![](data:application/octet-stream;base64,)

CDM Onboarding report for the Synthea database

1. Table of content
2. Execution details

| Detail | Value |
| --- | --- |
| CdmOnboarding package Version | 0.1.0 |
| CDM version | v5.3 |
| Execution date | Wed Jul 13 10:17:57 2022 |
| Execution duration | 249.17 seconds |
| Document Generation date | Wed Jul 13 10:17:57 2022 |

* 1. CDM Source Table

1. Content of the OMOP cdm\_source table

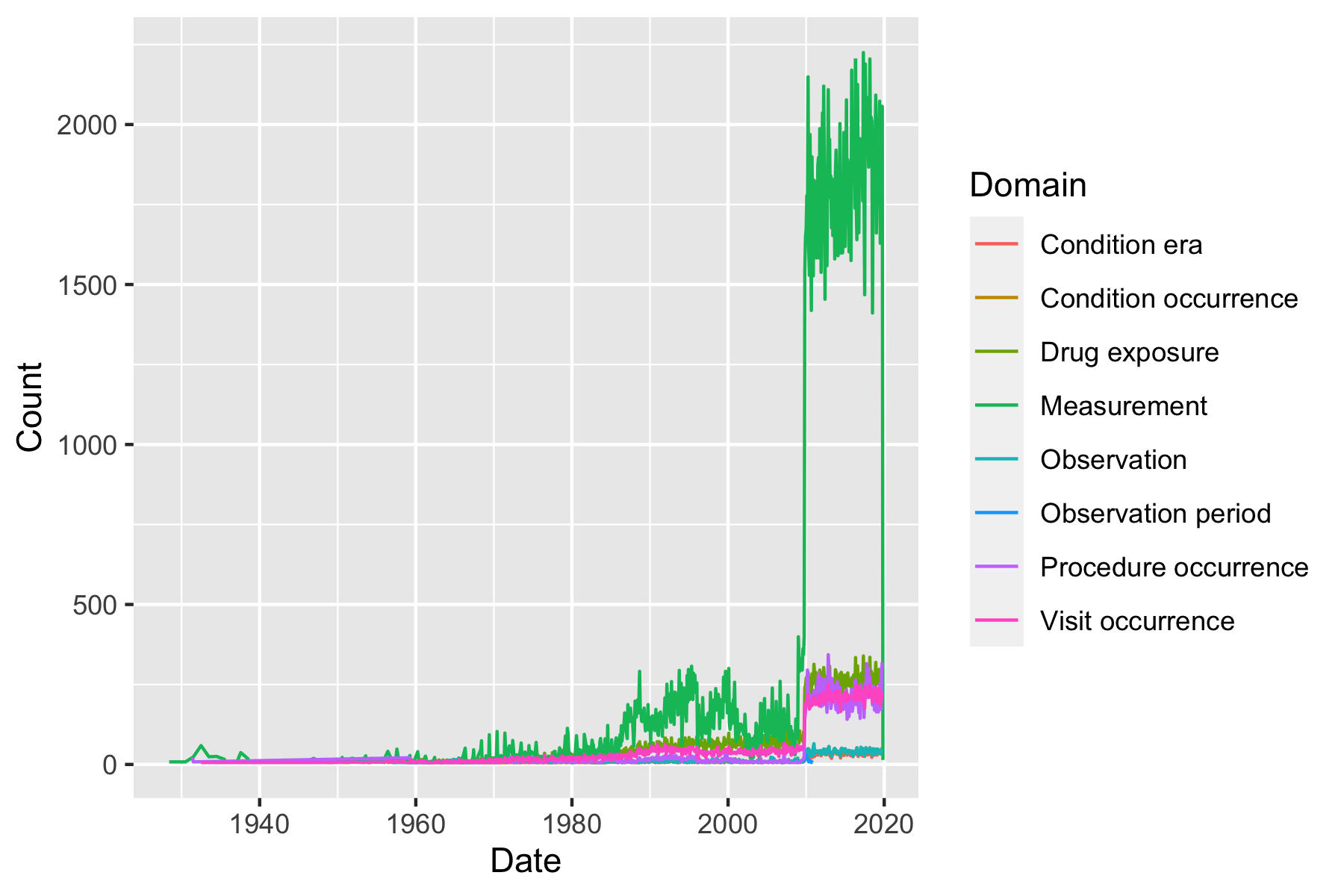
| field | 1 |
| --- | --- |
| CDM\_SOURCE\_NAME | Synthea synthetic health database |
| CDM\_SOURCE\_ABBREVIATION | Synthea |
| CDM\_HOLDER | OHDSI Community |
| SOURCE\_DESCRIPTION | SyntheaTM is a Synthetic Patient Population Simulator. The goal is to output synthetic, realistic (but not real), patient data and associated health records in a variety of formats. |
| SOURCE\_DOCUMENTATION\_REFERENCE | https://synthetichealth.github.io/synthea/ |
| CDM\_ETL\_REFERENCE | https://github.com/OHDSI/ETL-Synthea |
| SOURCE\_RELEASE\_DATE | 2022-01-18 |
| CDM\_RELEASE\_DATE | 2022-01-18 |
| CDM\_VERSION | v5.3 |
| VOCABULARY\_VERSION | v5.0 21-DEC-20 |

1. Clinical data
   1. Record counts per OMOP CDM table
2. The number of records in all clinical data tables

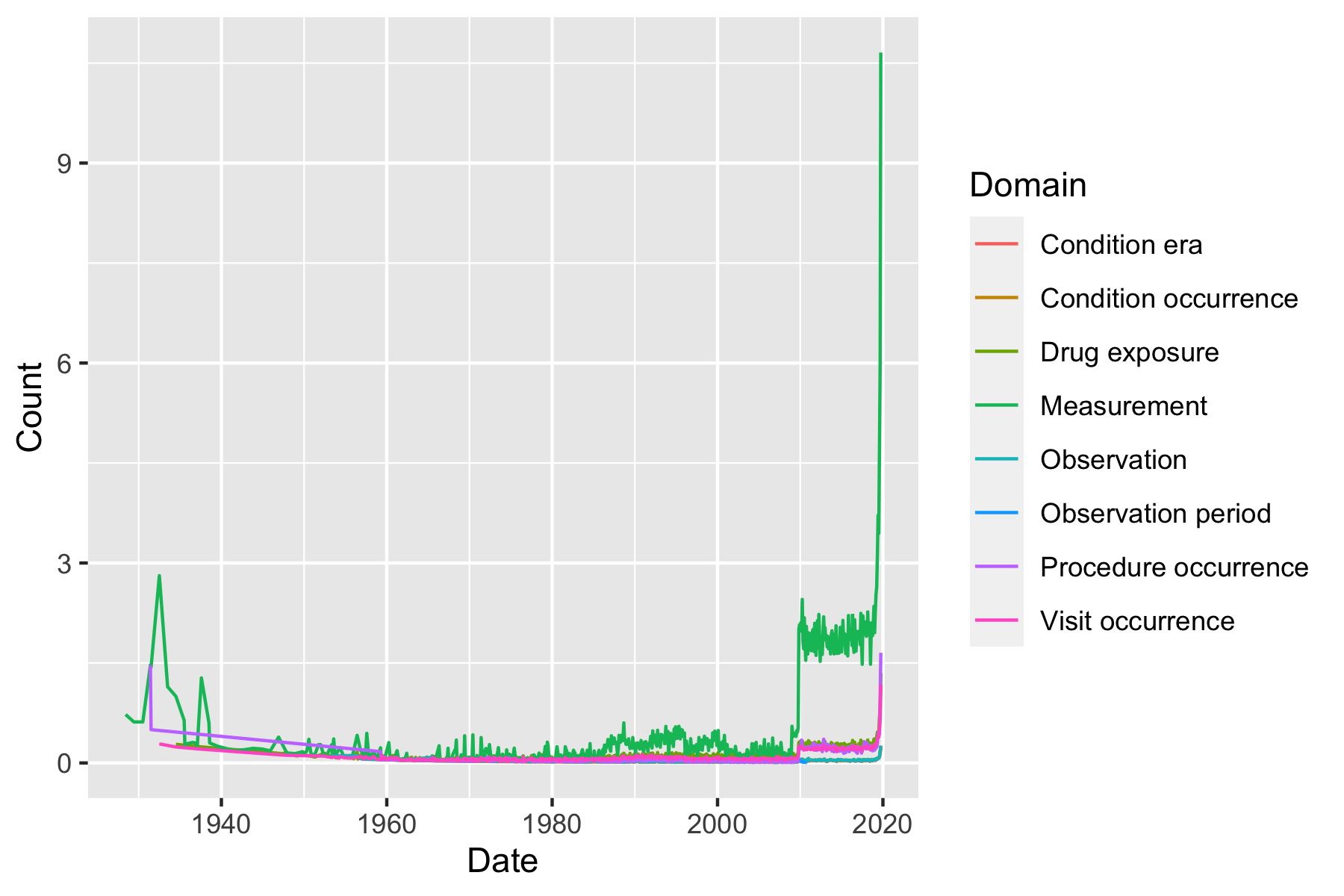
| TABLENAME | COUNT | PERSON COUNT |
| --- | --- | --- |
| measurement | 5,782,015 | 17,849 |
| observation | 3,950,788 | 17,848 |
| procedure\_occurrence | 1,161,318 | 17,810 |
| visit\_detail | 881,358 | 17,850 |
| visit\_occurrence | 881,358 | 17,850 |
| drug\_exposure | 841,954 | 17,018 |
| condition\_occurrence | 349,547 | 17,672 |
| condition\_era | 345,562 | 17,672 |
| drug\_era | 138,253 | 17,018 |
| observation\_period | 17,850 | 17,850 |
| person | 17,850 | 17,850 |
| device\_exposure | 3,247 | 1,547 |
| death | 2,755 | 2,755 |
| location | 0 | NA |
| cost | 0 | NA |
| care\_site | 0 | NA |
| note | 0 | 0 |
| payer\_plan\_period | 0 | 0 |
| provider | 0 | NA |
| specimen | 0 | 0 |
| dose\_era | 0 | 0 |

Query executed in 15.66 seconds

* 1. Data density plots



1. Total record count over time per OMOP data domain



1. Number of records per person over time per OMOP data domain
   1. Distinct concepts per person
2. The number of distinct concepts per person for all OMOP data domains

| Domain | Min | P10 | P25 | MEDIAN | P75 | P90 | Max |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Drug exposure | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Condition occurrence | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Observation | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Condition era | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Procedure occurrence | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Measurement | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

1. Vocabulary data
   1. Vocabularies

Vocabulary version: v5.0 21-DEC-20

1. The vocabularies available in the CDM with concept count. Note that this does not reflect which concepts are actually used in the clinical CDM tables. S=Standard, C=Classification and '-'=Non-standard

| ID | NAME | VERSION | S | C | - |
| --- | --- | --- | --- | --- | --- |
| ABMS | Provider Specialty (American Board of Medical Specialties) | 2018-06-26 ABMS | 87 | 0 | 11 |
| ATC | WHO Anatomic Therapeutic Chemical Classification | RxNorm 20200504 | 0 | 6,335 | 61 |
| CANCERTYPE | DIAMOND cancer type for family history | v0.1 | 0 | 0 | 1 |
| CCAM | Common Classification of Medical Acts | CCAM version 64 | 0 | 0 | 10,206 |
| CDM | OMOP Common DataModel | CDM v6.0.2 | 950 | 0 | 0 |
| CMS Place of Service | Place of Service Codes for Professional Claims (CMS) | 2009-01-11 | 51 | 0 | 9 |
| COMORBIDITIES | DIAMOND comorbidities | v0.1 | 0 | 0 | 1 |
| CPT4 | Current Procedural Terminology version 4 (AMA) | 2020 Release | 12,686 | 3,433 | 173 |
| Cancer Modifier | Diagnostic Modifiers of Cancer (OMOP) | Cancer Modifier 20201014 | 3,304 | 0 | 33 |
| Cohort Type | OMOP Cohort Type | NA | 0 | 0 | 1 |
| Concept Class | OMOP Concept Class | NA | 0 | 0 | 414 |
| Condition Status | OMOP Condition Status | NA | 22 | 0 | 0 |
| Condition Type | OMOP Condition Occurrence Type | NA | 0 | 0 | 118 |
| Cost | OMOP Cost | NA | 51 | 0 | 0 |
| Cost Type | OMOP Cost Type | NA | 0 | 0 | 8 |
| Currency | International Currency Symbol (ISO 4217) | 2008 | 180 | 0 | 0 |
| Death Type | OMOP Death Type | NA | 0 | 0 | 14 |
| Device Type | OMOP Device Type | NA | 0 | 0 | 4 |
| Domain | OMOP Domain | NA | 0 | 0 | 64 |
| Drug Type | OMOP Drug Exposure Type | NA | 0 | 0 | 16 |
| ETHNICITY | DIAMOND ethnicity | v0.1 | 0 | 0 | 1 |
| Episode | OMOP Episode | Episode 20201014 | 14 | 0 | 4 |
| Ethnicity | OMOP Ethnicity | NA | 2 | 0 | 0 |
| FAMILY\_RELATIONSHIP | DIAMOND family relationship for family history | v0.1 | 0 | 0 | 1 |
| Gender | OMOP Gender | NA | 2 | 0 | 3 |
| HCPCS | Healthcare Common Procedure Coding System (CMS) | 2020 Alpha Numeric HCPCS File | 8,434 | 0 | 2,355 |
| HES Specialty | Hospital Episode Statistics Specialty (NHS) | 2018-06-26 HES Specialty | 64 | 0 | 101 |
| HGNC | Human Gene Nomenclature (European Bioinformatics Institute) | HGNC v20200101 | 19,297 | 0 | 0 |
| HemOnc | HemOnc | HemOnc 2019-08-29 | 1,730 | 343 | 4,962 |
| ICD10 | International Classification of Diseases, Tenth Revision (WHO) | 2020 Release | 0 | 0 | 16,143 |
| ICD10CM | International Classification of Diseases, Tenth Revision, Clinical Modification (NCHS) | ICD10CM FY2020 code descriptions | 0 | 0 | 96,308 |
| ICD9CM | International Classification of Diseases, Ninth Revision, Clinical Modification, Volume 1 and 2 (NCHS) | ICD9CM v32 master descriptions | 0 | 0 | 17,564 |
| ICD9Proc | International Classification of Diseases, Ninth Revision, Clinical Modification, Volume 3 (NCHS) | ICD9CM v32 master descriptions | 2,237 | 0 | 2,420 |
| ICDO3 | International Classification of Diseases for Oncology, Third Edition (WHO) | ICDO3 SEER Site/Histology Released 06/2019 | 59,619 | 0 | 4,048 |
| IMAGING | DIAMOND Imaging | v0.1 | 0 | 0 | 1 |
| JAX | The Clinical Knowledgebase (The Jackson Laboratory) | JAX v20200824 | 0 | 0 | 5,877 |
| Korean Revenue Code | Korean Revenue Code | NA | 7 | 0 | 0 |
| LOINC | Logical Observation Identifiers Names and Codes (Regenstrief Institute) | 2.68 | 105,939 | 46,354 | 97,994 |
| Meas Type | OMOP Measurement Type | NA | 0 | 0 | 12 |
| Medicare Specialty | Medicare provider/supplier specialty codes (CMS) | 2018-06-26 Specialty | 107 | 0 | 13 |
| Metadata | Metadata | NA | 1 | 0 | 1 |
| NAACCR | Data Standards & Data Dictionary Volume II (NAACCR) | NAACCR v18 | 26,240 | 0 | 8,233 |
| NCIt | NCI Thesaurus (National Cancer Institute) | NCIt 2018-01-01 | 1,899 | 0 | 527 |
| NDC | National Drug Code (FDA and manufacturers) | NDC 20201129 | 10,617 | 0 | 1,012,135 |
| NUCC | National Uniform Claim Committee Health Care Provider Taxonomy Code Set (NUCC) | 2018-06-26 NUCC | 697 | 0 | 158 |
| None | OMOP Standardized Vocabularies | v5.0 21-DEC-20 | 0 | 0 | 1 |
| Note Type | OMOP Note Type | NA | 0 | 0 | 10 |
| OMOP Extension | OMOP Extension (OHDSI) | OMOP Extension 20201217 | 67,541 | 0 | 1 |
| OPCS4 | OPCS Classification of Interventions and Procedures version 4 (NHS) | 2019 Release | 2,372 | 0 | 8,628 |
| OSM | OpenStreetMap | OSM Release 2019-02-21 | 203,339 | 0 | 0 |
| Obs Period Type | OMOP Observation Period Type | NA | 0 | 0 | 6 |
| Observation Type | OMOP Observation Type | NA | 0 | 0 | 29 |
| PAST\_PROCEDURE | DIAMOND past procedures | v0.1 | 0 | 0 | 1 |
| PHDSC | Source of Payment Typology (PHDSC) | Version 3.0 | 158 | 0 | 4 |
| PIONEER | European Network of Excellence for Big Data in Prostate Cancer | v0.1 | 0 | 0 | 1 |
| Plan | Health Plan - contract to administer healthcare transactions by the payer, facilitated by the sponsor | NA | 11 | 0 | 0 |
| Plan Stop Reason | Plan Stop Reason - Reason for termination of the Health Plan | NA | 13 | 0 | 0 |
| Procedure Type | OMOP Procedure Occurrence Type | NA | 0 | 0 | 97 |
| Race | Race and Ethnicity Code Set (USBC) | Version 1.0 | 50 | 0 | 3 |
| Read | NHS UK Read Codes Version 2 (HSCIC) | NHS READV2 21.0.0 20160401000001 + DATAMIGRATION\_25.0.0\_20180403000001 | 0 | 0 | 108,696 |
| Relationship | OMOP Relationship | NA | 14 | 0 | 608 |
| Revenue Code | UB04/CMS1450 Revenue Codes (CMS) | 2010 Release | 538 | 0 | 0 |
| RxNorm | RxNorm (NLM) | RxNorm 20200803 | 147,283 | 36,007 | 109,381 |
| RxNorm Extension | RxNorm Extension (OHDSI) | RxNorm Extension 2020-12-10 | 1,761,116 | 0 | 274,381 |
| SNOMED | Systematic Nomenclature of Medicine - Clinical Terms (IHTSDO) | SNOMED 2020-04-01 | 540,077 | 0 | 346,408 |
| SPL | Structured Product Labeling (FDA) | NDC 20201129 | 0 | 474,244 | 14,893 |
| Sponsor | Sponsor - institution or individual financing healthcare transactions | NA | 6 | 0 | 0 |
| TNM | DIAMOND TNM staging | v0.1 | 0 | 0 | 1 |
| TREATMENT | DIAMOND treatment | v0.1 | 0 | 0 | 1 |
| Type Concept | OMOP Type Concept | NA | 78 | 0 | 0 |
| UB04 Point of Origin | UB04 Claim Source Inpatient Admission Code (CMS) | NA | 0 | 0 | 22 |
| UB04 Pri Typ of Adm | UB04 Claim Inpatient Admission Type Code (CMS) | NA | 6 | 0 | 0 |
| UB04 Pt dis status | UB04 Patient Discharge Status Code (CMS) | NA | 0 | 0 | 55 |
| UB04 Typ bill | UB04 Type of Bill - Institutional (USHIK) | NA | 4 | 0 | 294 |
| UCUM | Unified Code for Units of Measure (Regenstrief Institute) | Version 1.8.2 | 918 | 0 | 86 |
| UK Biobank | UK Biobank | version 2020-10-15 | 4,787 | 291 | 13,359 |
| US Census | United States Census Bureau | US Census 2017 Release | 13 | 0 | 0 |
| Visit | OMOP Visit | NA | 16 | 0 | 0 |
| Visit Type | OMOP Visit Type | NA | 0 | 0 | 18 |
| Vocabulary | OMOP Vocabulary | NA | 0 | 0 | 137 |
| dm+d | Dictionary of Medicines and Devices (NHS) | dm+d Version 12.0.0 20201207 | 22,927 | 0 | 358,911 |

Query executed in 6.43 seconds

* 1. Table counts

1. Shows the number of records in all vocabulary tables

| TABLENAME | COUNT |
| --- | --- |
| concept\_ancestor | 69,595,970 |
| concept\_synonym | 7,573,232 |
| concept\_class | 416 |
| concept\_relationship | 44,604,476 |
| domain | 48 |
| vocabulary | 81 |
| drug\_strength | 0 |
| concept | 6,088,528 |

Query executed in 17.05 seconds

* 1. Mapping Completeness

1. Shows the percentage of codes that are mapped to the standardized vocabularies as well as the percentage of records.

| Domain | #Codes Source | #Codes Mapped | %Codes Mapped | #Records Source | #Records Mapped | %Records Mapped |
| --- | --- | --- | --- | --- | --- | --- |
| measurement-value | 11,147 | 0 | 0.00 | 5,782,015 | 0 | 0.00 |
| observation | 95 | 95 | 100.00 | 3,950,788 | 3,950,788 | 100.00 |
| visit\_occurrence | 881,358 | 881,358 | 100.00 | 881,358 | 881,358 | 100.00 |
| measurement | 206 | 206 | 100.00 | 5,782,015 | 5,782,015 | 100.00 |
| device | 7 | 7 | 100.00 | 3,247 | 3,247 | 100.00 |
| observation-unit | 1 | 0 | 0.00 | 3,950,788 | 0 | 0.00 |
| condition | 206 | 206 | 100.00 | 349,547 | 349,547 | 100.00 |
| observation-value | 1 | 0 | 0.00 | 3,950,788 | 0 | 0.00 |
| measurement-unit | 42 | 28 | 66.67 | 5,782,015 | 4,944,595 | 85.52 |
| drug | 206 | 206 | 100.00 | 841,954 | 841,954 | 100.00 |
| procedure | 161 | 161 | 100.00 | 1,161,318 | 1,161,318 | 100.00 |

Query executed in 30.23 seconds

* 1. Drug Mappings

1. The level of the drug mappings

| CLASS | #RECORDS | #PATIENTS | #SOURCE CODES |
| --- | --- | --- | --- |
| Clinical Drug | 603,808 | 16,712 | 132 |
| Quant Clinical Drug | 103,695 | 7,362 | 42 |
| Branded Drug | 82,878 | 3,810 | 14 |
| Branded Pack | 11,105 | 3,963 | 11 |
| Branded Drug Comp | 26 | 26 | 2 |
| Clinical Drug Comp | 12,825 | 810 | 2 |
| Quant Branded Drug | 27,580 | 690 | 2 |
| Branded Drug Form | 37 | 37 | 1 |

Query executed in 9.43 seconds

* 1. Unmapped Codes

1. Omitted because no unmapped drugs were found.

Query executed in 0.24 secs

1. Omitted because no unmapped conditions were found.

Query executed in 0.29 secs

1. Omitted because no unmapped measurements were found.

Query executed in 0.16 secs

1. Omitted because no unmapped observations were found.

Query executed in 0.13 secs

1. Omitted because no unmapped procedures were found.

Query executed in 0.15 secs

1. Omitted because no unmapped devices were found.

Query executed in 0.19 secs

1. Omitted because no unmapped visits were found.

Query executed in 0.20 secs

1. Omitted because no unmapped units were found.

Query executed in 17.51 secs

* 1. Mapped Codes

1. Top 25 of mapped drugs. Counts are rounded up to the nearest hundred.

| ROW\_NUM | CONCEPT NAME | #RECORDS | #SUBJECTS |
| --- | --- | --- | --- |
| 1 | lisinopril 10 MG Oral Tablet | 135,300 | 3,200 |
| 2 | hydrochlorothiazide 25 MG Oral Tablet | 114,200 | 2,800 |
| 3 | amlodipine 2.5 MG Oral Tablet | 103,900 | 2,400 |
| 4 | insulin isophane, human 70 UNT/ML / insulin, regular, human 30 UNT/ML Injectable Suspension [Humulin] | 56,000 | 500 |
| 5 | 24 HR metformin hydrochloride 500 MG Extended Release Oral Tablet | 40,600 | 700 |
| 6 | NDA020503 200 ACTUAT albuterol 0.09 MG/ACTUAT Metered Dose Inhaler | 34,200 | 1,900 |
| 7 | 120 ACTUAT fluticasone propionate 0.044 MG/ACTUAT Metered Dose Inhaler | 32,800 | 900 |
| 8 | simvastatin 10 MG Oral Tablet | 31,200 | 2,000 |
| 9 | 1 ML epoetin alfa 4000 UNT/ML Injection [Epogen] | 26,900 | 100 |
| 10 | nitroglycerin 0.4 MG/ACTUAT Mucosal Spray | 18,500 | 1,100 |
| 11 | simvastatin 20 MG Oral Tablet | 15,100 | 900 |
| 12 | amlodipine 5 MG Oral Tablet | 14,200 | 900 |
| 13 | clopidogrel 75 MG Oral Tablet | 13,300 | 1,300 |
| 14 | digoxin 0.125 MG Oral Tablet | 13,100 | 700 |
| 15 | warfarin sodium 5 MG Oral Tablet | 13,100 | 700 |
| 16 | verapamil hydrochloride 40 MG | 12,700 | 700 |
| 17 | 60 ACTUAT fluticasone propionate 0.25 MG/ACTUAT / salmeterol 0.05 MG/ACTUAT Dry Powder Inhaler | 11,200 | 600 |
| 18 | acetaminophen 325 MG Oral Tablet | 9,700 | 7,500 |
| 19 | cisplatin 50 MG Injection | 9,300 | 300 |
| 20 | acetaminophen 300 MG / hydrocodone bitartrate 5 MG Oral Tablet | 9,000 | 1,500 |
| 21 | paclitaxel 100 MG Injection | 8,300 | 300 |
| 22 | ibuprofen 400 MG Oral Tablet [Ibu] | 7,500 | 800 |
| 23 | acetaminophen 325 MG Oral Tablet [Tylenol] | 7,500 | 800 |
| 24 | acetaminophen 325 MG / oxycodone hydrochloride 10 MG Oral Tablet [Percocet] | 6,000 | 700 |
| 25 | 72 HR fentanyl 0.025 MG/HR Transdermal System | 4,500 | 500 |

Query executed in 5.88 secs

1. Top 25 of mapped conditions. Counts are rounded up to the nearest hundred.

| ROW\_NUM | CONCEPT NAME | #RECORDS | #SUBJECTS |
| --- | --- | --- | --- |
| 1 | Stress | 80,500 | 14,200 |
| 2 | Limited social contact | 20,100 | 10,600 |
| 3 | Social isolation | 20,000 | 10,600 |
| 4 | Viral sinusitis | 18,800 | 11,500 |
| 5 | Victim of intimate partner abuse | 13,600 | 7,800 |
| 6 | Disease caused by 2019-nCoV | 13,100 | 13,100 |
| 7 | Fever | 12,000 | 12,000 |
| 8 | Acute viral pharyngitis | 10,800 | 8,000 |
| 9 | Cough | 9,200 | 9,200 |
| 10 | Acute bronchitis | 8,900 | 7,100 |
| 11 | Normal pregnancy | 7,600 | 3,100 |
| 12 | Loss of taste | 6,900 | 6,900 |
| 13 | Risk activity involvement | 5,700 | 4,300 |
| 14 | Impaired glucose tolerance | 5,400 | 5,400 |
| 15 | Anemia | 5,400 | 5,400 |
| 16 | Fatigue | 5,300 | 5,300 |
| 17 | Essential hypertension | 4,500 | 4,500 |
| 18 | Sputum finding | 4,500 | 4,500 |
| 19 | Chronic sinusitis | 3,900 | 3,900 |
| 20 | Chronic low back pain | 3,100 | 3,100 |
| 21 | Miscarriage in first trimester | 3,100 | 3,100 |
| 22 | Otitis media | 3,000 | 2,200 |
| 23 | Pneumonia | 2,900 | 2,900 |
| 24 | Wheezing | 2,800 | 2,800 |
| 25 | Dyspnea | 2,800 | 2,800 |

Query executed in 2.97 secs

1. Top 25 of mapped measurements. Counts are rounded up to the nearest hundred.

| ROW\_NUM | CONCEPT NAME | #RECORDS | #SUBJECTS |
| --- | --- | --- | --- |
| 1 | Systolic blood pressure | 261,300 | 17,900 |
| 2 | Diastolic blood pressure | 261,300 | 17,900 |
| 3 | Body weight | 244,000 | 17,900 |
| 4 | Heart rate | 240,600 | 17,900 |
| 5 | Respiratory rate | 240,600 | 17,900 |
| 6 | Pain severity - 0-10 verbal numeric rating [Score] - Reported | 235,400 | 17,900 |
| 7 | Body height | 195,600 | 17,900 |
| 8 | Body mass index (BMI) [Ratio] | 179,400 | 17,500 |
| 9 | Carbon dioxide, total [Moles/volume] in Blood | 98,100 | 6,900 |
| 10 | Glucose [Mass/volume] in Blood | 98,100 | 6,900 |
| 11 | Potassium [Moles/volume] in Blood | 98,100 | 6,900 |
| 12 | Creatinine [Mass/volume] in Blood | 98,100 | 6,900 |
| 13 | Sodium [Moles/volume] in Blood | 98,100 | 6,900 |
| 14 | Urea nitrogen [Mass/volume] in Blood | 98,100 | 6,900 |
| 15 | Calcium [Mass/volume] in Blood | 98,100 | 6,900 |
| 16 | Chloride [Moles/volume] in Blood | 98,100 | 6,900 |
| 17 | Glomerular filtration rate/1.73 sq M.predicted [Volume Rate/Area] in Serum, Plasma or Blood by Creatinine-based formula (MDRD) | 91,900 | 5,500 |
| 18 | Cholesterol in HDL [Mass/volume] in Serum or Plasma | 81,900 | 11,700 |
| 19 | Triglyceride [Mass/volume] in Serum or Plasma | 81,900 | 11,700 |
| 20 | Cholesterol [Mass/volume] in Serum or Plasma | 81,900 | 11,700 |
| 21 | Cholesterol in LDL [Mass/volume] in Serum or Plasma by Direct assay | 81,900 | 11,700 |
| 22 | Hemoglobin A1c/Hemoglobin.total in Blood | 75,500 | 6,100 |
| 23 | Hemoglobin [Mass/volume] in Blood | 75,200 | 17,900 |
| 24 | MCHC [Mass/volume] by Automated count | 75,000 | 17,900 |
| 25 | Erythrocytes [#/volume] in Blood by Automated count | 75,000 | 17,900 |

Query executed in 37.91 secs

1. Top 25 of mapped observations. Counts are rounded up to the nearest hundred.

| ROW\_NUM | CONCEPT NAME | #RECORDS | #SUBJECTS |
| --- | --- | --- | --- |
| 1 | Full-time employment | 220,100 | 13,100 |
| 2 | Tobacco smoking status | 195,000 | 17,900 |
| 3 | Housing status | 142,800 | 14,500 |
| 4 | Within the last year, have you been afraid of your partner or ex-partner [HARK] | 141,700 | 14,400 |
| 5 | Are you worried about losing your housing [PRAPARE] | 141,700 | 14,400 |
| 6 | What was your best estimate of the total income of all family members from all sources, before taxes, in last year [PhenX] | 141,700 | 14,400 |
| 7 | Discharged from the U.S. Armed Forces | 141,700 | 14,400 |
| 8 | Do you feel physically and emotionally safe where you currently live [PRAPARE] | 141,700 | 14,400 |
| 9 | Employment status - current | 141,700 | 14,400 |
| 10 | How many people are living or staying at this address [#] | 141,700 | 14,400 |
| 11 | Address | 141,700 | 14,400 |
| 12 | Are you a refugee | 141,700 | 14,400 |
| 13 | Primary insurance | 141,700 | 14,400 |
| 14 | Has lack of transportation kept you from medical appointments, meetings, work, or from getting things needed for daily living [PRAPARE] | 141,700 | 14,400 |
| 15 | Has season or migrant farm work been your or your family's main source of income at any point in past 2 years [PRAPARE] | 141,700 | 14,400 |
| 16 | Have you or any family members you live with been unable to get any of the following when it was really needed in past 1 year [PRAPARE] | 141,700 | 14,400 |
| 17 | Have you spent more than 2 nights in a row in a jail, prison, detention center, or juvenile correctional facility in past 1 year [PRAPARE] | 141,700 | 14,400 |
| 18 | Highest level of education | 141,700 | 14,400 |
| 19 | Hispanic or Latino | 141,700 | 14,400 |
| 20 | Preferred language | 141,700 | 14,400 |
| 21 | How often do you see or talk to people that you care about and feel close to [PRAPARE] | 141,700 | 14,400 |
| 22 | Stress is when someone feels tense, nervous, anxious or can't sleep at night because their mind is troubled - how stressed are you [PRAPARE] | 141,700 | 14,400 |
| 23 | Race | 141,700 | 14,400 |
| 24 | Patient Health Questionnaire 2 item (PHQ-2) total score [Reported] | 109,900 | 14,300 |
| 25 | Generalized anxiety disorder 7 item (GAD-7) total score [Reported.PHQ] | 77,200 | 15,200 |

Query executed in 32.37 secs

1. Top 25 of mapped procedures. Counts are rounded up to the nearest hundred.

| ROW\_NUM | CONCEPT NAME | #RECORDS | #SUBJECTS |
| --- | --- | --- | --- |
| 1 | Assessment of health and social care needs | 141,900 | 14,400 |
| 2 | Depression screening | 127,900 | 15,600 |
| 3 | Assessment using PHQ-2 questionnaire | 109,900 | 14,300 |
| 4 | Assessment of substance use | 96,600 | 14,700 |
| 5 | Medication Reconciliation | 92,800 | 17,700 |
| 6 | Assessment of anxiety | 77,200 | 15,200 |
| 7 | Assessment using AUDIT-C | 43,900 | 12,400 |
| 8 | Screening for drug abuse | 43,300 | 12,300 |
| 9 | Evaluation of uterine fundal height | 40,500 | 2,700 |
| 10 | Auscultation of the fetal heart | 40,500 | 2,700 |
| 11 | Oxygen administration by mask | 31,700 | 3,100 |
| 12 | Placing subject in prone position | 31,000 | 3,100 |
| 13 | Renal dialysis | 28,000 | 100 |
| 14 | Assessment using Morse Fall Scale | 27,600 | 3,700 |
| 15 | Intramuscular injection | 21,200 | 1,700 |
| 16 | Subcutaneous immunotherapy | 21,000 | 500 |
| 17 | Depression screening using PHQ-9 (Patient Health Questionnaire 9) score | 17,800 | 7,800 |
| 18 | Physical examination | 11,500 | 3,200 |
| 19 | Combined chemotherapy and radiation therapy | 10,500 | 400 |
| 20 | Direct current cardioversion | 9,800 | 700 |
| 21 | Colonoscopy | 9,100 | 4,900 |
| 22 | Anticipatory guidance | 7,500 | 2,900 |
| 23 | Ultrasound scan for fetal viability | 6,900 | 3,100 |
| 24 | Cognitive and behavioral therapy | 6,100 | 600 |
| 25 | Cytopathology procedure, preparation of smear, genital source | 5,900 | 2,800 |

Query executed in 10.10 secs

1. All 6 mapped devices. Counts are rounded up to the nearest hundred.

| ROW\_NUM | CONCEPT NAME | #RECORDS | #SUBJECTS |
| --- | --- | --- | --- |
| 1 | Hemodialysis machine | 1,300 | 200 |
| 2 | Implantable defibrillator | 700 | 700 |
| 3 | Mechanical ventilator | 400 | 400 |
| 4 | Videolaryngoscope | 400 | 400 |
| 5 | Coronary artery stent | 400 | 400 |
| 6 | Implantable cardiac pacemaker | 200 | 200 |

Query executed in 0.41 secs

1. All 3 mapped visits. Counts are rounded up to the nearest hundred.

| ROW\_NUM | CONCEPT NAME | #RECORDS | #SUBJECTS |
| --- | --- | --- | --- |
| 1 | Outpatient Visit | 820,500 | 17,900 |
| 2 | Emergency Room Visit | 31,700 | 12,700 |
| 3 | Inpatient Visit | 29,300 | 6,100 |

Query executed in 4.98 secs

1. Omitted because no mapped units were found.

Query executed in 24.61 secs

* 1. Source to concept map

1. Source to concept map breakdown

| SOURCE\_VOCABULARY\_ID | TARGET\_VOCABULARY\_ID | COUNT |
| --- | --- | --- |
| CANCERTYPE | None | 38 |
| ETHNICITY | None | 11 |
| FAMILY\_RELATIONSHIP | None | 120 |
| IMAGING | None | 33 |
| TNM | None | 40 |
| TREATMENT | None | 39 |

Query executed in 0.25 seconds

Note that the full source\_to\_concept\_map table is added in the results.zip

1. Technical Infrastructure
   1. HADES packages
2. Versions of all installed R packages that are relevant for DARWIN EU studies

| Package | Version |
| --- | --- |
| Andromeda | 0.6.0 |
| CohortDiagnostics | 2.2.0 |
| CohortMethod | 3.1.0 |
| Cyclops | 3.1.2 |
| DatabaseConnector | 5.0.0 |
| DatabaseConnectorJars | 1.1.0 |
| EmpiricalCalibration | 3.0.0 |
| Eunomia | 1.0.2 |
| FeatureExtraction | 3.2.0 |
| MethodEvaluation | 1.1.0 |
| OhdsiSharing | 0.1.3 |
| ParallelLogger | 2.0.2 |
| ROhdsiWebApi | 1.3.0 |
| SqlRender | 1.8.3 |

Missing R packages: PatientLevelPrediction, Hydra, EvidenceSynthesis, SelfControlledCaseSeries, SelfControlledCohort

* 1. System Information

Installed R version: R version 4.0.3 (2020-10-10)

System CPU vendor:

System CPU model: Apple M1

System CPU number of cores: 8

System RAM: 17.18 GB

DBMS: postgresql

WebAPI version: 2.11.0

* 1. Vocabulary Query Performance

The number of 'Maps To' relations is equal to 4847747. This query was executed in 26.03 seconds

* 1. Achilles Query Performance

1. Execution time of queries of the Achilles R-Package

| ID | NAME | DURATION |
| --- | --- | --- |
| 0 | Source name | 0.063486 secs |
| 1 | Number of persons | 0.012376 secs |
| 2 | Number of persons by gender | 0.018776 secs |
| 3 | Number of persons by year of birth | 0.020583 secs |
| 4 | Number of persons by race | 0.011756 secs |
| 5 | Number of persons by ethnicity | 0.013231 secs |
| 7 | Number of persons with invalid provider\_id | 0.013621 secs |
| 8 | Number of persons with invalid location\_id | 0.018225 secs |
| 9 | Number of persons with invalid care\_site\_id | 0.012805 secs |
| 10 | Number of all persons by year of birth by gender | 0.019509 secs |
| 11 | Number of non-deceased persons by year of birth by gender | 0.015394 secs |
| 12 | Number of persons by race and ethnicity | 0.013079 secs |
| 101 | Number of persons by age, with age at first observation period | 0.027144 secs |
| 102 | Number of persons by gender by age, with age at first observation period | 0.023618 secs |
| 108 | Number of persons by length of observation period, in 30d increments | 0.020133 secs |
| 109 | Number of persons with continuous observation in each year | 0.086811 secs |
| 110 | Number of persons with continuous observation in each month | 0.203220 secs |
| 111 | Number of persons by observation period start month | 0.017839 secs |
| 112 | Number of persons by observation period end month | 0.010727 secs |
| 113 | Number of persons by number of observation periods | 0.014020 secs |
| 114 | Number of persons with observation period before year-of-birth | 0.012052 secs |
| 115 | Number of persons with observation period end < observation period start | 0.010412 secs |
| 116 | Number of persons with at least one day of observation in each year by gender and age decile | 0.142697 secs |
| 117 | Number of persons with at least one day of observation in each month | 7.148543 secs |
| 118 | Number of observation periods with invalid person\_id | 0.012633 secs |
| 119 | Number of observation period records by period\_type\_concept\_id | 0.012655 secs |
| 200 | Number of persons with at least one visit occurrence, by visit\_concept\_id | 0.124208 secs |
| 201 | Number of visit occurrence records, by visit\_concept\_id | 0.061951 secs |
| 202 | Number of persons by visit occurrence start month, by visit\_concept\_id | 0.194482 secs |
| 204 | Number of persons with at least one visit occurrence, by visit\_concept\_id by calendar year by gender by age decile | 0.194499 secs |
| 207 | Number of visit records with invalid person\_id | 0.027467 secs |
| 208 | Number of visit records outside valid observation period | 0.035518 secs |
| 209 | Number of visit records with end date < start date | 0.017478 secs |
| 210 | Number of visit records with invalid care\_site\_id | 0.018506 secs |
| 212 | Number of persons with at least one visit occurrence, by calendar year by gender by age decile | 0.134329 secs |
| 220 | Number of visit occurrence records by visit occurrence start month | 0.079748 secs |
| 221 | Number of persons by visit start year | 0.076073 secs |
| 225 | Number of visit\_occurrence records by visit\_source\_concept\_id | 0.031793 secs |
| 300 | Number of providers | 0.005537 secs |
| 301 | Number of providers by specialty concept\_id | 0.006073 secs |
| 302 | Number of providers with invalid care site id | 0.006601 secs |
| 325 | Number of provider records by specialty\_source\_concept\_id | 0.006562 secs |
| 400 | Number of persons with at least one condition occurrence, by condition\_concept\_id | 0.018085 secs |
| 401 | Number of condition occurrence records, by condition\_concept\_id | 0.012400 secs |
| 402 | Number of persons by condition occurrence start month, by condition\_concept\_id | 0.084768 secs |
| 404 | Number of persons with at least one condition occurrence, by condition\_concept\_id by calendar year by gender by age decile | 0.067968 secs |
| 405 | Number of condition occurrence records, by condition\_concept\_id by condition\_type\_concept\_id | 0.015999 secs |
| 409 | Number of condition occurrence records with invalid person\_id | 0.014283 secs |
| 410 | Number of condition occurrence records outside valid observation period | 0.019962 secs |
| 411 | Number of condition occurrence records with end date < start date | 0.016532 secs |
| 412 | Number of condition occurrence records with invalid provider\_id | 0.012828 secs |
| 413 | Number of condition occurrence records with invalid visit\_id | 0.048290 secs |
| 420 | Number of condition occurrence records by condition occurrence start month | 0.042020 secs |
| 425 | Number of condition\_occurrence records by condition\_source\_concept\_id | 0.015841 secs |
| 424 | Number of co-occurring condition\_occurrence condition\_concept\_id pairs | 0.026399 secs |
| 500 | Number of persons with death, by cause\_concept\_id | 0.010576 secs |
| 501 | Number of records of death, by cause\_concept\_id | 0.023907 secs |
| 502 | Number of persons by death month | 0.012104 secs |
| 504 | Number of persons with a death, by calendar year by gender by age decile | 0.010606 secs |
| 505 | Number of death records, by death\_type\_concept\_id | 0.007315 secs |
| 509 | Number of death records with invalid person\_id | 0.011667 secs |
| 510 | Number of death records outside valid observation period | 0.009491 secs |
| 525 | Number of death records by cause\_source\_concept\_id | 0.016827 secs |
| 600 | Number of persons with at least one procedure occurrence, by procedure\_concept\_id | 0.048530 secs |
| 601 | Number of procedure occurrence records, by procedure\_concept\_id | 0.034932 secs |
| 602 | Number of persons by procedure occurrence start month, by procedure\_concept\_id | 0.116717 secs |
| 604 | Number of persons with at least one procedure occurrence, by procedure\_concept\_id by calendar year by gender by age decile | 0.144871 secs |
| 605 | Number of procedure occurrence records, by procedure\_concept\_id by procedure\_type\_concept\_id | 0.084539 secs |
| 609 | Number of procedure occurrence records with invalid person\_id | 0.049175 secs |
| 610 | Number of procedure occurrence records outside valid observation period | 0.041149 secs |
| 612 | Number of procedure occurrence records with invalid provider\_id | 0.030878 secs |
| 613 | Number of procedure occurrence records with invalid visit\_id | 0.123940 secs |
| 620 | Number of procedure occurrence records by procedure occurrence start month | 0.110626 secs |
| 625 | Number of procedure\_occurrence records by procedure\_source\_concept\_id | 0.056035 secs |
| 624 | Number of co-occurring procedure\_occurrence procedure\_concept\_id pairs | 0.030142 secs |
| 691 | Percentage of total persons that have at least x procedures | 0.042588 secs |
| 700 | Number of persons with at least one drug exposure, by drug\_concept\_id | 0.076122 secs |
| 701 | Number of drug exposure records, by drug\_concept\_id | 0.045864 secs |
| 702 | Number of persons by drug exposure start month, by drug\_concept\_id | 0.177722 secs |
| 704 | Number of persons with at least one drug exposure, by drug\_concept\_id by calendar year by gender by age decile | 0.256459 secs |
| 705 | Number of drug exposure records, by drug\_concept\_id by drug\_type\_concept\_id | 0.056893 secs |
| 709 | Number of drug exposure records with invalid person\_id | 0.034490 secs |
| 710 | Number of drug exposure records outside valid observation period | 0.041869 secs |
| 711 | Number of drug exposure records with end date < start date | 0.024326 secs |
| 712 | Number of drug exposure records with invalid provider\_id | 0.049273 secs |
| 713 | Number of drug exposure records with invalid visit\_id | 0.095887 secs |
| 720 | Number of drug exposure records by drug exposure start month | 0.109141 secs |
| 725 | Number of drug\_exposure records by drug\_source\_concept\_id | 0.059762 secs |
| 724 | Number of co-occurring drug\_exposure drug\_concept\_id pairs | 0.027198 secs |
| 791 | Percentage of total persons that have at least x drug exposures | 0.057219 secs |
| 800 | Number of persons with at least one observation occurrence, by observation\_concept\_id | 0.021856 secs |
| 801 | Number of observation occurrence records, by observation\_concept\_id | 0.011835 secs |
| 802 | Number of persons by observation occurrence start month, by observation\_concept\_id | 0.034733 secs |
| 804 | Number of persons with at least one observation occurrence, by observation\_concept\_id by calendar year by gender by age decile | 0.061501 secs |
| 805 | Number of observation occurrence records, by observation\_concept\_id by observation\_type\_concept\_id | 0.020443 secs |
| 807 | Number of observation occurrence records, by observation\_concept\_id and unit\_concept\_id | 0.023136 secs |
| 809 | Number of observation records with invalid person\_id | 0.022047 secs |
| 810 | Number of observation records outside valid observation period | 0.016336 secs |
| 812 | Number of observation records with invalid provider\_id | 0.011346 secs |
| 813 | Number of observation records with invalid visit\_id | 0.050968 secs |
| 814 | Number of observation records with no value (numeric, string, or concept) | 0.018383 secs |
| 820 | Number of observation records by observation start month | 0.045173 secs |
| 822 | Number of observation records, by observation\_concept\_id and value\_as\_concept\_id | 0.020773 secs |
| 823 | Number of observation records, by observation\_concept\_id and qualifier\_concept\_id | 0.034998 secs |
| 826 | Number of observation records by value\_as\_concept\_id | 0.020486 secs |
| 827 | Number of observation records by unit\_concept\_id | 0.022459 secs |
| 825 | Number of observation records by observation\_source\_concept\_id | 0.016715 secs |
| 824 | Number of co-occurring observation observation\_concept\_id pairs | 0.019768 secs |
| 891 | Percentage of total persons that have at least x observations | 0.026238 secs |
| 900 | Number of persons with at least one drug era, by drug\_concept\_id | 0.006124 secs |
| 901 | Number of drug era records, by drug\_concept\_id | 0.008420 secs |
| 902 | Number of persons by drug era start month, by drug\_concept\_id | 0.013499 secs |
| 904 | Number of persons with at least one drug era, by drug\_concept\_id by calendar year by gender by age decile | 0.010064 secs |
| 908 | Number of drug eras without valid person | 0.007475 secs |
| 909 | Number of drug eras outside valid observation period | 0.007930 secs |
| 910 | Number of drug eras with end date < start date | 0.011590 secs |
| 920 | Number of drug era records by drug era start month | 0.014005 secs |
| 1,000 | Number of persons with at least one condition era, by condition\_concept\_id | 0.020593 secs |
| 1,001 | Number of condition era records, by condition\_concept\_id | 0.012011 secs |
| 1,002 | Number of persons by condition era start month, by condition\_concept\_id | 0.040717 secs |
| 1,004 | Number of persons with at least one condition era, by condition\_concept\_id by calendar year by gender by age decile | 0.047713 secs |
| 1,008 | Number of condition eras without valid person | 0.019235 secs |
| 1,009 | Number of condition eras outside valid observation period | 0.016707 secs |
| 1,010 | Number of condition eras with end date < start date | 0.008313 secs |
| 1,020 | Number of condition era records by condition era start month | 0.039554 secs |
| 1,100 | Number of persons by location 3-digit zip | 0.020294 secs |
| 1,101 | Number of persons by location state | 0.011067 secs |
| 1,102 | Number of care sites by location 3-digit zip | 0.008778 secs |
| 1,103 | Number of care sites by location state | 0.007360 secs |
| 1,200 | Number of persons by place of service | 0.010596 secs |
| 1,201 | Number of visits by place of service | 0.036781 secs |
| 1,202 | Number of care sites by place of service | 0.010407 secs |
| 1,203 | Number of visits by place of service discharge type | 0.017410 secs |
| 1,408 | Number of persons by length of payer plan period, in 30d increments | 0.008899 secs |
| 1,409 | Number of persons with continuous payer plan in each year | 0.010886 secs |
| 1,410 | Number of persons with continuous payer plan in each month | 0.022032 secs |
| 1,411 | Number of persons by payer plan period start month | 0.009484 secs |
| 1,412 | Number of persons by payer plan period end month | 0.012914 secs |
| 1,413 | Number of persons by number of payer plan periods | 0.010689 secs |
| 1,414 | Number of persons with payer plan period before year-of-birth | 0.011042 secs |
| 1,415 | Number of persons with payer plan period end < payer plan period start | 0.008631 secs |
| 1,425 | Number of payer\_plan\_period records by payer\_source\_concept\_id | 0.009480 secs |
| 1,800 | Number of persons with at least one measurement occurrence, by measurement\_concept\_id | 0.551826 secs |
| 1,801 | Number of measurement occurrence records, by measurement\_concept\_id | 0.212643 secs |
| 1,802 | Number of persons by measurement occurrence start month, by measurement\_concept\_id | 0.806123 secs |
| 1,804 | Number of persons with at least one mesurement occurrence, by measurement\_concept\_id by calendar year by gender by age decile | 1.044935 secs |
| 1,805 | Number of measurement occurrence records, by measurement\_concept\_id by measurement\_type\_concept\_id | 0.213784 secs |
| 1,807 | Number of measurement occurrence records, by measurement\_concept\_id and unit\_concept\_id | 0.266165 secs |
| 1,809 | Number of measurement records with invalid person\_id | 0.148721 secs |
| 1,810 | Number of measurement records outside valid observation period | 0.191973 secs |
| 1,812 | Number of measurement records with invalid provider\_id | 0.107827 secs |
| 1,813 | Number of measurement records with invalid visit\_id | 0.310181 secs |
| 1,814 | Number of measurement records with no value (numeric, string, or concept) | 0.089916 secs |
| 1,818 | Number of measurement records below/within/above normal range, by measurement\_concept\_id and unit\_concept\_id | 0.135823 secs |
| 1,820 | Number of measurement records by measurement start month | 0.373066 secs |
| 1,821 | Number of measurement records with no numeric value | 0.107618 secs |
| 1,822 | Number of measurement records, by measurement\_concept\_id and value\_as\_concept\_id | 0.219366 secs |
| 1,823 | Number of measurement records, by measurement\_concept\_id and operator\_concept\_id | 0.197007 secs |
| 1,826 | Number of measurement records by value\_as\_concept\_id | 0.224814 secs |
| 1,827 | Number of measurement records by unit\_concept\_id | 0.279325 secs |
| 1,825 | Number of measurement records by measurement\_source\_concept\_id | 0.252593 secs |
| 1,824 | Number of co-occurring measurement measurement\_concept\_id pairs | 0.092138 secs |
| 1,891 | Percentage of total persons that have at least x measurements | 0.217763 secs |
| 1,900 | Source values mapped to concept\_id 0 by table, by source\_value | 0.452636 secs |
| 2,000 | Number of patients with at least 1 Dx and 1 Rx | 0.057794 secs |
| 2,001 | Number of patients with at least 1 Dx and 1 Proc | 0.029416 secs |
| 2,002 | Number of patients with at least 1 Meas, 1 Dx and 1 Rx | 0.193960 secs |
| 2,003 | Number of patients with at least 1 Visit | 0.021072 secs |
| 2,100 | Number of persons with at least one device exposure, by device\_concept\_id | 0.009018 secs |
| 2,101 | Number of device exposure records, by device\_concept\_id | 0.007544 secs |
| 2,102 | Number of persons by device records start month, by device\_concept\_id | 0.010899 secs |
| 2,104 | Number of persons with at least one device exposure, by device\_concept\_id by calendar year by gender by age decile | 0.015067 secs |
| 2,105 | Number of device exposure records, by device\_concept\_id by device\_type\_concept\_id | 0.011868 secs |
| 2,125 | Number of device\_exposure records by device\_source\_concept\_id | 0.018650 secs |
| 2,200 | Number of persons with at least one note by note\_type\_concept\_id | 0.010255 secs |
| 2,201 | Number of note records, by note\_type\_concept\_id | 0.005976 secs |

Query executed in 0.50 seconds