University of Michigan Health-West:
Sepsis Management Review
2024

A brief review for attending providers and APPs from the multiple service lines that admit, treat, and consult on our patients diagnosed with sepsis, severe sepsis and septic shock

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Sepsis Care at UMH-West

CMS & HMS

CMS Sepsis Core Measure (SEP-1)

- Promotes quality and cost-effective care to sepsis patients on a national level.
- Shapes the care we provide to our patients at UMH-West

NEW:

Becoming part of CMS's Hospital Value Based Purchasing (VBP) program

- Performance period: 1/1/24 – 12/31/24
- Hospital Reimbursement: FY 2026

New eCQM (electronic clinical quality measure "Community-Onset Sepsis: 30-day Mortality" coming (date TBD)

Michigan Hospital Medicine Safety Consortium (HMS)

- Collaborative Quality Initiative (CQI)
- Sepsis initiative combines:
  - SEP-1 measure
  - Care during entire encounter
  - Discharge transition and post-discharge care

NEW:

UMH-West will be assessed, graded and reimbursed by BCBSM on sepsis management starting in CY 2024

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UMH-West Sepsis Program

In preparation for these changes, UMH-West has been focused on implementing a sustainable sepsis program

- Sepsis Committee: formed 11/2022
  - Multidisciplinary team
  - Uses data to assess and monitor processes and outcomes in our adult hospitalized patients with a sepsis diagnosis to improve our standard of care while reducing adverse events and increasing our compliance with CMS and HMS requirements.
- Identified key sepsis leaders:
  - RN Quality Coordinator (sepsis lead & HMS abstractor)
  - RN Quality Coordinator (CMS SEP-1 abstractor)
  - HMS physician champion
  - ED physician sepsis champion
- Sepsis Algorithm: released 3/2023
  - All service lines *regardless* of specialty will be expected to follow these standards

Definitions

Sepsis | Severe Sepsis | Septic Shock

SIRS
(2 or more)

+

Infection

↓

Sepsis

Sepsis

+

Organ dysfunction
(1 or more)

↓

Severe Sepsis

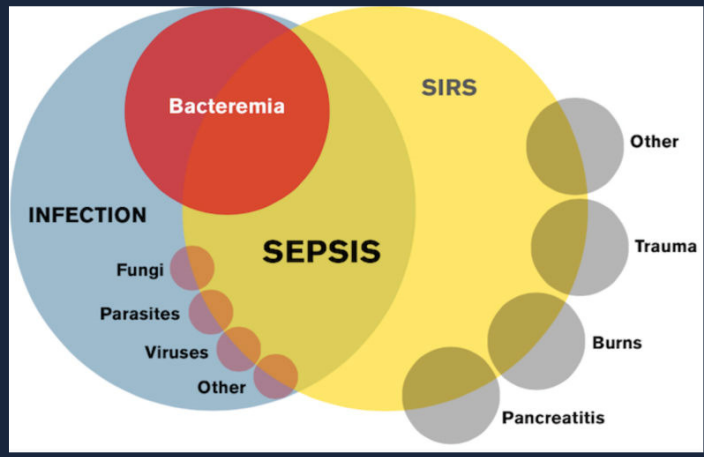
Severe Sepsis

+

Persistent Hypotension
and / or
Lactic acid ≥ 4

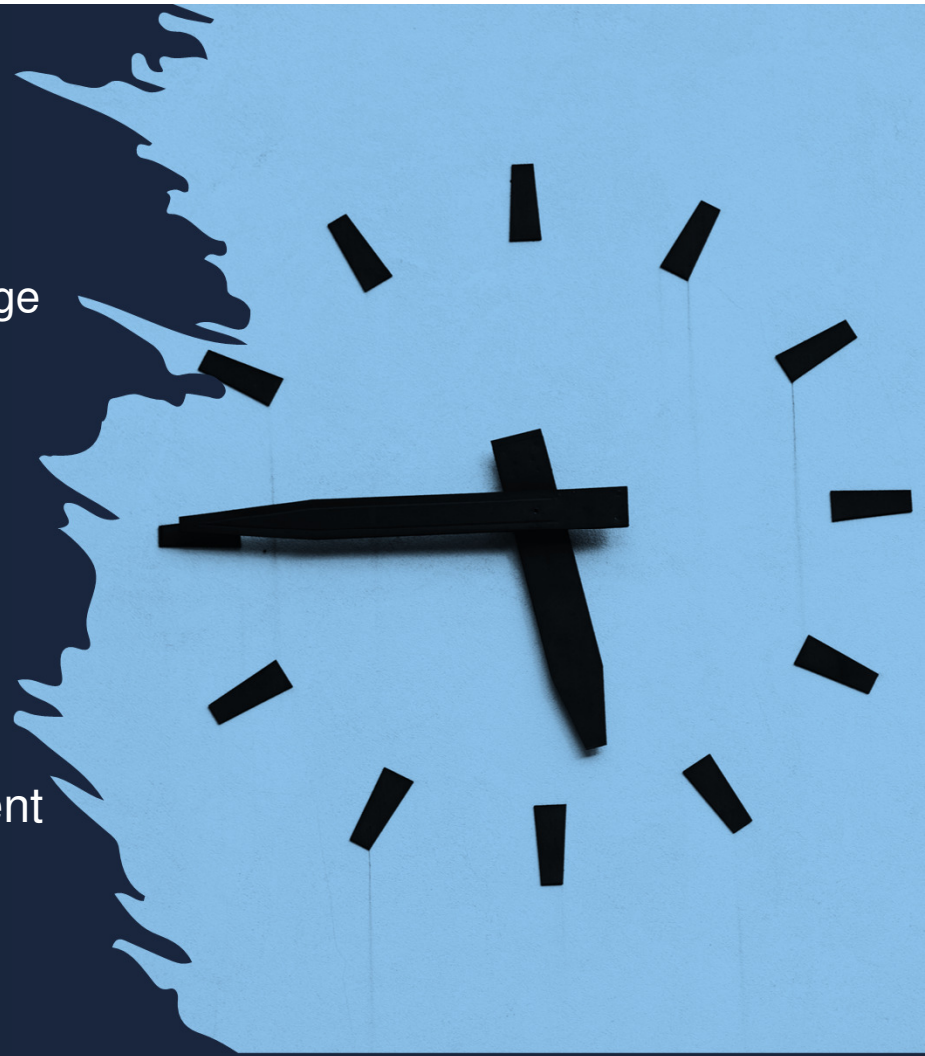
↓

Septic Shock



Defining Time Zero

- Sepsis is present upon arrival to ED:
  - Time Zero = the time the patient *arrived* to ED triage (not the time the patient was bedded in the ED)
- Sepsis presentation is after hospital admission:
  - Time Zero = the time the last of the following 3 criterion are met:
    1. Documentation of an infection
    2. SIRS criteria (2 or more)
    3. Organ dysfunction (1 or more)
- Severe sepsis and septic shock can have different "Time Zeros"
- "Time Zero" determines the timeframe requirements for subsequent care



Sepsis Standards

Early Management

- Within **THREE** hours of "Time Zero"
  - Initial lactic acid (required for severe sepsis)
    - *Collected & resulted* within 3 hours
  - Blood cultures x2 (required for severe sepsis)
    - *Collected* within 3 hours
  - Order & Administer IV Antibiotics (required for severe sepsis)
    - *Ordered & administered* within 3 hours
    - RNs are educated on the importance of starting the antibiotic within 1 hour of the order being placed
  - Crystalloid fluid resuscitation (required for septic shock)
    - *Started* within 3 hours

Sepsis Standards

Early Management

- Within **SIX** hours of "Time Zero"
  - Crystalloid fluid resuscitation (required for septic shock)
    - *Finished* within 6 hours
  - Repeat lactic acid (required if initial was > 2 mmol/L)
    - *Collected* within 4 hours of initial
  - Vasopressors (required if persistent hypotension is present **AFTER** completion of fluid bolus)
    - *Started* within 6 hours
  - Repeat Volume Status & Tissue Perfusion Assessment (required for septic shock)
    - *Completed* after bolus & within 6 hours
    - It's recommended **.sep1** or **.sep1exam** is used so all required documentation is captured
    - Documentation should include date & time exam was completed

Sepsis Standards
Crystalloid Fluids

- Target volume = 30 mL/kg
  - Ideal body weight (IBW) may be used if:
    1. Ordering provider documents patient is obese
    2. Ordering provider documents IBW was used to determine resuscitation volume
  - May be given over multiple boluses
    - 1000 mL NS bolus x2 vs. 1980 mL NS bolus x1
  - Balanced fluids (Plasmalyte, LR) are preferred

- Lesser volumes
  - Allowed if physician documents in a *single* note:
    1. The volume to be administered (Ex. 1500 mL or 25 mL/kg)
    2. Reason for lesser volume, such as…
       - "Concern for fluid overload"
       - "Heart failure" / "Renal failure"
       - "Blood pressure responded to a lesser volume"
  - *A volume of "0 mL" is not acceptable.*

Fluid bolus is only indicated if hypotension is present (SBP < 90 [not pregnant], SBP < 85 [pregnant], and/or MAP < 65) and/or lactic ≥4 mmol/L in patients with no ESRD and no documentation of EF ≤ 39%, or moderate, severe, critical aortic stenosis

Sepsis Standards

Tips, Hints, & Reminders

- Sepsis-related diagnoses that do not have a time associated with it
  - The infection documentation criteria defaults to the note open time
  - Misrepresents the true “Time Zero”
  - Starts the clock prematurely, often causing fallouts
  - ED providers should consider adding the timestamp to their templated note to better capture this
    - Contact Tami Gallagher if you need help adding this to your template
- Refusing care during sepsis workup
  - Document when a patient refuses care (IV fluids, blood draws, if the patient pulls out their IV)
  - Refusals delay care, often causing fallouts
    - If documented, these cases can be pulled out of the measures
- Link SIRS criteria with organ dysfunction & use “severe sepsis” / “septic shock” in documentation, when appropriate
  - Example: “Severe sepsis as evidenced by tachypnea, leukocytosis, and AKI”
  - Improves documentation and understanding of the patient’s situation
  - Allows for accurate coding

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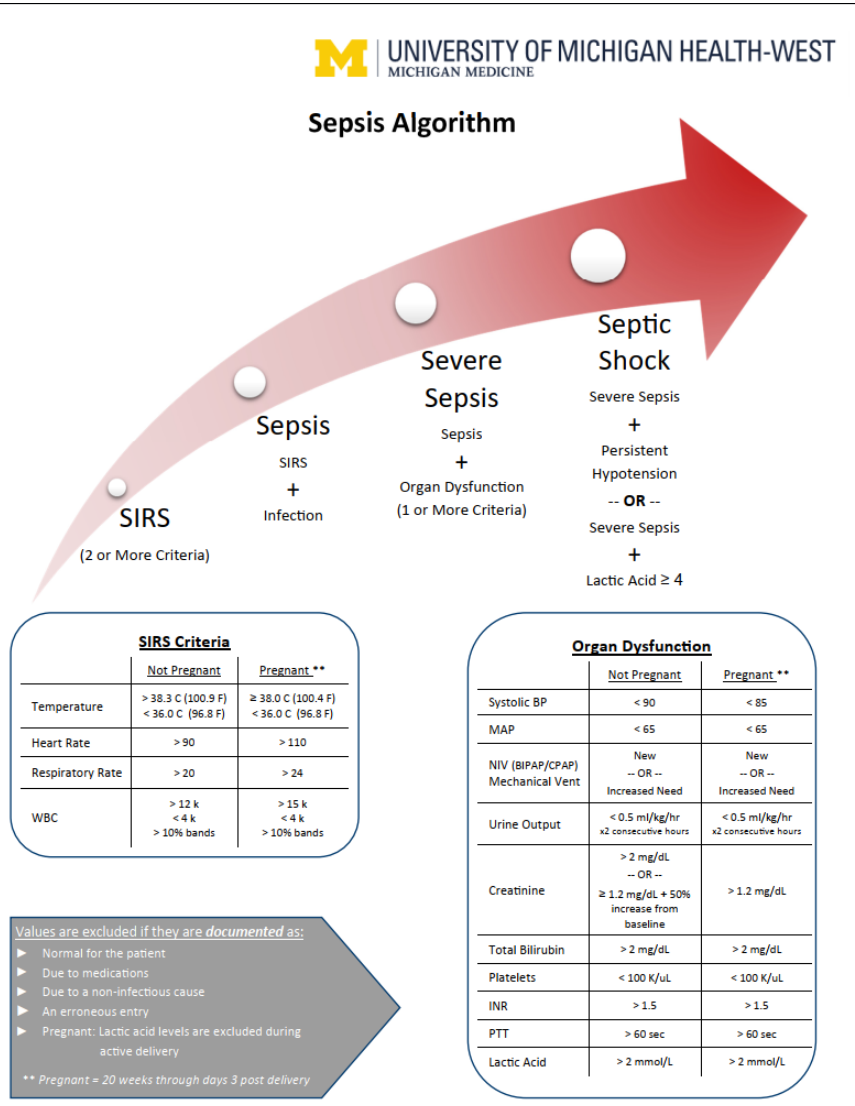

Sepsis Algorithm

- Visual tool depicting the sepsis standards
- Merges HMS and CMS criteria for recognizing & treating sepsis
- Page 1: sepsis disease progression, criteria, and exclusions

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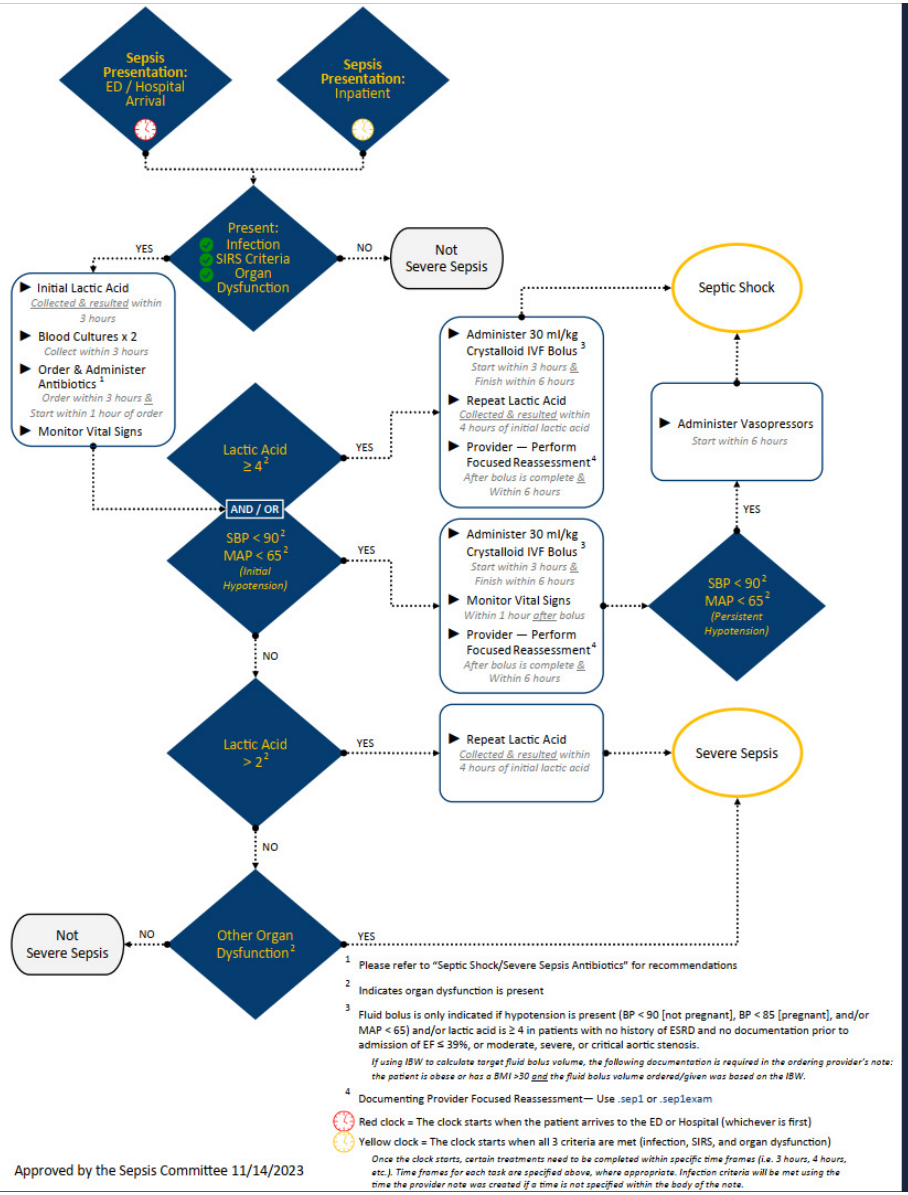

Sepsis Algorithm

- Page 2: Algorithm with sepsis standards
- Located:
  - Laminated copies posted in work areas on the inpatient units
  - EPIC > M-Care > Sepsis Algorithm > "Sepsis Early Management"

EPIC > M-Care > Sepsis Algorithm also includes a document with antibiotic recommendations, provided by the Antimicrobial Stewardship Committee

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Questions?

Reach out with questions or for real-time guidance:

Other Contacts:

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