C5-10: A Pilot Study: Establishing the Prevalence of Acute Delirium and Evaluating the Feasibility and Effectiveness of a “Bundle” for Prevention in Adult Critically Ill Mechanically Ventilated Patients

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Abstract:

Introduction: Acute delirium (AD) occurs in up to 85% of mechanically ventilated patients, 56% in other critically ill patients, and is associated with increased morbidity, mortality, length of stay, and healthcare costs. Multiple patient, environmental, and iatrogenic factors contribute to the development of AD, many of which are modifiable. The purpose of this pilot study is to establish the prevalence of AD among mechanically ventilated critically ill patients, and to evaluate the feasibility and effectiveness of a bundled intervention aimed at prevention. The research questions are: 1) What is the prevalence of AD in mechanically ventilated critically ill patients? 2) What components of the intervention are problematic? 3) What are the most effective components of the bundle?

Method(s): This study is taking place in a large, Magnet-designated hospital, using a prospective, descriptive, comparative cohort design. Prevalence of AD in the population of mechanically ventilated ICU patients across 12 ICUs will be established. Next an experimental unit and control unit will be used to test the intervention and compare post-intervention AD incidence. The bundle will consist of five items: 1) sedation cessation 2) pain control 3) sleep facilitation 4) patient mobility, and 5) meaningful sensory stimulation. Descriptive statistics will be used to report demographic data and bundle achievement; prevalence and incidence calculations to report numbers of AD overall and in the intervention/control units after implementation of the protocol, respectively. AD rates between the intervention/control units will be compared with a student’s t-test; factor analysis will determine the contribution of each bundle component on delirium rates post-intervention.

Results: Prevalence rates, sample characteristics, and barriers and promoters to implementation of the bundle will be reported. Results of the pilot study will be used to refine the intervention and procedures, and determine sample size via power analysis for a larger study to include all 12 ICUs.

Discussion & Conclusions: Because of the magnitude of the study and a multi-faceted protocol necessitating collaboration among numerous individuals and disciplines, a pilot study is essential for optimal success with the larger study.

Abstract History:
This abstract has not been presented or accepted for presentation in whole or in part at the SNRS or other scientific meeting.

Financial Disclosure:
No, I (or a member of my immediate family) have not received something of value* from or own stock (or stock options) in a commercial company or institution related directly or indirectly to the subject of my presentation.

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I will not be describing any pharmaceutical and/or medical device.

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