Experiences of Older Patients, their Families, and Healthcare Providers with Delirium After Surgery: an Action Research Study to Improve Patient and Family-Centered Care (PFCC)

Hassan Yassin[1], Maria Cruz[2], Dr. Jennifer O'Brien[2], Dr. Peter Hedlin[2]

[1]School of Public Health, [2]Department of Anesthesiology – University of Saskatchewan, Saskatoon, SK, Canada

Introduction

Postoperative Delirium (POD) is a severe and sudden disturbance in cognitive abilities that results in confusion, disorientation, and changes in perception observed in the aftermath of surgery.[1] While POD can impact individuals of all ages, older patients exhibit a higher susceptibility to its development, with the condition affecting up to 50% of patients aged 65 and above.[1,2] Often, delirium goes unnoticed, or its identification is delayed, resulting in a range of adverse consequences such as prolonged hospitalization, the necessity for institutional care, compromised functionality, increased mortality rate and elevated medical expenses.[1,2] Consequently, the experience of POD can be quite distressing for both patients and their loved ones.

Objectives

1. To **understand and describe the experiences** of older patients, their family members, and HCPs with postoperative delirium.
2. To describe the **needs** of patients, their family members, and HCPs related to how they experience postoperative delirium.
3. To **identify targeted initiatives** to support patient and family-centered care (PFCC) for patients with postoperative delirium.

Methods and Participants

Participants Selection Criteria:

Inclusion Criteria:

- Patients (≥ 65 years) that had POD at some point in their life.
- Family/caregiver with experience caring for a patient (≥ 65 years) with POD.
- Healthcare providers with experience treating patients (≥ 65 years) with POD.

Exclusion Criteria:

- Cognitive impairment severe enough to prevent consent to the interview and/or lack of capacity to consent

Recruitment Methods:

Patient and family participants:

- Recruitment via Saskatchewan Center for Patient-Oriented Research (SCPOR) - Invitation posted on Patient-Researcher Connection site.
- Invitations are sent through Geriatric Psychiatry via mail/email by office staff with access to participant contacts.
- PAWS announcement and flyers posted in RUH.

Healthcare provider participants:

- Recruitment via email invitation sent by their managers' administrative support personnel
- PAWS announcement and flyers posted in RUH.

Data Collection Method:

- A mixed-method approach involving semi-structured interviews and surveys to explore the experience of patients (≥ 65 years), families and HCPs with POD.
- Interviews are conducted virtually via Zoom, and surveys are completed through an emailed SurveyMonkey link.

Data Analysis Method:

- Deductive qualitative analysis using a coding framework derived from the Joint Consensus Statement on Postoperative Delirium Prevention and the principles of PFCC.[1,3]
- The content of interview transcripts and survey results is analyzed using Microsoft Excel.
- Objective of the analysis is to identify common themes in the experiences of POD among Saskatchewan patients aged over 65 years.

Preliminary Results

Please note the following are preliminary results obtained from interviews and surveys with healthcare providers only (n=9).

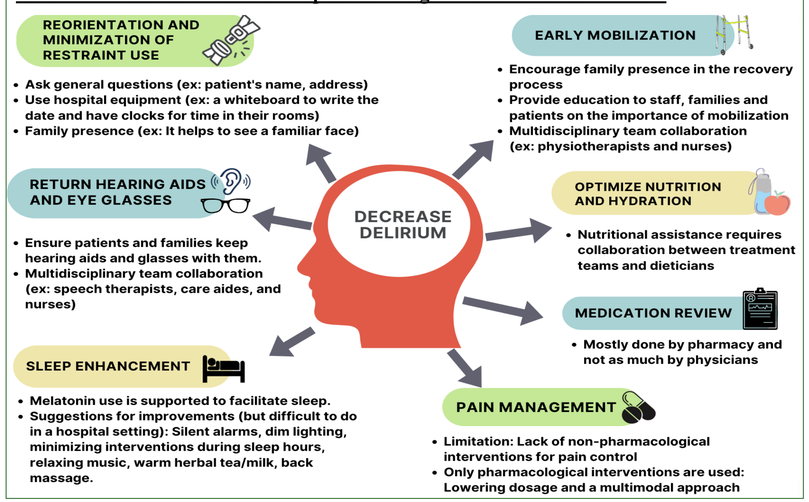
Demographics of HCP Participants (n=9)

HCP				
Individual #	**Profession**	**Specialty**	**Age Group**	**Gender**
1	Physician	Geriatric Psychiatry	41-50	Female
2	Physician	General Internal Medicine	31-40	Male
3	Physician	Geriatric Psychiatry	41-50	Female
4	Physician	Anesthesiologist and ICU	41-50	Female
5	Nurse	Psychiatry	51-60	Female
6	Nurse	Psychiatry	31-40	Female
7	Physician	Colorectal surgery	31-40	Undeclared
8	Physician	Geriatric Medicine	31-40	Female
9	Physician	Anesthesiologist	31-40	Male

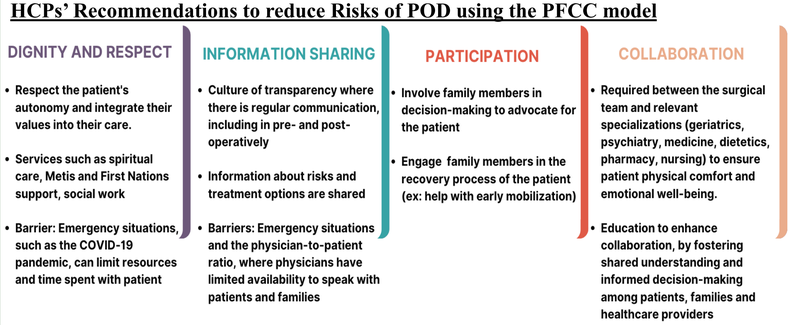
HCPs' Recommendations to Minimize POD Risks During Perioperative Care

Perioperative care	Recommendations (Themes)	Descriptions from Participants
Preoperative	Screen for High-Risks	-Risk Factors: Age, Pre-existing cognitive impairment (ex:Dementia) -Multidisciplinary Collaboration: Anesthesia, Nurses, Surgical team
	Inform Patient of Risks	- Education: Educate patients and provide handouts on POD - Engagement: Involve patients in the decision-making
	Optimize Modifiable Risk Factors	Patient Optimization: -Exercise, healthy eating, no smoking, no drinking
Intraoperative	Anesthesia Protocols	Limitation: No formal anesthesia protocols in place
	Minimize High-Risk Medications	- Multimodal Analgesia Approach -Minimize benzodiazepine, opioid use and anticholinergics
	No Delirium Prophylaxis	Alternative: Use Dexmedetomidine
Postoperative	Assess for Delirium	-Tools for assessement: CAM-ICU, Pain score, RAAS - Review the complete history of the patient and identify risk factors
	Optimize Pain Control	-Have a Multimodal Pain Control Approach
	Minimize High-Risk Medications	Use Nonpharmacological Interventions, lower doses of high-risk medications, and use alternatives (ex: NSAIDS)

HCPs' Recommendations on Nonpharmacological Interventions for POD



HCPs' Recommendations to reduce Risks of POD using the PFCC model



Limitations

- Survey answers were less elaborate than the interviews, and some questions were misinterpreted.
- Recruitment primarily relied on email and technology, potentially excluding older patients due to limited access or familiarity with digital platforms.

Conclusion

Please note the following conclusion is premature, as the study is still in its early stages.

The present findings detail the experience of healthcare professionals, one of our three target groups. Participants emphasized involving patients and their family members throughout the perioperative journey, advocating open communication to enhance mutual understanding and better meet their needs. Furthermore, a consensus emerged on specific areas necessitating focus. These encompass the lack of formal anesthesia protocols for POD prevention, the demand for nonpharmacological pain control interventions, and the difficulties in ensuring efficient information exchange with patients during emergencies. These results align with and further describe the recommendations outlined in the Joint Consensus Statement on POD prevention in the context of PFCC.

Recommendations

Conducting research on the effectiveness of different anesthesia protocols for POD prevention and developing evidence-based guidelines for optimal anesthesia management in older patients undergoing surgery.

References

1. Hughes CG, Boncyk CS, Culley DJ, Fleisher LA, Leung JM, McDonagh DL, et al. American society for enhanced recovery and perioperative quality initiative joint consensus statement on postoperative delirium prevention. Anesth Analg [Internet]. 2020;130(6):1572–90. Available from:http://dx.doi.org/10.1213/ane.0000000000004641
2. Grover S, Avasthi A. Clinical practice guidelines for management of delirium in elderly. Indian J Psychiatry [Internet]. 2018;60(Suppl 3):S329–40. Available from: http://dx.doi.org/10.4103/0019-5545.224473
3. Yudkin JS. Advancing patient-centered care: moving from outcome-based to risk factor-based models using the big four risk factors. Rev Panam Salud Publica [Internet]. 2022;46:1. Available from: http://dx.doi.org/10.26633/rpsp.2022.162

Acknowledgments

Thank you to:
Supervisor Dr. Peter Hedlin
Sub-Investigator: Dr. Jennifer O'Brien
Study Coordinator: Maria Cruz