





Health Quality Innovation Network

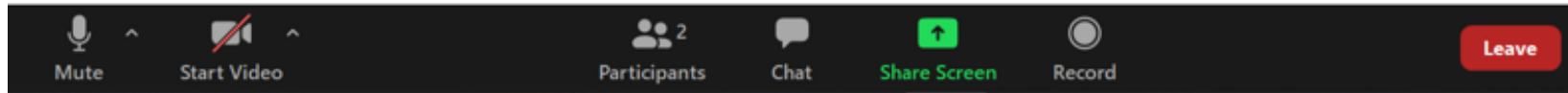
# Partnership to Stop Sepsis

9/15/2022

# Health Quality Innovation Network



# Logistics – Zoom Meeting



To ask questions, click on the **Chat** icon.

**Raise your hand** if you want to verbally ask a question.

Resources from today's session will be posted in **Chat**.

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# Your HQIN Team



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BS, RPh, CDCES,  
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# Today's Presenters



**Charles Crecelius, MD,  
PhD, CMD, FACP**  
Post Acute Medical Director,  
BJC Medical Group



**Michael Nash, MD, CMD**  
Post Acute Section Chair,  
Mercy Clinic East

# Agenda

- 1 Sepsis and Nursing Homes**
- 2 Causes and Pathophysiology**
- 3 100-100-100 Screening Tool**
- 4 ACT FAST**
- 5 Steps after 100-100-100 Begins**
- 6 Tools for Implementation**
- 7 Discussion**

# An Approach to Early Sepsis Screening in Nursing Homes: The 100-100-100 Tool





# Sepsis and Nursing Homes

- **Sepsis: infection that leads to signs of inflammatory response (unstable vitals, labs, organ dysfunction)**
  - **10-14%** of admissions from a nursing home to acute care hospital are for sepsis **AND** those admissions account for approximately **40-50%** of inpatient hospital mortality
  - As many as 30% of patients with a diagnosis of sepsis in the acute care hospital are **DISCHARGED** to a nursing home
  - A history of sepsis places the resident at high risk for re-occurrence

Nursing home patients can rapidly undergo sepsis transformation

# Sepsis: Causes and Pathophysiology

- Sepsis in our residents often stems from these common infectious syndromes:
  - Wounds: skin/soft tissue infections
  - Pneumonia/respiratory
  - Urinary tract-device exchange, obstructive stone disease
  - Enteritis – *C. difficile*
  - **Other sources of infection can stem from dialysis and recent procedures, including dental work**
- Pathophysiology: cascade of different chemicals (e.g., cytokines) spill into and overwhelm the body, causing multi-organ dysfunction (kidneys, liver, muscle, lungs, blood vessels, coagulation, encephalopathy, etc.)



# Risk Factors for Sepsis

- Age
- Weakened immune systems
- Comorbidities: cancer, diabetes, lung disease, kidney disease
- Nutrition
- Dementia
- Functional impairments
- History of prior infections
- Catheter, implants
- Vaccination status
- Environment
- Institutional factors (e.g., staffing)



# Screening/Identifying Sepsis

- **100/100/100 rule**
  - Advantages: vital sign-based, quick, easy, nursing home-based
  - Disadvantages: elders and atypical VS with infection
- **qSOFA (quick Sequential Organ Failure Assessment)**
  - Advantages: VS+ mental status-based (Glasgow Coma Scale)
  - Disadvantages: hospital-based, predictor of mortality
- **INTERACT® tools**
  - Advantages: screens for multiple causes of condition changes
  - Disadvantages: multiple forms and processes

# 100-100-100 Screening Tool

- Is their temperature above 100?
- Is their blood pressure below 100?
- Is their pulse rate above 100?
- Are they just not acting like themselves?
  - Drowsy?
  - No appetite?
  - Stumbling, falling?
  - Confused/increased confusion?
- **STOP** – Go find the nurse and ask her to **ASSESS** the resident for possible sepsis



100



100



100

# ACT FAST!

Early detection of SEPSIS requires fast action



If resident has suspected infection AND two or more:

- Temperature  $>100^{\circ}\text{F}$  or  $<96.8^{\circ}\text{F}$
- Pulse  $>100$
- SBP  $<100$  mmHg or  $>40$  mmHg from baseline
- Respiratory rate  $>20/\text{SpO}_2 <90\%$
- Altered mental status

Plan for:

- Review advance directive
- Contact the physician
- Contact the family

If transferring resident to hospital:

- Prepare transfer sheet
- Call ambulance
- Call in report to hospital
- Report positive sepsis screen

If resident stays in facility, consider options below that are in agreement with resident's advance directives:

- Labs: CBC w/diff, lactate level (if able)
- UA/UC, blood cultures, as able from 2 sites, not from lines
- Establish IV access for IV 0.9% @ 30ml/kg
- Administer IV, PO or IM antibiotics
- Monitor for worsening in spite of treatment, such as:
  - Urine output  $<400\text{ml}$  in 24 hours
  - SBP  $<90$  despite IV fluids
  - Altered mental status
- Comfort care:
  - Pain control
  - Analgesic for fever
  - Reposition every 2-3 hrs
  - Oral care every 2 hrs
  - Offer fluids every 2 hrs
  - Keep family informed
  - Adjust care plan as needed
- Consider transferring to another level of care such as palliative care, hospice or hospital

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

**Call the doctor!**



Is their **temperature** above 100?



Is their **heart rate** above 100?



Is their **blood pressure** below 100?

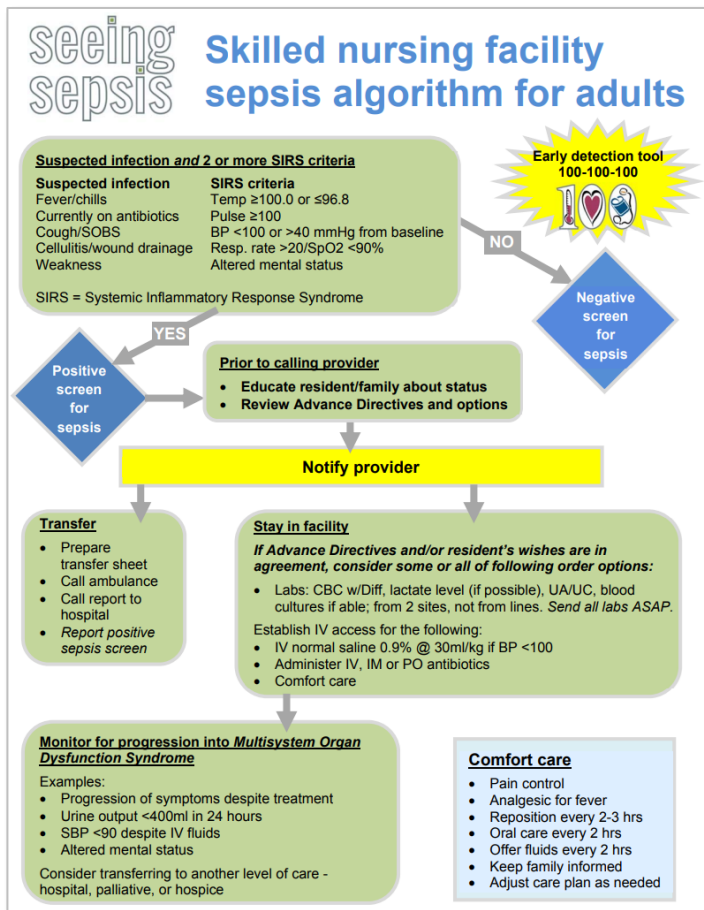
**And does the resident just not look right? Tell the nurse, screen for sepsis and notify the physician immediately.**

# Initial Steps: 100-100-100

- If resident has suspected infection **AND** two or more of the following:
  - Temperature  $>100^{\circ}\text{F}$  or  $<96.8^{\circ}\text{F}$
  - Pulse  $>100$
  - SBP  $<100$  mmHg or  $>40$  mmHg from baseline
  - Respiratory rate  $>20$ /SpO<sub>2</sub>  $<90\%$
  - Altered mental status
- Plan for:
  - Review advance directives
  - Contact the physician
  - Contact the family



# 100-100-100: Next Steps





# Basic Tools for Direct Caregivers

- Seeing Sepsis 100 Tool Kit
  - [Seeing Sepsis Wallet Cards | HQIN](#)
  - [Skilled Nursing Facility Sepsis Algorithm for Adults | HQIN](#)
  - [Act Fast! Early Detection of Sepsis Requires Fast Action | HQIN](#)
- [Stop and Watch Early Warning Tool | INTERACT®](#)
- ["Know-it-All™ Before You Call Data Collection System in the PALTC & Assisted Living Setting | AMDA](#)

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# Discussion

# Next Steps

- Sepsis is too costly in human lives and in dollars to be brushed off
- Nursing homes receive high-risk admissions from hospitals
- All nursing home residents are at risk for sepsis
- We must embed risk screening and sepsis awareness into the fabric of our organizations



# **Next Session: Implementation of Sepsis Risk Assessment & High- Risk Rounding Tool**

**Thursday, October 20, 2022  
11:30 a.m. CST | 12:30 p.m. EST**



# FOR MORE INFORMATION

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