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Background

- Enhanced Recovery After Surgery (ERAS) is a technique recently used in colorectal surgeries at NLEMMC
 - ERAS protocol is used to decrease certain risks associated with surgery.
- There are three main components of ERAS:
- One of the major goals is to decrease the use of narcotics used by supplementing scheduled non-narcotic analgesics post-operatively
 - Early ambulation is another tactic used for the ERAS protocol. Ambulating assists the patient with decreased risk of ileus, preventing deconditioning, and relieving gas pain
 - Gum and hard candies are used to stimulate the GI tract due to patients having a NPO (nothing by mouth) status after surgery

Methods

The patients' charts from the past year and the pharmacy morphine milliequivalents report were placed into an excel spreadsheet and calculated. This allowed us to create a comparison bar graph.

Procedure

The researchers collected data per NLEMMC protocol. In conjunction with the department of pharmacy created a narcotic use report. This data was entered into excel and analyzed.

Measure

All patients that underwent a surgery utilizing ERAS were compiled into a year long data set. We compiled each patient's pain medication usage during their stay, as well as their length of stay. Based on the information received, a determination could be made that the benefits of ERAS are a decreased use of narcotics for pain management, and a decreased length of stay.

Measures and Results

- **Participant Recruitment:**
- With this project being a quality improvement project the participants have already been recruited into the ERAS research project already in progress within the hospital. The patients were notified and consented prior to the surgery towards being a participant. Being a member of the ERAS protocol did not affect the level of care, or pain management the patient received.
- Education about ERAS was presented to RNs:
 - Protocol was placed at the nurses station on Merritt 3 Surgical
 - Information on ERAS was made available through posters and handouts on Merritt 3 Surgical

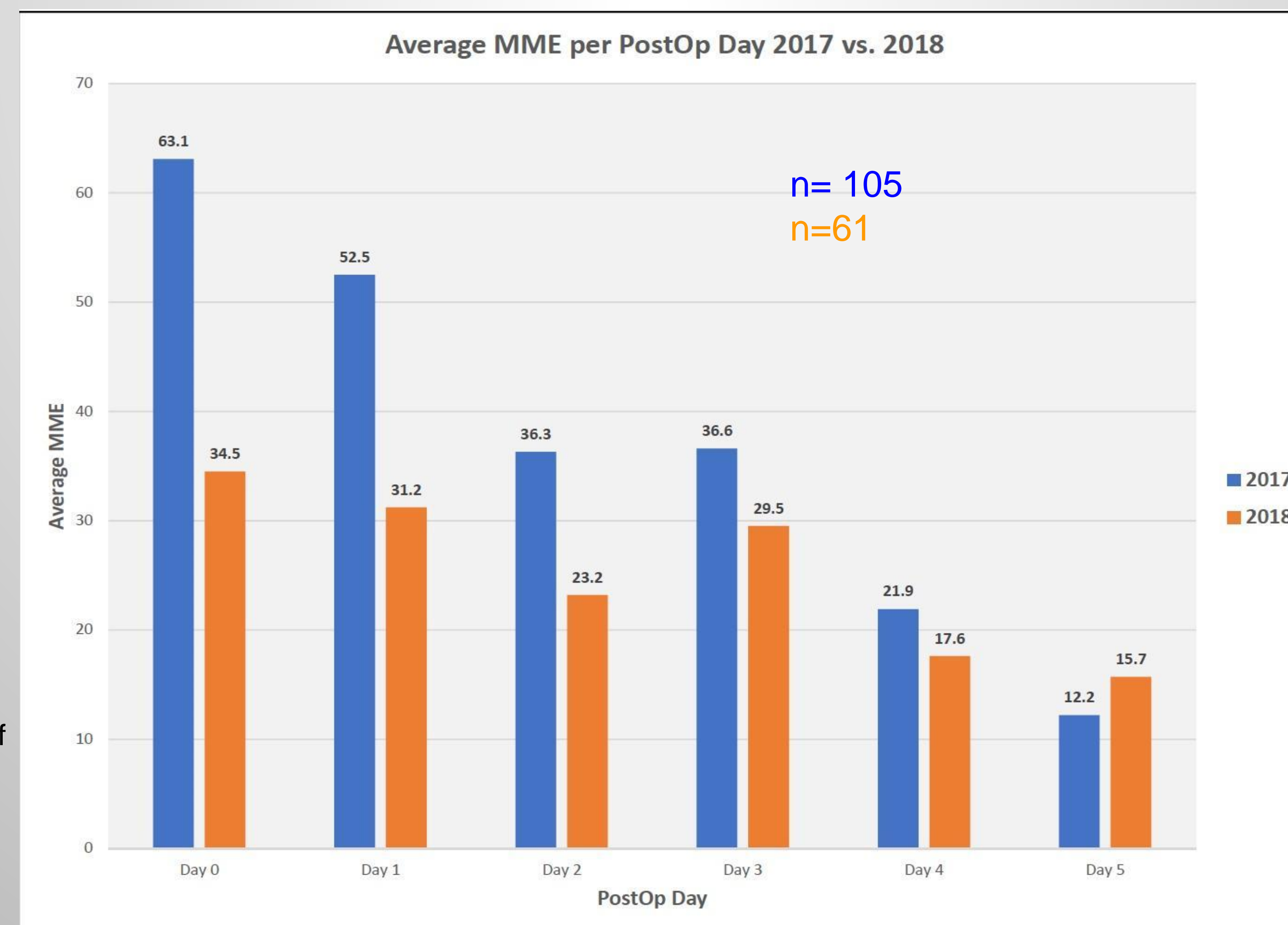
Summary/Discussion

Limitations:

- Patient's pain level and pain tolerance is subjective and hard to objectively compare narcotic use
- Patients that are unable to comply with ERAS protocol for various reasons could also affect pain scores
- Surgical patients can have complications that affect pain scores and length of stay in the hospital.
- ERAS is a multimodal protocol that can decrease pain. Factors from previous health diagnoses can impact narcotic use.
- The multidisciplinary team that helped gather the findings was in a transitional phase during the time of this project with new ERAS.

Conclusion

- Implementation of ERAS on Merritt 3 surgical has found to statistically significant decrease the usage of morphine milliequivalents when compared to ERAS protocol.
- Day five day to day comparison showed 2017 had a lower MME compared to 2018 in the ERAS protocol.
- This is suspected because of patients may have secondary complications.



References

- Cox, B. W., Lassen, K., Soop, M., Nygren, J., Hendry, P. O., Spies, C., et al. (2009). Consensus review of optimal perioperative care in colorectal surgery: Enhanced Recovery After Surgery (ERAS) group recommendations. *Arch Surg*, 144(10), 961-969.
- Koning, M. V., Teunissen, A., van der Harst, E., Ruijgrok, E. J., & Stolker, R. J. (2018). Intrathecal Morphine for Laparoscopic Segmental Colonic Resection as Part of an Enhanced Recovery Protocol: A Randomized Controlled Trial. *Regional anesthesia and pain medicine*, 43(2), 166-173. doi:10.1097/AAP.0000000000000703
- Liu, V. X., Rosas, E., Hwang, J., Cain, E., Foss-Durant, A., Clopp, M., ... Parodi, S. (2017). Enhanced Recovery After Surgery Program Implementation in 2 Surgical Populations in an Integrated Health Care Delivery System. *JAMA surgery*, 152(7), e171032. doi:10.1001/jamasurg.2017.1032
- Matlok, M., Pędziwiatr, M., Major, P., Kłęk, S., Budzyński, P., & Malczak, P. (2015). One hundred seventy-nine consecutive bariatric operations after introduction of protocol inspired by the principles of enhanced recovery after surgery (ERAS®) in bariatric surgery. *Medical science monitor : international medical journal of experimental and clinical research*, 21, 791-797. doi:10.12659/MSM.893297