

SEPSIS EARLY SYMPTOM DETECTION IS KEY TO SURVIVAL

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QIPMO PROGRAM



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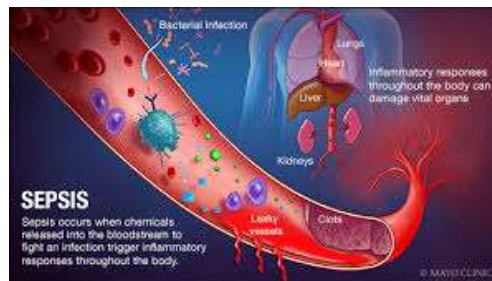
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OBJECTIVES

- Learning Objectives:
 - Understand the definition of sepsis and its causes
 - Identify potential resident risk factors for sepsis development
 - Learn ways to utilize screening tools to improve early symptom recognition and outcomes



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WHAT IS SEPSIS?

- Sepsis is the body's extreme response to an infection. It is a life-threatening medical emergency.
- Sepsis happens when an infection you already have triggers a chain reaction throughout your body. Infections that lead to sepsis most often start in the lung, urinary tract, skin, or gastrointestinal tract.
- Sepsis is the body's overwhelming and life-threatening response to an infection which can lead to tissue damage, organ failure, and death.
- About **1.7 million** adults in America develop sepsis.
- At least **350,000** adults who develop sepsis die during their hospitalization or are discharged to hospice.
- Roughly 30% of hospitalized patients with a diagnosis of sepsis in acute care are discharge to a nursing home
- **1 in 3** patients who die in a hospital had sepsis during that hospitalization.
- It is the ninth leading cause of disease-related deaths.
- Diagnose sepsis using several physical findings like fever, increased heart rate, and increased breathing rate. They also do lab tests that check for signs of infection.



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SEPSIS: WHEN?

Sepsis can occur to anyone, at any time, from any type of infection, and can affect any part of the body. It can occur even after a minor infection.



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SEPSIS: WHO?

- Anyone can get sepsis as a negative outcome from an infection, but the risk is higher in:
 - Adults 65 or older AND children younger than one
 - People with weakened immune systems
 - People with chronic medical conditions, such as diabetes, lung disease, cancer, and kidney disease
 - People with recent severe illness or hospitalization, including due to severe COVID-19
 - People who survived a previous occurrence of sepsis
 - People suffering from a severe burns or wounds
 - Community acquired infections: pneumonia, urinary, wounds, trauma
 - Health care acquired: invasive devices, secondary infections and skin breakdown



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RISK FOR SEPSIS

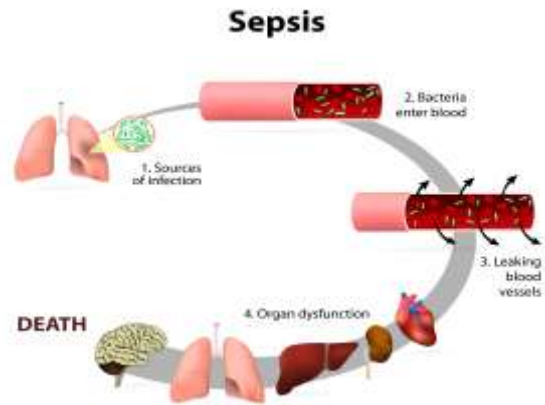
- Extremes of age (old and young)
 - Can't communicate, need careful assessment
 - Patients with developmental delay
 - Cerebral Palsy
- Recent surgery, invasive procedure, illness, childbirth/pregnancy termination/miscarriage
- Reduced immunity
- **DIABETES**
- Liver cirrhosis
- Autoimmune diseases (lupus, rheumatoid arthritis)
- HIV/AIDS
- Para/quadrilegics
- Sickle cell disease
- Splenectomy patients
- Compromised skin (chronic wounds, burns, ulcers)
- Chemotherapy
- Post-organ transplant (bone marrow, solid organ)
- Chronic steroid use
- Recent antibiotic use
- Indwelling catheters of any kind (dialysis, Foley, IV, PICC, PEG tubes, etc.)



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WHAT CAUSES SEPSIS?

- An infection occurs when germs enter a person's body and multiply, causing illness and organ and tissue damage
- Bacterial infections are the most common
- Fungal, parasitic or viral infections can also cause sepsis
- The infection can originate from anywhere in the body and can cause organ damage to any system of the body
- Unknown (1/3 of all sepsis cases)



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CAUSES OF SEPSIS

- Any type of infection that is anywhere in your body can cause sepsis, including infections of the
- Skin, (Bacteria can enter your skin through wounds, inflammation or openings made with catheters, IVs, cellulitis, wounds or burns)
 - Abdomen (such as appendicitis, (peritonitis, gallbladder or liver infections)
 - Infections of the brain or spinal cord
 - Lungs, such as pneumonia
 - Kidney, bladder and other parts of the urinary system (UTI), obstructive stone disease
 - Digestive system
 - Bloodstream
 - Catheter sites



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COMMON INFECTIOUS DISEASES THAT MAY PROGRESS TO SEPSIS

- Pneumonia/respiratory
- Skin Infections (cellulitis)
- Urinary Tract Infections
- Post-partum Endometritis
- Influenza
- *Clostridium difficile* (*C.diff*) Enteritis
- Tick-borne infections, especially in the immunocompromised



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EARLY DETECTION OF SEPSIS

Is the patient's **temperature** above 100?

Is the patient's **heart rate** above 100?

Is the patient's **blood pressure** below 100?

And does the patient just not look right? **Screen for sepsis and notify the physician immediately.**

Every hour a resident in septic shock doesn't receive antibiotics, the risk of death increases 7.6%
Call the doctor!



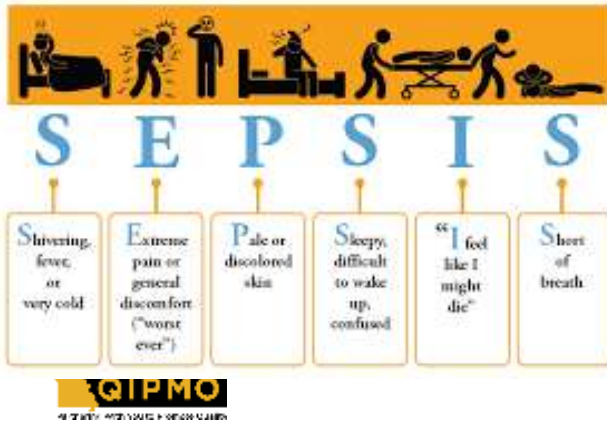
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SYMPTOMS OF SEPSIS

- There is no single sign or symptom of sepsis. It is, rather, a combination of symptoms. Since sepsis is the result of an infection, symptoms can include infection signs (diarrhea, vomiting, sore throat, etc.), as well as ANY of the symptoms below(CDC)



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These 3 germs most frequently develop into sepsis are:

- Staphylococcus aureus (staph)
- Escherichia coli (E. coli)
- Some types of Streptococcus

SYMPTOMS OF SEPSIS

*Sepsis always develops from an *infection with more than one of the following:*

- High heart rate or weak pulse
- Fever, shivering, or feeling very cold or mottling of skin
- Confusion or disorientation, or difficult to arouse
- Shortness of breath
- Extreme pain or discomfort
- Clammy or sweaty skin
- Reduced urine output
- Abdominal pain, nausea or vomiting
- Skin rash or pale, discoloration
- Low blood pressure
- Elevated white blood cell count
- Elevated lactate levels

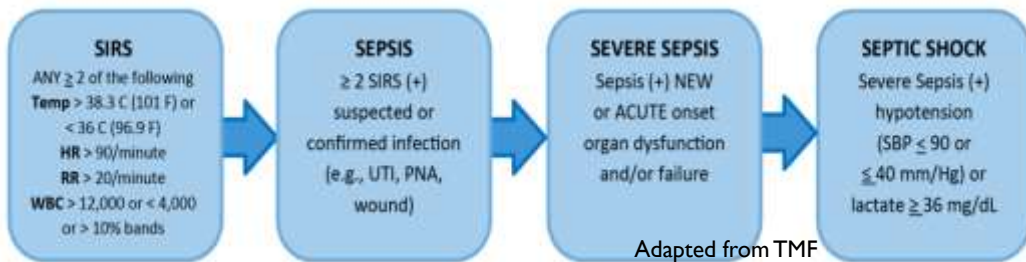
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PROGRESSION OF SEPSIS

Early identification and treatment

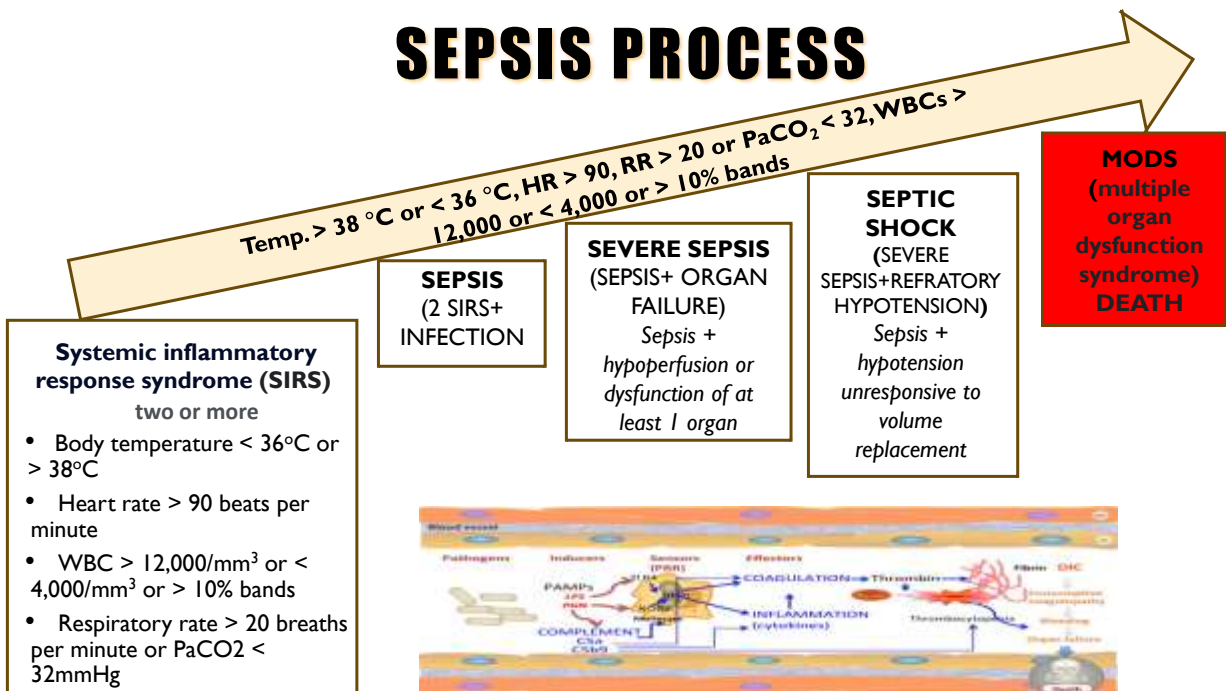
It is crucial to identify septic patients and initiate treatment as early along the continuum as possible and treat them to avoid developing organ damage or shock.

- **SIRS** is the nonspecific inflammatory response to an insult – the person has two or more of the criteria and it may or may not be sepsis. Assess if these are due to known conditions or a response to treatments.
- **Sepsis** is two or more SIRS criteria AND a known or suspected infection.
- **Severe sepsis** is sepsis with signs of organ dysfunction – the most common are altered mentation or an elevated lactate (> 2).
- **Septic shock** is when the person has severe sepsis with persistent hypotension after adequate fluid resuscitation (30 mL/kg crystalloid fluid bolus) OR a lactate ≥ 4.0.
- **Multi-Organ Dysfunction Syndrome (MODS)** can be the end result of septic shock. The more organs involved (failing), the higher the mortality rate.

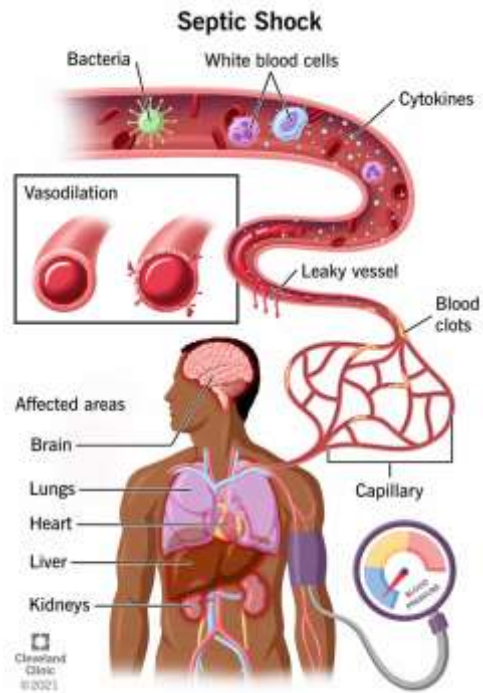


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SEPSIS PROCESS



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SEVERE SEPSIS SCREENING

Suspected or documented infection

Assess/Screen for SIRS – Systemic Inflammatory Response Syndrome

- Temperature $\geq 100.4^\circ\text{F}$ or $\leq 96.8^\circ\text{F}$
- Heart rate greater than 90 beats/minute
- Systolic blood pressure less than 90 mmHg

*If less than two checked = **NEGATIVE** screen for sepsis

*If 2 above are checked, resident **SCREENED POSITIVE FOR SEPSIS**; alert the nurse who will:

- Place resident on I & O. Monitor and record urine output every shift.
- Obtain order for LACTIC ACID



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SEVERE SEPSIS SCREENING

Monitor for ORGAN DYSFUNCTION

- Respiratory: SaO₂ less than 90% OR increasing O₂ requirements
- Cardiovascular: SBP less than 90 mmHg or 40 mmHg less than baseline
- Renal: Urine output less than 0.5 ml/kg over last 8 hours
- CNS: Mental status changes

LABS: (Do not use lab results older than 24 hours.)

- Platelets less than 100,000
- INR greater than 1.5
- Bilirubin greater than or equal to 4 mg/dl
- Serum lactic acid greater than or equal to 2 mEq/l

*If 1 above checked, RESIDENT SCREENS POSITIVE FOR SEVERE SEPSIS. CALL PHYSICIAN AND FOLLOW SBAR

*If no checks above = NEGATIVE screen for sepsis.

Continue to assess every two to four hours.



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CLINICAL SCREENING TOOLS



SIRS – Systemic Inflammatory Response Syndrome (1991): Defines a clinical response to a nonspecific insult of either infectious or noninfectious origin



SOFA – Sequential Organ Failure Assessment (1996): The SOFA tool uses a scoring system that evaluates six key system measures: respiration, coagulation, liver, cardiovascular, central nervous system and renal.



qSOFA – quick Sepsis Related Organ Failure Assessment (2016): also known as quickSOFA) is a bedside prompt that may identify patients with suspected infection who are at greater risk for a poor outcome in areas outside the ICU



MEWS – Modified Early Warning Score (2001): assigns a number between zero and three to six vital signs: respiratory rate, heart rate, systolic blood pressure, conscious level, temperature and hourly urine output



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SIRS

SIRS is defined as two or more of the following variables:

Fever of more than 38 C (100.4F) or less than 36C (96.8F)	Heart rate of more than 90 beats per minute	Respiratory rate of more than 20 breaths per minute or arterial carbon dioxide tension (PaCO ₂) of less than 32 mmHG	Abnormal white blood cell count (> 12,000/μL or < 4,000/μL or > 10% immature bands)
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SIRS is nonspecific and can be caused by ischemia, inflammation, trauma, infection or several insults combined. Thus, SIRS is not always related to infection



SOFA – SEQUENTIAL ORGAN FAILURE ASSESSMENT

The SOFA scoring tool is used in the intensive care unit (ICU). “A score of two or more (see chart below) and a suspicion of infection is indicative of sepsis”

System	Score				
	0	1	2	3	4
Respiration PaO ₂ /FIO ₂ (mmHg)	≥400	<400	<300	<200	<100
Coagulation Platelets 10 ³ /mm ³	≥150	<150	<100	<50	<20
Liver Bilirubin (mg/dL)	<1.2	1.2-1.9	2.0-5.9	6.0-11.9	>12.0
Cardiovascular Hypotension	MAP ≥70 mmHg	MAP <70 mmHg	Dopamine <5 or dobutamine (any)	Dopamine 5,1-15 or norepinephrine ≤0.1	Dopamine >15 or norepinephrine >0.1
CNS Glasgow Coma Score	15	13-14	10-12	6-9	<6
Renal Creatinine (mg/dL)	<1.2	1.2-1.9	2.0-3.4	3.5-4.9	>5.0



QSOFA – QUICK SEPSIS-RELATED ORGAN FAILURE ASSESSMENT

- The qSOFA score (also known as quickSOFA) is a bedside prompt that may identify patients with suspected infection who are at greater risk for a poor outcome in areas outside the ICU. It uses three criteria, assigning one point for
 - low blood pressure (SBP ≤ 100 mmHg),
 - high respiratory rate (≥ 22 breaths per min) or
 - altered mentation (Glasgow coma scale < 15).

Assessment	qSOFA score
Low blood pressure (SBP ≤ 100 mmHg)	1
High respiratory rate (≥ 22 breaths/min)	1
Altered mentation (GCS ≤ 14)	1



Glasgow Coma Scale		
Response	Score	Score
Eye Opening Response	Eyes open spontaneously	4 Points
	Eyes open to verbal command, speech, or touch	3 Points
	Eyes open to pain (not applied to face)	2 Points
	No eye opening	1 Point
Verbal Response	Oriented	5 Points
	Confused conversation, but able to answer questions	4 Points
	Inappropriate responses, words discernible	3 Points
	Incomprehensible sounds or speech	2 Points
	No verbal response	1 Point
Motor Response	Obeys commands for movement	6 Points
	Purposeful movement to painful stimulus	5 Points
	Withdraws from pain	4 Points
	Abnormal (specific) flexion, decorticate posture	3 Points
	Extensor (rigid) response, decerebrate posture	2 Points
	No motor response	1 Point

Minor Brain Injury = 13-15 points; Moderate Brain Injury = 9-12 points; Severe Brain Injury = 3-6 points

If a patient has two out of three variables, they are at greater risk for needing ICU care and have a poorer prognosis. The third international consensus definitions for sepsis and septic shock (Sepsis-3) recommends replacing SIRS criteria with qSOFA.

MEWS – MODIFIED EARLY WARNING SCORE

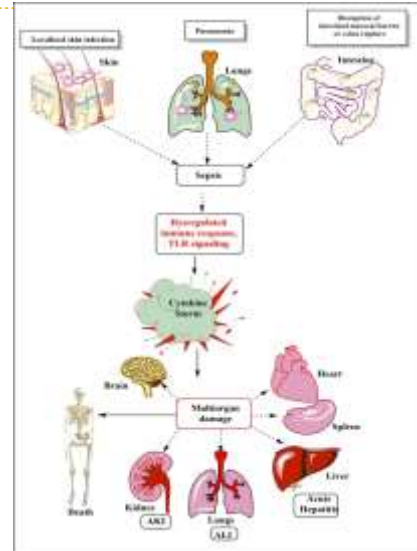
A total score ≥ four is often used as an indicator to contact a provider or trigger an alert

MEWS (Modified Early Warning System)							
	3	2	1	0	1	2	3
Respiratory Rate per minute		Less than 8		9-14	15-20	21-29	More than 30
Heart Rate per minute		Less than 40	40-50	51-100	101-110	111-129	More than 129
Systolic Blood Pressure	Less than 70	71-80	81-100	101-199		More than 200	
Conscious level (AVPU)	Unresponsive	Responds to Pain	Responds to Voice	Alert	New agitation Confusion		
Temperature (°C)		Less than 35.0	35.1-36	36.1-38	38.1-38.5	More than 38.6	
Hourly Urine For 2 Hours	Less than 10 mLs/hr	Less than 30 mLs/hr	Less than 45 mLs/hr				



ROLE OF NURSING STAFF

- **MONITOR:**
 - Lab work
 - Frequent vitals signs
 - Fall risk due to weakness or confusion
 - Oxygen support
 - Change in diet due to aspiration pneumonia or failed swallow evaluation
 - Any changes in condition. Early monitoring and reporting



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PREVENTIVE MEASURES

- **Prevent infections** that can lead to sepsis by:
 - **Cleaning** scrapes and wound
 - Practicing good **hygiene** (e.g., hand washing, bathing regularly)
 - Appropriate catheter management
- If resident has an **infection, look for signs like:**
 - fever, chills, rapid breathing and increased heartrate, rash, confusion, and disorientation
- Monitor the infection closely to identify if there is **Systematic inflammatory response syndrome (SIRS) criteria**
 - Fever $\geq 100.4^{\circ}\text{F}$ or $\leq 96.8^{\circ}\text{F}$
 - Systolic blood pressure less than 100mmHg
 - Heart rate greater than 100 beats per minute
 - Respiratory rate greater than 20 breaths per minute



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PREVENTIVE MEASURES

- Educate staff on knowing sepsis signs and symptoms to identify and treat residents early
- **ACT FAST** if you suspect sepsis
- Ensure residents receive recommended vaccines
- Educate residents and their families about:
 - Preventing infections
 - Keeping cuts and wounds clean and covered until healed
 - Managing chronic conditions
 - Recognizing early signs and symptoms of worsening infection and sepsis
 - Seeking immediate care if signs and symptoms are present



4 WAYS TO GET AHEAD OF SEPSIS

GET AHEAD OF SEPSIS
Before the clock starts for shock and death


Infections put you and your family at risk for a life-threatening condition called sepsis.
Sepsis is the body's extreme response to an infection. It is life-threatening, and without timely treatment, sepsis can rapidly lead to tissue damage, organ failure, and death. Sepsis happens when an infection you already have—in your skin, lungs, urinary tract or somewhere else—triggers a chain reaction throughout your body.

Anyone can get an infection, and almost any infection can lead to sepsis.

1

PREVENT INFECTIONS

Talk to your doctor or nurse about steps you can take to prevent infections.



 Use good care of chronic conditions


 Get recommended vaccines

2

PRACTICE GOOD HYGIENE

Remember to wash your hands and keep cuts clean and covered until healed.



 Wash hands



 Keep cuts clean and covered until healed


3

KNOW THE SYMPTOMS


Symptoms of sepsis can include any one or a combination of these:



 Fever or chills


 Confusion


 Rapid heart rate


 Rapid or shallow breathing


 Low blood pressure


 Change in skin color



4

ACT FAST

Get medical care IMMEDIATELY if you suspect sepsis or have an infection that's not getting better or is getting worse.

Sepsis is a medical emergency. Time matters.

To learn more about sepsis and how to prevent infections, visit www.cdc.gov/sepsis


FOR LONG TERM CARE HOMES

PROTECT YOUR RESIDENTS FROM SEPSIS.

GET AHEAD OF SEPSIS
HOW TO BEGET YOUR RESIDENTS, NOT SEPSIS

Sepsis is a medical emergency. You play a critical role. Protect your residents by ACTING FAST. Infections and your residents' risk for sepsis. Avoid the risk of sepsis by identifying any infection, including COVID-19, and treat it quickly. With your fast recognition and treatment, most residents survive.

WHAT CAUSES SEPSIS?

Bacterial infections cause most cases of sepsis. Sepsis develops in small differences, including skin infections, such as 1000 to 10 million, or gram-negative. Several types of bacteria can cause sepsis, but some are more likely to cause sepsis. Sepsis can also be caused by fungal, viral, or parasitic infections. Sepsis is not a single condition. It is a collection of symptoms that can be caused by many different infections. Sepsis is not a disease. It is a condition that can be caused by many different infections.

WHO IS AT RISK?

Anyone can develop sepsis, but some people are at higher risk for sepsis:

- 65+ (Age 65 or older)
- Chronic conditions (Chronic conditions)
- Recent surgery (Recent surgery)
- Recent hospitalization (Recent hospitalization)
- Recent antibiotic use (Recent antibiotic use)
- Recent infection (Recent infection)
- Recent trauma (Recent trauma)
- Recent burn (Recent burn)
- Recent injury (Recent injury)
- Recent fall (Recent fall)
- Recent stroke (Recent stroke)
- Recent heart attack (Recent heart attack)
- Recent cancer (Recent cancer)
- Recent organ transplant (Recent organ transplant)
- Recent blood transfusion (Recent blood transfusion)
- Recent organ donation (Recent organ donation)
- Recent organ donation recipient (Recent organ donation recipient)

WHAT ARE THE SIGNS AND SYMPTOMS OF SEPSIS?

A resident with sepsis might have one or more of the following signs or symptoms:

- High fever or low body temperature
- Fast heart rate
- Fast breathing
- Low blood pressure
- Confusion
- Extreme pain or discomfort
- Swelling or redness in one or more areas of the body
- Changes in skin color
- Changes in mental status
- Changes in breathing
- Changes in heart rate
- Changes in blood pressure
- Changes in oxygen saturation
- Changes in urine output
- Changes in stool output
- Changes in vomit output
- Changes in sweat output
- Changes in tears output
- Changes in saliva output
- Changes in mucus output
- Changes in sputum output
- Changes in stool output
- Changes in vomit output
- Changes in sweat output
- Changes in tears output
- Changes in saliva output
- Changes in sputum output

Residents with sepsis should be urgently evaluated and treated by a healthcare professional.



FOR LONG TERM CARE CERTIFIED NURSING ASSISTANTS/TECHS

PROTECT YOUR RESIDENTS FROM SEPSIS.

GET AHEAD OF SEPSIS
HOW TO BEGET YOUR RESIDENTS, NOT SEPSIS

Sepsis is a medical emergency. You play a critical role. Protect your residents by ACTING FAST. Infections and your residents' risk for sepsis. Avoid the risk of sepsis by identifying any infection, including COVID-19, and treat it quickly. With your fast recognition and treatment, most residents survive.

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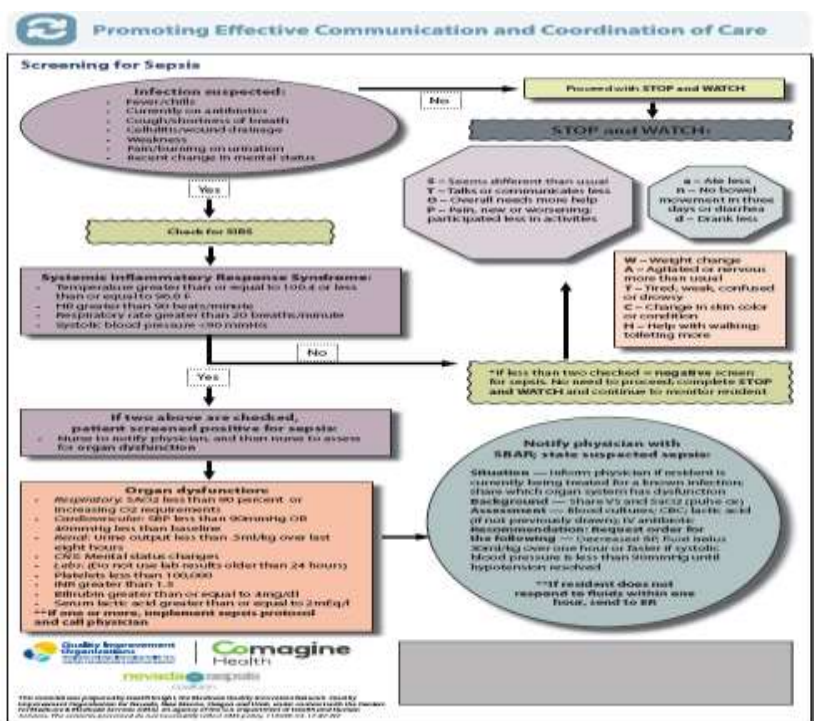
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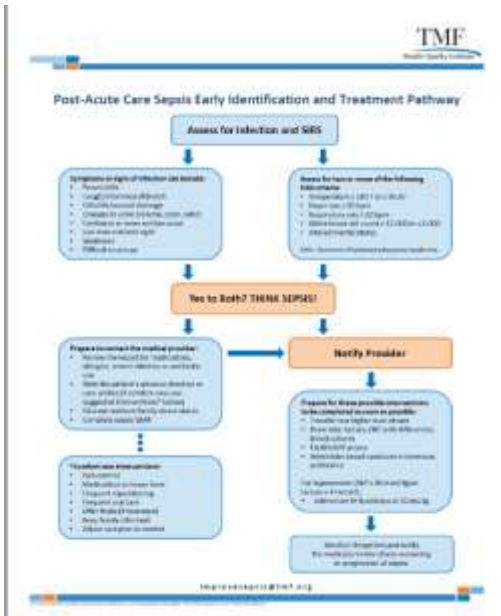
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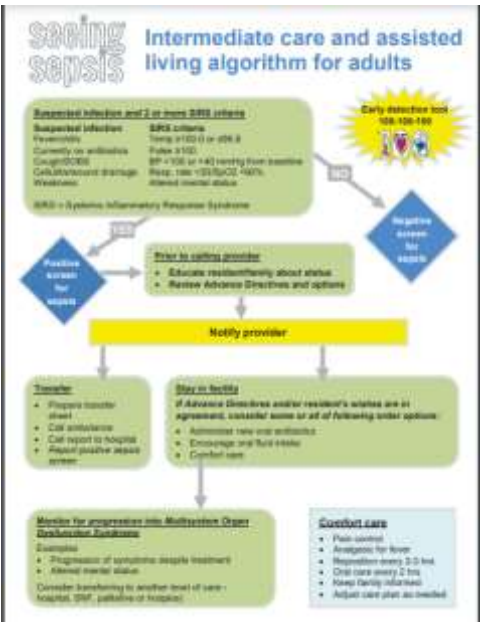
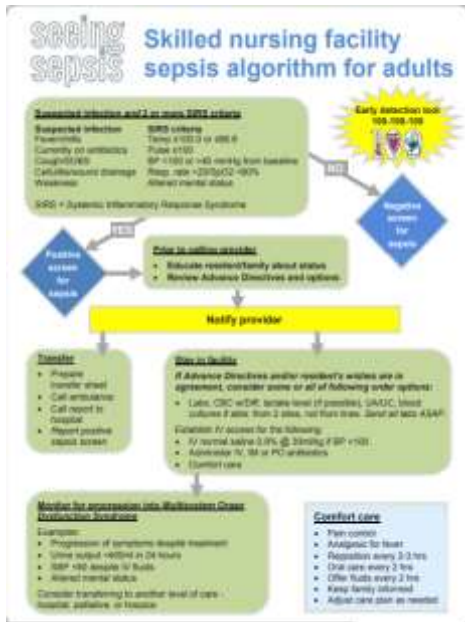
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- Changes in sweat output
- Changes in tears output
- Changes in saliva output
- Changes in sputum output

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Adapted from MN Hospital Association

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HSAG HOIC

Post-Acute Situation Background Assessment Recommendation (SBAR) for Sepsis
 Sepsis Inflammatory Response Syndrome (SIRS)

Complete immediately with admitting provider when a patient screen positive for sepsis

Situation:

- Has not been treated with following SIRS criteria (only one more than could be met):
 - Temperature greater than 101°F (38.3°C) or lower than 97°F (36.1°C)
 - Heart rate greater than 100 beats per minute
 - Respiratory rate greater than 20 breaths per minute
 - White blood cell count (WBC) is greater than 12,000 and less than 4,000 or greater than 10 percent band

Background:

- Present was admitted with _____ and has been in most patient SIRS criteria (see above)
- Expected source of infection (and how that was):
 - Respiratory: pneumonia, chest pain, cough, or other infection
 - Urinary: urinary symptoms (e.g. pyelonephritis, urinary tract infection) or other infection
 - Central line or device infection
 - Other: _____
- Other pertinent lab symptoms
- Other symptoms of infection

Assessment:

- Is patient/severity _____ (Sepsis Inflammatory Response Syndrome) or less?
- Is there a need for a second assessment (see note in heading)?
- What is the patient's status?
- What is the patient's status?
- Other relevant _____ (see the last three)

Recommendations:

- Based on patient screening, recommend screening provider
- Screen patient for sepsis based on clinical criteria if possible, but admission based on patient condition(s) and clinical criteria if not possible (see note in heading)
- Consider transfer to an acute care facility based on patient presentation, availability of resources, and response to treatment

Notes:

SBAR is a tool for communication and decision-making. It is not a substitute for clinical judgment. It is not a checklist. It is a tool to help you communicate and make decisions. It is not a substitute for clinical judgment. It is not a checklist. It is a tool to help you communicate and make decisions.

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SBAR Communication for Possible Sepsis

SITUATION

My name is _____
 I'm calling from (unit) _____
 Name of Physician/Provider contacted _____
 I need to speak with you about (patient name) _____
 Resident Age _____

BACKGROUND

The resident was admitted on _____ (date) with the diagnosis of _____
 The resident also has the following co-morbid conditions/diagnoses: _____
 The resident is now showing these signs of possible infection: _____

What is the signs and symptoms you are observing?
 The resident is currently on, or recently completed PO or IV Antibiotics:
 - Antibiotic Name, Dose, Route _____
 - Antibiotic Name, Dose, Route _____
 The resident is allergic to: _____
 The resident's advance care directive is: _____

ASSESSMENT (Use the key findings)

My assessment of the situation is that the resident may be experiencing a new or worsening infection. Here are my findings:

Temp	Heart Rate	BP
Respiratory Rate	SpO2	WBC
Current WBC	Other Lab Data	
Blood Sugar	Creatinine	Last SBAR Date
Current Lab/Recent Cultures:		

Mental status is (changed) OR (not changed) from baseline:
 Possible source of infection: _____
 (Use only relevant assessment/assessment after observation, admit)

RECOMMENDATION (Use the key findings)

I am concerned that this resident may have sepsis.
 Would you like to order any labs, IV fluids or treatments?
 How often should vital signs be performed?
 What vital signs parameters would indicate an immediate notification to you?
 If no improvement, when would you want us to call you again?
 Additional Orders received: _____

SBAR Calling Key Findings:

- Provide the resident and family the best care, safety, medications and patient needs.
- Check vital signs to alert to early sepsis warning signs.
- Notify the resident about recent hospital status, all safety, medications and patient needs.
- Follow-up plan.
- Be aware of the resident's advance care wishes.

Severe Sepsis Warning Signs:

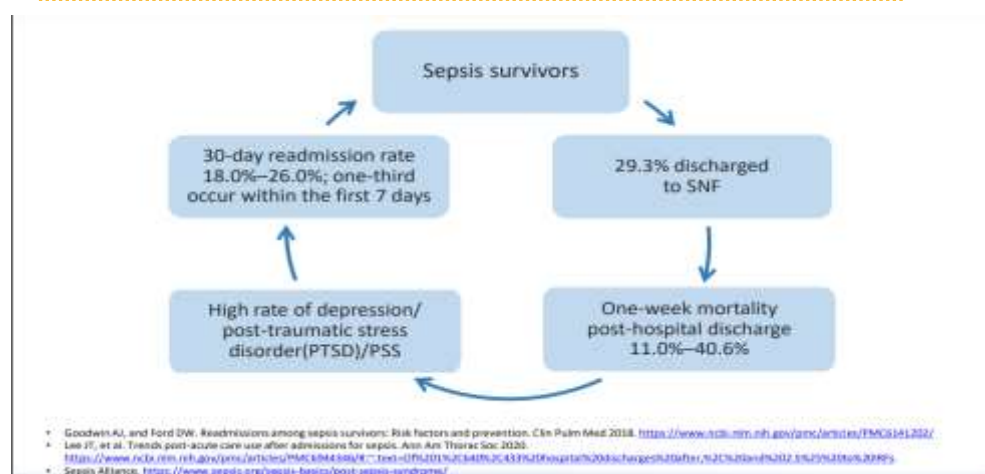
Temperature > 101.7 or < 97.0 F
 Heart rate > 100 bpm
 Respiratory rate > 20 bpm
 White blood cell (WBC) count > 12,000 or < 4,000 or > 10% band
 Altered mental status
 SIRS (Multiple SIRS)
 Decreased urine output
 Pressor agents used
 Lactate > 2 mmol/L
 Creatinine > 1.5 or a 1.5 or more
 PT/TT > 10 sec

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Health Care of Ontario

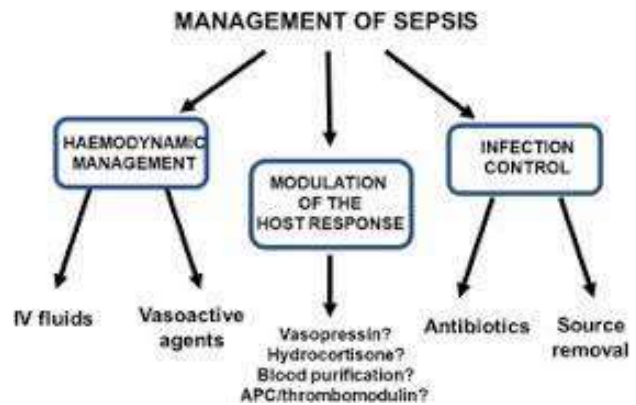


SURVIVING SEPSIS



ACUTE CARE TREATMENT

- Recommended within the first hour of recognition
 1. Measure blood lactate level
 2. Obtain blood cultures (prior to giving antibiotics)
 3. Administer broad-spectrum IV antibiotics
 4. Administer 30 ml/kg crystalloid for hypotension or lactate ≥ 4 mmol/L



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POST-SEPSIS SYNDROME (PSS) SYMPTOMS

PHYSICAL

- General to extreme weakness and fatigue
- Insomnia, difficulty getting or staying asleep
- Fatigue or lethargy
- Shortness of breath
- General body pains or aches
- Difficulty moving around
- Weight loss, lack of appetite, food not tasting normal
- Dry and itchy skin that may peel
- Brittle nails and/or hair loss
- Organ dysfunction (kidney failure, lung problems, etc.)
- Amputations (loss of limb(s))
- Repeated infections

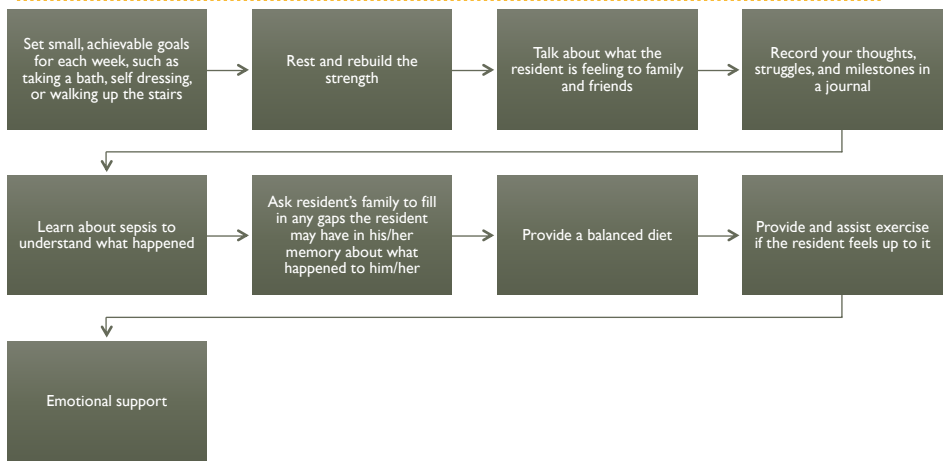
PSYCHOLOGICAL

- Unsure of yourself
- Not caring about your appearance
- Wanting to be alone, avoiding friends and family
- Flashbacks, bad memories
- Confusing reality (e.g., not sure what is real and what isn't)
- Feeling anxious, more worried than usual
- Poor concentration
- Depressed, angry, unmotivated
- Frustration at not being able to do everyday tasks
- Nightmares, vivid hallucinations, panic attacks
- Decreased mental (cognitive) function
- Loss of self-esteem and self-belief
- PTSD



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CARE PLAN FOR POST SEPSIS



PSS TREATMENT

Emotional and psychological support	<ul style="list-style-type: none"> • Counseling • Cognitive behavioral therapy • Neuropsychiatric assessment
Physical support	<ul style="list-style-type: none"> • Physical therapy • Neurorehabilitation



PSS SBAR

Situation: Resident/patient has symptoms of PSS.

Background: A large percentage of sepsis survivors and their families experience PSS symptoms.

Assessment: The patient is experiencing the following symptoms:

- | | |
|--|---|
| <input type="checkbox"/> Insomnia, difficulty getting to sleep or staying asleep | <input type="checkbox"/> Nightmare, vivid hallucinations, and panic attacks |
| <input type="checkbox"/> Disabling muscle and joint pain | <input type="checkbox"/> Flashbacks |
| <input type="checkbox"/> Fatigue, lethargy | <input type="checkbox"/> Poor concentration |
| <input type="checkbox"/> SOB | <input type="checkbox"/> Decreased mental (cognitive) function |
| <input type="checkbox"/> Swelling of limbs | <input type="checkbox"/> Loss of self-esteem and self-belief |
| <input type="checkbox"/> Repeat infections | <input type="checkbox"/> Depression |
| <input type="checkbox"/> Poor appetite | <input type="checkbox"/> Mood swings |
| <input type="checkbox"/> Hair loss | <input type="checkbox"/> Memory loss |
| <input type="checkbox"/> Skin rash | <input type="checkbox"/> PTSD |



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INTERVENTIONS FOR PSS



Understand the potential for PSS:

Communicate with the provider

Let your resident know they are not alone helps healing

Allow the resident the time and opportunity to share how they are feeling



Reinforce resident education provided in the hospital



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PROGRAMS TO PREPARE AND PREVENT

Does the facility have sepsis reduction efforts in place?

- A process to screen residents for sepsis?
- A process for sepsis treatment? Standing order/protocol?

Do you know which residents have the **potential for sepsis** in your facility? How are they identified?

Are you more closely monitoring residents who were discharged from a hospital with an infection or sepsis?

Do you have the program for sepsis or infection prevention?

- Early identification
- Early antibiotics
- Early (aggressive) fluid resuscitation



SUPPORT SYSTEM FOR SEPSIS MANAGEMENT



STAFF EDUCATION

Normal Response to Infection

- Local infection
- Non-specific inflammatory response
- 3 phases
 - Vasodilation - increased blood flow to site, infusion of antibodies and cells to fight infection
 - Vessel permeability - antibodies and cells exit bloodstream and enter infected tissue
 - Once infection is controlled, tissue repairs itself



Pathophysiology of Sepsis

- Uncontrolled, exaggerated immune response
- Endothelium damage, cell mediator activation, disruption of coagulation system homeostasis
- Vasodilation and capillary permeability
- Systemic inflammatory response
- End-organ damage, death



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REFERENCES

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- World Health Organization. (2019, January 11). *World Health Organization*. Retrieved from Factsheets Detail Sepsis: <https://www.who.int/news-room/fact-sheets/detail/sepsis>
- <https://tmfnetworks.org> Sepsis Improve Early Identification and Treatment in Nursing Homes Education Toolkit
- <https://rorystautonfoundationofsepsis.org> The Rory Staunton Foundation
- <https://www.mass.gov> Betsy Lehman Center for Patient Safety
- <https://mnhospitals.org> Early Detection Graphic Tool
- <https://hqin.org> Partnership to Stop Sepsis
- <https://comagine.org> Sepsis Toolkit for Skilled Nursing and Long-Term Care
- <https://qi.ipro.org> Skilled Nursing Facility Care Pathway-Symptoms of Sepsis and Septic Shock
- www.hsag.com Post Acute Sepsis SBAR



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IMPORTANT – CEU INFORMATION

TODAY'S WEBINAR HAS BEEN APPROVED FOR CEU HOUR(S)

IN ORDER FOR MO LNHAS TO GET CREDIT:

- It is **REQUIRED** that you complete a brief survey/evaluation via:
 - ✓ A pop-up at the end of the webinar, or
 - ✓ An automated email from GoToWebinar that will be sent to attendees
 - ✓ You only need to complete it once (either via the pop-up or the email)
- It is **REQUIRED** that you answer the question asking for your LNHA number.

Please note: the certificate that will be linked in GoToWebinar's automated "thank you for attending" email is **NOT YOUR CEU CERTIFICATE**. Your official certificate will be sent out by QIPMO staff in approximately 2 weeks.

*The amount of your credit will be adjusted based on time spent on the webinar.



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