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Table Information

icu_admission_table

1. Tables Used:
    a. **icustays:** Contains information about ICU stays, including patient identifiers, hospital admission identifiers, ICU stay details, and length of stay.

2. Query Conditions:
    a. The query selects data from the icustays table.
    b. It calculates a unique row number (rn) for each ICU stay within a patient's partition, ordered by admission time.
    c. The query filters for ICU stays with a length of stay (los) longer than 1 (greater than 24 hours).
3. Query Output:
    a. subject_id
    b. hadm_id
    c. first_careunit
    d. last_careunit
    e. icu_intime
    f. icu_outtime
    g. los
    h. icu_seq: ICU Stay Sequence (a unique row number for each ICU stay within the patient's partition).
    i. total_icu_stays: Total number of ICU stays for the patient (>24hrs).

patients_with_vent_session

1. Tables Used:

    a. `procedureevents`
    b. `d_items`

2. Query Conditions:
    a. The query selects data from the `procedureevents` and `d_items` tables.
    b. It calculates a unique row number (`vent_seq_no`) for each procedure within a patient's partition, ordered by start time.
    c. It counts the total number of ventilation procedures for each patient.
    d. The query filters for procedures with the status description 'FinishedRunning.'

3. Query Output:

    a. `subject_id`: Patient identifier.
    b. `vent_starttime`: Start time of the procedure.
    c. `vent_endtime`: End time of the procedure.
    d. `ventilation_type`: Label description for the ventilation item.
    e. `vent_duration`: Duration of the procedure.
    f. `duration_unit`: Unit of measurement for duration.
    g. `patientweight`: Patient's weight at the time of the procedure.
    h. `vent_seq_no`: Ventilation Sequence Number (a unique row number for each procedure within the patient's partition).
    i. `total_vent_stays`: Total number of ventilation stays for the patient.

ventilation_and_icu_data

- It combines the ventilation session information with the icu_stays.

- ventilation_and_icu_data gives information about the ICU_stays and the corresponding ventilation sessions

Condition:

```
ventilation_and_icu_data = result_df[(result_df['vent_starttime'] >= result_df['icu_intime'] - pd.Timedelta(minutes=15)) & (result_df['vent_endtime'] <= result_df['icu_outtime'])]
```

patient_demographic_info

1. Tables Used:
    a. `patients`:
    b. `omr`: Contains medical record data, including BMI records, results, sequence numbers, and chart dates.

2. Query Conditions:

    a. It retrieves patient demographic information for subjects with the latest BMI records and within specified subject IDs (from the ventilation and icu_data)

3. Query Output:

    a. `subject_id`: Patient identifier.
    b. `gender`: Patient's gender.
    c. `anchor_age`: Patient's anchor age.
    d. `dod`: Date of death.
    e. `bmi_value`: BMI value.

ventilation_and_first_icu_visit

1. It is a subset of the ventilation_and_icu table.
2. It contains the information of the patients with their first ICU visit information.

Condition:

```
ventilation_and_first_icu_visit =
ventilation_and_icu_data[ventilation_and_icu_data['icu_seq'] == 1]
```

patient_first_icu_24hr_labtests

1. Tables Used:

    a. `labevents`:
    b. `d_labitems`:

2. Query Conditions:

    a. Selection of lab events related to specific items, focusing on hematology, electrolytes, blood gases, metabolic markers, coagulation, and liver function.
    b. Filtering based on the lab tests that took place with 24hrs of the patient's first ICU visit

3. Output:

    a. Patient identifier (`subject_id`).
    b. Lab event label and category.
    c. Lab event chart time (`charttime`).
    d. Lab event value and unit of measurement.
    e. Flag for out-of-range values.
    f. ICU admission time (`icu_intime`).
    g. ICU admission time + 24 hours (`First_24Hr`).

patient_first_icu_24hr_vital_signs

1. Tables Used:

    a. `d_items`
    b. `chartevents`
    c. `procedureevents`
    d. `icustays`

2. Query Conditions:

    a. Vital sign selection: Filters specific vital signs based on their labels (e.g., heart rate, arterial pressure, respiratory rate) from `d_items`.
    b. Filtering based on ICU stay and time criteria, focusing on the first 24 hours of admission.

3. Output:

    a. Patient identifier (`subject_id`).
    b. Vital sign label, category, chart time, value number, and unit of measurement.
    c. ICU admission time (`icu_intime`).
    d. ICU admission time + 24 hours (`First_24Hr`).

patient_comorbidities_info

1. Tables Used:
    a. `diagnoses_icd`:
2. Query Conditions:
    a. The query assigns descriptions such as 'Sepsis,' 'Acute Myocardial Infarction,' etc., based on ICD code patterns.
3. Output:
    a. Patient identifier (`subject_id`).
    b. ICD code (`icd_code`).
    c. Description based on ICD code patterns

patient_vasopressor_drug_info

1. Tables Used:

    a. `emar`:
    b. `icustays`:

2. Query Conditions:

    a. Medications related to vasopressors are filtered based on their names and event types.
    b. Records are filtered to include only those within the first 24 hours of first ICU admission.

3. Output:

    a. Patient identifier (`subject_id`).
    b. Medication administration time (`charttime`).
    c. ICU admission time (`icu_intime`).
    d. ICU admission time + 24 hours (`First_24Hr`).
    e. Medication name (`medication`).
    f. Medication event type (`event_txt`).
    g. Medication administration schedule time (`scheduletime`).
    h. Time when the medication record was stored (`storetime`).

patient_crrt_info

1. Tables Used

    a. `procedureevents`:
    b. `d_items`:
    c. `icustays`:

2. Query Conditions:

    a. It filters for CRRT records with 'FinishedRunning' status.
    b. Records are filtered to include only those within the first 24 hours of first ICU admission and with a valid 'hadm_id'.

3. Output:

    a. Patient identifier (`subject_id`).
    b. CRRT start time (`starttime`).
    c. CRRT end time (`endtime`).
    d. Time when the CRRT record was stored (`storetime`).
    e. Item identifier (`itemid`).
    f. CRRT label (`label`).
    g. CRRT value (`value`).
    h. Unit of measurement (`valueuom`).
    i. Patient weight (`patientweight`).
    j. Status description (`statusdescription`).
    k. ICU admission time (`icu_intime`).
    l. ICU admission time + 24 hours (`First_24Hr`).

patient_bronschopy_info

1. Tables Used:

   a. `procedureevents`:
   b. `d_items`:
   c. `icustays`:

2. Query Conditions:

   a. The query defines bronchoscopy items using the 'd_items' table.
   b. It filters for bronchoscopy records with 'FinishedRunning' status.
   c. Records are filtered to include only those within the first 24 hours of patient's first ICU admission

3. Output:

   a. Patient identifier (`subject_id`).
   b. Hospital admission identifier (`hadm_id`).
   c. Bronchoscopy start time (`starttime`).
   d. Bronchoscopy end time (`endtime`).
   e. Time when the bronchoscopy record was stored (`storetime`).
   f. Item identifier (`itemid`).
   g. Bronchoscopy label (`label`).
   h. Bronchoscopy value (`value`).
   i. Unit of measurement (`valueuom`).
   j. Patient weight (`patientweight`).
   k. Status description (`statusdescription`).
   l. ICU admission time (`icu_intime`).
   m. ICU admission time + 24 hours (`First_24Hr`).

patient_with_vap

1. Tables Used:

    a. `diagnoses_icd`:
    b. `d_icd_diagnoses`:

2. Query Conditions:

    a. selects ICD codes(9 and 10) and long titles related to ventilator-associated pneumonia (VAP)

3. Output:

    a. Patient identifier (`subject_id`).
    b. Hospital admission identifier (`hadm_id`).
    c. ICD code for ventilator-associated pneumonia (`icd_code`).
    d. Information about the ICD code, including its long title (`ICD_Information`).

Colab Link

https://colab.research.google.com/drive/1L9s7EWTqNDSiVFvCA4KPCPPao4JrTUF4?usp=sharing