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School of Occupational Therapy

Rehabilitative Pre-Operative Screening Tool for Cardio-pulmonary Surgery Patients

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Abstract

Cardiac physicians commonly see their patients pre-operatively to address risk factors. occupational therapy (OT) and physical therapy (PT) practitioners are often involved in a patient's care post-operatively, yet they do not typically screen their patients pre-operatively. The purpose of this project was to develop a screening tool to assess functional factors pre-operatively and to advocate for OT and PT practitioners' involvement in patient care post-surgery. Using a two-round Delphi survey technique, the therapy team received an 8-question survey to write questions they wanted patients to answer pre-operatively. Then, a 30-question screening tool was created to address a patient's physical functioning, cognition, home set-up, support system, and goals pre-operatively. In addition to the screening tool development, the role of the therapy team was further defined to the patient and cardiovascular surgery physicians. Future research is needed to evaluate the correlation between length of stay and using the Cardiac Pre-Operative Screening Tool.

Rehabilitative Pre-Operative Screening Tool for Cardio-pulmonary Surgery Patients

Introduction

This Doctoral Capstone Experience (DCE) took place at Indiana University (IU) Health Methodist Hospital, in downtown Indianapolis, Indiana. IU Health is the largest healthcare organization in Indiana (IU Health, 2020a). IU Health has an overall mission "to improve the health of our patients and community through innovation, and excellence in care, education, research and service" (IU Health, 2020a). Their vision is to "be a preeminent leader in clinical care, education, research and service," which is achieved through "objective evidence and established best practices" (IU Health, 2020a). This hospital is one of Indiana's largest Level 1 Adult Trauma Centers, so it is well-equipped to handle significant traumas, such as motor vehicle accidents, gunshot wounds, burns, etc. (IU Health, 2020c). This DCE was primarily focused in the cardio-pulmonary intensive care unit (ICU).

It is common practice for physicians to complete a pre-operative screening with their patients to identify any risk factors prior to surgery (Kumar et al., 2018). There is a gap in the literature regarding the use of a rehabilitation-specific pre-operative screening for patients undergoing cardiac surgery, so the purpose of this project was to develop a screening tool to assess a patient's prior level of physical functioning, cognition, home set-up, support system, and goals prior to their cardiac surgery, as well as to advocate for both occupational therapy (OT) and physical therapy (PT) practitioners (therapy team) to be involved in a patient's care after their surgery. I gathered qualitative information from the therapy team at my site to determine screening questions that were included in the screening tool that patients fill out prior to their cardiac surgery. I obtained the data from the therapy team through an online survey. Information

gathered from the therapists regarding their degree, credentials, and years of experience helped to determine the validity of the screening tool.

Background

Population Served

IU Health Methodist Hospital cares for patients with diverse backgrounds, medical needs, values, races, and ethnicities throughout central Indiana. Patients from various counties within the state receive services from this hospital (IU Health, 2020b).

With this DCE being focused in the cardio-pulmonary ICU, common conditions and diagnoses treated by OT practitioners in this particular ICU include patients on extracorporeal membrane oxygenation (ECMO), who need coronary artery bypass graft surgery (CABG), heart/lung transplants, valve replacement, open-heart surgery, and stent placements, and who have coronary artery disease (CAD), chronic obstructive pulmonary disease (COPD), and heart failure (Edwards, S., personal communication, February 24, 2021). Common health and occupational risk factors include impaired cognition, smoking, diabetes, COVID-19, and obesity (Edwards, S., personal communication, February 24, 2021).

Needs Assessment

During the initial interview, the therapy team discussed the setbacks some patients experience with ICU delirium and the lack of knowledge of the role of the therapy practitioners in the ICU. Delirium involves a “change in perception or cognition,” which impacts an individual's “ability to receive, process, store and recall information” (Kotfis et al., 2018, p. 129). Its impact ranges from 11.4% to 55% of patients receiving care in the ICU (Pagad et al., 2020). Symptoms of ICU delirium are often reversible, although some literature indicates individuals

who experience ICU delirium have “longer hospital stays, prolonged mechanical ventilation,” and higher mortality (Ibrahim et al., 2018, p. 1; Pauley et al., 2017).

There is no known cause of delirium, and it is often a mixture of predisposing risk factors that cause severe confusion (Ibrahim et al., 2018). Some risk factors can include age, anxiety, depression, and cognitive impairments (Jackson et al., 2016; Matter et al., 2013). Antipsychotics are often a medication used to prevent the delirium’s side effects, but there is no relevant evidence that the medication works efficiently (Ibrahim et al., 2018). Non-pharmaceutical interventions to help patients who are experiencing ICU delirium can include the use of calendars, clocks, early mobilization, sleep preservation techniques, ICU diaries, music therapy, and family education (Ibrahim et al., 2018; Laxton & Morrow, 2018).

Early rehabilitation is vital to cardiac patients who are experiencing ICU delirium. The research indicates that patients who did not receive therapy and were sedated had an average of four days with delirium, while patients who received therapy had an average of two days with severe confusion (Ibrahim et al., 2018). As a result of the decreased delirium, a patient's stay in the hospital was reduced by 3.1 days (Ibrahim et al., 2018). In a different study, 104 patients, who were previously mechanically vented in the ICU after having long-term complications of critical illness, were assessed to determine if OT and PT improved functional outcomes (Schweickert et al., 2009). Forty-nine patients participated in therapy during periods of daily interruption in their sedation, while 55 patients had therapy as needed ordered by the primary care team (Schweickert et al., 2009). Overall, the patients receiving consistent therapy were discharged faster, had a shorter duration of delirium, and had more ventilator-free days (Schweickert et al., 2009).

At this site, the overall goal for OT practitioners is to evaluate and provide interventions that help patients who are critically ill begin to gain the independence and safety needed to move to acute care (Edwards, S., personal communication, February 24, 2021). OT practitioners also identify barriers that patients may face in the ICU (Edwards, S., personal communication, February 24, 2021). According to Affleck et al. (1986), there are three common problems that occur in the ICU: "immobility and prolonged bed rest, sensory deprivation and stress, and prolonged mechanical ventilation" (p. 324). For individuals who are awake and alert, OT practitioners have the ability to work on bed, room, and bathroom mobility with their patients in the ICU. The ICU setting can cause patients to have feelings of isolation (Affleck et al., 1986), which has been especially difficult throughout the COVID-19 pandemic when a patient's support system is unable to visit. The decreased social support, along with the constant sound of the monitors going off, the lights turning on and off, and decreased independence can cause a patient to feel stressed (Affleck et al., 1986). These environmental factors can also put patients at risk for ICU delirium. OT practitioners can assess and provide interventions, such as improving sleep hygiene, cognitive retraining, and modifying the environment for individuals, including those with heart conditions (Laxton & Morrow, 2018).

In an acute care setting, OT and PT practitioners often meet their patients for the first time after surgery. During the initial meeting or evaluation, the therapy team can gain a better picture of their patient's overall health and wellbeing prior to surgery and their current level of function (AOTA, 2020). Literature indicates there is a screening tool for patients undergoing a total joint arthroplasty (Odum et al., 2020) that addresses "pre-operative mobility, home safety, social/cognitive barriers, and patient health history" in order to determine rehabilitation needs post-operatively (p. 144). At this site, the therapy team currently uses a pre-operative screening

tool for patients undergoing orthopedic surgery. Just as physicians are able to screen their patients and identify risk factors prior to major surgery, it is important that the therapy team can also screen their patients with different conditions (Kumar et al., 2018). Because of the prevalence of ICU delirium at this site and lack of knowledge of therapy's role in the ICU, it was determined that a cardiac-specific pre-operative screening tool could allow the therapists to gain information about their patients prior to their surgery. With the information gathered prior to a scheduled surgery, the therapy team can gain a better picture of their patient's current function, identify risk factors such as cognition, and make more appropriate goals during their hospital admission (Odum et al., 2020).

Model and Frame of Reference (FOR)

The model guiding this DCE is the Canadian Model of Occupational Performance (CMOP). The focus of CMOP is that occupational performance is the interaction between the person, the environment, and the occupation itself (Cole & Tufano, 2008). The person would include the patient's physical, cognitive, and affective components (Cole & Tufano, 2008). At the center of CMOP is the human spirit which is a person's "source of will and self-determination, and a sense of meaning, purpose, and connectedness that people experience in the context of their environment" (Cole & Tufano, 2008, p. 28). Understanding the physical and cognitive aspects of a patient, in addition to their human spirit, allowed the screening tool to be more informative and holistic of the patient's function prior to surgery. This helped to predict any dysfunction, defined as any disruption between the person-environment-occupation interaction, a patient may have after their surgery and allowed the therapy team to better address these complications (Cole & Tufano, 2008).

The Cognitive Behavioral FOR is often used when a patient experiences a psychological barrier that affects their engagement in meaningful activities, such as ICU delirium (Cole & Tufano, 2008). When a patient experiences ICU delirium, they are unable to balance their life roles and occupations. Assessing a patient through interviews, questionnaires, and clinical observations is vital to this FOR (Cole & Tufano, 2008). This FOR guided the questions included in the screening tool so cognition, which can be related to ICU delirium, could be addressed prior to a patient's cardiac surgery. In addition to the Cognitive Behavioral FOR, the Rehabilitative FOR was also addressed. This FOR is occupation-based and focuses on a patient's functioning so that they can achieve their highest level of occupational performance (Cole & Tufano, 2008). It also guided the questions included on the screening tool, so the therapy team could gain a better insight into their patient's overall function prior to surgery.

Project

Design

The plan and goals for this project were designed by combining the needs assessment, literature review, University of Indianapolis School of Occupational Therapy curricular threads, and collaborating with the site. This project was completed using the Delphi survey technique. Through a two-round process, a screening tool was created. During this process, feedback from the OT and PT practitioners was obtained to ensure the screening tool was inclusive of both disciplines.

Implementation

During the first four weeks of this DCE, through the help of the site mentor, a list of all OT and PT practitioners who have rotated through the cardiac floors was created. A total of 31 therapists were included in the list. These therapists were the participants in this project and

helped to create the screening tool. During the first four weeks, a Google Form was created with eight questions including:

1. What are your credentials?
2. Where did you graduate from? What year did you graduate?
3. How many years of experience do you have working with cardiac patients?
4. Are you a member of any professional organizations? If so, please list.
5. If you could see a patient prior to their scheduled surgery, what home set up questions would you want answered?
6. If you could see a patient prior to their scheduled surgery, what about the patient's functional tasks would you want answered?
7. If you could see a patient prior to their scheduled surgery, what about the patient's support system would you want answered?
8. If you could see a patient prior to their scheduled surgery, what about the patient's values, beliefs, and spirituality would you want answered?

These questions were reviewed by the site mentor and approved prior to sending them to the therapists. The first four questions listed increased the validity of the screening tool. The final four questions contributed to the creation of the screening tool. With this Delphi survey technique, 31 total OT and PT practitioners received the Google Form through email and had approximately four weeks to respond. Once the first round of comments was collected, a list of potential questions for the screening tool was created. During the second round, the therapy team reviewed the different questions and the wording of the questions to come to a consensus of questions that should be included in the pre-operative screening tool. From there, a final draft of the screening tool was created.

Originally, this project involved assessing a patient's cognition, using the Mini-Mental State Examination, prior to their cardiac surgery. Results from the assessment were going to be used to assess the potential correlation between cognition and ICU delirium. Unfortunately, due to the cancellation of elective surgeries at this site because of the COVID-19 pandemic, not enough participants would be available to complete the assessment. Another barrier included the implementation of the screening tool. Currently, an orthopedic clinic at this site calls patients, rather than having them fill out a survey in person, prior to their surgery to ask a list of rehabilitation-related questions. There was the question on whether this screening tool would be administered over the phone or filled out by the patient in-person. During the dissemination process of this DCE, it was determined that the patient would fill out the screening tool in the cardiac clinic prior to their surgery. From there, a secretary at the clinic front desk would scan the screening tool along with the other questionnaires filled out by the patient, into the patient's medical chart for the therapists and other medical providers to view.

Outcomes

During this DCE, I spent 20% of my overall experience communicating with the therapy team to create a pre-operative screening tool for the cardiac population as part of my project. This screening tool was created through a two-round Delphi survey technique. The participants consisted of the cardiac OT and PT practitioners, all licensed and certified, at IU Health Methodist Hospital. Participants had anywhere from three months to eleven years of experience working with cardiac patients. As mentioned above, participants were sent a Google Form explaining the purpose of the project and were asked for questions they felt would be important to include in a pre-operative screening tool for cardiac patients. Of the 31 surveys sent to the OT and PT practitioners, 23 (74%) completed the survey. After the first round, a consensus above

50% was reached for a variety of different elements discussing ‘type of home’, ‘steps into and inside home’, ‘bathroom set-up’, ‘independence with activities of daily living (ADL) and instrumental activities of daily living (IADL)’, ‘assistive devices’, ‘support system’, ‘hobbies’, and ‘goals’. Although ‘falls’, ‘cognition’, ‘type of caregiver/therapist’, and ‘preferred learning style’ did not meet the 50% threshold, the questions were still addressed in round two, due to the site mentor stressing the importance of the categories. A list of questions was then formulated based on the responses.

When going through this Delphi survey technique, the therapy team suggested addressing cognition on the screening tool. Robinson et al. (2009) suggest pre-existing cognitive impairments are one of the strongest risk factors for delirium after a surgery. Cognition and physical function can also be linked. Literature indicates that individuals with dementia or other cognitive impairments are likely to demonstrate physical decline when compared to individuals with normal cognition (Taylor et al., 2019). Due to the strong link between cognition, delirium, and physical decline, it is important to include questions regarding cognition in the screening tool. Challenges to this include that the screening tool is not an assessment and is meant to be filled out by the patient. After reviewing the literature, I discovered the Dementia Screening Interview (AD8), an informant interview used to assess the prevalence of dementia in patients, which is used by the Alzheimer’s Association (Alzheimer’s Association, n.d.; Galvin, 2006). According to Galvin et al. (2006), the AD8 demonstrates good validity and reliability in detecting cognitive impairment. This information was communicated to the therapy team and questions similar to the AD8 were written and reviewed by the therapy team in rounds one and two of this process.

In the second and final round, 8/23 (31%) participants reviewed the list of questions that met the consensus threshold in the first round. Respondents had the opportunity to comment on the different elements. Feedback regarding the wording of the questions and order of the questions was received. The participants agreed with 100% of the questions listed. Ultimately, after round two of this process, there was a consensus that led to including 30 elements in the screening tool (see Appendix A).

Summary

The overall purpose of this project, which was to develop a screening tool and to advocate for the therapy team to be involved in a patients' care post-operatively, was met. The Cardiac Pre-Operative Screening Tool has 30 questions, which aids the therapy team in the evaluation process. The questions included allow the therapy team to assess a patient's prior level of physical functioning, cognition, home set-up, support system, and goals, prior to their cardiac surgery. In addition to addressing the factors listed, questions addressing cognition are also included. With literature suggesting a link between cognitive impairments and the likelihood of delirium in hospitalized older adults, these questions help to address any potential underlying cognitive impairments in patients undergoing a cardiac surgery (Jackson et al., 2016). If there are cognitive impairments, the therapy team can adapt their evaluation and treatment sessions to meet the needs of the patient, including modifying the environment to help decrease confusion and stress (Affleck et al., 1986). With both OT and PT practitioners providing consistent therapy to the patient, the literature indicates patients can have a shorter duration of delirium, more ventilator-free days, and decrease their hospital stay (Ibrahim et al., 2018; Schweickert et al., 2009). With the Cardiac Pre-Operative Screening Tool, the therapy team at this site can identify

risk factors and evaluate the patient undergoing a cardiac surgery pre-operatively, just as physicians and the orthopedic therapy team is able to do (Kumar et al., 2018; Odum et al., 2020).

Conclusion

During this DCE, I spent 80% of my time furthering my skills as a future OT practitioner in the cardio-pulmonary ICU. There, I gained a better understanding of the therapy process with a higher acuity of patients. Through this clinical experience, I gained more confidence and independence in communicating with family members, caregivers, physicians, nurses, the therapy team, and other medical professionals. I also gained a greater level of independence, knowledge, and awareness with line management, documentation, different conditions, disease processes, medications, precautions, and protocols in the cardio-pulmonary ICU.

Through the completion of this project, I was able to further advocate for the OT profession. On the screening tool, a description of the tool is given, along with the role of OT and PT practitioners after a patient's surgery. OT and PT have similarities, but they are also vastly different professions. Literature indicates there is a lack of understanding specifically for the role of OT in a large medical hospital setting (Bonsall et al., 2016). Bonsall et al. (2016) conducted a study to further assess the lack of understanding by sending a survey to medical professionals employed by the University of Missouri Healthcare system. 68 employees filled out the survey, and the data was analyzed using descriptive statistics. Results indicated that 100% of the respondents had heard of OT, yet less than half were able to identify areas outside of activities of daily living as domains OT can address. OT practitioners have the ability to address multiple areas outside of ADL, including education, sleep hygiene, IADL, cognition, the environment, etc. (AOTA, 2020; Laxton & Morrow, 2018). This screening tool helped and will continue to help advocate for the OT profession to patients and the medical team. During the

dissemination process of this DCE, the benefits of the screening tool, collaboratively created by OT and PT practitioners, were explained to the physician assistants on the cardiovascular surgery team. During this process, the benefit of patients being evaluated by both disciplines was expressed to further advocate for OT. Overall, through completing this project, I gained a better understanding of the impact cognition has on delirium and physical functioning and the benefits of the therapy team being a part of a patients care prior to their surgery. Future research should evaluate if there is a correlation between length of stay and using the Cardiac Pre-Operative Screening Tool.

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Appendix A

Cardiac Pre-Operative Screening Tool

This screening tool is designed by Occupational and Physical Therapists at IU Health. After surgery, you will likely meet with the therapy team to address your mobility, strength, ability to do your self-care tasks, and other factors. Both therapies will work alongside your medical team to address your balance, activity tolerance, and functional mobility after surgery. Please take the time to fill this out, so we can best assist you after your surgery. Thank you!

Name:	**Date of Birth:**	**Date of Surgery:**

Home

1. What type of home do you live in?
   - ☐ House
   - ☐ Apartment
   - ☐ Condo
   - ☐ Other: _____
2. How many steps are there to enter your home?
   - ☐ 0
   - ☐ 1-2
   - ☐ 3-4
   - ☐ 5+
3. Are there any handrails when going up the stairs?
   - ☐ Yes (circle one): right side/left side/both sides
   - ☐ No
4. If you live in a home with stairs, will you need to use stairs to access a different floor (i.e. second floor and basement)?
   - ☐ Yes
   - ☐ No
   - ☐ N/A
5. Is there a bathroom with a shower that can be accessed on the main level?
   - ☐ Yes
   - ☐ No
6. What type of shower do you have?
   - ☐ Tub
   - ☐ Walk-in
7. Do you have any adaptive equipment in the bathroom (check all that apply)?
   - ☐ Shower chair

- ☐ Tub bench
- ☐ Grab bars
- ☐ Hand-held shower head
- ☐ Other: _____
- ☐ N/A

8. Is your toilet elevated or a regular height?
    - ☐ Elevated
    - ☐ Regular

Support System

9. Do you live with anyone?
    - ☐ Yes
    - ☐ No
10. Is there someone (above the age of 18) who can physically assist you, if needed?
    - ☐ Yes
    - ☐ No
11. Are they able to assist you 24 hours/day?
    - ☐ Yes
    - ☐ No
12. Do you prefer a specific caregiver and/or therapist to assist you?
    - ☐ Male
    - ☐ Female
    - ☐ No preference

Prior Level of Function

13. Have you had any falls in the past three months?
    - ☐ Yes
    - ☐ No
14. Do you **currently** require assistance with mobility (walking, getting in/out of bed, getting into/out of the shower, getting on/off the toilet, etc.)?
    - ☐ Yes
    - ☐ No
15. Do you **currently** use any assistive mobility devices (check all that apply)?
    - ☐ Walker
    - ☐ Rollator (4 wheels and a seat)
    - ☐ Cane
    - ☐ Wheelchair
    - ☐ Other: _____
    - ☐ N/A
16. Do you **currently** drive?

- ☐ Yes
- ☐ No

17. Do you **currently** work?
    - ☐ Yes
    - ☐ No
18. Do you **currently** require assistance with toileting tasks (pulling pants up and down, wiping)?
    - ☐ Yes
    - ☐ No
19. Do you **currently** require assistance with bathing tasks?
    - ☐ Yes
    - ☐ No
20. Do you **currently** require assistance getting dressed (putting on socks/shoes, pulling up pants, threading arms through sleeves, etc.)?
    - ☐ Yes
    - ☐ No
21. Do you **currently** require assistance managing medication and/or finances?
    - ☐ Yes
    - ☐ No
22. Do you **currently** require assistance with cooking, cleaning, or laundry tasks?
    - ☐ Yes
    - ☐ No
23. Do you have difficulty recalling conversations a few days later?
    - ☐ Yes
    - ☐ No
24. Do you have trouble remembering things that have happened recently?
    - ☐ Yes
    - ☐ No
25. When speaking, do you have difficulty finding the right words to use or use the wrong words?
    - ☐ Yes
    - ☐ No

Extra

26. What is your preferred learning style?
    - ☐ Written
    - ☐ Verbal
    - ☐ Demonstration
27. Where do you expect to go after surgery?

- ☐ Home
- ☐ Rehab

28. What goals do you have after surgery?

_____

29. What do you like to do for fun?

_____

30. Is there anything extra you would like for us to know about?

_____

Appendix B

Timeline

Week	DCE Stage (orientation, screening/evaluation, implementation, discontinuation, dissemination)	Weekly Goal	Objectives	Tasks	Date complete
1	Orientation	-Complete orientation by end of the week -Address supervision when treating/evaluating	-Understand site expectations -Meet with site mentor regarding project idea	-Complete initial post with timeline -Submit MOU and IRB for review	Anticipate completion by 1/16
2	Screening/Evaluation	-Gather list of therapists to send survey to	-Communicate with site mentor to determine cardiac dedicated therapists	-Complete initial post -Complete 3 response posts -Finalize MOU -Create list of therapists with their emails	Anticipate completion by 1/23
3	Screening/Evaluation	-Create survey (include information on therapists credentials to add to validity to project) -Independently explain at least three conditions/diagnoses in detail	-Research and find sites to send survey with (Survey Monkey, etc.) -Review OT Cardiac Reference Manual provided by educator	-Complete initial post -Complete 3 response posts -Introduction draft -Create survey -Review OT Cardiac Reference Manual	Anticipate completion by 1/30

4	Implementation	-Begin to gather list of questions from therapists -Will manage medical lines with moderate assistance	-Send survey to therapists -Practice managing medical lines daily throughout capstone to gain more experience	-Complete initial post -Complete 3 response posts -Background draft -Create Word document for questions	Anticipate completion by 2/6
5	Implementation	-Gather results from therapists	-Combine questions addressed by therapists in Word document	-Complete initial post -Complete 3 response posts -Design and implementation draft -Organize questions into categories	Anticipate completion by 2/13
6	Implementation	-Gather results from therapists	-Combine questions addressed by therapists in Word document	-Complete initial post -Complete 3 response posts -Continue to organize questions into categories	Anticipate completion by 2/20
7	Implementation	-Gather results from therapists -Independently explain at least six conditions/diagnoses in detail -Will independently write all notes in the ICU with minimal assistance	-Combine questions addressed by therapists in Word document -Review OT Cardiac Reference Manual provided by educator -Write notes daily and ask for feedback from educator	-Complete initial post -Complete 3 response posts -Continue to organize questions into categories -Review OT Cardiac Reference Manual	Anticipate completion by 2/27

8	Implementation	-Finalize gathering results from therapists	-Combine questions addressed by therapists in Word document -Send out email/ask therapists if survey still needs completed	-Complete initial post -Complete 3 response posts -Continue to organize questions into categories	Anticipate completion by 3/6
9	Implementation	-Review results from survey -Develop template screening tool	-Ensure all questions are in Word document -Create categories for similar questions -Review formatting of past screening tools	-Complete initial post -Complete 3 response posts -Design screening tool	Anticipate completion by 3/13
10	Implementation	-Work on screening tool -Independently explain at least ten conditions/diagnoses in detail -Will independently provide education to the patient and their family in the ICU	-Review OT Cardiac Reference Manual provided by educator -Continue to practice daily educating patients on post-operative precautions, etc.	-Complete initial post -Complete 3 response posts -Outcomes draft -Input questions into screening tool template -Review OT Cardiac Reference Manual	Anticipate completion by 3/20
11	Implementation	-Assess wording of questions -Ask for therapists feedback	-Use Grammarly to address spelling and grammar -Print out questions for	-Complete initial post -Complete 3 response posts	Anticipate completion by 3/27

			therapists to review	-Dissemination plan -Print out questions for therapists to review	
12	Implementation	-Finalize screening tool -Ask for therapists feedback regarding tool	-Review formatting, spelling, and grammar -Print out screening tool for therapists to review	-Complete initial post -Complete 3 response posts -Print out questions for therapists to review	Anticipate completion by 4/3
13	Discontinuation	-Finalize screening tool	-Review formatting, spelling, and grammar	-Complete initial post -Complete 3 response posts	Anticipate completion by 4/10
14	Dissemination	-Present assessment tool to rehab department and surgeons -Treat full caseload with line-of-site supervision	-Email screening tool to therapists and surgeons office	-Complete initial post -Complete 3 response posts Abstract, summary, and conclusion draft -Email screening tool	Anticipate completion by 4/17