

## **A Program Evaluation of a NP-led Metabolic and Bariatric Surgery Clinic**

Jennifer Conklin DNP(c), MSN, APRN, AGACNP-BC, CMSRN, Regina DeGennaro DNP, CNS, RN, AOCN, CNL, Terri Yost, PhD, FNP-BC, Kim Giles, DNP, RN

**Background:** Obesity is an increasingly costly, chronic disease associated with multiple comorbidities affecting 41.9% of American adults. For people with severe obesity, defined as a BMI >40, bariatric surgery remains the most effective and sustainable treatment. To address increasing obesity rates and to improve access, quality, and efficiency in bariatric treatment, a metabolic and bariatric surgery center in the southeastern United States implemented a Nurse Practitioner-led clinic care model. NP-led care within surgical subspecialty clinics is rarely found within the literature. A systematic literature search demonstrated that NPs can effectively manage patients' multiple comorbidities in outpatient settings resulting in equivalent or improved patient outcomes.

**Methods:** Utilizing the Agency for Clinical Innovation's (ACI) framework, a summative program evaluation of a NP-led metabolic and bariatric surgery clinic was conducted. Retrospective data was collected using the MBSAQIP data registry and the electronic health record from a sub-population of 342 patients having primary bariatric surgery during the period of September 1<sup>st</sup> to November 30<sup>th</sup> from 2018 to 2023. Based on evidence from the literature search, the researcher attempted to evaluate the effectiveness of NP-led care by optimizing patients for surgery through pre-op hypertension management and pre-op weight loss. NP-related pre-op measures were compared with post-operative outcomes including length of stay, 30-day emergency department visits, 30-day readmissions, and 30-day post-operative bleeds. Additionally, the researcher assessed whether the program's initial goals were met and evaluated the cost-effectiveness of the NP-led model of care.

**Results:** The NP-led clinic achieved its initial goal of increasing patient access to bariatric surgery by offering pre-operative weight loss visits, telemedicine visits, and simply by expanding clinic visit capacity while remaining cost-effective with an estimated ROI greater than 180%. Among a sub-population of 342 patients, length of stay and emergency department visits declined over time, while hospital readmissions and post-operative bleeding fluctuated but showed improvement in 2023. The prevalence of pre-operative hypertension rose from 19% to 54%, whereas pre-operative weight loss remained steady at 4%, with a slight increase to 5% in 2023.

**Conclusion:** The NP-led clinic contributed to improved bariatric surgery outcomes over time, but there are opportunities for NPs to optimize patient's comorbidities prior to surgery, specifically, hypertension. Despite evidence from the literature, no relationship was found between preoperative hypertension and bleeding among these 342 bariatric surgery patients. The increase in preoperative hypertension is more likely due to shifts in population following Medicaid expansion in 2019. This is supported by the literature, which shows that patients with public health insurance or low socioeconomic status experience greater disease severity and

poorer outcomes. Future quality improvement efforts should focus on addressing health disparities among the bariatric surgery population, where nearly 50% are publicly insured.