

Analysis of Hospital Readmission Rates After Minimally Invasive Sacrocolpopexy

Andrea Schaeffer, MD, PGY-3
Lynzee Rittenour, DO, PGY-2

Background

- Pelvic organ prolapse affects approximately 40-50% of parous women.
- Peak incidence age of 60-69 years
- The prevalence of pelvic floor disorders will increase significantly with the aging population.
- Symptoms: vaginal bulge, pelvic pressure, pelvic or lower back pain, dyspareunia, constipation, urinary symptoms
- Conservative and surgical treatment options.
- Sacrocolpopexy is a surgical procedure used to restore pelvic organ support and can be done with or without concurrent hysterectomy.

Objective

To examine the cause for readmission after Sacrocolpopexy with or without Hysterectomy and compare factors related to increased likelihood for readmission such as same day discharge vs admission after surgery along with various medical comorbidities.

Methods

Population

“our region”
Jan 1, 2016-
March 30, 2023

Inclusion criteria

18-88yo
Underwent
laparoscopic
Sacrocolpopexy
w/ or w/out
hysterectomy

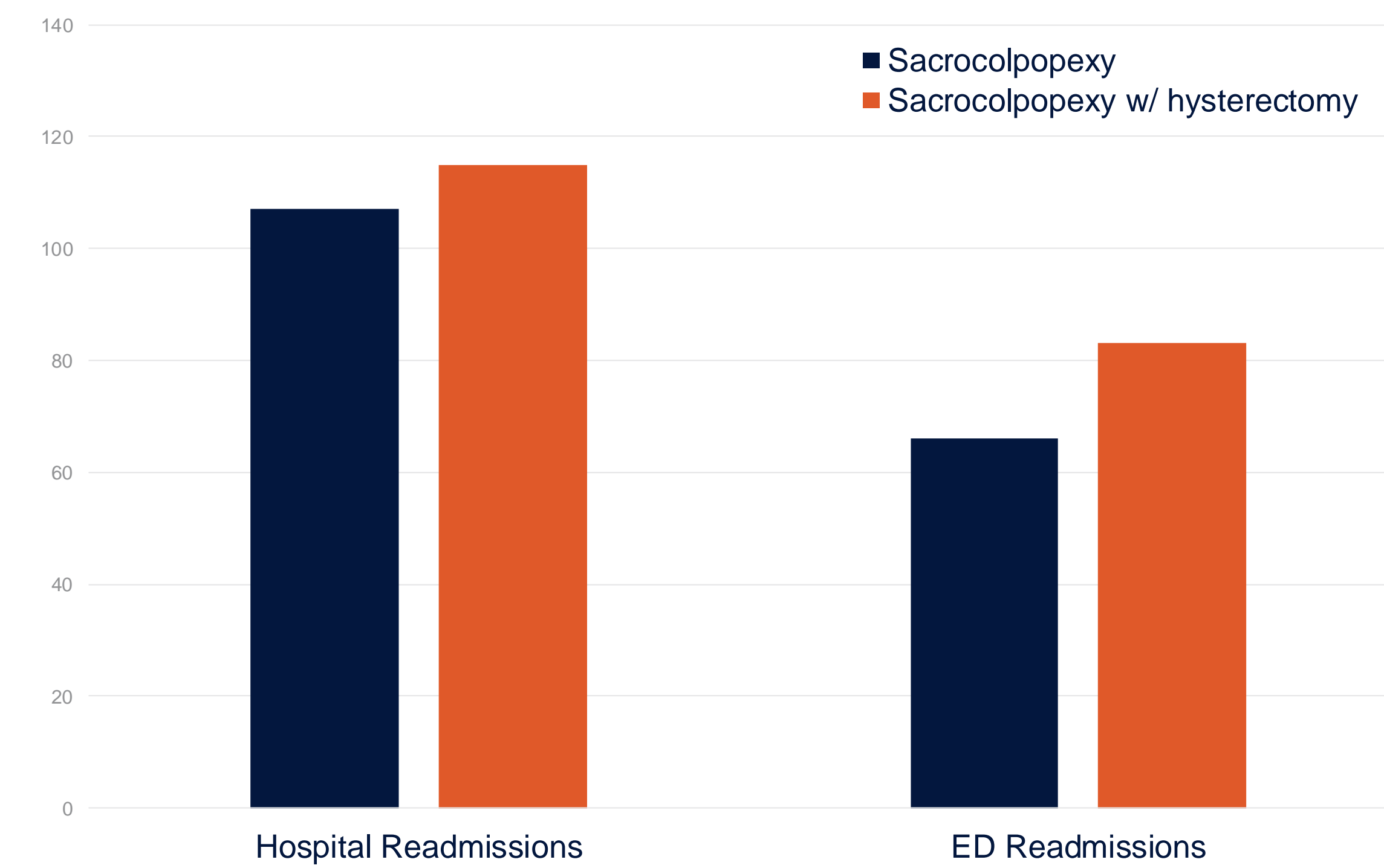
Exclusion criteria

Incarceration
Pregnancy
Malignancy
Duplicate
encounters

- Retrospective study
- 1742 cases
- Readmission rates of patients who underwent Sacrocolpopexy alone vs Sacrocolpopexy and hysterectomy were compared using Chi-square test
- Readmission rates of patients who were discharged from the hospital the same day of their surgery versus those with a longer length of stay were compared using Chi-square test.
- Binary logistic regression was used to examine likelihood of readmission within 60 days associated with either surgery type and with same day discharge while controlling for BMI, hypertension, COPD, heart failure, and diabetes.

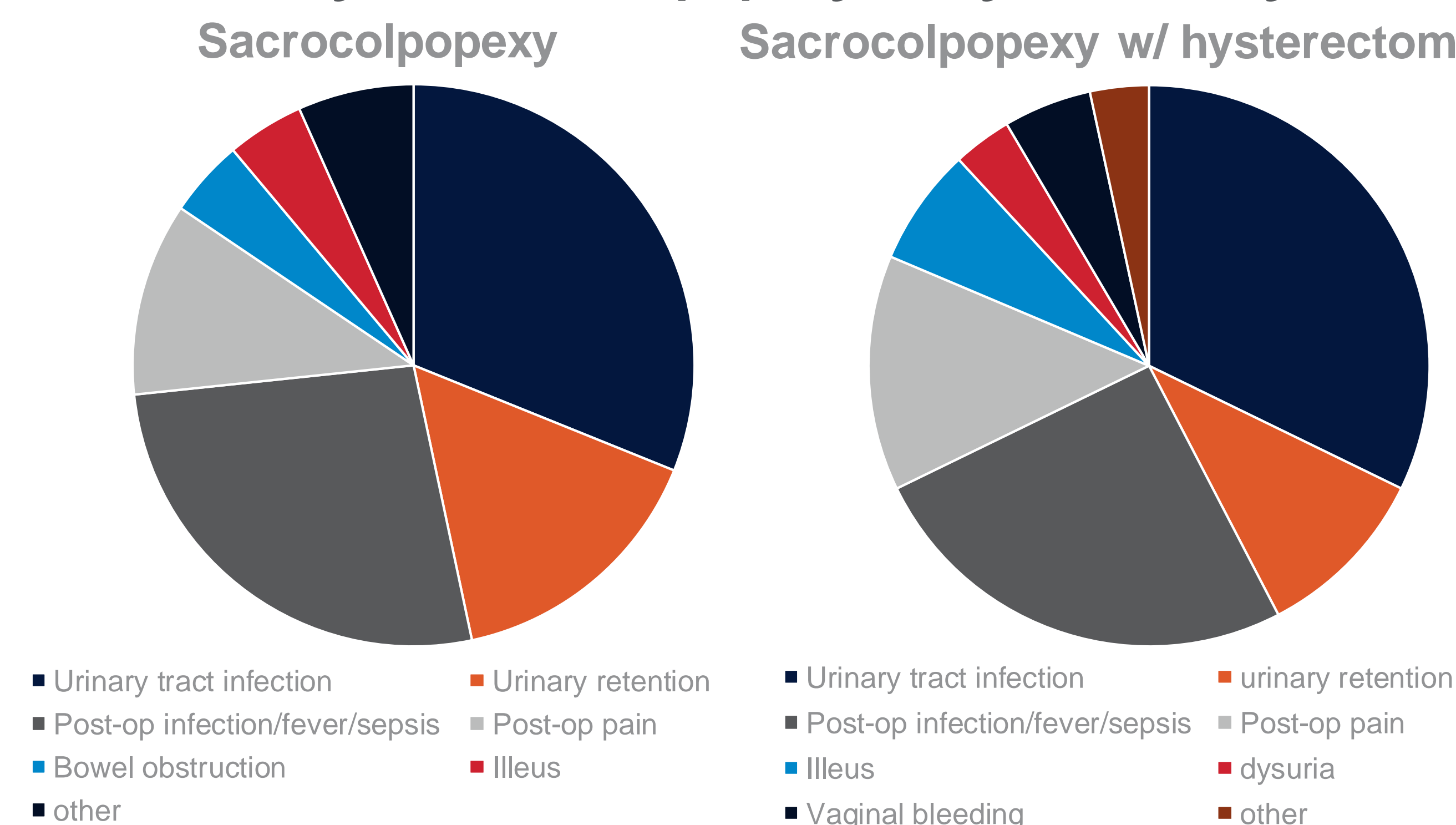
Results

Figure 1: Comparison of Overall Readmission Rates In Sacrocolpopexy Only vs. Sacrocolpopexy with Hysterectomy



- Sacrocolpopexy only cases were not found to be significantly different from sacrocolpopexy with hysterectomy cases in likelihood of hospital or ED readmission within 60 days of discharge
- The odds of readmission within 60 days for patients with same day discharge is expected to 33.5% lower than the odds for patients with longer length of stay in hospital
- BMI was significantly associated with the likelihood of hospital and ED readmission within 60 days of discharge
- The most common reason for readmission was urinary tract infections

Figure 2: Postoperative complications in Sacrocolpopexy only vs Sacrocolpopexy w/ hysterectomy



Discussion

- Included a large cohort of patients from our region with a diverse sample of women (age, race, ethnicity etc.).
- Procedures were performed at multiple medical centers by a diverse group of surgeons.
- Unable to control certain factors such as the surgeon’s decision on surgical approach or when to discharge patients
- Higher risk patients, older patients, or patients with more comorbidities or more complicated surgeries might be less likely to discharge on POD 0
- We only included laparoscopic cases and controlled for BMI, hypertension, COPD, heart failure, and diabetes.

Conclusion

- No significant difference between likelihood of hospital or ED readmission rates between sacrocolpopexy only cases vs sacrocolpopexy with hysterectomy cases regardless of same day discharge or longer hospital stay.
- BMI was significantly associated with the likelihood of hospital and ED readmission within 60 days of discharge when controlling for surgery type, same day discharge, the diagnosis of hypertension, COPD, heart failure and diabetes.

It may be appropriate and cost-efficient for surgeons to consider combined procedures and same-day discharge for their patients undergoing sacrocolpopexy.

References

- Barber MD, Maher C. Epidemiology and outcome assessment of pelvic organ prolapse. *Int Urogynecol J.* 2013 Nov;24(11):1783-90. doi: 10.1007/s00192-013-2169-9. PMID: 24142054.
- Berger AA, Tan-Kim J, Menefee SA. Readmission and emergency department visits after minimally invasive sacrocolpopexy and vaginal apical pelvic organ prolapse surgery. *Am J Obstet Gynecol.* 2021 Nov;225(5):552.e1-552.e7. doi: 10.1016/j.ajog.2021.08.017. Epub 2021 Aug 23. PMID: 34437864. (SCP)
- Culligan, Patrick J. MD. Nonsurgical Management of Pelvic Organ Prolapse. *Obstetrics & Gynecology* 119(4):p 852-860, April 2012. | DOI: 10.1097/AOG.0b013e31824c0806
- Nygaard I, Barber MD, Burgio KL, Kenton K, Meikle S, Schaeffer J, Spino C, Whitehead WE, Wu J, Brody DJ; Pelvic Floor Disorders Network. Prevalence of symptomatic pelvic floor disorders in US women. *JAMA.* 2008 Sep 17;300(11):1311-6. doi: 10.1001/jama.300.11.1311. PMID: 18799443; PMCID: PMC2918416.
- Susan L. Hendrix, Amanda Clark, Ingrid Nygaard, Aaron Aragaki, Vanessa Barnabei, Anne McTiernan, Pelvic organ prolapse in the women’s health initiative: Gravity and gravidity, *American Journal of Obstetrics and Gynecology*, Volume 186, Issue 6, 2002, Pages 1160-1166,
- Wu, Jennifer M. MD, MPH; Hundley, Andrew F. MD; Fulton, Rebekah G. BS; Myers, Evan R. MD, MPH. Forecasting the Prevalence of Pelvic Floor Disorders in U.S. Women: 2010 to 2050. *Obstetrics & Gynecology* 114(6):p 1278-1283, December 2009. | DOI: 10.1097/AOG.0b013e3181c2ce96