GSA
GLOBAL SEPSIS ALLIANCE

Statement on the European Society of Intensive Care Medicine (ESICM) and the Society of Critical Care Medicine (SCCM) Task Force Third International Consensus Definitions for Sepsis and Septic Shock (Sepsis-3)

The mission of the Global Sepsis Alliance (GSA) is to provide opportunities for and be supportive of global interaction, such that the Global Community might address with equal commitment and vigor the needs of children and adults with sepsis in both the developed and developing world. It aims to provide the ability to speak with one united voice to offer consistent, easily understood messaging to governments, philanthropists and the public, and to easily identify and access resources and people of common purpose and intent within and without the scientific community with the goal of reducing the global burden of sepsis.

With the above mission in mind the GSA welcomes the increased academic interest in sepsis generated in response to the reports of the European Society of Intensive Care Medicine (ESICM) and the Society of Critical Care Medicine (SCCM) Task Force Third International Consensus Definitions for Sepsis and Septic Shock (Sepsis-3).1-3

The task force articulated key concepts which the GSA has long promoted as part of its mission including that:

- In lay terms, sepsis is a life-threatening condition that arises when the body's response to an infection injures its own tissues and organs (agreed at the first meeting of the Global Sepsis Alliance at the Merinoff Symposium in New York in 2010).
- Sepsis is the primary cause of death from infection, especially if not recognized and treated promptly. Its recognition mandates urgent attention.
- What differentiates sepsis from uncomplicated infection is the presence of (even minor degrees of) organ dysfunction.
- Sepsis-induced organ dysfunction may be occult; therefore, its presence should be considered in any patient presenting with infection. Conversely, unrecognized infection may be the cause of new-onset organ dysfunction. Any unexplained organ dysfunction should thus raise the possibility of underlying infection, in which case the patient has unrecognized sepsis.

The Task Force offered a new definition for sepsis, namely that "Sepsis is defined as life-threatening organ dysfunction caused by a dysregulated host response to infection" and suggest that organ dysfunction be identified using the Sequential Organ Failure (SOFA) Score rather than the criteria for organ dysfunction previously adopted by the Surviving Sepsis Campaign. The task force concluded that the term severe sepsis was redundant.

In addition, the Task Force sought to evaluate clinical criteria to identify patients with sepsis through the interrogation of large clinical databases in the USA and one hospital in Germany. From this exercise they offered quick SOFA (qSOFA) as a clinical scoring system that identified patients in who infection was assumed (as they had received antibiotics and had microbiological cultures taken) and who were more likely to die or to be treated in an intensive care unit for 3 or more days.

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The task force also articulated existing limitations of their suggested approach and offered key messages that should be emphasized, namely that with regard to qSOFA:

- "The task force strongly encourages prospective validation in multiple US and non-US health care settings to confirm its robustness and potential for incorporation into future iterations of the definitions."

- "Neither qSOFA nor SOFA is intended to be a stand-alone definition of sepsis. It is crucial, therefore, that failure to meet 2 or more qSOFA or SOFA criteria should not lead to a deferral of investigation or treatment of infection or to a delay in any other aspect of care deemed necessary by the treating practitioners."

- The task force also stressed that SIRS criteria still remain useful for the identification of infection.

Although the task force chose not to include measurement of serum lactate in qSOFA, the also stated that "The task force recommendations should not, however, constrain the monitoring of lactate as a guide to therapeutic response or as an indicator of illness severity." Lactate is included in the proposed new definition of septic shock but the Task Force notes that where lactate is not available other indicators of hypoperfusion may be used.

The GSA agrees with these statements, particularly that the proposed definition and qSOFA are derived from data from US hospitals and therefore need external validation before being widely adopted. This further highlights the need to generate sepsis-related data in low and middle income countries and prospectively test the definition widely around the world. Indeed, advocating for data from low and middle income countries is a mandate of the GSA. A change in SOFA score, being reliant on a laboratory services, will not be practicable as a diagnostic criterion in many locations in LMICs. The GSA proposes that governments, agencies and organizations such as the World Health Organization be engaged in devising and testing surrogate measures for such regions by way of 'operationalizing' the academic definitions.

We, like the authors, also recognize that improving on definitions is an iterative process and further refinement and changes may prove necessary. Thus pending prospective testing, the decision of how hospitals, health care systems and countries respond to the task force recommendations rests with those individual hospitals, health care systems and countries.

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References

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