

# *Sepsis* Awareness Training

Clinical Staff



# Pre-Training Assessment

Please complete the Pre-training Assessment questions at the **TOP** and on the **LEFT** side of the form.

Thank you!



### Sepsis Awareness Training Pre and Post-Learning Assessment - Clinical Staff

Your name is not required. This is not a quiz.  
It is used solely to assess understanding of sepsis before and after training.

Instructions:

1. Please complete the top section of this form at the start of training.
2. Pre-learning Assessment: Read the statements in the **LEFT** section below and respond by checking one of the boxes.
3. Post-learning Assessment: Repeat with statements in the **RIGHT** section below and complete the bottom.

Date: \_\_\_\_\_

My provider setting:  Hosp.  SNF  HH  AL  Comm Agency  Med Off  Other \_\_\_\_\_

My Role is:  MD/DO/NP/PA  RN  LPN  CNA/MA  PT/OT/RT  Pharmacist  Other \_\_\_\_\_

Pre-learning Assessment			Post-learning Assessment		
Please complete this section <b>before</b> training.			Please complete this section <b>after</b> training.		
	T	F		T	F
1. Sepsis should be treated as a medical emergency in all instances.			1. Sepsis should be treated as a medical emergency in all instances.		
2. Patients with sepsis will present with fever and confusion in all instances.			2. Patients with sepsis will present with fever and confusion in all instances.		
3. Common infections that may progress to sepsis are lung infection, skin infection, UTI, and intra-abdominal infection, but sepsis can also occur without an infection.			3. Common infections that may progress to sepsis are lung infection, skin infection, UTI, and intra-abdominal infection, but sepsis can also occur without an infection.		
4. Organ dysfunction is a life-threatening result of sepsis and can occur anywhere in the body.			4. Organ dysfunction is a life-threatening result of sepsis and can occur anywhere in the body.		
5. I am familiar with post-sepsis syndrome and its potential long-term effects.			5. I am familiar with post-sepsis syndrome and its potential long-term effects.		
6. Sepsis can be prevented by preventing infections and treating them promptly.			6. Sepsis can be prevented by preventing infections and treating them promptly.		

Are you a sepsis survivor?  Yes  No

If you are willing to share your story to help increase sepsis awareness please enter your contact information here:

Or contact: Alyssa DaCunha: 877.904.0057 x3241 [adacunha@healthcentricadvisors.org](mailto:adacunha@healthcentricadvisors.org)

**Thank you!**

This material was originally created by the Atlantic Quality Improvement Network, the Quality Improvement Network-Quality Improvement Organization for New York, South Carolina and the District of Columbia. It has been updated by the New England Quality Improvement Network-Quality Improvement Organization for New England, under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services. The content presented in our materials reflect CMS policy. ©2020 CMS-101-0311-410

# Sepsis Training Content Outline

- Sepsis Alliance video “SEPSIS: EMERGENCY”
- What is sepsis
- High risk populations
- Importance
- Early signs/symptoms
- Definitions
- Treatment strategies and antibiotic stewardship
- Post sepsis syndrome
- Tools for screening and education
- Case study
- Prevention

# Sepsis: Emergency video

Cut and paste this URL into your browser

<https://www.youtube.com/watch?v=DnsQ4RIXsZY>



# What is Sepsis?

- Sepsis is the body's overwhelming and life-threatening response to **INFECTION**
- **NOT ENOUGH OXYGEN** is reaching the tissues
- If not recognized and treated **PROMPTLY**, sepsis can result in:
  - Organ failure
  - Tissue damage
  - Death

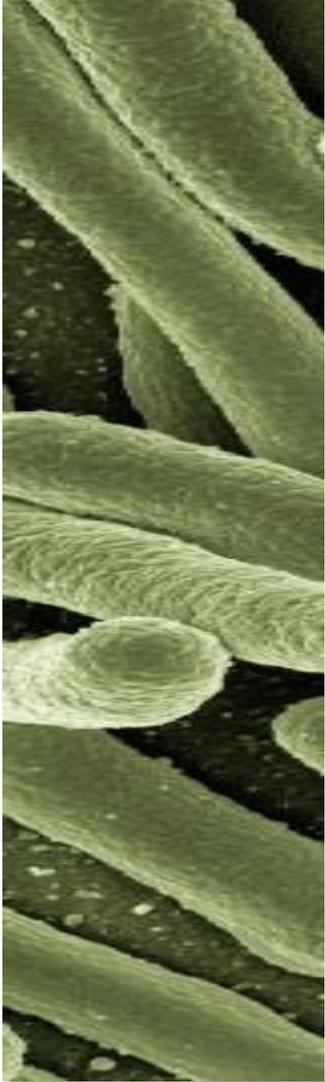
Singer M, Deutschman CS, Seymour C, et al. The Third International Consensus Definitions for Sepsis and Septic Shock (Sepsis-3). *JAMA*. 2016;315(8):801-810. doi:10.1001/jama.2016.0287.

# Sepsis and Infection

- Sepsis is always triggered by an infection
- Sometimes people don't know they have an infection
- Sometimes the causative agent of the infection is not identified
- Sepsis diagnosis is sometimes missed due to various manifestations of sepsis
- *Conversely: If symptoms of sepsis exist a source of infection should be sought*



# Watch for Progression



## Common Infectious Diseases That May Progress to Sepsis:

- **Pneumonia**
- **Skin Infections (cellulitis)**
- **Urinary Tract Infections**
- **Intra-abdominal infections**
- **Post-partum Endometritis**
- **Influenza**
- *Clostridium difficile* (*C.diff*) Enteritis
- **Tick Borne Infections especially in the immunocompromised**

# Who is at Risk for Sepsis?

**Anyone with an infection!**

Those at higher risk include:

- People 65 or older or infants less than 1 year old
- People with chronic illnesses: diabetes, cancer, AIDS
- People with weakened immune systems
- People recently hospitalized or recovering from surgery
- People with wounds, invasive lines, drains, catheters
- People who have had sepsis in the past

# Sepsis Risk and Aging

- Elderly are more susceptible to infections:
  - Weakened immunity
  - Fragile skin, bedsores, ulcerations
  - Multiple chronic conditions
  - Admissions to a hospital or other facility
- Some patients may not be able to communicate symptoms of infection due to dementia or stroke

Source: <http://www.todaysgeriatricmedicine.com/archive/MA19p20.shtml>

# Why This is Important...

- Each year over 1.5 million people in the US get sepsis and about 250,000 die from it <sup>1</sup>
- 1 in 3 patients who die in a hospital have sepsis <sup>1</sup>
- Mortality rate for Severe Sepsis is **29%** <sup>1</sup> which is greater than:
  - AMI (25%) <sup>2</sup>
  - Stroke (23%) <sup>3</sup>
  - Trauma (1.5%) <sup>4</sup>
- A leading cause of hospital readmissions
- The most expensive condition treated in U.S. hospitals <sup>5</sup>

1. <https://www.cdc.gov/sepsis/datareports/index.html>

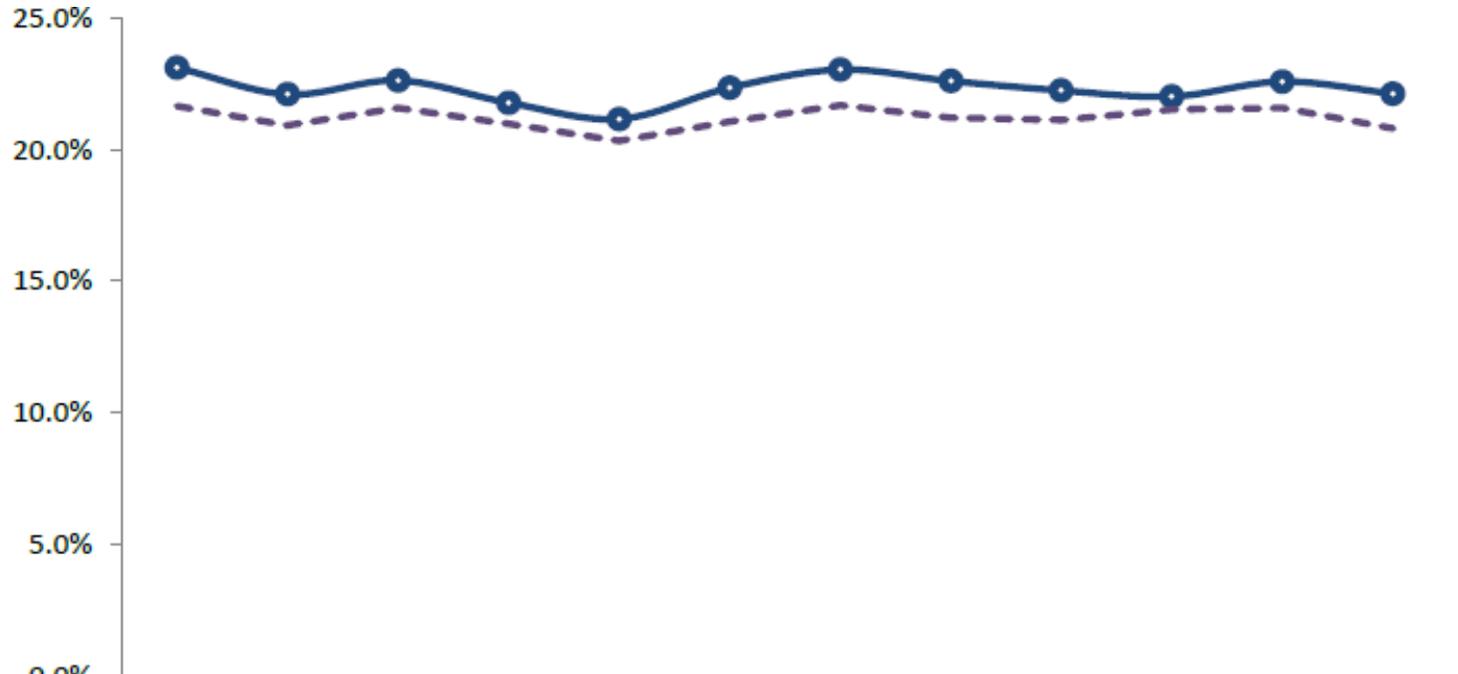
2. *JACC 1996*

3. *American Heart Association. Heart Disease and Stroke Statistics- 2005 Update*

4. *National Highway Traffic Safety Administration. Traffic Safety Facts 2003*

5. *AHRQ* <http://www.hcup-us.ahrq.gov/reports/statbriefs/sb204-Most-Expensive-Hospital-Conditions.pdf>

# Sepsis (Any Dx): All Cause 30 Day Hospital Readmissions



	Q1-16	Q2-16	Q3-16	Q4-16	Q1-17	Q2-17	Q3-17	Q4-17	Q1-18	Q2-18	Q3-18	Q4-18
MA: Hospital 30 Day Readmissions	1274	1168	1120	1120	1174	1152	1177	1224	1353	1224	1236	1226
MA: Hospital Live Discharges	5513	5286	4951	5143	5548	5155	5110	5416	6083	5560	5474	5542

**\*Medicare fee-for-service beneficiaries discharged with sepsis (on any diagnosis code) and readmitted within 30 days for any reason**

# Public Awareness is Poor

- 35% of Americans have never heard of sepsis, yet 80% of sepsis cases originate in the community (outside of the hospital)
- Only 12% can identify the most common symptoms
- 50% do not know you need to seek urgent medical attention
- The public needs an understandable definition of sepsis



<https://www.sepsis.org/2018-sepsis-awareness-survey/>

[https://www.cdc.gov/mmwr/volumes/65/wr/mm6533e1.htm?s\\_cid=mm6533e1\\_w](https://www.cdc.gov/mmwr/volumes/65/wr/mm6533e1.htm?s_cid=mm6533e1_w)

<https://ccforum.biomedcentral.com/articles/10.1186/cc11511>

# Sepsis and Famous People You May Know

## Died from Sepsis

- Mother Theresa
- Pope John Paul II
- Patty Duke (actor)
- Leslie Nielson (actor)
- Casey Kasem (radio)
- Lawrence Welk (musician)
- Mohammed Ali (boxer)
- Prince Ranier of Monaco
- Christopher Reeve (actor)
- Jim Henson (Muppets creator)

## Survived Sepsis

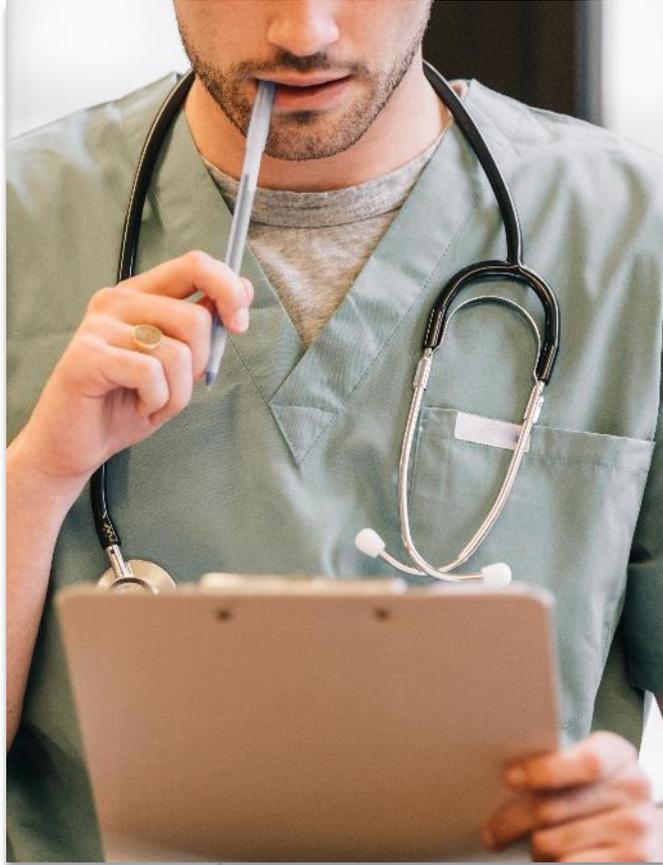
- Angelica Hale (child singer)
- Mary Louise Parker (actor)
- Chris Young (singer/song writer)



Angelica Hale partnered with Sepsis Alliance on the It's About TIME campaign

Picture source: <https://www.sepsis.org/itsabouttime/>

# Healthcare Providers Awareness



- Sepsis is one of the most under recognized and misunderstood conditions by healthcare providers
- Healthcare providers need improved clinical prompts to facilitate earlier identification of sepsis

# Know the signs and symptoms of sepsis.



**Shivering, fever,  
or very cold**



**Extreme pain  
or discomfort**



**Clammy  
or sweaty skin**



**Confusion  
or disorientation**



**Short of breath**



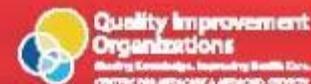
**High heart rate**

# An easy way to remember:



SEPSIS ALLIANCE

Suspect Sepsis. Save Lives.



Quality Improvement  
Organizations  
Sharing Knowledge. Improving Health Care.  
Centers for Disease Control & Prevention



When it comes to sepsis, remember  
**IT'S ABOUT TIME™** Watch for:



**TEMPERATURE**  
higher or lower  
than normal



**INFECTION**  
may have signs  
and symptoms of  
an infection



**MENTAL DECLINE**  
confused, sleepy,  
difficult to rouse



**EXTREMELY ILL**  
"I feel like I might  
die," severe pain  
or discomfort

Watch for a combination of these symptoms. If you suspect sepsis, see a doctor urgently, CALL 911 or go to a hospital and say, "I AM CONCERNED ABOUT SEPSIS."

# Sepsis May Present Differently in Older Adults

- Fever may be low grade, delayed or absent
- Decline in functional status may be a symptom of infection, including new or increasing confusion, incontinence, falling, deteriorating mobility, reduced food intake, or failure to cooperate with staff
- Signs of infection and organ dysfunction may be difficult to recognize with multiple comorbidities

## Resources::

Clifford KM, Dy-Boarman EA, Haase KK, Maxvill K, Pass SE, Alvarez CA. Challenges with Diagnosing and Managing Sepsis in Older Adults. *Expert Rev Anti Infect Ther*. 2016;14(2):231–241.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4804629/>

High KP, Bradley SF, Gravenstein S, Mehr DR, Quagliarello VJ, Richards C, Yoshikawa TT, Clinical Practice Guideline for the Evaluation of Fever and Infection in Older Adult Residents of Long-Term Care Facilities: 2008 Update by the Infectious Diseases Society of America, *Clinical Infectious Diseases*, Volume 48, Issue 2, 15 January 2009, Pages 149–171, <https://doi.org/10.1086/595683>

# Definitions

Let's look at some important definitions to help recognize the progression of sepsis.

## SIRS

### Systemic Inflammatory Response Syndrome (SIRS)

- Temperature  $\geq 38.3$  C (101 F) or  $\leq 36$  C (96.8 F)
- Respiratory Rate  $\geq 20$
- Heart Rate  $\geq 90$
- White Blood Count  $\geq 12$ K,  $\leq 4$ K or  $\geq 10\%$  bands

*Note: SIRS can exist without progressing to sepsis*

# Definitions

Let's look at some important definitions to help recognize the progression of sepsis.

**SIRS**

**Sepsis**

## **Sepsis**

≥2 SIRS + suspected or confirmed infection

- *Infections that lead to sepsis most often:*
  - *Bladder or kidney infections*
  - *Lung infections*
  - *Skin infections*
  - *Abdominal infections*

# Definitions

Let's look at some important definitions to help recognize the progression of sepsis.

**SIRS**

**Sepsis**

**Severe Sepsis**

## **Severe Sepsis**

Sepsis (+) NEW or ACUTE onset organ dysfunction and/or failure

# Definitions

Let's look at some important definitions to help recognize the progression of sepsis.

**SIRS**

**Sepsis**

**Severe Sepsis**

**Septic Shock**

## **Septic Shock**

Severe Sepsis (+) hypotension (SBP  $\leq$  90 mm/Hg) that does NOT respond to fluid OR lactate  $\geq$  4 mmol/L

# Acute Organ Dysfunction as a Marker of Severe Sepsis

## Neurological

Confusion, altered consciousness

## Respiratory

Increased oxygen requirements  
SaO<sub>2</sub> < 90%

## Metabolic

Unexplained metabolic acidosis

- pH ≤ 7.30 or base deficit ≥ 5.0 mEq/l
- Lactate > 4 mmol/L

## Cardiovascular

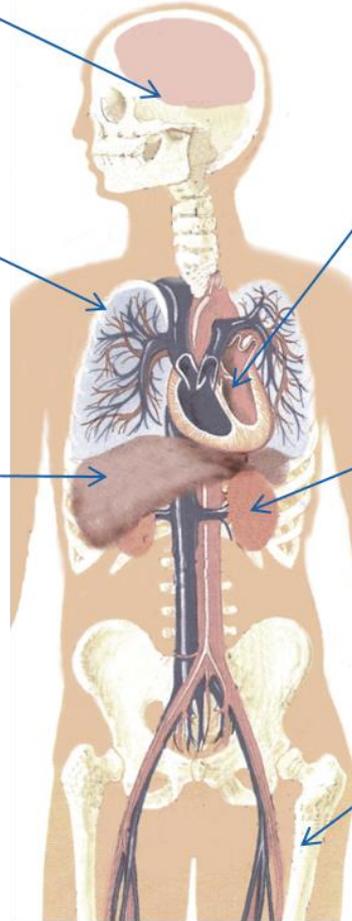
Tachycardia  
SBP < 90 mm/Hg

## Renal

UO < 0.5 ml/kg per hour  
(despite fluid)

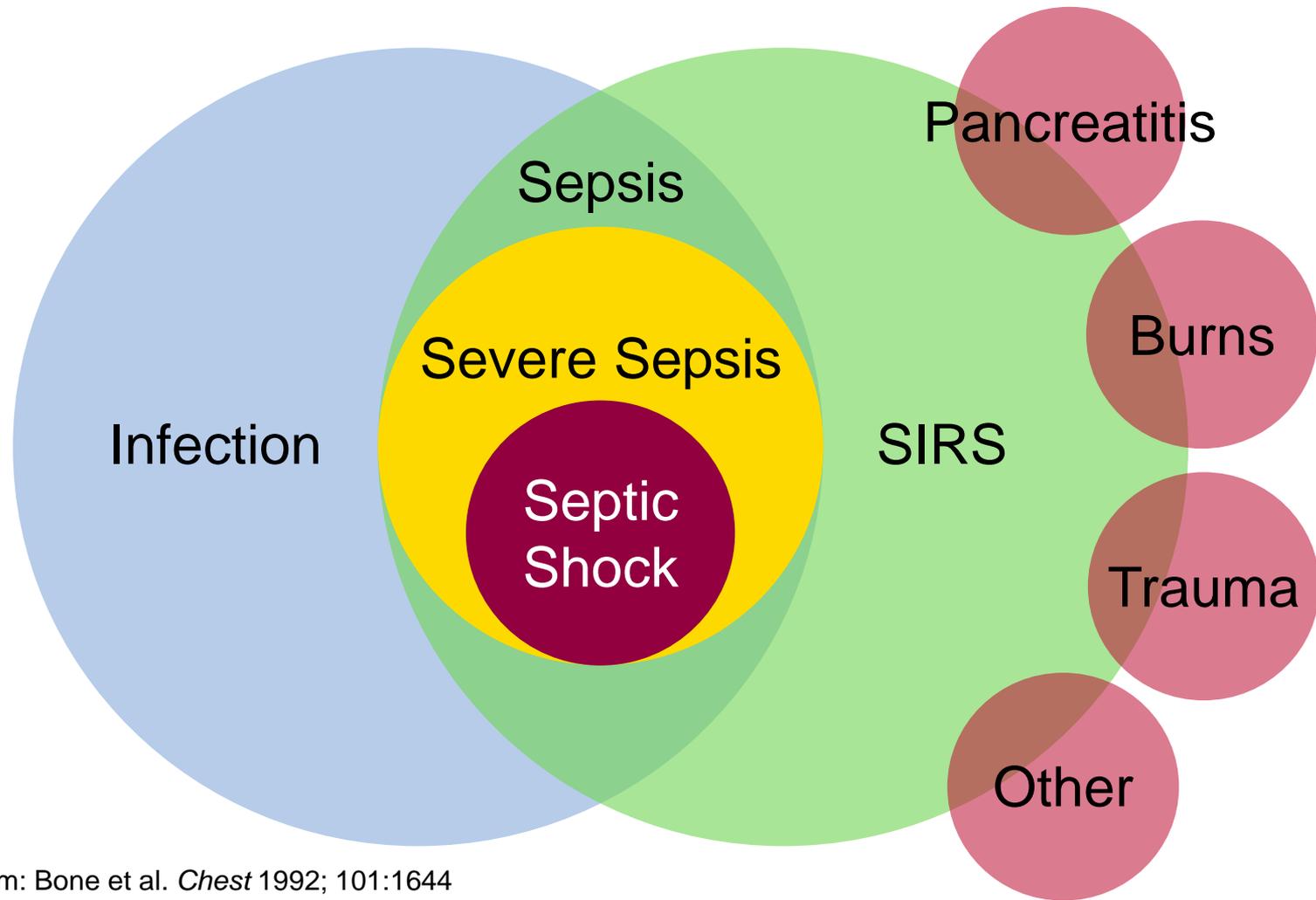
## Hematologic

Platelets < 80,000/mm<sup>3</sup>  
Decline in platelet count  
of 50% over 3 days



Kathleen M. Vollman RN, MSN, CCNS, FCCM Clinical Nurse Specialist/Educator/Consultant ADVANCING NURSING kvollman@comcast.net  
Northville, Michigan www.vollman.com. <http://slideplayer.com/slide/4002936/> Retrieved 23 February 2016.

# Relationship of Infection, SIRS, Sepsis, Severe Sepsis and Septic Shock



Adapted from: Bone et al. *Chest* 1992; 101:1644

# 2016 Definitions for Sepsis

## Third International Consensus Definitions for Sepsis

- Sepsis should be defined as life-threatening organ dysfunction caused by a dysregulated host response to infection
- For clinical operationalization, organ dysfunction can be represented by an increase in the Sequential [Sepsis-related] Organ Failure Assessment (SOFA) score of 2 points or more, or the quickSOFA

(Singer, et al. JAMA 2016;315(8) 801-810)

# 2016 Definitions for Sepsis

quickSOFA (qSOFA) Criteria:

- Better predictor of patient outcomes for non-hospital and non-ICU settings (vs. SIRS criteria)
- Appropriate and easy to use in the outpatient setting

2 of the 3 criteria provides simple bedside criteria to identify adults with suspected infection who are likely to have poor outcomes:

- Altered mental status
- Hypotension ( systolic <100mmHg)
- Increased respiration rate (>22 breaths per minute)

# 2016 Definitions for Septic Shock

## Third International Consensus Definitions for Septic Shock

- Septic shock should be defined as a subset of sepsis in which particularly profound circulatory, cellular, and metabolic abnormalities are associated with a greater risk of mortality than with sepsis alone
- Patients with septic shock can be clinically identified by
  - Vasopressor requirement to maintain a mean arterial pressure of 65 mm Hg or greater
  - Serum lactate level greater than 2 mmol/L (>18 mg/dL) in the absence of hypovolemia

(Singer, et al. JAMA 2016;315(8) 801-810)

# 100-100-100 Early Detection Tool



Is their **temperature** above 100?



Is their **heart rate** above 100?



Is their **blood pressure** below 100?

And does the resident just not look right? Tell the nurse, **screen for sepsis** and notify the physician immediately.

Minnesota Hospital Association

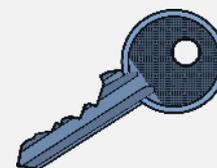
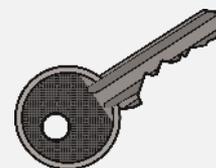
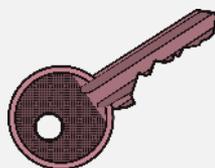
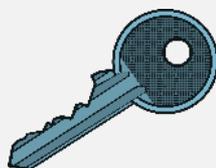
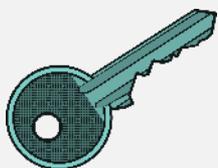
Resources and details: <https://www.mnhospitals.org/quality-patient-safety/quality-patient-safety-initiatives/sepsis-and-septic-shock#/videos/list>

# Early recognition is key

- Sepsis-induced organ damage **may not be apparent**
- **You cannot detect organ damage until it is too late**
- Survival depends on **timely** assessment and treatment when **changes** first happen in the patient/resident's condition
- Knowing which patient/residents are **more susceptible** to sepsis and are at higher risk will help with early recognition

<http://www.prweb.com/releases/sepsis/awareness/prweb11102587.htm>

Singer M, Deutschman CS, Seymour C, et al. The Third International Consensus Definitions for Sepsis and Septic Shock (Sepsis-3). *JAMA*. 2016;315(8):801-810. doi:10.1001/jama.2016.0287.



# Time to Treatment is Critical

- Mortality increases by 8% for every hour that appropriate treatment is delayed<sup>1</sup>
- Early identification and treatment are the keys to improved outcomes
- When sepsis is caught early, it...
  - increases the chance for surviving
  - can prevent progression to septic shock



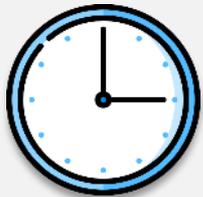
1. Crit Care Med,2006; 34: 1589-96.

# Initial Treatment- Evidence Based

Consistent with Surviving Sepsis Campaign<sup>1</sup>



Recommended within **1<sup>st</sup>** hour of recognition



Within **3** Hours of Presentation

- ✓ Measure blood lactate level
- ✓ Obtain blood cultures (prior to giving antibiotics)
- ✓ Administer broad-spectrum IV antibiotics
- ✓ Administer 30ml/kg crystalloid for hypotension or lactate  $\geq 4$ mmol/L

1. Surviving Sepsis Campaign Bundle revised 4/2015 by SSC Executive Committee

# Initial Treatment- Evidence Based



## Within 6 Hours of Presentation of Septic Shock

- ✓ Administer vasopressors (for hypotension that does not respond to initial fluid resuscitation) to maintain a mean arterial pressure (MAP)  $\geq 65$ mmHg
- ✓ For persistent hypotension (MAP $<65$ ) or initial lactate  $\geq 4$ mmol/L, reassess volume status and tissue perfusion
- ✓ Repeat lactate level if initial level was elevated

*\*Time of presentation is defined as the time of triage in the emergency department or, if presenting from another care venue, from the earliest chart annotation consistent with all the elements of severe sepsis or septic shock ascertained through chart review*

# Antibiotic Stewardship vs. Treating Sepsis



## Not a Conflict in Strategies!

The **right** drug

For the **right** diagnosis

With the **right** dose and duration

- Appropriate use of all antibiotics in all health care settings
- Urgent antibiotic therapy required for bacterial infections to prevent progression to sepsis and septic shock
- Next steps should focus on identifying pathogens to tailor antimicrobial therapy or scale back (de-escalation)

# Antibiotic Stewardship and Sepsis

## Additional Guidance <sup>1</sup>

- **Treat clinically significant infections** (not contamination or colonization)
  - Do not treat asymptomatic bacteriuria
- **Track local resistance patterns**
  - CDC interactive maps <https://www.cdc.gov/hai/>
  - Health Map Resistance <https://www.resistanceopen.org/>
  - How to read and interpret an antibiogram video: [https://www.youtube.com/watch?v=\\_Vv6Z0HeECM&feature=youtu.be](https://www.youtube.com/watch?v=_Vv6Z0HeECM&feature=youtu.be)

1. Antibiotic Stewardship in Sepsis. The Hospitalist. May 2018

# Hospitalization

## Sepsis patients of any age:

- Are more severely ill than others hospitalized
- Have considerably longer lengths of stay (median=10 days)<sup>1</sup>
- Are more likely to die during hospitalization

## Older adult sepsis patients are:

- 13 times more likely to be hospitalized <sup>2</sup>
- More likely to be admitted to the ICU <sup>3</sup>
- 76% are more likely to be discharged to SNF <sup>4</sup>

1. MMWR Vol.65 Aug.2016

2. <https://www.sepsis.org/sepsis-alliance-news/sepsis-and-aging-community-presentation/>

3. *Sepsis in Older Americans: Saving Lives through Early Recognition*

4. *Sepsis in Older Americans: Saving Lives through Early Recognition*



# Post Sepsis Syndrome

**Affects up to 50% of sepsis survivors**

**Physical and/or psychological long-term effects, such as:**

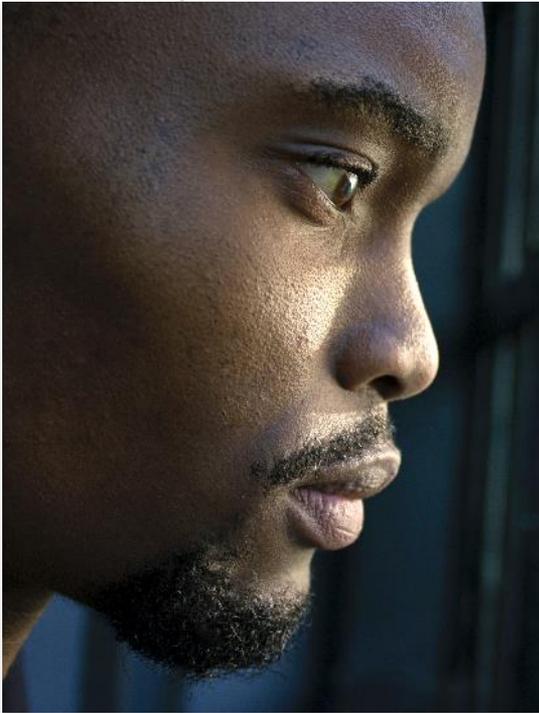
- Impaired cognitive function-especially among older patients
- Mobility impairments (muscle weakness)
- Disabling muscle and joint pain
- Amputations
- Loss of self-esteem
- Extreme fatigue
- Insomnia
- Nightmares, hallucinations, and panic attacks

Higher risk with an ICU or extended hospital stay



# Post Sepsis Syndrome

## Significant impact on family, friends, and caregivers



- Increased dependency on caregivers
- Inadequate hospital discharge education on what to expect during recovery
- Difficulty accessing follow-up community treatment
- Disruption to their lives
- Cost

# Questions to Ask Yourself

- Does this agency /facility have sepsis reduction efforts in place?
  - A process to screen patients/residents for sepsis?
  - A process for sepsis treatment? Standing order/protocol?
- Do you know which patients/residents have the **potential for sepsis** in your facility?
- Are you more closely monitoring patients/residents who were discharged from a hospital with an infection or sepsis?

# INTERACT Stop and Watch Tool

**Stop and Watch** is a helpful tool to help identify changes in a patient's condition that could be the early signs of sepsis:

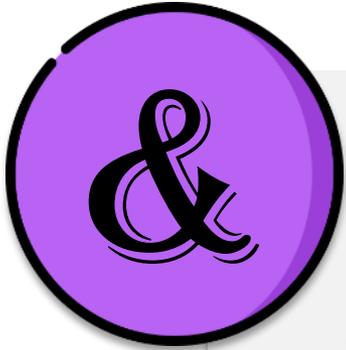


- S**eems different than usual
- T**alking or communicating less than usual
- O**verall needs more help than usual
- P**articipating in activities less than usual

<http://www.pathway-interact.com/>

# INTERACT Stop and Watch Tool

**Stop and Watch** is a helpful tool to help identify changes in a patient's condition that could be the early signs of sepsis:



**A**te less than usual (not because dislikes food)

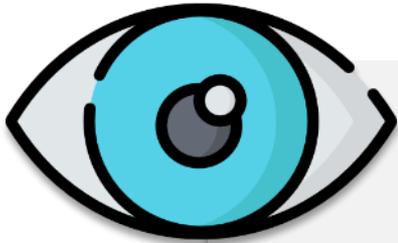
**N**o bowel movement in 3 days: or diarrhea

**D**rinking less than usual

<http://www.pathway-interact.com/>

# INTERACT Stop and Watch Tool

**Stop and Watch** is a helpful tool to help identify changes in a patient's condition that could be the early signs of sepsis:



**W**eight change

**A**gitated or nervous more than usual

**T**ired weak confused or

**C**hange in skin color or condition

**H**elp with walking, transferring or  
toileting more than usual

<http://www.pathway-interact.com/>

# Post-Acute Situation Background Assessment Recommendation (SBAR) for Sepsis

## SITUATION

- My name is \_\_\_\_\_
- I'm calling from \_\_\_\_\_
- I need to speak with you about patient/resident, Mr. or Mrs. \_\_\_\_\_
- This patient/resident is showing signs and symptoms of infection and sepsis.

## BACKGROUND

- The patient/resident was admitted on \_\_\_\_\_ (date) with the diagnosis of \_\_\_\_\_ (original condition).
- The patient/resident is now showing these signs of possible infection \_\_\_\_\_ (describe the signs and potential source of infection).
- This started on \_\_\_\_\_ (date).
- The patient/resident is allergic to \_\_\_\_\_
- The patient's/resident's advance care directive is \_\_\_\_\_

## ASSESSMENT (describe key findings)

- My assessment of the situation is that the patient/resident may be experiencing a new or worsening infection. Here are my findings.
  - Current vital signs  
BP \_\_\_\_\_ HR \_\_\_\_\_ RR \_\_\_\_\_ Temp \_\_\_\_\_  
SpO2 \_\_\_\_\_ (on room air or supplemental O2)
  - The patient/resident has voided \_\_\_\_\_ times in the last 8 hours.
  - Mental status is (changed OR unchanged) from baseline: \_\_\_\_\_
  - Other physical assessment findings that are related to possible infection or sepsis (e.g., lung sounds, wound assessment): \_\_\_\_\_

## RECOMMENDATION

- I am concerned that this patient/resident may have sepsis.
  - Would you like to order a serum lactate, blood culture and basic metabolic panel?
  - How soon can you see this patient/resident?
- If the patient/resident is hypotensive, should I start an IV and give a fluid bolus?
- The physician should confirm, clarify and request additional information and then work with the nurse to take appropriate action with this patient/resident.

Before calling the physician, NP, PA or other health care professional:

*Evaluate the patient/resident and complete this form.*

Check vital signs; be alert for the early sepsis warning signs.

Review the patient/resident record: recent hospitalizations, lab values, medications and progress notes.

Note any allergies.

Be aware of the patient's/resident's advance care wishes.

### Sepsis Early Warning Signs

*Report any of these findings*

Temperature  $\geq 38.3$  C (101 F)

or  $\leq 36$  C (96.8 F)

Heart rate  $\geq 90$  bpm

Respiratory rate  $\geq 20$  bpm

White blood cell count

$\geq 12,000$   $\mu\text{L}^{-1}$  or

$\leq 4,000$   $\mu\text{L}^{-1}$

Altered mental status

SpO2  $\leq 90\%$

Decreased urine output

From recently drawn labs

(within 24 hours)

Creatinine  $> 2$  mg/dl

Bilirubin  $> 2$  mg/dl

Platelet count  $\leq 100,000$   $\mu\text{L}$

Lactate  $\geq 2$  mmol/L

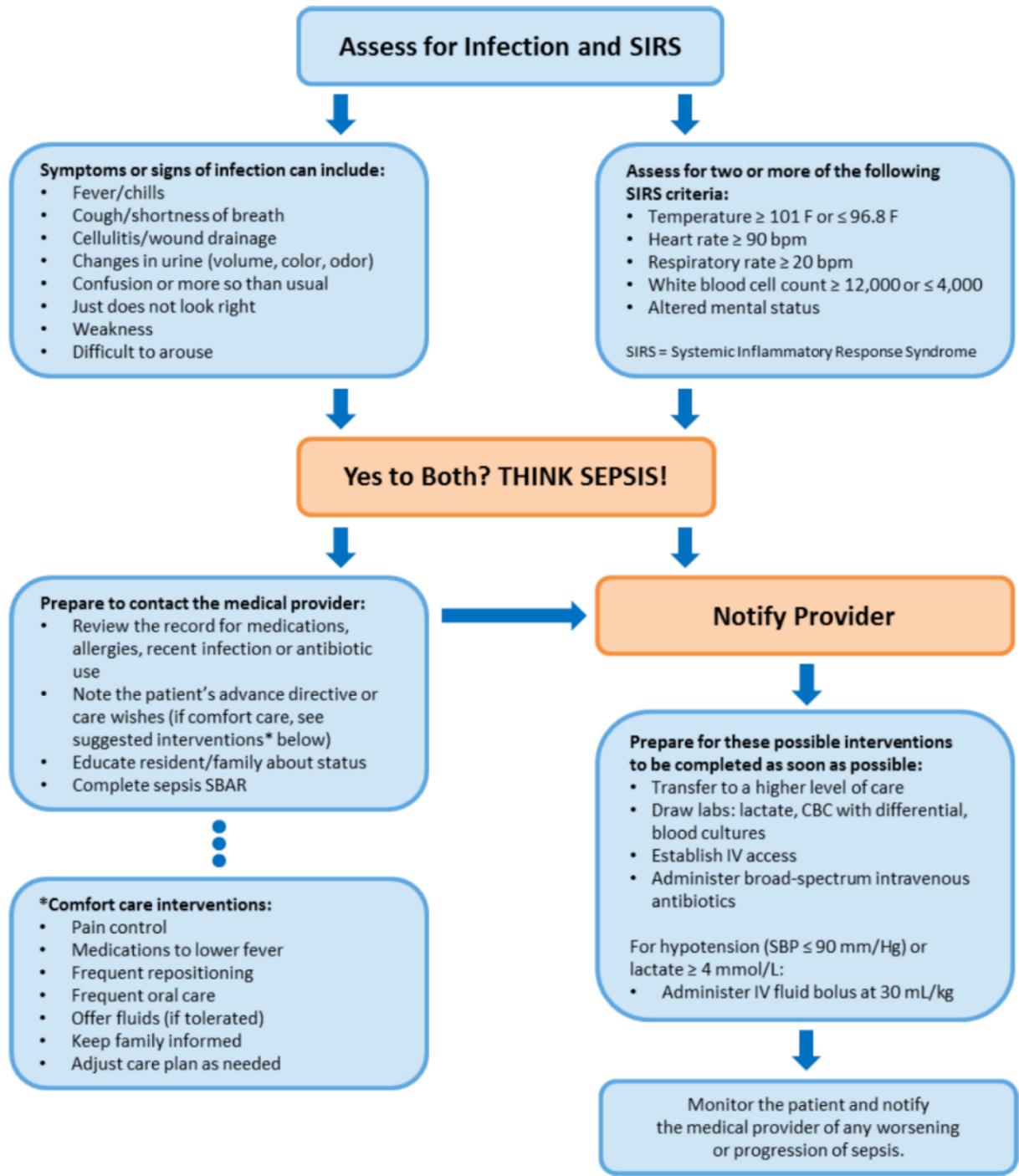
Coagulopathy INR  $\geq 1.5$

or aPTT  $> 60$  secs

Example 1

Example 2

# Post-Acute Care Sepsis Early Identification and Treatment Pathway



# Sepsis Zone Tool

Patient information sheet to self-monitor for the early signs and symptoms of sepsis

Provide this for residents that have either been diagnosed with an infection or are at high risk for developing an infection

## My plan for preventing infection at home

### Things I can do

- Wash my hands and water door knob
- Stay away from colds, flu, your doctor
- Get records whooping cough
- Eat healthy
- Keep my
- Have a plan the yellow

### Look for signs

- Do a daily stoplight
- Report any yellow risk
- Watch for danger by your damage, **one of the signs of concern**

## Signs of infection and sepsis at home

Common infections can sometimes lead to sepsis. Sepsis is a deadly response to an infection.



**Green Zone**  
No signs of infection.



**Yellow Zone**  
Take action today.

Call: \_\_\_\_\_



**Red Zone**  
Take action now!

Call: \_\_\_\_\_

<b>Are there changes in my heartbeat or breathing?</b>	<ul style="list-style-type: none"> <li>• My heartbeat is as usual.</li> <li>• Breathing is normal for me.</li> </ul>	<ul style="list-style-type: none"> <li>• Heartbeat is faster than usual.</li> <li>• Breathing is a bit more difficult and faster than usual.</li> </ul>	<ul style="list-style-type: none"> <li>• Heartbeat is very fast.</li> <li>• Breathing is very fast.</li> </ul>
<b>Do I have a fever?</b>	I have not had a fever in the past 24 hours and I am not taking medicine for a fever.	Fever between 100°F to 101.4°F.	Fever is 101.5°F or greater.
<b>Do I feel cold?</b>	I do not feel cold.	<ul style="list-style-type: none"> <li>• I feel cold and cannot get warm</li> <li>• I am shivering or my teeth are chattering.</li> </ul>	<ul style="list-style-type: none"> <li>• Temperature is below 96.8°F.</li> <li>• Skin or fingernails are pale or blue.</li> </ul>
<b>How is my energy?</b>	My energy level is as usual.	I am too tired to do most of my usual activities.	<ul style="list-style-type: none"> <li>• I am very tired.</li> <li>• I cannot do any of my usual activities.</li> </ul>
<b>How is my thinking?</b>	Thinking is clear.	Thinking feels slow or not right.	My caregivers tell me I am not making sense.
<b>Are there changes in how I feel after a hospitalization, procedure, infection or change in wound or IV site?</b>	<ul style="list-style-type: none"> <li>• I feel well.</li> <li>• I had pneumonia, a urinary tract infection (UTI) or another infection.</li> <li>• I had a wound or IV site. It is healing.</li> </ul>	<ul style="list-style-type: none"> <li>• I do not feel well.</li> <li>• I have a bad cough.</li> <li>• My wound or IV site looks different.</li> <li>• I have not urinated (peed) for 5 or more hours. When I do urinate (pee), it burns, is cloudy or smells bad.</li> </ul>	<ul style="list-style-type: none"> <li>• I feel sick.</li> <li>• My wound or IV site is painful, red, smells or has pus.</li> </ul>



# Teach Back Method

- Studies have shown that patients forget 40-80% of the information they receive almost immediately after hearing it <sup>1</sup>
- Teach Back is asking people to restate in their own words what has been presented to them
- How Teach Back can help ensure effective communication:



- Helps gauge the need for re-explaining if necessary
- Heightens engagement of your audience
- Fosters trust between presenter and audience
- Creates an opportunity for dialogue between you and the audience

1. N Engl J Med 2009; 360: 1418-1428

# Talking with Patients & Families

- Start the discussion by asking if they have heard of sepsis
- *If they have let them tell you what they know*



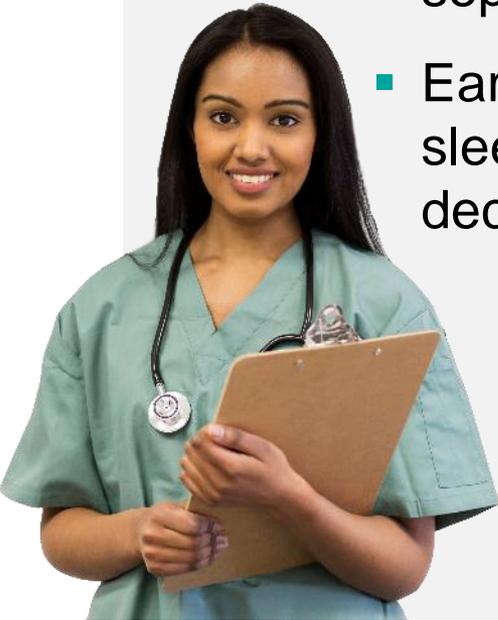
Do you know what sepsis is?

I think so. Does it have something to do with bacteria?



# Talking with Patients & Families

- Share key points about sepsis:
  - The body's over active/often life threatening response to an infection anywhere (skin, urine, respiratory etc.)
  - Anyone with an infection may be at risk for developing sepsis
  - Early signs and symptoms; fever/feeling cold, sleepy/confused, short of breath, rapid heart rate, decreased /dark urine
    - Its important that you let your caregiver know if you experience any of the above
    - **Sepsis is a medical emergency!**



# Case Study



A 74-year-old female, who is a longtime nursing home resident, has a medical history of CAD, osteoarthritis and stroke with left-leg weakness.

She normally eats in the dining room, but wanted to stay in her room today. She asked for a blanket because she feels chilled and is not acting like her usual self. Her color is pale and she stated it burned when she went to the bathroom. You also notice she is coughing more than normal.

# Case Study

Her vital signs are:

T 100.3

HR 117

RR 22

BP 105/43

O2 SAT 90% on room air



Does she have two or more SIRS criteria? **HR,RR**

Does she have a possible or active infection? **UTI?**

Does she have additional organ dysfunction? **Respiratory?**

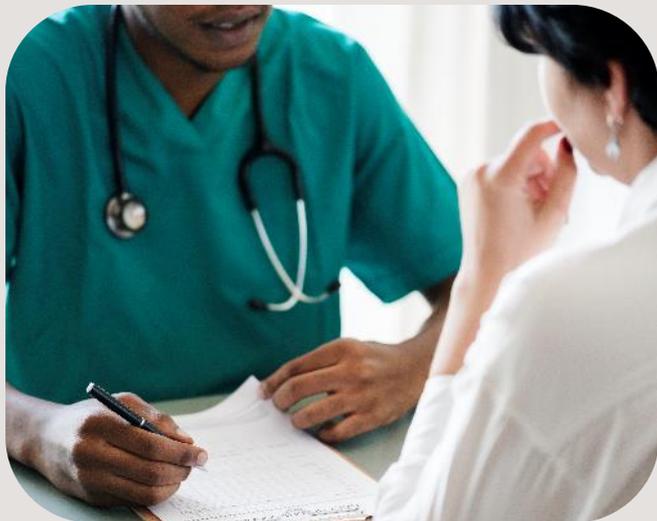
Does she screen positive for severe sepsis? **Yes**

# Preventing Sepsis



- Follow infection control practices (hand hygiene, catheter removal)
- Treat infections promptly
- Recognize the symptoms of severe infection
- Ensure vaccinations are up-to-date
- Maintain good overall health and care for chronic conditions

# How You Can Help



- Educate colleagues, patients, family and friends:
  - About the signs of sepsis and who is at risk
  - About need to seek immediate care and use the words “I suspect sepsis”
  - About how to prevent infections
  - With use of patient education materials and Teach Back Method
- Take precautions to prevent infections and sepsis
- If you suspect sepsis- Act immediately and initiate care

# Organizations Working to Stop Sepsis

## New England QIN-QIO

Providing education and resources to promote awareness and educate on early identification and treatment of sepsis

<http://www.healthcarefornewengland.org/sepsis>

## Sepsis Alliance

Largest sepsis advocacy organization in the U.S. working in all 50 states  
Resources for patients and health professionals

<http://www.sepsis.org/>

## Centers for Disease Control (CDC)

Resources for patients, families and health care professionals including clinical information and guidelines

<https://www.cdc.gov/sepsis/index.html>

# Organizations Working to Stop Sepsis

## IPRO and TMF

We thank the NY and TX QIN-QIOs for sharing their resources:

<http://www.stopsepsisnow.org> <https://www.tmf.org/Health-Care-Providers/Nursing-Homes/Early-ID-of-Sepsis-in-Texas-Nursing-Homes>

## Surviving Sepsis Campaign- Society of Critical Care Medicine

Clinical guidelines, bundles, performance improvement

<http://www.survivingsepsis.org/Pages/default.aspx>

## Rory Staunton Foundation:

Advocacy, education, resources and *Rory's Regulations* for hospitals

<https://rorystauntonfoundationforsepsis.org/>

## Global Sepsis Alliance

Not-for-profit charitable organization to raise awareness worldwide

<https://www.global-sepsis-alliance.org/>

# Questions



## Feedback



## Recommendations

# Post-Training Assessment

Please complete Post Training Assessment questions on the **RIGHT** and **BOTTOM** and hand in to the presenter at the end of training session.

Thank you!

 **Quality Improvement Organizations**  
Sharing Knowledge. Improving Health Care.  
CENTERS FOR MEDICARE & MEDICAID SERVICES

 **NEW ENGLAND QUALITY IMPROVEMENT NETWORK**  
Supporting the Transformation of Health Care  
A Partnership with Quality

**Sepsis Awareness Training**  
**Pre and Post-Learning Assessment - Clinical Staff**

Your name is not required. This is not a quiz.  
It is used solely to assess understanding of sepsis before and after training.

Instructions:

1. Please complete the top section of this form at the start of training.
2. Pre-learning Assessment: Read the statements in the **LEFT** section below and respond by checking one of the boxes in the column labeled "T" (True) or "F" (False).
3. Post-learning Assessment: Repeat with statements in the **RIGHT** section below and complete the bottom.

Date: \_\_\_\_\_

My provider setting:  Hosp.  SNF  HH  AL  Comm Agency  Med Off  Other \_\_\_\_\_

My Role is:  MD/DO/NP/PA  RN  LPN  CNA/MA  PT/OT/RT  Pharmacist  Other \_\_\_\_\_

Pre-learning Assessment		T	Post-learning Assessment		T	F
Please complete this section <b>before</b> training.			Please complete this section <b>after</b> training.			
1. Sepsis should be treated as a medical emergency in all instances.			1. Sepsis should be treated as a medical emergency in all instances.			
2. Patients with sepsis will present with fever and confusion in all instances.			2. Patients with sepsis will present with fever and confusion in all instances.			
3. Common infections that may progress to sepsis are lung infection, skin infection, UTI, and intra-abdominal infection, but sepsis can also occur without an infection.			3. Common infections that may progress to sepsis are lung infection, skin infection, UTI, and intra-abdominal infection, but sepsis can also occur without an infection.			
4. Organ dysfunction is a life-threatening result of sepsis and can occur anywhere in the body.			4. Organ dysfunction is a life-threatening result of sepsis and can occur anywhere in the body.			
5. I am familiar with post-sepsis syndrome and its potential long-term effects.			5. I am familiar with post-sepsis syndrome and its potential long-term effects.			
6. Sepsis can be prevented by preventing infections and treating them promptly.			6. Sepsis can be prevented by preventing infections and treating them promptly.			

Do you know someone who has had sepsis or are you a sepsis survivor? If you are willing to share your story to help increase sepsis awareness please enter your contact information here:

Or contact: Alyssa DaCunha: 877-904.0057 x3241 [adacunha@healthcentricadvisors.org](mailto:adacunha@healthcentricadvisors.org)

**Thank you!**

This material was originally created by the National Quality Improvement Network, the Quality Improvement Network-Healthcare Improvement Organization for New York, South Carolina and the District of Columbia. It has been updated by the New England Quality Improvement Network-Healthcare Improvement Organization for New England, under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services. The content presented do not necessarily reflect CMS policy. CMS/QIO/2014/01149

# Evaluation and CEUs

In order to get your CEUs, please complete the evaluation form provided.



# For more information

Alyssa DaCunha, MPH  
Program Administrator  
adacunha@healthcentricadvisors.org  
877.904.0057 x3241

<https://healthcentricadvisors.org/sepsis-training>

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