupenthixol (Dihydrochloride) tablet |
| Milnacipran HCL capsule |
| Motival (or equiv) tablet |
| Nefazodone HCL tablet |
| Oxitriptan (l-5-hydroxytryptophan) capsule |
| Protriptyline HCL tablet |
| Zodone HCL tablet |

| |
|---|
| Acipran HCL capsule |
| Milnacipran HCL capsule |
| Agomelatine tablet |
| Vortioxetine (HBR) tablet |

## Product id: C01 – C11

## Product name: Cancer Data Products

| Product id | Product Name |
|---|---|
| C01 | Colorectal Cancer |
| C02 | Breast (Female) Cancer |
| C03 | Lung Cancer |
| C04 | Prostate Cancer |
| C05 | Liver Cancer |
| C06 | Nasopharynx Cancer |
| C07 | Stomach Cancer |
| C08 | Corpus Cancer |
| C09 | Ovary Cancer |
| C10 | Cervix Cancer |
| C11 | Non-Hodgkin Lymphoma |

| Dataset | Included in Data Product |
|---|---|
| Structured | D01 to D23 |
| Textual | N/A |
| Image | N/A |

## Product definition:

For all cancer data products, the prevalence was provided by Hong Kong Cancer Registry.

**END**