Welcome to

Sepsis Standard Work: Improving Compliance with Early Recognition and Management of Perinatal Sepsis

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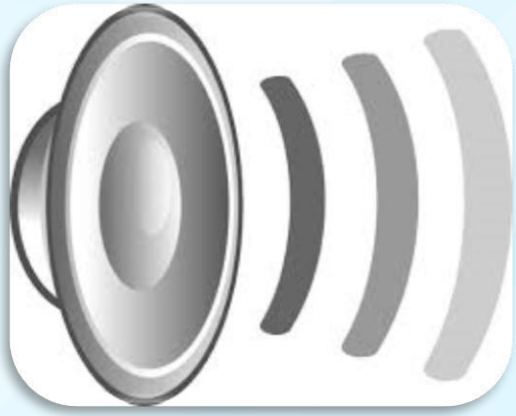

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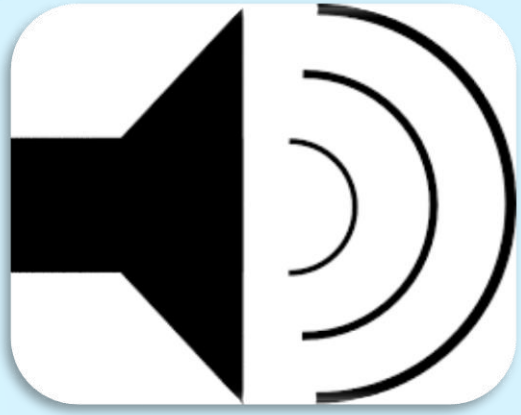

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ACCREDITATION STATEMENTS:

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Continuing Education Information

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- The Centers for Disease Control and Prevention is a pre-approved provider of Certified in Public Health (CPH) recertification credits and is authorized to offer (**1**) CPH recertification credits for this program.
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CDC, our planners, presenters, and their spouses/partners wish to disclose they have no financial interests or other relationships with the manufacturers of commercial products, suppliers of commercial services, or commercial supporters. Planners have reviewed content to ensure there is no bias.

Content will not include any discussion of the unlabeled use of a product or a product under investigational use.

CDC did not accept commercial support for this continuing education activity.

Continuing Education Information

PROGRAM DESCRIPTION:

This webinar will discuss the need for protocols for early recognition and management of maternal sepsis. The barriers and resistance of implementation of sepsis bundles must be addressed for our vulnerable pregnant population.

OBJECTIVES:

- Describe infection control techniques that reduce the risk and spread of healthcare- associated infections (HAI).
- Identify unsafe practices that place patients at risk for HAIs.
- Describe best practices for infection control and prevention in daily practice in healthcare settings.
- Apply standards, guidelines, best practices, and established processes related to safe and effective medication use.

SPECIFIC OBJECTIVES FOR THIS ACTIVITY:

- Effectively implement the OB sepsis screen in the perinatal setting using adjusted parameters for SIRs criteria in the pregnant population.
- Identify the importance of implementing protocols for early recognition and management of perinatal sepsis.
- Identify the barriers to implementation of sepsis bundles in early recognition and management of perinatal sepsis and how to overcome them.

Sepsis Standard Work: Improving Compliance with Early Recognition and Management of Perinatal Sepsis

May 17, 2017

Before We Get Started…

To submit a question:

- Use the “Chat" window, located on the lower left-hand side of the webinar screen.
- Questions will be addressed at the end of the webinar, as time allows.

To ask for help:

- Please press the “Raise Hand” button, located on the top left-hand side of the screen.

To hear the audio:

- **Please ensure your speakers are turned on with the volume up -** the audio for today’s conference should be coming through your computer speakers.

The speakers’ slides were e-mailed before the webinar and will also be provided to participants in a follow-up e-mail.

American Nurses Association

- Represents the interests of the nation's 3.6 million nurses
- Has long-standing involvement in infection prevention and control

Dr. Seun Ross

ANA, Director of Nursing Practice & Work Environment

ANA
AMERICAN NURSES ASSOCIATION

Why are nurses significant in infection control?

- Uniquely qualified to recognize and prevent infections like sepsis.

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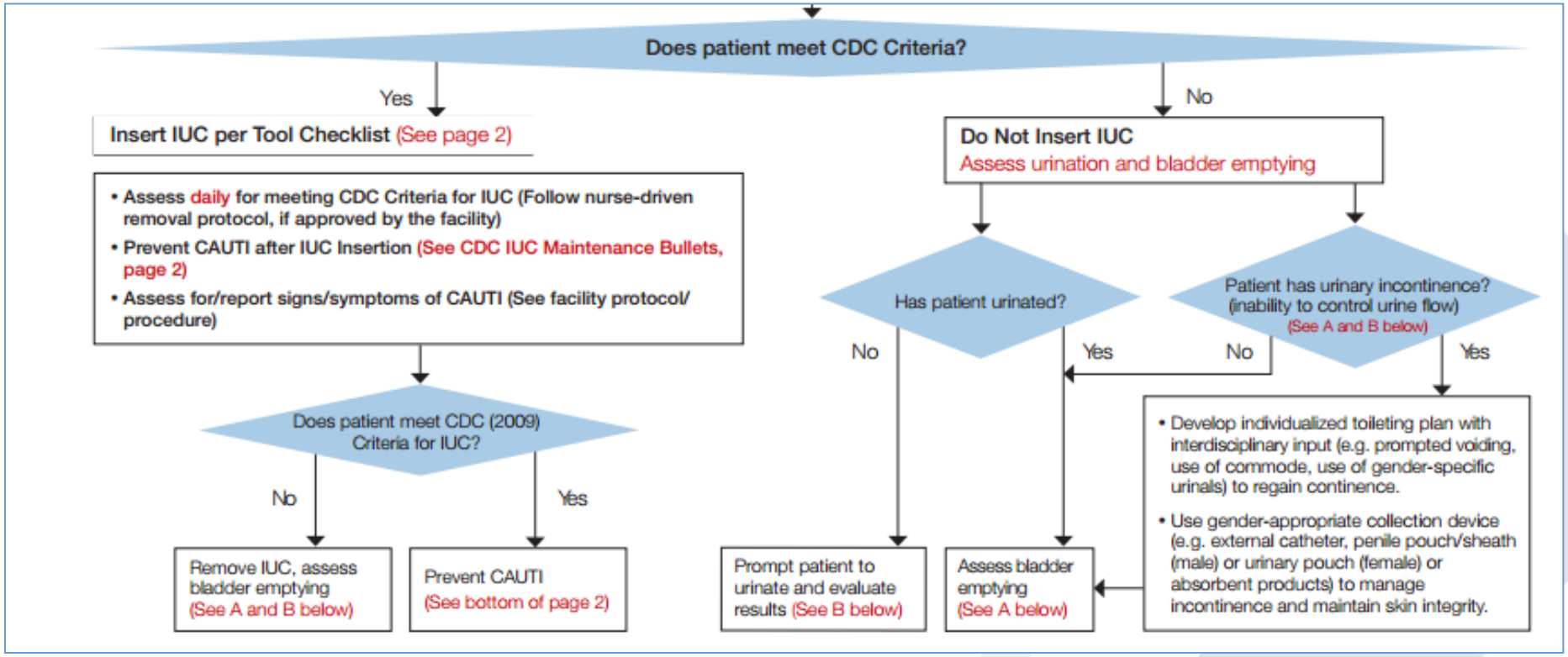
Preventing CAUTI—A Leading Cause of Sepsis

NursingWorld.org/ANA-CAUTI-Prevention-Tool



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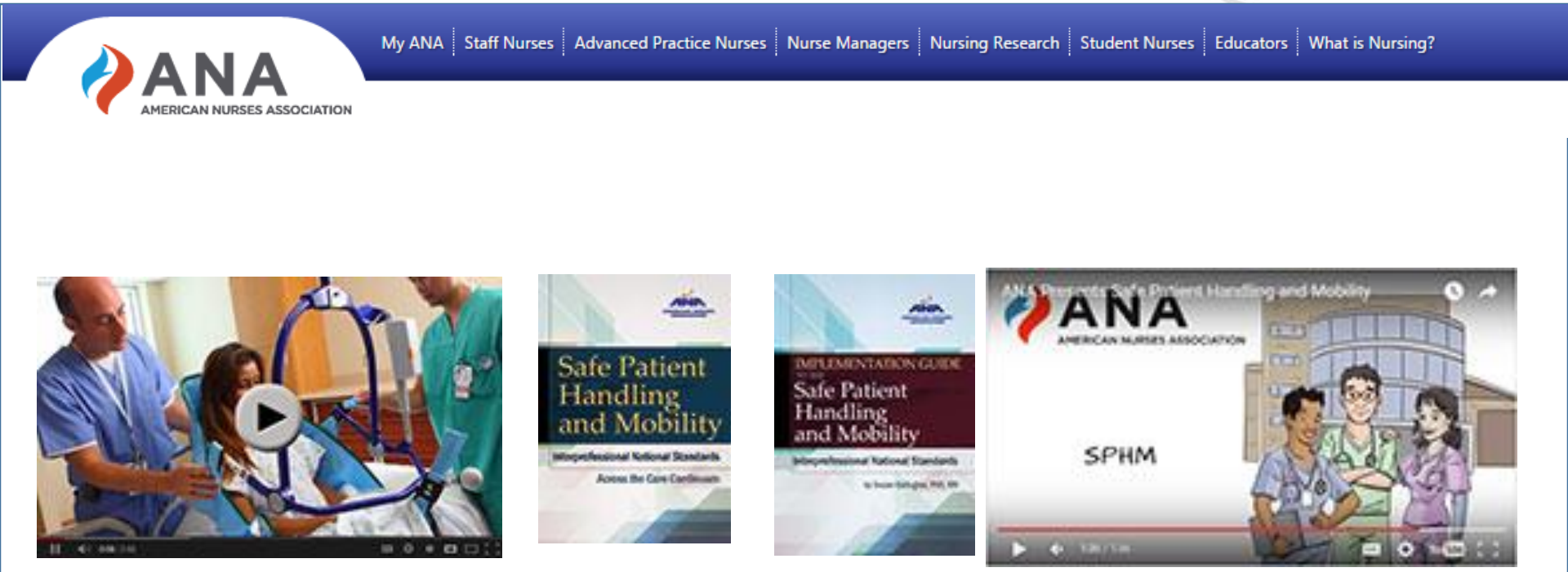
Preventing Infections through Early Mobility

NursingWorld.org/MainMenuCategories/Workplace/Safety/Healthy-Work-Environment/SafePatient



Nurses on the Frontlines of Infection Prevention

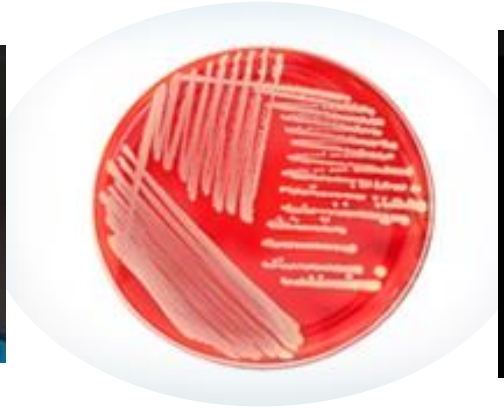
NursingWorld.org/ANA-APIC

ANA AMERICAN NURSES ASSOCIATION

My ANA | Staff Nurses | Advanced Practice Nurses | Nurse Managers | Nursing Research | Student Nurses | Educators | What is Nursing?

Hospital-Acquired Infections

Personal Protective Equipment



Emerging Infections

Hand Hygiene

NICE Network

NursingWorld.org/InfectionPreventionControlEducation

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My ANA | Staff Nurses | Advanced Practice Nurses | Nurse Managers | Nursing Research | Student Nurses | Educators | What is Nursing?

Infection Control Resources

In-Person Training Opportunities

Webinars

AWHONN
PROMOTING THE HEALTH OF WOMEN AND NEWBORNS

Sepsis Standard Work:

Improving Compliance with Early Recognition and Management of Perinatal Sepsis

Elizabeth Rochin, PhD, RN, NE-BC
Vice President, Nursing
Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN)

Maternal Sepsis on a Global Scale

Maternal sepsis is the leading cause of maternal death, accounting for 15% of maternal deaths worldwide[1]

In the United States and the United Kingdom, maternal sepsis is considered to be the leading cause of death in the Peripartum period[2]

Olvera, L. & Dutra, D. (2016). Early recognition and management of maternal sepsis. *Nursing for Women's Health, 20*(2), 182-196.

Padilla, C. & Palanisamy, A. (2017). Managing maternal sepsis: Early warning criteria to ecmo. *Clinical Obstetrics and Gynecology, 60*(2), 418-424.

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Associations for Sepsis in the Maternal Population

Demographics

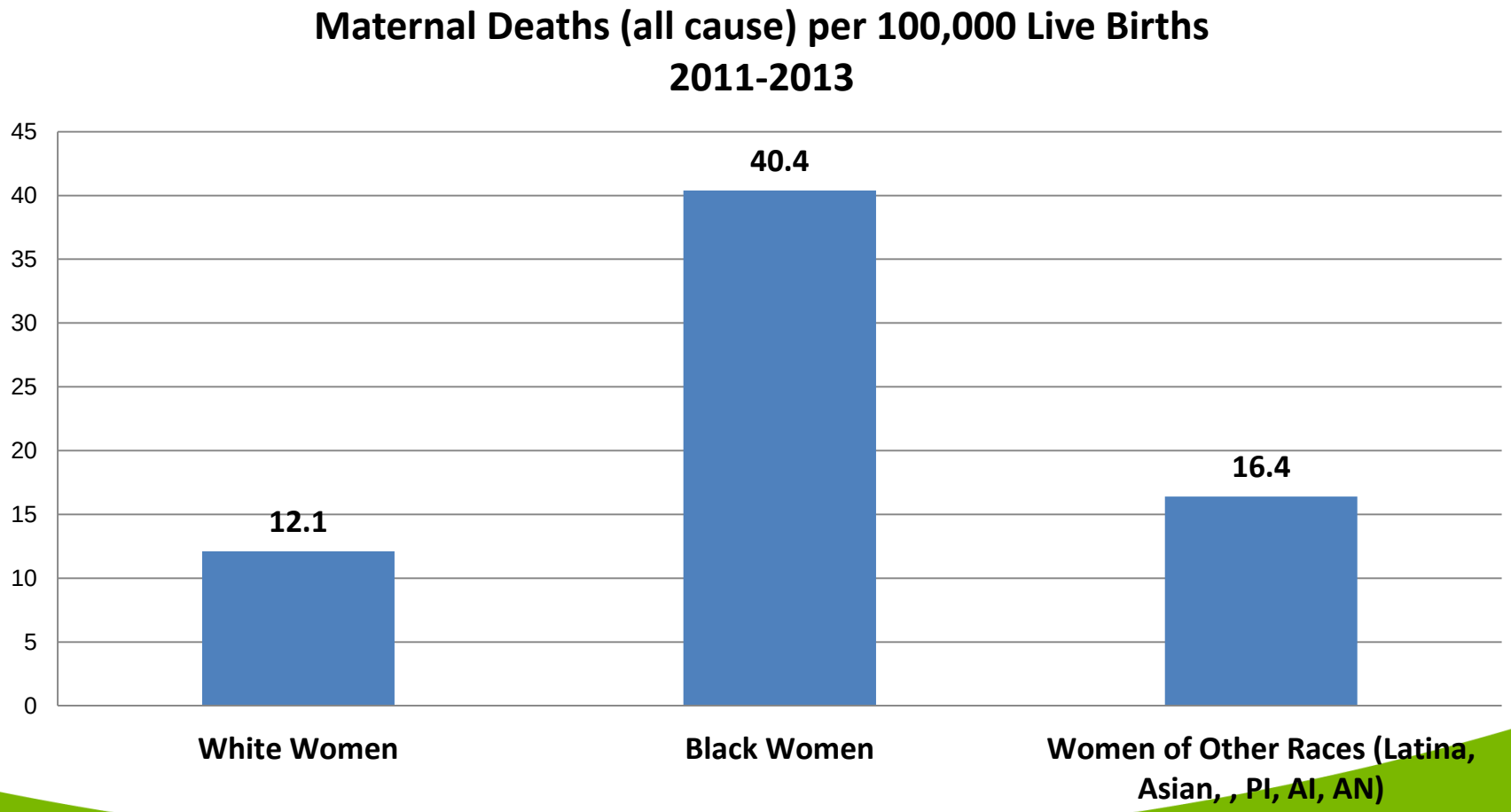
- Advanced Maternal Age
- African-American race
- Medicaid Insurance

History

- Preterm Delivery
- Postpartum Hemorrhage
- Stillbirth
- Cesarean Section
- Endometritis
- Cerclage
- Retained Products
- Multiple Gestation

Bauer, M.E., Bateman, B.T., Bauer, S.T., Shanks, A.M. & Mhyre, J.M. (2013). Maternal sepsis mortality and morbidity during hospitalization for delivery: Temporal trends and independent associations for sepsis. *Anesthesia & Analgesia, 117*(4), 944-950.

CDC Pregnancy Mortality Surveillance System



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Incidence of Maternal Sepsis in the United States

Stratified US National Inpatient Sample (NIS) 1998-2009

50,000,000 Obstetric visits were reviewed

No significant change pre-delivery

Rate of post-delivery sepsis increased **148%** between 1998-1999 and 2008-2009

Callaghan, W.M., Creanga, A.A. & Kuklina, E.V. (2012). Severe maternal morbidity among delivery and postpartum hospitalizations in the United States. *Obstetrics and Gynecology, 120*(5), 1029-1036.

Postpartum Discharge Education: Early Detection of Potential Complications

SAVE YOUR LIFE:

Get Care for These POST-BIRTH Warning Signs

Most women who give birth recover without problems. **But any woman can have complications after the birth of a baby.** Learning to recognize these POST-BIRTH warning signs and knowing what to do can save your life.

POST-BIRTH WARNING SIGNS

Call 911 if you have:

- ❑ Pain in chest
- ❑ Obstructed breathing or shortness of breath
- ❑ Seizures
- ❑ Thoughts of hurting yourself or your baby

Call your healthcare provider if you have:
(If you can't reach your healthcare provider, call 911 or go to an emergency room)

- ❑ Bleeding, soaking through one pad/hour, or blood clots, the size of an egg or bigger
- ❑ Incision that is not healing
- ❑ Red or swollen leg that is painful or warm to touch
- ❑ Temperature of 100.4°F or higher
- ❑ Headache that does not get better, even after taking medicine, or bad headache with vision changes

Trust your instinct. ALWAYS get medical care if you are not feeling well or have questions or concerns.

Tell 911 or your healthcare provider:

"I had a baby on _____ (Date) and I am having _____ (Specific warning sign)."

These post-birth warning signs can become life-threatening if you don't receive medical care right away because:

- **Pain in chest, obstructed breathing or shortness of breath** (trouble catching your breath) may mean you have a blood clot in your lung or a heart problem
- **Seizures** may mean you have a condition called eclampsia
- **Thoughts or feelings of wanting to hurt yourself or your baby** may mean you have postpartum depression
- **Bleeding (heavy),** soaking more than one pad in an hour or passing an egg-sized clot or bigger may mean you have an obstetric hemorrhage
- **Incision that is not healing, increased redness or any pus** from episiotomy or C-section site may mean you have an infection
- **Redness, swelling, warmth, or pain** in the calf area of your leg may mean you have a blood clot
- **Temperature of 100.4°F or higher, bad smelling vaginal blood or discharge** may mean you have an infection
- **Headache (very painful), vision changes, or pain in the upper right area of your belly** may mean you have high blood pressure or post birth preeclampsia

GET HELP

My Healthcare Provider/Clinic: _____ Phone Number: _____

Hospital Closest To Me: _____

AWHONN PROMOTING THE HEALTH OF WOMEN AND NEWBORNS

16002

Early Recognition is Key to Successful Treatment

- ✓Prevention is key
- ✓**Sepsis may be difficult to identify early in pregnant women, particularly those in labor (symptoms may be similar)**
- ✓Training and simulation
- ✓Strong interdisciplinary teamwork
- ✓Communication strategies, such as Code Sepsis OB

AWHONN
PROMOTING THE HEALTH OF WOMEN AND NEWBORNS

Making Health Care Safer

Think sepsis. Time matters.

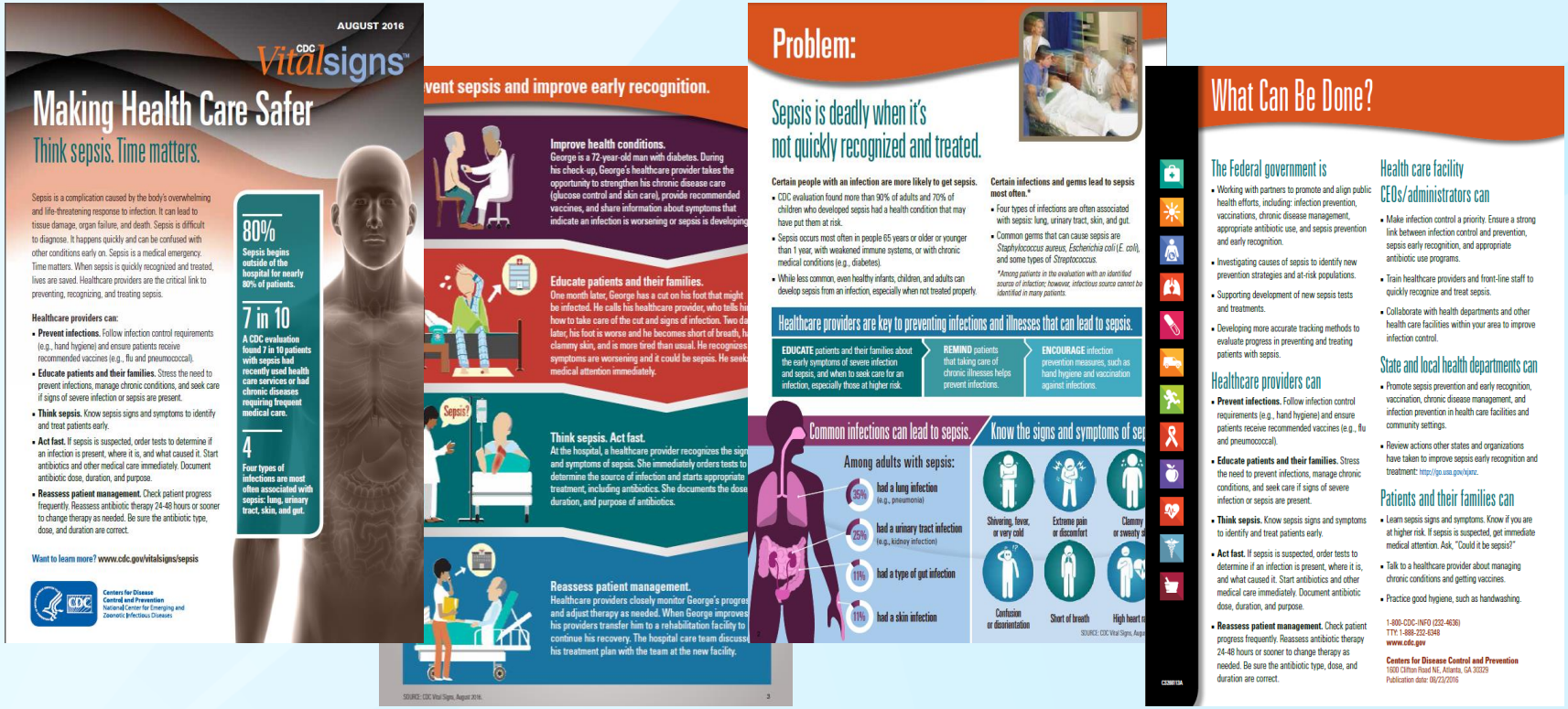
CDC Vitalsigns™

Lauren Epstein, MD MSc

Medical Officer, Epidemiology Research And Innovations Branch

Division of Healthcare Quality Promotion

CDC *Vital Signs* Report



Vital Signs: Epidemiology of Sepsis: Prevalence of Health Care Factors and Opportunities for Prevention

Shannon A. Novosad, MD[1,2]; Mathew R.P. Sapiano, PhD[2]; Cheri Grigg, DVM[1,2]; Jason Lake, MD[1,2]; Misha Robyn, DVM[1,4]; Ghinwa Dumyati, MD[3]; Christina Felsen, MPH[3]; Debra Blog, MD[4]; Elizabeth Dufort, MD[4]; Shelley Zansky, PhD[4]; Kathryn Wiedeman, MPH[2]; Lacey Avery, MA[2]; Raymund B. Dantes, MD[2]; John A. Jernigan, MD[2]; Shelley S. Magill, MD[2]; Anthony Fiore, MD[2]; Lauren Epstein, MD[2]

On August 23, 2016, this report was posted as an MMWR *Early Release on the* MMWR *website (*http://www.cdc.gov/mmwr*).*

Abstract

Background: Sepsis is a serious and often fatal clinical syndrome, resulting from infection. Information on patient demographics, risk factors, and infections leading to sepsis is needed to integrate comprehensive sepsis prevention, early recognition, and treatment strategies.

Methods: To describe characteristics of patients with sepsis, CDC and partners conducted a retrospective chart review in four New York hospitals. Random samples of medical records from adult and pediatric patients with administrative codes for severe sepsis or septic shock were reviewed.

Results: Medical records of 246 adults and 79 children (aged birth to 17 years) were reviewed. Overall, 72% of patients had a health care factor during the 30 days before sepsis admission or a selected chronic condition likely to require frequent medical care. Pneumonia was the most common infection leading to sepsis. The most common pathogens isolated from blood cultures were *Escherichia coli* in adults aged ≥18 years, *Klebsiella* spp. in children aged ≥1 year, and *Enterococcus* spp. in infants aged <1 year; for 106 (33%) patients, no pathogen was isolated. Eighty-two (25%) patients with sepsis died, including 65 (26%) adults and 17 (22%) infants and children.

Conclusions: Infection prevention strategies (e.g., vaccination, reducing transmission of pathogens in health care environments, and appropriate management of chronic diseases) are likely to have a substantial impact on reducing sepsis. CDC, in partnership with organizations representing clinicians, patients, and other stakeholders, is launching a comprehensive campaign to demonstrate that prevention of infections that cause sepsis, and early recognition of sepsis, are integral to overall patient safety.

CDC *Vital Signs* Report

- Sepsis **most often occurs** in people:
  - Over the age of 65, or infants less than one year of age.
  - With chronic diseases (such as diabetes) or weakened immune systems.

- Sepsis is most often associated with **infections of the lung, urinary tract, skin, or gut.**

- Common pathogens that cause sepsis are ***Staphylococcus aureus*, *E. coli*, and some types of *Streptococcus.***

- Even **healthy infants, children and adults can develop sepsis** from an infection, especially if it is not treated properly.

CDC *Vital Signs* Report

- Sepsis begins outside of the hospital for **nearly 80% of patients.**
- **7 in 10 patients** with sepsis had recently interacted with healthcare providers or had chronic diseases requiring frequent medical care.
- *Vital Signs* report demonstrates that there are opportunities to better prevent infections and recognize sepsis early to save lives.

What Can Healthcare Providers do?

Sepsis Prevention

Healthcare providers are key to preventing infections and illnesses that can lead to sepsis.

EDUCATE patients and their families about the early symptoms of severe infection and sepsis, and when to seek care for an infection, especially those at higher risk.

REMIND patients that taking care of chronic illnesses helps prevent infections.

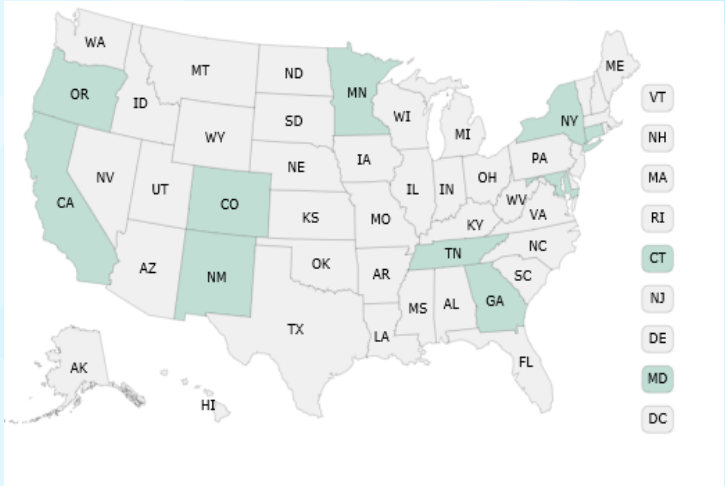
ENCOURAGE infection prevention measures, such as hand hygiene and vaccination against infections.

Sepsis Recognition and Treatment

- **Think sepsis** by knowing sepsis signs and symptoms to identify and treat patients early.
- **Act fast** if sepsis is suspected.
- **Reassess** patient management and antibiotic therapy.

Next Steps

- Expanding the project to 10 sites throughout the US using CDC's Emerging Infections Program Network.
  - Data collection is currently underway.
  - Further characterize underlying characteristics of patients with sepsis and septic shock.



Next Steps

- A national sepsis educational effort to improve sepsis prevention, early suspicion/recognition, and timely treatment.
- **Launch: Fall 2017**
- Anticipated outcomes:
  - Increase awareness of sepsis and importance of infection prevention.
  - Increase awareness of need for rapid recognition and prompt treatment.

Thank You

https://www.cdc.gov/vitalsigns/sepsis/index.html

Lauren Epstein, MD MSc
Medical Officer, Epidemiology Research and Innovations Branch
Division of Healthcare Quality Promotion
Email: xdd0@cdc.gov

For more information, please contact Centers for Disease Control and Prevention

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Telephone: 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348
Visit: www.cdc.gov | Contact CDC at: 1-800-CDC-INFO or www.cdc.gov/info

Featured Speakers

Katarina Lanner-Cusin, MD

Medical Director Women's Services, Sutter Health, Alta Bates Summit Medical Center, Berkeley, California

Lori Olvera, DNP, RNC-OB, EFM-C

Bedside Nurse, Anderson Lucchetti Women's and Children Hospital; Sutter Health

EARLY RECOGNITION OF MATERNAL SEPSIS

Presented by:
Dr. Katarina Lannér-Cusin
Lori Olvera DNP, RNC-OB, EFM-C

Objectives

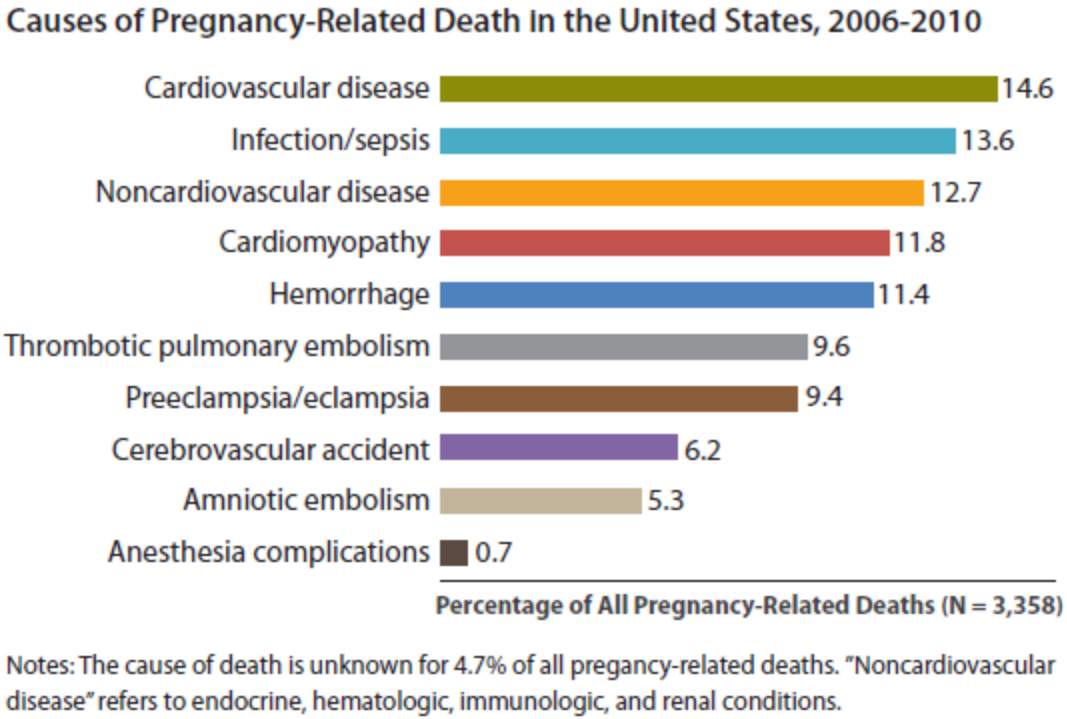
1. Effectively implement the OB Sepsis Screen in the perinatal population using adjusted parameters for Systemic Inflammatory Response (SIR)

2. Identify the importance of implementing protocols for early recognition and management of perinatal sepsis

3. Identify the barriers to implementation of sepsis bundles in early recognition and management of perinatal sepsis and how to overcome them

History of Sepsis and the Perinatal Population

- ✓ 2001 Rivers Study
- ✓ 2004 Sepsis Guidelines
- ✓ The Perinatal Population
- ✓ CMS Measure



www.cdc.gov

Rivers, E. et al.(2001). Early goal-directed therapy in the treatment of severe sepsis and septic shock. *The New England Journal of Medicine*

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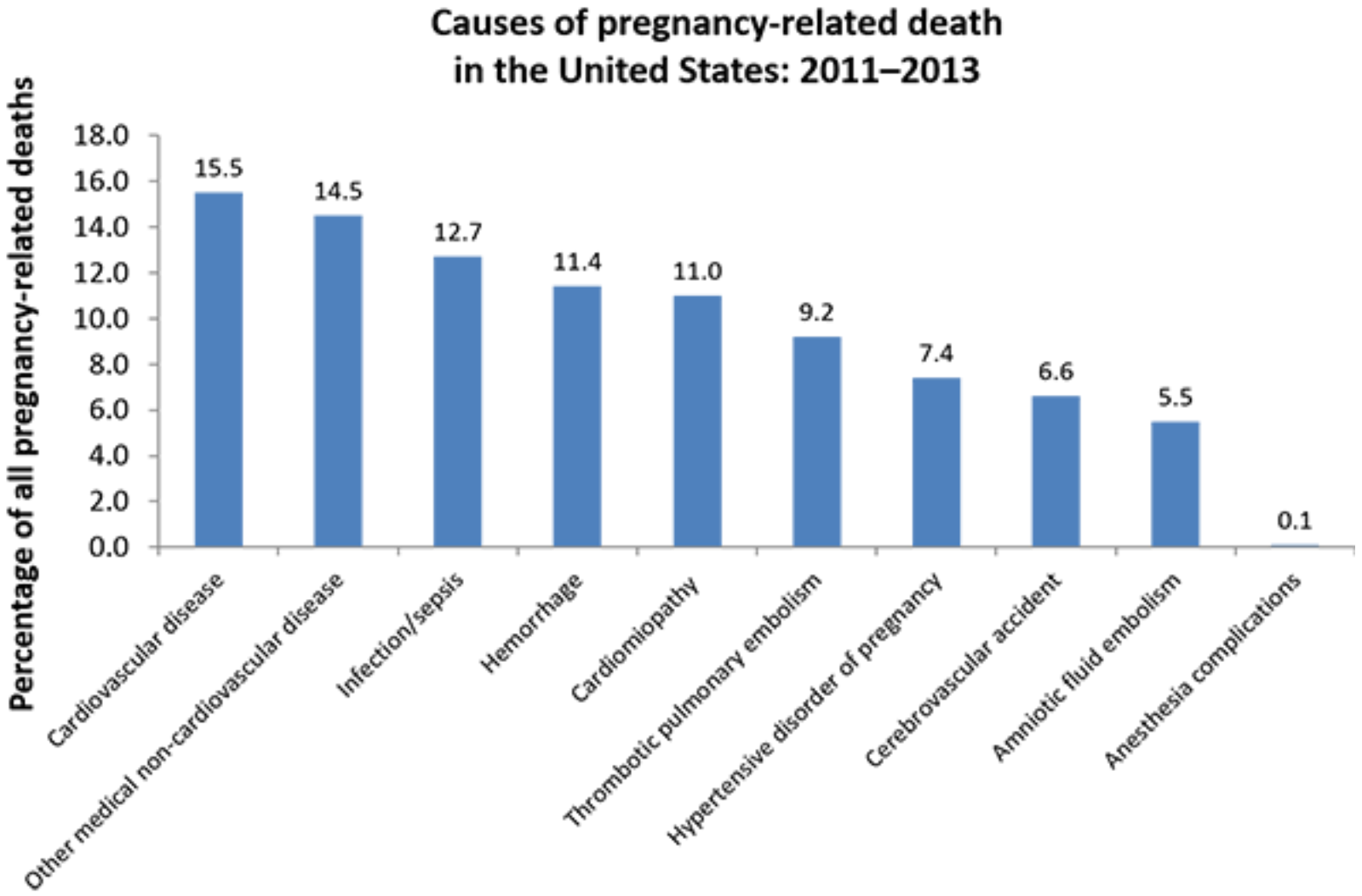

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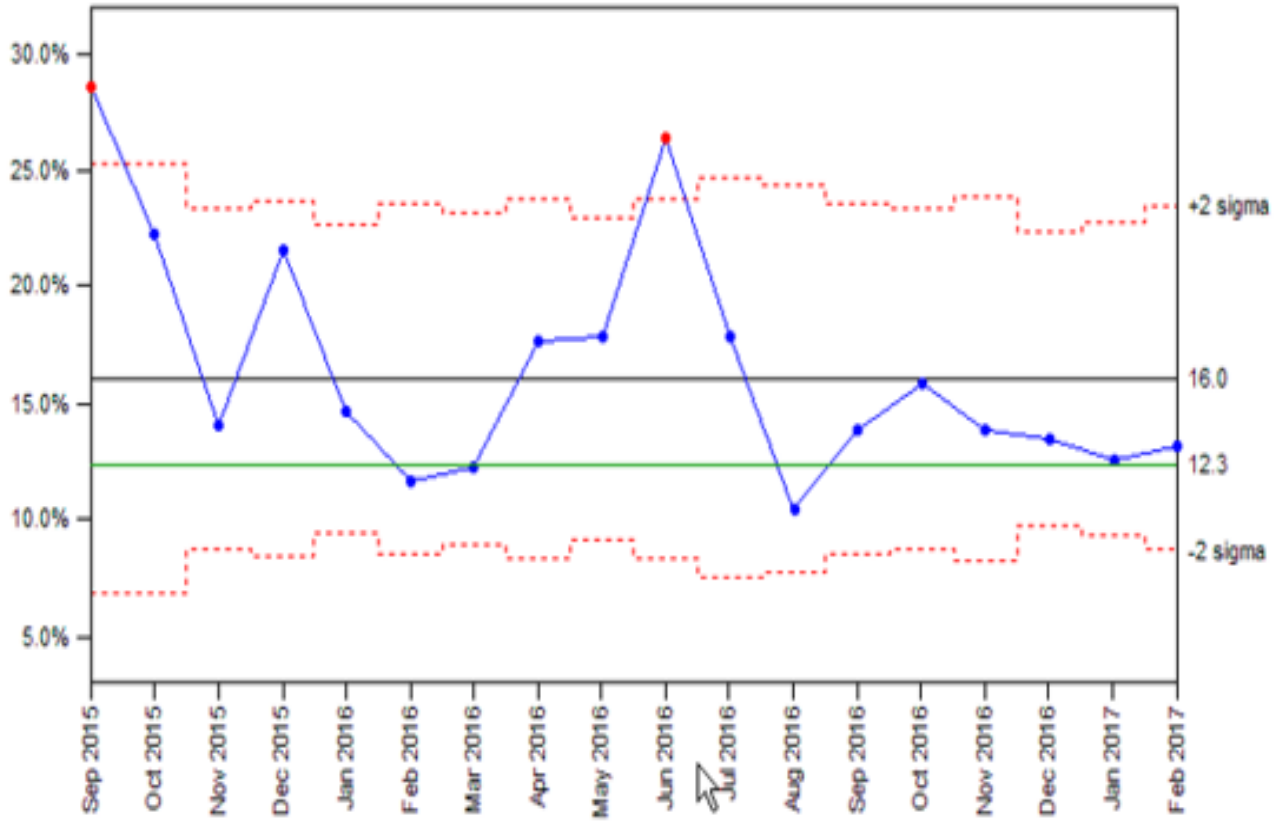
Severe Sepsis and Septic Shock
Adult population Sutter Sacramento
Implementation of Sepsis Screening



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Pregnancy and Sepsis

Incidence:

- Septic Shock is rare in pregnancy 0.002-0.01%
  - Of all septic patients, 0.3-0.6% are pregnant
- Overall increase in severe sepsis and septic shock due to changes in demographics of pregnant women:
  - Advanced maternal age
  - Obesity
  - Diabetes
  - Placental abruption
  - Placental abnormalities
  - Assisted Reproductive Technology (ART)
  - Emerging Infections Diseases

Barton & Sibai (2012). Severe Sepsis & Septic Shock in Pregnancy. *Obstetrics & Gynecology*

Pregnant Patients need to be included in our Sepsis Protocols!

"Pregnancies complicated by severe sepsis and septic shock are associated with increased rates of preterm labor, fetal infection, and preterm delivery. Sepsis onset in pregnancy can be insidious and patients may appear deceptively well before rapidly deteriorating with the development of severe shock, multiple organ dysfunction syndrome, or death. The outcome and survivability in severe sepsis and septic shock in pregnancy are improved with early detection, prompt recognition of the source of infection, and targeted therapy"

Barton & Sibai (2012). Severe Sepsis & Septic Shock in Pregnancy. *Obstetrics & Gynecology*

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What does the literature say…..

- Sepsis is one of the top four causes of maternal mortality
- Pregnant women are more vulnerable to infection and susceptible to serious complications
- Screening protocols are needed for early recognition and management of maternal sepsis
- All perinatal staff must be trained on early recognition and management of maternal sepsis

Acosta, Kurinczuk, Lucas, Tufnell, Sellers & Knight (2014). Severe maternal sepsis in the U.K., 2011-2012: A national case-control study.

Sutter Health

Why do we need Protocols for Early Recognition?

- **Early recognition and treatment of maternal sepsis will improve survival, decrease length of stay, and length of stay in the ICU**
- **Delay in diagnosis and treatment of sepsis has been shown to increase mortality**

Barton & Sibai (2012). Severe Sepsis & Septic Shock in Pregnancy. *Obstetrics & Gynecology*

Sutter Health

The Sutter Health Sepsis Initiative
Perinatal Population

Goal:

Reduce morbidity and mortality from severe sepsis and septic shock

Strategies:

- **Early recognition and treatment**
- **Prevent mother and baby harm: A chance to alter outcome**
- **Use of Standard Work-**An approach adopted from manufacturing to healthcare to reduce

1) variation in care ("I like 3 lactates in 4 hours")
2) errors of omission ("I forgot to order a repeat lactate")

Sutter Health

What Can We Do?

Improve recognition of sepsis in the Perinatal population

Adopt best practices

Provide recommended care

BEST PRACTICES:

- **Based on organizations with lowest sepsis mortality**
- **Protocol driven, early recognition, ICU level care**

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Code Sepsis in OB: Let's Intervene before it hits!

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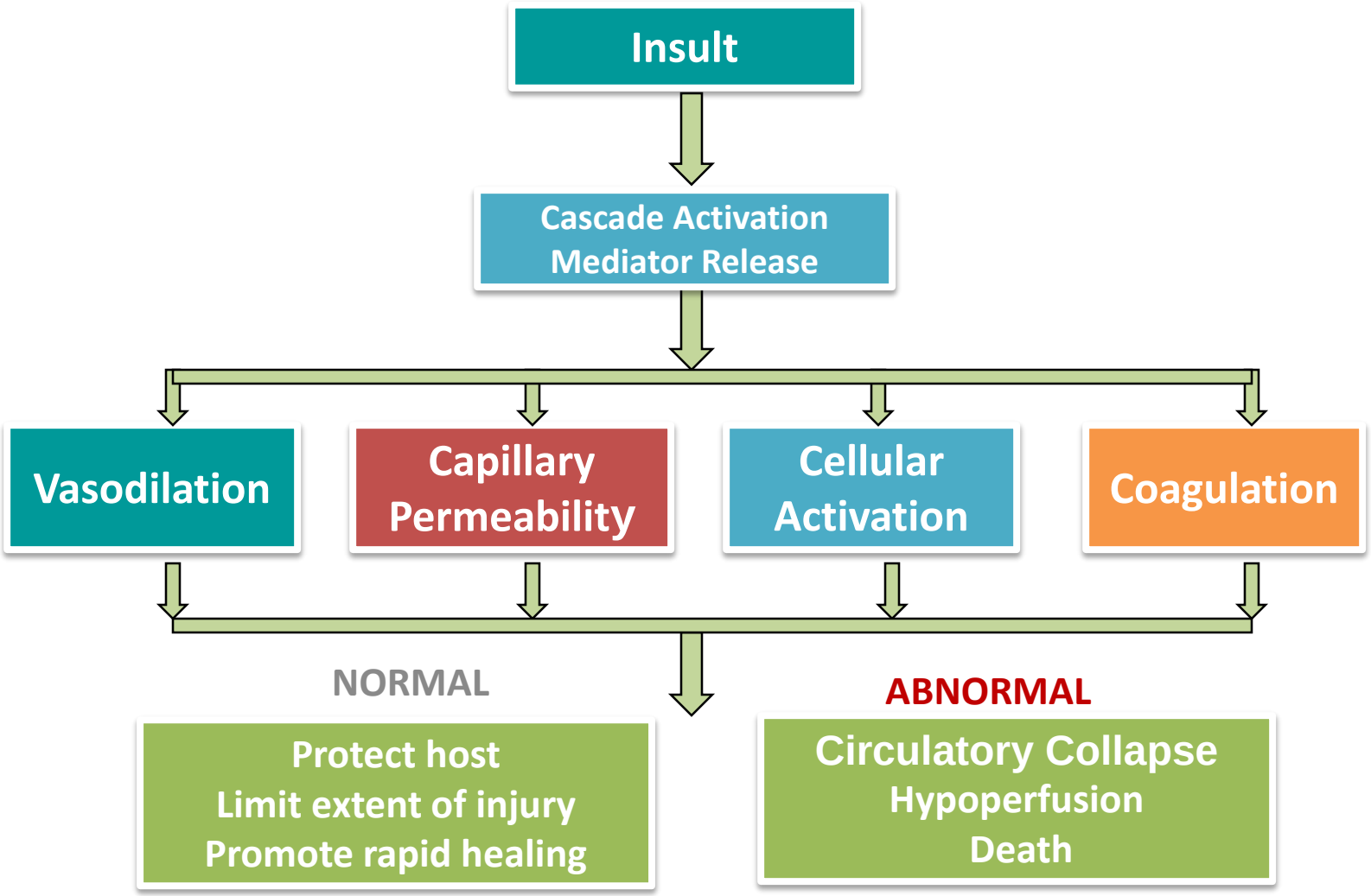
Systemic Inflammatory Response

Definition

A clinical manifestation resulting from an insult, infection, or trauma, that includes a body-wide activation of immune and inflammatory cascades

Why SIRS can KILL in Sepsis*



*https://www.youtube.com/watch?v=o5sYBUarpmI

Sutter Health

Perinatal Parameters

Because of the physiology of pregnancy, the screening criteria was adjusted for perinatal population

- Increase in blood volume increases maternal heart rate by 10-20 bpm
- Minute volume (RR x Tidal Volume) increases 50% due to an increase in respiratory rate and tidal volume
- The position of the diaphragm decreases lung volume and increases the respiratory rate
- Increase in WBC (leukocytosis) in labor and immediate postpartum
- Increase in perfusion to the kidneys causes a decrease in the creatinine level

SIRS CRITERIA Comparison

Adult Screening Criteria

- Temp > 38°C (100.4°F) or < 36°C (96.8°F)
- *HR > 90 bpm*
- *Resp Rate> 20 breaths/minute*
- WBC >12,000, < 4,000 or >10% *immature neutrophils*
- Blood glucose > 140 mg/dl in the absence of diabetes
- *New mental status change*

Perinatal Screening Criteria

- Temp > 38°C (100.4°F) or < 36°C (96.8°F)
- *HR > 110 bpm*
- *Resp Rate > 24 breaths/ minute*
- *WBC > 15,000 or < 4,000 or > 10 % immature neutrophils*
- Blood glucose > 140 mg/dl in absence of diabetes
- *Mental status change*

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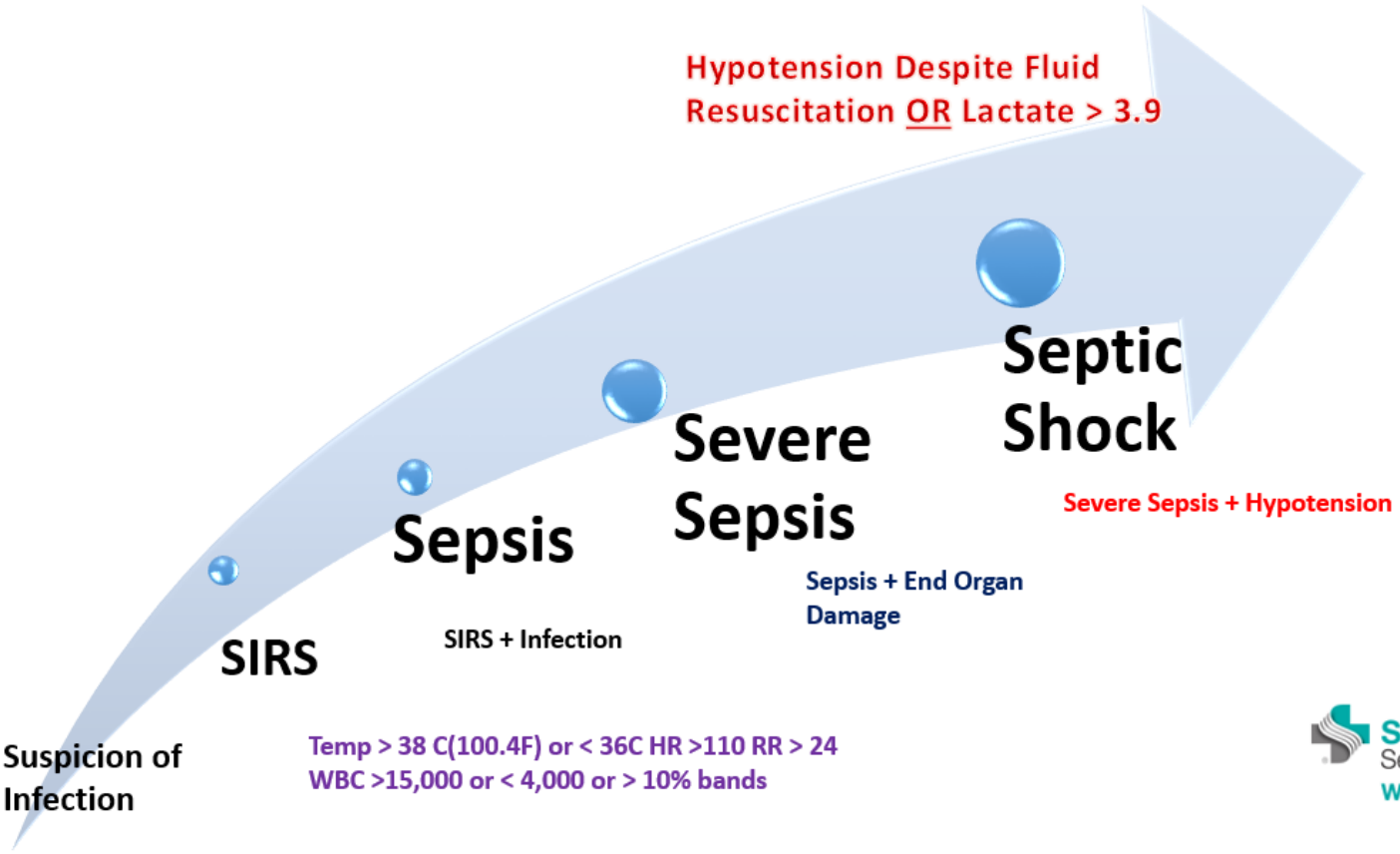
Sepsis Syndrome



Sutter Health
Sepsis Initiative
We Plus You

COMMUNITY STANDARD FOR ADJUSTING SIRS CRITERIA

	Sutter Health	Dignity	ACOG
Temperature	>38/100.4 or < 36/96.8F	> 38/100.4F or <36/96.8F	>38/100.4 or < 36/96.8F
FHR		>160 BPM	
Maternal Heart Rate	> 110 bpm	>110 bpm	> 110 bpm
Respiratory Rate	> 24 breaths per min	>24 breaths per min	> 24 breaths per min
White Blood Cell Count	> 15,000 < 4,000 10% Bands	>15,000 <4,000 10% Bands	No recommended value
Altered Mental Status	AMS present	AMS present	AMS present
Glucose	>140 in absence of DM	>140 in absence of DM	No recommended value

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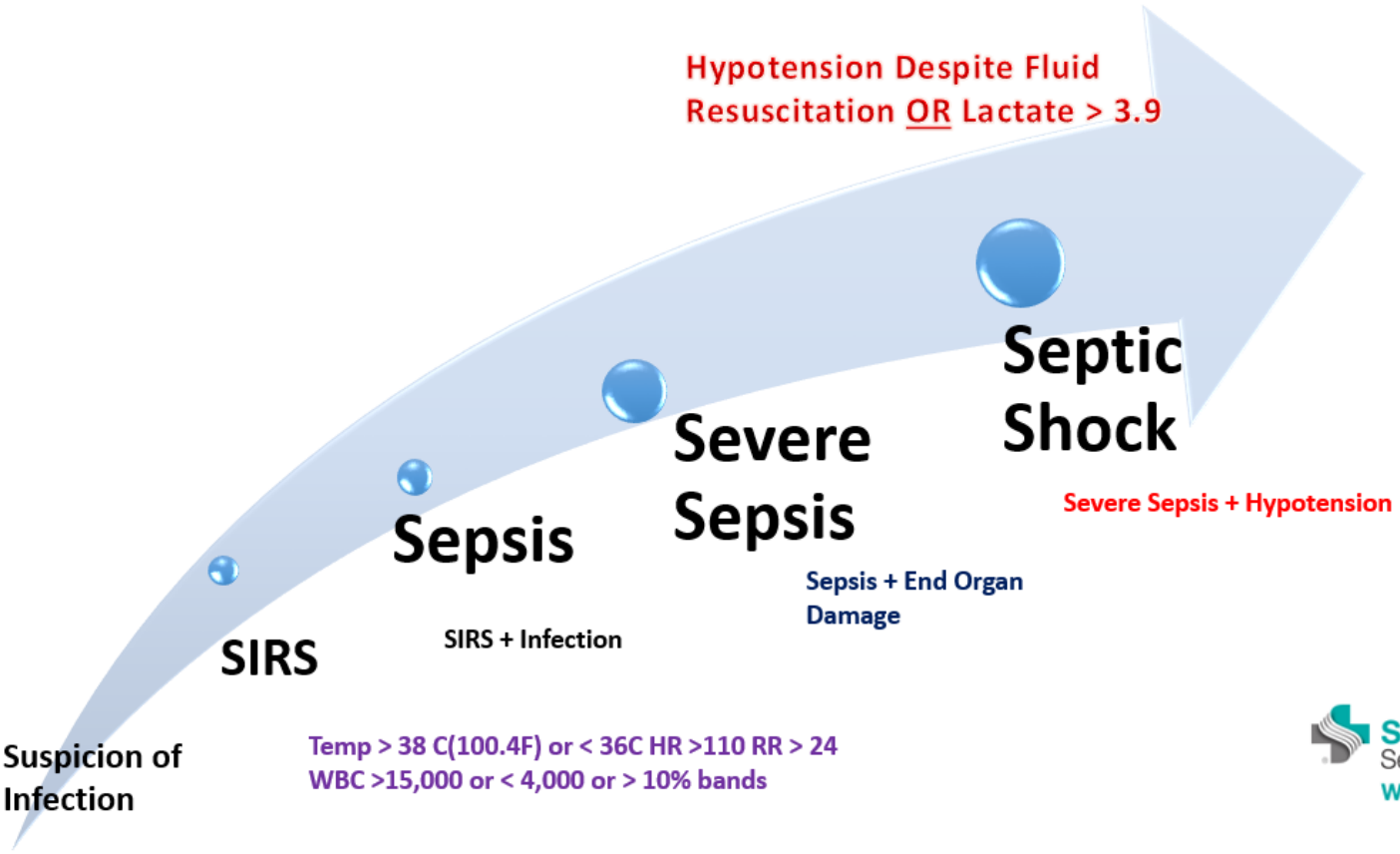
Sepsis Syndrome



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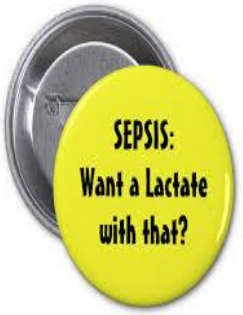
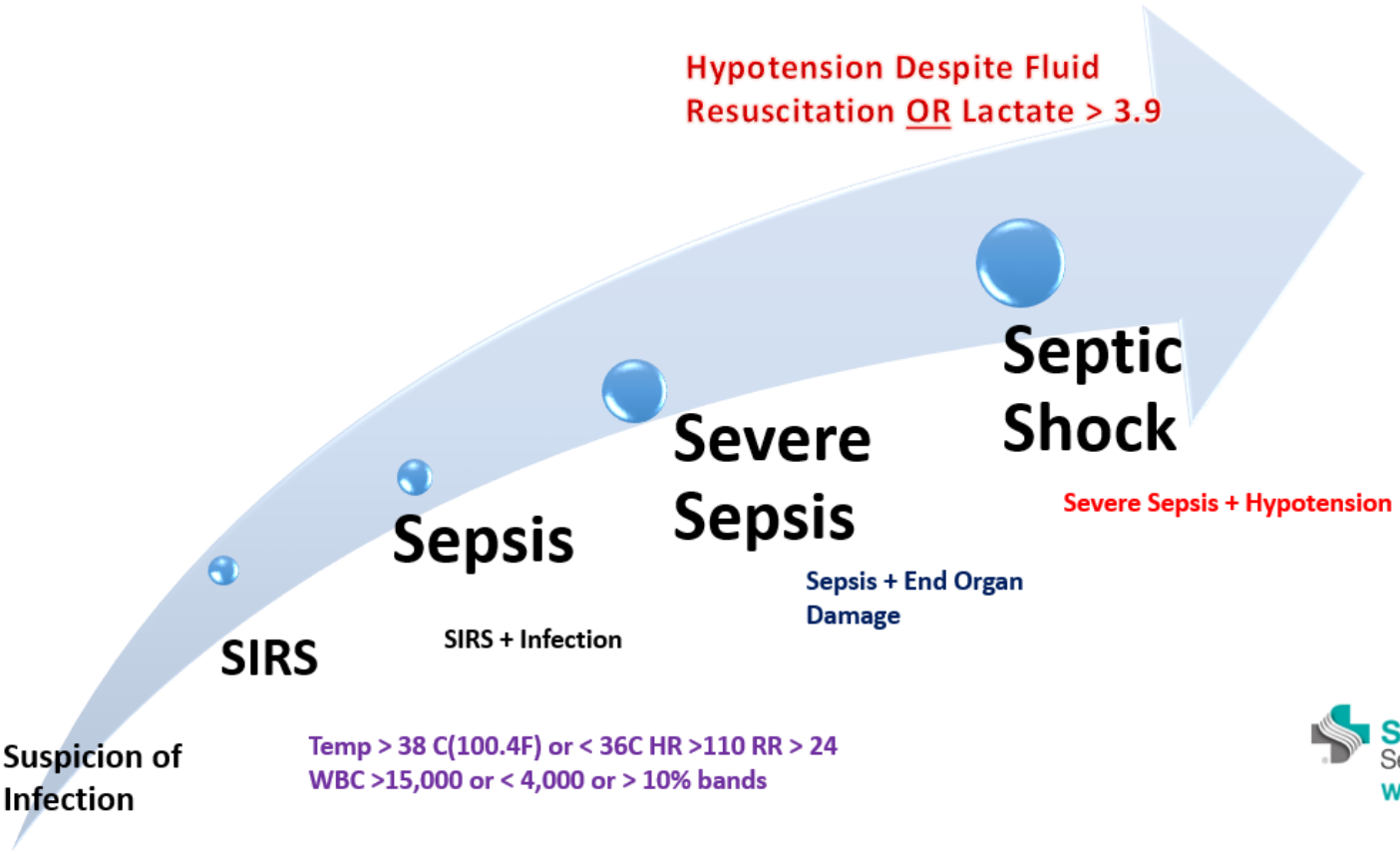
Organ Dysfunction



	Surviving Sepsis Campaign	Sutter Health Parameters
Respiratory	Respiratory: ↑ O2 requirements to maintain SpO2 >90% or PaO2/FiO2 ratio <300	SpO2 <92%
Urine Output	Low Urine Output <0.5 ml/kg/hr. >2 hours	≤30 ml/hour for 2 hours
Creatinine	Creatinine >2.0 mg/dl	Creatinine >1.5 mg/dl
Altered Mental Status	Altered Mental Status	Altered Mental Status
Blood Pressure MAP	SBP < 90mmHg or 40mmHg below the base line or MAP <65 mmHg	SBP <90mmHg or 40mmHg below the base line or MAP <65 mmHg
Platelets	Platelet <100,000	Platelet count <100,000
Lactate	Lactate >2	Lactate >2
Bilirubin	Bilirubin >2 mg/dl	Bilirubin >2 mg/dl
Coagulopathy	Coagulopathy (INR >1.5 or PTT >60 secs)	Coagulopathy (INR >1.5 or PTT >60 secs)

Sepsis Syndrome



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Dismissing Abnormal SIRS as a Decoy

1. Abnormal SIRS criteria are often seen and disregarded in postpartum states
2. ***Fever*** due to elevated metabolic demand
3. ***Tachycardia*** due to relative hypovolemia
4. ***Leukocytosis*** due to stress of delivery
5. Even mild ***hypotension*** can be dismissed in the possibly ***hypovolemic***, young woman with physiologically low blood pressure

How did we implement early recognition as part of our standard work?

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Implementation of Standard Workflow

- A Multidisciplinary Team
- Physician Education First
- Inter-professional Education
- A new perinatal sepsis physician order set
- Physician & RN Champions

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Perinatal Sepsis Standard Work

Initiate Sepsis screening every shift (Nursing Staff)

Create Protocols with SIRS criteria for Maternal Sepsis

Early intervention implemented for all patients who screen positive

Arrival of Rapid Response Team, intensivist evaluation as needed

OB physician notification

Standard Work

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Standard Work Instruction Sheets
Sepsis: Perinatal Area

Who must adopt this process: PBX Operator, RRT Team (RRT RN & RCP), OB MD, OB RN, OB Charge nurse, Intensivist, Lab, Pharmacy
Goal: Utilizing evidence based practice, standard work flow and intra/inter-dept collaboration to achieve early identification of septic patient and on-time completion of sepsis/severe sepsis and septic shock bundles

STEP NO.	OPERATOR	TASK DESCRIPTION	TOOLS/ SUPPLIES REQUIRED
1	OB RN	• Take vitals per order and record in EHR	• EHR
	OB RN	• **Complete Sepsis Screen for the following:** o On Admission/OB Triage o Perform Shift Assessment and document screening ▪ L&D/AP-Within 2 hrs of shift start ▪ Postpartum-Within 4 hrs of shift start o BPA fire o Change in patient condition (change vital signs, new SIRS criteria, new organ dysfunction including altered mental status, new S/Sx, lab test)	• EHR Sepsis Summary
2 *Positive Sepsis Screen/Sepsis Alert*	OB RN	• **Screen positive** for Sepsis/Severe Sepsis (i.e. criteria 1+2 or 1+2+3 or 1+3) 1. Suspected infection 2. 2 or more signs of SIRS 3. New sign of organ dysfunction • OB RN call PBX operator; Operator page RRT RN and RT (Activate **Sepsis Alert**) • Call OB Charge nurse • RRT arrives at bedside (ICU RN/Resp Therapy)	• EHR Sepsis Summary
3	OB RN	• **OB RN Give report to RRT Nurse** **S** = New positive sepsis screen with or without hypotension **B** = Name of patient, age, admit dx, hospital day number, hx, code status **A** = Vital signs, level of consciousness (LOC), labs, physical symptoms **R** = Recommend to validate positive sepsis screen	
	RRT RN	• **RRT RN performs the following**	• EHR Sepsis

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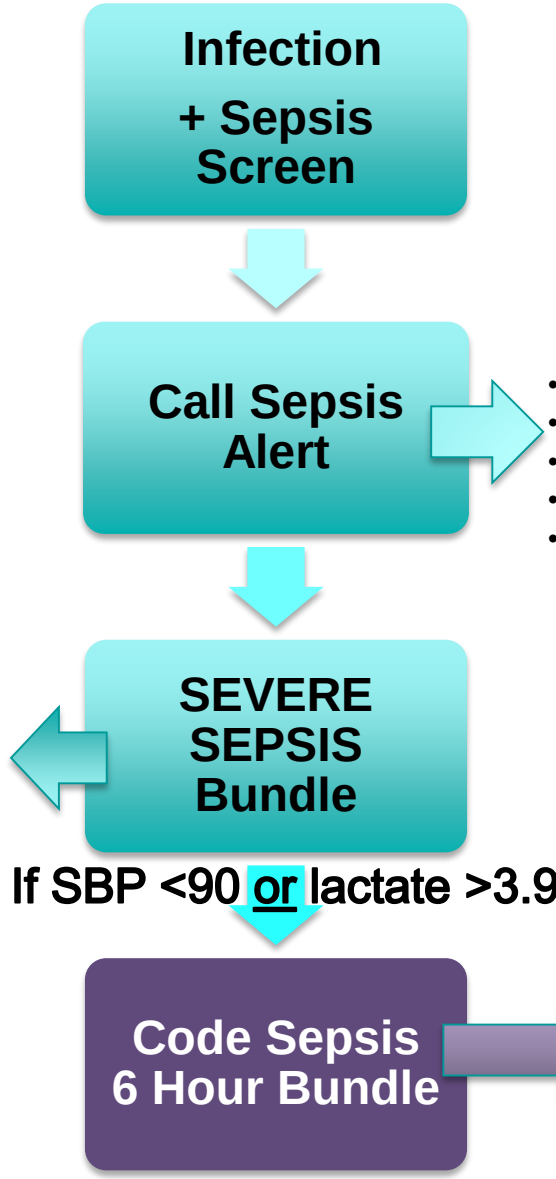
Sepsis Alert



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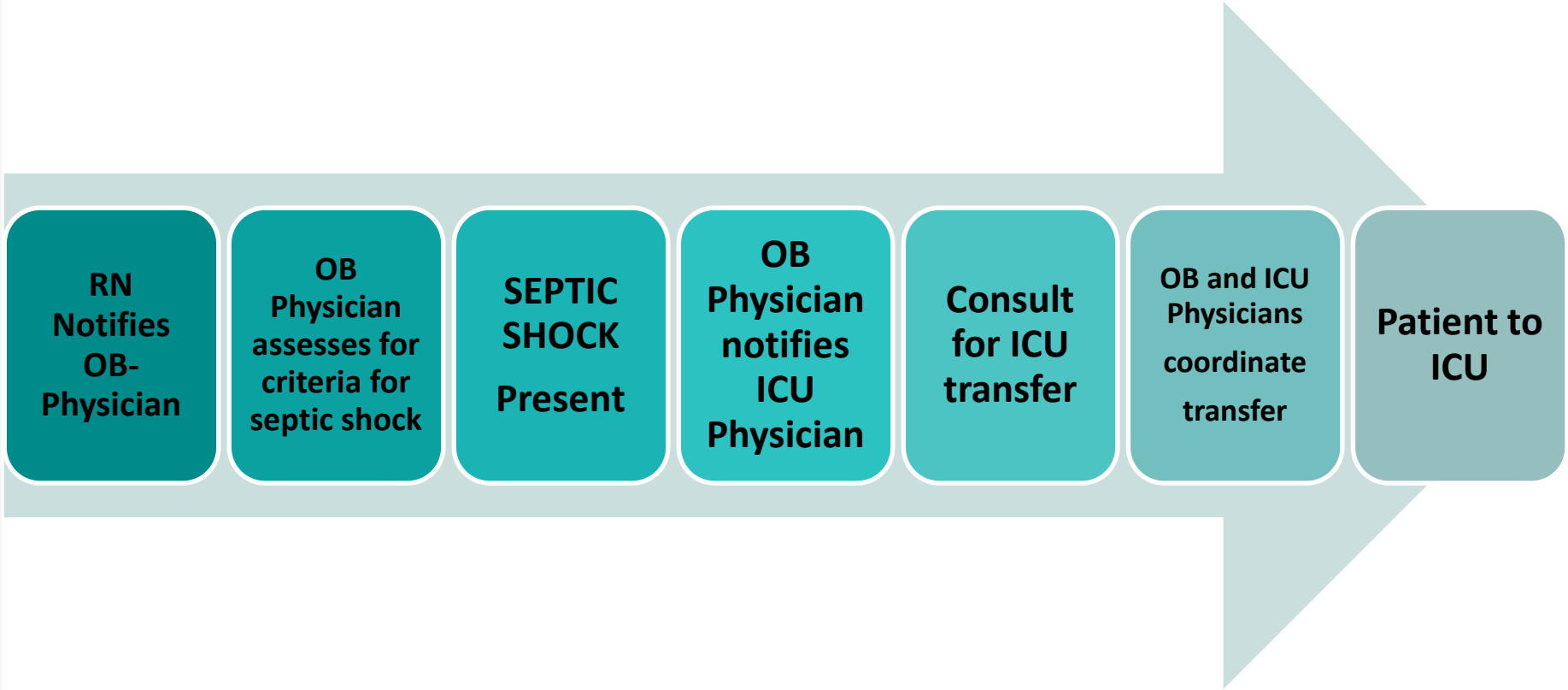
Code Sepsis
6 Hour Bundle



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Maternal Sepsis

The impact of implementation at Sutter Medical Center Sacramento and Central Valley Sutter Health

The Source of Infection in Perinatal Patients Diagnosed with *Sepsis* during Pregnancy Sutter Medical Center Sacramento April 2014-January 2015

	Frequency (N=99)	Percent
Chorioamnionitis	45	46.4 %
Pyelonephritis	14	14.4 %
Endometritis	5	5.2 %
Urinary Tract Infection	5	5.2 %
Unknown	29	29 %

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Sepsis, Severe Sepsis and Septic Shock
Sutter Medical Center Sacramento
April 2014-January 2015

	Observation		Observation
Sepsis Screen Positive	0.024% 99/4000	Screen Positive, confirmed	98% 97/99
Severe Sepsis	0.012% 47/4000	Severe Sepsis Screen Positive	48.5% 47/97
Septic Shock	0.002% 7/4000	Septic Shock Screen Positive	7.2% 7/97

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Addressing the Barriers

Our patients are young and healthy, did not look septic

The bundles would result in over-treatment

Risk of Pulmonary of Edema

Women with epidurals have fevers

Lactate is normally elevated in the laboring woman

No Sepsis Screening during second stage of labor

Let's Begin the Campaign to promote Early Recognition and Management of Maternal Sepsis

Think **Sepsis.**
Save a **Life.**

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Any Questions?

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Question and Answer Session

Please submit your questions via the chat window, located on the lower left-hand side of the webinar screen.

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Continuing Education

- Detailed instructions for taking the post-test and evaluation will appear on your screen as soon as today's webinar concludes.
  - www.cdc.gov/tceonline; Access Code: **WC0517**
  - If you are listening to this webinar as a recording, please check the Tune in to Safe Healthcare webinar page for instructions for claiming continuing education.
- If you exit out of the webinar prior to taking the post-test and evaluation, you can access the continuing education information in an email that will be sent to you following today's webinar.

THANK YOU