Incidence of Delirium in the Intensive Care Unit Before and After Implementation of the Confusion Assessment Method for the ICU (CAM-ICU)

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Background

- Delirium is commonly underdiagnosed in the ICU[1] and has not routinely been assessed at Oklahoma State University Medical Center (OSUMC)
- There were 10 cases of true ICU delirium diagnosis codes from January 1st , 2019-June 30th, 2019
- Hypoactive and mixed delirium are the most common seen forms in the ICU. In one study, only 1.6% of patients had hyperactive delirium, whereas 43.5% had hypoactive, and 54.1% of patients had mixed delirium.[1]
- Since a majority of delirium is not hyperactive it can be difficult to diagnose. Screening tests like the CAM-ICU or the intensive care delirium screening checklist (ICDSC) can provide early recognition and treatment of ICU related delirium. [1]
- The CAM-ICU has shown a specificity of 95.6%, and sensitivity of 80% when diagnosing delirium.[2]
- Delirium in the ICU has a prevalence of up to 80% depending on the severity of illness, mechanical ventilation, and length of stay in the hospital. [3]
- Delirium leads to increased length of stay in the ICU, length of stay in the hospital, death in the ICU, and death in the hospital. [4]

Objectives

The objectives of this study are to:

- Improve recognition of delirium at an academic medical center.
- Implement the CAM-ICU screening tool for determining delirium
- Reduce length of ICU and hospital stay through early recognition of delirium
- Recognize which patient populations have the greatest prevalence of delirium at an academic medical center
- Monitor the use of antipsychotics for treatment of delirium
- Optimize non-pharmacological management strategies to prevent delirium

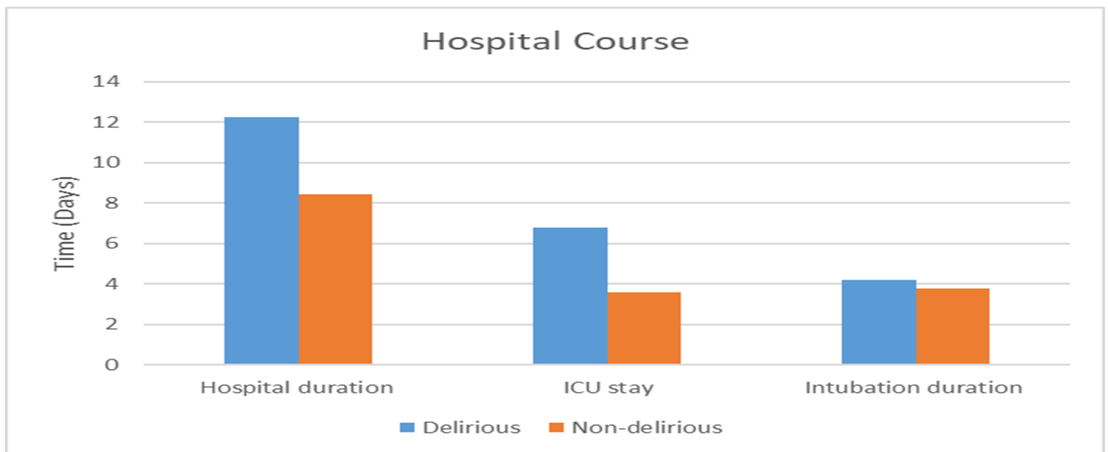
Methods

This study has been submitted and approved by the Institutional Review Board. It will be a retrospective chart review based on diagnosis codes and CAM-ICU results obtained from the Oklahoma State University electronic medical record. Information gathered will consist of the following:

- Patient demographics
- CAM-ICU results and number of positive tests
- Inpatient Medications
- Outpatient Medications
- Length of stay in the Hospital
- Length of stay in the ICU
- Intubation
- Reason for admission
- Retrospective delirium diagnosis codes

Demographics recorded will include patient age, gender, and past medical history. A psychiatric disorder is defined as a patient with a history of dementia, schizophrenia, bipolar disorder, anxiety, or depression. ICU nurses will be performing the CAM-ICU assessment. Education materials were provided to the nursing staff through presentations and instructional videos. The medical staff was educated on treatment options available for delirium. All data will be stored and analyzed in a secure database, Redcap. This study is ongoing. Data will be collected from 10/30/2019 through 3/31/2020.

Results



Results

	Delirious (n=41)	Non-Delirious (n=317)
Ventilation	21 (51.2%)	85 (26.8%)
Substance Abuse	16 (39%)	92 (29%)
Psychiatric Disorder	13 (31.7%)	79 (24.9%)
Window present	29 (70.7%)	225 (70.9%)

	Age>65 (n=124)	Age<65 (n=234)
Delirious	18 (14.5%)	23 (9.8%)

Conclusion

Results have shown that with a coordinated approach, the recognition of delirium was increased. The outcomes associated with delirium have been shown in previous studies to be worse when compared to patients without delirium. Our study confirmed mechanical ventilation, psychiatric disorder, age greater than 65, and a history of drug abuse contributed to delirium.

Disclosures

No authors of this presentation have anything to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation.

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