Decreasing the 30-Day Sepsis Readmission Rate through Nurse Education in a Medical Surgical Unit

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**Introduction & Background**

<table>
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<tr>
<th>Sepsis Incidence - Global &amp; National</th>
<th>World</th>
<th>United States</th>
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<tbody>
<tr>
<td>Develop Sepsis</td>
<td>49 million</td>
<td>1.7 million</td>
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<tr>
<td>Survive Sepsis</td>
<td>38 million (78%)</td>
<td>1.4 million (82%)</td>
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- 1/3rd survivors require readmission (Zilberberg et al., 2015)
- Survivors are prone to high rates of 30-day readmission (Chen et al., 2020; Di Paolo et al., 2017; Krumholtz et al., 2002; Rice et al., 2018)
- Sepsis readmissions are preventable (Prescott, 2018)
- Survivors have a 1.7x increased risk of mortality from all causes compared to the general population (Prescott, 2018)

**Purpose:**

Problem Statement: No standardized education on sepsis survivorship for nurses.

Literature Findings:

- Survivors of sepsis have increased mortality and morbidity (Chen et al., 2020; Di Paolo et al., 2017; Krumholtz et al., 2002; Rice et al., 2018)
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**Methods**

**Participants:** 21 RNs of Bridgeview Unit of JHBM with all employment status including new hires.

**Intervention:** 50-minute online educational module on sepsis survivorship

**Access:** Hospital or personal computers or smart phones to register and complete the course

**Measurements:**

- Pre/post test assessment of knowledge using knowledge questionnaire by Sepsis Alliance Institute
- 30-day sepsis readmission rate from Population health dashboard

**Analysis:** Descriptive statistics; Wilcoxon Signed Rank Test

**Results**

**Aim 1:** Determine the baseline 30-day sepsis readmission rate of the unit

<table>
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<th>May-July - 2020 (3 months)</th>
<th>May-July - 2019 (3 months)</th>
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<tr>
<td>No of discharges with primary diagnosis sepsis/severe sepsis/septic shock</td>
<td>28</td>
</tr>
<tr>
<td>Readmitted within 30 days of discharge</td>
<td>2</td>
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<td>30-day sepsis readmission rate</td>
<td>7.1%</td>
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**Aim 2 & 3**

**Aim 2:** Determine the baseline knowledge of the nurses of the unit on the challenges of sepsis survivorship and provide online educational course on survivorship over an 8-week period.

**Aim 3:** Measure the effects of educational intervention on nurses' knowledge on the challenges of sepsis survivorship

**Aim 4:** Measure the effects of educational intervention on 30-day sepsis readmission rate of the unit

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<th>May - July 2020 (3 months)</th>
<th>October - December 2020 (3 months)</th>
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**Conclusion, Dissemination & Sustainability**

- Online educational module improved nurses' knowledge on the challenges of sepsis survivorship
- Benefits of online educational module:
  - Time-efficient
  - Cost-effective
  - Unbiased
  - Possible to view multiple times
  - Can be finished at own convenience

Due to the influence of COVID-19 pandemic on the readmission rate, the effect of the intervention on 30-day sepsis readmission is inconclusive.

Nurses being the primary health care members involved in discharge education, improvement in nurse knowledge could be suggested to have clinical significance in reducing readmission.

Additional studies including patient education over prolonged time span are needed to determine statistical significance.

**Next Steps**

- Sustainability: Implementation as Unit’s New Hire Orientation Competency
- Annual Competency
- Dissemination through project presentation at Hospital Sepsis Readmission work group
- Project site in unit staff meeting
- Sepsis Alliance Webinar
- Submission of the intervention to relevant peer reviewed journals

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- Sepsis Alliance Institute

**References**