



Western Surgical Association 2020 Annual Meeting

Monday, November 9, 2020
4:00pm – 6:15pm Pacific Time
– Virtual Meeting --

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P 9. POSTOPERATIVE OUTCOMES IN THE PLAIN COMMUNITY PATIENT POPULATION: A SINGLE INSTITUTION RETROSPECTIVE STUDY IN WISCONSIN

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Background: Residents of Plain Communities (PC) such as Amish, German Baptist, and Old Order Mennonite, constitute an underserved minority population in the U.S. that is not reliably captured in contemporary healthcare outcomes research. In Wisconsin, there are an estimated 22,020 individuals in PC comprising 56 different settlements. This population has unique and variable beliefs about modern healthcare and is growing at a rate of 4% per year. The surgical outcomes of PCs have not been assessed. The objective of this study is to identify differences in postoperative outcomes or care between the PC population and a general surgical population at a single independent academic institution in Wisconsin. We hypothesized that PC patients will have a higher rate of complications compared to a matched majority patient population. We suspect that contributing factors to this may include delay in presentation and less frequent follow-up care.

Methods: A retrospective review of 30-day postoperative follow-up and outcomes for PC patients compared to a majority (non-PC) matched patient population from 9/1/2014 to 3/31/2020 was performed. PC patients were identified based on our medical center's electronic medical record (EMR) payor identification. Non-PC and PC patients were matched up to a 2:1 ratio based on age, gender, date of operation, ASA class, primary service line, and emergency admission status. 30-day postoperative complications were identified based on our EMR system ICD-10 codes. The primary outcome measure was any complication within 30 days of surgery. Statistical analysis included chi-square and Wilcoxon rank sum tests. A p-value < 0.05 was considered significant.

Results: A total of 271 PC patients were identified and matched with 498 non-PC patients. The analysis included general surgery (35.1%), orthopaedics (25.1%), obstetrics (10.4%), gynecology (10.0%), otolaryngology (8.5%), urology (7.2%), cardiothoracic (2.3%), neurosurgery (1.0%), and pediatric (0.4%) service lines. The overall 30-day complication rate was 27/769 (3.5%) and was slightly higher for the PC group (13/271, 4.8%) compared to the matched non-PC population (14/498, 2.8%), however the difference was not statistically significant (p=0.15). There were no 30-day mortalities in the PC group, and 2 (0.4%) in the non-PC group (p=0.54). There was noted to be lower utilization of select preventive care services in the year prior to surgery among the PC vs. non-PC population, e.g., colonoscopy (1.1% vs. 7.8%; p<0.001), female



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mammography (0.8% vs 22.4%, $p < 0.0001$), cholesterol screening (5.5% vs. 24.1%; $p < 0.001$). Additionally, the proportion of patients who attended at least one postoperative follow-up appointment was significantly lower for PC patients (162/271, 59.8%) compared to their non-PC counterparts (414/498, 83.1%, $p < 0.001$).

Conclusion: Our regional PC surgical patient population utilizes preventive healthcare services less than a comparable non-PC population and is less likely to attend follow-up appointments. Despite this, there is not a statistically significant difference in 30-day morbidity or mortality between the groups. This may be due in part to the relatively low number of PC patients captured in this data set. Further iterations of this research will focus on specific postoperative outcome measures and examine financial and additional healthcare utilization data.