NEXUS MONTGOMERY

Sepsis Train the Trainer: Using Bedside Personnel to Recognize Signs & Symptoms

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

THE GRANT GROUP
Integrated Healthcare Management Solutions

Early Recognition of Sepsis in Long-Term Care Settings

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<u>**Prompt Identification of Infections can Interrupt the Pathway to Sepsis.**</u>

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Training

All staff who interact with Residents must be enlisted in identifying signs and symptoms of sepsis.

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Sepsis in the Nursing Home Setting

Identification

- Management vs Treatment of Sepsis (NH vs Hospital Approach)
- Training of Personnel who Interact with Residents (nurses, CNA's/Med Techs, cleaning staff, maintenance staff, dining staff)
- Roles of Family Members (Caregivers – what to look out for; also family that visits the NH)

Where does Sepsis start?

- Residents who Develop Sepsis in Skilled-Nursing Facility

- Residents who Are Treated for Sepsis in Acute Care and are Discharged to a Skilled Nursing Facility

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STOP AND WATCH

S	Seems different than usual
T	Talks or communicates less
O	Overall needs more help
P	Pain – new or worsening; Participated less in activities
a	Ate less
n	No bowel movement in 3 days; or diarrhea
d	Drank less
W	Weight change
A	Agitated or nervous more than usual
T	Tired, weak, confused, or drowsy
C	Change in skin color or condition
H	Help with walking, transferring, toileting more than usual

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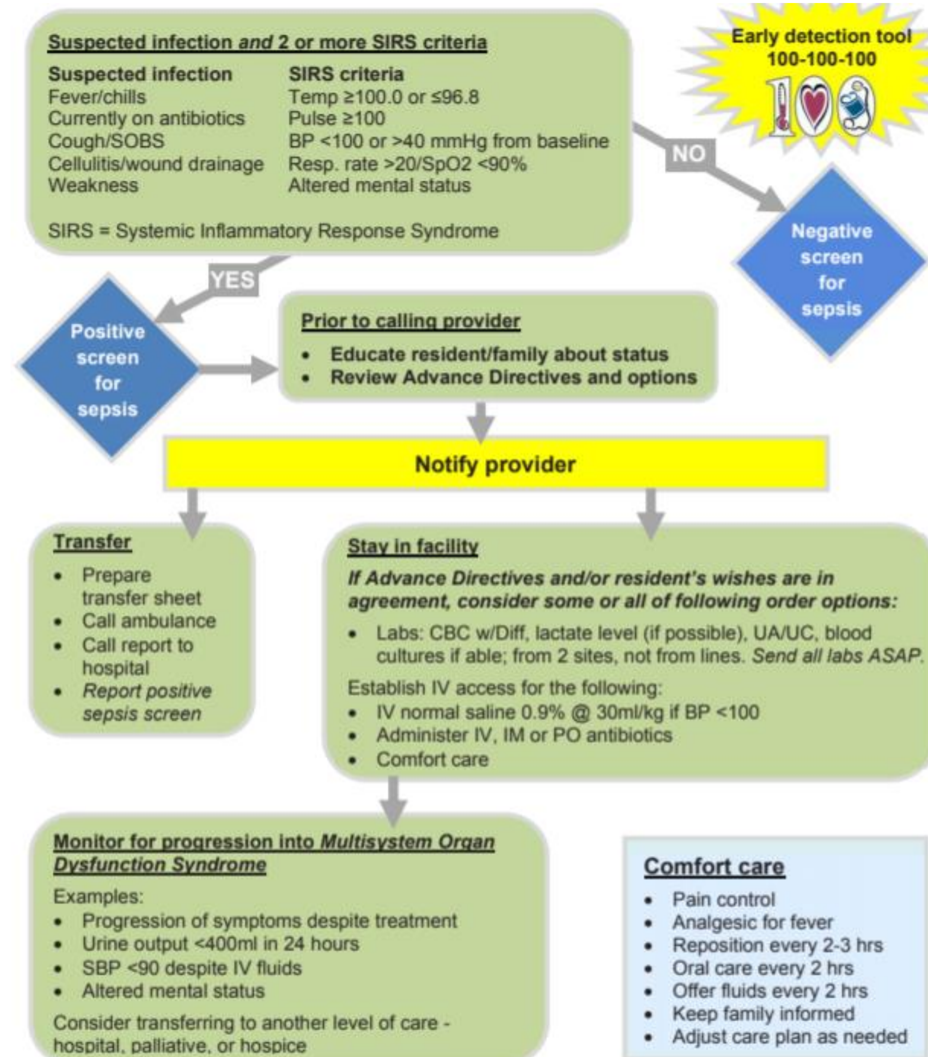
MINNESOTA HOSPITAL ASSOC. TOOL



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Suspected infection *and* 2 or more SIRS criteria

Suspected infection	SIRS criteria
Fever/chills	Temp ≥100.0 or ≤96.8
Currently on antibiotics	Pulse ≥100
Cough/SOBS	BP <100 or >40 mmHg from baseline
Cellulitis/wound drainage	Resp. rate >20/SpO2 <90%
Weakness	Altered mental status

SIRS = Systemic Inflammatory Response Syndrome

Early detection tool
100-100-100

NO → Negative screen for sepsis

YES → Positive screen for sepsis

Prior to calling provider

- Educate resident/family about status
- Review Advance Directives and options

Notify provider

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Notify provider

Transfer

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

Stay in facility

If Advance Directives and/or resident's wishes are in agreement, consider some or all of following order options:

- Labs: CBC w/Diff, lactate level (if possible), UA/UC, blood cultures if able; from 2 sites, not from lines. *Send all labs ASAP.*

Establish IV access for the following:

- IV normal saline 0.9% @ 30ml/kg if BP <100
- Administer IV, IM or PO antibiotics
- Comfort care

Monitor for progression into *Multisystem Organ Dysfunction Syndrome*

Examples:

- Progression of symptoms despite treatment
- Urine output <400ml in 24 hours
- SBP <90 despite IV fluids
- Altered mental status

Consider transferring to another level of care - hospital, palliative, or hospice

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

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MINNESOTA HOSPITAL ASSOC. TOOL 100: 100: 100 USES

A screening triage tool for detection of sepsis in long term care settings

- Created in response to rising sepsis mortality among older adults.
- Initiates intensive surveillance of sepsis by front line medical staff.
- Targeted to provide for more structured communication between front line medical staff (CNAs/GNAs/Med-Techs/Medical Assistants) and clinicians

MINNESOTA HOSPITAL ASSOC. TOOL 100; 100; 100

- 100 ↑ - is their temperature above 100.
- 100 ↑ - is their heart rate above 100.
- 100 ↑ - is their blood pressure below 100.
- Does the resident just not look right? Has the resident’s mental status changed? Screen for sepsis and notify the physician immediately.

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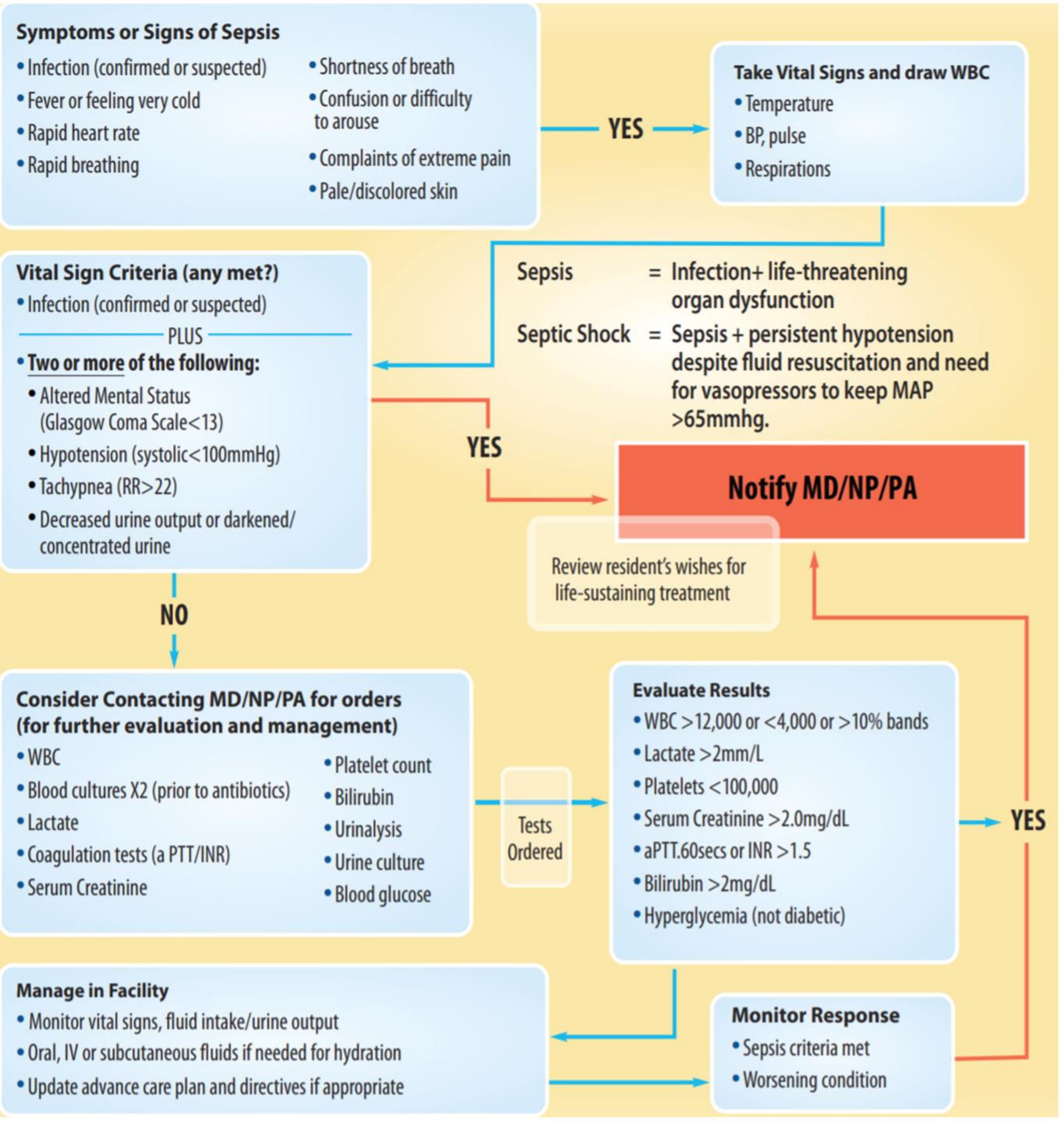
ATLANTIC QUALITY IMPROVEMENT SEPSIS TOOL



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ATLANTIC QUALITY IMPROVEMENT SEPSIS TOOL: USES

- A screening tool for early recognition of Sepsis in the NH setting
- Incorporates Q SOFA and 1 hour bundle of care for sepsis.
- Includes screening for sepsis AND septic shock.
- Takes into consideration the resident's wishes for treatment – which is something other screening tools do not mention.

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ATLANTIC QUALITY IMPROVEMENT SEPSIS TOOL: LIMITATIONS

- Successful management and treatment for sepsis in the NH setting is heavily reliant on early detection and rapid response.
- Reliance on necessary labs places burden on NH to ensure that lab used has a fast turnaround time – this may likely be out of the NH's control.
- This tool encourages management of sepsis and septic shock in the facility – however, it should also include the need to transfer to the hospital setting for specialized care if necessary.

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SEVERE SEPSIS SCREENING TOOL

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SEVERE SEPSIS SCREENING TOOL

I. INFECTION

- ◯ Suspected or documented infection
- ◯ Antibiotic therapy

*If no checks above = NEGATIVE screen for sepsis. Initial ________

II. SIRS – Systemic Inflammatory Response Syndrome (lady bug form)

- ◯ Temperature greater than or equal to 100.4° F or less or equal to 96.8° F
- ◯ Heart rate greater than 90 beats/minute
- ◯ Systolic blood pressure less than 90 mmHg

*If less than two checked = NEGATIVE screen for sepsis. Initial ________

*If 2 above are checked, PATIENT SCREENED POSITIVE FOR SEPSIS; alert the nurse who will:

Place resident on I & O. Monitor and record urine output every shift.

Obtain order for LACTIC ACID and proceed to Section III.

III. ORGAN DYSFUNCTION

- ◯ Respiratory: SaO2 less than 90% OR increasing O2 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

LABS: (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 or equal to 2 mEq/l

*If 1 above checked, PATIENT SCREENS POSITIVE FOR SEVERE SEPSIS.

CALL PHYSICIAN AND FOLLOW SBAR SCRIPT BELOW.

*If no checks above = NEGATIVE screen for sepsis. Initial _______

Continue to assess every two to four hours.

SITUATION: Tell physician resident screened positive for Severe Sepsis

BACKGROUND: Describe positive SIRS; inform physician if resident is currently being treated for a known infection; share which organ system has dysfunction

ASSESSMENT: Share VS and SaO2 (pulse ox)

RECOMMENDATION – REQUEST ORDER FOR FOLLOWING: Decrease BP, fluid bolus 30 ml/kg over 1 hour or faster if systolic blood pressure is less than 90 mmHg until hypotension resolved. If resident does not respond to bolus within one hour, send to ER.

Severe Sepsis Screening Tool

I. INFECTION

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SBAR

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AHRQ: SBAR Tool Design

S – Situation: A concise statement of the problem (what is going on now).

B – Background: Pertinent and brief information related to the situation (what has happened).

A – Assessment: Analysis and consideration of options (what you found/think is going on).

R – Request: Ask for/recommend action (what you want done).

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SITUATION: Tell physician resident screened positive for Severe Sepsis

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SBAR

AHRQ Situation Background Assessment Response

S Situation

I am contacting you about a suspected UTI for the above resident.

Vital Signs BP ________ /________ HR ________ Resp. rate ________ Temp. ________

B Background

Active diagnoses or other symptoms (especially, bladder, kidney/genitourinary conditions)

Specify ____

☐ No ☐ Yes The resident has an indwelling catheter

☐ No ☐ Yes Patient is on dialysis

☐ No ☐ Yes The resident is incontinent **If yes,** new/worsening? ☐ No ☐ Yes

☐ No ☐ Yes Advance directives for limiting treatment related to antibiotics and/or hospitalizations

Specify ____

____

☐ No ☐ Yes Medication Allergies

Specify ____

____

☐ No ☐ Yes The resident is on Warfarin (Coumadin®)

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SBAR

Nursing Home Name ______________________ Facility Fax ______________

Resident Name ____

A Assessment Input (check all boxes that apply)

Resident WITH indwelling catheter

The criteria are met to initiate antibiotics if one of the below are selected

No	Yes	
☐	☐	Fever of 100°F (38°C) or repeated temperatures of 99°F (37°C)*
☐	☐	New back or flank pain
☐	☐	Acute pain
☐	☐	Rigors / shaking chills
☐	☐	New dramatic change in mental status
☐	☐	Hypotension (significant change from baseline BP or a systolic BP <90)

Resident WITHOUT indwelling catheter

Criteria are met if one of the three situations are met

No	Yes	
☐	☐	1. Acute dysuria alone

OR

No	Yes	
☐	☐	2. Single temperature of 100°F (38°C) **and** at least one new or worsening of the following:

- ☐ urgency
- ☐ frequency
- ☐ back or flank pain
- ☐ suprapubic pain
- ☐ gross hematuria
- ☐ urinary incontinence

OR

No	Yes	
☐	☐	3. No fever, but two or more of the following symptoms:

- ☐ urgency
- ☐ frequency
- ☐ incontinence
- ☐ suprapubic pain
- ☐ gross hematuria

Nurses: Please check box to indicate whether or not criteria are met

☐ **Nursing home protocol criteria are met.** Resident may require UA with C&S or an antibiotic.†

☐ **Nursing home protocol criteria are NOT met.** The resident does NOT need an immediate prescription for an antibiotic, but may need additional observation.††

SBAR

R Request for Physician/NP/PA Orders

Orders were provided by clinician through ☐ Phone ☐ Fax ☐ In Person ☐ Other ________________

☐ Order UA

☐ Urine culture

☐ Encourage ________ ounces of liquid intake ________ times daily until urine is light yellow in color.

☐ Record fluid intake.

☐ Assess vital signs for ________ days, including temp, every ________ hours for ________ hours.

☐ Notify Physician/NP/PA if symptoms worsen or if unresolved in ________ hours.

☐ Initiate the following antibiotic

Antibiotic: ______________________________ Dose: ________ Route: ________ Duration: ________

☐ No ☐ Yes Pharmacist to adjust for renal function

☐ Other ____

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SBAR Communication Form

and Progress Note for RNs/LPN/LVNs

Before Calling the Physician / NP / PA / other Healthcare Professional:

☐ **Evaluate the Resident/Patient:** Complete relevant aspects of the SBAR form below
☐ **Check Vital Signs:** BP, pulse, and/or apical heart rate, temperature, respiratory rate, O_2 saturation and finger stick glucose for diabetics
☐ **Review Record:** Recent progress notes, labs, medications, other orders
☐ **Review an INTERACT Care Path** or **Acute Change in Condition File Card**, if indicated
☐ **Have Relevant Information Available when Reporting**
(i.e. medical record, vital signs, advance directives such as DNR and other care limiting orders, allergies, medication list)

SITUATION

The change in condition, symptoms, or signs observed and evaluated is/are ________

This started on ____/____/____ Since this started it has gotten: ☐ Worse ☐ Better ☐ Stayed the same

Things that make the condition or symptom ***worse*** are ________

Things that make the condition or symptom ***better*** are ________

This condition, symptom, or sign has occurred before: ☐ Yes ☐ No

Treatment for last episode *(if applicable)* ________

Other relevant information ________

BACKGROUND

Resident/Patient Description

This resident/patient is in the facility for: ☐ Long-Term Care ☐ Post Acute Care ☐ Other: ________

Primary diagnoses ________

Other pertinent history *(e.g. medical diagnosis of HF, DM, COPD)* ________

Medication Alerts

☐ Changes in the last week *(describe)* ________

☐ Resident/patient is on *(Warfarin/Coumadin)* Result of last INR: ________ Date ____/____/____

☐ Resident/patient is on other anticoagulant *(direct thrombin inhibitor or platelet inhibitor)*

Resident/patient is on: ☐ Hypoglycemic medication(s) / Insulin ☐ Digoxin

Allergies ________

Vital Signs

BP ________ Pulse ________ (or Apical HR ________) RR ________ Temp ________ Weight ________ lbs *(date* ____/____/____*)*

For HF, edema, or weight loss: last weight before the current one was ________ on ____/____/____

Pulse Oximetry *(if indicated)* ________% on ☐ Room Air ☐ O_2 (________)

Blood Sugar *(Diabetics)* ________

Resident /Patient Name ________

(continued)

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SBAR Communication Form

and Progress Note for RNs/LPN/LVNs (cont'd)

Resident/Patient Evaluation

Note: Except for Mental and Functional Status evaluations, if the item is not relevant to the change in condition check the box for "not clinically applicable to the change in condition being reported".

1. Mental Status Evaluation ***(compared to baseline; check all changes that you observe)***

- ☐ Altered level of consciousness *(hyperalert, drowsy but easily aroused, difficult to arouse)*
- ☐ Increased confusion or disorientation
- ☐ Memory loss *(new or worsening)*
- ☐ New or worsened delusions or hallucinations
- ☐ Other symptoms or signs of delirium *(e.g. inability to pay attention, disorganized thinking)*
- ☐ Unresponsiveness
- ☐ Other *(describe)*
- ☐ **No changes observed**

Describe symptoms or signs ____________________

2. Functional Status Evaluation ***(compared to baseline; check all that you observe)***

- ☐ Decreased mobility
- ☐ Needs more assistance with ADLs
- ☐ Falls (one or more)
- ☐ Swallowing difficulty
- ☐ Weakness *(general)*
- ☐ Other *(describe)*
- ☐ **No changes observed**

Describe symptoms or signs ____________________

3. Behavioral Evaluation

- ☐ **Not clinically applicable to the change in condition being reported**
- ☐ Danger to self or others
- ☐ Depression *(crying, hopelessness, not eating)*
- ☐ Social withdrawal *(isolation, apathy)*
- ☐ Suicide potential
- ☐ Verbal aggression
- ☐ Physical aggression
- ☐ Personality change
- ☐ Other behavioral changes *(describe)*
- ☐ **No changes observed**

Describe symptoms or signs ____________________

4. Respiratory Evaluation

- ☐ **Not clinically applicable to the change in condition being reported**
- ☐ Abnormal lung sounds *(rales, rhonchi, wheezing)*
- ☐ Asthma *(with wheezing)*
- ☐ Cough (☐ Non-productive ☐ Productive)
- ☐ Inability to eat or sleep due to SOB
- ☐ Labored or rapid breathing
- ☐ Shortness of breath
- ☐ Symptoms of common cold
- ☐ Other respiratory changes *(describe)*
- ☐ **No changes observed**

Describe symptoms or signs ____________________

5. Cardiovascular Evaluation

- ☐ **Not clinically applicable to the change in condition being reported**
- ☐ Chest pain/tightness
- ☐ Edema
- ☐ Inability to stand without severe dizziness or lightheadedness
- ☐ Irregular pulse *(new)*
- ☐ Resting pulse >100 or <50
- ☐ Other *(describe)*
- ☐ **No changes observed**

Describe symptoms or signs ____________________

6. Abdominal / GI Evaluation

- ☐ **Not clinically applicable to the change in condition being reported**
- ☐ Abdominal pain
- ☐ Abdominal tenderness
- ☐ Constipation *(date of last BM____/____/____)*
- ☐ Decreased/absent bowel sounds
- ☐ Distended abdomen
- ☐ Decreased appetite/fluid intake
- ☐ Diarrhea
- ☐ GI Bleeding *(blood in stool or vomitus)*
- ☐ Hyperactive bowel sounds
- ☐ Jaundice
- ☐ Nausea and/or vomiting
- ☐ Other *(describe)*
- ☐ **No changes observed**

Describe symptoms or signs ____________________

Resident/Patient Name ____________________

(continued)

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SBAR Communication Form

and Progress Note for RNs/LPN/LVNs (cont'd)

7. GU/Urine Evaluation

☐ **Not clinically applicable to the change in condition being reported**

☐ Blood in urine
☐ Decreased urine output
☐ Lower abdominal pain or tenderness
☐ New or worsening incontinence
☐ Painful urination
☐ Urinating more frequently or urgency with or without other urinary symptoms
☐ Other *(describe)*
☐ **No changes observed**

Describe symptoms or signs ______________________

8. Skin Evaluation

☐ **Not clinically applicable to the change in condition being reported**

☐ Abrasion
☐ Blister
☐ Burn
☐ Contusion
☐ Discoloration
☐ Itching
☐ Laceration
☐ Pressure ulcer/pressure injury
☐ Puncture
☐ Rash
☐ Skin tear
☐ Splinter/sliver
☐ Wound *(describe)*
☐ Other *(describe)*
☐ **No changes observed**

Describe symptoms or signs ______________________

9. Pain Evaluation

☐ **Not clinically applicable to the change in condition being reported**

Does the resident have pain?

☐ No ☐ Yes *(describe below)*

Is the pain?

☐ New ☐ Worsening of chronic pain

Description/location of pain: ______________________

Intensity of Pain *(rate on scale of 1-10, with 10 being the worst)*: __________

Does the resident show non-verbal signs of pain (for residents with dementia)?

☐ No ☐ Yes *(describe)* ______________________
(restless, pacing, grimacing, new change in behavior)

Other information about the pain ______________________

10. Neurological Evaluation

☐ **Not clinically applicable to the change in condition being reported**

☐ Abnormal Speech
☐ Altered level of consciousness *(hyperalert, drowsy but easily arousable, difficult to arouse, unarousable)*
☐ Seizure
☐ Weakness or hemiparesis
☐ Dizziness or unsteadiness
☐ Other neurological symptoms *(describe)*
☐ **No changes observed**

Describe symptoms or signs ______________________

Advance Care Planning Information *(the resident/patient has orders for the following advanced care planning)*

☐ Full Code ☐ DNR ☐ DNI *(Do Not Intubate)* ☐ DNH *(Do Not Hospitalize)* ☐ No Enteral Feeding ☐ Other Order or Living Will *(specify)*

____

Other resident/patient or representative preferences for care

____

____

Resident/Patient Name ______________________ *(continued)*

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SBAR Communication Form

and Progress Note for RNs/LPN/LVNs (cont'd)

APPEARANCE

Summarize your observations and evaluation: ______________________________

____

____

REVIEW AND NOTIFY

Primary Care Clinician Notified: ______________________ **Date** ___/___/___ **Time (am/pm)** _______

Recommendations of Primary Clinicians *(if any)* ______________________________

____

____

b. Check *all* that apply

Testing
- ☐ Blood tests
- ☐ EKG
- ☐ Urinalysis and/or culture
- ☐ Venous doppler
- ☐ X-ray
- ☐ Other *(describe)* ____________

Interventions
- ☐ New or change in medication(s)
- ☐ IV or subcutaneous fluids
- ☐ Increase oral fluids
- ☐ Oxygen *(if available)*
- ☐ Other *(describe)* ____________

☐ Transfer to the hospital (non-emergency) *(send a copy of this form)* ☐ Call for 911 ☐ Emergency medical transport

Nursing Notes *(for additional information on the Change in Condition)*

____

____

____

____

____

____

Name of Family/Health Care Agent Notified: ______________________ **Date** ___/___/___ **Time (am/pm)** _______

Staff Name (RN/LPN/LVN) and Signature ______________________________

Resident/Patient Name ______________________________

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Management/Treatment of Sepsis in Long-term Care Settings

Some initial treatment of Sepsis in NH settings can be done IF

- Access to Laboratory Facilities that can provide results within a few hours
- Standing Sepsis Orders for appropriate medications/tests
- Ability to provide fluid resuscitation
- Ability to monitor vitals at least hourly for patients at risk for sepsis who need monitoring
- System for alerting Nursing and Medical Staff when Signs of Sepsis are identified
- Clear Protocols and Timelines for Action
- Ability to systematically record signs and symptoms, clinical interventions, and the response of the resident to those interventions.

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