A Program Evaluation of an NP-led Metabolic and Bariatric Surgery Clinic

UVA SCHOOL of NURSING

Background:

- Defined as a BMI of 30 or greater, **obesity** contributes to the global burden of chronic disease and disability
- The National Health and Nutrition Examination Survey reported an increase in obesity from 30.5% to 41.9% and **severe obesity from 4.7% to 9.2% within the last twenty years.**
- There are many treatment options for people with obesity including diet, exercise, behavior modification, medication, and surgery. For people with **severe obesity**, defined as a BMI >40, **bariatric surgery remains the most effective and sustainable treatment**.

Program Evaluation Framework:

- Informed by a literature review and utilizing the Agency for Clinical Innovation's (ACI) framework, a **summative program evaluation of an NP-led MBS clinic** was conducted.

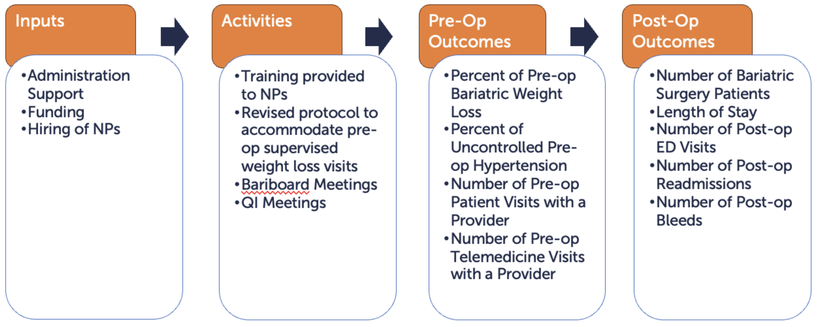
1. Establish a Team:

- **Jennifer Conklin, DNP(c), MSN, AGACNP-BC, CMSRN**
- **Regina DeGennaro, DNP,CNS, RN, AOCN, CNL, Advisor**
- **Terri Yost, PhD, FNP-BC, Second Reviewer**
- **Kim Giles, DNP, RN, Site Mentor**

2. Planning:

A plan for regular communication with the DNP team and DNP site was established. A project plan was created.

3. Program Logic:



4. Evaluation Design:

A summative program evaluation was implemented to assess the impact of a NP-led metabolic and bariatric surgery clinic on bariatric outcomes.

5. Data Plan:

Retrospective data was collected using the MBSAQIP data registry and the EHR to identify the impact of NP-related measures on bariatric patient outcomes.

Sub-population: 342 adults having primary bariatric surgery (gastric sleeve or gastric bypass)

Data: September, October, November for 2018 to 2023

Outcome Measures:

- # bariatric surgeries
- # preoperative visits with a provider
- % bariatric weight loss prior to surgery
- % pre-op hypertension (HTN)
- Length of Stay (LOS)
- 30-day post-operative ED visits
- 30-day post-operative readmissions
- 30-day post-operative bleeds

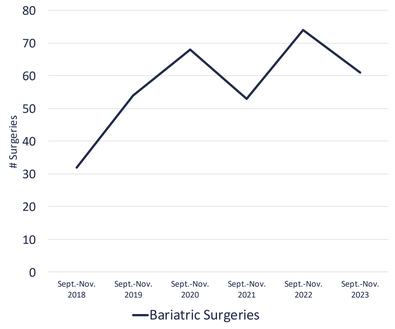
6. Implementation Plan:

- The implementation plan included project approval, data collection, data analysis, and interpretation of results.

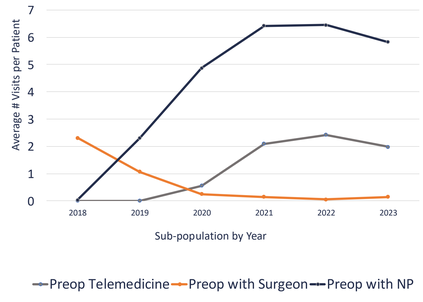
7. Communicating Results:

- The NP-led clinic **achieved its initial goal of increasing patient access to bariatric surgery while remaining cost effective with an estimated ROI >180%.**
  - Bariatric surgeries increased
  - NPs provide on average 6 pre-op visits per patient
  - Telemedicine visits increased overtime

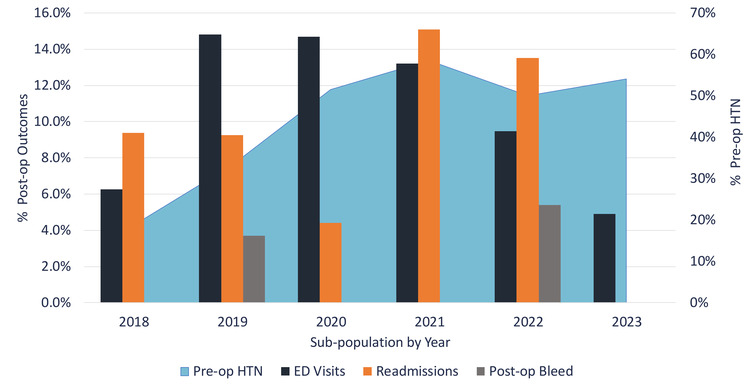
Bariatric Surgeries



Patient Visits



Pre-op HTN & Post-op Outcomes



A larger percentage of patients had pre-op HTN overtime, potentially increasingly their risk for post-operative bleeds. Of the 6 post-operative bleeds in this sub-population, 4 (2022 cases) were attributed to a specific surgical stapler. The increase in preoperative HTN more likely occurred due to shifts in population following Medicaid expansion in 2019.

- **Pre-op Outcomes**
  - % Pre-op HTN increased
  - % Pre-op Weight loss increased
- **Post-op Outcomes**
  - ED Visits decreased
  - Readmissions varied
  - Post op bleeds varied
  - Length of Stay decreased

8. Incorporating Findings:

- Overtime, **bariatric surgery patient outcomes improved, but there are opportunities for the NP-led clinic to optimize pre-op hypertension**.
- This center serves a higher proportion of patients with public insurance—nearly 50% are covered by Medicaid or Medicare—compared to the average (35%) across MBSAQIP-accredited centers. Existing literature indicates that individuals with public insurance are more likely to have severe disease and experience poorer post-operative outcomes. These factors may contribute to certain metrics falling below MBSAQIP benchmarks. Consequently, future quality improvement initiatives should be tailored to address the needs of patients with severe disease and complex social determinants of health.
- The NP-led clinic's **commitment to continuous quality improvement likely influenced patient outcomes**.

References: