

Course 2 Module 5

Programming Assignment

Assignment is to ETL MIMIC data into the
OMOP CONDITION_OCCURRENCE table

Detailed instructions with Slide Notes

Assignment is to ETL MIMIC data into the OMOP CONDITION_OCCURRENCE table

ETL Steps

1. Understand source/target data models
2. Profile source tables
3. Create ETL mappings
4. Write transformation code
5. Execute transformation
6. Perform data quality assessment
7. Package documentation

Step 1: Understand source/target data models

CONDITION_OCCURRENCE is the TARGET OMOP table.

Read the OMOP documentation about the type of data stored in CONDITION_OCCURRENCE and for three fields below that are in that table:

- **person_id**
- **visit_occurrence_id**
- **condition_source_value**

Definitions of each variable from OMOP documentation in NOTES on next page.



Table Details: condition_occurrence

Schema	Details	Preview	
condition_occurrence_id	FLOAT	NULLABLE	int64
person_id	FLOAT	NULLABLE	int64
condition_concept_id	FLOAT	NULLABLE	int64
condition_start_date	STRING	NULLABLE	parse_date()
condition_start_datetime	STRING	NULLABLE	parse_datetime()
condition_end_date	STRING	NULLABLE	parse_date()
condition_end_datetime	STRING	NULLABLE	parse_datetime()
condition_type_concept_id	FLOAT	NULLABLE	int64
stop_reason	STRING	NULLABLE	Describe this field...
provider_id	FLOAT	NULLABLE	int64
visit_occurrence_id	FLOAT	NULLABLE	int64
visit_detail_id	FLOAT	NULLABLE	int64
condition_source_value	STRING	NULLABLE	Describe this field...
condition_source_concept_id	FLOAT	NULLABLE	int64
condition_status_source_value	STRING	NULLABLE	Describe this field...
condition_status_concept_id	FLOAT	NULLABLE	int64

The definition of the variables from OMOP documentation:
person_id (int) - A foreign key identifier to the Person who is experiencing the condition. The demographic details of that Person are stored in the PERSON table. – This will be same as to SUBJECT_ID in MIMIC data.

visit_occurrence_id (int) - A foreign key to the visit in the VISIT_OCCURRENCE table during which the Condition was determined (diagnosed). – This is equivalent to HADM_ID in MIMIC data.

condition_source_value (Char (50)) -The source code for the Condition as it appears in the source data. This code is mapped to a Standard Condition Concept in the Standardized Vocabularies and the original code is stored here for reference. This will be exactly same as to MIMIC data (ICD_9code) .

Step 1: Understand source/target data models

CONDITION_OCCURRENCE is the TARGET OMOP table.

Select one or more MIMIC tables from the table screen shots on the next slides that you feel are most related to the three fields in **CONDITION_OCCURRENCE.**

Table Details: condition_occurrence

Schema	Details	Preview	
condition_occurrence_id	FLOAT	NULLABLE	int64
person_id	FLOAT	NULLABLE	int64
condition_concept_id	FLOAT	NULLABLE	int64
condition_start_date	STRING	NULLABLE	parse_date()
condition_start_datetime	STRING	NULLABLE	parse_datetime()
condition_end_date	STRING	NULLABLE	parse_date()
condition_end_datetime	STRING	NULLABLE	parse_datetime()
condition_type_concept_id	FLOAT	NULLABLE	int64
stop_reason	STRING	NULLABLE	Describe this field...
provider_id	FLOAT	NULLABLE	int64
visit_occurrence_id	FLOAT	NULLABLE	int64
visit_detail_id	FLOAT	NULLABLE	int64
condition_source_value	STRING	NULLABLE	Describe this field...
condition_source_concept_id	FLOAT	NULLABLE	int64
condition_status_source_value	STRING	NULLABLE	Describe this field...
condition_status_concept_id	FLOAT	NULLABLE	int64

Table Details: ADMISSIONS

Schema	Details	Preview
ROW_ID	INTEGER	
SUBJECT_ID	INTEGER	
HADM_ID	INTEGER	
ADMITTIME	DATETIME	
DISCHTIME	DATETIME	
DEATHTIME	DATETIME	
ADMISSION_TYPE	STRING	
ADMISSION_LOCATION	STRING	
DISCHARGE_LOCATION	STRING	
INSURANCE	STRING	
LANGUAGE	STRING	
RELIGION	STRING	
MARITAL_STATUS	STRING	
ETHNICITY	STRING	
EDREGTIME	DATETIME	
EDOUTTIME	DATETIME	
DIAGNOSIS	STRING	
HOSPITAL_EXPIRE_FLAG	INTEGER	
HAS_CHARTEVENTS_DATA	INTEGER	

Table Details: CAREGIVERS

Schema	Details	Preview
ROW_ID	INTEGER	NULLABLE
CGID	INTEGER	NULLABLE
LABEL	STRING	NULLABLE
DESCRIPTION	STRING	NULLABLE

Table Details: CPTEVENTS

Schema	Details	Preview
ROW_ID	INTEGER	NU
SUBJECT_ID	INTEGER	NU
HADM_ID	INTEGER	NU
COSTCENTER	STRING	NU
CHARTDATE	DATETIME	NU
CPT_CD	STRING	NU
CPT_NUMBER	INTEGER	NU
CPT_SUFFIX	STRING	NU
TICKET_ID_SEQ	INTEGER	NU
SECTIONHEADER	STRING	NU
SUBSECTIONHEADER	STRING	NU
DESCRIPTION	STRING	NU

Table Details: D_ICD_PROCEDURES

Schema	Details	Preview	
ROW_ID	INTEGER	NULLABLE	Describe this
ICD9_CODE	STRING	NULLABLE	Describe this
SHORT_TITLE	STRING	NULLABLE	Describe this
LONG_TITLE	STRING	NULLABLE	Describe this

Table Details: D_ICD_DIAGNOSES

Schema	Details	Preview	
ROW_ID	INTEGER	NULLABLE	Describe th
ICD9_CODE	STRING	NULLABLE	Describe th
SHORT_TITLE	STRING	NULLABLE	Describe th
LONG_TITLE	STRING	NULLABLE	Describe th

Table Details: D_CPT

Schema	Details	Preview
ROW_ID	INTEGER	
CATEGORY	INTEGER	
SECTIONRANGE	STRING	
SECTIONHEADER	STRING	
SUBSECTIONRANGE	STRING	
SUBSECTIONHEADER	STRING	
CODESUFFIX	STRING	
MINCODEINSUBSECTION	INTEGER	
MAXCODEINSUBSECTION	INTEGER	

Table Details: ICUSTAYS

Schema	Details	Preview
ROW_ID	INTEGER	NL
SUBJECT_ID	INTEGER	NL
HADM_ID	INTEGER	NL
ICUSTAY_ID	INTEGER	NL
DBSOURCE	STRING	NL
FIRST_CAREUNIT	STRING	NL
LAST_CAREUNIT	STRING	NL
FIRST_WARDID	INTEGER	NL
LAST_WARDID	INTEGER	NL
INTIME	DATETIME	NL
OUTTIME	DATETIME	NL
LOS	FLOAT	NL

Table Details: DIAGNOSES_ICD

Schema	Details	Preview	
ROW_ID	INTEGER	NULLABLE	Describe this
SUBJECT_ID	INTEGER	NULLABLE	Describe this
HADM_ID	INTEGER	NULLABLE	Describe this
SEQ_NUM	INTEGER	NULLABLE	Describe this
ICD9_CODE	STRING	NULLABLE	Describe this

Table Details: DRGCODES

Schema	Details	Preview
ROW_ID	INTEGER	NULLAB
SUBJECT_ID	INTEGER	NULLAB
HADM_ID	INTEGER	NULLAB
DRG_TYPE	STRING	NULLAB
DRG_CODE	STRING	NULLAB
DESCRIPTION	STRING	NULLAB
DRG_SEVERITY	INTEGER	NULLAB
DRG_MORTALITY	INTEGER	NULLAB

Table Details: D_LABITEMS

Schema	Details	Preview
ROW_ID	INTEGER	NULLABLE
ITEMID	INTEGER	NULLABLE
LABEL	STRING	NULLABLE
FLUID	STRING	NULLABLE
CATEGORY	STRING	NULLABLE
LOINC_CODE	STRING	NULLABLE

Use these screen captures (and next slide) to select one or more MIMIC tables that contain data for OMOP CONDITION_OCCURRENCE table

Table Details: ICUSTAYS

Schema	Details	Preview
ROW_ID	INTEGER	NL
SUBJECT_ID	INTEGER	NL
HADM_ID	INTEGER	NL
ICUSTAY_ID	INTEGER	NL
DBSOURCE	STRING	NL
FIRST_CAREUNIT	STRING	NL
LAST_CAREUNIT	STRING	NL
FIRST_WARDID	INTEGER	NL
LAST_WARDID	INTEGER	NL
INTIME	DATETIME	NL
OUTTIME	DATETIME	NL
LOS	FLOAT	NL

Table Details: LABEVENTS

Schema	Details	Preview
ROW_ID	INTEGER	NULLABLE
SUBJECT_ID	INTEGER	NULLABLE
HADM_ID	INTEGER	NULLABLE
ITEMID	INTEGER	NULLABLE
CHARTTIME	DATETIME	NULLABLE
VALUE	STRING	NULLABLE
VALUENUM	FLOAT	NULLABLE
VALUEUOM	STRING	NULLABLE
FLAG	STRING	NULLABLE

Table Details: NOTEEVENTS

Schema	Details	Preview
ROW_ID	INTEGER	NULLABLE
SUBJECT_ID	INTEGER	NULLABLE
HADM_ID	INTEGER	NULLABLE
CHARTDATE	DATETIME	NULLABLE
CHARTTIME	DATETIME	NULLABLE
STORETIME	DATETIME	NULLABLE
CATEGORY	STRING	NULLABLE
DESCRIPTION	STRING	NULLABLE
CGID	INTEGER	NULLABLE
ISERROR	STRING	NULLABLE
TEXT	STRING	NULLABLE

Table Details: PATIENTS

Schema	Details	Preview
ROW_ID	INTEGER	NULLABLE
SUBJECT_ID	INTEGER	NULLABLE
GENDER	STRING	NULLABLE
DOB	DATETIME	NULLABLE
DOD	DATETIME	NULLABLE
DOD_HOSP	DATETIME	NULLABLE
DOD_SSN	DATETIME	NULLABLE
EXPIRE_FLAG	INTEGER	NULLABLE

Table Details: PRESCRIPTIONS

Schema	Details	Preview
ROW_ID	INTEGER	NULLABLE
SUBJECT_ID	INTEGER	NULLABLE
HADM_ID	INTEGER	NULLABLE
ICUSTAY_ID	INTEGER	NULLABLE
STARTDATE	DATETIME	NULLABLE
ENDDATE	DATETIME	NULLABLE
DRUG_TYPE	STRING	NULLABLE
DRUG	STRING	NULLABLE
DRUG_NAME_POE	STRING	NULLABLE
DRUG_NAME_GENERIC	STRING	NULLABLE
FORMULARY_DRUG_CD	STRING	NULLABLE
GSN	STRING	NULLABLE
NDC	STRING	NULLABLE
PROD_STRENGTH	STRING	NULLABLE
DOSE_VAL_RX	STRING	NULLABLE
DOSE_UNIT_RX	STRING	NULLABLE
FORM_VAL_DISP	STRING	NULLABLE
FORM_UNIT_DISP	STRING	NULLABLE
ROUTE	STRING	NULLABLE

Table Details: PROCEDURES_ICD

Schema	Details	Preview	
ROW_ID	INTEGER	NULLABLE	Describe this
SUBJECT_ID	INTEGER	NULLABLE	Describe this
HADM_ID	INTEGER	NULLABLE	Describe this
SEQ_NUM	INTEGER	NULLABLE	Describe this
ICD9_CODE	STRING	NULLABLE	Describe this

Table Details: TRANSFERS

Schema	Details	Preview
ROW_ID	INTEGER	NULLABLE
SUBJECT_ID	INTEGER	NULLABLE
HADM_ID	INTEGER	NULLABLE
ICUSTAY_ID	INTEGER	NULLABLE
DBSOURCE	STRING	NULLABLE
EVENTTYPE	STRING	NULLABLE
PREV_CAREUNIT	STRING	NULLABLE
CURR_CAREUNIT	STRING	NULLABLE
PREV_WARDID	INTEGER	NULLABLE
CURR_WARDID	INTEGER	NULLABLE
INTIME	DATETIME	NULLABLE
OUTTIME	DATETIME	NULLABLE
LOS	FLOAT	NULLABLE

Use these screen captures (and previous slide) to select one or more MIMIC tables that contain data for OMOP CONDITION_OCCURRENCE table

Step 1: Understand source/target data models

Table Details: DIAGNOSES_ICD

Schema	Details	Preview	
ROW_ID	INTEGER	NULLABLE	Describe this field...
SUBJECT_ID	INTEGER	NULLABLE	Describe this field...
HADM_ID	INTEGER	NULLABLE	Describe this field...
SEQ_NUM	INTEGER	NULLABLE	Describe this field...
ICD9_CODE	STRING	NULLABLE	Describe this field...

This is the main table I will use.

Table Details: D_ICD_DIAGNOSES

Schema	Details	Preview	
ROW_ID	INTEGER	NULLABLE	Describe this field...
ICD9_CODE	STRING	NULLABLE	Describe this field...
SHORT_TITLE	STRING	NULLABLE	Describe this field...
LONG_TITLE	STRING	NULLABLE	Describe this field...

This one will be then joined to the target table so that ICD9 codes will be readable language.

Paste one or more MIMIC table(s) from the previous two slides that contain data for ETL into OMOP CONDITION_OCCURRENCE here!

Table Details: condition_occurrence

Schema	Details	Preview	
condition_occurrence_id	FLOAT	NULLABLE	int64
person_id	FLOAT	NULLABLE	int64
condition_concept_id	FLOAT	NULLABLE	int64
condition_start_date	STRING	NULLABLE	parse_date()
condition_start_datetime	STRING	NULLABLE	parse_datetime()
condition_end_date	STRING	NULLABLE	parse_date()
condition_end_datetime	STRING	NULLABLE	parse_datetime()
condition_type_concept_id	FLOAT	NULLABLE	int64
stop_reason	STRING	NULLABLE	Describe this field...
provider_id	FLOAT	NULLABLE	int64
visit_occurrence_id	FLOAT	NULLABLE	int64
visit_detail_id	FLOAT	NULLABLE	int64
condition_source_value	STRING	NULLABLE	Describe this field...
condition_source_concept_id	FLOAT	NULLABLE	int64
condition_status_source_value	STRING	NULLABLE	Describe this field...
condition_status_concept_id	FLOAT	NULLABLE	int64

Step 2: Profile source table or tables

Using the White Rabbit profiling data from the 100 patient MIMIC database provided in the Assessment to comment on the distribution of the SUBJECT_ID field from one of the MIMIC tables selected in Step 1

- DIAGNOSES_ICD
- ID#41976 had 266 entries in Diagnoses_ID then follows with a longtail with most patients having more than one diagnosis.
- ICD9_CODE 4019 (hypertension), 42731 (atrial fibrillation), 5849 (acute kidney failure) were the top 3 diagnoses.

Step 3: Create ETL mappings

Table Details: DIAGNOSES_ICD

Schema	Details	Preview	
ROW_ID	INTEGER	NULLABLE	Describe this field...
SUBJECT_ID	INTEGER	NULLABLE	Describe this field...
HADM_ID	INTEGER	NULLABLE	Describe this field...
SEQ_NUM	INTEGER	NULLABLE	Describe this field...
ICD9_CODE	STRING	NULLABLE	Describe this field...

Table Details: condition_occurrence

Table Details: condition_occurrence

Schema	Details	Preview	
condition_occurrence_id	FLOAT	NULLABLE	int64
person_id	FLOAT	NULLABLE	int64
condition_concept_id	FLOAT	NULLABLE	int64
condition_start_date	STRING	NULLABLE	parse_date()
condition_start_datetime	STRING	NULLABLE	parse_datetime()
condition_end_date	STRING	NULLABLE	parse_date()
condition_end_datetime	STRING	NULLABLE	parse_datetime()
condition_type_concept_id	FLOAT	NULLABLE	int64
stop_reason	STRING	NULLABLE	Describe this field...
provider_id	FLOAT	NULLABLE	int64
visit_occurrence_id	FLOAT	NULLABLE	int64
visit_detail_id	FLOAT	NULLABLE	int64
condition_source_value	STRING	NULLABLE	Describe this field...
condition_source_concept_id	FLOAT	NULLABLE	int64
condition_status_source_value	STRING	NULLABLE	Describe this field...
condition_status_concept_id	FLOAT	NULLABLE	int64

person_id (int) - A foreign key identifier to the Person who is experiencing the condition. - This will be same as to SUBJECT_ID in MIMIC data as this describes unique key identifier to the person and it is integers.

visit_occurrence_id (int) - A foreign key to the visit in the VISIT_OCCURRENCE table during which the Condition was determined (diagnosed). - This is equivalent to HADM_ID in MIMIC data as this is the unique admission id and it is integers.

condition_source_value (Char (50)) -The source code for the Condition as it appears in the source data. -This will be exactly same as to MIMIC data (ICD9_code) as this is what describes the diagnosis (condition) experienced by the patient in MIMIC data.

Step 4: Write transformation code

```
WITH person1 as (select distinct mp.subject_id as person_id,
                        mp.subject_id as person_source_value from mimic3_demo.PATIENTS mp),
person2 as (select distinct p1.person_id, p1.person_source_value
            ,mp.GENDER as gender_source_value
            ,CASE mp.GENDER
              WHEN 'F' then 8532
              WHEN 'M' then 8507
              ELSE 0 END as gender_concept_id
            from person1 p1 join mimic3_demo.PATIENTS mp on p1.person_id = mp.subject_id),
person3 as (select distinct p2.person_id, p2.person_source_value
            ,p2.gender_source_value, p2.gender_concept_id
            ,extract(year from mp.dob) as year_of_birth
            ,extract(month from mp.dob) as month_of_birth
            ,extract(day from mp.dob) as day_of_birth
            ,dob as birth_datetime
            from person2 p2 join mimic3_demo.PATIENTS mp on p2.person_id = mp.subject_id),
person4 as (select distinct p3.person_id, p3.person_source_value
            ,p3.gender_source_value,p3.gender_concept_id
            ,p3.year_of_birth, p3.month_of_birth, p3.day_of_birth, p3.birth_datetime
            ,ma.ethnicity as race_source_value
            ,case ma.ethnicity

                        when 'WHITE' then 8527
                        when 'BLACK/AFRICAN AMERICAN' then 8516
                        when 'ASIAN' then 8515
                        when 'HISPANIC/LATINO-PUERTO RICAN' then 44814653
                        when 'HISPANIC OR LATINO' then 44814653
                        when 'UNKNOWN/NOT SPECIFIED' then 44814653
                        when 'OTHER' then 44814653
                        when 'AMERICAN INDIAN/ALASKA NATIVE FEDERALLY RECOGNIZED TRIBE' then 8657
                        when 'UNABLE TO OBTAIN' then 44814650
                        else 0 end as race_concept_id

            from person3 p3 join mimic3_demo.ADMISSIONS ma on p3.person_id = ma.subject_id),
person as (select distinct p4.person_id, p4.person_source_value
            ,p4.gender_source_value,p4.gender_concept_id
            ,p4.year_of_birth, p4.month_of_birth, p4.day_of_birth, p4.birth_datetime
            ,p4.race_source_value, p4.race_concept_id
            ,ethnicity as ethnicity_source_value
            ,case ma.ethnicity

                        when 'WHITE' then 38003564
                        when 'BLACK/AFRICAN AMERICAN' then 38003564
                        when 'ASIAN' then 38003564
                        when 'HISPANIC/LATINO-PUERTO RICAN' then 38003563
                        when 'HISPANIC OR LATINO' then 38003563
                        when 'UNKNOWN/NOT SPECIFIED' then 44814653
                        when 'OTHER' then 38003564
                        when 'AMERICAN INDIAN/ALASKA NATIVE FEDERALLY RECOGNIZED TRIBE' then 38003564
                        when 'UNABLE TO OBTAIN' then 44814650
                        else 0 end as ethnicity_concept_id

            from person4 p4 join mimic3_demo.ADMISSIONS ma on p4.person_id = ma.subject_id)
select * from person
```

Paste the SQL statements that transform data from one or more MIMIC tables into the three OMOP CONDITION_OCCURRENCE fields (patient-id, visit_occurrence_id, condition_source_value) into the Coursera Submission Site

Transformation code shown here is from the Course 2 videos showing transformation of MIMIC PATIENTS to OMOP PERSON

Step 5: Execute transformation code

Execute the ETL code from Step 4 but do not submit the output table.

Use the output table for Step 6.

There is no submission for this Step.

Step 6: Perform data quality assessment

**Define, implement, execute one or more data quality measures.
Submit final DQ measure and an explanation why you created your measure(s).**

Row	MIN_YOB	MAX_YOB	AVG_YOB
1	1844	2181	2061.5699999999999

Example output table from the Course 2 videos showing transformation of MIMIC PATIENTS to OMOP PERSON

OK to paste link to a GoogleDoc instead.

new Query

```
11      , d3.condition_source_value
12      , dd.SHORT_TITLE as condition_name
13      from diag3 d3 join mimic3_demo.D_ICD_DIAGNOSES dd on d3.condition_source_value = dd.ICD9_CODE)
14
15
16
17 * SELECT MIN(d4.patient_id) as MIN_patient_id,
18        MAX(d4.patient_id) as MAX_patient_id
19      from diag4 d4
20
21
```

Standard SQL Dialect X

RUN QUERY Save Query Save View Format Query Show Options Query complete (3.7s elapsed, 471 KB processed)

Results Details

Row	MIN_patient_id	MAX_patient_id
1	10006	44228

Table JSON

Data quality measures:
patient_id and visit_occurrence_id

Check if there are any negative values (which will be error as there are no negative values in mimic subject_id and HADM_ID). The range is as expected.

```
13      from diag3 d3 join mimic3_demo.D_ICD_DIAGNOSES dd on d3.con
14
15
16
17 * SELECT MIN(d4.visit_occurrence_id) as MIN_visit_occurrence_id,
18        MAX(d4.visit_occurrence_id) as MAX_visit_occurrence_id
19      from diag4 d4
20
21
```

Standard SQL Dialect X

RUN QUERY Save Query Save View Format Query Show Options Query complete (3.7s elapsed, 471 KB processed)

Results Details

Row	MIN_visit_occurrence_id	MAX_visit_occurrence_id
1	100375	199395

Table JSON

Check if the ICD9_codes from condition_source_value still matches with the labels from MIMICS.

```
7      , md.ICD9_CODE as condition_source_value
8      from diag2 d2 join mimic3_demo.DIAGNOSES_ICD md on d2.patient_id = md.subject_id),
9  diag4 as (select distinct d3.patient_id
10             , d3.visit_occurrence_id
11             , d3.condition_source_value
12             , dd.SHORT_TITLE as condition_name
13             from diag3 d3 join mimic3_demo.D_ICD_DIAGNOSES dd on d3.condition_source_value = dd.ICD9_CODE)
14
15
16 SELECT * from diag4
17
```

standard SQL Dialect ✕ Ctrl + Enter: run qu

RUN QUERY Save Query Save View Format Query Show Options Query complete (3.3s elapsed, 471 KB processed)

Results **Details** Download as CSV Download as JSON Save as

row	patient_id	visit_occurrence_id	condition_source_value	condition_name
1	10046	133110	1983	Sec mal neo brain/spine
2	41976	172082	53019	Other esophagitis
3	41976	125013	0389	Septicemia NOS
4	43909	167612	2536	Neurohypophysis dis NEC
5	42346	175880	37230	Conjunctivitis NOS
6	41976	172082	3572	Neuropathy in diabetes
7	41976	174863	25000	DMII wo cmp nt st uncntr
8	10088	169938	5849	Acute kidney failure NOS
9	40310	186361	7850	Tachycardia NOS
10	41976	130681	99811	Hemorrhage complic proc
11	41976	151798	V5867	Long-term use of insulin
12	42033	154156	4280	CHF NOS

able JSON First < Prev Rows 1 - 12 of 2972 Next > Last

Checking the Top 5 Diagnoses

```
12      , dd.SHORT_TITLE as condition_name
13      from diag3 d3 join mimic3_demo.D_ICD_DIAGNOSIS d4
14      on d3.D_ICD_DIAGNOSIS = d4.D_ICD_DIAGNOSIS
15
16 SELECT d4.condition_name, d4.condition_source_value,
17        count( d4.condition_source_value) as NUM_DX
18 FROM diag4 d4
19 GROUP BY d4.condition_source_value, d4.condition_name
20 ORDER BY NUM_DX desc
21
22
```

Standard SQL Dialect X

RUN QUERY

Save Query

Save View

Format Query

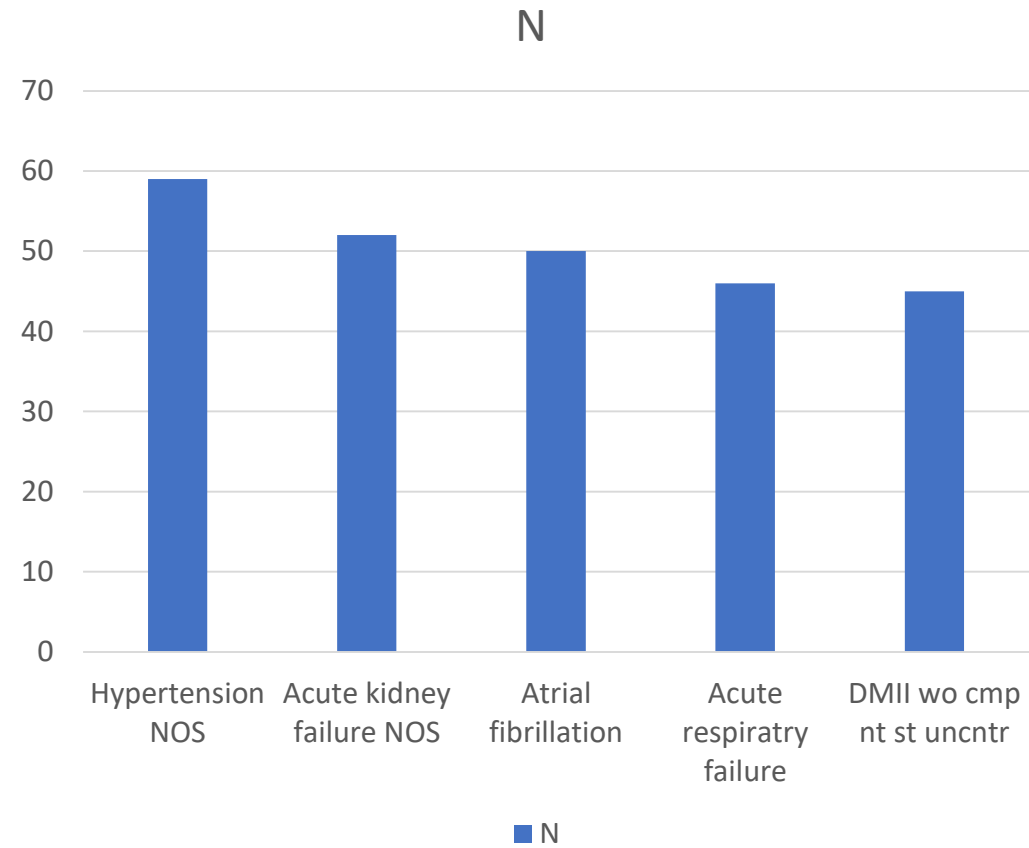
Show Options

Results Details

Row	condition_name	condition_source_value	NUM_DX
1	Hypertension NOS	4019	59
2	Acute kidney failure NOS	5849	55
3	Atrial fibrillation	42731	52
4	Acute respiratory failure	51881	50
5	DMII w/o cmp nt st uncncr	25000	46
6	Pneumonia, organism NOS	486	45
7	CHF NOS	4280	41
8	Hyperlipidemia NEC/NOS	2724	40
9	Anemia NOS	2859	36
10	Severe sepsis	99592	36
11	Urin tract infection NOS	5990	35
12	Septicemia NOS	0389	34

Table JSON

First 12



Step 7: Package documentation

- Congratulations! The materials in the previous slides constitute a complete ETL package.

There is no submission for this Step.