Published in final edited form as:

Crit Care Med. 2018 March ; 46(3): e273–e274. doi:10.1097/CCM.0000000000002901.

In Response to: Sepsis-3 is a positive evolution in discrimination between septic and non-septic patients as well as sepsis entities, not a step backwards

Sarah A. Sterling, MD, Michael A. Puskarich, MD, Alan E. Jones, MD

Department of Emergency Medicine, University of Mississippi Medical Center School of Medicine, 2500 N State St., Jackson, MS 39216, USA

Dear Editor,

We read with great interest the letter to the editor from Scheer et al (1). We appreciate their thoughtful comments as well as the opportunity to address some of their concerns regarding our recently published paper (2). The authors rightfully point out in their letter that Sepsis-3 summarized two conditions, sepsis and septic shock. Our analysis specifically addressed changes in the criteria of septic shock and the potential effect the new criteria could have on patients previously considered septic shock. The authors note that the majority (91%) of the patients in this analysis who met the 1991 criteria for septic shock only would still be “covered” under the Sepsis-3 criteria since they would meet the criteria for sepsis. Although this is true, we feel this could affect a clinician’s perception of severity of illness and lead to under appreciation of potential morbidity and mortality. One could argue that this is simply calling a disease by another name and does not change the disease itself; however, given the previous definitions of sepsis and septic shock have been used for more than 20 years, assuming the change from “septic shock” to “sepsis” could not potentially impact clinical care or the clinician’s perception of risk is ideological.

As recognized in our analysis, this is not to say that the previous definitions of sepsis and septic shock were without their shortcomings, as SIRS criteria are well-known for having limited specificity for the diagnosis of sepsis. While we agree with the authors that the Sepsis-3 criteria of septic shock does indeed identify a cohort of patients at a higher risk of mortality than the previous (1991) definition, a mortality risk of 14% for patients previously considered septic shock, who are now sepsis under the new criteria, remains substantial. (2) The authors note that this mortality rate coincides with a general ICU mortality rate. However, we are concerned that that clinicians could inappropriately use the argument that “this patient does not meet sepsis criteria” as a reason to recommend admission to a general medical ward, perhaps inappropriately not understanding the associated risk.

Contact Information: Alan E. Jones, MD, Chairman, Department of Emergency Medicine, University of Mississippi Medical Center, 2500 N State Street, Jackson, MS 39216, Tel: +1601-984-5572, Fax: +1601-984-5583, aejones@umc.edu. sasterling@umc.edu, mpuskarich@umc.edu.

The remaining authors have disclosed that they do not have any potential conflicts of interest.

Scheer et al (1) note confusion regarding our terminology of “SEP-3 Septic Shock” and “1991 Septic Shock Only”. We apologize for any confusion and appreciate the opportunity to clarify. As described in the results section and shown in Figure 1 “Flowchart of included patients” (2), all 470 patients included in this analysis met the criteria for the 1991 definition of septic shock. Patients were subsequently divided into those meeting the new criteria (Sepsis-3) and those meeting only the 1991 definition. The authors are correct in their assertion that the 200 patients who met the criteria for Sepsis-3 septic shock also met the criteria for the 1991 definition.

Finally, Scheer et al (1) state that the potential advantages of the Sepsis-3 criteria were not investigated. We feel the potential advantages were addressed in our report, as the new, Sepsis-3 criteria clearly identified a cohort of patients that had higher morbidity and mortality. (2) However, balancing this potential advantage of narrowing the scope of the criteria for septic shock is the possibility that patients with significant mortality risks, who might benefit from early intervention and treatment, could be under-recognized and undertreated if no longer considered “septic shock”. Thus, we do not conclude nor wish to propose a return to the 1991 sepsis definitions. Rather, the aim of this report was to observe the necessary trade-offs that result from such changes, and alert researchers and clinicians alike to the potential pitfalls associated such changes.

Acknowledgments

Copyright form disclosure: Dr. Sterling disclosed she is partially supported by the National Institute of General Medical Sciences of the National Institutes of Health (NIH) under Award Number 1U54GM115428. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health. She also received support for article research from the NIH.

Reference List

1. Scheer CA, Kuhn SO, Rehberg S. Sepsis-3 is a Positive Evolution in the Discrimination Between Septic and Non-Septic Patients as Well as Sepsis Entities, Not a Step Backwards. *Crit Care Med* 2017
2. Sterling SA, Puskarich MA, Glass AF, Guirgis F, Jones AE. The Impact of the Sepsis-3 Septic Shock Definition on Previously Defined Septic Shock Patients. *Crit Care Med* 2017;45(9):1436–1442. [PubMed: 28542029]