Supplemental Digital Content 1: Text

Methods

Study Design

Patients were excluded from the study if they did not have established vascular access from which blood could be obtained, were in a state in which death was perceived as imminent, or had an advanced directive or do not resuscitate (DNR) order to withhold life-sustaining interventions.

Clinical Data Collection

Study data were collected and managed using Research Electronic Data Capture (REDCap) electronic data capture tools hosted at CCHMC [1]. Clinical data were analyzed using SigmaStat for Windows Version 13 (Systat Software, San Jose, CA).

Positive pressure ventilation (PPV) included non-invasive methods (continuous positive airway pressure [CPAP] or bilevel positive airway pressure [BiPAP]) and invasive methods (i.e. intubation with mechanical ventilation)

Values for parametric data are expressed as mean and standard deviation (SD) and were analyzed by t-test. For nonparametric data, median and interquartile range are shown, and data were analyzed by Mann-Whitney rank sum test. Categorical data were compared with Fisher exact test. Statistical significance was defined as p≤0.05.

1.   Harris PA, Taylor R, Thielke R, Payne J, Gonzalez N, Conde JG: **Research electronic data capture (REDCap)--a metadata-driven methodology and workflow process for providing translational research informatics support**. *J Biomed Inform* 2009, **42**(2):377-381.