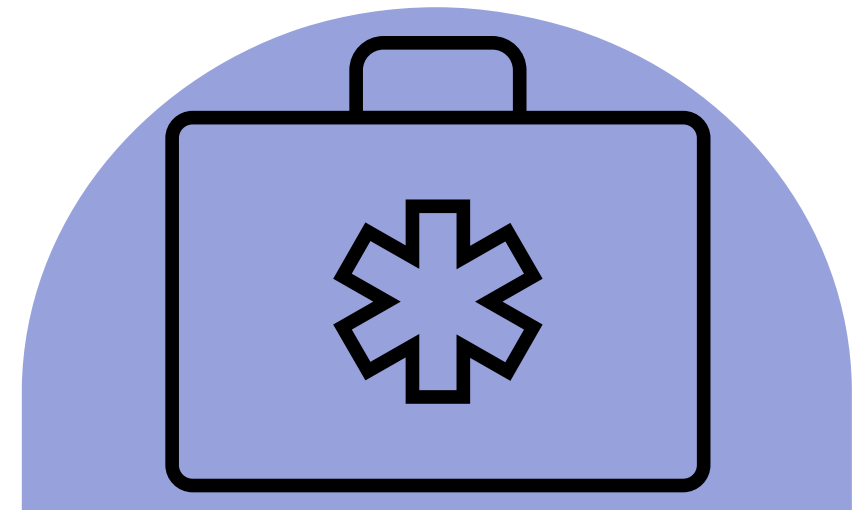




# Sepsis Train the Trainer: Patients at Increased Risk For Sepsis

JANET A. PHOENIX, MD, MPH, MS  
MICHELLE GEORGE, MPH  
CIDNEY A. ROBINSON, MPH



# Who is at Risk

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**Anyone can get an infection, and any infection can lead to sepsis. However, there are some people more at risk than others.**

- Chronic medical conditions like HIV, diabetes, lung disease, kidney disease
- Older Adults aged 65+
- Immunosenescence
- People with cognitive impairment
- People with weakened immune systems
- People with cancer
- Sepsis survivors
- Hospitalized patients

# Factors Complicating Recognition of Sepsis

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- **Mental Status Changes** – Many residents have cognitive deficits making it difficult to recognize a cognitive decline
- **Increased respiratory rate** – Conditions such as asthma or COPD are common and can cause increased respiratory rate
- **Hypotension** – Medications given for hypertension, heart failure and psychological disorders can all lower blood pressure
- **Tachycardia** – Beta blockers or cardiac conduction disorders can cause tachycardia
- **Fever** – Some residents don't exhibit fever when they are infected. Older people may have lower baselines temperatures than younger people

# Cancer as a Sepsis Risk Factor

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- Cancer seemed to be a predictive factor for death in sepsis survivors
- Cancer seemed to function independently of other sepsis related factors

# Diabetes and sepsis mortality

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- Those with Type II diabetes had the highest sepsis infection rates
- Diabetes causes a functional immune deficiency that directly reduces immune cell function. As a result, patients display diminished bactericidal clearance, increased complications
- Long-term sepsis mortality is at 60–80%

# ≡ Why is Chronic Disease a Risk Factor for Sepsis?

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- Chronic disease causes a functional immune deficiency
- This reduces the function of immune cells
- This diminishes the ability of the body to clear bacteria or other infectious agents from the body
- This increases complications and increases the risk of mortality

# Older people experience Immunosenescence

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## **Immunosenescence**

Refers to the age associated decline of the immune system that may contribute to increased occurrence and severity of infectious diseases in the elderly population

# Immunosenescence as a Risk Factor for Sepsis

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- Reduction of function of cell-mediated immunity (the body's response to intracellular pathogens) and
- Decline in humoral immunity (involving antibodies which – the body's response to extracellular pathogens) and
- Increases not only the risk for developing sepsis but also leads to more severe presentation of infection and a higher risk of death (Martín, Pérez, & Aldecoa, 2017)



# ≡ **Being a Survivor of Sepsis is a Risk Factor for Sepsis**

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- Physical and psychological effects on sepsis survivors can leave a devastating impact on quality of life after sepsis;
- Effects can include cognitive and functional impairments; increased risk of hospital readmission; increased risk of mortality
- More than 50% of survivors of sepsis experience these effects
- Sepsis survivors have residual immunosuppression in sepsis survivors
- This contributes to risk of reinfection, not only of sepsis, but of other recurrent infections