

Response to Letter: “Resuscitative ultrasound – Underappreciated need for the clarity in terminology”

Dear Editor,

We thank Drs. Barjaktarevic and Friedman for their comments¹ on The Second Sonography in Hypotension and Cardiac Arrest in the Emergency Department (SHoC-ED2) study,² in addition to the SHoC Consensus paper³ from the International Federation for Emergency Medicine, and their questions regarding the continuum between cardiac arrest and shock. The confirmation of the utility of point-of-care ultrasound (PoCUS) to predict outcomes more accurately than electrocardiogram alone, as well as potentially guide clinicians towards more sustained resuscitation and improved initial outcomes, is timely.

The SHoC series continues to grow as a result of original contributions from researchers and PoCUS leaders from many countries.⁴ The series has focused on outcomes related to PoCUS use in critically ill patients in the emergency department; in particular, those with the highest mortality rates: hypotensive⁴ and cardiac arrest patients.⁵ As evidenced by studies examining the ability of clinicians to differentiate extreme shock and hypotension from cardiac arrest, and in line with resuscitation literature, there is a clear spectrum of severity of hemodynamic status extending from abnormal markers of perfusion, such as a raised shock index or lactate, through to patients with pulseless electrical activity, or cardiac

arrest.⁶ As such, we believe that similar principles for the use of PoCUS to assess for core findings, such as pericardial fluid; cardiac form, function, flow; and filling status, combining cardiac, lung, and caval PoCUS; along with other focused enquiries depending upon the clinical scenario, are applicable to all patients along this spectrum of shock.

As to what terminology should be used for such resuscitative ultrasound, well, it seems that no one owns naming rights to this commonly used modality. As Drs. Barjaktarevic and Friedman highlight, there are many acronyms describing various similar approaches to the use of PoCUS in both cardiac arrest and hypotension, including but not limited to ACES, RUSH, SHoC, FATE, FOCUS, ELS, FEEL, and so on. We agree that resuscitative ultrasound is an appropriate and applicable term for the use of ultrasound in cardiac arrest. Whether or not the term can also be applied to critically ill or injured patients cannot be determined other than by opinion and consensus. There is no gold standard for terminology. As such, we hope that the SHoC investigators and other resuscitative ultrasound leaders will continue to contribute to the growing body of evidence describing the optimal way to use PoCUS to improve outcomes during resuscitation of any type.

Sincerely,

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On behalf of the SHoC
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