

## **Surviving Sepsis Campaign Statement on Glucose Control in Severe Sepsis (June 2009\*)**

There is insufficient information from randomized controlled trials to determine the optimal target range of blood glucose in the severely septic patient. (1) The NICE-SUGAR trial is the largest most compelling study to date on glucose control in ICU patients given its inclusion of multiple ICUs and hospitals, and a more general patient population. (2) Based on the results of this trial, we recommend against intravenous insulin therapy titrated to keep blood glucose in the normal range (80-110 mg/dl) in patients with severe sepsis. It is clear that attempts to normalize blood glucose with IV insulin during critical illness results in higher rates of hypoglycemia. (1,3) Until additional information is available, teams seeking to implement glucose control should consider initiating insulin therapy when blood glucose levels exceed 180 mg/dL with a goal blood glucose approximating 150 mg/dl as was observed in the beneficial arm of the NICE-SUGAR trial.

- 1) Griesdale DE, de Souza RJ, van Dam RM, Heyland DK, Cook DJ, Malhotra A, Dhaliwal R, Henderson WR, Chittock DR, Finfer S, Talmor D. Intensive insulin therapy and mortality among critically ill patients: a meta-analysis including NICE-SUGAR study data. *CMAJ*. 2009 Apr 14; 180(8): 799-800.
- 2) NICE-SUGAR Study Investigators, Finfer S, Chittock DR, Su SY, Blair D, Foster D, Dhingra V, Bellomo R, Cook D, Dodek P, Henderson WR, Hébert PC, Heritier S, Heyland DK, McArthur C, McDonald E, Mitchell I, Myburgh JA, Norton R, Potter J, Robinson BG, Ronco JJ. Intensive versus conventional glucose control in critically ill patients. *N Engl J Med*. 2009 Mar 26; 360(13):1283-97. Epub 2009 Mar 24
- 3) Wiener RS, Wiener DC, Larson RJ. Benefits and risks of tight glucose control in critically ill adults: A meta-analysis. *JAMA* 2008; 300:933–44

\*This revised recommendation has been issued by Surviving Sepsis Campaign (SSC) Guidelines Committee Subgroup for Glucose Control; R. Phillip Dellinger, MD, FCCM, the 2008 SSC Guidelines Chair; and the SSC Executive Committee. Posted on the SSC Web site and list serve 6/12/2009.