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Preoperative Weight Loss for Patients Undergoing Lumbar Spine Surgery Utilizing Motivational Interviewing to Decrease Postoperative Complications: A Quality Improvement Project

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Introduction

-Currently there is no standard of care, preoperatively for patients who are obese based on BMI>30 and undergo elective lumbar spine surgery.
-In 2018, over 70% of United States (U.S.) citizens were overweight and or obese (Fryar et al., 2020).
-Over 2 million lumbar spine surgeries were performed in 2014 (Raad et al., 2019).
-Motivational Interviewing (MI) is an effective intervention for weight loss (Patel et al., 2019; Prochaska & Velicer, 1997; Rollnick, et al, 2008).
-One wound infection can cost >\$43,000 (Lang et al., 2017).

Problem/Question

Do patients who are obese, based on BMI>30 and are offered lumbar spine surgery, who undergo preoperative MI via telehealth to lose weight, compared to those who don't undergo MI have decreased postoperative complications at 30 days postoperatively?

Methodology

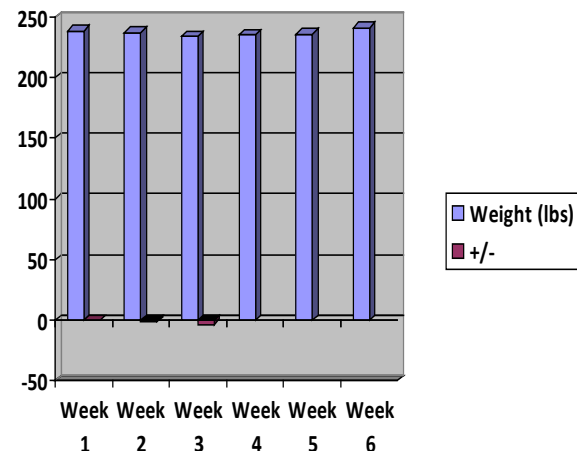
This small pilot Quality Improvement (QI) project was approved by the IRB to recruit obese patients over a two-week time frame who were approved for lumbar spine surgery.
The goal was to enlist 5-10 patients.
The QI sample size was small with 2 patients (one intervention-patient #1 and one control-patient #2) due to Covid19 influences.

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Analysis/Results

Patient #1

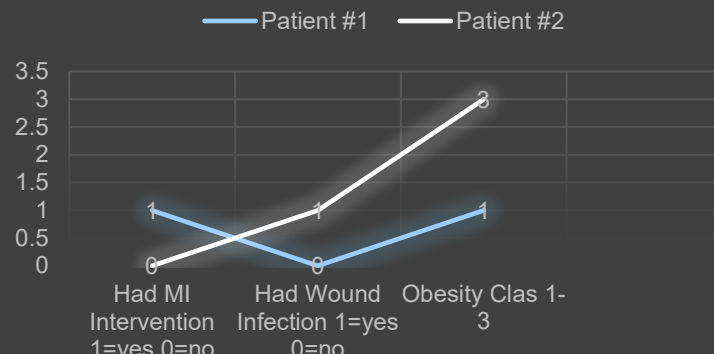
- Achieved 98% of his 2% weight loss goal by week 3
- Regained weight by week 6 due to multiple factors including holiday travel and lack of access to nutritious meals
- Had Class 1 obesity
- Did not have any postoperative complications
- Recommended QI program for all patients undergoing spine surgery



Patient #2

- Had Class 3 obesity
- Had a postoperative complication
→ wound infection

Comparison of MI Intervention, Wound Infection and Obesity Class with Patient #1 and Patient #2



Conclusions/Implications

-Results from this QI project suggest a higher BMI class is associated with postoperative complications-wound infection.
-However, given the small sample size no conclusions could be drawn.
-This QI project should be replicated on a larger scale
-The process for recruitment and intervention is established. The Neurosurgical providers are supportive of the continued study.

Team Members

- Lisa Starr DNP, MSN, APRN, WHNP-BC
- Roxanne Wilson PhD, RN

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