**Script Documentation: Angus Criteria for Sepsis Identification**

* **Overview**: This SQL script identifies cases of severe sepsis based on the Angus criteria using ICD-9 codes. It creates a new table named angus that aggregates information about infections, organ dysfunction, and mechanical ventilation for patients admitted to acute care hospitals.
* **Key References**:
  + Angus et al, 2001. Epidemiology of severe sepsis in the United States. [PubMed Link](http://www.ncbi.nlm.nih.gov/pubmed/11445675)
* **Logic Summary**:
  + The script utilizes multiple Common Table Expressions (CTEs) to classify patients based on their diagnoses and procedures recorded in the hospital's database. It checks for infections, organ dysfunction, and explicit diagnoses of severe sepsis or septic shock. Finally, it aggregates this data to create a final indicator for severe sepsis according to the Angus criteria.
* **Process Steps**:
  + **CTE infection\_group**:
    - Identifies patients with ICD-9 codes corresponding to infections, assigning a flag (1 for presence) based on predefined infection-related codes.
  + **CTE organ\_diag\_group**:
    - Identifies patients with ICD-9 codes indicating organ dysfunction or explicit severe sepsis diagnoses, assigning appropriate flags.
  + **CTE organ\_proc\_group**:
    - Flags patients who have undergone mechanical ventilation, based on specific ICD-9 procedure codes.
  + **CTE aggregate**:
    - Combines the results from the previous CTEs to summarize infection status, explicit sepsis diagnosis, organ dysfunction, and mechanical ventilation for each hospitalization.
  + **Final Selection**:
    - Outputs the aggregated data, including flags for infections, explicit sepsis, organ dysfunction, and mechanical ventilation, along with a final indicator for severe sepsis (angus).
* **Output**:  
  The script generates a new table, angus, containing the following fields:
  + subject\_id: Unique identifier for the patient.
  + hadm\_id: Unique identifier for the hospital admission.
  + infection: Flag indicating the presence of an infection (1 if present, 0 otherwise).
  + explicit\_sepsis: Flag indicating an explicit diagnosis of sepsis (1 if present, 0 otherwise).
  + organ\_dysfunction: Flag indicating the presence of organ dysfunction (1 if present, 0 otherwise).
  + mech\_vent: Flag indicating whether the patient was on mechanical ventilation (1 if present, 0 otherwise).
  + angus: Final flag indicating whether the patient meets the Angus criteria for severe sepsis.

**Example Query**:  
To retrieve all patients identified with severe sepsis:  
sql  
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SELECT \* FROM angus WHERE angus = 1;

* **Important Notes**:
  + The script is automatically generated; direct edits should be avoided to maintain integrity.
  + Ensure ICD-9 codes used for classification are updated and relevant for current datasets.
* **Conclusion**:  
  This script automates the identification of severe sepsis cases based on the Angus criteria, providing valuable insights for clinical assessments and research into sepsis epidemiology.