

15: Implementation of a Pediatric Intensive Care Unit (ICU) Delirium Guideline

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Background:

Delirium affects 27-67% of patients in the pediatric ICU (PICU). Data shows there is a significant (>4.5 point) decrease in health-related quality of life (HRQL) scores, with long term psychosocial symptoms with individuals that experience delirium. Pediatric delirium is associated with a 23.2% increased average length of stay, which results in an 85% increase in PICU costs that increases incrementally every day a child is delirious.

Purpose:

The aim of this quality improvement project is to measure the efficacy of a PICU delirium prevention and management guideline. Incidence of delirium pre and post implementation will be compared. Adherence to guideline elements: mobilization, and avoidance of benzodiazepines and restraints; for those who develop delirium will be measured.

Innovation:

In an urban community hospital PICU in the Pacific Northwest, a multidisciplinary team of nurses, psychiatrist, providers, child life specialist, and pharmacists developed an evidence-based delirium guideline. Nursing staff received education on the new guideline and important delirium prevention strategies. All children admitted to the PICU are screened for delirium and will receive preventative interventions. The team will utilize the guideline to provide necessary interventions for patients who screen positive. Data was collected for four months prior to guideline implementation (August 2023-November 2023) and two months post implementation (December 2024-January 2024).

Results: Post delirium rates dropped compared to pre interventions rates, 18-31% vs 17-18%; an up to 14% decrease overall. Adherence to bundle elements was shown by a marked decrease in the percentage of patients that screened positive for delirium receiving benzodiazepines; pre 44-82% vs post 38-59%. There was also a decrease in restraints utilized in patients who developed delirium; pre 29-50% vs post 19-24%. Mobilization of patients who developed delirium was slightly worse with pre being 33-54% vs post 33-24%.

Implications: This project is a step forward in taking a more proactive approach to pediatric delirium prevention and management. A PICU delirium guideline can aid in the prevention of delirium as shown in the decreased use of known risk factors(i.e. restraints and benzodiazepines) and subsequent decrease in overall delirium rates. Further data analysis is needed to determine other contributing factors for delirium and separation of patients based on diagnoses which often have a large impact on rates of delirium.

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Key words: Delirium, Pediatric ICU, care bundle guidelines.