Introduction:
Septic shock patients are often at risk for volume overload. We explore a control patient population receiving standard of care (SOC) resuscitation to evaluate fluid balance in patients with sepsis or septic shock.

Methods:
FRESH is a prospective randomized controlled study, evaluating the incidence of fluid responsiveness (FR) and patient centered outcomes in critically ill septic patients (NCT02837731). Patients initially presented to the ER with hypotension and symptoms of septic shock and were admitted to the ICU. Patients randomized to treatment group had a dynamic assessment of fluid responsiveness (Starling SV, Cheetah Medical) to guide their resuscitation. Control patients received resuscitation per Institution standard of care. Patients were broken into sextets based on fluid balance.

Results:
48 patients received SOC treatment across 11 institutions globally. 38% were female, and the average age was 62 years. Patients exhibited 2.8 SIRS criteria with a 2.0 average qsofa score. Patients received a mean of 6.6 ± 3.4L of fluid from hospital arrival until ICU discharge or 72 hours, whichever occurred first. Patients exhibited an average fluid balance of 4.2 ± 3.4 L of fluid at ICU discharge/ 72 hours. Fluid balance ranged from 14.9L to -1.5L (Figure 1).

Conclusion:
A wide range of fluid balance exists in septic shock patients cared for in ICU.
Subjects by Fluid Balance Sextiles with Range

Mean Study Fluid Balance (Ltr) w/ 95% CI

Group 1* (14.9-6.8) Group 2* (6.7-5.6) Group 3# (5.5-4.0) Group 4* (4.0-2.7) Group 5# (2.5-1.3) Group 6* (1.1-1.5)

Fluid Balance Groups (*N=7, #N=8)

Subjects by Fluid Balance Sextiles with Range