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School of Occupational Therapy

Development and Implementation of a Preoperative Therapy Program for Individuals Undergoing Total Joint Surgical Procedures

Trevor D. Manspeaker

April 30th, 2019

A capstone project submitted in partial fulfillment for the requirements of the Doctor of Occupational Therapy degree from the University of Indianapolis, School of Occupational Therapy.

Under the direction of the faculty capstone advisor:

Dr. Lucinda Dale, EdD, OTR, CHT, FAOTA

A Capstone Project Entitled

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By

Trevor D. Manspeaker

Occupational Therapy Doctoral Student

Approved by:

Faculty Capstone Advisor	**Date**
Doctoral Capstone Coordinator	**Date**

Accepted on this date by the Chair of the School of Occupational Therapy:

Chair, School of Occupational Therapy	**Date**

Abstract

Following the completion of a needs assessment at Saint Joseph Regional Medical Hospital, an increase of medical spending, a lack of patient expectation fulfillment, and the decreased functional outcomes postoperatively were all identified as problems impacting the joint replacement population. The purpose of the doctoral capstone experience was to develop and implement a preoperative therapy program to address the above needs. Cabilan, Hines, and Munday (2016) defined pre-habilitation as "the preoperative optimization of physical functionality to enable the individual to maintain a normal level of function during and after surgery" (p. 224). During the initial development of the program, a preoperative therapy team was created to begin data collection and resource creation. In conjunction with the therapy staff, the team created multiple educational handouts corresponding to preoperative exercises, adaptive devices, surgical expectations, and home modifications. Data were collected to assess the financial impact a preoperative therapy program could have at this site. Data demonstrated an annual saving of 118,000 dollars due to decreased post-acute care utilization. Following the development of the program, the team began the implementation phase by completing chart reviews. Implementation trials yielded positive results indicating improved postoperative outcomes and satisfaction fulfillment. The occupational therapy (OT) student presented the program to administration staff, and it was accepted for implementation to care. Throughout the experience, the OT student utilized leadership and advocacy skills to complete objectives. The experience provided great opportunities for continued learning and professional growth.

Development and Implementation of a Preoperative Therapy Program for Individuals Undergoing Total Joint Surgical Procedures

According to the Centers for Disease Control (2019), arthritis is the leading cause of disability. The Centers for Disease Control estimates that 23% of adults have arthritis, with the most common form being osteoarthritis (Centers for Disease Control, 2019). Osteoarthritis affects joints causing pain and decline in functional abilities over time. Total joint replacement surgery has emerged as one of the leading treatments for end-stage arthritis of the knee and hip. Kurtz, Ong, Lau, Mowat, and Halpern (2007) examined the projections for primary hip and knee arthroplasties in the United States from 2005 to 2030. The researchers projected primary total hip arthroplasties to increase by 174%, and primary total knee arthroplasties to increase by 673% (Kurtz et al., 2007, p.782). As the total number of arthroplasties performed increases, so will healthcare costs (Press, Rajkumar, & Conway, 2016, p. 131). These two factors indicated a need for alternative methods in reducing healthcare costs associated with total joint procedures.

The purpose of this doctoral experience capstone was to develop and implement a preoperative therapy program for individuals undergoing total joint surgical procedures in an acute-care setting. The development of this program aimed to reduce post-acute healthcare costs, improve postoperative outcomes and expectations, decrease the length of stay (LOS), and decrease hospital readmissions. According to Bonnel and Smith (2018), when developing a project, frameworks are necessary for guidance and enveloping important concepts and boundaries. Two frameworks guided the development and implementation of the doctoral capstone experience.

The first framework utilized in this project was the person-occupation-environment-performance model. The person-occupation-environment-performance model analyzes the

person, the environment, and occupation to provide a systematic view of the client and his or her occupational performance (Cole & Tufano, 2008). This systematic view considers the interaction among each of the components through a collaborative relationship between practitioner and client. The person component contains the physiological, psychological, motor, sensory/perceptual, cognitive, and spiritual components of the individual (Christiansen, Baum, & Bass, 2015). The OT student utilized these components to guide each facet of the program, from screening to discharge, to ensure comprehensive care and overall understanding of the client's strengths and weaknesses before surgery. The environment encompasses cultures, social supports, social determinants, social capitals, physical environments, natural environments, health educations, public policies, and assistive devices and technologies (Christiansen et al., 2015). Individuals undergoing total joint surgical procedures required adaptive devices, home modifications, and preoperative environmental changes to ensure healthy postoperative outcomes. This project included evaluations and interventions that ensured an individual's environment enhances postoperative outcomes. The occupation component is composed of activities, tasks, or roles (Christiansen et al., 2015). Due to the systematic nature of this model, occupation can affect the person and environment. Throughout this project, occupation was the mechanism of change when providing interventions to patients. The last component of this model is occupational performance. Occupational performance is the culmination of each of the listed components. The patient’s occupational performance served as an outcome measure for the effects of a preoperative therapy program.

The second framework utilized was biomechanical/rehabilitation frame of reference. This frame of reference analyzes range of motion, kinematics, torque, strength, and endurance (Cole

& Tufano, 2008, p. 167). This frame of reference utilizes assessments aimed at identifying performance components such as movements, strength, and endurance (Cole & Tufano, 2008).

Assessing these components helped identify impairments that limited occupational performance. For the preoperative program to be successful, there needed to be proper identification of risk factors contributing to increased post-acute utilization, decreased postoperative outcomes, and increased LOS. Yu, Garvin, Healy, Pellegrini, and Iorio (2015) identified physical deconditioning as a risk factor for post-acute care utilization (p. e68). The OT student utilized this approach to provide interventions aimed at improving strength, endurance, and mobility for improved occupational performance postoperatively.

Literature Review

The Centers for Medicare & Medicaid Services (CMS) are transitioning to alternative payment models, such as bundled payments for health care services (Press et al., 2016). Press et al. (2016) reported these bundled payments as the link among unconnected payments for clinical services provided during an episode of care. An episode of care for a complete joint replacement begins with hospitalization for hip or knee replacement and ends 90 days after discharge (Press et al., 2016). Snow et al. (2014) found the average cost of an episode of care for a total joint replacement to be 19,818 dollars. Furthermore, the researchers found the bulk of spending to be centered around hospitalization (10,033 dollars), skilled nursing facilities (3,090 dollars), and home health agencies (1,645 dollars) (Snow et al., 2014, p.5). In conjunction with the increasing number of total joint replacement surgeries performed, health care providers are experiencing increased overall spending. In order to decrease spending, alternative treatment measures must be explored (Porter, 2009).

To reduce health care costs effectively, understanding which individuals have the highest risk for longer hospitalization and skilled nursing facility placement was crucial. Yu et al. (2015) identified risk factors for complications associated with total joint arthroplasties. The researchers produced a list of modifiable factors (obesity, diabetes, staphylococcus, smoking, venous thromboembolic disease, cardiovascular disease, neurocognitive problems, psychological problems, behavioral problems, physical deconditioning, comorbidities affecting ambulation) (Yu et al., 2015). The researchers concluded that an occupational therapist analyzing these modifiable factors could improve pain, physical function, quality of life, and reduce hospital readmissions (Yu et al., 2015). Similarly, Mednick, Alvi, Krishnan, Lovecchio, and Manning (2014) investigated factors contributing to increased readmissions following primary total hip arthroplasties. There is a greater risk for readmission in individuals who are higher in age, higher in body mass index, and have multiple comorbidities (Mednick et al., 2014). Additionally, Mednick et al. (2014) concluded that higher readmission rates correspond with more complications postoperatively.

An alternative method that can be successful in reducing these costs is preoperative care, i.e., pre-habilitation. Cabilan et al. (2016) defined pre-habilitation as "the preoperative optimization of physical functionality to enable the individual to maintain a normal level of function during and after surgery" (p. 224). Researchers have demonstrated promising results for reduction of post-acute care utilization and improved postoperative outcomes. Snow et al. (2014) demonstrated a 29% reduction in post-acute care utilization when individuals engaged in preoperative physical therapy. Furthermore, Snow et al. (2014) found the total cost reduction to be around 1,215 dollars compared to individuals who received no preoperative therapy. Soeters et al. (2018) found that preoperative therapy resulted in fewer physical therapy visits during the

acute stay, improving readiness for discharge. Soeters et al. (2018) concluded that preoperative therapy could assist in reducing the LOS, but alone cannot decrease the LOS. Cabilan et al. (2016) examined the effect of pre-habilitation can have with pain and quality of life among individuals receiving total hip and knee arthroplasties. Cabilan et al. (2016) found zero improvements in pain scores or quality of life for individuals engaging in preoperative therapy. However, Cabilan et al. (2016) concluded that individuals participating in preoperative therapy had a significant reduction in admission to an acute care facility. Soares, Nucci, Silva, and Campacci (2013) examined the pulmonary benefits of engaging in preoperative therapy. The researchers concluded that individuals participating in preoperative therapy had increased inspiratory strength and respiratory muscle endurance (Soares et al., 2013). Additionally, Soares et al. (2013) found improved functional independence measures and increased 6-minute walk test distances among preoperative patients.

Tilbury et al. (2016) found a substantial number of patients dissatisfied with expectation fulfillment following the total knee arthroplasty. Tilbury et al. (2016) indicated that future programming should include specific educational materials addressing realistic expectations to improve patient satisfaction postoperatively. Tilbury et al. (2018) investigated the connection between preoperative expectations and postoperative outcomes. Tilbury et al. (2018) found that a patient's expectations were consistently part of the predictions for postoperative function and pain. Tilbury et al. (2018) concluded that preoperative programs could be effective in improving postoperative outcomes when expectations are part of the preoperative plan. Similar to the previous two studies, Palazzo et al. (2014) examined patient satisfaction one year after the total hip arthroplasty. The researchers concluded that preoperative predictors of satisfaction were improved mental well-being and optimistic surgeon expectations (Palazzo et al., 2014).

Additionally, the researchers found the fulfillment of expectation as the main determinant of satisfaction (Palazzo et al., 2014). Palazzo et al. (2014) reported that programs need to address postoperative function and pain relief to achieve patient satisfaction.

The findings in this doctoral capstone experience contribute to the literature. Significant findings associated with the effectiveness of preoperative therapy aided in the determination of whether preoperative therapy could decrease health care spending, improve postoperative outcomes and expectations, decrease the LOS, and decrease hospital readmissions.

Screening & Evaluation

The needs assessment aimed to reveal current procedural operations at the site, as well as available opportunities for change and growth. Multiple staff members completed the needs assessment including occupational therapists, physical therapists, speech therapists, nurses, administrators, and physicians. The needs assessment included questions about patient care, adequate programming in specific departments, perceived benefits of implementing preoperative programs, barriers preventing program development, and specific needs for departments. The results of the needs assessment indicated a great need for a preoperative therapy program. Currently, there are two programs available for patients receiving joint surgeries. The first program is a pre-surgical testing department. The second program is a joint class. When asked, the nursing staff indicated a lack of therapy presence in the two programs. Additionally, the nursing staff reported a decrease in volume due to decreased physician referrals to the programs. There are currently four full-time physical therapists, three full-time occupational therapists, and two full-time speech therapists working in the hospital. Therapy staff reported that the major barriers to therapist involvement in program development are time constraints and costs. Therapy staff indicated there is a need for more therapy presence in the preoperative setting. Four major

physician groups serve Saint Joseph Hospital. When interviewed, physicians indicated the need for a program specific to their instructions. Additionally, physicians were hesitant to send their patients to the joint class due to fear of the specific instructions not being addressed. The administration expressed a desire for a preoperative program that could decrease health care costs while remaining within the hospital's budget. There is currently a lack of programs that involve collaboration among nursing, therapy, and physicians. The lack of collaboration has resulted in an overall decrease in preoperative care and education. A preoperative therapy program that incorporates all staff members would alleviate this issue, subsequently resulting in improved quality of care and decreased health care costs.

Established evaluation methods must be used to analyze a patient's occupational performance and participation. Yu et al. (2015) produced a list of modifiable factors (obesity, diabetes, staphylococcus, smoking, venous thromboembolic disease, cardiovascular disease, neurocognitive problems, psychological problems, behavioral problems, physical deconditioning, comorbidities affecting ambulation). An occupational therapist analyzing these modifiable factors could improve pain, physical function, quality of life, and reduce hospital readmissions (Yu et al., 2015). The reduction of these factors could contribute to improved occupational performance and participation in patients enrolled in the preoperative program. Also, Mednick et al. (2014) found that individuals who were higher in age, had a higher body mass index, and increased comorbidities were more likely to be readmitted. Mednick et al. (2014) concluded that higher readmission rates correspond with more complications postoperatively following a total hip procedure. These risk factors contributed to the selection of four tools to evaluate and screen patients enrolled in the preoperative therapy program.

The first tool selected was the Knee Injury and Osteoarthritis Outcome Score Jr. The Knee Injury and Osteoarthritis Outcome Score Jr. is an additional tool preferred by Medicare as an outcome measure for individuals in the complete joint replacement bundle (Drummond-Dye & Smith, 2016). Drummond-Dye and Smith (2016) indicate the completion of the Knee Injury and Osteoarthritis Outcome Score Jr. provides additional points that contribute to the annual quality score for the hospital system. Collins et al. (2016) found the Knee Injury and Osteoarthritis Outcome Score Jr. had adequate content validity, internal consistency, test-retest reliability, construct validity, and responsiveness for age and condition-relevant subscales. An occupational therapist utilizing the questions contained in the Knee Injury and Osteoarthritis Outcome Score Jr. can examine the quality of the knee and an individual's quality of life. The tool served as a screening tool to determine the risk for occupational deprivation.

The second tool selected was the Hip Injury and Osteoarthritis Outcome Score Jr. The Hip Injury and Osteoarthritis Outcome Score Jr. is an additional screening tool preferred by Medicare that could contribute to the annual quality score for the hospital system (Drummond-Dye & Smith, 2016). Lyman et al. (2016) found the Hip Injury and Osteoarthritis Outcome Score Jr. had high internal consistency, moderate to excellent external validity, and very high responsiveness. Additionally, the researchers concluded the Hip Injury and Osteoarthritis Outcome Score Jr. to be a relevant and efficient tool for analyzing an individual's hip health (Lyman et al., 2016). This measure served as a risk-screening tool to examine an individual's hip quality and his or her daily occupations and routines.

The third tool selected was the Patient Reported Outcome Measurement Information System. The Patient Reported Outcome Measurement Information System is an accepted global measure of patient function, and a hospital system can submit scores for additional quality score

points (Drummond-Dye & Smith, 2016). The results of this tool identify the current occupational participation and performance of an individual.

The fourth tool was the Blaylock Risk Assessment Screening Score (BRASS). The BRASS is used to identify patients who will require complex discharge needs. Cunic, Lacombe, Mohajer, Grant, and Wood (2014) found a positive correlation between the BRASS and increased LOS. Additionally, Cunic et al. (2014) concluded that higher BRASS scores increased the risk of complex discharge. The BRASS tool provided a deeper analysis of the functional capabilities of the patients before their surgical procedure. This datum guided the interventions and facilitated the best care for patients. The combination of these four tools provided a comprehensive and client-centered approach to screening and evaluation. By utilizing the four tools, the OT analyzed risk factors associated with joint procedures and identified that these risk factors might decrease post-acute care utilization, improve postoperative outcomes, reduce the LOS, and reduce hospital readmissions for all patients undergoing joint replacement procedures.

The screening and evaluation methods used in this study are similar to the methods used in traditional areas of practice. In an acute care setting, an occupational therapist evaluates the patient's functional status for an understanding of what additional services are needed. The occupational therapist in the preoperative program completes the evaluation to reach a similar goal.

The screening and evaluation methods are different from a traditional area of practice due to the timing of the evaluation. An evaluation before injury changes the purpose of therapy from rehabilitation or remediation to prevention.

The evaluation and screening methods used in the preoperative program are similar to an emerging area of practice. In an emerging area of practice, therapy services have not been

implemented and used over a longer period. Thus, therapy services are ever changing and becoming defined. Although the interventions performed will be traditional, the timing of evaluation and screening aligns more with an emerging practice area.

The OT student aimed to analyze functional status in a more traditional sense, such as activities of daily living. An occupational therapist in an emerging area of practice evaluates more specific skills or occupations that are not commonly analyzed, such as driving. The occupational therapist can use different evaluation tools and methods not seen in this program. Overall, this program aimed to use evaluation and screening methods found in traditional and emerging areas of practice to provide a comprehensive, high level of care.

Implementation

The implementation of the preoperative therapy program required a multi-facet approach. The first objective was the data collection and analysis. After the completion of the needs assessment, the OT student concluded the biggest area of concern to be skilled nursing facility utilization. The hospital administrators identified skilled nursing facility placements as a costly component and identified it as a focal point for data collection and analysis. In partnership with two senior analysts at the site, the team collected data pertaining to the current performance of the hospital with individuals undergoing joint replacements. The OT student gathered data to examine the financial benefits, and clinical benefits a preoperative therapy program could have at this site. The team collected complete joint replacement bundle data from the calendar year 2017. Hospital administrators track the bundle data due to the connections with hospital performance and Medicare ratings (Press et al., 2016). This connection allowed the team to gather comprehensive data when justifying the implementation of the program. Four hundred eleven patients belonged to the complete joint replacement bundle in 2017. Fifty-three patients

discharged to a skilled nursing facility. The team determined the average cost associated with a patient discharged to a skilled nursing facility from the bundle to be 11,000 dollars. In 2017, the 53 patients that discharged to a skilled nursing facility cost the hospital 568,478 dollars. To gain an understanding of the possible cost reduction a preoperative therapy program could have, the OT student and therapy staff conducted a chart review of the 53 patients. Each chart was examined to determine the therapy recommendation and if it was congruent with the eventual discharge location. Upon completion, the team identified 25 patients who should have discharged to their homes instead of a skilled nursing facility. The further evaluation determined that the bulk of these patients lacked education and services before their surgeries, which resulted in discharge to a skilled nursing facility. Following the completion of the chart review, the OT student created an Excel table that illustrated the financial benefits a preoperative therapy program would have (See Appendix). The Excel table presented the cost savings associated with a 4% decrease in skilled nursing facility discharges (16 patients a year). The team concluded that if 16 patients a year discharged home with home care instead of a skilled nursing facility, the hospital would save 118,784 dollars annually. The table also includes the financial expense associated with hiring a part-time occupational therapist to manage the program. After hiring the part-time occupational therapist, the hospital would save 69,997 dollars annually. Administration and therapy staff believe additional savings are achievable through a decrease in skilled nursing facility placements, a decrease in the LOS, decrease in readmissions, and improvement in surgeon compliance. Through the data, the team provided a means to justify the implementation of the preoperative therapy program to administrative staff at this site.

The second objective was to create the framework for the day-to-day operations of the therapist managing the program. To start this process, the OT student organized a meeting with

the nursing staff, pre-surgical testing staff, and the therapy team. The team identified pre-surgical testing as the gateway for therapy evaluation and treatment. The team determined that nurses in the pre-surgical testing department would call patients scheduled for their upcoming surgical procedure. These calls would utilize the BRASS. The team determined if an individual scored fewer than a ten (low risk) the occupational therapist would call the patient to provide education and exercises required for his or her surgery. If an individual scored greater than a ten (moderate to high risk), the occupational therapist would call the patient to schedule an OT evaluation in the hospital therapy gym. In addition to the calls, the nursing staff implemented a new hospital education class that informs future patients of hospital expectations when admitted for surgical procedures. To achieve surgeon participation, the OT student met with the surgeons to ensure the educational handouts were accurate and tailored to their expectations. Upon approval, the OT student began creating the official educational handouts and exercises for the patients. The framework created an improved understanding of the preoperative therapy program.

Effectiveness of Leadership

An important skill that leaders exhibit is effective communication. The OT student utilized this skill throughout the doctoral capstone experience to implement a preoperative therapy program effectively. For a team to be successful, communication must be effective to ensure each member of the team is valued and given a chance to be productive. The OT student used his strength in communication to establish an interdisciplinary approach for the implementation of the program. The interdisciplinary team included nursing staff, physicians, therapy staff, administrators, and off-site vendors. The OT student effectively differentiated communication with each to achieve successful outcomes. For example, when communicating with nursing, physicians, and therapy staff, the conversations were centered around clinical care.

However, when communicating with administrators and off-site vendors, the conversations were centered around the financial impact of the program. By modifying communications with different individuals, the OT student was able to connect with each member, increasing project efficiency and productivity. Another skill that a leader demonstrates is flexibility. The OT student demonstrated flexibility to staff members when scheduling meetings, scheduling evaluations, and when completing tasks. The flexibility shown allowed the team to feel comfortable and complete the tasks at their own pace. The flexible attitude created a culture of support and positivity, which allowed the team to implement the program effectively.

Staff Development. As the program entered the implementation phase, it was important to include staff development and ensure the continuation of the program. When completing tasks and objectives, meetings were held with the therapy staff to ensure carryover of skills. Additionally, the OT student presented evidence-based research to therapy staff during lunch and meetings. When developing the framework for the day-to-day operations of the therapist, the OT student consulted with the therapy staff to gather input for improved effectiveness of the program. The OT student utilized the therapy team feedback to ensure individual efficiency in managing the program. In addition, the OT student created an evaluation tool for use in the preoperative therapy program. In terms of data collection and analysis, the OT student requested therapy staff members to assist with portions of the data collection to ensure carryover of skills. The staff involvement ensured that if staff members had to continue the program they would be effective in collecting outcome data. The OT student approached the development and implementation with an interdisciplinary approach ensuring staff members understood the importance of the program and felt they were impactful towards the implementation of the preoperative therapy program.

Discontinuation

For the preoperative therapy program to reach its full potential, it was necessary to implement continuous quality improvement and outcome measurement. Following the data collection phase, the team identified an area for continued quality improvement. Currently, Saint Joseph Regional Medical Hospital performs in the top ten percent of hospitals in the region for skilled nursing facility placement with joint replacement patients. The preoperative therapy program intends to improve this performance with a four percent decrease in skilled nursing facility placements. With continued quality improvements and outcome measurements, the team strives to make Saint Joseph Regional Medical Hospital the number one hospital in the region in terms of skilled nursing facility placement rates and postoperative outcomes. The team established a plan for continued improvement to reach goals. The first step in this plan was to continue data collection. The team created an Excel document to track the program's volume. This document tracks the appointment date, the patient's preoperative BRASS score, the education and interventions provided, the patient's discharge location, and postoperative Short Musculoskeletal Function Assessment Score (SMFA). The team will utilize the form to examine trends within the data. For instance, if a trend forms between a specific intervention and a decrease in skilled nursing facility placement, the team will educate the occupational therapist to make improvements. Conversely, if the team finds a negative trend, the team will work with the occupational therapist to address the issue and provide a solution. The Excel document provides the data necessary to implement continued improvements throughout the program's lifecycle. In addition to data collection, the team created checkpoints throughout the program for continuous quality improvement. Some of these checkpoints will be meetings that include members of the preoperative therapy team. During these meetings, the preoperative therapy team will discuss the

current state of the program. If a member of the team feels an area could be improved, the team will work together to provide alternative methods and strategies to address the problem. Another set of checkpoints will be patient feedback discussions at one month, three months, and six months postoperatively. During this time, the team will incorporate patient feedback into the continued improvement of the program.

The team will utilize the SMFA as the primary outcome measurement following the patient's operative procedure. The major outcomes are to decrease financial spending, to improve postoperative outcomes, to decrease the LOS, and to decrease readmissions. The utilization of this tool creates an avenue for continued quality improvement, as well as a measure of program outcomes. An occupational therapist utilizes the SMFA to examine a patient's functional status and his or her attitudes (Williams, 2016). The team will administer the SMFA to patients at one month and six months postoperatively. If a patient indicates improvements in functional status compared to his or her BRASS scores, the team will examine what parts of the program led to the improvements. Additionally, improvements in functional status should correlate to decreased financial spending, decreased LOS, and decreased readmissions. Ultimately, the occupational therapist will utilize the SMFA to assist with meeting program goals and provide support for the continuation of a preoperative therapy program at this site.

Addressing the Societal Need

Two societal needs helped to drive the program and its contents. The first societal need is the individuals suffering from a diagnosis of arthritis at an increasing rate. The significant percentage of individuals who have arthritis has created a societal need for improved treatment methods to combat the negative effects of arthritis. A treatment method that has emerged to help individuals with end-stage arthritis is a total joint replacement. As more individuals undergo total

joint replacement surgeries, the need for improved resources and treatments surrounding these procedures increases. The preoperative therapy program addressed this need by expanding the pre-existing services available at this site. Implementation of new educational materials, exercises, adaptive devices, and home modifications improve the experience of undergoing total joint surgery. The preoperative program at this site adds to the ongoing efforts for improved care around the nation for individuals who have arthritis.

The second societal need addressed by the OT student while developing and implementing this program was the need for improved outcomes and expectation fulfillment following a surgical procedure. The team understood the importance of expectation fulfillment within postoperative outcomes. The team developed the educational materials and interventions for the program to address expectation fulfillment. A patient's expectations would be clear, and the occupational therapist would educate the patient to achieve the fulfillment of those expectations. The OT student created educational materials centered around surgical procedures, typical responses to the surgery, and individualized information about the patient's functional needs. The OT student utilized interventions to examine the expectations of the patient. Additionally, the team included questions regarding the patient's expectation fulfillment within the postoperative questionnaires.

The OT student addressed the societal needs throughout the program. The preoperative therapy team created an environment that strived to make a difference. It was important for the team to address the needs of the patients at the site, as well as all possible patients in society.

Overall Learning

Throughout the experience, the OT student strived to effectively interact with all individuals through written, oral, and non-verbal communication. The experience provided opportunities for communication in a variety of settings and with a variety of individuals. The OT student effectively communicated with multiple individuals within the hospital setting. These individuals included nursing staff, therapy staff, administrators, off-site vendors, patients, and fellow students. Much of the communication among staff members happened via email. Within these emails, the OT student had to communicate professionally and promptly. This form of communication was key in reaching weekly objectives and goals. In addition to written email communication, the OT student provided written documents to hospital administrators. These documents highlighted the program's progress while being specific and concise. The team shared these documents with the chief executive officer, president, chief financial officer, chief medical officer, and other high-ranking administration officials. Therefore, it was imperative that all writing was professional and efficient.

Oral communication happened throughout the experience. Daily meetings with the site mentor provided an opportunity for the OT student to express his thoughts and opinions about the progress of the program. During these meetings, the OT student effectively communicated while remaining professional and concise. In addition to meetings with the site mentor, the OT student facilitated several meetings with a variety of hospital staff members. During these meetings, the OT student maintained a professional and organized appearance. The wide variety of disciplines that were part of the program development process enforced the need for individualized oral communication. The student adapted communication to each effectively. For instance, when discussing financial data with hospital administrators, the student was confident and assertive when discussing findings and conclusions. When discussing clinical care and the

importance of the program, the student adapted the communication to meet the concerns of other clinical staff members. Similarly, the student utilized effective communication when speaking with patients in the community. There were cases when the OT student vocalized the importance of preoperative therapy to members in society. While discussing this information, the OT student communicated appropriately and used non-medical, simple language when necessary. The OT student incorporated health literacy strategies speaking with the public to ensure a greater understanding of concepts.

The OT student utilized non-verbal communication professionally and appropriately. While communicating with individuals, the OT student maintained eye contact and refrained from displaying a posture of disinterest, such as crossing arms. In addition to this, the OT student understood the role of an active listener in conversations. The OT student listened to every individual fully and never interrupted. The act of listening allowed members of the preoperative team to discuss their views and opinions. This act created an environment where each member of the team felt valued. In addition to listening to staff members, the OT student engaged in active listening while discussing the program with patients in the public sphere. These patients provided input into what they would appreciate from a program. The OT student created the most effective program at this setting utilizing this feedback.

Leadership and Advocacy

The doctoral capstone experience provided many opportunities for the OT student to advocate for the importance of the profession. As the only occupational therapist in the preoperative therapy team, it was important to advocate for the reasons why an occupational therapist was best suited for this position. To do this effectively, the OT student discussed what an occupational therapist does and how the OT scope of practice best fits the responsibilities of

the position. Additionally, the OT student presented literature demonstrating the impact OT could have with a preoperative program. In addition to advocating for the profession, the OT student advocated for the patients that the program would serve. Although presentations were tailored to the financial benefits, it was important to acknowledge the positive impact the program would have with the satisfaction and outcomes of the patients. During a meeting with the hospital president, the OT student demonstrated advocacy for client-centered care. After the OT student presented the data, the president asked for additional benefits to justify the program. During this time, the OT student presented multiple clinical benefits of the program. These included patient satisfaction, community engagement, and improved care. Through the presentation of these benefits, the OT student advocated for the patients who would benefit from the program.

To implement the program successfully, the OT student utilized effective leadership skills. These skills included effective communication, flexibility, delegation, teamwork, and drive. Throughout the development, the OT student maintained open and effective communication with the staff. The OT student utilized all forms of communication to enhance the experience and to accomplish goals. Additionally, the OT student utilized written communication via email to schedule meetings, discuss program progress, and to delegate tasks. Some tasks required assistance from multiple individuals. The OT student successfully delegated these tasks to different individuals. The delegation allowed an individual to utilize his or her strengths to accomplish a specific goal. In addition to the delegation, the OT student utilized the analysts at the site to assist with data collection. As the OT student delegated the tasks, the OT student could complete additional tasks to accomplish goals more effectively. To create a positive environment within the preoperative therapy team, the OT student demonstrated

flexibility while completing program development. By utilizing these skills as a leader, the team felt comfortable and cohesive when completing tasks. Individuals understood that the OT student would aid throughout and would be flexible with completion dates. The flexibility decreased stress and allowed individuals to perform at a high level. The leadership skill that was most important during the development and implementation of this program was drive. Throughout the development and implementation, there were times for celebration and times for despair. The experience truly tested the drive of the OT student. After an initial meeting with the president of the hospital, the program had hit a low point, and the outlook for implementation was very low. However, after an additional meeting, the president approved the presentation of the project for implementation. Without the continuous drive to accomplish the goals originally set, this program would have never existed or impacted the many individuals at this site.

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Appendix

Financial Benefits of the Preoperative Therapy Program

4% Decrease	Preoperative Therapy Program Proposal							
	In the calendar year 2017, we sent 53 patients in the bundle to a skilled nursing facility from the hospital. Skilled nursing facility placements resulted in 568,478 dollars spent on skilled nursing facility stays within the post-acute phase.							
	Scenario	Hire part-time occupational therapist to manage preoperative therapy program.						
	Percentage of patient episodes sent to a skilled nursing facility in 2017				13% (53/411)			
	Skilled nursing facility cost is 10,726 dollars on average per episode				The total cost of episodes sent to a skilled nursing facility		$568,478	
	Plan to decrease the number of patients who go skilled nursing facility to 9% (16 Patients fewer)				16 patients per year		$171,616	
	Home health care cost is 3,302 dollars on average per episode				16 patients per year		-$52,832	
	Cost savings for 16 patients to go home with home care instead of a skilled nursing facility				Total Savings		$118,784	
	Expenses		Rate	Benefits	Total	Hours needed per week	Annual Hours	Total Cost
		1 Part Time OT	36.1	10.83	46.93	20	1040	$48,807
	Assuming 16 more patients per year go home instead of a skilled nursing facility, and the occupational therapist's salary, the actual benefit will be							**$69,977**

Assuming we decreased the number of episodes sent to a skilled nursing facility to 8%	**$99,673**
Assuming we decreased the number of episodes sent to a skilled nursing facility to 7%	**$129,369**