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3-27-2019

Sepsis: Identification & Recognition

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Recommended Citation

Ethington, Shelbi; Irwin, Lakisha; Cramer, Jodi; Roell, Victoria; and Von Elling, Mindy, "Sepsis: Identification & Recognition" (2019). *Nurse Presentations*. 5.

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Sepsis: Identification & Recognition

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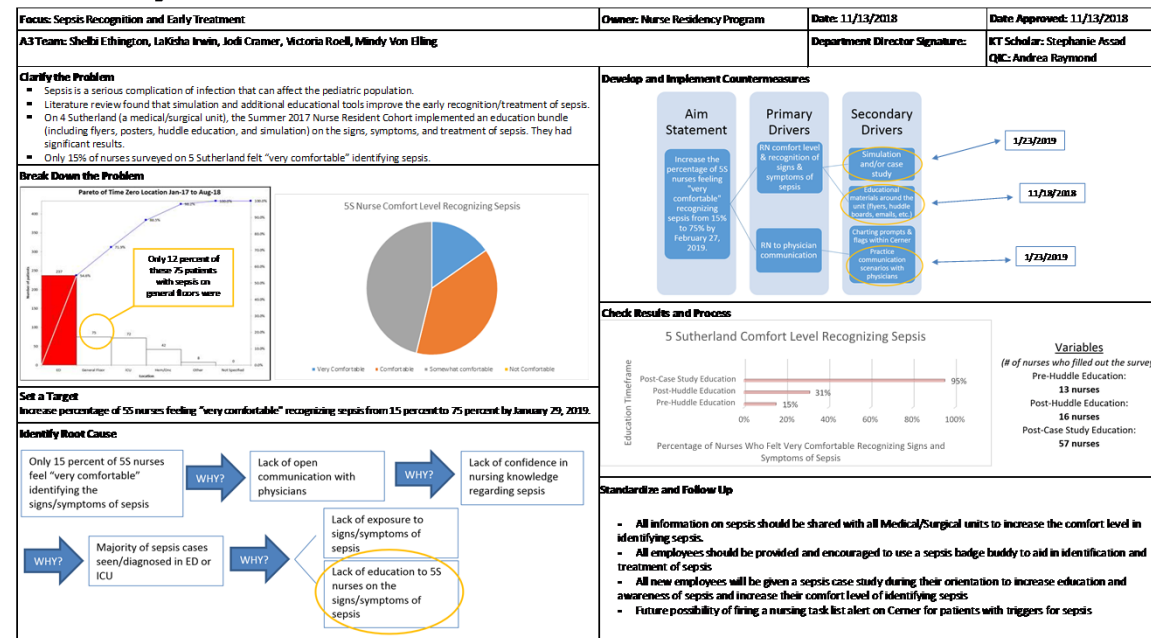


Acknowledgements

- 5 Sutherland Unit Directors and Educator: Janette Rowe, Kelli Rafols & Maria Williams
- 4 Sutherland Unit Directors: Janet Franzen & Cheryl Powers
- 4 Sutherland Summer 2017 Nurse Residency Program Cohort
- KT Scholar: Stephanie Assad
- QIC: Andrea Raymond
- Children's Mercy SIM lab educators
- Dr. Stephanie Burrus

A3 Overview

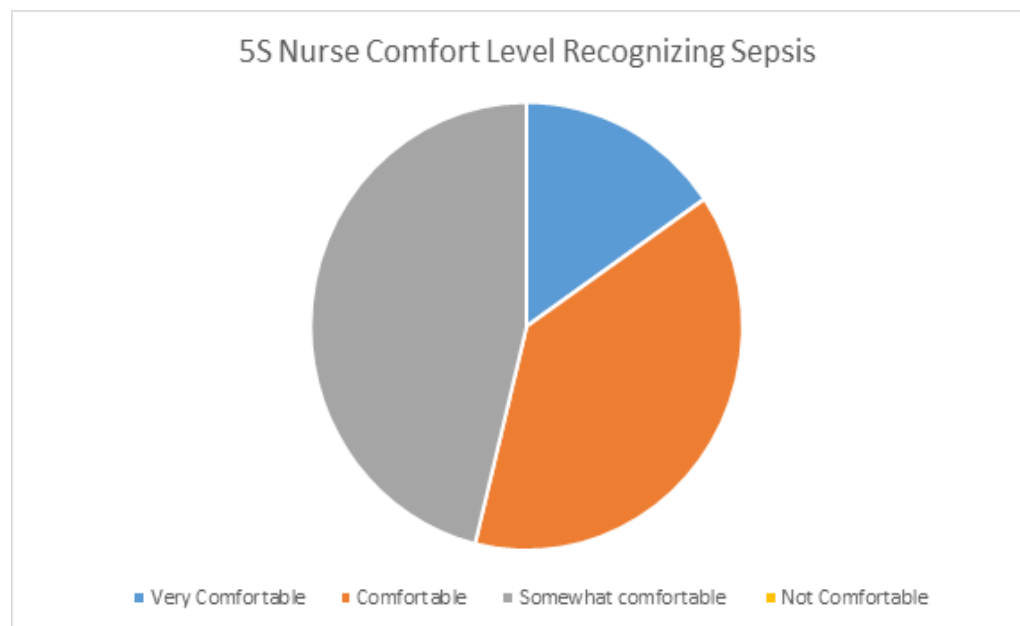
A3 for Problem Solving



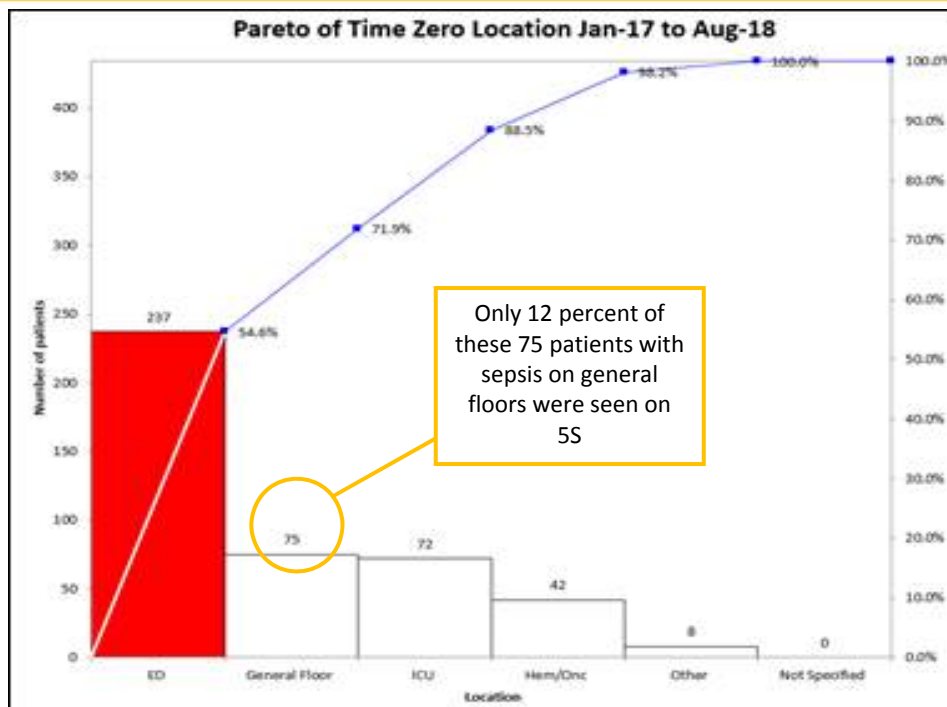
Clarify the Problem

- Sepsis is a serious complication of infection that can affect the pediatric population.
- Literature review found that simulation and additional educational tools improve the early recognition/treatment of sepsis.
- On 4 Sutherland (a medical/surgical unit), the Summer 2017 Nurse Resident Cohort implemented an education bundle (including flyers, posters, huddle education, and simulation) on the signs, symptoms, and treatment of sepsis. They had significant results.
- Only 15% of nurses surveyed on 5 Sutherland felt “very comfortable” identifying sepsis.

Breakdown the Problem



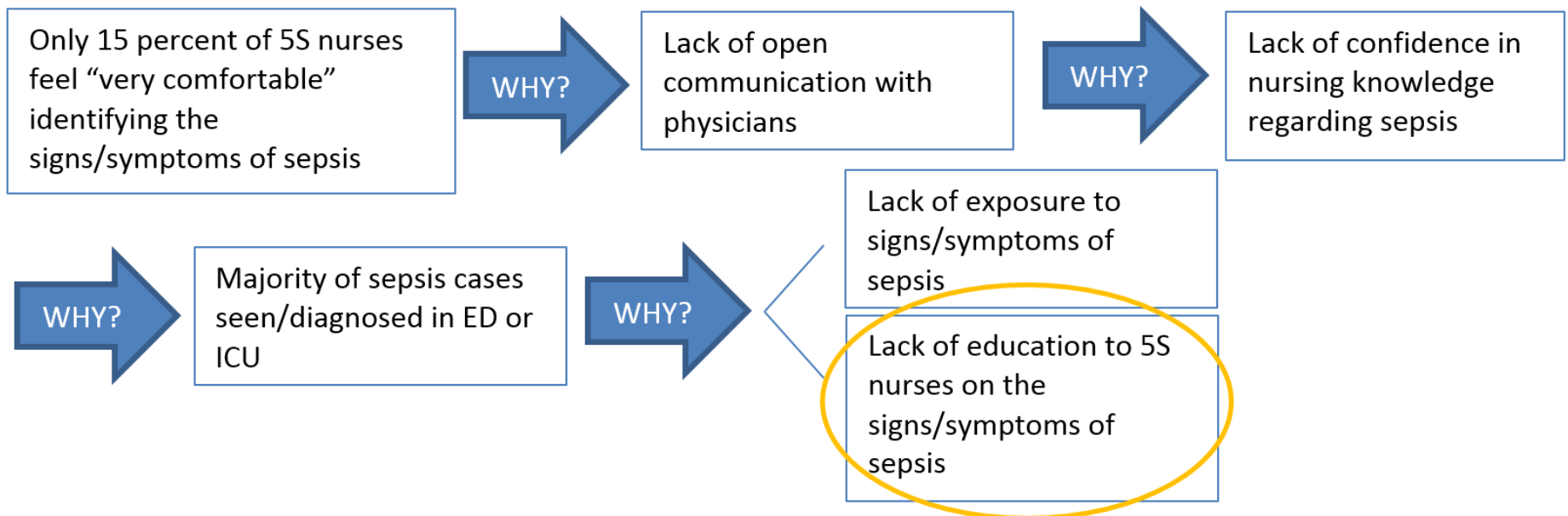
Breakdown the Problem



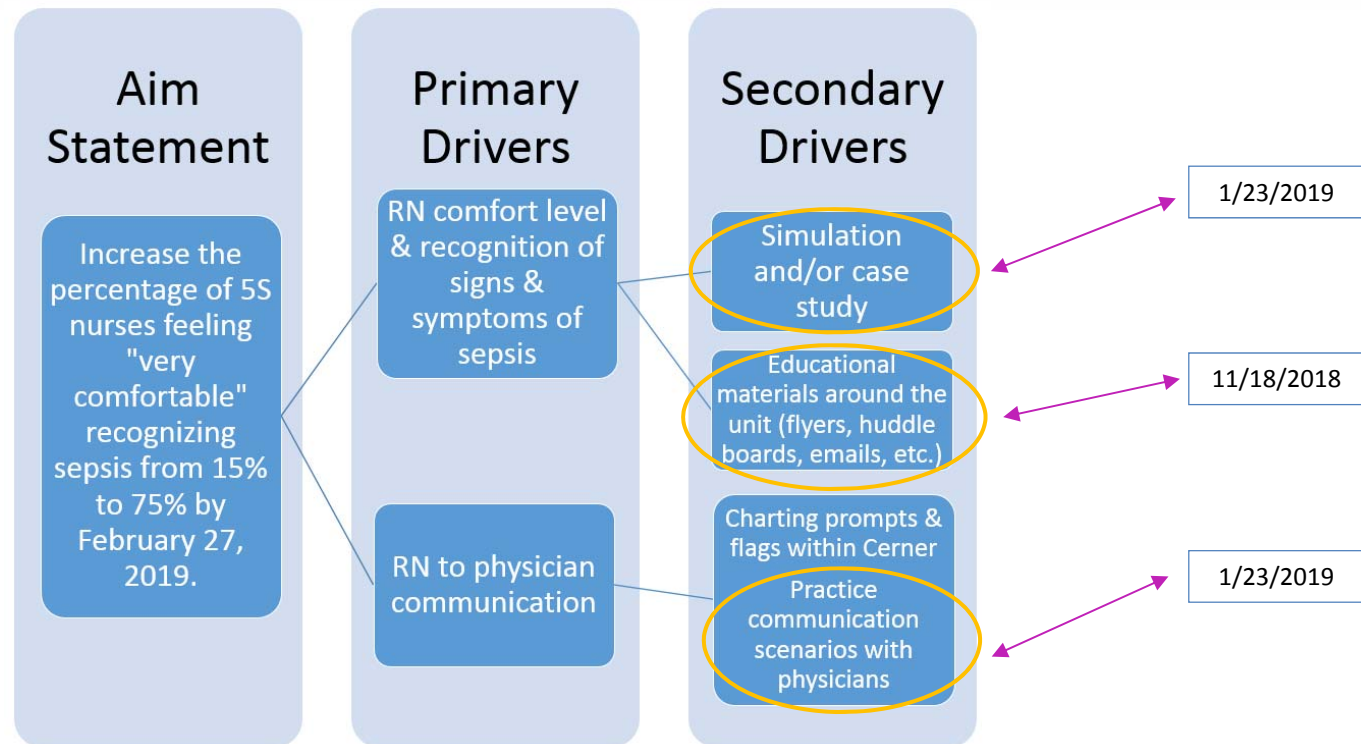
Set a Target

To increase the percentage of 5S nurses feeling “very comfortable” recognizing sepsis from 15 percent to 75 percent by January 29, 2019.

Identify Root Cause



Develop and Implement Countermeasures



Develop and Implement Countermeasures

SEPSIS

B- Blood cultures before antibiotics

L- Line placed within 15 minutes

A- Antibiotics completed within 1st hour

S- 1st Saline Bolus of 20 ml/kg given within 20 minutes (Saline bolus of 60 ml/kg completed within 1 hour)

T- Timely identification of patients at risk for severe sepsis

TREATMENT

Develop and Implement Countermeasures

Do you know the clinical signs in order to identify **SEPSIS**?

Heart Rate



Bradycardia or
Tachycardia

Blood Pressure



Early Onset: Hypertension
Late Onset: Hypotension

Inadequate Urine Output



GOAL:
< 30 kg: > 1 ml/kg/hr
≥ 30 kg: ≥ 30 ml/hr

Mental Status



Lethargic, confusion,
and/or agitation

Capillary Refill



Flash capillary refill
(warm shock) or delayed
capillary refill (cold shock)

Develop and Implement Countermeasures

SEPSIS CASE STUDY

Situation: 9 yr old female is admitted to the floor at 0930 for severe abdominal pain mild fever and a cloudy PD. She has had nausea and vomiting for 1 day prior to admission. Pt was given Zofran and Tylenol in the ED and an IV was placed but no fluids were started yet. When entering the room for an initial assessment the RN notices the pt is showing her grandma her new comic book she had created with great enthusiasm. Vitals are all within normal limits, pt PEWS score is at a 0. When the RN returns for a noon assessment the pt seems very sleepy, and grandma mentions that she has been mumbling for the past 15 minutes. Upon assessment RN notices that pt is hard to arouse, mottled, cool to touch, pulses are +1, and cap refills are 4.5 seconds.

Vitals

- Temp: 35.8 degrees C,
- BP: 90/65
- HR: 145
- RR: 40

What Signs and Symptoms make you think it could possibly be sepsis?

- A. Temp abnormality
- B. Heart Rate abnormality
- C. Altered Mental Status
- D. Perfusion abnormality
- E. All of the above

Would you activate a Situational Awareness?

- A. Yes
- B. No



How you would communicate with a physician using SBAR

- Situation: This is (introduce yourself) and I am the nurse taking care of Patty Joe Sue in room 8 on 5 sutherland and I am concerned she is showing signs of Sepsis
- Background: She was admitted for 1 day of nausea and vomiting, severe abdominal pain and cloudy PD, and presenting signs of possible peritonitis.
- Assessment: I am concerned for sepsis due to current signs and symptoms of: pt is mottled, cool to touch, altered mental status, hard to arouse, with a temp of 35.8, RR of 40 and a HR of 145, cap refill of 4.5.
- Recommendation: I feel as though we should activate a situational awareness and should follow the guidelines of sepsis to treat in a timely manner by: BLAST

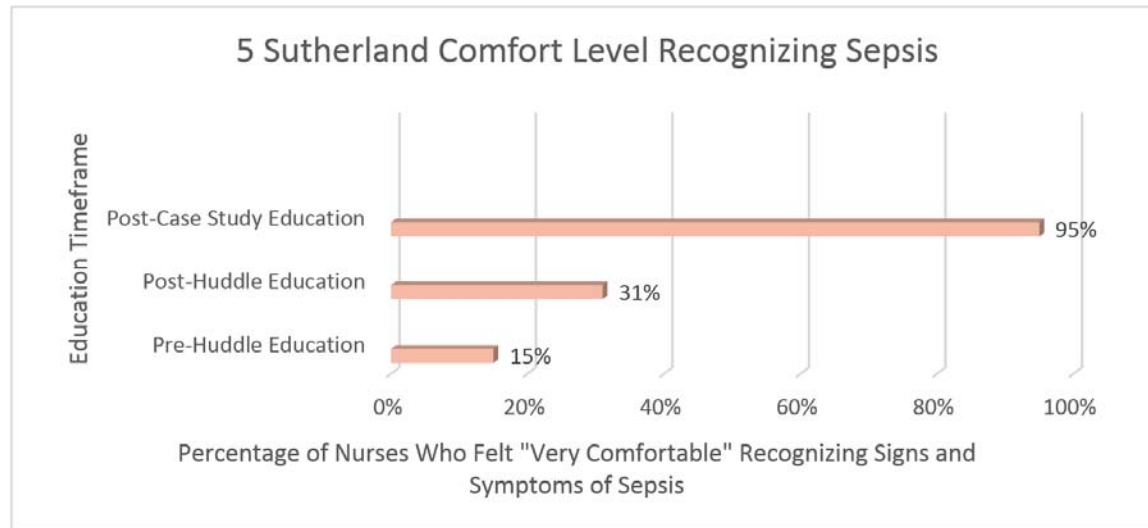
Blas

- Blood Cultures before antibiotics
- Line within 15 minutes
- Administer high flow O2 if indicated
- Antibiotics completed within the first hour
- Saline Bolus 60ml/kg completed within the 1st hour (must be given in 20 min increments)
- Timely identification of pts at risk for severe Sepsis

How to recognize sepsis

- Children suggestive of infection or inadequate tissue perfusion.
- Temp Abnormality: <36 or >38.5
- Heart rate abnormality: follow algorithm
- Plus one of the following:
 - Altered mental status, perfusion abnormality, high risk conditions (hypotension)
 - Pulses: decreased, weak, or bounding
 - Cap refill: >3 seconds or <1 second
 - Skin: mottled, cool, flushed, ruddy
 - Metal status: decreased, irritability, confusion, inappropriate crying, drowsiness, poor interaction with parents, lethargy, decreased arousability

Check Results and Process



Variables

(# of nurses who filled out the survey)

Pre-Huddle Education:

13 nurses

Post-Huddle Education:

16 nurses

Post-Case Study Education:

57 nurses

Standardize and Follow Up

- All information on sepsis should be shared with all Medical/Surgical units to increase the comfort level in identifying sepsis.
- All employees should be provided and encouraged to use a sepsis badge buddy to aid in identification and treatment of sepsis
- All new employees will be given a sepsis case study during their orientation to increase education and awareness of sepsis and increase their comfort level of identifying sepsis
- Future possibility of firing a nursing task list alert on Cerner for patients with triggers for sepsis

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Questions?

