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Implementation of a nurse-administered dysphagia screening tool to prevent post-extubation dysphagia complications

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ABSTRACT

BACKGROUND

Nature & significance of problem (global) • Post-extubation dysphagia (PED) is an addressable and preventable harm.

Nature & significance of problem (local) • No standardized practice in the Medical ICU at UVMCC • Reliance on Speech Language Pathology. • Delays with nutrition and potential for decreased patient and family psychosocial wellbeing. • Lack of oral nutrition status (PO) status: • Can be a barrier to transfer patient out of the ICU. • Can lead to delays in medication therapy.

What do we know? • PED occurs in 3% to 62% of intensive care unit patients (Skoretz et al., 2010). • Early identification of PED is crucial so modifications and further evaluation can occur before harm is caused (Macht et al., 2011; Malandraki et al., 2016). • Preventable aspiration events contributes to added healthcare costs. Each aspiration pneumonia (ICD-9 507.0) event costs hospitals an average of $13,356 (HCUP, 2015). • Dysphagia screening tools (mostly validated in the stroke population) have varying degrees of interrater reliability, specificity, and sensitivity (Edmiaston et al., 2018).

What is yet to be known? • Limited studies on PED interventions (Brodsky et al., 2014). • One study looking at a nurse led PED screening tool for ICU (Johnson et al., 2018).

METHODS

PURPOSE & AIMS

The purpose of this quality improvement project was to implement a nurse-administered dysphagia screening tool for post-extubated patients in a 21-bed mixed medical intensive care unit (MICU) at a large academic medical center.

METHODS

Project process flow

Professional Knowledge

Super User Training (Conducted by SLP)

Key Informant Surveys

Staff Training (75%) (1:1 and YouTube)

Intervention Trial

Pre-Intervention Survey

Post-Intervention Survey

Screening Data

RESULTS

Consent Form: Screening tool- Working Process

<table>
<thead>
<tr>
<th>Percentage of Respondents</th>
<th>American Pediatric Society for Pre-Intervention (N=38)</th>
<th>I am comfortable with assessing dysphagia in my patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>Never</td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>10%</td>
<td>Failed</td>
<td>Disagree</td>
</tr>
<tr>
<td>20%</td>
<td>Not screened</td>
<td>Neutral</td>
</tr>
<tr>
<td>30%</td>
<td>Passed</td>
<td>Agree</td>
</tr>
<tr>
<td>40%</td>
<td>Passed</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

Staff Training Aids

Laminated protocol and YouTube

I am comfortable with assessing dysphagia in my patients

DISCUSSION

• High level of pre-intervention knowledge regarding dysphagia.
• Findings and interpretation are causal assumptions.
• Challenges with fidelity to the intervention protocol.
• Screening completed on 57.6% of eligible patients.
• 60% of those not screen received non-textured diets.
• Providers provided with a clear algorithm: diet now versus SLP.
• Of those that failed screenings 100% received SLP evaluation.
• As compared to the pre-intervention period, post-intervention nurses reported:
  • An increase in screening for PED prior to starting a diet.
  • An increase in comfort level with screening for dysphagia.
• Nursing felt the tool was valuable and should be adopted as a standard of care.
• Generalizability outside of the Medical ICU limited.

CONCLUSION

• The intervention:
  • contributed to addressing a little studied preventable harm.
  • promotes best nursing practice and gives nurses the power and authority to safely begin PO nutrition in their post-extubated patients.
  • Decrease net nursing time by identifying aspiration complications.
  • Strong support from the Nursing, Medical, and SLP teams for continued use after the end of the trial period.
• The positive findings from this project supports the adoption of the intervention protocol as a new standard of care in the MICU at UVMMC.
• Further study may focus on assessing barriers to screening and opportunities to increase screening.

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References available upon request

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