

Delirium Screening: The next nurse sensitive indicator?

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Objectives

- Recognize the importance of delirium screening to patient outcomes
- Identify nurse sensitive measures to prevent/treat delirium

Purpose

- Prevention and treatment of delirium has nurse sensitive components
- We did not have a process in place to routinely screen patients for delirium
- Our goal was to implement delirium screening on all patients and standardize preventive nursing practices on our unit.

What is Delirium?

- Altered LOC
- Inattention
- Disorganized thinking
- Acute onset with fluctuating course

How many types of delirium?

- Hyperactive – agitated, restless, tries to remove lines/tubes, hitting, biting, etc.
- Hypoactive – lethargic, withdrawn, apathy, flat affect
- Mixed – may exhibit signs of both or fluctuate between hyper and hypoactive delirium¹

Why Screen for Delirium?



- Delirium

- Increases length of stay, mortality, and cost
- Patients with delirium who survive have long term cognitive dysfunction. This affects quality of life and performance of daily activities
- Screening and treatment for delirium in hospitalized patients can help attenuate these adverse outcomes



How common is it in ICU?

- Studies report anywhere from 20-90% of ICU patients have delirium
- Patients may have predisposing risk factors
- We may precipitate the occurrence of delirium

Risk Factors for Developing Delirium

- Predisposing:
 - Age
 - Sensory impairment
 - Hx of dementia, ETOH, smoking, depression
 - Malnutrition, disease processes
 - Polypharmacy and psychotropic meds
 - Renal/liver impairment



Risk Factors for Developing Delirium

- Precipitating Factors
 - Dehydration
 - Sleep deprivation
 - Restraints/lines/tubes
 - Excessive noise
 - Day/night orientation out of whack
 - Anticholinergic medications
 - Constipation



So What?

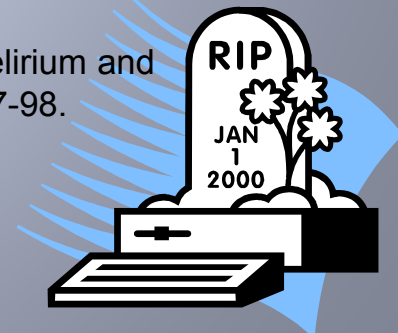
- Delirium is directly associated with^{1,2,3}:
 - Increased morbidity and mortality (3.2 times more likely to die than pts who do not have delirium)
 - Risk of death increases 10%/day for patients in ICU with delirium
 - Increased hospital LOS – as much as 11 days in some studies
 - Increased Vent days



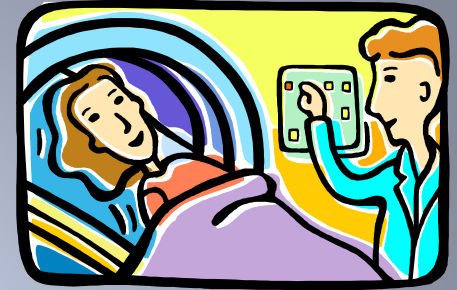
So What?

- Nearly 1/3 of patients remain delirious 6 months later
- Of these patients, 39% will be dead within the year
- Patients who survive suffer long term cognitive decline

1. O'Keefe, S. and Lavan, J. The prognostic significance of delirium in older hospital patients. *J Am Geriatr Soc.* 1997; 45(2):174-8.
2. Kiely DK, Markantonio ER, Inouye SK, et al. Persistent delirium predicts greater mortality. *J Am Geriatr Soc.* 2009;57(1):55-61.
3. Jackson JC, Gordon SM, Hart RP, Hopkins RO, and Ely EW. The association between delirium and cognitive decline: A review of the empirical literature. *Neuropsychol Rev.* 2004; 14(2):87-98.



Facts⁴



- In 2009 only 59% of hospitals screen for delirium
- 29% of hospitals use a standardized tool for screening
- CAM-ICU was the first tool developed for non-verbal patients in the ICU. It is a highly reliable and valid instrument

4. Bruno JJ, and Warren ML. Intensive care unit delirium. *Crit Care Nurs Clin North Am.* 2010;22(2):161-78.

Implementing Practice Change

- Review of Literature: Identified screening tool, patient outcomes, and how to prevent/treat delirium
- “Buy-in” from key stakeholders – nurse leaders/staff/physicians
- Educate the nursing staff
- Staff nurse “super screeners” on each shift were recruited to help implement and sustain the practice change.



Implementing Practice Change

- An initial pilot of approximately 2 weeks included delirium screening on all ICU patients twice daily by the super screeners.
- Rolled out daily screening to all staff members.
- Nursing practices were identified via the literature to prevent and treat delirium. An interdisciplinary team was formed and an order set was developed to prevent and treat patients with delirium.



Screening Tool for Pilot

| Initial screening predisposing factors: | Circle if present Y/N | Presence of Precipitating Factors: | Circle if present Y/N |
|---|-----------------------|---|-----------------------|
| Cognitive Impairment | Y N | Use of restraints? | Y N |
| ICU Day # | | Foley Catheter? | Y N |
| History of depression | Y N | Pain | Y N |
| Vision/hearing impairment | Y N | Immobilization | Y N |
| | | Blinds open daytime <i>or</i> Lights off night time? | Y N |
| | | Anxiety | Y N |
| | | Sleep deprivation | Y N |
| | | Dehydration (is input less than output on flowsheet?) | Y N |
| | | | |
| | | | |
| | | | |



Nurse Specific Interventions

- Promote day/night orientation
- If possible allow uninterrupted periods of sleep (90 mins at a time)
- Keep environment quiet
- Remove unnecessary lines/tubes and reassess daily
- Sedate if agitated. Pain control.
- Bowel management

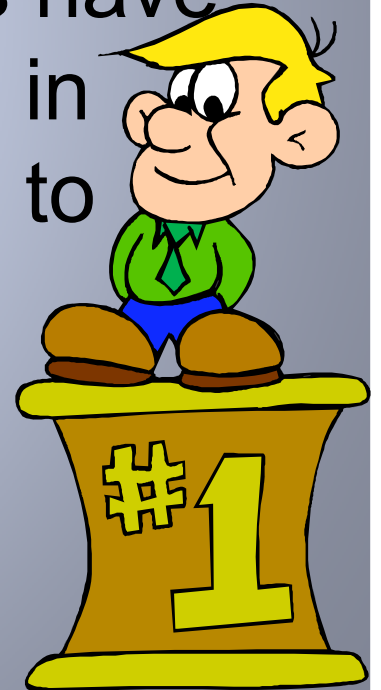


Medical Treatment

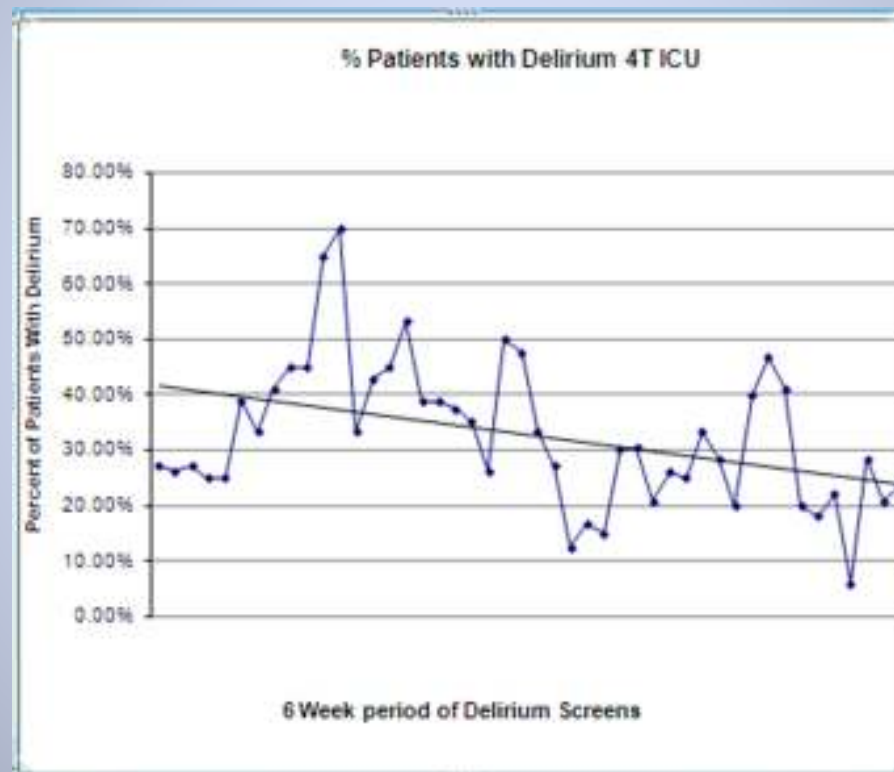
- Haldol – watch QT interval
- Seroquel
- Precedex
- Avoid benzo' s and anticholinergics
- Bowel regimen

Initial Outcomes

- The CNS tracked daily incidence of patients with delirium, nursing preventive practices, and use of the order set over a six month period. Our initial findings have been promising showing a decrease in daily incidence of delirium from 42% to 23%.



Initial Outcomes



Next Steps

- Delirium ICU order set developed
- Screening added to electronic health record
- Creating reports to track incidence of delirium via electronic health record
- Disseminated practice throughout critical care and healthcare system
- Piloting delirium screening on medicine floor