



# Research Week 2021

## An Algorithm for Integration of a Pre-Anesthesia Clinic in the Community Hospital Setting with Geriatric Neurosurgical Outcomes Analysis

Rohi Gheewala, BS; Wencesley Paez, MD; Nathan Hildebrant, MD; Clifford Tsai, MD; Shalini Gupta, MD; Joe Hardman, MD; Nathan R. Selden, MD, PhD; Jeremy N. Ciporen, MD  
gheewala@ohsu.edu  
OHSU School of Medicine

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### Abstract

#### INTRODUCTION

Preoperative clinics have been utilized by academic medical centers to optimize patient outcomes and operating room (OR) utilization. There are few reports of the impact of pre-anesthesia clinics (PAC) on patient outcomes in the community hospital setting. We piloted a community hospital PAC in January 2017 and permanently established it June 2017. All neurosurgical patients from a single provider were evaluated by an anesthesiologist in-person or telephone consultation preoperatively. Over three years, the PAC was also adopted by general surgery, orthopedic surgery, and urology.

#### METHODS

With IRB approval, the electronic medical records of consecutive geriatric neurosurgical patients undergoing operation were evaluated. Inclusion criteria were age  $\geq 65$  and completion of a PAC assessment preoperatively. Patient demographics, treatment, and medical and neurosurgical outcomes were reviewed retrospectively.

#### RESULTS

The community hospital PAC evaluated 129 patients age  $\geq 65$  over a three-year period. Geriatric neurosurgical volume doubled between 2017 (25 cases) and 2019 (52 cases). Sixty-nine percent of patients were classified as American Society of Anesthesiologists (ASA) Class III or IV. Mean length of hospital stay was 2.9 days. Intraoperative complication rate was 1.6%. Neurologic deficit rate was 0.8%. Neurosurgical-related 30- and 90-day readmission rates were 3.1% and 4.7%, respectively. Medical-related 30- and 90-day readmission rates were 2.3% and 5.4%, respectively.

#### CONCLUSION

Community hospitals are typically comprised of a diverse pool of private practice and employed physicians and groups, creating challenges to patient care standardization. In this setting, a PAC

triage algorithm may serve to standardize patient flow. In neurosurgical patients, a community hospital PAC supported a doubling of geriatric OR volume and facilitated preoperative medical optimization of a high-risk population, yielding low medical and neurosurgical readmissions. As academic health systems incorporate community hospitals, implementing PACs should be considered to support patient access and improve outcomes, particularly in vulnerable populations.