

Stepping Up To Collaborate



**Managing Sepsis Through Information,
Collaboration, Education and Innovation**

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Objectives

- Engage Healthcare Partners to collaborate together to create reasonable pathways for the early identification of sepsis
- Establish communication across the continuum to provide safe care transitions and more effectively mobilize the resident goals of care
- Review facility characteristics and what will be necessary to manage acute onset of sepsis
- Develop Sepsis training and care pathways specific to LTC that focuses on Risk factors, , early identification, reporting guidelines, and interventions
- Establish a process for case reviews and community discussion on effective care management across settings
- Mobilize advance care planning and care pathways when comfort takes presentence over a chronic

Definitions

- **Infection (SIRS)** pathological process caused by microorganisms
- **Sepsis:** suspected or diagnosed infection and clinical manifestation of inflammatory response (General S/S and inflammatory signs)
- **Severe Sepsis:** sepsis with organ dysfunction, hypoperfusion, and hypotension
- **Septic Shock:** sepsis with low BP AFTER fluid resuscitation along with perfusion abnormalities (Inotropes/pressors required)
- **Courtesy of the Texas Gulf Coast Sepsis Network**

Sepsis Awareness Should Lead to Collaborative Discussion

- Sepsis creates a high risk of dying
- On Admission to the SNF from the hospital it is important to try to determine what the **expected goals of care** are especially if the person has been treated for Sepsis, is admitted on IV ABT, OR HAS noted risk factors.
- Evaluate early returns to the hospital with presenting symptoms such as “Altered mental status” or changes in Vital Signs and share data with community partners

Understanding Sepsis

Patients are often described as being "septic" or having "septic shock". These terms are used in a variety of ways by different doctors and in 1992 'sepsis' and several new terms were formally defined:

- Systemic inflammatory response syndrome (SIRS) replaced the previous term 'sepsis syndrome'. This is the body's response to a variety of severe clinical insults. It is characterised by the presence of two or more of the following features:
 - Temperature 38°C or above or $<36^{\circ}\text{C}$
 - Heart rate $> 90/\text{min}$
 - Respiratory rate $> 20/\text{min}$ or $\text{PaCO}_2 < 4.3\text{kPa}$
 - White cell count < 4 OR $> 12 \times 10^9/\text{l}$
- Sepsis is defined as SIRS in response to infection.
- Severe sepsis is sepsis associated with:
 - organ dysfunction (altered organ function such that normal physiology cannot be maintained without support)
 - hypotension (systolic blood pressure $< 90\text{mmHg}$ or a reduction of $> 40\text{ mmHg}$ from the patient's normal in the absence of other causes of hypotension)
 - organ hypoperfusion (revealed by signs such as lactic acidosis, oliguria, acute alteration of mental status).
- Septic shock describes sepsis with hypotension despite adequate fluid resuscitation.
- Multiple organ dysfunction syndrome (MODS) describes a state where dysfunction is seen in several organs.

Definition of Neutropenia

- **Increased susceptibility to infection is likely when the neutrophil count falls below 1000/mm³ with escalating risk at <500/mm³ (Significant) and at <100/mm³. (Severe)**
- **The risk of infection is greater the faster the rate of decline of the neutrophil count and the longer the duration of neutropenia especially if neutropenia lasts for > 10 days.**
- **Do not delay administration of antibiotics whilst awaiting WCC results.**

Could we create a healthy dialogue with
your referring hospitals?

“What Are The Discharge Indicators Used
to Evaluate Stability Post Sepsis Tx”?

What can we do together?

What do we need to do next?



Pre Admission Preparation

- **Facility has defined their Scope of Care with tools such as the Interact Facility Capabilities**
 - **Understanding the Scope of Care and the vulnerabilities will help assess what is necessary to care for complex care**
 - **Nurse to nurse reporting is an established best practice between care centers: Facilitate hospital discussions on communication strategies and goals of care dialogue**
 - **Reinforce essential handoff info: Communication and adequate reports**
 - **H&P and physician guidance on reporting guidance as applicable**
- *Parameters for reporting Early identification of Risk**

Post Admission Promote Visibility on Units

- **Whiteboard: Who is at Risk, Who is a New Admit, Who is on ABT?**
- **How are we monitoring? How frequent are Vital Signs for High Risk Residents? Who monitors the Vital Signs?**
- **Use PCC Dashboard reports (Vital signs, ABT Use)**
- **FOCUS Rounds with absolutes: All new admissions seen routinely**
- **Predictive Data: Dashboards, RADAR if Point Right is used, EYES on the Residents, Reporting of the Right data!**

Use the Resources

Whiteboard/Priority Considerations	Residents Identified for Rounds
<p>List Newly admitted residents – Suggest those admitted or readmitted within past 7 days</p> <p>1) MC/Bundles/UHC/Other Visit on rounds: Focus on Dx and Risk Factors Interim Care Plan for Essential Needs and Risk Factors</p>	
<p>2) Wound Referrals Differential <u>Dx</u> for new admissions/readmissions 2nd check of skin per Wound Nurse/designee Surface Management New <u>Tx</u> Orders/New Skin Conditions or worsened conditions</p>	
<p>3) Vision, Dental, Hearing, Podiatry, Mental Health Referrals</p>	
<p>4) Advance Directives/DNR New Admission status/Updates</p> <p>Transfer Triage/UPHD/RADAR and QOC/QM's should trigger ACP reviews Referrals</p>	
<p>5) PCC/Incidents that need 72 hour follow up Visit on Rounds Root cause Updates to care plan/Documentation PCC Dashboard Alerts: VS, EMAR, Other</p>	
<p>6) Grievances/Adverse/Risk <u>Reportables</u> for follow up</p>	
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White Board Priority Considerations	Residents Identified for Rounds
<p>7) Infections Antibiotic Therapy (ABT) Reason For, Resolution, side effects *IV ABT on admit/Sepsis risk Special Precautions/Resolved? TST: Flu/<u>Pneumovax</u></p>	
<p>8) Critical Labs /tests-/Transport Coumadin's/PT INR Pending Labs Pending Tests</p>	
<p>9) Planned Discharges/Needs: Med Reconciliation</p>	
<p>10) Unplanned re hospitalizations (Need for follow up Interact QI RCA) Case Reviews Referrals for Palliative or Goals of Care Review per Hospice</p>	
<p>11) Special Needs ACP review/referral</p>	
<p>12) Dialysis Updates ACP review/referral</p>	
<p>13) Appointments/ Transportation Needs 14) Special Staffing/one to one</p>	

Conduct Annual or Regularly Scheduled Competency Fairs



- **Based on Scope Care (Top Diagnosis)**
- **What will it take> Supplies, equipment, RN Oversight, Extenders, Resources, Protocols, Competencies**
- **Lookback at UPHD Trends: <7 days, Dx, Advance Care Planning...**
- **Where can we target?**

Target Competency Development

- **What do we need to know to manage Sepsis risk**
- **How do we reinforce front line reporting>Stop and Watch, consistency in assignments**
- **How can we better know the resident and their wishes>relationships**
- **How can we build in the “Predictive use of data”**
- **Vital sign accuracy: Equipment checks, competency, frequency. What is the baseline and parameters**

Possible Competency Themes

Identify Training Partners: Medical Director, Nursing Schools, Hospitals, Department of Health, Infection Preventionists, Hospice

- **Head to Toe/Lung Sounds**
- **Validation of Vital Sounds/Use of Vital Sound Equipment and ensuring the RIGHT Readings**
- **Using SBAR for a change in condition that may be indicative of Sepsis**
- **Using the PCC VS Dashboard to identify trends**
- **Reinforcing Stop and Watch Use and Clinical Conditions**
- **Use of Antibiotics: Assessing for desired outcomes and side effects**
- **Understanding Goals of care: Bridging Difficult Conversations**

Head to Toe: Assessing for Sepsis

- Look for **inflammation/infection** at the following sites as appropriate:
 - Mouth – teeth, gums, pharynx (Dental assessment on admission is required)
 - ENT problems involving sinuses; Eyes including fundi
 - Upper gastrointestinal symptoms : Pain, distention, reflux, nausea, other?
 - Lung – cough, shortness of breath, sputum
 - Diarrhea – (if present> isolation precautions are advisable) – review ABT and Hx

Assess, Be Inquisitive



- Skin lesions – (Often fungal: *Pseudomonas aeruginosa*, generalized herpes and *Varicella zoster* infections)
- Look for genito-urinary infections or discharges.
- **Look at: vascular access sites especially central venous line insertion sites, skin tunnels, surgical incision sites etc.**
- Look at HX: Renal track, previous instrumentation, surgery or catheterization

New Interact Guidance on Sepsis

- a. The “**100/100/100**” criteria recommended by the Minnesota Hospital Association, which has developed tools for Sepsis in long-term care.^{2,3} (see **Table**)

“100/100/100” Criteria ^{2,3}

- Temperature above 100
- Heart rate above 100
- Blood pressure below 100

Other Quick Ways to Identify

The **quick Sepsis Related Organ Failure Assessment (qSOFA)** has not been validated in the post-acute or long-term care setting. It does not define sepsis, but research has shown that patients who score 2 or 3 on the qSOFA are at higher risk of dying during hospitalization.⁴ Scoring of the qSOFA are illustrated in the **Table**⁵:

qSOFA Criteria^{4,5}

- Respiratory rate ≥ 22 /minute = 1 point
- Altered mentation = 1 point
- Systolic blood pressure ≤ 100 mmHg = 1 point

Inflammatory Signs

- WBC
 - $> 12,000 \mu/L$ (leukocytosis)
 - or $< 4,000 \mu/L$ (leukopenia)
- Normal WBC count with $> 10\%$ bands

Medical Director Query:
Do we need a lab profile
based on Risk of Sepsis?
When? What criteria
triggers?



General Signs/Symptoms

- Temperature
 - $>100.9^{\circ}\text{F}$ (38.3°C) (hyperthermia)
 - or $<96.8^{\circ}\text{F}$ (36°C) (hypothermia)
- Heart Rate - >90 bpm (tachycardia)
- Respiration - Rate > 20 (tachypnea)
- Altered Mental Status
- Hyperglycemia
- Significant edema

CLINICAL SIGNS

- Tachycardia
- Tachypnea
- Confusion
- Fever

- Decreased UOP
- Hypotension
- Elevated lactate

- Refractory hypotension
- On vasopressors
- On inotropes
- Mechanical ventilation



- Recognition/Assessment
- Call!
- Oxygen
- Fluid bolus
- Obtain cultures
- Obtain other labs
- Antibiotic administration
- VS Monitoring
- I&O Monitoring

NURSES' ROLE

Signs of Severe Sepsis

- General Signs as noted plus
- Fever, Chills, Rigor
- Inflammatory Signs
- Hypoxemia (restlessness? Agitation?)
- Hypotension (sepsis induced due to system failure)
- Mottled skin, poor capillary refill
- Low output



Develop Realistic LTC Pathways

1. Screen on admission

Coordinate VS frequency: Right equipment and staff competency

✓ Nurse should perform vital signs

✓ Establish Facility Capabilities

2. Discuss with Medical Director and Care Partners

The INTERACT team recommends that all patients/residents with a suspected or confirmed infection and possible sepsis be considered for transfer to an acute care hospital, unless:

- a. The patient/resident is on or placed on a comfort or palliative care plan, or is on hospice.
- b. The patient/resident or decision maker wants the condition treated, but not in the acute hospital, and understands the risks; and the facility has the capability of managing sepsis according to recommended interventions.

Proactive Steps Regarding Sepsis Awareness

Opportunity exists
to define how we
respond

- Nurse driven sepsis screening on admission
- Repeat screen every 12 hours for those at risk (100/100/100?)
- Repeat with change in condition
- Be thorough with reporting to the physician



Suggested "SEPSIS PROTOCOL"

Review with Medical Director in conjunction with Scope of Care

Identify High Risk Residents

- Residents with an infection/actively being treated for any bacterial, viral or fungal infection; Note IV ABT on admission commonly used for MDRO's
- Residents who are immunocompromised (chemotherapy or other immunosuppressant medications or disorders)
- Residents with a central line or recent line
- Residents with an Indwelling catheter or recently d'ced catheter
- Stage III or IV wounds
- Acute pancreatitis **Recent ICU stay; recurrent infections per Hx**
- Exclusion: Hospice

Enhanced Monitoring

- Vital signs every shift to include temperature, pulse, respirations and oxygen saturation*
- Intake and output every shift (**documentation of number of voids is acceptable**)
- Identify/assess for any of the following signs/symptoms: **Rapid onset of acute confusion; chills or shaking; sweating; decreased urinary output; decrease of oxygen saturation from baseline or less than 90%; changes in vital signs from baseline including: tachycardia, tachypnea, hypotension, increase or decrease in baseline temperature by 2 or more degrees;and if two or more present;**
- Rule of 100/100/100**
- Complete a focused systems assessment: including: lung sounds, urine characteristics; appearance of infection site(s) including redness, warmth or swelling; blood sugar and any other pertinent information as appropriate to existing conditions
- Reinforce the use of Stop and Watch for front line staff

Practitioner Notification

- Identification of two or more signs/symptoms or changes from baseline require **immediate practitioner notification**
- Contact Practitioner, relay all assessment findings, explain that resident is on Sepsis Protocol and inquire as to appropriateness for: **obtaining stat labs, for example CBC, CMP, Procalcitonin levels and blood cultures.**
- Document findings per facility protocol in the clinical record
- Complete follow-up on orders received
- Report results immediately to practitioner and RP as indicated
- Maintain resident on Sepsis Protocol until infection or other high risk indicators resolve
- Review Advanced Directives>Opportunity for referral for Palliative/Hospice based on Prognosis

*it is recommended, that obtaining vital signs for this protocol not be delegated to the CNA but rather completed by the licensed nurse. Pulse and respirations should be assessed for one full minute. Verify VS equipment is calibrated with right cuff size for the resident

Consider Adopting a Protocol in conjunction with the Medical Director and other Medical Professionals

Educate around it and monitor for adoption

Discuss With Medical Director and Collaborative Partners

- a. If sepsis is being considered and the patient/resident is not being immediately transferred to the acute hospital, the following lab tests should be added to routine blood work recommended to evaluate acute changes in condition:
 - i. Blood cultures (two sets)
 - ii. Lactate level
 - iii. Platelet count
 - iv. Coagulation tests (INR or PTT)
 - v. Comprehensive metabolic panel (includes bilirubin)

Considerations: One size does not fit all!

This is influenced by Lab Services, RN support, Skills Sets

Recommendations for Management of Sepsis ⁸

1. At least 30 mL/kg of IV crystalloid fluid should be given within the first 3 hours
2. Additional fluid administration should be guided by frequent reassessment of hemodynamic status.
3. Mean Arterial Pressure (MAP) and serum lactate are considered adequate indicators of tissue perfusion. These values should be maintained at (Mean Arterial Pressure (MAP) ≥ 65 mmHg and lactate < 2 mmol/L (< 18 mg/dL).
4. To estimate MAP, double the diastolic blood pressure and add the sum to the systolic blood pressure. Then divide by 3.
5. Appropriate routine microbiologic cultures (including blood) should be obtained before starting antimicrobial therapy in patients with suspected sepsis.
6. Administration of IV antimicrobials should be initiated as soon as possible, within 1 hour after recognition of sepsis.
7. Goals of care and prognosis should be discussed with patients and families.
8. Goals of care should be incorporated into treatment and end-of-life care planning, utilizing palliative care principles where appropriate.

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