DELIRIUM MANAGEMENT AND PREVENTION

safer healthcare now!

GOAL

THE GOAL IS TO IMPROVE CARE OF THE CRITICALLY ILL PATIENT THROUGH IMPLEMENTATION OF STANDARDIZED SCREENING AND PREVENTION AND MANAGEMENT STRATEGIES

Background

- Delirium is an under-recognized, but surprisingly common problem in hospitalized ICU patients.
- Up to 80 per cent of critically ill patients from various ICU populations can be identified as having delirium or sub-syndromal delirium according to validated screening criteria.[1,2]
- Delirium is associated with worse outcomes such as increased length of stay and ventilator-days, long term cognitive dysfunction, self-removal of important devices (endotracheal tubes, central venous catheters) and mortality.
- The pharmacologic treatments (e.g., antipsychotics, sedation) used to manage delirium are associated with risks as well.
- The identification and management of delirium is complex. Improved outcomes are noted when ICU teams utilize a structured approach for the administration and titration of sedative, analgesic and antipsychotic medications.

Intervention

Managing and preventing delirium for a critically ill patient can be addressed through implementing the elements of the Safer Healthcare Now! Delirium change package that include:

1. Recognize/manage/mitigate risk factors for every patient ("universal precautions")
2. Assess for delirium every shift and as required
3. Develop standardized protocol for management of delirium. Initial strategies to support the implementation and documentation of the protocol, including:
    a. Identifying and treating underlying causes of delirium
    b. Use of non-pharmacological strategies (early mobility, optimize sleep routines, daily reassessment of sedation needs, paired with readiness to wean, provide need for communication adjuncts and reassess restraints daily)
    c. Use of environmental strategies (i.e. visible daylight, allow visitors, display calendar and clocks in the room, avoid restraints, etc.)
    d. Use of pharmacological strategies appropriately and only after underlying causes addressed
    e. A plan for withdrawal of anti-psychotics (before transfer to ward and/or other location)
4. Support patients and families of patients with delirium and integrate them in the management of delirium
5. Include a multidisciplinary team in planning and managing care (i.e. physician, nurse, psychiatry, pharmacy, RT/OT and social worker)
6. Create a unit culture that is sensitive to delirium by raising awareness and improving knowledge and skill to identify and manage delirium
7. Manage hand-offs (communication, documentation, information within ICU, pre and post ICU stay)

[1] Ouimet S, Kavanagh BP, Gottfried SB, Skrobik Y. Incidence, risk factors and consequences of ICU delirium. Intensive Care Med. 2007 Jan; 33(1):66-73.

[2] Ouimet S, Riker R, Bergeron N, Cossette M, Kavanagh B, Skrobik Y. Subsyndromal delirium in the ICU: evidence for a disease spectrum. Intensive Care Med. 2007 Jun;33(6):1007-13. Epub 2007 Apr 3.

Intervention Measures

1. **Delirium 1: Percentage of Patients Screened for Delirium**
   The percentage of patients screened for delirium for a specific patient population in order to allow for early identification, targeted prevention and the effective utilization of management strategies. Using a validated screening tool (e.g. ICDSC, Cam-ICU) all patients will be screened daily or as deemed clinically appropriate.

2. **Delirium 2: Percentage of Patients Identified with Delirium**
   The incidence of delirium within the ICU. The measure will be used as a baseline assessment and as an on-going outcome to assess the impact of improvement efforts in reducing the rate of delirium. Using a validated screening tool (e.g. ICDSC, Cam-ICU) all patients will be screened daily or as deemed clinically appropriate.

3. **Delirium 3: Percent Compliance with Non-Pharmalogical Strategies**
   The percentage of delirium-positive patients where all elements of the bundle have been considered.

4. **Delirium 4: Number of Unplanned Extubations per 1000 Mechanical Ventilation Days**
   An unplanned extubation is the unscheduled removal of an artificial airway (endotracheal or tracheostomy tube) due to accidental dislodgement or patient self extubation. The patient need not be ventilated at the time of the event (e.g. tracheal collar). The occurrence of unplanned extubations may be associated with patient harm, poorer outcomes and prolonged length of stay, due to loss of the airway and the risks associated with re-intubation. Putative factors may include inadequate/inappropriate: (1) patient vigilance, nurse: patient ratios, and use of physical restraints; (2) practices for: analgesia, sedation/comfort, delirium assessment/management, patient mobilization and transport; (3) ETT position, length and fastening.

Other Resources

- IHI Improvement Map - "Acute Delirium Prevention and Treatment"
  www.ihi.org/offerings/Initiatives/Improvemaphospitals/Pages/default.aspx

- www.icudelirium.org - Confusion Assessment Method flow and work sheet –
  http://www.icudelirium.org/docs/CAM_ICU_flowsheet.pdf
  http://www.icudelirium.org/docs/CAM_ICU_worksheet.pdf

Success Stories

Covenant Health has implemented a data collection tool and processes to ensure 100 per cent of intensive care unit (ICU) patients are screened for delirium. Delirium is very difficult to recognize in a critical care setting and very often goes undiagnosed. The most important step in delirium management is early recognition. When Alberta Health Services asked its Edmonton zone to standardize and implement delirium screening, the team at Covenant Health's Misericordia Hospital site, along with other teams in Edmonton, looked for help from the *Safer Healthcare Now!* Delirium and Medication Reconciliation Collaborative to improve care for critically ill patients.

To increase delirium awareness for staff on the unit, Covenant Health created and put into practice a comprehensive education program. From this program came strategies to arm families of delirium patients with support and information. The team has also developed noise reduction strategies to minimize sleep disturbance for patients in the ICU and a mobilization protocol to ensure that patients are out of bed when appropriate. A new pain assessment tool is under development for intubated patients who cannot express their pain level.

The Covenant Health team included the nurse practitioner, educator, supervisor, manager, pharmacist, respiratory therapist and two physiotherapists – all instrumental in the development of delirium reduction strategies and making the mobilization protocol a reality. A physician group provided support in the ongoing management of appropriate medications.

"The Covenant Health team has made huge strides in implementing a significant change in practice and improved care," says Kim Scherr, Nurse Practitioner. "Our efforts to manage and prevent delirium have had a positive impact on the health and quality of life for countless ICU patients."