Nurse Recognition of Acute Delirium: A Pilot Study

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PURPOSE

• To evaluate an innovative CNS multi-phased educational program which included didactic teaching, bedside mentoring & consultation

BACKGROUND

• Delirium: a complex syndrome associated with significant morbidity & mortality, adverse patient outcomes & increased cost of care
• Evidenced based cost effective management of delirium includes use of standardized instruments & non-pharmacologic targeted interventions

INTERVENTIONS

• General nursing orientation classes, overview of delirium
• Post-orientation classes on CAM-ICU
  • Assessment using CAM-ICU
  • Non-pharmacologic management of delirium (music therapy, rocking chairs, busy-boxes)
• Grand rounds with national guest speakers
• Policies & guideline revisions with delirium management
• CNS Consultations: interdisciplinary rounds
  • Face-to-face & telephone (on call)
  • CAM-ICU assessment & documentation
• Educational program:
  • Case-studies
  • Delirium algorithm

METHODS

• Prospective longitudinal multi-phase study conducted large Midwest teaching hospital
• Data was collected using caregiver survey & patient chart reviews
• Baseline chart reviews to assess consistency & accuracy in use of the CAM-ICU by bedside RNS
• Bedside nurse interview
• Plans of care reviewed to identify targeted interventions

CONCLUSIONS

• Accurate CAM-ICU use was higher among the medical RNs (7/8 charts) as compared to ICU RNs (4/15 charts)
• Medical RNs reported feeling less competent despite ↑education on delirium as compared to the ICU RNS
• Charts revealed very low rates of documentation of delirium management strategies (< 10 percent)

FINDINGS

University Hospitals Case Medical Center
Concentration Assessment Method (CAM-ICU)

The CAM is a screening tool (CAM-ICU validated in ICU) to detect delirium & is to be used with delirium protocol/curriculum project. Scoring to Positive or Negative PATIENT IS EITHER POSITIVE FOR DELIRIUM, OR NEGATIVE To score the CAM, Features 1 & 2 are scored positive as well as either Feature 3 or 4 are positive = CAM is positive.

Features 1. Acute Onset or Fluctuating Course
An acute change from normal status baseline—or fluctuating over 24 hrs OR if assuming potential problem

Features 2 Inattention—If 3 or more errors (not squeezing A or squeezing on letter not A) = POSITIVE Directions: Say to patient: “I'm going to tell you 10 letters, please squeeze (same finger, not) when you hear the letter 'A.'” Read the letters:

SAVE A H A R T

If 1 & 2 are positive, then choose EITHER Feature 3 A & B or 4

Features 3 Disorganized Thinking (Positive if combined score is less than 4)
A. Use either Set 1 or Set 2)
Score 1 point for each correct answer

Set 1
1) Will a stone float on water?
2) Are there fish in the sea?
3) Does 12 feet weigh more than 1 lb?
4) Can you use a hammer to pound a nail? (Yes)

Set 2
1) Will a leaf float on water?
2) Are there elephants in the sea?
3) Do 2 lbs weigh more than 1 lb?
4) Can you use a hammer to cut wood?

B. Continue—Score 1 point if able to successfully complete the entire command
Say to patient: “Hold up all five fingers” (you hold up 2 fingers in front of patient). “Now do the same thing with your right hand”—or “other hand”—if patient unable to move both arms, add 1 more finger to same hand.
If total is <4, score is positive for delirium. If 5 go to 4 below

Features 4 Altered Level of Consciousness — Alert/orientated score = 0 or Negative
Any other score = positive for delirium
1st hyper-alert, 2nd drowsy, 3rd Roller to animal, 4th unresponsible

Overall CAM-ICU
(FEATURES 1, 2 & either) Features 3 A & B or 4:

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Nurse Interviews N= 37

<table>
<thead>
<tr>
<th>Feature</th>
<th>Medicine</th>
<th>ICU</th>
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<tbody>
<tr>
<td>Mean yrs experience</td>
<td>4 yrs</td>
<td>10 yrs</td>
</tr>
<tr>
<td>Accurate CAM-ICU</td>
<td>88%</td>
<td>27%</td>
</tr>
<tr>
<td>Nurses’ self-perceived competence: Felt ↓ confidence</td>
<td>Reported yes</td>
<td>Reported yes</td>
</tr>
<tr>
<td>Delirium/CAM-ICU edu.</td>
<td>reported yes</td>
<td>reported yes</td>
</tr>
<tr>
<td>Patient N=</td>
<td>27</td>
<td>11</td>
</tr>
<tr>
<td>Delirium detected</td>
<td>50%</td>
<td>33%</td>
</tr>
<tr>
<td>Diagnosis 50% Resp.</td>
<td>&lt;10%</td>
<td>&lt;10%</td>
</tr>
<tr>
<td>Delirium protocol</td>
<td>17%</td>
<td>13%</td>
</tr>
<tr>
<td>Patient age mean</td>
<td>&gt;76 yrs</td>
<td>68 yrs</td>
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CLINICAL PRACTICE IMPLICATIONS

• Prevalence of delirium is high, yet despite the use of standardized instruments, detection is low 33-50%
• Even with younger patient age, ICU delirium↑ prevalence
• Traditional didactic education is insufficient to achieve bedside RN competency in detection & management of delirium
• Less experience RNs (with recent delirium orientation) demonstrated increased accuracy in detection

FINDINGS

• Enhanced CNS telephone consultation to bedside nurses in the midst of delirium patient crises—provides needed support & timely cost effective targeted interventions
• CNS monitoring is critical to implementing an evidenced-based, cost-effective program to improve the quality of care for patients with delirium
• Non-pharmacological management of symptoms associated with delirium including agitation remains particularly challenging