

New study aims to validate pediatric version of sequential organ failure assessment

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A new study aims to validate the pediatric version of Sequential Organ Failure Assessment score in the emergency department (ED) setting as a predictor of mortality in all patients and patients with suspected infection. Findings from the study will be presented during the *Pediatric Academic Societies (PAS) 2019 Meeting*, taking place on April 24-May 1 in Baltimore.

In adult Sepsis-3, sepsis is defined as a Sequential Organ Failure Assessment (SOFA) score greater than or equal to 2 plus suspected infection. A pediatric version (pSOFA) was derived among [pediatric intensive care unit \(PICU\)](#) patients.

"Our study is the first evaluation of pSOFA and Sepsis-3 outside of the PICU setting in a broad, multi-centered cohort of children seeking [emergency care](#)," said Frances Balamuth, MD, Ph.D., MSCE, one of the authors of the study. "We found that hospital mortality is a very rare outcome in this setting due to the diverse population that seek care in the ED and differentiating it from prior areas of pSOFA study. We found that pSOFA in the ED has face validity in that we observed increasing mortality with increasing pSOFA scores in both the ED population overall, and in those with sepsis according to Sepsis-3 definitions. Interestingly, we found that an ED pSOFA score of greater than or equal to 2 had poor sensitivity for predicting in hospital death, and not surprisingly had better test characteristics in those with suspected infection compared to the ED population overall."

This study involved a retrospective observational study in seven U.S. children's hospitals using the Pediatric Emergency Care Applied Research Network (PECARN) Registry from January 1, 2012 through -March 31, 2018. It included all ED visits for patients less than 18 years.

There were 3,087,746 ED visits during the study period. The pSOFA scores ranged from 0 to 14,

with median (IQR) of 0 (0, 0). There were 88,916 (2.9%) visits with pSOFA greater than or equal to 2. Visits with pSOFA greater than or equal to 2 had increased risk of death (RR 31.8 (95% CI 28.5, 35.7) and longer median length of stay (LOS) (116 [41, 358] versus 41 [20, 85] hours, p

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