Implementation of LIBERATE protocol with focus on delirium in an acute care community hospital’s medical and cardiovascular intensive care units

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Implementation of LIBERATE protocol with focus on delirium in an acute care community hospital’s medical and cardiovascular intensive care units

Lima Memorial Health System, Lima, Ohio
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Background

- Delirium is a commonly encountered complication that typically occurs in critically ill patients admitted to the intensive care unit (ICU)
- Delirium is an independent risk factor for poor short and long term outcomes as there is a 10% increase in relative risk of morbidity in one year with each day of delirium
- The Society of Critical Care Medicine (SCCM) introduced the ICU Liberation quality improvement initiative
- The goal of this initiative is to "liberate" patients from the aspects of patient care that may threaten the patient’s sense of self-worth
- In a pilot study, Barnes-Daley, et al. found that for every 10% increase in bundle compliance, patients had 15% higher odds of hospital survival
- The interventions recommended by the Liberation Bundle focus on assessment, prevention, and management of delirium

Multicomponent, non-pharmacologic interventions are used for prevention and management of delirium to help reduce modifiable risk factors for delirium

Pharmacologic management with antipsychotics is only appropriate when the patient is delirious AND displaying agitation or harmful behaviors

*Examples: reorienting the patient, reducing sedation, enabling use of eye glasses
**Studies have demonstrated no difference in duration of delirium in non-agitated patients who were managed without medication

Purpose

- Lima Memorial Health System (LMHS) implemented a new LIBERATE protocol to comply with the ICU Liberation Bundle and ensure the best patient outcomes in the critical care areas.
- Historically at LMHS, there has been no guidance on the assessment and management of delirium.
- The purpose of this study is to determine the effect of proper assessment, prevention, and management of delirium on the ICU length of stay.

Methods

Design: Descriptive, single site interventional study, consisting of prospective data review

Duration: 8-12 weeks

Study Participants:

<table>
<thead>
<tr>
<th>Inclusion</th>
<th>Exclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult patients (age ≥ 18)</td>
<td>Pediatrics</td>
</tr>
<tr>
<td>Admitted to the medical or cardiovascular ICU</td>
<td>Pregnant or breast-feeding</td>
</tr>
<tr>
<td>CAM-ICU conducted by nursing staff twice per shift</td>
<td>Antipsychotic use prior to admission</td>
</tr>
<tr>
<td>If deemed necessary, an order set with guideline recommended options will be available*</td>
<td>Documented lack of non-pharmacologic intervention</td>
</tr>
</tbody>
</table>

Interventions:

- CAM-ICU conducted by nursing staff twice per shift
- A positive CAM-ICU triggers a notification to the attending physician
- Multicomponent, non-pharmacologic interventions will be implemented on all patients in critical care areas
- Nursing staff will document the interventions they incorporate within the CAM-ICU assessment
- Delirious patients without agitation or worrisome behaviors will be managed with non-pharmacologic intervention alone
- Patients with agitation or worrisome behaviors may receive antipsychotics based on physician’s clinical judgement
- If deemed necessary, an order set with guideline recommended options will be available*

Assessment

Prevention

Management

Primary Outcome:

- Length of stay in the critical care unit

Secondary Outcomes:

- Mean daily sedative dose
- Total number of benzodiazepine doses
- Appropriate discontinuation of pharmacologic therapy used for delirium
- Duration of delirium
- Adverse reactions from pharmacologic intervention (eg. QTc prolongation)

Results

- Research ongoing
- Results will be presented at the Ohio Pharmacy Residency Conference in May 2019

Lima Memorial (Setting)

Affiliate: ProMedica (Toledo, OH)
Model Type: Non-profit Acute Care Community Hospital
Total Beds: 329
Average Daily Census: 100
Critical Care Beds: 24

Disclosures

Authors of this presentation have the following to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation:

Karen Kier: Nothing to disclose
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Jasmine Hossler: Nothing to disclose

References