### **Script Documentation: SOFA Score Calculation**

#### **Overview**

This SQL script calculates the **SOFA (Sequential Organ Failure Assessment) scores** using the methodology defined by Vincent et. al. in their 1996 paper, *"The SOFA (Sepsis-related Organ Failure Assessment) score to describe organ dysfunction/failure"*. It uses a variety of variables such as urine output and GCS to generate the score.

The script calculates a score between 0 and 24 that details a patient's SOFA score during a specific ICU admission.

#### **Key References**

* Jean-Louis Vincent, Rui Moreno, Jukka Takala, Sheila Willatts, Arnaldo De Mendonça, Hajo Bruining, C. K. Reinhart, Peter M Suter, and L. G. Thijs. *"The SOFA (Sepsis-related Organ Failure Assessment) score to describe organ dysfunction/failure."* Intensive care medicine 22, no. 7 (1996): 707-710.

#### **Output**

* The script generates a new table, **sofa**, containing the sofa score for each ICU admission
  + Sofa: Overall sofa score
  + Respiration: Score for this variable used to calculate sofa
  + Coagulation: Score for this variable used to calculate sofa
  + Liver: Score for this variable used to calculate sofa
  + Cardiovascular: Score for this variable used to calculate sofa
  + CNS: Score for this variable used to calculate sofa
  + Renal: Score for this variable used to calculate sofa

#### **Example Query**

To retrieve all icu admissions with SOFA score of 6:

SELECT icustay\_id FROM sofa WHERE sofa = 6;

#### **Conclusion**

This script automates the derivation of SOFA scores from a variety of variables to facilitate sepsis and organ failure studies.