



HORIZON
HEALTH

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Sepsis Recognition Protocol/ Code Sepsis

Purpose:

- To ensure rapid identification, evaluation, and treatment of patients with severe sepsis or septic shock utilizing evidence-based practice.

Definitions:

- A. **SIRS Criteria (Systemic Inflammatory Response Syndrome)**
Consists of any or all of the following: Clinical tachypnea, tachycardia, hyperthermia, and/or hypothermia. The systemic inflammatory response to a wide variety of severe clinical injuries, manifested by two (2) or more of the following conditions:
1. **Body temperature >38.0oC(100.9oF) or <36oC(96.8o)**
 2. **Heart rate >90 beats/min**
 3. **Respiratory rate > 20/min**
 4. **White blood cell count > 12,000 OR < 4,000 or >10% bands**
- B. **Sepsis** – The presence (probable or documented) of infection together with systemic manifestations of infection (SIRS).
- C. **Severe Sepsis** – SIRS documented as due to infection with associated acute organ failure/dysfunction or tissue hypo-perfusion.
- D. **Septic Shock** – Severe sepsis with hypotension (SBP <90 mmHg or MAP <65 mmHg or a 40 mmHg drop from previous baseline unresponsive to fluid resuscitation, and may require pharmaceutical intervention) **OR** initial lactate level>36mg/dL or 4mmol/L
- E. **Sepsis Screening Process-**
1. Can be initiated by the provider or nurse at any time

Adult Sepsis Protocol:

1. **Sepsis Screening: *must meet two or more of the following criteria:***
 - a. Temperature > to 38.3°C(100.9°F) < 36°C (96.8°F)
 - b. Respiratory rate > 20
 - c. Heart rate > 90 beats per minute
 - d. White blood cell count >12,000 OR < 4,000 or >10%bands within the last 6 hours
PLUS
 - e. Suspected or documented infection

2. **Severe Sepsis:** must meet the following:
 - a. Two Sepsis Criteria and one organ dysfunction that has developed within the last 48 hours, not due to a chronic condition
 - b. **Respiratory** –need for non-invasive mechanical ventilation or invasive mechanical ventilation
 - c. **Cardiovascular** – SBP <90 or MAP <65 or on vasopressor
 - d. **Renal** - Creatinine >2 for new onset, urine output <0.5 ml/kg/hr for two consecutive hours
 - e. **Metabolic** - Lactate > 18 mg/dL or > 2mmol/L
 - f. **Hematologic** – Platelets <100,000; or INR > 1.5 (unless on Warfarintherapy)
 - g. **Hepatic** – Serum total bilirubin ≥ 2mg/dL – New onset
 - h. **CNS** – Altered consciousness (unrelated to primary neuro pathology); sudden change from baseline not related to drugs or alcohol; Glasgow coma scale ≤ 12

3. **Fluid Resuscitation Screening** – If the patient has two hypotensive pressures less than 3 hours apart or the Lactate is > 36mg/dL or 4mmol/, obtain an order for a 30ml/kg fluid bolus
 - Patient ideal body weight in kg__x 30 ml Total to infuse
 - Record Height and Weight
 - Record Bolus End Time
 - Take 2 blood pressure checks MUST be done within 1 hour of fluid resuscitation completion, document results

4. **Septic Shock** -Two consecutive systolic blood pressures <90, or Mean Arterial Pressure < 65 in the hour after the crystalloid fluid bolus administration or Initial Lactate >36 mg/dL or 4 mmol/L indicates Septic Shock
 - a. Start Vasopressors for persistent hypotension with 1 hour of IV fluid completion
 - b. Provider must document volume status and Tissue Perfusion within 3 hours
 - Documentation of
 - Physical exam
 - Perfusion (re-perfusion) assessment

- Sepsis (severe sepsis or septic shock) focused exam
- System review

Pediatric Sepsis Guide

Pediatric

- Pediatric screening criteria and protocols are applied to patients ≤ 18 years old in emergency department

Pediatric age-specific SIRS criteria:

- **Temperature:** <36°C/96.8°F or >38.5°C/101.3°F
- **Heart Rate, Respiratory Rate, and WBC Count** – See Chart Below

Age Group	Heart Rates, Beats/Min		Leukocyte Count		
	Tachycardia	Bradycardia	Respiratory Rate	Leukocytes X 10 ³ /mm ³ <i>3b,c.</i>	Hypotension, mm Hg
0 days to 1 wk	>180	<100	>60	>34	<59
1 wk to 1 mo	>180	<100	>50	>19.5 OR <5	<75
1 mo to <2 yrs	>180	<90	>35	>17.5 OR <5	<75
2-5 yrs	>140	Not applicable	>30	>15.5 OR <6	<75
6-12 yrs	>130	Not applicable	>20	>13.5 OR <4.5	<83
>12 yrs	>110	Not applicable	>20	>11 OR <4.5	<90

Severe sepsis includes SIRS and at least one of the following major organ dysfunction or two minor organ dysfunction criteria:

- Major –Cardiovascular:
 - Hypotension < 5th percentile for age or systolic BP < 2 SD below normal age for age – see above chart
 - Need for vasoactive drug to maintain BP in normal range (dopamine >5 µg/kg/min or dobutamine, epinephrine at any dose)
 - *Two of the following:*
 - Unexplained metabolic acidosis: base deficit > 5.0 mEq/L
 - Increased arterial lactate >36mg/dL or > 4mmol/L

- Prolonged capillary refill: > 3secs
- Major Respiratory:
 - PAO₂/FIO₂ <300 in absence of cyanotic heart disease or preexisting lung disease
 - PaCO₂ >65 or 20 mm Hg over baseline PaCO₂
 - Proven need for >50% FiO₂ to maintain saturation ≥92%
 - Need for non-elective invasive or noninvasive mechanical ventilation
- Minor – CNS:
 - Acute change in mental status with a decrease in Glasgow Coma Score ≥ points from abnormal baseline
 - Assessment contains any of the following: "stuporous", "deep coma", "disoriented", "lethargic", "deep stupor", "combative", "inconsolable cry", or "pharmacologically paralyzed"
- Minor – Hematologic
 - Platelet count < 100,000/mm³ or a decline of 50% in platelet count from highest value recorded over the past 3 days (for chronic hematology/oncology patients) and is not receiving ECMO
 - INR > 2.0
- Minor – Renal
 - Elevated Creatinine
 - Age <1 year: ≥1.2mg/dL
 - Age > 1 year: ≥3.0mg/dL
- Minor – Hepatic:
 - Total bilirubin ≥4 mg/dL (not applicable for newborn)
 - ALT:
 - ≤2 months: > 156
 - >2 months: > 72

POLICY:

- All patients with the exception of Comfort or Palliative Care measures will be screened for sepsis using the Sepsis Screening Tool. Must have documentation of comfort care.
- Screening will be completed on admission and may be completed at every shift and as needed with any change in patient condition
- If the patient screens positive with the sepsis screening tool, the nurse will initiate a Code Sepsis, and notify the provider immediately

PROCEDURE:

For Any Positive Sepsis Screening:

1. If the patient screens positive with the sepsis screening tool, the nurse will initiate a Code Sepsis
2. The primary nurse or their designee will activate Code Sepsis by dialing #88 and announcing CODE SEPSIS with the location over the public address system
3. If hypotensive (as defined by SBP <90 or MAP <65) or serum lactate level is greater than 4.0mmol/L, obtain an order for a crystalloid fluid bolus of 30ml/kg (Ideal Body Weight)
4. For activations of Code Sepsis, the Attending Physician or Provider, the primary nurse, House Supervisor or Unit Lead, Lab/phlebotomy, will respond immediately
5. The staff are aware of the location of the sepsis checklist and will activate this checklist upon a positive sepsis screen
6. The Physician or Provider or nurse may initiate the sepsis order set
7. The Unit Lead is responsible for oversight on the completion of the Sepsis Checklist

*Providers who are contacted for a positive sepsis screen and determine the patient to be at risk for worsening condition, severe sepsis, or septic shock will be expected to utilize the Sepsis Order Set to ensure optimal patient care and safety.

Education

- Nursing Staff –Sepsis recognition and treatment training is incorporated into annual education
- Other Staff: Pharmacy, Respiratory, and Laboratory Staff - Sepsis recognition and treatment training is incorporated into annual education

Auditing of Code Sepsis Calls

- All Completed Sepsis Checklist: should be turned in to the Quality Improvement Coordinator for evaluation
- Upon completion of the Sepsis Checklist Quality Improvement Coordinator will complete an SBAR and share with Staff, Physician or Provider involved in care of the patient

References:

Surviving Sepsis Campaign 2016; IL Senate Bill 2403; <http://www.survivingsepsis.org/Resources/Pages/Protocols-and-Checklists.aspx>. Illinois Law 7/2016 Gabby's Law Senate Bill 2403 Illinois House Human Services Committee (2016), Sepanski RJ, Godambe SA, Mangum CD, Bovat CS, Zaritsky AL, Shah SH. Designing a pediatric severe sepsis screening tool. *Front Pediatr.* 2014;2:56. Published 2014 Jun 16. doi:10.3389/fped.2014.00056

Attachments

[Horizon Health Sepsis Checklist.pdf](#)

Approval Signatures

Step Description	Approver	Date
CNO	Rachel Kelley: Administration, VP of Nursing Services	10/2022
Board of Trustees	Lauren Stolz: Administration, Executive Asst. / Internal Comms.	09/2022
Med Staff Committee	Lauren Stolz: Administration, Executive Asst. / Internal Comms.	09/2022
ED Committee	Samantha McCarty: Critical Care, Emergency Services Director	08/2022
Policy Owner	Samantha McCarty: Critical Care, Emergency Services Director	08/2022