Evaluating the Effectiveness of a Delirium Protocol Order Set at HCA Florida Osceola Hospital

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Background

Delirium: acute onset of deficits in attention, awareness, and cognition secondary to a direct pathophysiologic consequence of an underlying medical condition.

- May result in increased risk of mortality, loss of autonomy, long-term cognitive decline, and increased risk of institutionalization.
- Episodes of acute agitation are common among patients with delirium, often posing harm to themselves and to staff, necessitating the use of restraints or sedating medications that worsen the delirium state and prolong hospitalization

Implementing a delirium precautions protocol order set may help to prevent some of these associated consequences.

Objective

1. To decrease the rate of diagnosis of acute encephalopathy in patients 65+ by 15%
2. To decrease the rate of order placement for restraints in patients 65+
3. To decrease length of stay in patients 65+ by 1 day

Interventions

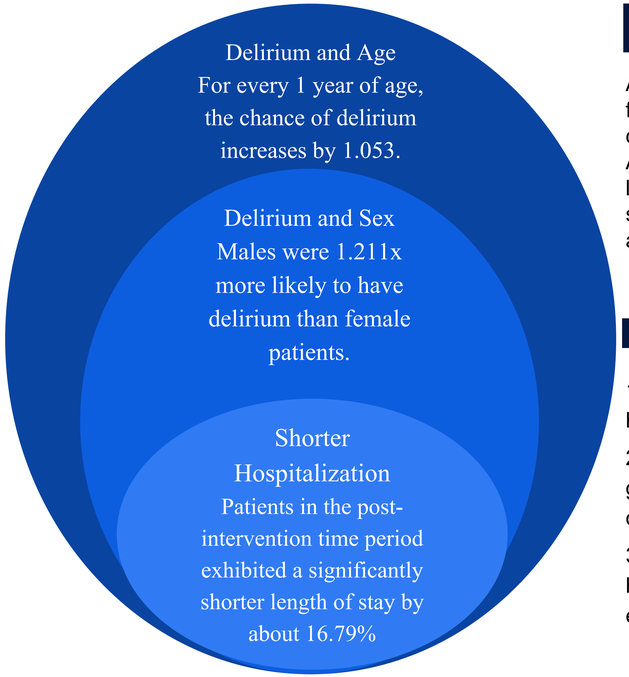
- Morning report presentation on delirium prevention and management to residents and teaching attendings
- Presentation at Department of Medicine meeting to reach non-GME affiliated attendings
- Distributing .xml file outlining recommendations for non-pharmacological interventions for delirium prevention for providers to incorporate into dictation software for notes
- Nursing intervention to introduce and discuss proposed delirium protocol
- Staff trainings on the availability and use of the delirium precautions order set
- Publication of delirium protocol in EMR with delirium prevention interventions and options for management of acute agitation

Methods

Analyze data for the following outcome measures: the rate of diagnosis of acute encephalopathy (cases/1000 patient days) in patients 65+ during hospitalization, the rate of order placement for restraints (days/1000 patients), percent of encephalopathy cases out of total inpatient admissions, and the length of stay. These outcome measures will be compared for one year prior and one year after the implementation of this order set and data will be presented after analysis.

Results

There was no significant difference in the overall prevalence of delirium between the pre-intervention and post-intervention time period. There was a significant association between delirium and age, as well as between delirium and sex. For every 1 year of age, the chance of delirium increases by 1.053. Males were 1.211x more likely to have delirium than female patients. There was no significant difference in the chance of restraint use in the post-intervention group compared to pre-intervention. Patients in the post-intervention time period exhibited a significantly shorter length of stay by about 16.79% with all other factors constant
($p < 0.0161$).



Discussion

Delirium is an acute illness that requires timely management to prevent adverse outcomes and prolonged hospitalization. By initiating a delirium precautions protocol, it is hypothesized that the length of hospital stay will decrease. In addition, by initiating a delirium precautions protocol, it is hypothesized it will also improve rates of restraint placement. Overall, the delirium protocol proved to be beneficial in decreasing the length of stay by 16%. This will help mitigate health care costs associated with prolonged hospitalization and reduce the risk of infection. However, there was no significant association between implementation of this protocol and restraint use. Limitations of the study include sample size and length of study. Overall, integration of a delirium precautions protocol was statistically significant in reducing the length of hospitalization.

Conclusion

A novel delirium protocol was introduced and outcome measures were compared for one year prior and six months after the implementation on the order set. The delirium protocol proved to be beneficial in decreasing the length of stay by 16%. A decrease in length of time in hospital may be beneficial in patients as it may lead to decrease costs, and decrease risk of infection and side effects. It did not show to be significant in prevalence of delirium as well as restraint use. Further analysis may be done on improving the protocol and its usage.

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This research was supported (in whole or in part) by HCA Healthcare and/or an HCA Healthcare affiliated entity. The views expressed in this publication represent those of the author(s) and do not necessarily represent the official views of HCA Healthcare or any of its affiliated entities.

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