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Introduction

The purpose of this project is to perform a comprehensive review of adult ICU sepsis protocols and policies across a large northeast hospital system with a goal of developing a strategic plan for the implementation of an adult nurse driven sepsis protocol to present to the ICU stakeholders.

Background and Significance

- **Sepsis** - overwhelming immunological response to an infection that can lead to tissue hypoperfusion, end organ damage and dysfunction, amputations or death.
- **U.S.** – 1.7 million cases with 270,000 deaths annually (Rhee et al., 2017)
- **Worldwide** – 30 million cases with 8 million deaths annually (Gyawali et al., 2019)
- 1 in 3 inpatients had sepsis (CDC, 2019)
- **Cost** - 27 billion dollars annually for all payer groups (Celeste & Moore, 2016)

Problem:

- Patients who are living longer with significant comorbidities may require ICU care. Contributing risk factors for sepsis include lengthy hospital stays and advance therapies such as invasive lines and devices.
- Despite established Surviving Sepsis Campaign (SSC) guidelines, delays in sepsis treatment occur and result in an increase in morbidity, mortality and hospital costs.
- Current literature examines nurse driven sepsis protocols in the emergency department (ED) and ward settings, but there is a gap in literature that investigates nurse driven sepsis protocols in the adult ICU.

Methodology

- A sample of existing adult ICU sepsis protocols and policies was collected from 11 acute care facilities belonging to a large northeast hospital system with the aid of an online survey tool via an encrypted email server.
- A one-page consent was included with the online survey that allowed for the utilization of information for the purpose of the project.
- The results from the questionnaire were compiled in a table.
- A strategic plan for the implementation of a nurse driven sepsis protocol for the adult ICU was developed and presented to ICU stakeholder at an urban, teaching hospital.

Hour-1 Bundle

**Initial Resuscitation for Sepsis and Septic Shock**

1. **MEDICAL EMERGENCY**
   - Initiate bundle upon recognition of sepsis/septic shock.
   - May not complete all bundle elements within one hour of recognition.

2. **Obtain blood cultures before administering antibiotics.**

3. **Administer broad-spectrum antibiotics.**

4. **Begin rapid administration of 30 mL/kg crystalloid for hypotension or lactate ≥ 4 mmol/L.**

5. **Apply vasopressors if hypotensive during or after fluid resuscitation to maintain a mean arterial pressure ≥ 65 mm Hg.**

6. **Measure lactate level. Remeasure lactate if initial lactate elevated (> 2 mmol/L).**

Surviving Sepsis Campaign

Reference List

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