

# Hour-1 Surviving Sepsis Campaign Bundle of Care

## SCCM and ACEP Release Joint Statement About the SSC Hour-1 Bundle

The [Society of Critical Care Medicine \(SCCM\)](#) and the [American College of Emergency Physicians \(ACEP\)](#) acknowledge concerns expressed about the recently released [Surviving Sepsis Campaign \(SSC\) Hour-1 Bundle](#) and the appropriateness of implementation in the United States. Both organizations understand the importance of prompt and optimal sepsis diagnostics and treatment. SCCM and ACEP along with other involved international experts are organizing a meeting as soon as possible to carefully review the recommendations, and provide guidance on bundle implementation and care of potentially septic patients who present to emergency departments in the United States. We recommend that hospitals not implement the Hour-1 bundle in its present form in the United States at this time.

Intensive Care Med, May 2018

# Clover Study (out of the ARDS Petal Network)

## Hypothesis

- Restrictive (vs liberal) fluid treatment strategy during the 1<sup>st</sup> 24hr of resuscitation for sepsis-induced hypotension will reduce 90-day in hospital mortality

"conservative" (vasopressor first followed by rescue fluids)

VERSUS

"liberal" (fluids followed by rescue vasopressors)

Will reduce 90 day in-hospital mortality in sepsis induced hypotension

## Method

- Multicenter, randomized prospective phase 3 trial
- Intervention: protocolized fluid titration strategies for up to 24 hours
- Sample: 2,320 patients planned to enrollment
- Primary outcome: 90 day inpatient mortality
- 50 Hospitals—acute and critical care (part of Petal Network)

- 20 Hospitals — acute and critical care (part of 1999 initiative)
- Hospital outcome: 80% reduction mortality
- 2500 patients moved to ambulatory
- 15% of total patients with hospital care
- 25% of total patients with hospital care

# Going beyond the hospital walls

*it's all about the early*



100% of total patients with hospital care

50% of total patients with hospital care



# Reaching Beyond

- **Partner with EMS**
  - Have them screen and begin fluids for hypotension, possibly draw lactic acid
- **Partner with PCPs** and medical and surgical homes to educate on severe sepsis
- **Partner with Extended Care Facilities and Home Care** to educate on sepsis and implement early identification and management

# EMS sepsis identification and management

Been in place since 2012,  
just updated in 2016

## Sepsis

It is the purpose of this policy to recognize and treat sepsis early to promote optimal care and survival of patients who may be septic. This protocol applies to patients 18 years and above with a clinical suspicion of systemic infection who have 2 or more of the inclusion criteria. These patients are defined as meeting criteria for suspicion of sepsis and should be evaluated and treated per this protocol.

### **INCLUSION CRITERIA**

1. Clinical suspicion of systemic infection, and two or more of the following:
  - A. Hyperthermia temp  $>38^{\circ}\text{C}$  ( $100.4\text{ F}$ )
  - B. Hypothermia temp  $<36^{\circ}\text{C}$  ( $96.8\text{ F}$ )
  - C. Heart rate  $>90\text{ bpm}$
  - D. Respiratory rate  $<10$  or  $>20$  per min
  - E. SBP  $<90\text{ mmHg}$  or evidence of hypoperfusion

### **Pre-Medical Control**

#### **MFR/EMT/SPECIALIST/PARAMEDIC**

1. Follow **General Pre-Hospital Care** protocol.
2. Place patient in supine position.
3. Administer high flow oxygen via non-rebreather, unless contraindicated.

#### **SPECIALIST/PARAMEDIC**

4. Start 1 large bore IV catheter.
5. Start 2<sup>nd</sup> large bore IV catheter, if time permits.

#### **PARAMEDIC**

1. Place on cardiac monitor and treat rhythm according to appropriate protocol.
2. Place on continuous pulse oximetry.
3. Measure blood glucose.
4. If the patient meets inclusion criteria, administer a NS IV/IO fluid bolus up to 1 liter, wide open. Reassess the patient, repeat boluses to a maximum of 2 L NS as long as vital sign abnormalities persist.
5. **(Optional)** Measure ET $\text{CO}_2$  level. If  $\text{CO}_2 < 25$ , report level to the receiving facility as soon as possible.

### **Post Radio**

#### **PARAMEDIC**

6. Consider Dopamine Drip (Inotropin) 400 mg in 250 ml of NS if the patient remains hypotensive  $<90\text{ mmHg}$  after the 2 L NS bolus. Titrate to maintain a systolic BP above 90 mmHg.

# Partner with Skilled Nursing Facilities

- Educate them on infection prevention, sepsis, early identification and initial management
- Help them put in routine screening
- SNF sepsis toolkit available



Early Recognition and Management of Sepsis for Post-acute Settings  
**TOOLKIT**

[www.mpro.org/sepsistoolkit](http://www.mpro.org/sepsistoolkit)

## Severe Sepsis Screening Tool

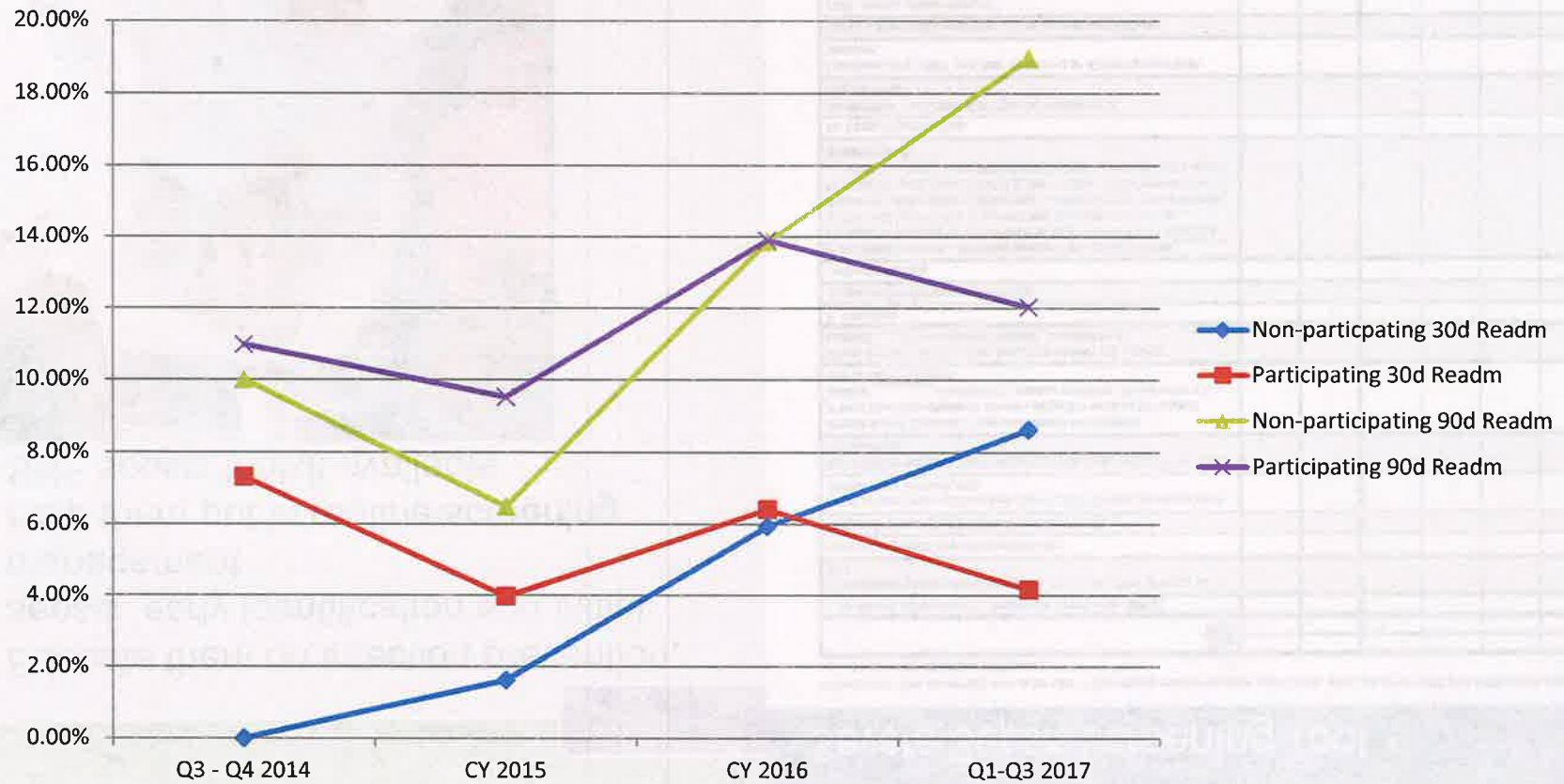
Directions: The screening tool is for use in identifying residents upon admission, daily on every shift and PRN upon condition change or a STOP AND WATCH notification.

|  | Date |  |  |  |  |  |  |  |  |  |
|--|------|--|--|--|--|--|--|--|--|--|
|  | Time |  |  |  |  |  |  |  |  |  |
| <b>I. Systemic Inflammatory Response Syndrome (SIRS)</b>   |      |  |  |  |  |  |  |  |  |  |
| Temperature greater than or equal to 101 or less than or equal to 96.8   |      |  |  |  |  |  |  |  |  |  |
| Heart rate greater than 90 beats/minute  |      |  |  |  |  |  |  |  |  |  |
| Respiratory rate greater than 20 breaths/minute  |      |  |  |  |  |  |  |  |  |  |
| WBC greater than 4,000 or less than 12,000 (do not use blood work greater than 24 hours old)   |      |  |  |  |  |  |  |  |  |  |
| Blood glucose greater than 140 in non-diabetics (Obtain if 1 or more SIRS present)   |      |  |  |  |  |  |  |  |  |  |
| Check blood glucose if any one above is checked. If less than two checked above - negative screen for sepsis (Initial) ____ Continue to assess resident. Proceed to II if one or more checked.   |      |  |  |  |  |  |  |  |  |  |
| If two or less not checked, negative screen for sepsis (Initial) ____ If two checked above, proceed to II.   |      |  |  |  |  |  |  |  |  |  |
| <b>II. Infection</b>   |      |  |  |  |  |  |  |  |  |  |
| Suspected or documented infection  |      |  |  |  |  |  |  |  |  |  |
| Antibiotic therapy   |      |  |  |  |  |  |  |  |  |  |
| If no checks above - negative screen for sepsis (Initial) ____ No need to proceed to III. Continue to assess resident for changes: STOP AND WATCH early warning tool or using your senses. If one checked above, patient has screened positive for sepsis. Monitor VS q4x2, then q shift x 2, then routine. Place resident on I & O. Monitor & record urine output q shift. Obtain order for lactic acid & proceed to III. |      |  |  |  |  |  |  |  |  |  |
| <b>III. Organ Dysfunction</b>  |      |  |  |  |  |  |  |  |  |  |
| Respiratory: SAO <sub>2</sub> less than 90% or increasing O <sub>2</sub> 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   |      |  |  |  |  |  |  |  |  |  |
| Labile: 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 2 mEq/l   |      |  |  |  |  |  |  |  |  |  |
| If no checks above - negative screen for severe sepsis (Initial) ____ Continue to assess. No further action at this time. If one checked above - patient screens positive for severe sepsis. Review advance directives. Contact family if no advance directives on record. Call physician and follow SBAR.   |      |  |  |  |  |  |  |  |  |  |

|                       |  |
|-----------------------|--|
| <b>SITUATION</b>      | Tell physician resident screened positive for severe sepsis.   |
| <b>BACKGROUND</b>     | Describe positive SIRS; inform physician if resident is currently being treated for a known infection; share which organ system has dysfunction.   |
| <b>ASSESSMENT</b>     | Share VS, the SAO <sub>2</sub> (pulse ox) and any additional vital information.  |
| <b>RECOMMENDATION</b> | Blood cultures; CBC; lactic acid (if not previously drawn); IV antibiotic. The systolic blood pressure is less than 90 mmHg (or 40 mmHg less than baseline) - need an order to administer fluid bolus of 30 ml/kg over 1 hour. After reassessment if resident's hypotension has not resolved, may we send to the ER? |



# Results Combined: Participating and Nonparticipating SNFs: Readmission Rates



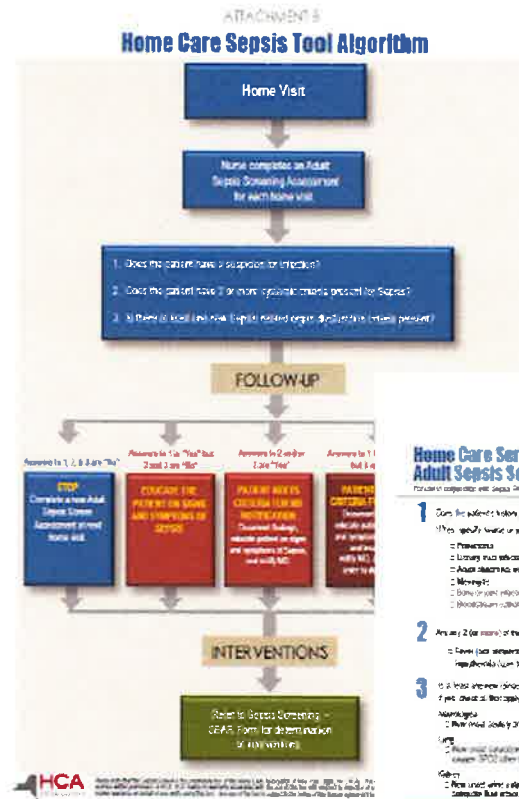
# Home Care

- Home care association of New York state in partnership with IPRO
- <https://hca-nys.org/stop-sepsis-at-home>

Stop Sepsis at Home



## Sepsis Screen Tool



## Sepsis Screen Tool

ATTACHMENT 6  
**Home Care Services Adult Sepsis Screening Tool**

Patient's Name: \_\_\_\_\_  
Medical Record #: \_\_\_\_\_  
Care Coordinator: \_\_\_\_\_

1. Does the patient's history, physical examination or other findings suggest an infection or potential source of infection?  Yes  No  
 \*Yes specify: tissue or publicly source of infection and onset (see below):  
 Pneumonia  Focal abscess  
 Urinary tract infection  Hospital-acquired infection  
 Skin/soft tissue infection  Urinary tract infection  
 Meningitis  Recent Chemotherapy (chemotherapy-related)  
 Bone or joint infection  Urinary infection of unknown source  
 Bloodstream (culture negative)  Other Source of infection (specify): \_\_\_\_\_

2. Are any 2 (or more) of the following symptoms/signs present?  Yes  No  Yes, check all that apply:  
 Fever (oral temperature  $\geq 38.3^\circ\text{C}$  or  $101.0^\circ\text{F}$ )  Tachycardia (heart rate  $\geq 100$  beats/minute)  
 Hypotension (systolic blood pressure  $\leq 90$  mmHg)  Tachypnea (respiratory rate  $\geq 20$  breaths/minute)

3. Is a local laboratory that has rapid testing capabilities available and/or present near the following lab?  Yes  No  
 If not, check all that apply:  
 Name(s): \_\_\_\_\_  
 Blood (local)  Urinalysis  Other (specify): \_\_\_\_\_  
 Blood (local)  Urinalysis  Other (specify): \_\_\_\_\_  
 Blood (local)  Urinalysis  Other (specify): \_\_\_\_\_  
 Blood (local)  Urinalysis  Other (specify): \_\_\_\_\_

If the answers to questions 1, 2, and 3 above are all "NO," then STOP. Screening is complete for this visit.

**The Patient Meets Criteria for Infection**  
 If the answer to #1 is "Yes" and the answer to #2 and #3 are "No," then indicate the patient has signs and symptoms of Sepsis and provide patient with information about Sepsis Signs and Symptoms at Sepsis (Attachment C).

**The Patient Meets Criteria for MD Notification**  
 If the answer to question #2 and/or #3 are "Yes," then indicate the patient has signs and symptoms of Sepsis and notify MD of your findings and actions.

**The Patient Meets Criteria for Sepsis**  
 If the answer to questions #1 and #2 are "Yes," then the patient meets criteria for Sepsis. Document your findings, indicate the patient has signs and symptoms of Sepsis and treatment, and notify the provider and **Alert MD** over a text/DOC.

**The Patient Meets Criteria for URGENT Sepsis**  
 If the answer to question #1, #2, and #3 are all "Yes," then the patient meets criteria for URGENT Sepsis. Document your findings, indicate the patient has signs and symptoms of Sepsis and treatment, and notify the provider and/or patient transferred to emergency department for evaluation.

Notes: \_\_\_\_\_

Check all that apply:

**FOLLOW-UP**

- The information on the Sepsis Screen was directly communicated (person-to-person). The patient has been educated on the signs and symptoms of Sepsis and provided with the patient education flyer: Sepsis Signs and Symptoms at Sepsis (Attachment C).
- The patient has advanced medical care in place at the time which precludes any of the previous interventions (e.g., an order in place for transfer to acute care). Education has been completed with the patient and/or caregiver on symptoms management of Sepsis.
- The patient is currently admitted to a hospital or urgent care facility. The patient has been notified of the decision not to receive acute care. Education has been completed with the patient and/or caregiver on the signs and symptoms of Sepsis.
- The patient has initial orders for general Sepsis and respiratory observation interventions. MD notified, orders advanced and to be transported to emergency department, and report called to the receiving emergency department.
- The patient meets Sepsis criteria, patient education, MD notified, antibiotics received, and/or blood transfusion and to be completed within 24 hours.

Date: \_\_\_\_\_

Physician/ Nurse/ Provider Name: \_\_\_\_\_ Phone/Fax: \_\_\_\_\_ Date of Visit: \_\_\_\_\_ Signature: \_\_\_\_\_

Home Care Services (HCS) is a program of the Home Care Association of New York State (HCA-NYS). HCA-NYS is a 501(c)(3) not-for-profit organization. HCA-NYS is not affiliated with any government agency. HCA-NYS is not responsible for the content of the information provided on this website. HCA-NYS is not responsible for the content of the information provided on this website. HCA-NYS is not responsible for the content of the information provided on this website.



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**P2**

add copy of St Joes home care sepsis screen

Pat, 4/29/2018

# St. Joe's Home Care Sepsis Screening Tool

|  |  |  |  |  |
|--|--|--|--|--|
|  <b>ST. JOSEPH MERCY ANN ARBOR</b><br><small>SAINT JOSEPH MERCY HEALTH SYSTEM</small>  |  | Patient Name: _____<br>MRN: _____  |  |  |
| <b>HOME CARE SEVERE SEPSIS SCREENING TOOL</b><br>Directions: The screening tool is for use in identifying patients upon admission, every visit and PRN any condition change  |  |  |  |  |
| SECTION ONE  | <b>Infection: Do the medical history, physical exam or findings suggest infection?</b><br>Examples: <ul style="list-style-type: none"> <li>• Currently on antibiotic therapy to treat any infection?</li> <li>• Pneumonia</li> <li>• UTI (painful urination, urgency, feels need to urinate despite empty bladder)</li> <li>• Abdominal pain or distension</li> <li>• Meningitis</li> <li>• Indwelling medical device</li> <li>• Cellulitis/septic arthritis</li> <li>• Chemotherapy &lt; 6 weeks prior or recent organ/bone marrow transplant</li> <li>• Recent abdominal or vascular surgery</li> <li>• Wound redness/purulent drainage</li> </ul> |  |  | <input type="checkbox"/> Yes <input type="checkbox"/> No |
|  | If NO checked in section one - negative screen for sepsis (RN initials) _____<br>Stop here, no need to proceed to Section Two. Repeat sepsis screen for changes in condition.  |  |  |  |
|  | If YES checked in section one:<br>SECTION ONE ACTION STEPS: Assess Vital Signs and PROCEED TO SECTION TWO  |  |  |  |
| SECTION TWO  | <b>Signs of Sepsis present?</b>  |  |  |  |
|  | Temperature greater than or equal to 101°F or less than or equal to 98.8°F   |  |  | <input type="checkbox"/> Yes <input type="checkbox"/> No |
|  | Heart rate greater than 90 beats/minute  |  |  | <input type="checkbox"/> Yes <input type="checkbox"/> No |
|  | Respiratory rate greater than 20 breaths/minute  |  |  | <input type="checkbox"/> Yes <input type="checkbox"/> No |
|  | New onset mental status changes (mild confusion or disorientation)   |  |  | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| If less than two checked YES in section two - negative screen for sepsis (RN initials) _____<br>Stop here, no need to proceed to Section Three. Repeat sepsis screen for changes in condition.    B/P _____ / _____ Temp _____   |  |  |  |  |
| If two or more checked YES in section two, patient screens positive for POSSIBLE SEPSIS!    HR _____ RR _____<br>SECTION TWO ACTION STEPS:<br>1. Check Pulse Oximetry (SaO <sub>2</sub> )    SaO <sub>2</sub> _____ %<br>2. Look for sign of severe sepsis: Dehydration (dark concentrated, little or no urine)    Decreased/concentrated urine    Y / N<br>3. PROCEED TO SECTION THREE to assess for signs of severe sepsis before using SBAR below to notify physician   |  |  |  |  |
| SECTION THREE  | <b>Signs of Severe Sepsis (Organ Dysfunction) Present?</b>   |  |  |  |
|  | Cardiovascular dysfunction: SBP less than 90 mmHg or 40 mmHg drop below baseline systolic  |  |  | <input type="checkbox"/> Yes <input type="checkbox"/> No |
|  | Respiratory dysfunction: Pulse oximetry (SaO <sub>2</sub> ) less than 90% or New or increasing need for Oxygen to keep sat > 90% or prevent dyspnea  |  |  | <input type="checkbox"/> Yes <input type="checkbox"/> No |
|  | Neurologic dysfunction: New onset severe mental status change or decreased level of consciousness (severe confusion or agitation/severe lethargy or difficulty waking up)  |  |  | <input type="checkbox"/> Yes <input type="checkbox"/> No |
|  | Perfusion dysfunction: Mottled Skin (patchy red/purple discoloration on trunk or extremities) or Cap Refill greater than or equal to 3 seconds (while hand above heart level)  |  |  | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| If one or more checked YES in section three - patient screens positive for SEVERE SEPSIS!<br>SECTION THREE ACTION STEPS:<br>1. Review advance directives<br>2. Call 911 for transport to hospital.<br>3. Notify physician of "possible severe sepsis", positive findings and EMS activation per SBAR below<br>If none checked YES in section three - negative screen for Severe Sepsis but still positive in section two (RN initials) _____<br>Continue with SECTION TWO ACTION STEPS by using SBAR below to notify physician |  |  |  |  |
| SBAR   | SITUATION  | Tell physician patient has screened positive for possible sepsis (section two positive) or severe sepsis (section three also positive).  |  |  |
|  | BACKGROUND   | Describe signs of sepsis (and signs of severe sepsis if present), inform physician if patient is currently being treated for a known infection   |  |  |
|  | ASSESSMENT   | Share VS, the SaO <sub>2</sub> (pulse ox) and any additional vital information   |  |  |
|  | RECOMMENDATION   | <ul style="list-style-type: none"> <li>• For positive Sepsis (section two) request orders for STAT labs: CBC with Diff, Lactic Acid, Urinalysis and same-day (or within 24 hr) provider appointment to evaluate patient &amp; lab results</li> <li>• For positive Severe Sepsis (section three) notify physician of EMS activation/hospital transport</li> </ul> |  |  |
| DATE:  | TIME:  | RN Signature:  |  |  |

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**PJP5**

Patricia J. Posa, 4/30/2018

**PJP6**

recopy--make sure at 100% before take a picture

Patricia J. Posa, 4/30/2018



# Keys to Success

- Team in place with key stakeholders overseeing implementation
- Project coordinator with lead clinical staff on each unit
- Sepsis resource/coordinator rounds frequently on units
- Strong physician leadership on team
- Reminders to staff through use of bedside sepsis tools/checklist
- Empowerment of nursing staff to prevent errors
- Administrative support to help manage barriers
- Review data monthly to identify opportunities for improvement-real time follow up whenever possible
- Provider specific feedback or report cards related to performance
- Support from a collaborative
- EDUCATION, DATA, COACHING, EDUCATION.....



# SEPSIS COORDINATOR NETWORK

*Resources and Guidance for Improved Outcomes*

SCN activities support ongoing communication, education and network building among health professionals passionate about improved sepsis care. Activities include:

- Educational webinars that highlight sepsis best practices in a variety of healthcare settings
- Active discussion and peer support via an online community
- Training and education opportunities
- Resource drive to find information on a range of topics, including core measures, clinical practice guidelines, patient screening and identification tools, education resources and more

**JOIN NOW AT**  
**[SEPSISCOORDINATORNETWORK.ORG](http://SEPSISCOORDINATORNETWORK.ORG)**



**SEPSIS ALLIANCE**

*Suspect Sepsis. Save Lives.*

**Our Mission**

To provide sepsis best-practice resources and guidance to sepsis coordinators and all health professionals across the country

**FOUNDING**

**S E R**



**Edwards**

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**SEPSIS COORDINATOR NETWORK**  
*Resources and Guidance for Improved Outcomes*

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# Other Resources

- <http://www.survivingsepsis.org>
- Sepsis alliance: [www.sepsis.org](http://www.sepsis.org)



SEPSIS ALLIANCE  
A COMMITMENT TO IMPROVING PATIENT CARE

HOME

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# Questions?



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