

ELEMENT VII

SEPSIS AWARENESS AND EDUCATION

LEARNING OBJECTIVES

At the conclusion of course work or training on this element, the learner will be able to:

- Describe the scope of the sepsis problem and the NYS Sepsis Improvement Initiative
- Describe persons at increased risk of developing sepsis
- Identify common sources of infection that may lead to sepsis
- Describe early signs and symptoms that may be associated with sepsis in adults and children and infants
- Understand the need for immediate medical evaluation and management if sepsis is suspected
- Educate patients and families on methods for preventing infections and illnesses that can lead to sepsis and on identifying the signs and symptoms of severe infections and when to seek medical care

DEFINITIONS

Sepsis is a life-threatening condition caused by a host's extreme response to infection. The Surviving Sepsis Campaign 2016 International Guidelines define sepsis as life-threatening organ dysfunction caused by a dysregulated host response to infection. Earlier definitions defined sepsis as an inflammatory response to infection, while sepsis associated with organ dysfunction was identified as severe sepsis. Septic shock is a subset of sepsis that manifests with circulatory and cellular/metabolic dysfunction; it is associated with a higher mortality risk.

CONTENT OUTLINE

I. Sepsis - Scope of the Problem

- a. Sepsis is a life-threatening medical emergency that requires early recognition and intervention.
- b. Most sepsis cases are community-acquired.

- c. Seven in 10 patients with sepsis had recently used healthcare services or had chronic conditions requiring frequent medical care.
- d. Sepsis prevalence and mortality in the United States and New York State

II. New York State Sepsis Care Improvement Initiative and “Rory’s Regulations” (as it applies to healthcare professionals)

- a. Purpose
 - i. To increase early recognition of suspected sepsis by all healthcare professionals by requiring such individuals to complete course work or training on sepsis;
 - ii. Stress the importance of timely initiation of evidence-based protocols to improve sepsis outcomes.
- b. New York State regulations at 10 NYCRR §§ 405.2 and 405.4 require hospitals to, among other things:
 - i. Adopt evidence-based protocols to ensure early diagnosis and treatment of sepsis; and
 - ii. Ensure hospital staff are trained to implement such sepsis protocols.

III. Causes of Sepsis

- a. Development of sepsis following infection
 - i. Bacterial infections commonly trigger sepsis, although other microbial infections (e.g. fungal or viral) can also trigger sepsis
 - ii. Populations at increased risk of developing sepsis include:
 - 1. The very young (under 1 year), and individuals 65 years of age and older;
 - 2. People with chronic conditions such as diabetes, lung disease, kidney disease, or cancer; and
 - 3. People with impaired immune systems.
 - iii. Sepsis most commonly results from infection in the lungs, urinary tract, skin, and/or gastrointestinal tract

IV. Early Recognition of Sepsis

- a. Manifestations of sepsis vary based on the type of infection and host factors.
- b. Some people may have subtle sepsis presentations.

- c. Signs and symptoms that may be associated with sepsis in persons with confirmed or suspected infection can include:
 - i. Altered mental state, shortness of breath, fever, clammy or sweaty skin, extreme pain or discomfort, high heart rate
 - ii. Signs and symptoms in children and the elderly
 - iii. Severe forms of sepsis including septic shock
- b. If a person presents with suspected or confirmed infection, healthcare professionals should assess for signs of, and risk factors for sepsis.

V. Principles of Sepsis Treatment

- a. Prompt diagnosis and treatment are critical for optimal outcomes; there is increased morbidity and mortality with delayed recognition and response.
- b. Recommended diagnostic modalities include blood cultures and other tests to identify source and site of infection and organ dysfunction.
- c. Recommended treatment of sepsis includes administration of appropriate intravenous (IV) antimicrobial therapy, with source identification and de-escalation of antibiotics as soon as feasible.

VI. Patient Education and Prevention

- a. Preventing infection: hand hygiene, wound care, and vaccination
- b. Risk factors (high-risk patients)
- c. Warning signs and symptoms of sepsis
- d. Seeking immediate care for worsening infection and signs and symptoms of sepsis
- e. Giving relevant history and information to clinicians