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Published In/Presented At

Howard, M. Fritts, K. (2017, June 21). *The Effects of Early Mobilization on Length of Stay for Patients Undergoing Total Joint Replacement Surgery*. Poster Presented at: NEXT APTA Annual Conference & Expo, Boston, MA.

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The Effects of Early Mobilization on Length of Stay for Patients Undergoing Total Joint Replacement Surgery

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PURPOSE:

The purpose of this project is to study early mobilization of patients receiving primary TJR surgery on POD #0 and its relationship on hospital LOS.

BACKGROUND:

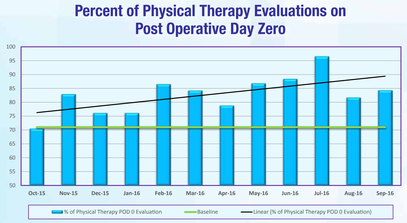
Early mobilization through standardized interdisciplinary clinical care pathways can reduce LOS, decrease adverse events, and allow patients to endure better overall functional outcomes. With the shift towards bundled payment reimbursement, this advancement in care, stands to benefit both the patient and the hospital. Focusing on a clinical pathway that involves initiating mobility on the day of surgery has been found to be associated with a shorter LOS. Focused patient pre-operative education, setting of patient expectations, nursing and staff education, and interdisciplinary communication has led to internal cultural change. The addition of a dedicated rehabilitation staff was incorporated for better continuity of patient care and establishment of shared goals for high quality and cost-effective care.

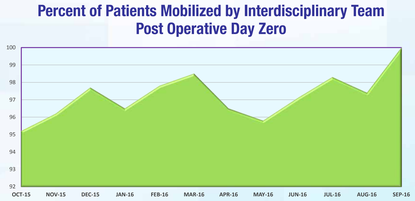
DESCRIPTION:

Early mobilization data was collected from July 2014 through January 2016, for primary total knee and hip replacement patients. The goal was to determine if early mobilization on the day of surgery would affect length of stay. Early mobilization was defined as completion of a POD #0 evaluation by physical therapy, or by sitting edge of bed, standing at the bedside, or transferring to a bedside chair from a dedicated member of the interdisciplinary team. Mobilization was initiated on the orthopedic unit after the initial post-operative nursing assessment was completed. Orthostatic vitals were used as a guideline to determine patients' physical tolerance for out of bed. A physical therapy evaluation was initiated for patients meeting the above criteria, however, if the patients were unavailable, unable to participate, or unable to tolerate mobilization at that time, they would be re-engaged by another member of the interdisciplinary team. In order to accommodate later post-operative cases, physical therapy staff adjusted their working hours to extend the clinical care day. Mobility status was added to a standardized bedside report to identify patients that had not accomplished POD 0 mobilization through therapy intervention. These patients were prioritized by nursing to re-attempt mobilization during evening care. It was the expectation that all patients POD #1 and beyond are encouraged to perform functional mobility and activities of daily living (ADLs) with a member of the interdisciplinary team prior to 11am.

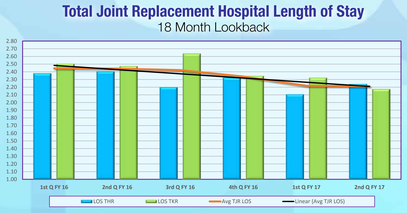
OBSERVATIONS/RESULTS:

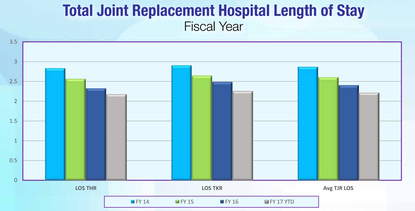
The baseline data for mobilization on POD #0 by the interdisciplinary team prior to the implementation of early mobilization was 71%. This number represents that mobilization at the commencement of the project was directly associated with therapy. Post-implementation, the therapy staff increased the POD #0 capture rate by 10% (82.8%). After implementing counter measures, an additional 15.6% of the patients were mobilized through the interdisciplinary team. At the completion of the project, an average of 97.25% of the patients admitted to the post-op orthopedic unit after sustaining an elective total joint replacement surgery were mobilized by the interdisciplinary team. This demonstrates a significant change by greater than 25% (25.8%) of patients now being mobilized through the early mobilization protocol.





A correlation between early mobilization and LOS was identified. Average LOS for patients in the studied category were found to have a baseline LOS of 2.88 days. After implantation of the early mobilization protocol, LOS was reduced to 2.53 days. The flexibility of therapy staff to extend their clinical day, the overall willingness of the interdisciplinary team to adapt to change, and collaboration amongst the team of physical therapists, surgeons, and anesthesiologists were all contributing factors in LOS reduction.





CONCLUSIONS:

Amidst rising pressure to provide the highest quality care at the lowest price, healthcare organizations are placing greater emphasis on reduction of hospital length of stay while maintaining error reduction, promoting safety, and ultimately improving the service that is provided to the patient. The focus on early mobility of the elective total joint population is key in the overall reduction of hospital costs. The results of this project supported current evidence and confirmed the hypothesis that early mobilization on POD #0 was effective strategy in reducing LOS. The implementation of this clinical care pathway further reduced LOS by an average of 0.37 days.

Key Contributing Factors

- Dedicated Interdisciplinary Orthopedic Team
- Enhanced Pre-Operative Patient Education
- Enhanced Caregiver Involvement
- Establishment of Patient Expectations
- Surgeon, Hospitalist, and Anesthesiologist Engagement

Benefits

- Improved patients satisfaction
- Decrease in adverse medical events
- Empowerment and collaboration amongst the interdisciplinary team

Opportunities for Future Study

- Fast Track: Rapid Recovery Program with the incorporation of "Prehab."
- Application of a standardized functional mobility assessment tool that spans from pre-operative to post-acute discharge for patients undergoing Total Joint Replacement for establishment of the most cost effective care path.

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