Reply

From the Authors:

We appreciate the interest of Drs. Nolan and Weiden in our investigation of trends in sepsis and infection in the United States (1). The authors hypothesize that increasing use of venous lactate (over arterial lactate) and tympanic temperature (over core temperature) measurements to define sepsis may have contributed to an increased diagnosis of sepsis over time by reducing the threshold to diagnose sepsis.

We agree that the definition of sepsis may vary between clinicians and centers, and over time, and would include trends in temperature and lactate measurement among the possible differences in determining systemic inflammatory response syndrome and acute organ failure previously in our article. We also agree that overdiagnosis (and underdiagnosis) of sepsis has the potential for harm, and encourage further studies investigating the diagnostic approach to sepsis. However, unlike the well-documented increased use of computed tomography to diagnose pulmonary embolism (2), it is currently unclear if use of venous lactate or tympanic temperature has increased over the time frame of our study. Neither “standard definition” for sepsis (i.e., the Consensus Conference published in 1992 [3] and International Consensus Conference revised April 2003 [4]) stipulated that arterial lactate or core temperature define sepsis diagnosis; thus, it is unclear what would have triggered clinicians to change their diagnostic strategy between 2003 and 2009. In addition, the symmetric 95% confidence intervals for the average difference between venous and arterial lactate (−2.0 to +2.3) (5) imply similar risk for venous lactate to over- and underestimate arterial lactate values, a finding that would not likely have a net impact on severe sepsis incidence.

Author disclosures are available with the text of this letter at www.atsjournals.org.

Allan J. Walkey, M.D., M.Sc.
Boston University School of Medicine
Boston, Massachusetts

Tara Lagu, M.D., M.P.H.
Peter K. Lindenauer, M.D., M.Sc.
Baystate Medical Center
Springfield, Massachusetts

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