



The Fundamental Need for ICU Delirium Prevention: Decreasing ICU Delirium by Creating and Implementing a Nurse-driven ICU Delirium Prevention Bundle

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Introduction

- o **Intensive Care Unit (ICU) Delirium** – A common form of acute brain dysfunction in an ICU (Von Hofen-Hohloch et al, 2020).
- o **Prevalence of ICU delirium:** ICU delirium affects 16 to 89% of critically ill patients (Junior et al, 2022).
- o **Characterized by:** An acute change of fluctuation in mentation or level of consciousness, inattention, and/or disorganized thinking (Palakshappa & Hough, 2021).

Precipitating Modifiable Risk Factors (Acquired in the Hospital)

- Environmental: Noise, sleep disruptions, light, visual/hearing deficits
- Immobility (Mart et al, 2021).

ICU Delirium Increase

- Morbidity and Mortality
- Risk of Falls
- Functional, and Cognitive Decline
- Risk Of Discharge to Acute/ Long-term Care
- Length of Hospital Stay
- Cost of Care
- Caregiver Burden (Stollings et al, 2021).

The importance of sleep and rest promoting behavior, as a fundamental component of the well being and recovery of a patient is NOT considered in the neurosurgical or neurological patients in the Neurosurgery ICU(NICU) at Yale New Haven Hospital (YNHH).

Nurse-driven ICU Delirium Prevention Bundle (Evidence-Based Interventions)

1. Open blinds during the day and close blinds at night
2. Reduce noise and lights at night (Turn off all lights in the room and hallway as able, shut down computer screens within patient rooms)
3. Cluster care (Lab draws, neurological examinations, baths, and turn/repositioning)
4. Early Mobilization (Chair position of the bed as able, out of bed to chair as able, PT/OT involvement)
5. Encourage family participation in patient care
6. Remove restraints as able
7. Removal of Catheters/lines if able
8. Re-orient the patient frequently
9. Have the patient wear hearing or visual aids if needed and able
10. Personal items need to be within reach
11. Have the date updated on board and the clock/calendar in view



BRING
their glasses
and/or hearing
aids



TALK
with them
about family
and friends



REMIN
them where
they are what
day it is



TURN ON
the lights
during the day
and off at night



SILENCE
the room as
much as possible
at night

(Stollings et al, 2021).

Results and Conclusions

- **Pre-Education Survey Results:** Over 80% of participants agree or strongly agree that implementing a nurse-driven ICU delirium prevention bundle would reduce ICU delirium in the NICU at YNHH.
- **Post- Education Survey Results:** 100% of participants felt they would apply the nurse-driven ICU delirium prevention bundle in some capacity to their patient care to prevent ICU delirium.
- **Post-Implementation Survey Results:** Over 60% of participants agreed or strongly agreed that the nurse-driven ICU delirium prevention bundle made some improvement in the prevention of ICU delirium during the two-month period of implementation.
- **Conclusion:** When the nurse-driven ICU delirium bundle was implemented effectively and consistently participants agreed that the bundle had a positive impact in preventing and reducing ICU delirium in the NICU at YNHH.

Significance

- Change in preventing ICU delirium in the NICU at YNHH was needed
- The nurse-driven ICU delirium prevention bundle in nursing opinions reduced the incidence and prevalence of ICU delirium was needed in the NICU
- Further research:
 - Currently, there are a limited number of studies exploring ICU delirium in neurological patients
 - Advanced practicing provider education in reducing ICU delirium in the NICU at YNHH
 - Implementation of the nurse-driven ICU delirium prevention bundle in other ICU's and organizations



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Acknowledgements

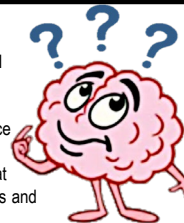
- On-site Mentor: Judy Rodriguez BSN, RN, SCRNP, CNRN
- NICU nurses at YNHH
- University Co-Mentor: Kristin Bott DNP, APRN, ACNP-BC
- University Co-Mentor: Joy Elwell DNP, FNP-BC, APRN, CNE, FAAN, FAANP



References

Qualitative Descriptive Study

1. Identify the problem of ICU delirium in the NICU at YNHH
2. Utilize databases to research ICU delirium prevention techniques
3. Summarize the data and extract evidenced-based practice interventions
4. Create a nurse-driven ICU delirium prevention bundle that utilizes evidenced-based practices to reduce the incidents and prevalence of ICU delirium in the NICU at YNHH
5. Create and distribute a pre-education survey to RNs in the NICU that focuses on the current practice or lack of evidenced-based practice in preventing ICU delirium in the NICU at YNHH
6. Educate all registered nurses in the NICU at YNHH via a less than fifteen minute in-service on defining ICU delirium, describing pre-disposing risk factors of ICU delirium, the outcomes associated with ICU delirium, components of the nurse-driven ICU delirium prevention bundle, and nursing empowerment in preventing and reducing ICU delirium. Educational fact sheet created and distributed for take home material.
7. Create and distribute a post-education survey to educate RNs to assess if education was effective
8. A two-month implementation period occurs
9. Create and distribute a post-implementation survey to evaluate RNs perspective on the bundles effectiveness in preventing ICU delirium in the NICU at YNHH
10. Evaluate all survey results to analyze if RNs believe in the efficacy of the bundle



Method

- o **Objective:** *Creating* an evidence-based practice bundle to prevent ICU delirium. *Educating* registered nurses (RNs) on ICU delirium prevention interventions to prevent and reduce ICU delirium in the NICU at YNHH. RNs *implementing* prevention interventions to reduce ICU delirium in the NICU at YNHH.
- o **PICOT Question:** For NICU patients at YNHH (P), does creating, developing, and implementing a nurse-driven ICU delirium prevention bundle (I) versus no delirium prevention bundle (C) reduce ICU delirium (O) over a two-month period?
- o **Study Location:** NICU at YNHH
- o **Plan:**

Educational Participants: NICU RNs

