### Online Supplement

<table>
<thead>
<tr>
<th>Content</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>List of participating sites</td>
<td>1</td>
</tr>
<tr>
<td>Survey</td>
<td>2 - 8</td>
</tr>
</tbody>
</table>

### Table E1. Participating Sites in Alphabetical Order

<table>
<thead>
<tr>
<th>Site Name</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beth Israel Deaconess Medical Center</td>
<td>Boston, MA</td>
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<tr>
<td>Brigham &amp; Women’s Hospital</td>
<td>Boston, MA</td>
</tr>
<tr>
<td>Emory University</td>
<td>Atlanta, GA</td>
</tr>
<tr>
<td>Massachusetts General Hospital</td>
<td>Boston, MA</td>
</tr>
<tr>
<td>North Shore Medical Center</td>
<td>Salem, MA</td>
</tr>
<tr>
<td>Stanford University</td>
<td>Palo Alto, CA</td>
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<tr>
<td>University of California Davis</td>
<td>Davis, CA</td>
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<tr>
<td>University of California San Diego</td>
<td>San Diego, CA</td>
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<tr>
<td>University of California San Francisco</td>
<td>San Francisco, CA</td>
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</tbody>
</table>
1. CONSENT STATEMENT: The purpose of this research study is to investigate the amount of fluid that emergency and critical care physicians feel comfortable providing to patients in septic shock. If you agree to take part in this study, you will be asked to complete an online survey/questionnaire. This survey/questionnaire will ask about how you approach patients with sepsis and heart failure and it will take you approximately 10 minutes to complete.

There is not any direct benefit to you from this research. The investigator(s), however, may learn more about how patients with heart failure and sepsis are managed and any potential areas for education.

There are minimal risks associated with this research study. We have made all responses anonymous to do what we can to prevent loss of confidentiality. Research records will be kept confidential to the extent allowed by law and may be reviewed by the UCSD Institutional Review Board.

Your participation in this study is completely voluntary and you can withdraw at any time by simply exiting the survey. Choosing not to participate or withdrawing will result in no penalty or loss of benefits to which you are entitled. You are free to skip any question that you choose.

If you have questions about this project or if you have a research-related problem, you may contact the researcher, Gabriel Wardi, MD, MPH at xxx-xxx-xxxx. If you have any questions concerning your rights as a research subject, you may contact the UCSD Human Research Protections Program Office at xxx-xxx-xxxx.

By clicking “You agree” below you are indicating that you are at least 18 years old, have read this consent form, and agree to participate in this research study. Please print a copy of this page for your records.
Please respond to the following questions as best you can.

2. What describes your role in the hospital?
   [ ] Nurse practitioner [ ] Physician assistant [ ] Physician

3. What training level best describes you (if applicable)?
   [ ] Intern [ ] Resident [ ] Fellow [ ] Attending [ ] Other

4. How many weeks per year do you typically see patients in the ICU?
   [ ] 0-5 [ ] 6-10 [ ] 11-15 [ ] 16-20 [ ] More than 20

5. How many shifts (of 6 hours or longer) per month do you typically see patients in the ED?
   [ ] 0-3 [ ] 4-6 [ ] 7-9 [ ] 10-12 [ ] More than 12

6. In what core specialty is your primary training (if applicable)?
   [ ] Emergency Medicine [ ] Internal Medicine [ ] Anesthesiology [ ] Surgery
   [ ] Emergency and Internal Medicine (dual-trained) [ ] Other

7. Have you completed a fellowship in critical care?
   [ ] Yes [ ] No

8. What is your total experience in the ICU, excluding time spent in a training program?
   [ ] None—I do not work in ICU setting [ ] 1-5 years [ ] 6-10 years [ ] 11-15 years [ ] 15+ years
9. What is your total experience in the ED, excluding time spent in a training program?

[ ] None—I do not work in ED setting [ ] 1-5 years [ ] 6-10 years [ ] 11-15 years [ ] 15+ years

10. Which best describes the setting at which you spend the majority of your clinical ED and/or ICU time?

[ ] Private or non-profit hospital—teaching [ ] Private or non-profit hospital—non-teaching [ ] Public hospital—teaching [ ] Public hospital—non-teaching [ ] University teaching hospital [ ] Veterans Affairs Medical Center

For the following questions, rate the level to which you agree with each statement. For any question regarding systolic heart failure, assume that the patient does not have signs of significant volume overload.

11. Patients with septic shock and systolic heart failure with ejection fraction < 40% should be exempt from existing sepsis bundled care initiatives for fluid resuscitation.

[ ] Strongly agree [ ] Agree [ ] Neutral [ ] Disagree [ ] Strongly disagree [ ] Uncertain

12. I feel comfortable administering more than 30 cc/kg of crystalloid fluid to patients with septic shock and systolic heart failure with ejection fraction < 40%.

[ ] Strongly agree [ ] Agree [ ] Neutral [ ] Disagree [ ] Strongly disagree [ ] Uncertain

13. The physicians in the ED and ICUs are aware of the Joint Commission measure on fluid resuscitation in patients with septic
14. In a usual clinical day, I lack the time to reassess and think about the quantity of fluids I administer to a patient under my care with septic shock and systolic heart failure with ejection fraction < 40%.

15. My training discourages > 30 cc/kg of fluids for patients with septic shock and systolic heart failure with ejection fraction < 40%.

16. I routinely initiate vasopressors with less total fluid administered for patients with septic shock and systolic heart failure with ejection fraction < 40%.

17. My blood pressure target for septic shock patients with systolic heart failure with ejection fraction < 40% is the same as for patients with septic shock without heart failure.

18. I routinely use changes in lactate or central venous oxygenation (ScvO2) to guide fluid resuscitation in patients with septic shock.
and systolic heart failure with ejection fraction < 40%.

19. I routinely check lactate in patients with sepsis and mean arterial pressure (MAP) ≥ 65 mm Hg.

20. I routinely administer fluids to patients with sepsis and elevated lactate (≥2 mmol/L) with MAP ≥ 65 mm Hg.

21. Multicenter trials published in major medical journals the last five years have shown that protocolized resuscitation improves survival compared to usual care among patients with septic shock.

22. Central venous pressure is a reliable indicator of intravascular volume in patients with septic shock.

23. Central venous pressure is a reliable indicator of volume responsiveness in patients with septic shock.
24. I understand the underlying pathophysiology of septic shock and how this impacts fluid resuscitation.

[ ] Strongly agree [ ] Agree [ ] Neutral [ ] Disagree
[ ] Strongly disagree [ ] Uncertain

25. Nurse:patient staffing ratios are not sufficient to allow for proper management of patients with septic shock and systolic heart failure with ejection fraction < 40%.

[ ] Strongly agree [ ] Agree [ ] Neutral [ ] Disagree
[ ] Strongly disagree [ ] Uncertain

26. My education has given me enough knowledge to manage patients in septic shock and systolic heart failure with ejection fraction < 40%.

[ ] Strongly agree [ ] Agree [ ] Neutral [ ] Disagree
[ ] Strongly disagree [ ] Uncertain

27. My institution's bundled care initiative for sepsis does NOT recommend a different sepsis resuscitation strategy for patients with systolic heart failure with ejection fraction < 40% compared to patients without heart failure.

[ ] Strongly agree [ ] Agree [ ] Neutral [ ] Disagree
[ ] Strongly disagree [ ] Uncertain

28. Please mark how much fluid (in liters, assuming a 75 kg patient) you feel should be administered in patients with septic shock and systolic heart failure with ejection fraction < 40% before the patient is deemed non-responsive to fluid challenge within the first 6 hours of presentation.

[ ] 0-0.5 [ ] 0.6-1.0 [ ] 1.1-2.0 [ ] 2.1-4.0 [ ] 4.1-6.0 [ ] 6+
29. Please mark how much fluid (in liters, assuming a 75 kg patient) you feel should be administered in patients with septic shock (without systolic heart failure) before the patient is deemed non-responsive to fluid challenge within the first 6 hours of presentation.

<table>
<thead>
<tr>
<th>Range</th>
<th>Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-0.5</td>
<td></td>
</tr>
<tr>
<td>0.6-1.0</td>
<td>[SEP]</td>
</tr>
</tbody>
</table>