

Know Sepsis

*CHI Franciscan Health Rainier Health Network – Continuing Care Network
September 2017*

Sepsis

The Patient Story



85 year old healthy female fell down 1 flight of stairs in her home resulting in fractured ankle. Appears younger than stated age, living alone, no routine medications, routinely walked 2 miles per day. Hospitalized with placement of external fixation device to set the bones until surgery at a later time (1 month). Patient sent to a skilled facility for care of external fixation, pain management and physical/occupational therapy.

On a Sunday two weeks into her stay, patient exhibiting increasing lethargy; found napping frequently during the day; though reports “feeling okay”; Vital signs: T 99, HR 100/min, RR 22/min, BP 96/68. Daughter visiting and reported to staff that her mother “wasn’t herself” and she was concerned that she was getting “sick.” Nursing staff informed daughter that patient was to be seen by her orthopedic surgeon the next day.

At orthopedic visit on Monday, surgeon noted drainage from the pin site of fixator; T 100, HR 110, RR 24/min, BP 92/60. Surgeon diagnosed infection and prescribed a course of oral antibiotics and patient returned to SNF.

10 hours after return to skilled facility, patient sent emergently to ED. T 102, HR 120/min, RR 30/min, BP 80/50; and non responsive. ED physician diagnosed sepsis. Over the next 48 hours, despite aggressive treatment of IV antibiotics, IV fluids and supportive care, the patient passed away.

Sepsis

What is Sepsis?

- Sepsis is a complex and life-threatening condition that can progress rapidly from an infection.
- Sepsis can occur from any type of infection, in anyone, at any given time.
- Sepsis can lead to tissue injury, organ failure, and death.
- According to Roberts & Davis (2016), Sepsis is the **leading** cause of death from infection, impacting between 900,000 and 3 million people in the U.S. each year.

- Sepsis is most likely to develop in adults 65 years or older, those with chronic medical conditions (e.g., diabetes), and/or those with weakened immune systems.
- Nursing home residents are at increased risk for developing sepsis compared to adults in the community.
- Sepsis is most often associated with 4 types of infections:
 - Respiratory (i.e. pneumonia)
 - Genitourinary (UTI)
 - Skin infections (pressure ulcers, cellulitis)
 - Gastrointestinal (E. coli, C. diff)

REMEMBER: No one person is protected from sepsis! All healthcare providers should think sepsis in any person who presents with a known or suspected infection.

Think sepsis ...

Risk Factors

- Immunocompromised/chemotherapy
- Fevers/rigors/night sweats
- Recent surgery
- Recent invasive procedure
- Implanted medical device/lines/catheters
- IV drug use
- Antibiotic use < 30 days
- Leukocytosis or leukopenia

Symptoms

- Cellulitis, wound, joint swelling, or redness
- Dysuria, frequency, odor
- Abdominal pain, diarrhea, vomiting
- Cough, SOB, sore throat
- Neck stiffness/headache/photophobia/petechial rash

SIRS = Systemic Inflammatory Response Syndrome Criteria

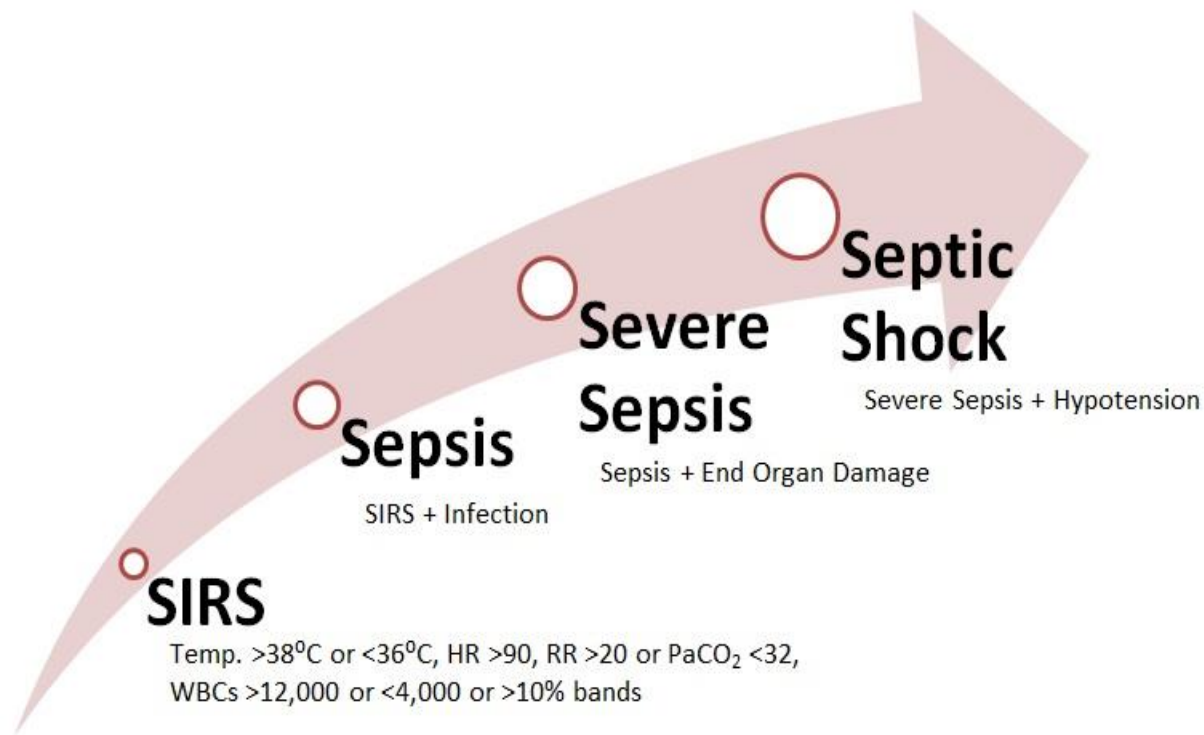
- Heart rate > 90
- Respiratory rate >20
- Temp >38.3 C or <36 C (>100.9 F or <96.8 F) (CMS criteria)
 - Start considering sepsis at a T of 38.0 C or 100.4 F)
- Systolic blood pressure < 90
- SpO2 < 90
- Acute altered mental status

- Sepsis is SIRS with a suspected or confirmed infection. A change in mental status and rapid breathing are potential early symptoms that sepsis is developing (Medline Plus, 2016).
- Sepsis with organ failure or lactate > 2 is considered severe sepsis
- Septic shock is characterized by persistent hypotension despite fluid resuscitation requiring vasopressors. Septic shock can cause multiorgan dysfunction syndrome (MODS) and further result in death.

For every hour that antibiotics are delayed in a patient in septic shock, the risk of death increases 7.6%, so act fast and contact the medical provider!

Sepsis

The Sepsis Continuum



Nurses must **be alert** to the development of sepsis and...

- Educate direct caregivers to report any changes in a patient's condition immediately
- Thoroughly and timely assess patients for suspected infection (risk factors and symptoms) and 2 or more SIRS criteria
- Notify medical provider of findings emergently using SBAR
- Plan to transfer patient to hospital or provide treatment in facility depending on patient/family wishes after reviewing advance directive, POLST and options
 - CMS recommends treatment within 3 hours of recognition
 - Consider transferring patient if this timeline cannot be met.

If patient wishes to transfer to hospital:

- Call 911 for transport
- Provide report using SBAR transport tool
- Call report to hospital with positive sepsis screen using SBAR transport tool
- Update family on status

If patient wishes to stay in facility:

- *Remember* – Goal is to initiate treatment within 3 hours of onset of symptoms per hospital guidelines
- Obtain labs to include CBC w/ Diff; blood cultures x2 (if able from 2 separate sites, not lines); lactate if possible; and UA/culture
- Obtain CXR, if indicated
- Insert IV, 2 large bore recommended
- Initiate fluids 30ml/kg IF SBP <90
- Administer IV antibiotics

Monitor response and if worsening condition, consider transferring to different level of care

Home Health Nurses should follow their agencies established policies and procedures.

- Call 911 for transport if situation is emergent
- Provide report using SBAR transport tool
- Call report to hospital with positive sepsis screen using SBAR transport tool
- Update family on status

Educate patients and their families about...

- Healthy lifestyle choices such as healthy nutrition and fluid intake
- Need for vaccinations including pneumonia and flu shots
- Always completing full course of antibiotics
- Performing proper hand hygiene frequently
- Chronic disease management and adhering to provider orders

PREVENTION of infection is PRIMARY!

- Sepsis is an infection that can quickly lead to life-threatening organ dysfunction
- Sepsis is in the top 10 of all disease leading to death in the United States (Macgill, 2016).
- Sepsis can quickly progress to septic shock and result in permanent organ damage.
- Early screening of sepsis and prevention of infection takes accurate and timely nursing assessments, interventions, and documentation.
- Expedited treatment and intervention is need to increase patient chance of survival.
- Sepsis survival takes collaboration from the members of the healthcare team.

- Centers for Disease Control and Prevention. (n.d.). Sepsis fact sheet. Retrieved from <https://www.cdc.gov/sepsis/pdfs/sepsis-fact-sheet.pdf>
- How to Spot and Prevent Sepsis at Your SNFs and ALFs (Web log post). (2016). Retrieved from <http://blog.qareader.com/spot-treat-septic-shock-fast>
- Macgill, M. (2016). Sepsis: Causes symptoms and treatment. Retrieved from <http://www.medicalnewstoday.com/articles/305782.php>
- MedlinePlus. (2016). Sepsis. Retrieved from <https://medlineplus.gov/ency/article/000666.htm>

Sepsis

References Continued

- Roberts, T. & Davis, J. (2016). Early detection of sepsis in Pennsylvania's long-term care residents. *Patient Safety Advisory*, 13(3), 108-113. Retrieved from http://patientsafety.pa.gov/ADVISORIES/Pages/201609_108.aspx
- Sepsis Alliance. (2016). Sepsis and aging. Retrieved from <http://www.sepsis.org/sepsis-and-aging>
- Sepsis Alliance. (2014). Sepsis: Understanding the risk. Retrieved from <http://www.sepsisalliance.org>
- Sweet, D., Marsden, J., Ho, K., Krause, C., & Russell, J. (2012). Emergency management of sepsis: The simple stuff saves lives. *BC Medical Journal*, 54(4), 176-182. Retrieved from <http://www.bcmj.org/articles/emergency-management-sepsis-simple-stuff-saves-lives>