1. **Filtering ICU Stays**:
   * I filtered the icustays table to exclude stays in NICU or PICU and focused on stays with a length of at least 2 days using ROW\_NUMBER() to prioritize recent stays by intime.
2. **Identifying Last Admission**:
   * I identified the most recent ICU admission (rn = 1) for each patient, ensuring we capture their final ICU stay details such as subject\_id, hadm\_id, and icustay\_id.
3. **Extracting Vital Times**:
   * Using the chartevents table, I calculated the earliest and latest vital sign records (charttime) for each patient, essential for evaluating their physiological state over a significant period.
4. **Selecting Eligible Patients**:
   * I selected patients whose vital sign data spanned at least 2 days (EXTRACT(EPOCH FROM ...) >= 2), ensuring robust data inclusion for meaningful analysis.
5. **Calculating Mean Vitals**:
   * I computed the average values of vital signs and lab tests (itemid from chartevents) grouped by subject\_id, providing a consolidated view of patient health metrics.
6. **Final Integration and Analysis**:
   * Finally, I integrated patient demographics (gender, dob, ethnicity), hospital outcomes (hospital\_expire\_flag), and averaged vital/lab data (v.heart\_rate, v.albumin, etc.) to create a comprehensive dataset for further clinical analysis and decision-making.

This structured approach allowed me to analyze ICU patient data effectively, focusing on understanding patient health trends and outcomes before discharge or death. This query serves as a foundational step in leveraging data-driven insights to enhance clinical care strategies.