



Wali Johnson, M.D.

M.P.H. Candidate, Health Policy Track

wali.r.johnson.1@vanderbilt.edu

Practicum Site:

VA Medical Center
Tennessee Valley Health Care System
Nashville, TN

Practicum Site Supervisor:

Mayur B. Patel, M.D., M.P.H.

MPH Practicum: Tennessee Valley Healthcare System (TVHS) Prehabilitation Program Design and Implementation

Introduction: Prehabilitation is the process of optimizing health prior to an operation to improve post-operative recovery and outcomes. Veterans undergoing exploratory laparotomies at the TVHS tend to have more comorbidities with no prehabilitation program available to them. It is hypothesized that a prehabilitation program will improve local outcomes.

Methods: Current processes, outcomes, and medical literature were reviewed. A team was created including General Surgery, Anesthesia, Nutrition, and Physical Therapy. Physical, nutritional, and medical optimization strategies were developed using best practice guidelines. The Model for Improvement's Plan-Do-Study-Act (PDSA) cycle was used to organize the implementation: *Plan:* Create exercise and nutrition programs to optimize patients getting exploratory laparotomies; *Do:* Provide patients with educational materials and exercise regimens; *Study:* Patient compliance and patient satisfaction to be obtained before surgery. Outcomes data from chart review; and *Act:* Modifications to the program occur monthly.

Results: Current exploratory laparotomy outcomes from 2018-2019 data at Nashville shows complications rates are 34.3%, length of stay is 4.9-5.2 days, and readmission rates are 11.5-11.9%. National VA averages are 29.8%, 4.4-4.5 days, and 10.7-10.8%, respectively. 12 patients have been recruited from July to September 2020. The mean age of recruited veterans was 62.5. 50% were actively smoking. 58% have hypertension, 25% have coronary artery disease, and 16.7% have congestive heart failure. National rates are 79.1%, 28.9%, 9.4%, respectively. One of the 12 veterans has completed his prehabilitation and follow up period. No complications or readmissions were identified. Length of stay was 8 days.

Conclusions: Veterans that have undergone a laparotomy in the past two years have a higher complication rates, length of stay and readmissions rates compared to the national VA average. By implementing the newly created prehabilitation program, it is anticipated there will be an improvement in local outcomes. If successful, this program will be shared with other surgery clinics locally and nationally.