

General Anesthesia Clinical Practice Guidelines for Patients with Posttraumatic Stress Disorder

Brad Closson BSN, RN

Project Team Leader: Dr. Brian Garrett DNP, CRNA; Project Team Members: Dr. Amy Bishop DNP, AGCNS, and Dr. Joy Shoemaker DNP, RN, APRN.CNP, FNP-C, CNE
Otterbein University and OhioHealth Grant Medical Center Nurse Anesthesia Program

Abstract

- Adult patients with posttraumatic stress disorder (PTSD) are at risk for general anesthesia-related complications throughout the perioperative setting.
- Emergence delirium is a clinically significant postoperative complication that patients with PTSD have an increased risk of developing.
- This project aimed to develop an evidence-based practice guideline for adult patients receiving general anesthesia with PTSD or at-risk for developing emergence delirium.

Project PICO(T) Question

In adult patients undergoing general anesthesia with a known diagnosis of PTSD (P), would the development and implementation of evidence-based practice guidelines related to the management of anesthesia in the perioperative period (I), compared to traditional practice (C), affect immediate postoperative complications specific to emergence delirium (O)?

Introduction

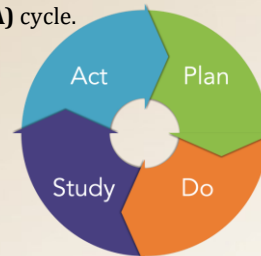
- PTSD is an anxiety disorder that develops after a traumatic event creating psychological trauma.
- Emergence delirium is a known postoperative complication affecting approximately five to nineteen percent of patients after receiving general anesthesia.
- PTSD is associated with comorbidities that influence surgical morbidity and mortality, including depression, cardiovascular comorbidities, chronic pain, cognitive dysfunction, risky health behaviors, and psychoactive medications.
- Patients diagnosed with PTSD may experience postoperative complications that are refractory to conventional treatment interventions.

Significance to Nurse Anesthesia

- Complications of emergence delirium include patient or medical staff injury, surgical site damage, prolonged post anesthesia care unit (PACU) stay, and increased medical care costs.
- Identifying patients at risk for emergence delirium allows for preventative measures to be implemented by nursing and anesthesia care teams.
- Anesthesia providers must utilize appropriate pharmacological and non-pharmacological interventions to reduce the incidence of emergence delirium.
- Collaboration between PACU nurses and anesthesia providers is essential in the treatment of emergence delirium and reduction in postoperative complications.
- Patients, healthcare providers, and healthcare organizations benefit from clinical guidelines which bridge the information gap on anesthesia care for patients with PTSD.

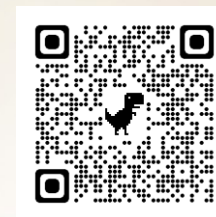
Project Description and Design

- The framework for this project is the **Plan-Do-Study-Act (PDSA)** cycle.



- The first stage of the PDSA cycle (Plan) involves identifying a problem, developing a change plan, and defining outcomes.
- The second stage of the PDSA cycle (Do) includes the implementation of the plan and the observation of how the plan is working.
 - Proposed implementation of the constructed practice guidelines for anesthesia care of patients with PTSD will occur in the perioperative setting at a Midwest, urban, level-one trauma medical center.
- The third stage of the PDSA cycle (Study) includes gathering and analyzing data after the implementation stage.
 - Project leaders will obtain results and data from the implementation trial in conjunction with the quality department. Collecting patient outcome data allows for measuring the impact of the proposed clinical practice guidelines.
- The fourth stage of the PDSA cycle (Act) is the adjustment of proposed changes based on knowledge gained from the implementation trial.
 - Project leaders will use knowledge and information gained from the implementation and study stages to refine or modify clinical practice guidelines to achieve desired outcomes.

Guideline



Outcomes and Evaluation

- Primary clinical outcomes that will be monitored include
 - RASS scores in the acute postoperative phase
 - Administration of rescue medications during emergence
 - Patient staff or injury during emergence or the immediate postoperative period.
 - Unintended removal of lines, tubes, or drains during emergence
- Statistical analysis and comparison of baseline and post-implementation data will assess the effectiveness of the evidence-based guideline in reducing postoperative complications related to emergence delirium.
- The timeline for associate project team leaders to implement the evidence-based guideline at a future facility will occur over an initial ten-month timeframe.
 - Due to the cyclical nature of the PDSA quality improvement model, the guideline can continue to be implemented and adjusted until desired outcomes are obtained.

Months	1	2	3	4	5	6	7	8	9	10	11	12
Education												
Implementation												
Data Collection/ Analysis												
Adjustment of Guideline												
Reimplementation												

Conclusion

- A comprehensive literature search confirmed that adult patient with posttraumatic stress disorder (PTSD) are at an increased risk for emergence delirium after receiving general anesthesia.
- A clinical practice guideline was developed to guide the implementation of pharmacological and non-pharmacological interventions to reduce the risk for emergence delirium in high-risk patients.
- A proposed plan for implementation, evaluation, and guideline revision was created utilizing the quality improvement model, the Plan-Do-Study-Act (PDSA) cycle.

References

