

5-2023

Shortening the Postoperative Length of Stay following Total Knee Arthroplasty does not Negatively Impact Short-term Patient Outcomes; a Retrospective Review of the Response to the COVID-19 Pandemic

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Recommended Citation

Shevenell, Bailey; Mackenzie, Johanna; Lieblein, Cassandra; McGrory, Brian J.; Becker, Michael; Colacchio, Nicholas; and Rana, Adam, "Shortening the Postoperative Length of Stay following Total Knee Arthroplasty does not Negatively Impact Short-term Patient Outcomes; a Retrospective Review of the Response to the COVID-19 Pandemic" (2023). *Costas T. Lambrew Research Retreat 2023*. 23.
<https://knowledgeconnection.mainehealth.org/lambrew-retreat-2023/23>

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Transitioning to Outpatient Total Knee Arthroplasty was a positive patient outcome of the COVID-19 pandemic

Safely Decreasing Postoperative Length of Stay for Total Knee Arthroplasty (TKA) Patients Following the COVID-19 Pandemic

Bailey Shevenell, BA; Johanna Mackenzie, MPH; Cassandra Lieblein; Brian J McGrory, MD; Michael Becker, MD; Nicholas Colacchio, MD; Adam J Rana, MD

Introduction

- The demand for total knee arthroplasty (TKA) is rapidly increasing due to the obesity epidemic in the United States, the growing elderly population, and patients' desire to remain active.
- Opportunity to maximize resources: limiting postoperative length of stay (LOS).
- After the COVID-19 pandemic, our institution began outpatient TKA procedures via a collaborative multi-stakeholder approach with anesthesia, nursing, physical therapy, and care management.
- This study aims to compare postoperative outcomes before and after the pandemic with respect to the LOS in TKA patients.

Methods

1. Retrospective cohort study of all primary, unilateral TKA patients in 2019 (n = 757) and 2021 (n = 707).
2. Patient demographics, preoperative, perioperative, and postoperative data was collected from EPIC.
3. Statistical analysis was performed in Excel.

Results

- The average LOS for the 2021 cohort was 0.73 days shorter than the average LOS in the 2019 cohort ($p < 0.001$).
- There was no significant differences between groups in terms of transfusion rates, postoperative complications, 90-day hospital readmissions or 30-day ED visits.
- PROM scores at 6-weeks postoperatively showed no difference in pain, functional ability or patient satisfaction.

Discussion

- Decreasing the LOS after TKA due to the COVID-19 pandemic in 2021 did not pose any increased risks within our 90-day study period when compared to the 2019 cohort.
- This collaborative approach between stakeholders demonstrates that LOS can be safely reduced without negatively impacting patient outcomes.

Total Knee Arthroplasty
Average Length of Stay by
Year

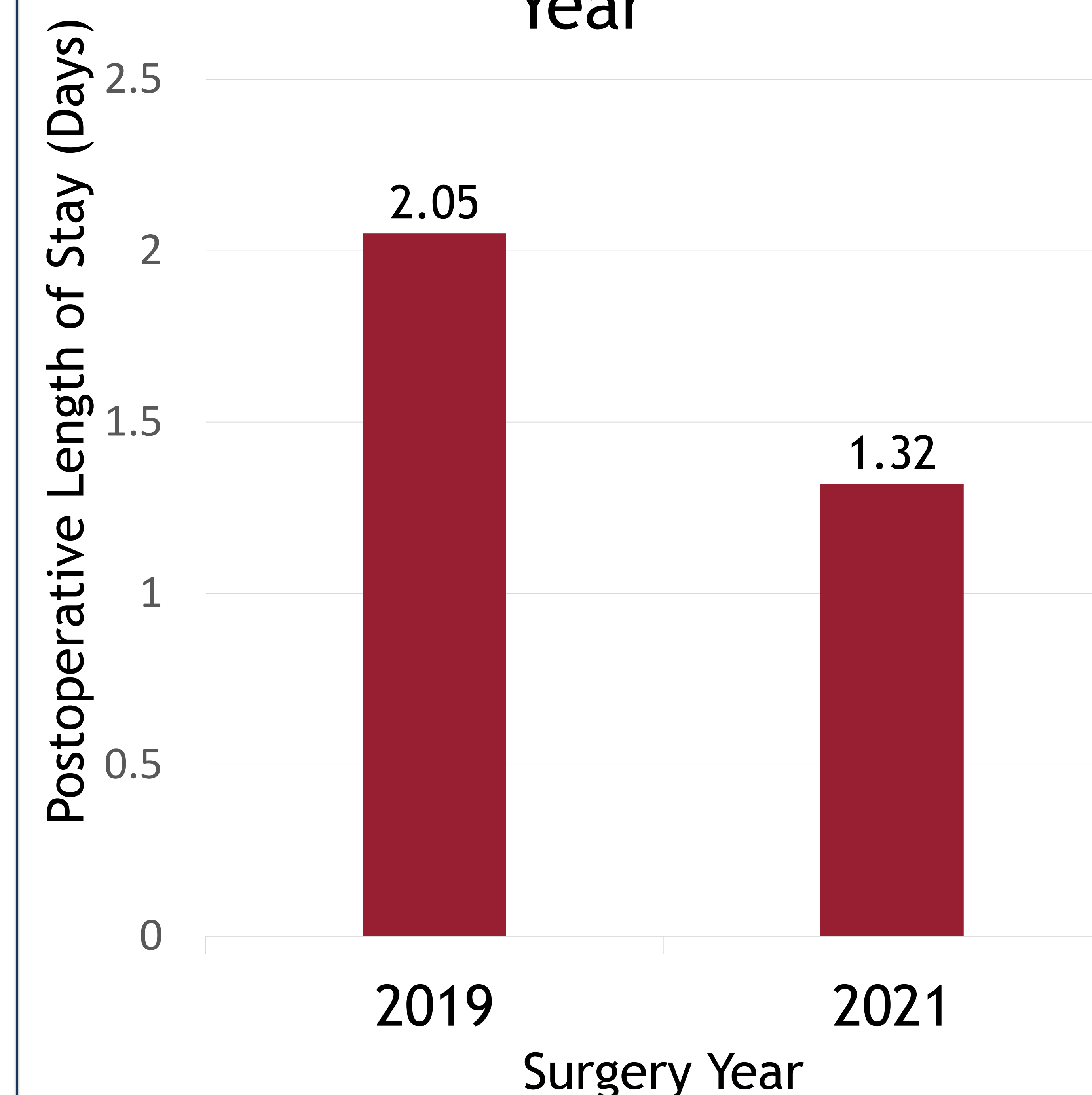


Figure 1. Total Knee Arthroplasty average postoperative length of stay between 2019 (n = 757) and 2021 (n = 707) cohorts.



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