create table concept (

 concept\_id INT64 not null ,

 concept\_name STRING not null ,

 domain\_id STRING not null ,

 vocabulary\_id STRING not null ,

 concept\_class\_id STRING not null ,

 standard\_concept STRING null ,

 concept\_code STRING not null ,

 valid\_start\_date DATE not null ,

 valid\_end\_date DATE not null ,

 invalid\_reason STRING null

)

;

create table vocabulary (

 vocabulary\_id STRING not null,

 vocabulary\_name STRING not null,

 vocabulary\_reference STRING not null,

 vocabulary\_version STRING not null,

 vocabulary\_concept\_id INT64 not null

)

;

create table domain (

 domain\_id STRING not null,

 domain\_name STRING not null,

 domain\_concept\_id INT64 not null

)

;

create table concept\_class (

 concept\_class\_id STRING not null,

 concept\_class\_name STRING not null,

 concept\_class\_concept\_id INT64 not null

)

;

create table concept\_relationship (

 concept\_id\_1 INT64 not null,

 concept\_id\_2 INT64 not null,

 relationship\_id STRING not null,

 valid\_start\_date DATE not null,

 valid\_end\_date DATE not null,

 invalid\_reason STRING null

 )

;

create table relationship (

 relationship\_id STRING not null,

 relationship\_name STRING not null,

 is\_hierarchical STRING not null,

 defines\_ancestry STRING not null,

 reverse\_relationship\_id STRING not null,

 relationship\_concept\_id INT64 not null

)

;

create table concept\_synonym (

 concept\_id INT64 not null,

 concept\_synonym\_name STRING not null,

 language\_concept\_id INT64 not null

)

;

create table concept\_ancestor (

 ancestor\_concept\_id INT64 not null,

 descendant\_concept\_id INT64 not null,

 min\_levels\_of\_separation INT64 not null,

 max\_levels\_of\_separation INT64 not null

)

;

create table source\_to\_concept\_map (

 source\_code STRING not null,

 source\_concept\_id INT64 not null,

 source\_vocabulary\_id STRING not null,

 source\_code\_description STRING null,

 target\_concept\_id INT64 not null,

 target\_vocabulary\_id STRING not null,

 valid\_start\_date DATE not null,

 valid\_end\_date DATE not null,

 invalid\_reason STRING null

)

;

create table drug\_strength (

 drug\_concept\_id INT64 not null,

 ingredient\_concept\_id INT64 not null,

 amount\_value FLOAT64 null,

 amount\_unit\_concept\_id INT64 null,

 numerator\_value FLOAT64 null,

 numerator\_unit\_concept\_id INT64 null,

 denominator\_value FLOAT64 null,

 denominator\_unit\_concept\_id INT64 null,

 box\_size INT64 null,

 valid\_start\_date DATE not null,

 valid\_end\_date DATE not null,

 invalid\_reason STRING null

)

;

create table cdm\_source

(

 cdm\_source\_name STRING not null ,

 cdm\_source\_abbreviation STRING null ,

 cdm\_holder STRING null ,

 source\_description STRING null ,

 source\_documentation\_reference STRING null ,

 cdm\_etl\_reference STRING null ,

 source\_release\_date DATE null ,

 cdm\_release\_date DATE null ,

 cdm\_version STRING null ,

 vocabulary\_version STRING null

)

;

create table metadata

(

 metadata\_concept\_id INT64 not null ,

 metadata\_type\_concept\_id INT64 not null ,

 name STRING not null ,

 value\_as\_string STRING null ,

 value\_as\_concept\_id INT64 null ,

 metadata\_date DATE null ,

 metadata\_datetime DATETIME null

)

;

create table person

(

 person\_id INT64 not null ,

 gender\_concept\_id INT64 not null ,

 year\_of\_birth INT64 not null ,

 month\_of\_birth INT64 null,

 day\_of\_birth INT64 null,

 birth\_datetime DATETIME null,

 race\_concept\_id INT64 not null,

 ethnicity\_concept\_id INT64 not null,

 location\_id INT64 null,

 provider\_id INT64 null,

 care\_site\_id INT64 null,

 person\_source\_value STRING null,

 gender\_source\_value STRING null,

 gender\_source\_concept\_id INT64 not null,

 race\_source\_value STRING null,

 race\_source\_concept\_id INT64 not null,

 ethnicity\_source\_value STRING null,

 ethnicity\_source\_concept\_id INT64 not null

)

;

create table observation\_period

(

 observation\_period\_id INT64 not null ,

 person\_id INT64 not null ,

 observation\_period\_start\_date DATE not null ,

 observation\_period\_end\_date DATE not null ,

 period\_type\_concept\_id INT64 not null

)

;

create table specimen

(

 specimen\_id INT64 not null ,

 person\_id INT64 not null ,

 specimen\_concept\_id INT64 not null ,

 specimen\_type\_concept\_id INT64 not null ,

 specimen\_date DATE null ,

 specimen\_datetime DATETIME not null ,

 quantity FLOAT64 null ,

 unit\_concept\_id INT64 null ,

 anatomic\_site\_concept\_id INT64 not null ,

 disease\_status\_concept\_id INT64 not null ,

 specimen\_source\_id STRING null ,

 specimen\_source\_value STRING null ,

 unit\_source\_value STRING null ,

 anatomic\_site\_source\_value STRING null ,

 disease\_status\_source\_value STRING null

)

;

create table death

(

 person\_id INT64 not null ,

 death\_date DATE not null ,

 death\_datetime DATETIME null ,

 death\_type\_concept\_id INT64 not null ,

 cause\_concept\_id INT64 null ,

 cause\_source\_value STRING null,

 cause\_source\_concept\_id INT64 null

)

;

create table visit\_occurrence

(

 visit\_occurrence\_id INT64 not null ,

 person\_id INT64 not null ,

 visit\_concept\_id INT64 not null ,

 visit\_start\_date DATE not null ,

 visit\_start\_datetime DATETIME null ,

 visit\_end\_date DATE not null ,

 visit\_end\_datetime DATETIME null ,

 visit\_type\_concept\_id INT64 not null ,

 provider\_id INT64 null,

 care\_site\_id INT64 null,

 visit\_source\_value STRING null,

 visit\_source\_concept\_id INT64 null ,

 admitted\_source\_concept\_id INT64 null ,

 admitted\_source\_value STRING null ,

 discharge\_to\_concept\_id INT64 null ,

 discharge\_to\_source\_value STRING null ,

 preceding\_visit\_occurrence\_id INT64 null

)

;

create table visit\_detail

(

 visit\_detail\_id INT64 not null ,

 person\_id INT64 not null ,

 visit\_detail\_concept\_id INT64 not null ,

 visit\_detail\_start\_date DATE not null ,

 visit\_detail\_start\_datetime DATETIME null ,

 visit\_detail\_end\_date DATE not null ,

 visit\_detail\_end\_datetime DATETIME null ,

 visit\_detail\_type\_concept\_id INT64 not null ,

 provider\_id INT64 null ,

 care\_site\_id INT64 null ,

 visit\_detail\_source\_value STRING null ,

 visit\_detail\_source\_concept\_id INT64 not null ,

 admitted\_source\_value STRING null ,

 admitted\_source\_concept\_id INT64 not null ,

 discharge\_to\_source\_value STRING null ,

 discharge\_to\_concept\_id INT64 not null ,

 preceding\_visit\_detail\_id INT64 null ,

 visit\_detail\_parent\_id INT64 null ,

 visit\_occurrence\_id INT64 not null

)

;

create table procedure\_occurrence

(

 procedure\_occurrence\_id INT64 not null ,

 person\_id INT64 not null ,

 procedure\_concept\_id INT64 not null ,

 procedure\_date DATE null ,

 procedure\_datetime DATETIME not null ,

 procedure\_type\_concept\_id INT64 not null ,

 modifier\_concept\_id INT64 not null ,

 quantity INT64 null ,

 provider\_id INT64 null ,

 visit\_occurrence\_id INT64 null ,

 visit\_detail\_id INT64 null ,

 procedure\_source\_value STRING null ,

 procedure\_source\_concept\_id INT64 not null ,

 modifier\_source\_value STRING null

)

;

create table drug\_exposure

(

 drug\_exposure\_id INT64 not null ,

 person\_id INT64 not null ,

 drug\_concept\_id INT64 not null ,

 drug\_exposure\_start\_date DATE not null ,

 drug\_exposure\_start\_datetime DATETIME null ,

 drug\_exposure\_end\_date DATE not null ,

 drug\_exposure\_end\_datetime DATETIME null ,

 verbatim\_end\_date DATE null ,

 drug\_type\_concept\_id INT64 not null ,

 stop\_reason STRING null ,

 refills INT64 null ,

 quantity FLOAT64 null ,

 days\_supply INT64 null ,

 sig STRING null ,

 route\_concept\_id INT64 not null ,

 lot\_number STRING null ,

 provider\_id INT64 null ,

 visit\_occurrence\_id INT64 null ,

 visit\_detail\_id INT64 null ,

 drug\_source\_value STRING null ,

 drug\_source\_concept\_id INT64 not null ,

 route\_source\_value STRING null ,

 dose\_unit\_source\_value STRING null

)

;

create table device\_exposure

(

 device\_exposure\_id INT64 not null ,

 person\_id INT64 not null ,

 device\_concept\_id INT64 not null ,

 device\_exposure\_start\_date DATE not null ,

 device\_exposure\_start\_datetime DATETIME null ,

 device\_exposure\_end\_date DATE null ,

 device\_exposure\_end\_datetime DATETIME null ,

 device\_type\_concept\_id INT64 not null ,

 unique\_device\_id STRING null ,

 quantity INT64 null ,

 provider\_id INT64 null ,

 visit\_occurrence\_id INT64 null ,

 visit\_detail\_id INT64 null ,

 device\_source\_value STRING null ,

 device\_source\_concept\_id INT64 null

)

;

create table condition\_occurrence

(

 condition\_occurrence\_id INT64 not null ,

 person\_id INT64 not null ,

 condition\_concept\_id INT64 not null ,

 condition\_start\_date DATE not null ,

 condition\_start\_datetime DATETIME null ,

 condition\_end\_date DATE null ,

 condition\_end\_datetime DATETIME null ,

 condition\_type\_concept\_id INT64 not null ,

 stop\_reason STRING null ,

 provider\_id INT64 null ,

 visit\_occurrence\_id INT64 null ,

 visit\_detail\_id INT64 null ,

 condition\_source\_value STRING null ,

 condition\_source\_concept\_id INT64 not null ,

 condition\_status\_source\_value STRING null,

 condition\_status\_concept\_id INT64 not null

)

;

create table measurement

(

 measurement\_id INT64 not null ,

 person\_id INT64 not null ,

 measurement\_concept\_id INT64 not null ,

 measurement\_date DATE not null ,

 measurement\_datetime DATETIME null ,

 measurement\_time STRING null,

 measurement\_type\_concept\_id INT64 not null ,

 operator\_concept\_id INT64 null ,

 value\_as\_number FLOAT64 null ,

 value\_as\_concept\_id INT64 null ,

 unit\_concept\_id INT64 null ,

 range\_low FLOAT64 null ,

 range\_high FLOAT64 null ,

 provider\_id INT64 null ,

 visit\_occurrence\_id INT64 null ,

 visit\_detail\_id INT64 null ,

 measurement\_source\_value STRING null ,

 measurement\_source\_concept\_id INT64 null ,

 unit\_source\_value STRING null ,

 value\_source\_value STRING null

)

;

create table note

(

 note\_id INT64 not null ,

 person\_id INT64 not null ,

 note\_date DATE not null ,

 note\_datetime DATETIME null ,

 note\_type\_concept\_id INT64 not null ,

 note\_class\_concept\_id INT64 not null ,

 note\_title STRING null ,

 note\_text STRING not null ,

 encoding\_concept\_id INT64 not null ,

 language\_concept\_id INT64 not null ,

 provider\_id INT64 null ,

 visit\_occurrence\_id INT64 null ,

 visit\_detail\_id INT64 null ,

 note\_source\_value STRING null

)

;

create table note\_nlp

(

 note\_nlp\_id INT64 not null ,

 note\_id INT64 not null ,

 section\_concept\_id INT64 null ,

 snippet STRING null ,

 offset STRING null ,

 lexical\_variant STRING not null ,

 note\_nlp\_concept\_id INT64 null ,

 note\_nlp\_source\_concept\_id INT64 null,

 nlp\_system STRING null ,

 nlp\_date DATE not null ,

 nlp\_datetime DATETIME null ,

 term\_exists STRING null ,

 term\_temporal STRING null ,

 term\_modifiers STRING null

)

;

create table observation

(

 observation\_id INT64 not null ,

 person\_id INT64 not null ,

 observation\_concept\_id INT64 not null ,

 observation\_date DATE not null ,

 observation\_datetime DATETIME null ,

 observation\_type\_concept\_id INT64 not null ,

 value\_as\_number FLOAT64 null ,

 value\_as\_string STRING null ,

 value\_as\_concept\_id INT64 null ,

 qualifier\_concept\_id INT64 null ,

 unit\_concept\_id INT64 null ,

 provider\_id INT64 null ,

 visit\_occurrence\_id INT64 null ,

 visit\_detail\_id INT64 null ,

 observation\_source\_value STRING null ,

 observation\_source\_concept\_id INT64 not null ,

 unit\_source\_value STRING null ,

 qualifier\_source\_value STRING null

)

;

create table fact\_relationship

(

 domain\_concept\_id\_1 INT64 not null ,

 fact\_id\_1 INT64 not null ,

 domain\_concept\_id\_2 INT64 not null ,

 fact\_id\_2 INT64 not null ,

 relationship\_concept\_id INT64 not null

)

;

create table location

(

 location\_id INT64 not null ,

 address\_1 STRING null ,

 address\_2 STRING null ,

 city STRING null ,

 state STRING null ,

 zip STRING null ,

 county STRING null ,

 location\_source\_value STRING null

)

;

create table care\_site

(

 care\_site\_id INT64 not null ,

 care\_site\_name STRING null ,

 place\_of\_service\_concept\_id INT64 null ,

 location\_id INT64 null ,

 care\_site\_source\_value STRING null ,

 place\_of\_service\_source\_value STRING null

)

;

create table provider

(

 provider\_id INT64 not null ,

 provider\_name STRING null ,

 npi STRING null ,

 dea STRING null ,

 specialty\_concept\_id INT64 null ,

 care\_site\_id INT64 null ,

 year\_of\_birth INT64 null ,

 gender\_concept\_id INT64 not null ,

 provider\_source\_value STRING null ,

 specialty\_source\_value STRING null ,

 specialty\_source\_concept\_id INT64 null ,

 gender\_source\_value STRING null ,

 gender\_source\_concept\_id INT64 null

)

;

create table payer\_plan\_period

(

 payer\_plan\_period\_id INT64 not null ,

 person\_id INT64 not null ,

 payer\_plan\_period\_start\_date DATE not null ,

 payer\_plan\_period\_end\_date DATE not null ,

 payer\_concept\_id INT64 not null ,

 payer\_source\_value STRING null ,

 payer\_source\_concept\_id INT64 null ,

 plan\_concept\_id INT64 null ,

 plan\_source\_value STRING null ,

 plan\_source\_concept\_id INT64 null ,

 sponsor\_concept\_id INT64 null ,

 sponsor\_source\_value STRING null ,

 sponsor\_source\_concept\_id INT64 null ,

 family\_source\_value STRING null ,

 stop\_reason\_concept\_id INT64 null ,

 stop\_reason\_source\_value STRING null ,

 stop\_reason\_source\_concept\_id INT64 null

)

;

create table cost

(

 cost\_id INT64 not null ,

 cost\_event\_id INT64 not null ,

 cost\_domain\_id STRING not null,

 cost\_type\_concept\_id INT64 not null ,

 currency\_concept\_id INT64 null ,

 total\_charge FLOAT64 null ,

 total\_cost FLOAT64 null ,

 total\_paid FLOAT64 null ,

 paid\_by\_payer FLOAT64 null ,

 paid\_by\_patient FLOAT64 null ,

 paid\_patient\_copay FLOAT64 null ,

 paid\_patient\_coinsurance FLOAT64 null ,

 paid\_patient\_deductible FLOAT64 null ,

 paid\_by\_primary FLOAT64 null ,

 paid\_ingredient\_cost FLOAT64 null ,

 paid\_dispensing\_fee FLOAT64 null ,

 payer\_plan\_period\_id INT64 null ,

 amount\_allowed FLOAT64 null ,

 revenue\_code\_concept\_id INT64 null ,

 reveue\_code\_source\_value STRING null,

 drg\_concept\_id INT64 null,

 drg\_source\_value STRING null

)

;

create table drug\_era

(

 drug\_era\_id INT64 not null ,

 person\_id INT64 not null ,

 drug\_concept\_id INT64 not null ,

 drug\_era\_start\_date DATE not null ,

 drug\_era\_end\_date DATE not null ,

 drug\_exposure\_count INT64 null ,

 gap\_days INT64 null

)

;

create table dose\_era

(

 dose\_era\_id INT64 not null ,

 person\_id INT64 not null ,

 drug\_concept\_id INT64 not null ,

 unit\_concept\_id INT64 not null ,

 dose\_value FLOAT64 not null ,

 dose\_era\_start\_date DATE not null ,

 dose\_era\_end\_date DATE not null

)

;

create table condition\_era

(

 condition\_era\_id INT64 not null ,

 person\_id INT64 not null ,

 condition\_concept\_id INT64 not null ,

 condition\_era\_start\_date DATE not null ,

 condition\_era\_end\_date DATE not null ,

 condition\_occurrence\_count INT64 null

)

;

create table cohort

(

 cohort\_definition\_id INT64 not null ,

 subject\_id INT64 not null ,

 cohort\_start\_date DATE not null ,

 cohort\_end\_date DATE not null

)

;

create table cohort\_attribute

(

 cohort\_definition\_id INT64 not null ,

 subject\_id INT64 not null ,

 cohort\_start\_date DATE not null ,

 cohort\_end\_date DATE not null ,

 attribute\_definition\_id INT64 not null ,

 value\_as\_number FLOAT64 null ,

 value\_as\_concept\_id INT64 null

)

;