# Improving ICU Liberation Bundle Documentation: A Quality Improvement Project

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## Background

Critical illness and admission to the intensive care unit (ICU) can be life saving but it can have life altering consequences after survival (Dessler, Law, & Needham, 2011).

The ICU Liberation Bundle is adapted from guidelines for critical care management to address pain, agitation, delirium, immobility, and sleep disturbances in the ICU (Devlin et al., 2018; Posa, Signh, & Notrica, 2020).

In 2021, there was a transition to a new electronic health record system (EHR) system. Although there is a section to document on the ICU Liberation Bundle elements, the current protocol did not have consistent language and the ICU professionals did not receive education on documentation requirements.

## Purpose

The purpose of the quality improvement project was to collaborate with the intensive care unit (ICU) professionals to develop an ICU Liberation Bundle protocol, and education to improve documentation and reduce ICU length of stay (LOS).

## Methods

The seven bundle elements are pain, spontaneous awakening trials/spontaneous breathing trials, sedation, delirium, early mobility, family engagement, and good sleep. This bundle has been shown to liberate the patients from harm in the ICU (Barnes et al., 2020).

The ICU Liberation Bundle is adapted from guidelines for critical care management to address pain, agitation, delirium, immobility, and sleep disturbances in the ICU (Devlin et al., 2018; Posa, Signh, & Notrica, 2020). The early mobility element has been shown to liberate the patients from harm in the ICU (Barnes et al., 2020).

In 2021, there was a transition to a new electronic health record (EHR) system. Although there is a section to document on the ICU Liberation Bundle elements, the current protocol did not have consistent language and the ICU professionals did not receive education on documentation requirements.

## Results

### Purpose
- 54 professionals (18% response rate) completed the education
- There was no statistically significant difference in the composition of the reports during the pre- and post-intervention data when analyzed with chi-squared tests.

### Methods

<table>
<thead>
<tr>
<th>ICU Liberation Elements</th>
<th>Oct 2021</th>
<th>Dec 2021</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non ventilated patient bundle compliance, N</td>
<td>68</td>
<td>68</td>
<td>0.859</td>
</tr>
<tr>
<td>Pain, n (%)</td>
<td>25 (36.8%)</td>
<td>26 (38.2%)</td>
<td>0.182</td>
</tr>
<tr>
<td>Sedation, n (%)</td>
<td>52 (76.5%)</td>
<td>48 (70.6%)</td>
<td>0.182</td>
</tr>
<tr>
<td>Delirium, n (%)</td>
<td>36 (52.9%)</td>
<td>35 (51.5%)</td>
<td>0.604</td>
</tr>
<tr>
<td>Mobility, n (%)</td>
<td>28 (41.2%)</td>
<td>31 (45.6%)</td>
<td>0.604</td>
</tr>
<tr>
<td>Family, n (%)</td>
<td>18 (26.5%)</td>
<td>22 (41.2%)</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

### Additional Information

- **Average ICU LOS went from 3.43 days to 3.61 days**.

### Conclusions

- The educational interventions were effective to change ICU Liberation Bundle documentation practices.
- More professionals documented in the ICU Liberation tab in the EHR after the intervention.
- The design of this QI project to improve ICU Liberation documentation was effective to obtain sufficient data to monitor and analyze documentation practices.