



# Evidence-Based Practice Guidelines for Prevention of Post-Operative Delirium in High-risk Elderly Population

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## Introduction

Delirium is one of the most common postoperative complications in patients aged 65 years and older. 40% of these cases are preventable. Therefore, preventative efforts need to be directed to institute evidence-based interventions throughout the pre, intra and postoperative phases to prevent this common complication causing physical, emotional and financial strain for the patients, families and the healthcare systems.

### Formulation of Practice Guidelines: An example of translational research

Evidence-based practice guidelines were formulated comprising of a series of interventions to be implemented in pre-operative, intra-operative and post-operative phase to help with prevention, early recognition and treatment of post-operative delirium.

### The Method

A systematic review with basic inclusion and exclusion criteria was conducted using CINHAL, Medline, and Cochrane databases.

## The Practice Guidelines Pre-operative Interventions

- Use of cognitive assessment tool - Mini-cognitive assessment test
- Patient morbidity risk stratification.
- Communication of high-risk status.



## Intra-operative Interventions

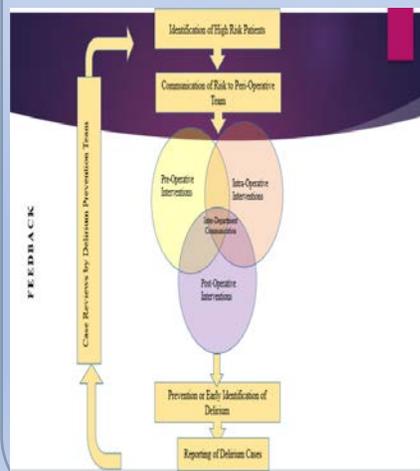
- Avoid use of Benzodiazepines.
- Prefer Regional over General anesthesia.
- Adequate muscle relaxation reversal
- Use of Bi-spectral index (BIS) analysis of electroencephalogram (EEG).
- Use of cerebral tissue oximetry via near-infrared spectroscopy (NIRS).



## Post-operative Interventions

- Early detection.
- Maintenance of patient's sleep-wake cycle.
- Continuation of pre-op medications.
- Multi-modal post-operative pain management.
- Noise-free environment.
- Early provision of assisting devices - glasses, dentures, hearing aids etc.

## The Budhwani Conceptual Framework



## Conclusion

Prophylaxis and treatment of POD both requires a multicomponent intervention program. From performing cognitive testing pre-operatively to initiating interventions once high risk patients are identified, nurses can play an essential role in preventing POD. Practice Guidelines based on the utilization of these interventions can prove to be beneficial for healthcare institutions.

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