



Surviving Sepsis: Change in Condition SBAR

Situation, Background, Assessment, Recommendation

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Objectives

- Review:
 - The impact of sepsis on our healthcare system and communities
 - Who is at a high risk for developing sepsis
 - Symptoms of infection and possible sepsis
- Identify opportunities to:
 - Improve early recognition of sepsis in nursing homes and post-acute settings
 - Deliver sepsis treatment in out-of-hospital settings
- Discuss:
 - Sepsis case studies
 - Tools to guide assessment and communicate a change of condition using SBAR (Situation, Background, Assessment, Recommendation)

Epidemiology and Impact of Sepsis

- A person is hospitalized every **20 seconds** for sepsis
- One person dies every **two minutes** from sepsis
- Agency for Healthcare Research and Quality lists sepsis as the most expensive condition treated in U.S. hospitals, each year more than **\$24 billion** is spent on acute care in-hospital costs
- Sepsis represented 5.2% of the national costs for all hospitalizations in 2011
- The most expensive condition billed to Medicare, accounting for 6.9% of all Medicare costs incurred in 2011
- *“Assessment of Global Incidence and Mortality of Hospital-treated Sepsis. Current Estimates and Limitations”* <https://www.ncbi.nlm.nih.gov/pubmed/26414292>
- Sepsis is the most expensive diagnosis, leading to readmissions costing more than \$3.1 billion per year (2013 data)
- Sepsis is responsible for the most readmissions to a hospital within 30 days after a hospital visit
 - More than 191,000 readmissions each year

November 2015 statistical brief from the Healthcare Cost and Utilization Project (HCUP), the Agency for Healthcare Research and Quality (AHRQ), a division of the U.S. Department of Health and Human Services

Sepsis Discharge Disposition

Patients hospitalized for septicemia or sepsis were:

- One-half as likely to be discharged home
- Twice as likely to be transferred to another short-term care facility
- Three times as likely to be discharged to long-term care institutions, as those with other diagnoses (Table).

Table. Hospitalizations for septicemia or sepsis compared with hospitalizations for other diagnoses, by discharge disposition, 2008

Characteristic	Septicemia or sepsis	Other diagnoses
Disposition	Percent	
Routine ¹	39	79
Transfer to other short-term facility ¹	6	3
Transfer to long-term care institution ¹	30	10
Died during the hospitalization ¹	17	2
Other or not stated	8	6
Total	100	100

6% sepsis vs. 3% other diagnosis

30% sepsis vs. 10% other diagnosis

¹Difference is statistically significant at the 0.05 level.

SOURCE: CDC/NCHS, National Hospital Discharge Survey, 2008.

This includes cases in which the septicemia or sepsis is one of the following: (a) the reason for the admission (first-listed or principal), (b) present at admission but not the reason for admission, or (c) acquired while in the hospital

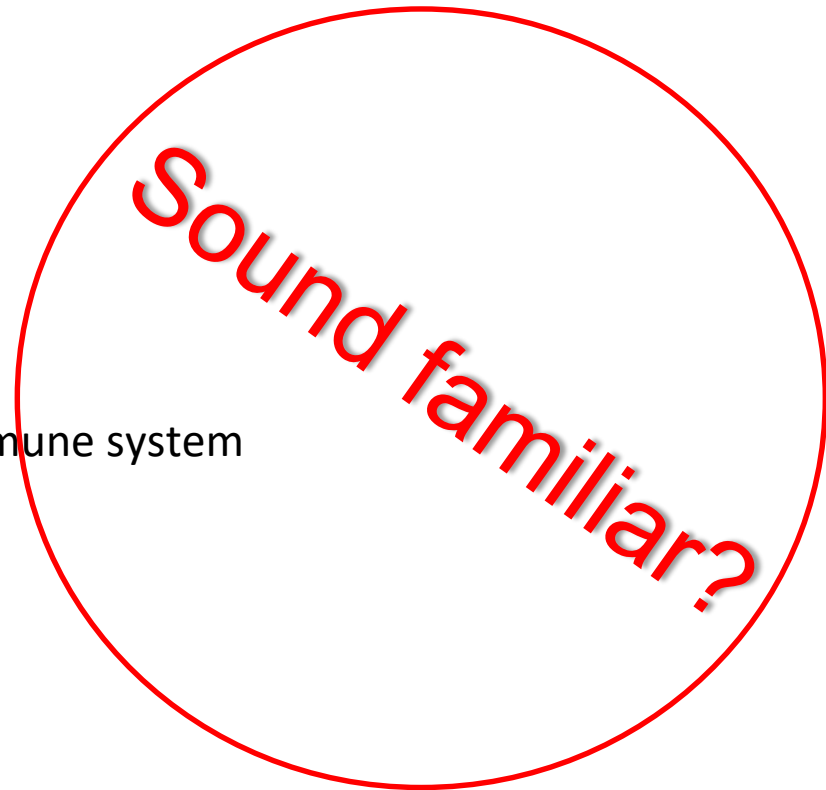
Sepsis: Number One Cause of Hospital Readmissions

- Sepsis is responsible for the most readmissions to a hospital within 30 days after a hospital visit
 - More than 191,000 readmissions each year
- Fewer than half of Americans have heard of sepsis and many hospitals do not have sepsis protocols in place to ensure prompt recognition, proper treatment, and *successful post-discharge outcomes*
 - These individuals come to your facilities at a higher rate than any other discharge diagnosis

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Who's at Risk

- Current infection
- Recent infection
- Very young and elderly
- Chronic illness—diabetes, cancer, impaired immune system
- Previous diagnosis of sepsis
- Recent discharge from acute care hospital
- Recent surgery
- Open wound
- Indwelling lines—Foley catheter, central line, dialysis catheter



What is Sepsis?

- ❑ **Sepsis** is defined as life threatening organ dysfunction caused by a dysregulated host response to infection. **Septic shock (a medical emergency)** is defined as a subset of sepsis where profound circulatory, cellular, and metabolic abnormalities have a higher risk of mortality than sepsis alone.
 - ❑ Sepsis is **not** an infection
 - ❑ Sepsis **is** a complication from infection
 - ❑ From the first signs of infection to death may be as little as 12–24 hours
 - ❑ May be viral (flu), bacterial (*E. Coli*), or fungal (yeast)
 - ❑ Lungs (pneumonia)
 - ❑ Urine (UTI)
 - ❑ Skin (cellulitis, bed sore)
 - ❑ Gut (*C. difficile*)

How To Identify Sepsis

Sepsis Symptoms

- ✓ **S** Shivering, fever or very cold
- ✓ **E** Extreme pain or general discomfort (“worse ever”)
- ✓ **P** Pale or discolored skin
- ✓ **S** Sleepy, difficult to arouse or confused
- ✓ **I** “I feel like I might die”
- ✓ **S** Short of breath

Systemic Inflammatory Response Syndrome (SIRS)

- **Systemic Inflammatory Response Syndrome (SIRS)** is a clinical response arising from nonspecific inflammatory result. It is defined by two or more of the following:
 - Temperature $> 38.3^{\circ}$ or $< 36^{\circ}$
 - Heart rate > 90 beats per minute
 - Respirations > 20 breathes per minute
 - WBC $> 12,000$ or $< 4,000$ or $> 10\%$ immature neutrophils

Very Important Consideration

- **SIRS** is non-specific and highly sensitive. Think of it as a “wink.” A hint of something that may or may not be suggestive of infection.
 - ✓ If **SIRS** present, ask “do you suspect your patient has a new or worsening infection?” If so, do not delay reporting change of condition to provider

Evaluating for Sepsis (CMS)¹

Sepsis:

- Two or more SIRS
- Documentation of presumed or confirmed (new or worsening) infection
- New onset organ dysfunction not related to a chronic medical condition or medication (you may not have this information)

Septic Shock: is sepsis and

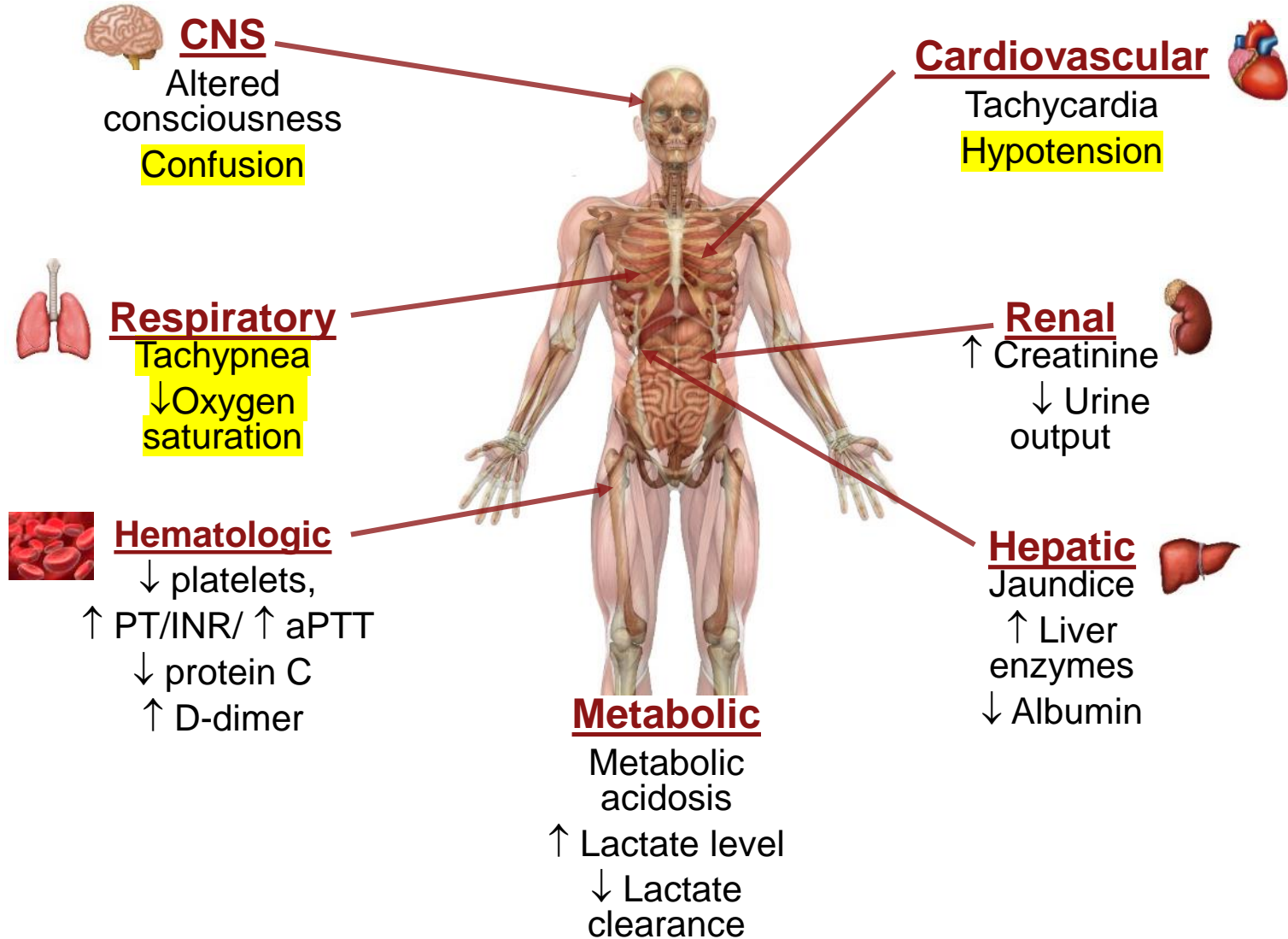
- Lactate \geq 4 mmol/L

Or

- Persistent hypotension
 - **Persistent hypotension** is hypotension (***SBP < 90 mmHg, MAP < 65 mmHg or drop of 40 mmHg from baseline***) that either a) does not resolve after resuscitation 30 ml/kg crystalloid fluids or b) reoccurs in the hour following resuscitation 30 ml/kg crystalloid fluids

1. Centers for Medicare & Medicaid Services

Acute Organ Dysfunction in Sepsis



Improve Early Recognition and Treatment

- ❑ Sepsis education for all staff (don't be afraid to talk about sepsis)
 - ❑ Think stroke or heart attack
- ❑ Infographics for staff, providers, residents, and families
 - ❑ Think posters and badge cards
- ❑ Develop a sepsis screening tool
 - ❑ Think fall assessment
- ❑ Ensure licensed staff are working at scope to deliver timely care
 - ❑ Think standardized procedures (chest pain, urinary frequency, immunizations)
- ❑ Review cases for learning opportunities
 - ❑ Think pressure wounds, falls, medication errors

Free downloadable resources available at: CDC, Sepsis Alliance and Surviving Sepsis Campaign websites

Sepsis Guidelines: Three Hour Bundle

❑ Three Hour Bundle

- ❑ Lactate blood draw (assess for oxygen perfusion)
- ❑ Blood cultures prior to administration of antibiotics
- ❑ Administration of IV antibiotics
- ❑ If hypotensive or lactate ≥ 4 mmol/L, administer 30mL/kg fluids

- Rapid treatment is needed
- There is a 7.6% increase in mortality for each hour antibiotic administration is delayed
- Communicate change in condition with provider ASAP using SBAR
- Do not delay transportation to hospital



Kumar A, Roberts D, Wood KE, Light B, Parrillo JE, Sharma S, Suppes R, Feinstein D, Zanotti S, Taiberg L, Gurka D, Kumar A, Cheang M
Crit Care Med. 2006 Jun; 34(6):1589-96.

Sepsis Case Study #1

Scenario:

Mrs. Garcia was admitted to your nursing facility two days ago for rehabilitation. She fell at home and broke her hip. Surgery was performed without complications. However, she is frail and became deconditioned. Her medical history is pertinent for osteoporosis and diabetes. She is usually alert and oriented and was caring for herself independently prior to the fall. This is your first encounter with Mrs. Garcia.

You receive report at change of shift. The off going RN reports no issues during the night except Mrs. Garcia “seemed a little cranky before bedtime and didn’t want to eat much dinner.” “Her vitals were normal, she said she was tired. She slept really well through the night, so I didn’t wake her up this morning.” “Maybe she did too much yesterday.”

Sepsis Case Study #1 (cont.)

Current vital signs:

Heart Rate – 92

Temperature - 100.2 F (37.8 C)

Respiratory Rate – 24

Blood pressure – 118/65

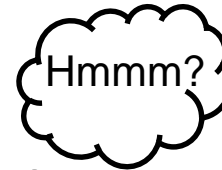
Oxygen saturation – 94% room air

I awaken Mrs. Garcia. She is answering questions slowly and she is confused about the time of day. She denies any pain and states “I feel tired and my stomach is a little upset. I’m okay. Maybe a little more sleep will help.”

You review Mrs. Garcia’s medical record and see that her heart rate is typically around 90 BPM and her blood pressure is at baseline. However, her oxygen saturation is slightly lower than yesterday and you are concerned about her respiratory rate. Her physical assessment is unremarkable except for slightly decreased breath sounds on the right side.

What are your next steps?

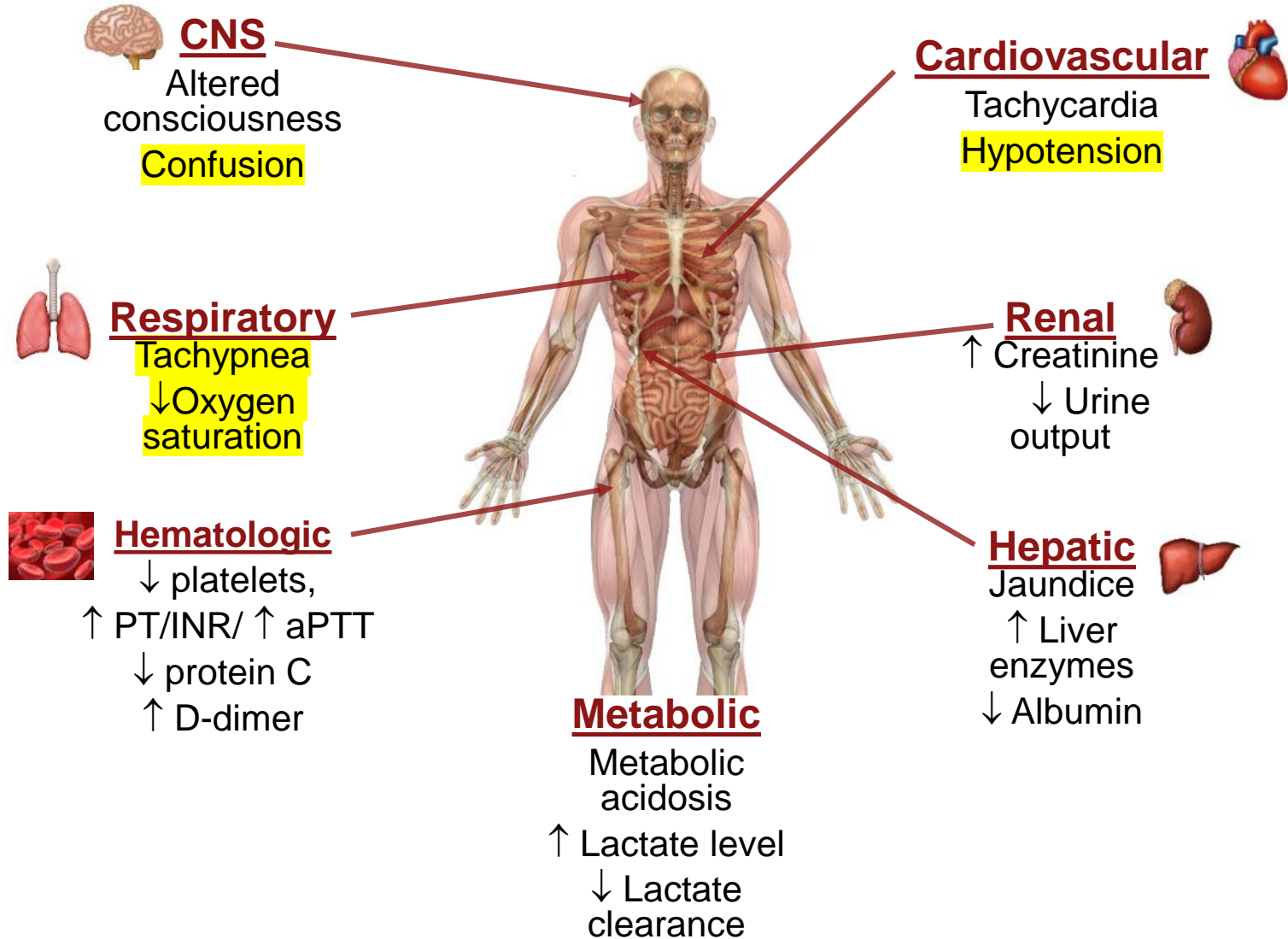
Sepsis Assessment Tool



Sepsis Screening	
Do you suspect this patient has a new or worsening infection?	
In last 6 hours temperature < 36 C or > 38.3 C	No
In last 6 hours HR > 90 beats per minute	Yes
In last 6 hours RR > 20 breaths per minute	Yes
In last 24 hours WBC > 12 or < 4 K/uL or Bands > 10%	?
Total of number of positive SIRS criteria	2
Is patient positive for sepsis	Yes

My patient meets SIRS criteria. Do they have any end organ dysfunction?

Acute Organ Dysfunction in Sepsis



Now What?

- ❑ Consider possible sources of infection based on your assessment and your patient's recent hospitalization.
- ❑ Consider what (if any infectious diseases have been occurring in the facility)
- ❑ Seek advice of colleagues as needed, but don't delay contacting provider
- ❑ Utilize a template to formulize your change of condition SBAR report to provider
- ❑ Think and say you suspect sepsis
- ❑ Recommend the sepsis bundle and immediate transport to a hospital
- ❑ Remind provider how important timely care is

Communicate With Provider

Post-Acute Situation Background Assessment Recommendation (SBAR) for Sepsis

Systemic Inflammatory Response Syndrome (SIRS)

Sepsis = two or more SIRS criteria and suspected or documented infection

Communicate immediately with attending provider when a patient screens positive for sepsis

Situation:

1. _____ has met **two or more** of the following SIRS criteria (circle only those that apply) and has a confirmed or suspected source of infection.
 - Temperature greater than 38°C (100.4°F) or less than 36°C (96.8°F)
 - Heart rate greater than 90 beats per minute
 - Respiratory rate greater than 20 breaths per minute
 - White blood cell count (WBC) is greater than 12,000; less than 4,000 or greater than 10 percent bands

Background:

1. Patient was admitted with _____ and now has two or more **positive** SIRS criteria (see above).
2. Suspected source of infection (circle those that apply):
 - Recent surgery, trauma, or open wound(s) _____
 - Respiratory symptoms (i.e., productive cough, abnormal chest x-ray, decrease in pulse oximetry reading (SaO2) _____
 - Central line or dialysis catheter _____
 - Urinary tract infection, recent use of a Foley catheter _____
 - Unusual gastrointestinal (GI) symptoms _____
 - Other symptoms of infection _____

Assessment:

1. Is patient hypotensive _____ (systolic blood pressure 100 mm Hg or less)
2. Patient's mental status is: Normal/Abnormal (compared to baseline)
3. Most recent weight is: _____
4. Pulse oximetry reading (SaO2) is now _____. Previous reading _____
5. Urine output is _____ mL per hour or _____ over the last 8 hours

Recommendations:

1. Based on positive screening criteria notify attending provider.
2. Obtain orders for lactate level and blood cultures if possible, but administer broad spectrum antibiotic(s) and 30mL/kg crystalloid fluid with rapid infusion even if blood work not done.
3. Consider transfer to an acute care facility based on patient presentation, availability of resources, and response to interventions.

References: Dellinger RP, Levy MM, Rhodes A, et al. Surviving Sepsis Campaign: International guidelines for management of severe sepsis and septic shock: 2012. *Critical Care Medicine*. 2013;41(2): 580–637.
Singer M, Deutchman, CS, Seymour CW, et al. The third international consensus definitions for sepsis and septic shock: 2016. *Journal of the American Medical Association*. 2016;315(8): 801–810.doi:10.1001/jama.2016.0287

The image shows a screenshot of a form titled "Post-Acute Situation Background Assessment Recommendation (SBAR) for Sepsis Systemic Inflammatory Response Syndrome (SIRS)". The form includes a header with logos for Quality Improvement Organizations and NSAG. Below the title, it states "Sepsis = two or more SIRS criteria and suspected or documented infection" and "Communicate immediately with attending provider when a patient screens positive for sepsis". The form is divided into four main sections: Situation, Background, Assessment, and Recommendations. Each section contains a numbered list of questions and checkboxes for data entry. At the bottom, there is a references section and a page number "Page 1 | 1".

Download at:
www.hsag.com/events
February 28, 2018

Sepsis Case Study #2

Scenario:

Mr. Chen was admitted to your SNF two weeks ago to recover from a complicated abdominal surgery for pancreatic cancer. Mr. Chen was hospitalized for thirty two days. During that time he developed sepsis from a anastomotic leak. He returned to the OR where the leak was successfully repaired. He received received IV antibiotics and eventually obtained source control of the infection. He has been improving daily since arriving at your facility. His medical history is pertinent for COPD, diabetes and pancreatic cancer.

You took care of Mr. Chen day before last and he seems to be functioning at about the same level as the day before yesterday. However, you notice that he hesitated before getting out of the chair and you thought he might feel dizzy. You obtain vital signs and begin your assessment.

Sepsis Case Study #2 (cont.)

Current vital signs:

Heart Rate – 102

Temperature – 101.0 F (38.3 C)

Respiratory Rate – 14

Blood pressure – 96/45

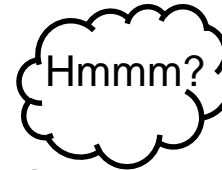
Oxygen saturation – 96% room air

Mr. Chen is able to toilet himself and tells you that he has had “some bouts” of diarrhea for the past two days. He is unable to quantify the amount and simply says “not too much, I guess.” He complains of abdominal distention and slight nausea only.

You review Mr. Chen’s medical record and see that his bowel movements have not been charted in five days. His systolic blood pressure was low yesterday, but prior to that always well above 110. His physical assessment is remarkable for abdominal tenderness and he is slightly pale.

What are your next steps?

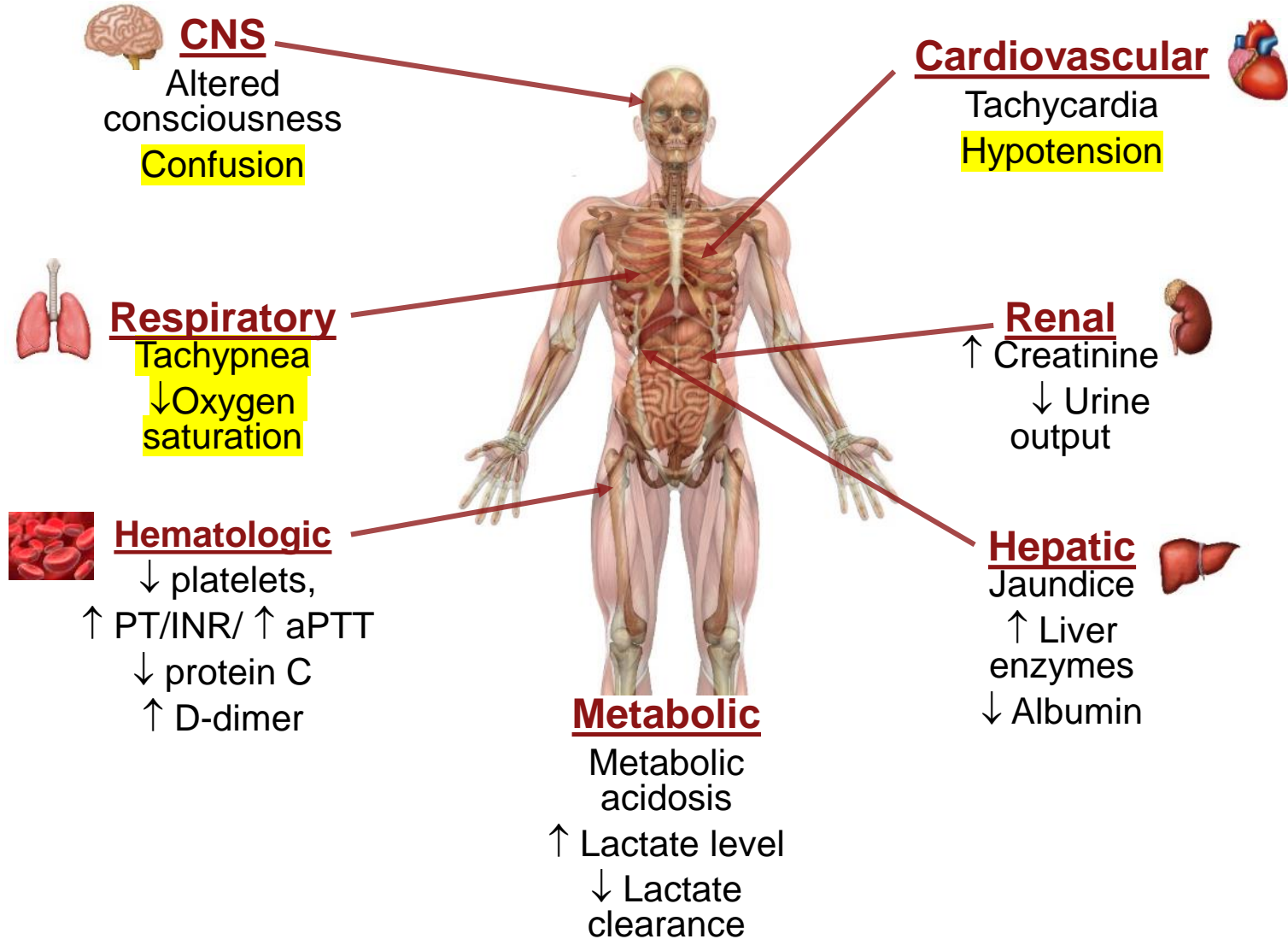
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February 28, 2018



Questions?

INTERACT Tools

For information on
INTERACT tools visit:



<http://www.pathway-interact.com/>



Reducing Readmissions Preparation Program

Jennette Silao, MBA, MPH
Director, Nursing Home, HSAG

Join Us on a Nine-Month Journey!

Reducing Readmission Preparation Program

**Starting
the
Journey**

**January–
February**

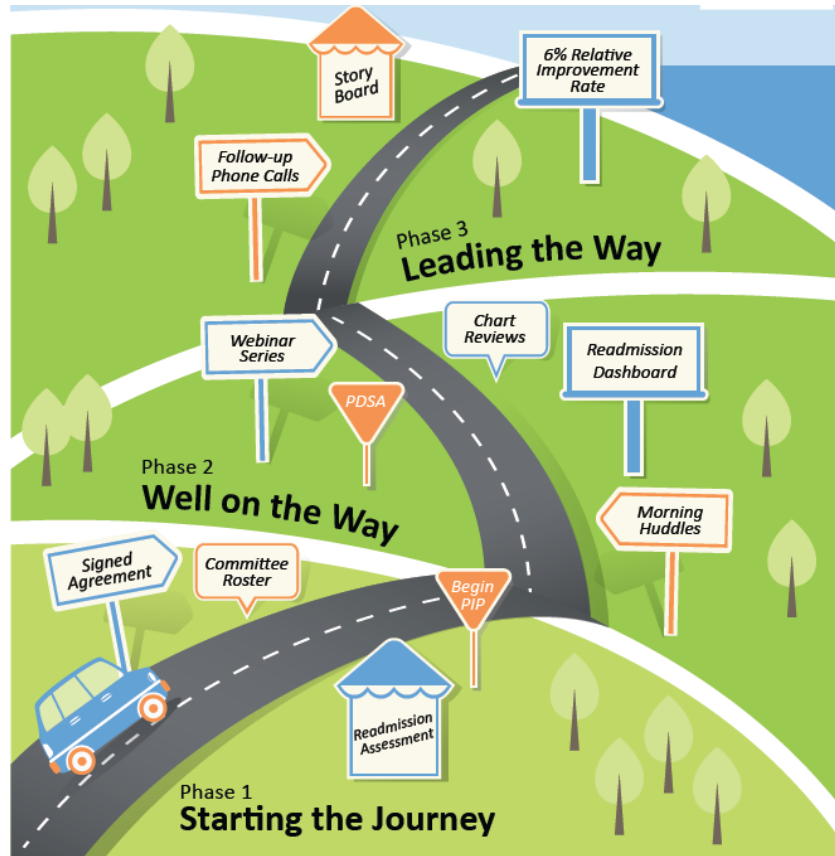
**Well
on the
Way**

March–April

**Leading
on the
Way**

**May–
September**

Reducing Readmissions Preparation Program



Goals:

- Improve staff knowledge on readmission interventions
- Strengthen your readmission prevention programs
- Help your facility be a preferred provider to your local hospitals
- Improve readmission rates by October 2018

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Ohio
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Sign up Today—Start the Journey

Complete commitment agreement:

Nursing Home Reducing Readmissions Preparation Program



California

Readmissions Penalties Are Coming. Are You Ready?

Did you know that Medicare is changing the reimbursement structure for nursing homes starting October 2018? A new factor that will contribute to your nursing home reimbursement includes hospital readmissions. Participating in this program will help improve knowledge on new readmission quality measures, identify strategies to prevent readmissions, and help facilities be a preferred provider to your local hospitals.

If you are located in Arizona or Ohio, please go to those state pages: [Arizona RRPP](#), [Ohio RRPP](#)

[California nursing homes sign up here today!](#)

What's involved? [Steps in the Preparation Journey](#)

Questions?

Email the California HSAG team at: nhreadmissions@hsag.com

Learn more about the [Skilled Nursing Facility Value-Based Purchasing Program](#) from the Centers for Medicare & Medicaid Services.

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Materials You'll Need



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Wednesday, March 7, 2018

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Wednesday, March 28, 2018

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Clinical Skills and Intervention Strategies Webinars

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RRPP Contacts by State

California: www.hsag.com/ca-rrpp

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