

Holiday Edition: Sepsis

Katie A. DeJong, DO

Department Chair

Avera eCare Emergency





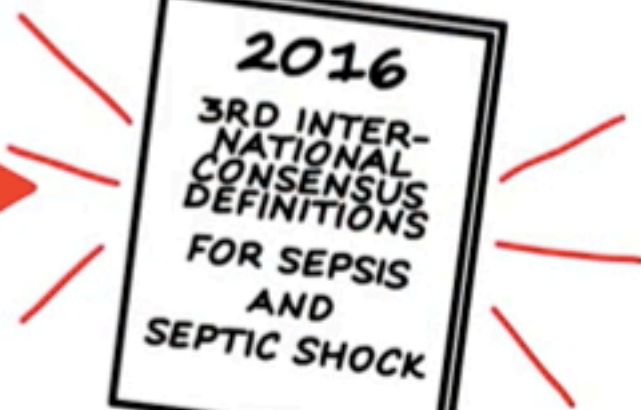
1991
DEFINITIONS
FOR SEPSIS
AND ORGAN
FAILURE



2001
INTER-
NATIONAL
SEPSIS
DEFINITIONS
CONFERENCE



2016
3RD INTER-
NATIONAL
CONSENSUS
DEFINITIONS
FOR SEPSIS
AND
SEPTIC SHOCK



A large red speech bubble graphic with a white outline, pointing downwards. The text is centered within the bubble. The background features faint, concentric circles and dashed lines.

25-50% mortality

SEPSIS matters.

A red speech bubble graphic with a white outline, pointing downwards. The text is centered within the bubble. The background features a pattern of concentric circles and dashed lines in light gray.

Mortality from sepsis increases 8% for every hour that treatment is delayed.

JAMA

Surviving Sepsis
Campaign

KNOW THE
DEFINITIONS!

SEPSIS

- Two SIRS criteria plus suspected infection

- SIRS
 - Temperature > 38.3 or < 36
 - HR > 90
 - RR > 20
 - WBC $> 12k$

Review the data.

SEVERE SEPSIS

- Sepsis + end organ injury
 - Lactate > 2
 - Hemodynamics
 - SBP < 90 or MAP < 70
 - SBP decrease > 40 from baseline
 - Coagulopathy
 - Elevated INR
 - Platelet count $< 100,000$
- AMS

SEPTIC SHOCK

- Sepsis + persistent hypotension (MAP < 65 after receiving 30cc/kg crystalloid)
- Severe sepsis with a LACTATE > 4
 - Regardless of blood pressure!





It's all or nothing!

3 hour goal!

SEVERE SEPSIS

- Sepsis + one or more variable of organ dysfunction
 - Lactate > 2
 - SBP < 90
 - MAP < 70
 - AMS
 - Extensive list...

3 HOUR COMPLIANCE

- Lactate
- Blood cultures
- Antibiotics

6 hour goal!

SEVERE SEPSIS

- Sepsis + one or more variable of organ dysfunction
 - Lactate > 2
 - SBP < 90
 - MAP < 70
 - AMS
 - Extensive list...

SIX HOUR COMPLIANCE

- Repeat lactate

3 hour goal!

SEPTIC SHOCK

- Severe sepsis with hypotension despite adequate fluids resuscitation or a lactate > 4

3 HOUR COMPLIANCE

- Lactate
- Blood cultures
- Antibiotic
- 30cc/kg fluid resuscitation

6 hour goal!

SEPTIC SHOCK

- Severe sepsis with hypotension despite adequate fluids resuscitation or a lactate > 4

SIX HOUR COMPLIANCE

- Repeat volume status and tissue perfusion assessment
- Vasopressor administration IF hypotension persists

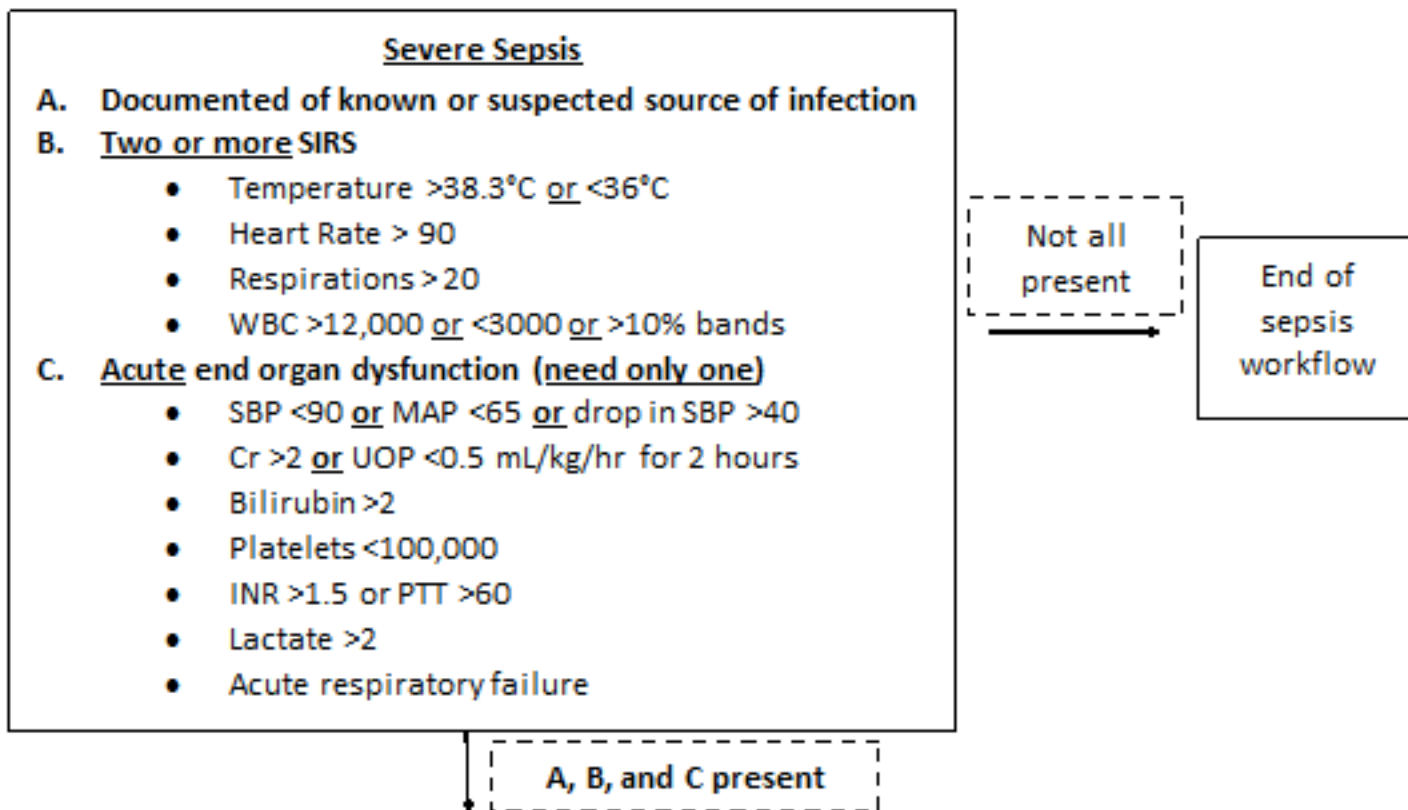
Telemedicine Improves Timeliness and Appropriateness of Antibiotics in Rural Emergency Departments

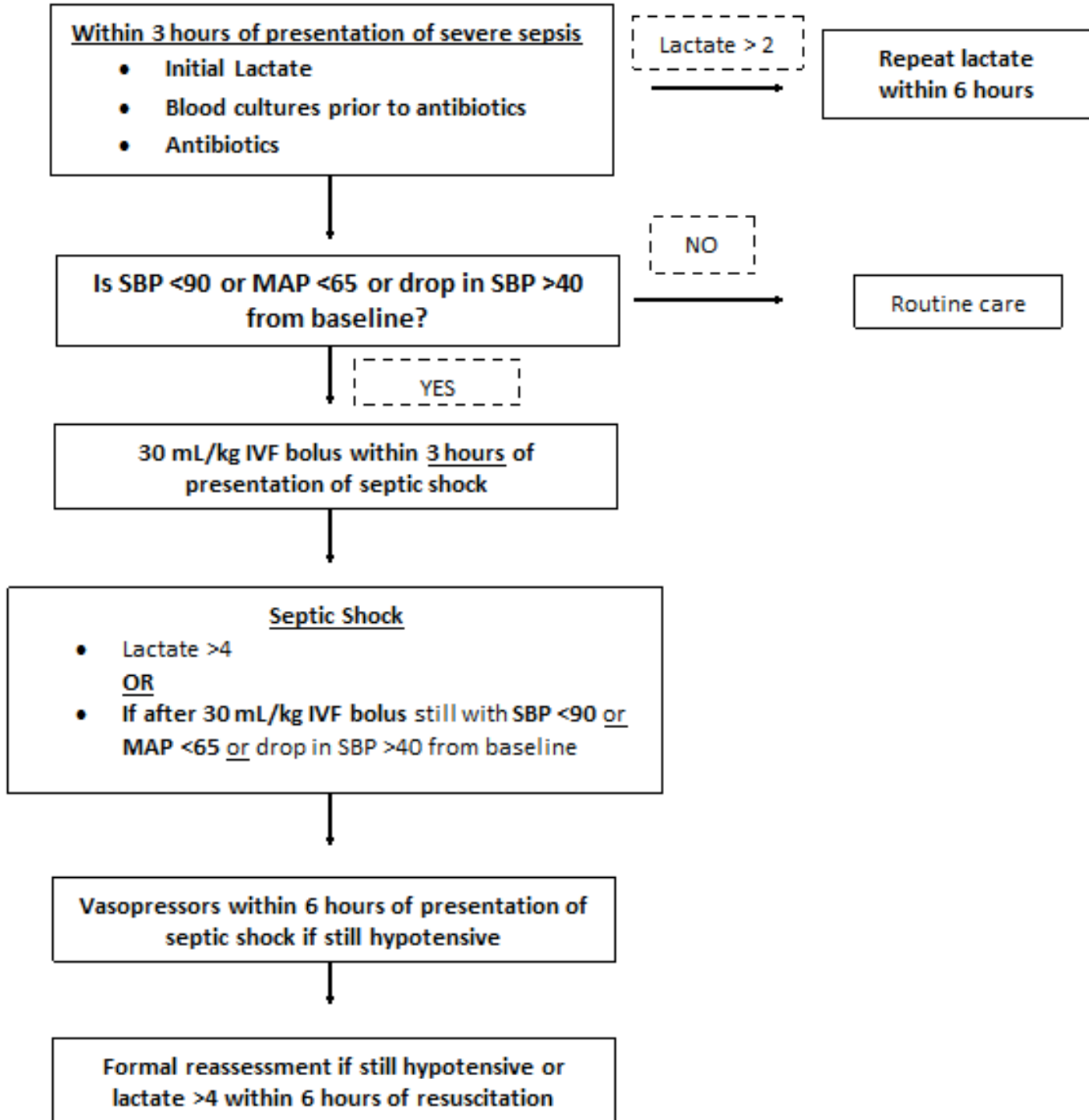
Kalyn Campbell, B.S.; Priyanka Vakkalanka, ScM; Amy Wittrock, MS; Mandy Bell, MHA; Brian Skow, MD; Brett Faine, PharmD, MS; Kari Harland, PhD, MPH; Nicholas Mohr, M.D., M.S.

Background: Severe sepsis continues to have rising incidence and high mortality, and timely and appropriate early therapy remains key to improving patient outcomes. Rural patients continue to suffer from delays in care and higher mortality than urban patients. Emergency department (ED)-based telemedicine has been associated with improved outcomes in stroke care and with providing improved access to specialty care in underserved areas. The role of telemedicine in augmenting rural sepsis care, however, has yet to be examined.

Hypothesis: Telemedicine consultation in rural EDs will improve antibiotic appropriateness. Our secondary hypothesis is that telemedicine consultation will increase adherence to *Surviving Sepsis Campaign* bundles.

Sepsis Flow Chart





Take home points!

- Severe sepsis is defined as sepsis plus a lactate > 2 or evidence of end organ dysfunction.
- You need to meet ALL the measures in order to be compliant with this core measure.
- Patients with septic shock require an assessment of volume status and tissue perfusion within 6 hours of presentation.
- Patients not included are those transferred from another facility or those placed on comfort cares.



Merry Christmas!

katie.dejong@avera.org