Development of a Unique Screening Tool for Acute Care Occupational Therapy Services in Patients Following Total Joint Replacement Surgery

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Introduction

Total joint replacement (TJR) surgery rates have seen significant increases in recent years.[1] Patients following TJR surgery often demonstrate significant difficulty in the performance of their activities of daily living (ADL) upon their discharge from the hospital.[2] Occupational therapy plays a crucial role in the treatment of these functional deficits.[3,5] While physical therapy (PT) is consulted for patients following TJR surgery as a standard of care, occupational therapy (OT) is often utilized on an as-needed basis. A concern with the growing number of patients undergoing TJR surgery is the lack of available occupational therapy resources to adequately address the ADL retraining needs of these patients in the acute care setting.[4] The impending bundled payment reimbursement method for TJR surgery presents a unique problem in that care must be streamlined to allow for minimal complications following surgery in this new reimbursement model.[5] A lack of evidence exists on the appropriate screening of patients who would benefit from occupational therapy services in the acute care, orthopedic setting. Given the impending transition of healthcare to a bundled payment method of reimbursement, a screening tool must be developed to ensure the appropriate patients are referred for skilled occupational therapy services following TJR surgery.

Research Objective

To develop a screening tool to standardize patient access to occupational therapy services in an acute care, orthopedic setting.

Design

Process improvement study in which data was compared between a previous, more subjective, occupational therapy screen and the new unique and standardized screening tool for referral of occupational therapy services. Data collected over a two month period for all individuals undergoing a total joint replacement (knee or hip). The month of February, collected data on the previous OT screen, which asked patients if they required OT services based on assistance available at home. The month of March, collected data utilizing the new screening tool that was developed. The new screening tool was created utilizing research. Patients meet certain criteria to be referred to occupational therapy services for data collected the month of March. Patients receiving OT services include those who require transfer to an inpatient rehab facility, those who are unable to follow hip precautions during activities of daily living and/or those who meet 3/5 set criteria.

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PREVIOUS SCREEN

Adaptive Equipment ☐ Not completed during this session	☐ **Basic introduction to Adaptive Equipment for ADL completion provided** ☐ **Verbalizes understanding of proper Adaptive Equipment use** ☐ **Requires additional training for proper Adaptive Equipment use** ☐ **Declines Adaptive Equipment for home as will receive assistance from caregivers for ADL completion**
Notes:	☐ **OT Consult recommended for detailed instruction on advanced ADL completion**

NEW SCREEN

OT Screen ☐ Not completed during this session	☐ **OT Screen IS NOT recommended as the patient has not met the required criteria** ☐ **OT Screen IS recommended for detailed instruction on advanced ADL completion secondary to:** ☐ Recommended discharge disposition of Inpatient Rehabilitation Facility (Turcotte et al., 2020) ☐ Patient has difficulty maintaining total hip precautions. (Lo et al., 2019; Riddle et al., 2018) ☐ At least 3/5 of the below categories met:
Social Support ☐ **Criteria Met**	☐ Patient lives alone or with poor social support (Lo et al. 2019; Jorgensen & Kehlet, 2013) ☐ Patient does not feel comfortable with caregiver assisting with self-care activities such as bathing, dressing, toileting, etc. (Roberts & Robinson, 2014) ☐ Patient will have limited access to a support system to access groceries, assist in food preparation, cleaning, pet care, etc. (Phelan et al., 2015)
Age ☐ **Criteria Met**	☐ Age >70 years old (Jorgensen & Kehlet, 2013; Lo et al., 2019; Schlussel et al., 2017)
Fall Risk ☐ **Criteria Met**	☐ Moderate risk on Hester Davis Fall Risk Assessment (>/= to 11) – found in Adult PCS section of EPIC Flow Sheet ☐ Hx of at least 1 fall in the last year (Riddle et al., 2018)
AM-PAC Score ☐ **Criteria Met**	☐ POD#0 PT AM-PAC Score <17 (indicating increased assistance with mobility, including transfers)
Co-Morbidities ☐ **Criteria Met**	☐ 4+ Comorbid diagnoses: including, but not limited to, any cardiovascular disorders, neuromuscular disorders, neurological disorders, cognitive deficits, visual deficits, or documented substance abuse that may impact patient's ability to complete functional tasks. (Riddle & Galloday, 2018; Pritchard et al., 2019) ☐ The presence of any psychiatric disorder treated with medication (Riddle & Galloday, 2018; Jorgensen & Kehlet, 2013; Lo et al., 2019)

Outcome Measure

The primary outcome was to identify the percentage of patients post-TJA receiving OT services pre/post-implementation of the evidenced-based OT screen. Patients requiring OT services despite a negative screen were tracked in both conditions.

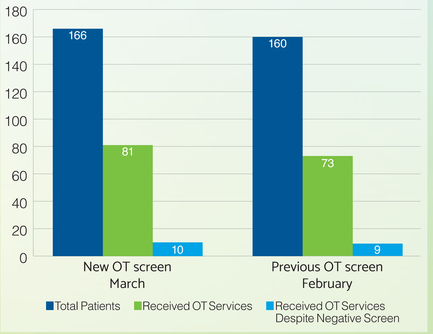
Participants

326 patients admitted LVH-Tilghman following THA/TKA surgery, including bilateral knee replacements. Patients excluded were TJA-revisions and those transferred out of the hospital prior to arrival to the unit.

Interventions

First month, physical therapists used clinical judgement and second month, completed evidence-based screening tool determining if OT was indicated. Included criteria include: inpatient rehab recommendation, difficulty maintaining hip precautions and/or meeting 3/5 of categories (social support, age, fall risk, AM-PAC score and co-morbidities).

Results



The subjective OT screen found that 45.6% of patients required OT services. The evidence-based screening tool showed that 48.8% of patients required OT services. In both conditions, 0.06% of patients required OT services, despite a negative screen.

Conclusion

OT plays a crucial role in treatment of functional deficits that prevent patients from completing activities of daily living following their hospital stay. An evidence-based screening tool for OT services was created to allow for the efficient utilization of OT services in the acute care setting following TJA. Our results indicate that the implementation of an evidence-based screening tool did not appear to alter the level of care provided to TJA patients. Further studies can be completed on self-efficacy of patients who receive and don't receive OT services.

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