Introduction

Over 1.1 million people yearly undergo total hip, knee, and shoulder arthroplasty surgeries in the United States. Cedars-Sinai Medical Center performs elective joint surgery on over 2,000 patients annually. Volume surges in the hospital delay post-operative arthroplasty patients’ transfers to an inpatient room, resulting in delayed mobilization. A delay in mobilization prolongs recovery, increases the risk of complications, and can increase inpatient stays.

Objectives

- Increase the number of same-day and 23:59 hours or less discharges amongst post-operative primary total joint replacement patients.
- Reduce overall length-of-stay for total hip and knee arthroplasty patients by facilitating earlier discharges.
- Ensure patient safety throughout all perioperative stages, and discharge.
- Set patient expectations for a same day discharge through pre-operative education and in-hospital interactions.

Project Questions

- Will the implementation of an Outpatient Stay Unit (OSU) be successful in facilitating early discharges amongst primary total joint arthroplasty patients?
- Will patients mobilize within three hours of recovery with the assistance of perioperative staff and physical therapy?
- Will the patients meet discharge criteria within 23:59 hours?

Potential Project Barriers

- Data Collection
  - March 2022-May 2022: “6-hours post-surgery” nursing note does not contain mobilization data
  - May 2022 – Updated “6-hours post-surgery” note to “3 hours post-surgery” nursing note
  - June 2022 – Began tracking mobilization in nursing note
- Potential Patient Barriers to Mobilization
  - Hypotension and dizziness
  - Falls
  - Post-op nausea and vomiting
  - Urinary retention
  - Uncontrollable pain
- Knowledge Deficit
  - PACU nurses required training on the optimized care and management of total joint arthroplasty patients.

Implementation

- Develop an interdisciplinary quality improvement project to reduce patient length-of-stay amongst total joint replacement patients, inclusive of hip, knee, and shoulder arthroplasties.
- A 14-bed area in the PreOp/PACU areas was chosen for the OSU – home to the Cedars-Sinai’s Center for Outpatient Hip & Knee Surgery.
- Establish a project team consisting of a surgeon, orthopaedic joint navigators, PACU nursing, therapists, and a project manager.
- Develop inclusion criteria for OSU appropriate patients.
- Define key performance metrics.
- Develop patient education handouts and unit posters
- Train PACU nursing staff on best-practice orthopedic care principles.
- Develop nursing notes to document patient recovery milestones.
- The OSU opens on December 7, 2020.
- Weekly interdisciplinary team meetings are held to review project implementation.
- Data milestones are reviewed at team meetings to inform quality improvement interventions.
- PACU nurses receive ongoing training by Nurse Navigators, Registered Nurses and Physical Therapists.

Results

- Same day and 23:59 hours discharge rates increased and have continued to improve during the OSU post-implementation time periods.
  - The discharge rate of TJR patients within 23:59 hours improved by 2.8 times the pre-implementation rate.
  - Continuous improvement in reduced length-of-stay has been achieved since the OSU inception
- POD1 (day after surgery) discharges increased in the OSU by almost twice the pre-implementation rate.
  - Average Pre-implementation POD1 discharge rate: 31%
  - Average Post-implementation POD1 discharge rate: 59%
- The OSU has provided additional bed capacity to facilitate CSMC patient volume demand.
  - Beginning April 2022, all orthopaedic TJR patients recovered in the OSU and only patients requiring extended hospital management were transferred to inpatient units.
  - Since the OSU inception, 46% (n=1054) of elective Total Joint Replacement (TJR) cases were discharged from the OSU.
- Mobilization data is currently insufficient to evaluate due to changes in data documentation and robustness.

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References
