Using the ‘Confusion Assessment Method (CAM) Tool to screen for delirium amongst hospitalized inpatients – A Quality Improvement Initiative.
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Background
Delirium is an acute, fluctuating confusional state that is treatable and potentially preventable when recognized early[1-3].
The Confusion Assessment Method (CAM) is a standardized, validated screening tool to assist with the identification of delirium. It shows a sensitivity of 94% and a specificity of 89%[4].
AHS recognizes the value of the CAM tool both for screening for and in diagnosing delirium.

Process Assessment

<table>
<thead>
<tr>
<th>OUTCOME MEASURES</th>
<th>PROCESS MEASURES</th>
<th>BALANCING MEASURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>% patients screened for delirium with CAM tool at admission</td>
<td>No. educational sessions</td>
<td>Time required for CAM training / person (mins)</td>
</tr>
<tr>
<td>No. of patients screened with CAM</td>
<td>No. attendees / educational session</td>
<td>No. additional staff required for coverage during training attendance / session</td>
</tr>
<tr>
<td>No. of times CAM tool is used for screening for delirium / total number of patients with confusion</td>
<td>Nursing documentation of CAM usage and results</td>
<td>Complication rate (LOS, delirium duration, falls, restraints)</td>
</tr>
<tr>
<td>No. of CAM positive results / total number of delirium cases</td>
<td>Time required to use CAM tool (mins)</td>
<td>Financial costs (CAM tool license, training, stationary costs)</td>
</tr>
<tr>
<td>No. of eligible patients not screened with CAM</td>
<td>Time (mins) assessing &amp; documenting delirium symptoms per patient-nursing with CAM</td>
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</table>

Table 1. Number of times CAM tool used / delirium cases

<table>
<thead>
<tr>
<th>Wk 1</th>
<th>Wk 2</th>
<th>Wk 3</th>
<th>Wk 4</th>
<th>Wk 5</th>
<th>Wk 6</th>
<th>Wk 7</th>
<th>Wk 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total no. times CAM used</td>
<td>198</td>
<td>266</td>
<td>359</td>
<td>470</td>
<td>447</td>
<td>409</td>
<td>395</td>
</tr>
<tr>
<td>Number of delirium cases</td>
<td>3</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Number of positive CAM results</td>
<td>4</td>
<td>3</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>0</td>
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</table>

CAM educational sessions
7 sessions held in total; each session lasted 30 mins.
No coverage was required for attendance at educational sessions.
80% target unit staff attendance achieved at these educational sessions.

Aim
All patients (newly admitted / inpatients) on unit 5G2 at the University of Alberta will be screened for delirium by nursing staff using the CAM tool at the time of admission, then twice a day, by the end of July, 2018.

Build Understanding
Seven 30 minutes training sessions were organized for nursing staff.
CAM results were documented on the white rapid round boards.
Current delirium screening process takes on average 5 minutes.
CAM tracking log was placed at the front of all patients Vital boards.

Manage Change
Communication / collaboration strategies
The project team include a clinical nurse educator and unit manager alongside a geriatric physician, resident, and Quality Improvement consultant.
Motivation and engagement from unit staff was achieved through staff tool at the time of admission, then twice a day, by the end of July, 2018.

Lessons learned
Post study chart audits will be done 2 and 4 weeks post study completion, then quarterly for one year to follow trends in length of stay and complication rates. These results will be provided to the unit on a regular basis.

Sustain Results

Reinforce Ownership, Measurement & Continuous Improvement
• Study results will be displayed and presented to the unit staff.
• Post study chart audits will be done 2 and 4 weeks post study completion.

Share Learning
Lessons learned:
• Difficulties experienced with capturing all nursing staff for CAM education sessions.
• Ensuring the ongoing consistency of nursing documentation is an area area to be addressed for future cycles.
• Difficulty with 1. monitoring and ensuring communication between nursing staff and physicians and 2. measuring and reporting changes in assessment times for physicians & nursing staff.

References

Feedback from Nursing Staff
100% felt they had received adequate training to use the CAM.
Several nursing staff had some difficulty with interpreting CAM results.
One person reported difficulty performing CAM at the recommended time.

Financial costs
$220 in total (training / stationary costs)

Complications
Why this Quality Improvement matters
To Patients
Improve in patient safety
Less time spent in hospitals and more time at home
To Albertans
Reduced strain to the system and improvement of care
To the healthcare system
Reduced healthcare expenditure

Presentation PDF