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Physical Activity Assessment and Staff Education for Oncology Nurses

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Walden University

College of Nursing

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Laurie Jean Tyer

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

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Walden University

2022

Abstract

Physical Activity Assessment and Staff Education for Oncology Nurses

by

Laurie Jean Tyer

MS, Walden University, 2010

BS, Boston University, 1983

Project Study in Fulfillment
of the Requirements for the Degree of
Doctor of Nursing Practice

Walden University

November 2022

Abstract

Physical activity and mobility are key indicators of treatment and disease tolerance in cancer patients. Patients are living longer during and after cancer treatment, and staying active prevents many side effects of the disease and the treatment. Staying mobile also prevents some conditions from occurring including bone and muscle loss. A nursing educational platform was identified as a need in the facility site's cancer center on the importance of patients staying physically active throughout cancer treatment. Nurses did not feel confident to coach patients on their activity levels which was an identified gap in their nursing practice. A nursing educational program was constructed utilizing a conceptual nursing model based on patient-centered care and the application of research to practice. The partnering with patients model of nursing interventions supported the development and implementation of the nursing educational PowerPoint presentation and the development of targeted assessment questions about activity. A pre- and post-survey were used to assess comfort level and feasibility of patient physical activity education during interactions with nurses. The results showed a +17% increase in comfort level after the presentation. The most significant increase were the questions on having tool to recommend and feeling prepared to recommend. The nurses understood the importance of this education. Proposed recommendations included patient teaching materials, acquisition of exercise tools for the outpatient clinic, and recommendations to cancer rehabilitation services for patients with identified individual needs. The PowerPoint presentation will be added to onboarding orientation of new nurses and shared with local and national oncology nursing organizations.

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Dedication

I would like to dedicate this work to my parents, my husband, and my children. My parents were teachers and taught me the passion for life-long learning. I am very proud to have graduated with my BSN from Boston University, the university where my parents met. I was blessed to meet my husband, Jim, at Boston University as well. We have celebrated many happy and productive years together. We are so proud of our children, Sarah and Craig. There is no bigger gift than to see your children grow up to be wonderful adults.

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I have been blessed with support from my family, friends, and mentors. I would like to thank Dr. Melanie Braswell, my committee chair, for her guidance and wisdom. She challenged me to be efficient and strive for excellence. I would also like to acknowledge Dr. Anna Hubbard for her feedback and guidance. In addition, I would like to thank Dr. Melissa Pollard, my preceptor, for her invaluable support and insight. These three mentors provided a strong support base that helped me reach this point in my academic career.

Without this team behind me, and so many more of my family and friends, I would not be where I am today. I would like to share my deep appreciation for my immediate and extended family especially my siblings, my Jersey cousins and Aunt JoJo. I would also like to acknowledge some friends who believed in me: Cathy, Mary, Michelle, Eileen, Deb, Karen, Mike, and Chris. As my doctoral degree comes to fruition, I am forever thankful for all these individuals and all that this life has given me.

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Section 1: Nature of the Project

Introduction

Side effects of cancer treatment include cancer related fatigue, depression, metabolic changes, and other impacts to the body (Keogh et al., 2017; Webb et al., 2016). Cancer patients need encouragement to stay active during and after cancer treatment (Taschner et al., 2022). Physical activity levels can have a direct correlation to the adverse side effects experienced with cancer treatment (Haas et al., 2016; Hirschev et al., 2021; Taschner et al., 2022; Ungar et al., 2019; Webb et al, 2016). Oncology nurses are aligned to assess patients' level of mobility, pain level with exercise, and experienced side effects. With this information, nurses can recommend physical activity that is safe and beneficial to increase treatment tolerance (Austin et al, 2016). With longevity the increased survival rates for many cancers (Siegel et al., 2021), the goal should be to keep patients active and mobile so they can enjoy time and live productively during and after active treatment.

The purpose of this Doctor of Nursing Practice (DNP) project was two-fold in approach. The first was the creation of a mobility assessment tool for oncology nurses to use when caring for their patients. Along with basic vital signs, pain assessments, and general questions, this additional assessment tool would enhance the understanding of the patient's physical activity. The second purpose was to create an educational program for oncology nurses. In surveying a group of oncology nurses, there were knowledge gaps in their role of understanding patients' mobility and function.

This DNP project has positive social change implications, both at the organization and in the community. The mobility assessment tool can enhance oncology nurses' comprehension of the patient activity status and allow oncology nurses to impart knowledge on staying active based on the staff educational program. The plan for making an impact globally will be the dissemination of the information to the local Oncology Nursing Society chapter, other oncology organizations, and local cancer centers.

Problem Statement

Oncology nurses have opportunities to educate patients and their caregivers during treatments, encounters, assessments, and triage. Physical mobility assessments, early discussions about daily exercise, educational tools, and information on the importance of staying active during and after treatment, can all have positive impacts on the patient's treatment journey (Forner et al., 2021; Haas et al., 2016; Prip et al., 2019; Turner et al., 2018). Through personal communication with the oncology nurses in this community-based outpatient oncology clinic, I had been alerted to gaps in the knowledge and comfort levels of oncology nurses to share information on keeping active, mobile, and incorporating daily physical activity with patients undergoing cancer treatments. Only three of the 12 registered nurses routinely included this topic in patient education and assessments they performed. Recent research also supported the gap in nursing practice. Due to lack of proper education on this topic, the oncology nurses were not equipped with the adequate knowledge to coach and educate their patients on the benefits of physical activity during and after cancer treatment (Karvinen et al., 2012, Keogh et al.,

2017, van Veen et al., 2017; Spence et al., 2020). The nurses also identified the need to improve the nursing assessment to include mobility targeted questions.

Patients who stay physically active during cancer treatment are reported to have fewer side effects from the treatment (Karvinen et al., 2017, ONS, 2022; Webb et al., 2016; Zeng et al., 2019). Some of the symptoms that can be reduced or eliminated by physical activity include cancer related fatigue, constipation, change in cardiovascular function, pulmonary issues, loss of bone density, deconditioning, and psychosocial issues (Webb et al., 2016; Spence et al., 2020). Literature states that physically active cancer patients may have longer survival rates with less disease recurrence (Austin et al., 2016; Karvinen et al., 2017; Webb et al., 2016).

This project holds significance for the field of nursing practice in enhancing the knowledge of the oncology nurses at the facility on cancer patients' physical activity. This project may be used at other cancer care facilities seeking to use the information for nursing staff education. The nursing profession plays a significant role in the education of cancer patients to stay physically active during treatment (Bryant et al., 2017).

Purpose Statement

The oncology nurses were not equipped with the education to teach their patients about mobility and physical activity during treatment. This directly affected the quality of the nursing support patients received during treatment. This gap in practice demonstrated a need for staff education in the care of this patient population. The purpose of this project was to develop a staff educational program and mobility assessment tool that, based on information available through a literature review, would provide the oncology

nurses with the knowledge necessary to have a positive impact on patients' understanding of the importance of physical activity. The practice-focused question for this doctoral project was:

Would a staff educational program specifically designed to instruct oncology nurses on the benefits of physical activity for patients during and after cancer treatments, in conjunction with a mobility-focused patient assessment tool, increase their knowledge and comfort levels to share information on keeping active, staying mobile, and incorporating daily physical activity with patients undergoing cancer treatments?

Approaches to mobility assessment and education can be multi-faceted. A staff educational program with oncology nurses, designed to enhance the knowledge base of oncology nurses, could improve patient education and physical activity comprehension for the cancer patients. Establishing a baseline for physical activity and monitoring for changes could alert oncology nurses to the potential need for counseling, teaching, or a referral for evaluation by a physical therapist (McNeely et al., 2016). Physical therapy's involvement in the patient care areas could support the transmission of information to the patients and would also be a valuable resource for specific patient concerns and inquiries out of the nurses' scope of knowledge (McNeely et al., 2016; Spence et al., 2020). Physical therapy and cancer rehabilitation, offered early in cancer treatment, could help sustain mobility, reduce pain, cancer related fatigue, and improve the quality of life (McNeely et al., 2016).

Nature of the Doctoral Project

The sources of evidence for this project were collected through library and Internet databases. Databases used for this staff educational program included PubMed/MEDLINE, ProQuest Nursing & Allied Health Source, and the Cumulative Index to Nursing and Allied Health Literature (CINAHL). Resources accessed included scholarly, peer-reviewed journal articles, books, and trusted Internet oncology-specific websites such as American Cancer Society (ACS), Oncology Nursing Society (ONS), National Institutes of Health (NIH), National Comprehensive Cancer Network (NCCN), and American Society of Clinical Oncology (ASCO). The topics and keywords included *oncology, cancer treatment, exercise and rehabilitation, mobility, nursing, education, cancer related fatigue, physical activity of patient populations, evidence-based practice, and nursing research*. Journals sourced for this project focused on oncology, nursing, patient education, and research. Journal examples included *Oncology Nursing Forum, Clinical Journal of Oncology Nursing, Public Health, Oncology Issues, Nursing Education Perspectives, Journal of Nursing Education, Journal for Nurses in Staff Development, International Journal of Behavioral Medicine, Worldviews on Evidence-Based Nursing, and Cancer Nursing*. Resources from ONS, NIH, ACS, and NCCN literature and websites have been cited for content information, guidelines, and recommendations.

The approach used for this doctoral project was a systematic literature search to navigate through peer-reviewed articles and websites. The use of a literature review matrix was essential in identifying key themes and supportive documentation related to

this oncology nursing education. The literature review and analysis supported the identified need for a staff educational program to fill the gap-in-practice in the understanding of the benefits of physical activity for patients during and after cancer treatments and increase the oncology nurses' comfort level in their knowledge and confidence to support the patients.

Significance

Many stakeholders were impacted by addressing the knowledge deficit of the nursing staff in the oncology clinic. The primary stakeholders were the oncology nurses, the providers, and the patients of the outpatient oncology clinic. Implementation of this mobility assessment tool and staff educational program on physical activity during and after treatment can enhance the quality of life for these cancer patients. This project can contribute to nursing practice by increasing the level of knowledge and the engagement of the oncology nurse in the care of this patient population. Professional growth and development are significant opportunities for nurses to stay challenged and engaged in the profession (DeSelits et al., 2010). Transferability to other areas of healthcare and nursing could be explored utilizing the nursing professional practice model in specialties where staff have the opportunity to expand their practice and enrich their patient assessment and teaching skills to benefit patients.

The education shared with the patients and their caregivers can provide both structure and freedom to their daily schedules. This project met the needs of the oncology nurses, oncologists, nurse practitioners, and physical therapists in supporting the patients with their mobility and physical activity. From an education perspective, the information

created was based on extensive research that was current, peer-reviewed, and evidence-based. The potential for this work to impact positive social change is the expansion of the oncology nurses' role in education for this patient population. This has dual benefit; the oncology nurses would be working at the highest level of their degree, and the patients would receive individualized coaching on their physical activity during treatment.

Summary

As cancer care continues to advance and improve survivorship, cancer care personnel have been challenged to help improve the quality of life and physical activity of patients during and after treatment. The literature supported the expansion of nursing knowledge on the topic of physical activity promotion to improve patient experience and impact patient satisfaction. When the oncology nurses were educated on the physical activity recommendations for their patient population, the gap identified in the knowledge deficit on the topic was addressed. Familiarity with the tools available for teaching would advance the educational information provided to the patients. The scope of this DNP project was the development of a mobility assessment tool and a staff educational program for the oncology nurses on the benefits of exercise and staying mobile. This project addressed the gap identified in knowledge and improvement of the patient experience and outcomes. In Section 2, the background and context of the identified educational need of the nursing staff will be explored. Concepts, models, and theories are discussed incorporating the project's relevance to nursing practice.

Section 2: Background and Context

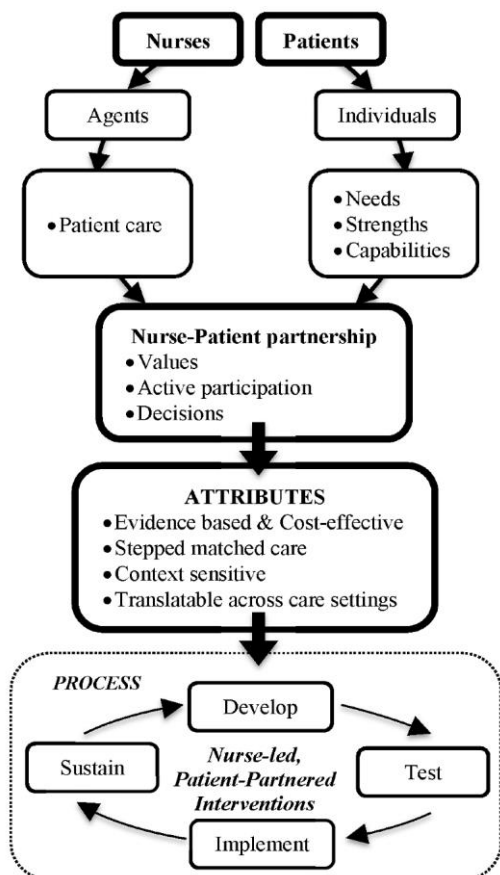
Introduction

The physical activity of cancer treatment patients can have a profound effect on the tolerance of side effects (Sreedhar, 2021). Understanding the importance of physical activity and mobility could be beneficial to the overall well-being and quality of life for these patients (Spencer & Staffileno, 2021). The practice problem was the identified need for a staff educational program to increase the knowledge of the facility's oncology nurses on the benefits of physical activity during and after treatment. By improving the oncology nurses' understanding of the positive effects of physical activity and the negative risks of inactivity, the staff educational program can provide the oncology nurses with the knowledge to teach their patients on the importance of staying physical active during and after cancer treatments (Hausmann et al., 2020; Webb et al., 2016). The second part of this project was an enhancement of the patient assessment tool used at the facility's cancer center to incorporate prompting assessment questions on their physical activity and mobility status.

Section 2 will introduce the conceptual nursing model used for this project, the partnering with patients model of nursing interventions. This section will follow with the relevance of this work to nursing practice and will cover local background and context. I will present my role as a DNP student in this project work, including my interest and motivation for this work.

Concepts, Models, and Theories

The application of a conceptual nursing model based on patient-centered care and the application of research to practice was used. The partnering with patients model of nursing interventions (PPM-NI) supports the development, testing, and application of knowledge to practice (Moyle et al., 2015). The framework of this model was the blending of researched evidence to patient care, focusing on the individuality and uniqueness of the patient (Moyle et al., 2015). Nursing interventions for patient-centered care be developed first through research, tested once approved, and subsequently applied to patient care (Moyle et al., 2015; see Figure 1). These steps are not to be omitted or taken out of sequence.

Figure 1*The Partnering with Patients Model of Nursing Interventions*

Note. From “The Partnering with Patients Model of Nursing Interventions: A First Step to a Practice Theory,” by W. Moyle, C. M. Rickard, S. K. Chambers, & W. Chaboyer, 2015, *Healthcare*, 3, p. 256. <https://doi.org/10.3390/healthcare3020252>. Reprinted with permission.

Over 20 years ago, a team of nursing professors proposed a similar model, model for change to evidence-based practice (Rosswurm & Larrabee, 1999). Rosswurm and Larrabee (1999) demonstrated similar approaches to applying nursing research to practice. Their recommendations included the need for nurses to understand the process and have the skills, time, and resources to assess and appraise the research finding. Once

reviewed, the next steps consist of the construction of a plan of care, and then the application of the new knowledge into nursing practice.

Although much health care knowledge and practice are shared or borrowed within disciplines, there was significance in the nursing construction of practice guidelines that are individual to the profession (Moyle et al., 2015). Nursing research and the application of the new knowledge to nursing practice had basis in the concept of patient-centered care. PPM-NI connects the satisfaction of the patients, the appreciation of the research-based care by the nurses, with the expected and actual outcome of improved patient outcomes (Moyle et al., 2015). Consistent results, matched with improved patient outcomes, can meet the desired foundation for a higher quality of individualized care.

One of the themes from qualitative studies focusing on the patients' perceptions of care highlighting education, physical activity, psychosocial support, and care coordination involves the sustainability of physical wellness and the needed support for this goal (Mitchell et al., 2020). Protecting and continuing activity along with emotional support were identified by patients as needs from the cancer care team. Partnering with the cancer team and having decision-making authority were also identified by patients as strengths that reflect patient-centered care (Mitchell et al., 2020).

Clarification of Terms

Physical activity: "Any body movement produced by skeletal muscles that requires energy expenditure" (WHO, 2022).

Mobility: "The ability to move or be moved" (New Oxford American Dictionary, 2022).

Relevance to Nursing Practice

Oncology nurses have opportunities to educate patients and their caregivers during treatments, encounters, assessments, and triage. Physical mobility assessments, early discussions about daily exercise, educational tools, and information on the importance of staying active during and after treatment, could have a positive impact on the patient's treatment journey (Forner et al., 2021; Haas et al., 2016; Prip et al., 2019; Turner et al., 2018). The development of an activity plan for patients during and after treatment could lessen the experienced side effects of treatment, improve quality of life, and sustain mobility and function (Spence et al., 2020). However, nurses have reported feeling unprepared to help patients with their physical activity such as flexibility and core strength (van Veen et al., 2017). Barriers to physical wellness education from oncology nurses fall into two categories: (a) the nurses feel unequipped with the physical activity recommendations, and (b) the nurses are unclear what activities are safe to recommend (Karvinen et al., 2012).

The goal of this project work was focused on all three areas outlined by the Institute for Healthcare Improvement (IHI): patient experience, population health, and cost containment. The Triple Aim Initiative, a framework from IHI, sets standards to meet for nursing professional development and optimizing patient care (IHI, 2015). Due to the rising cost of health care, along with the significance of positive patient experience and outcomes, this work aligned with the global focus on the health of the oncology population outlined by IHI. To achieve these three goals, this project needed to encompass short-term and long-term strategies for change. The transfer of education from

nursing to the patients could engage patient participation and accountability in their care while potentially minimizing costs for side effect management and debilitation from inactivity. The quality of the nurse-patient communication during teaching sessions is important in partnering with patient to sustain dignity and empowerment (Avestan et al., 2019). The establishment of habits on being physically active could improve quality of life for cancer survivors in the community (NCCN, 2021).

Historically, nursing has been the significant lead in the education of oncology patients throughout their treatment and survivorship (van Veen et al., 2017). In oncology, physical therapists and the other professionals of a rehabilitation team are important partners in the activity education and support for this patient population as well. An interdisciplinary approach to patient care could yield positive outcomes when structured to be imbedded in the overall patient experience. Once nursing had the tools necessary to perform a physical activity assessment, the nurses could be in key positions to recommend rehabilitation services for ailments and disabilities that lie outside their scope of practice (McNeely et al., 2016).

Working in tandem with physical therapists, nurses' knowledge of the need for patients to stay physically active during and after treatment would allay the past misnomer that cancer patients needed to rest throughout their treatment and minimize exercise (Ungar et al., 2019). Through research, these past beliefs were found to be inaccurate; newer studies showed that staying physically active was beneficial to overall health and well-being during and after cancer treatment (Corder & Duval, 2016; Ungar et al., 2019).

Local Background and Context

The project setting for this doctoral project was a community-based outpatient oncology clinic that was part of a larger, 100-bed hospital and organization located onsite and adjacent to the hospital. The medical oncology and hematology department was part of the center for cancer care services that also included radiation therapy, surgery, complementary services, physical therapy, radiology, and lab testing. The clinic was staffed with physicians and nurse practitioners from a large urban teaching hospital. All other staff members were employees of the hospital organization. The patient population for the oncology clinic ranged from 17 through 102 years of age. The medical oncology department had a provider practice division and adjacent treatment units where therapy was provided including, but not limited to, infusions, injections, chemotherapy, immunotherapy, transfusions, and hydrations.

This cancer center did not have a designated oncology educator for the nursing staff and, therefore, relied partly on the internal education from nurses, nurse leaders, physicians, pharmacists, and specialty providers. National organizations such as ONS, ACS, NCCN, the Association of Community Cancer Centers (ACCC), and the National Cancer Institute (NCI) all served as valuable resources for the oncology nursing staff in providing evidence-based guidelines for best practices. The Northern New England Clinical Oncology Society (NNECOS) as a local organization that connects health care professionals specializing in oncology with other leaders in the New England area. In researching many of these resources, I found sufficient data on the benefits of physical

activity for cancer patients but limited information on how the researched findings could be shared with oncology nurses and implemented into practice.

The cancer program was accredited by the American College of Surgeon's Commission on Cancer (CoC), (ACoS, 2022). The CoC is a team of representatives from regulatory organizations that evaluate cancer programs on their program goals, activities, and compliance to high standards of oncology care (ACoS, 2022). The cancer program at the practicum site had maintained accreditation with commendations which acknowledged the achievement of meeting and exceeding national benchmarks for excellence in oncology care. The mission statement of the practicum site was the commitment to the improvement of the health of the community. This goal can be achieved in alignment with the organization's dedication to the community-at-large and its sustainability to meet the needs of the community with staff education.

Role of the DNP Student

At the time of this project, I was the nurse clinical director of the center for cancer care and infusion therapy services at the site of this DNP project. My work on this project was not a requirement for my position, but instead a gap in nursing practice that I had identified in the cancer center. I continued as a professed life-long learner; I led by example in expanding my nursing knowledge and challenged my nursing staff to follow my practice in continuing their professional development and implementing evidence-based best practices. My background had been in oncology/hematology and nursing education throughout my career. My passion had been the alignment of these two specialties—oncology and nursing education. My master's degree from Walden

University specialized in Nursing Education. My position in the cancer center was to promote the application of evidence-based practices to our patient care.

My doctoral plan was to implement a staff educational program that would enhance the oncology nurses' understanding of the importance of patient physical activity during and after cancer treatment. Imbedded in this work was the enhancement of the nursing assessment tool to include specific physical activity questions that would trigger patient education or referral to the physical therapy department. The work for this project included a literature review that supported the proposed staff educational program for the cancer center's oncology nurses. The project included an enhanced nursing assessment tool to identify barriers and gaps in patients' mobility and physical activity goals. A pre- and post-survey with the educational program was constructed to assess the nurses' comfort levels in teaching patients about the benefits of staying physically active and mobile during and after treatment.

Potential bias may have impacted my work on the project because of a family member's experience with immobility during cancer treatment. I found myself in the position of patient advocate for my family member who experienced poor nutritional support, inactivity, debilitation with peripheral neuropathy, and lack of education on physical activity. Because of this history, my passion for implementing this patient education was key to my doctoral studies.

Role of the Project Team

The project team included the oncology nursing staff, the nursing education department, physical therapists, my preceptor, and the organization's nursing leadership.

Review of the work was done by the clinical research council, nursing leadership, and the professional development team. Guidance was provided by these experts in staff education and professional development to provide insight, feedback, and recommendations on the structure and content of the project.

This project work extended over a period of time, and the project team members were kept updated on the status. The team was instrumental in evaluating each step of the project development and had opportunities to provide feedback on any gaps in knowledge or program development. The team members were asked for input into the educational program development and the mobility assessment tool. The team was prompted to review the draft once constructed and was instrumental in assisting the roll out of the educational program and its evaluation.

Summary

In summary, there had been significant evidence in the gap in oncology nursing education on the positive impact that physical activity could have to decrease side effects and improve quality of life (Keogh et al., 2017; Ungar et al., 2019; van Veen et al., 2017). Medical oncology patients in the cancer center were not being educated on the benefits of physical activity on a consistent basis. This project incorporated the design of a physical mobility assessment tool to add to the current template for nursing assessment of the cancer patient at this project site. Utilizing the resources from ONS, ACS, and NCCN, a staff educational program for the oncology nurses was constructed on how to teach cancer patients the importance of staying physically active and mobile during and after

treatment. In the following section, the practice problem is presented with the plan for the collection and analysis of supportive evidence.

Section 3: Collection and Analysis of Evidence

Introduction

Cancer treatments can negatively impact a patient's quality of life because of side effects from both the therapies and the disease itself. Physical activity had been shown to improve patient's well-being and tolerance of therapy. I identified a potential gap in nursing knowledge on how to educate patients on the benefits of staying physically active and mobile during and after therapy. In Section 3, the practice-focused question is presented along with the plan to collect and analyze related data on the subject. The sources of evidence and the significant relationship to the practice-focused problem are detailed. The extraction, organization, and analysis of data supported the use of reliable and evidence-based practice resources.

Practice-Focused Question

The practice-focused question for this project was: "Would a staff educational program specifically designed to instruct oncology nurses on the benefits of physical activity for patients during and after cancer treatments, in conjunction with a mobility-focused patient assessment tool, increase their knowledge and comfort levels to share information on keeping active, staying mobile, and incorporating daily physical activity with patients undergoing cancer treatments?" I identified this gap in nursing practice in the cancer center and a knowledge deficit of the benefits for patients to stay physically active and mobile during and after treatment. The purpose of this project was to develop a staff educational program for the oncology nurses to enhance their knowledge on the importance of patients' activity levels throughout their treatment. Health literacy of the

patient, whether functional or communicative, would be a focus for the transmission of information from the nursing staff to their patients (Campbell, 2020).

Sources of Evidence

The tools I used to support the implementation of the staff educational program were identified as scholarly resources. There was an evidence-based literature review of peer-reviewed articles and Internet databases. Databases used for this research included PubMed/MEDLINE, ProQuest Nursing & Allied Health Source, and the Cumulative Index to Nursing and Allied Health Literature (CINAHL). Internet oncology-specific websites were reviewed including ACS, NIH, NCCN, ONS, and ASCO. Some of the reviewed journal included *Oncology Nursing Forum*, *Clinical Journal of Oncology Nursing*, *Public Health*, *Oncology Issues*, *Nursing Education Perspectives*, *Journal of Nursing Education*, *Journal for Nurses in Staff Development*, *Worldviews on Evidence-Based Nursing*, and *Cancer Nursing*. Patient education guidelines and recommendations for physical activity during treatment were extracted from the ONS, NIH, NCC, and ACS websites and literature. Topics and keywords used for this data sourcing included *oncology*, *cancer treatment*, *exercise*, *mobility*, *physical activity*, *nursing*, *education*, *cancer related fatigue*, and *evidence-based practice* and *nursing research*. Journals sourced for this project focused on nursing, patient education, oncology, and research. Through the collection and analysis of the evidence, I created a staff educational program designed to enhance the oncology nurses' knowledge and comfort level in teaching patients about the importance of physical activity and staying mobile during and after treatment.

Evidence Generated for the Doctoral Project

This section will include the evidence and data that validated how the information was collected. The participants, procedures, and ethical projection for those involved will be addressed.

Participants

This project focused on the development of an educational platform for oncology nurses to enhance their knowledge base on the importance of patients staying physically active during and after treatment. Written approval was obtained from the oncology clinic's administration prior to commencement of the project. All oncology nurses had the opportunity to participate in this education. Oncology nurses were notified of the upcoming educational project in advance and chose whether to participate. Involvement was on a voluntary basis with no identifying criteria identified in the pre- and post-survey questions. Participating nurses who completed the surveys, evaluation of the presenter, and attended the entire program were granted one continuing education credit.

Procedures

This project included the development of a mobility assessment tool to enhance the existing patient assessment questions for the oncology clinic. The project also included the creation of a staff educational program for oncology nurses on the benefits of cancer patients maintaining physical activity during and after treatment. This presentation precluded with a survey on the comfort level of the oncology nurses in discussing physical activity and mobility during their encounters with patients. After the educational program, the oncology nurses were surveyed to evaluate the impact of the

educational program on their comfort level and confidence on discussions with patients about keeping physically active and mobile during and after treatment.

Protections

Participation in the project did not involve any foreseeable or potentially ethical issues. I maintained all data security, and all distributed pre- and post-surveys were de-identified and anonymous. The results of the surveys were not accessible to the clinic's administration so as not to impute any adverse outcomes. The data results were reported as an aggregate.

Analysis and Synthesis

I organized the evidence that I procured from my research in a tracking tool using the John Hopkins evidence-based practice for nurses and healthcare professionals model (Dang et al., 2022). Journal articles were categorized by evidence levels and quality ratings. Documentation was made on the applicability of the research findings to help answer the practice-focused question. Once compiled, the research findings were evaluated for quality and strength of the evidence. A synthesis of the research information was completed to determine if the quantity and quality of the referenced data support moving forward with the project.

Because the research analysis showed that there was sufficient evidence to support a staff educational program for the oncology nurses on the impact of physical activity for cancer patients, the next steps included the creation of the curriculum. The educational program included a PowerPoint presentation, a pre- and post-survey of comfort level of the oncology nurses to share the information with the patients, and an

addition to the current assessment questions to include targeted questions on physical activity levels.

Summary

I identified a gap in nursing practice that required the development of a staff educational program for the oncology nurses on the benefits of patients staying physically active and mobile during their cancer treatment and after. The research showed that a knowledge gap of the practicum site's oncology nurses regarding patient mobility and activity required improvement for alignment with oncology best practices (ONS, 2022). Accreditation status by the American College of Surgeon's Commission on Cancer identified that appropriate patient care be provided by professionals with proper education and qualifications (ACoS, 2022). This research denoted the need for an oncology nursing staff educational program to understand the importance of patients staying active and mobile during their treatment for best outcomes. In Section 4, I report on the outcome of the literature review, analysis, and compilation of results to support the development of a plan for the practice-focused question.

Section 4: Findings and Recommendations

Introduction

Research indicated that physical activity and mobility of oncology patients improved tolerance of treatment and side effects during and after cancer treatment. Cancer related fatigue, sleep disturbances, functional compromise, cognitive decline, cardiotoxicity, and metabolic issues are among the side effects that can be managed and minimized with physical activity (Hayes et al., 2019; Morton et al., 2019; Vasbinder, A. et al., 2020). Because of the advances in oncology care, patients are living longer (Wilson et al., 2021). With a focus on avoiding inactivity, patients could live through cancer with a better quality of life, experience fewer side effects, and maintain their mobility.

At the project site, there was an identified gap in knowledge of the facility's oncology nurses on the significance of patients' physical activity during and after treatment. The practice-focused question asked if a staff educational program on the importance of physical activity would empower the nurses with the knowledge and confidence to share the information with patients. After an extensive literature review of scholarly, peer-reviewed resources, a PowerPoint presentation was constructed to share with the oncology nurses. Nurses who completed the pre- and post-surveys, participated in the entire presentation, and provided feedback through the evaluation received one continuing education credit granted by American Nurses Association.

The source of evidence for this project was a pre- and post-survey of the oncology nurses at the physical activity education presentation. The evidence was obtained using paper surveys denoted with pre- and post-implementation instructions. The surveys were

submitted to separate envelopes anonymously and tabulated by an independent staff member and then reviewed by me. The addition of targeted physical activity assessment questions to the nursing assessment tool was also proposed. The goal was to incorporate an opportunity for discussion and evaluation of each patients' physical activity during treatment. These questions were formulated by me, approved by physical therapy and nursing, and embedded into the electronic assessment tool for the clinic (see Figure 2). The review of these additional questions will be ongoing and may provide an opportunity for further education.

Figure 2

Nursing Assessment of Oncology Patient

Musculoskeletal	<ul style="list-style-type: none"> unsteady gait limited ROM weakness fractures amputee falls assistive devices
ADLs	<ul style="list-style-type: none"> fatigue insomnia safety concerns independent dependent
ADD:	<ul style="list-style-type: none"> having trouble moving around? difficulty with activities of daily life? dizziness/lightheadedness? pain with physical activity? How would you rate your current physical activity level using scale of 0-10 How would you rate your physical activity level prior to starting treatment Would you like more information on physical activity benefits?

Findings and Implications

The nursing education on the importance of patient physical activity during and after treatment was held at the project site (see Appendix A). There were 12 nurses in attendance (see Table 1). The group convened for an hour and all attendees were granted a continuing education credit for their participation and engagement in discussions.

Table 1

Nurse Participants in Physical Activity Education Program

Participants	Attended	Received CE credit
Treatment nurses	5	5
Nurse navigators	1	1
Nurse care coordinators	3	3
Clinical trials nurses	1	1
Radiation oncology nurses	1	1
Nurse practitioners	1	1
Total	12	12

The pre- and post-survey results showed a strong indication of the effectiveness of the educational program (see Table 2 and Figure 3). All four of the survey questions showed a positive improvement post- versus pre-survey. Following the presentation, every survey question improved in nurse confidence ratings. Question 1 showed a 20% increase, Question 2 showed a 36% increase, Question 3 showed a 29% increase, and Question 4 showed an 8% increase. Of note, Question 4 was significant because, unlike the questions related to the education, this question asked about the nurses' perception of the importance that physical activity plays in the oncology patient's treatment tolerance. This tested high pre-survey, indicating that nurses felt that this was an important topic in oncology care. Also of note, the lowest scoring question in the pre-survey was related to

the tools available in the practice to use or patient education. These two results were proposed positive outcomes of this work.

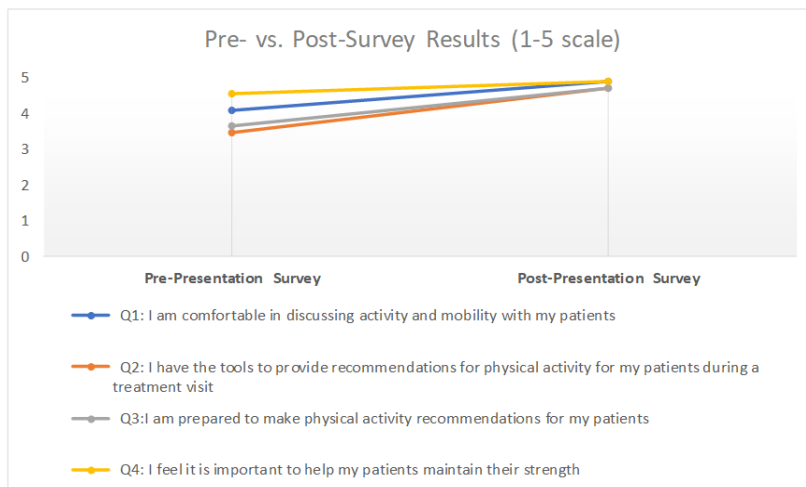
Table 2

Pre- and Post-survey results of Patient Physical Activity Staff Education for Oncology Nurses

Question	Participant	Pretest by Q	Posttest by Q	Difference
		Total comfort levels for each question <i>Scale=1-5 (low-high)</i>	Total comfort levels for each question <i>Scale=1-5 (low-high)</i>	Difference
1. I am comfortable in discussing activity and mobility with my patients.	<i>n</i> = 12	48	58	+10
2. I have the tools to provide recommendations for physical activity for my patients during a treatment visit	<i>n</i> = 12	41	56	+15
3. I am prepared to make physical activity recommendations for my patients.	<i>n</i> = 12	43	55	+12
4. I feel it is important to help my patients maintain their strength.	<i>n</i> = 12	54	58	+4
Total scores		186	227	+41
Comfort levels		77.5%	94.5%	+17%
Total number of participants		12	12	

Figure 3

Pre- Versus Post-Survey Results



The implications of this educational program were two-fold. The results of the surveys indicated that the educational program was an instrument necessary in the project site's oncology nursing knowledge of the importance of physical activity of the cancer patient. The results also indicated that the nurses knew that this was an important topic to discuss with patients but did not have the available resources to impart this knowledge to oncology patients. This educational program was the first to address this gap in practice and will be shared with the practice site, the community, and national organizations. As oncology care continues to advance, positive social change will be impacted by education on the health and wellness of community populations. With the longevity of patients diagnosed with cancer, it will continue to be significant that patients remain mobile and physically active during and after treatment.

Recommendations

The educational program was designed to meet the needs of the oncology nurses in the care of the cancer patient. There was a gap identified in the oncology nurses' knowledge of patient education on how to coach patients about physical activity during and after treatment. The project design included a PowerPoint presentation that included a pre- and post-survey of the comfort level of the oncology nurses on educating patients about staying active and mobile during and after treatment. Based on the results of this project intervention, this project was instrumental in addressing this gap.

Proposed recommendations from this work include:

- Update to teaching materials for patients to include physical activity guidelines from ONS, ACS, and ACSM
- Resource library of journal articles for nursing staff pertaining to physical activity of patients to be stored on shared drive
- Add program to onboarding curriculum for new oncology nurses
- Monthly discussion integration in staff meetings on education progress for the nurses
- 6-month post-survey of oncology nurses on comfort level with education
- Posters and guidelines on walking displayed in treatment area
- Provision of walking trails in local area
- Information on cancer rehabilitation services at project site
- Encouragement of walking buddies in the clinic and at home

- Acquisition of exercise tools in the outpatient clinic including but not limited to:
 - Hand weights
 - Chair yoga videos
 - Exercise foot pedals
 - iPads at treatment chairs to provide physical activity education

Contribution of the Doctoral Project Team

The project team consisted of the oncology nursing staff, the nursing education department, physical therapists, my preceptor, and the organization's nursing leadership. Systematic reviews were done by different members of the team to clarify any questions. The team was kept updated on the project. Review of the work was done by the clinical research council, nursing leadership, and the professional development team. The clinical research council reviewed the proposal and approved the project exempt from IRB oversight according to the Department of Health and Human Services regulations at 45 CFR part 46.101(b)(1) (for educational settings).

Strengths and Limitations of the Project

Strengths and limitations of this project have been evaluated after this first implementation of the presentation and changes can be made to the format or content of this education for future programs. A positive outcome of this presentation was the new knowledge imparted to the oncology nurses that was evidence-based and identified as a gap in practice. The reception of the information by the staff and the positive survey results demonstrated the effectiveness of the program (see Appendices B & C). The

oncology nurses have coaching and teaching within their scope of practice and now have the knowledge to educate the patients. The barrier identified prior to the project construction was the lack of tools and information to present and discuss. This barrier has been removed with this project.

A limitation noted was the small subject size ($n = 12$) due to the number of oncology nurses in the clinic. This information will, however, be added to the orientation of new oncology nurses which will further enlarge the subject numbers. One other limitation was the hour-long presentation; with refinement and further enhancement of the information, this presentation could expand to one hour and a half to include simulation of patient-nurse interactions. There is a plan for further work done on this project. Working with guidance from the clinical research council, a process improvement project will measure the patients' aptitude and engagement in learning and applying this knowledge.

Section 5: Dissemination Plan

The project's content will be shared with the entire cancer center staff including providers for awareness and support of these efforts. There will be a designated area in the new infusion suites to make this information available for patients, families, friends, and staff. Handouts will be available for dissemination, and the patient teaching books will be updated to include a chapter on physical activity. This work will be highlighted at the project site's 2022 Innovators Day. Innovators Day offers an opportunity for staff in the organization to share work they have accomplished on a process improvement project, scholarly work, and publications. A poster presentation will be constructed of the project including slides from the presentation.

Doctoral projects are also presented at nursing leadership to share ideas and stimulate other leaders in scholarly work. Along with internal dissemination, the local Oncology Nursing Society chapter will receive this presentation and an offer to review the content with the chapter members at a future date. Lastly, I will contact the regional and national oncology organization with an offer to present a poster or live presentation for their audience.

Analysis of Self

The journey through this project has provided me with an opportunity to grow academically and apply my learned research skills. My doctoral studies have built on my strong foundation to apply evidence-based research to nursing practice. I have developed and refined my skills in patience, diligence, organization, and perseverance. I have learned I have the capacity to reach beyond my comfort level to achieve a lifelong goal.

This process has offered engagement opportunities with specialists in the organization whom I may not have had a chance to work with on a project. This work has enhanced my leadership capabilities and set a strong example of fortitude for my staff to continue learning throughout a nursing career. I have had the opportunity to discuss research and educational opportunities with other nurses and provided them with resources and have offered my support to pursue such endeavors.

This process has not been easy, and life sometimes challenged the completion of my doctoral studies. With the support of others, and the internal drive to success, I have been able to come to this point with the summation of my work. I cannot be prouder of this achievement and hope to use my DNP degree to teach nursing studies in the future.

Summary

In summary, the physical activity and mobility of cancer patients are important indicators of how well patients are equipped to tolerate treatment and survivorship (Prip et al., 2019; Turner et al., 2018). Key factors in patients' perception of care are education, physical activity, and psychosocial support (Mitchell et al., 2020). Nurses are in alignment to provide these supports to patients, and patient teaching is within the nursing scope of practice. The staff educational program for the oncology nurses was created in conjunction with ONS best practices (ONS, 2022).

There was an identified gap in practice of patients consistently receiving information on physical activity and the benefits of movement. The nurses did not feel equipped with the knowledge and tools to impart this information to patients. The project

purpose and achieved goal was to provide the tools necessary to empower the nurses to have these dialogues with patients during interactions.

Once this gap in practice was identified, a review of resources from journals, websites, and guidelines from ONS, NCCN, NCI, and ACS followed. With substantial data to support the educational program, the PowerPoint presentation was created. The education was presented to the group of oncology nurses in the outpatient clinic with positive results in effectiveness. As a portion of this project, more assessment questions were added to the nursing interviews to engage patients in dialogue about their physical activity.

Though this project is the beginning of a new chapter in patient education on physical activity during cancer treatment, the associated improvements and developments will positively impact patient care. The integration of new and available resources in the clinic will help educate patients on the benefits of staying active during and after cancer treatment. The scope of this work will impact this community of cancer patients and will have the potential to empower other nurses to promote patients' engagement in physical activity and well-being.

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Patient Physical Activity Education for Oncology Nurses

Laurie J. Tyer, MSN, RN

•Objectives



- This presentation outlines a new educational program for oncology nurses to teach the importance of physical activity to cancer patients
- After this presentation, you will better understand:
 - The benefits of physical activity
 - The implications of inactivity
 - The new tools available for patient education
 - The local and national resources available
 - Educational and supportive opportunities that can be implemented in the cancercenter

• Disclosures and declarations



- There is no conflict of interest identified with this project
- This work is part of a Doctor of Nursing Practice (DNP) project
- Participation is anonymous and voluntary
- No patient subjects are involved in this work
- Please sign the roster, complete the pre and post surveys, and the evaluation form for this program
- Nurses will receive one contact hour (CE) for participation and attendance

Historic and Current
Approach to Patient
Physical Activity

• Historical approach to cancer and physical activity



In the past, patients receiving cancer treatments were:

- Encouraged to rest
- Instructed to conserve their energy
- Largely treated in the inpatient setting
- Offered few options for side effect management
- Limited in treatment options and survivorship

Advancements in cancer treatments



Patients are living longer thanks to better treatment options so it's important to plan for a good long-term quality of life

• Current trends in oncology physical activity guidelines



Today, patients are encouraged and empowered to:

- Discuss current activity and limitations with care team
- Come up with some plans for their physical activity
- Start from where they are and maintain or increase activity
- Avoid inactivity – any physical movement has benefits

(U.S. Department of Health and Human Services, 2022)

Oncology care is making progress in incorporating physical activity recommendations to patients

Benefits of staying active and mobile



Improve or Maintain:

- quality of life
- tolerance of common side effects
- sleep and cognitive status
- cardiovascular fitness
- functional status
- prognostic outcomes
- ability to stay on treatment

Decrease or Minimize:

- anxiety and depression
- effects of cancer related fatigue
- bone and muscle loss

What risks can be minimized by being active?

• Physical activity and prevention



Staying active can reduce the risk of:

- Falls
- Fractures or immobilizations
- Hospitalizations
- Deconditioning
- Functional and cognitive deficits
- Discontinuation, dose change, or treatment delay

• Issues with treatment side effects



Treatment side effects can impact:

- Quality of life
- Cancer related fatigue
- Depression
- Metabolic changes

If not well controlled, these issues can lead to physical inactivity

(Keogh et al., 2017)

Nursing plays a critical role in assessing patients for side effects and treatment intolerances

•Minimizing side effects



Some symptoms can be reduced or eliminated with physical activity:

- Constipation
- Pulmonary issues
- Fatigue
- Loss of bone density
- Changes in cardiovascular function
- Psychosocial issues

(Webb et al., 2016, Spence et al., 2020)

•Survivorship



- Survival rates for many cancers have improved, people are living longer – research reports that survivorship has increased by 30% over the early 1990s

(Siegel et al.,2021)

- Physically active cancer patients may have less disease recurrence and longer survival rates

(Austin, et.al., 2016; Karvinen et al., 2017, Webb et al., 2016)

How can nurses best equip patients for success with physical activity?

Nursing Role in Education

• Barriers to recommending physical activity to patient



• ONS (2022) identified common reasons:

- Lack of time and resources
- Lack of knowledge
- Fear of injuring the patient
- Fear of liability
- When to recommend?
- Who can recommend? Providers? Physical therapists?
- Are these recommendations in the nursing scope of practice?

Nursing scope of practice



- Teaching and providing information on physical health and well-being is well within the nursing scope of practice
- Studies show that with the proper education on recommending physical activity, nurses are well aligned to support their cancer patients about staying physically active during and after treatment (Austin et al., 2016; Forner et al., 2021; Spence et al., 2020)

Patient support



Nurses can start by doing the following:

- Share the importance of staying active and mobile
- Provide educational tools and resources to help patients
- Work with patients to set realistic and personalized physical activity goals

When physical activity is not discussed, patients may not understand the importance it plays in their wellbeing

Patient testimony



[Oncology Nursing Society \(2022\), GetUpGetMoving on Vimeo](#)

Research on nurse involvement



- Work by Stan et al. (2020) concluded that because nurses are the most trusted profession, patients value their advice
- Nurse coaching can improve lifestyle behaviors
- Nurses have opportunities to educate patients during triage, treatments, and visits
- A systematic review by Hirschey et al. (2021) found that goal setting and physical activity instructions were the most effective supportive techniques used by nursing

•Research on nurse involvement cont.



In the Netherlands, van Veen et al. (2017) performed a cross section study a group of oncology nurses

Purpose: evaluate their perceived level of expertise regarding patients' physical activity during cancer treatment

Outcome: almost half of the participants felt inadequately trained to counsel patients on physical activity, flexibility, and core strength

Barriers: (1) nurses felt unequipped to recommend physical activity, (2) needed clarity on what activity were safe to recommend

What are the recommendations and where are they found?

Physical Activity Recommendations

Current recommendations



MOVE YOUR WAY Adults need a mix of physical activity to stay healthy.

Moderate-intensity aerobic activity*
Anything that gets your heart beating faster counts.

at least **150 minutes a week**

Muscle-strengthening activity
Do activities that make your muscles work harder than usual.

at least **2 days a week**

AND

* If you prefer vigorous-intensity aerobic activity (like running), aim for at least 75 minutes a week.

If that's more than you can do right now, **do what you can**. Even 5 minutes of physical activity has real health benefits.

Walk. Run. Dance. Play. **What's your move?**

U.S. Department of Health and Human Services and Oncology Nursing Society guidelines recommend:

- 150-300 minutes/week of moderate physical activity
- 2 days of muscle-strengthening exercises

[Executive Summary: Physical Activity Guidelines for Americans, 2nd edition \(health.gov\)](#)

Physical Activity Guidelines for Americans

Special Considerations in Making Physical Activity Recommendations	
Considerations	Cautions
Implanted VAD	<ul style="list-style-type: none"> • Avoid pools and open water. • Avoid resistance exercise in that extremity or muscle group, contact sports, or ball sports.
Lymphedema	<ul style="list-style-type: none"> • Use a compression garment when exercising. • Start resistance training very slowly. • Evaluate limb response. • Utilize an experienced exercise specialist.
Neuropathy	<ul style="list-style-type: none"> • Consider balance issues. • Aerobic exercise might be more comfortable on a bike or in water.
Ostomy	<ul style="list-style-type: none"> • Same as with implanted VAD. • Empty bag before exercising.
Osteoporosis or metastatic bone disease	<ul style="list-style-type: none"> • Monitor fracture risk before initiation. • Consider new onset of pain a sign indicating need for reevaluation.

Oncology Nursing Society Guidelines; American College of Sports Medicine

Examples of activity



Examples of moderate and vigorous intensity physical activities

	Moderate intensity	Vigorous intensity
Exercise and leisure	Walking, dancing, leisurely bicycling, ice and roller skating, horseback riding, canoeing, yoga	Jogging or running, fast bicycling, circuit weight training, aerobic dance, martial arts, jumping rope, swimming
Sports	Volleyball, golfing, softball, baseball, badminton, doubles tennis, downhill skiing	Soccer, basketball, field or ice hockey, lacrosse, singles tennis, racquetball, cross-country skiing
Home activities	Mowing the lawn, general yard and garden maintenance	Digging, carrying and hauling, masonry, carpentry
Workplace activity	Walking and lifting as part of the job (custodial work, farming, auto or machine repair)	Heavy manual labor (forestry, construction, firefighting)

[American Cancer Society \(2022\)](#).

• Examples of activity levels



Physical Activity Intensity

Type of Physical Activity	Examples
Light <ul style="list-style-type: none"> No change in breathing pattern RPE = 1 to about 3 	<ul style="list-style-type: none"> Slow walking Slow bike riding Light housework (e.g., dusting, light sweeping, dish washing) Bowling Light gardening Very easy resistance exercises using assistive machines, easy bands, or body weight only; able to do >15 repetitions easily Stretching exercise Gentle or chair yoga
Moderate exercise <ul style="list-style-type: none"> Slight increase in breathing, can still talk easily RPE = 4 to about 5 	<ul style="list-style-type: none"> Brisk walking Bike riding more rapidly or with some hills Ball sports such as volleyball, softball, or tennis Water aerobics Standard yoga General gardening Ballroom dancing Resistance training with 10-12 repetitions per set

Resources & Guidelines



Get Up, Get Moving! Physical Activity Recommendation

Patient name: [Click here to enter text.](#)

Age: [Click here to enter text.](#)

Gender: [Choose an item.](#)

Cancer Diagnosis: [Choose an item.](#)

Assessment	
Baseline patient physical activity level	Choose an item.
Reason(s) for medical clearance before physical activity <i>NOTE: If the patient has any of these issues, he or she must receive medical clearance before beginning physical activity.</i>	<input type="checkbox"/> None <input type="checkbox"/> Cardiac disease or toxicities (cardiomyopathy) <input type="checkbox"/> Limited range of motion or lymphedema <input type="checkbox"/> Ostomy <input type="checkbox"/> Severe nutritional deficiencies <input type="checkbox"/> Thrombocytopenia <input type="checkbox"/> Symptomatic anemia <input type="checkbox"/> At risk for falls
Physical activity goal (include type, frequency, length of time)	Click here to enter text.
Kind(s) of physical activity recommended	<input type="checkbox"/> Light aerobic <input type="checkbox"/> Moderate aerobic <input type="checkbox"/> Vigorous aerobic <input type="checkbox"/> Yoga <input type="checkbox"/> Resistance training <input type="checkbox"/> Stretching exercises
Patient commitment to physical activity recommendation	Choose an item.

Reasons to stop physical activity and contact the healthcare team:

- Dizziness
- Shortness of breath
- Chest pain
- Development of new or an increase in the usual pain
- New or Increased swelling in a limb

Oncology Nursing Society Guideline

Knee Pull

Lean your back against a wall. Keep your lower back, hips, and feet in a straight line. Pull one knee toward your chest, hold for 10 seconds, and then repeat with the other leg.



A Sample Daily Walking Program

This program is only a guide. Your walking sessions may be longer or shorter based on your ability and the advice of your doctor. If you are walking fewer than three times per week, give yourself more than 2 weeks before adding more.

Warm-up Time <small>Walk Slowly</small>	Brisk-walk Time	Cool-down Time <small>Walk Slowly and Stretch</small>	Total Time
Weeks 1-2			
5 minutes	5 minutes	5 minutes	15 minutes
Weeks 3-4			
5 minutes	10 minutes	5 minutes	20 minutes
Weeks 5-6			
5 minutes	15 minutes	5 minutes	25 minutes
Weeks 7-8			
5 minutes	20 minutes	5 minutes	30 minutes
Weeks 9-10			
5 minutes	25 minutes	5 minutes	35 minutes
Weeks 11-12			
5 minutes	30 minutes	5 minutes	40 minutes
Weeks 13-14			
5 minutes	35 minutes	5 minutes	45 minutes
Weeks 15-16			
5 minutes	40 minutes	5 minutes	50 minutes
Weeks 17-18			
5 minutes	45 minutes	5 minutes	55 minutes
Weeks 19-20			
5 minutes	50 minutes	5 minutes	60 minutes

Should I stretch before I walk?

Most experts advise stretching only after you have warmed up. To warm up, walk slowly for a few minutes before picking up the pace.

Stretching gently at the end of your walk may help build flexibility. Do not bounce or hold your breath when you stretch. Do each stretch slowly and move only as far as you feel comfortable.

If you think that stretching before walking may help you, ask your doctor when and how to do so safely. You may want to discuss these exercises as examples.

Leg Curl

Pull your right foot toward your buttocks with your right hand. Stand straight and keep your bent knee pointing straight down. Hold for 10 seconds and repeat with your other foot and hand.



Hamstring Stretch

Sit on a sturdy bench or hard surface so that one leg is stretched out on the bench with your toes pointing up. Keep your other foot flat on the surface below. Straighten your back, and if you feel a stretch in the back of your thigh, hold for 10 seconds and then change sides and repeat. If you do not feel a stretch, slowly lean forward from your hips until you feel a stretch.



Side Reach

Reach one arm over your head and to the side. Keep your hips steady and your shoulders straight to the side. Hold for 10 seconds and repeat on the other side.



Wall Push

Lean your hands on a wall and place your feet about 3 to 4 feet away from the wall. Bend one knee and point it toward the wall. Keep your back leg straight with your foot flat and your toes pointed straight ahead. Hold for 10 seconds and repeat with the other leg.



Walking

A Step in the Right Direction




Personal Goals

Oncology Nursing Society
 125 Enterprise Drive • Pittsburgh, PA 15275
www.ons.org • help@ons.org

Oncology Nursing Society Guidelines

Being physically active has many benefits for cancer survivors before, during and after treatment. Walking can be a great way to be more active. This brochure will give you tips on how to make walking a part of your daily routine.

What are the benefits of walking?

Walking is the most popular physical activity among adults. Taking a walk is low cost and doesn't require any special clothes or equipment.

Walking can improve your quality of life and may

- Increase your energy level and decrease that feeling of exhaustion related to cancer treatments
- Help deal with emotional issues like anxiety and depression
- Improve sleep
- Improve ability to concentrate and remember things
- Strengthen bones
- Support achieving and maintaining a healthy weight
- Increase survival after treatment

Make walking fun by going to places you enjoy, like a park or shopping center. Bring along a friend or family member to chat with, or listen to some of your favorite music as you walk. Keep the volume low so that you can hear noises around you.

Do I need to ask my oncology care team before I begin walking?

Most cancer survivors can become more physically active without worry about harm. However, some people should see their physician, nurse practitioner or physician assistant first. If you have any of the following, please check with your oncology care team before beginning a walking program or increasing your level of physical activity.

- Heart or breathing problems
- Extreme fatigue or low red cell count
- Weakness or unsteadiness when walking
- Swelling in any part of your body
- Radiation to groin area or lymph nodes removed from your groin area
- Recent surgery
- Spread of cancer to bones
- Bone damage from hormone therapy

How do I start?

1. Make a plan


The following questions may help you get started.

- Where will you walk?
- How often will you walk?
- Who will walk with you?
- How far or for how long will you walk?

2. Get ready

Make sure you have anything you may need. Here are some examples:

- shoes with proper arch support, a firm heel, and thick flexible soles
- clothes that keep you dry and comfortable
- a hat or visor for the sun, sunscreen, and sunglasses
- a hat and scarf to cover your head and ears when it's cold outside



3. Go

Divide your walk into three parts:

1. Warm up by walking slowly.
2. Increase your speed to a brisk walk. This means walking fast enough to raise your heart rate while still being able to speak and breathe easily.
3. Cool down by slowing down your pace.

When walking, be sure to use proper form:

- Keep your chin up and your shoulders slightly back.
- Let the heel of your foot touch the ground first, and then roll your weight forward.
- Walk with your toes pointed forward.
- Swing your arms naturally.

4. Add more

As walking becomes easier, walk faster and go farther.

Keep track of your progress with a walking journal or log. Record date, time, and distance. Set goals and reward yourself with a relaxing shower or 30 minutes of quiet time to yourself.

Review the sample walking plan on the back of this brochure for suggestions on how to start and slowly increase walking.

How much do I need to walk?

This will depend upon how active you are now. If you are not very active now, take your time. Start slow and build up as you find it easier to walk. See the section "Sample Daily Walking Program" for a guide.

Setting a goal

150 minutes

Adults should get this much physical activity each week to get and stay healthy. However, this should be a goal – something to work toward.

Break it down

30 x 5 = 150

minutes/day days/week minutes/week

Walking briskly for 30 minutes per day, 5 days a week will help you meet this goal. But any 10-minute bout of physical activity helps.

Split it up

If you can't walk for 30 minutes at a time, you can take three 10-minute walks instead.

One 30-minute walk = three 10-minute walks

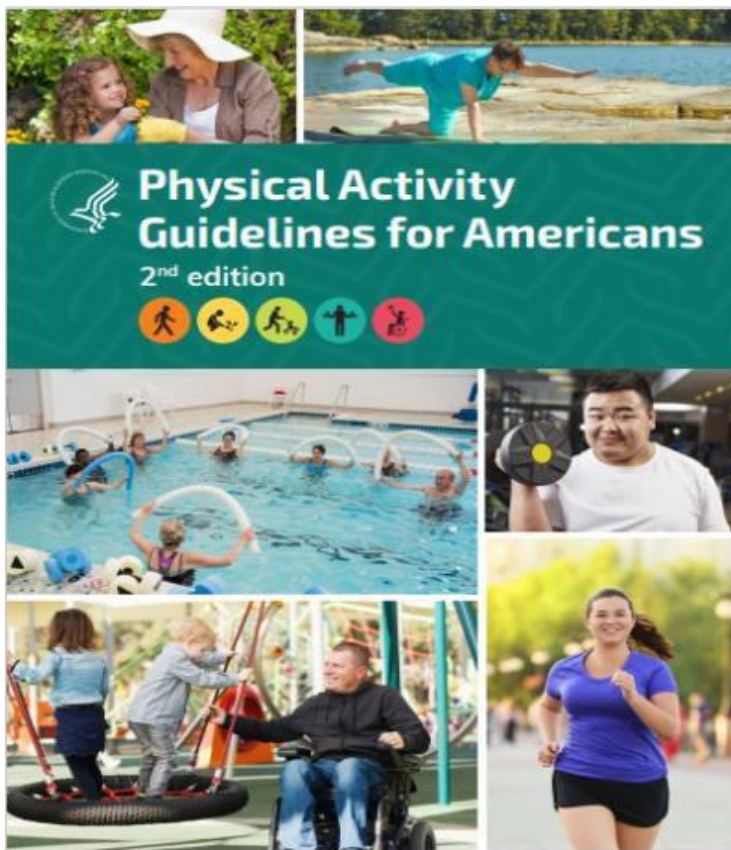
10 minutes

10 minutes

10 minutes

Oncology Nursing Society
 125 Enterprise Drive • Pittsburgh, PA 15275
www.ons.org • help@ons.org

Oncology Nursing Society Guidelines



[Physical Activity Guidelines for Americans, 2nd edition \(health.gov\)](https://www.health.gov)

•Physical activity recommendations



Many organizations have both staff and patient information:

- Oncology Nursing Society www.ons.org/courses/incorporating-physical-activity-cancer-care
Simple exercises for your patients with cancer
<https://youtube.com/playlist?list=PLgND6mUAYF4FX5epgPDR328xQz0UvACam>
- American Cancer Society <https://www.cancer.org/healthy/eat-healthy-get-active.html>
- American College of Sports Medicine [EIM-moving-through-cancer-form-web.pdf \(exerciseismedicine.org\)](http://www.exerciseismedicine.org/EIM-moving-through-cancer-form-web.pdf)
- United States Department of Health and Human Services [Current Guidelines | health.gov](http://www.health.gov)
- National Comprehensive Cancer Network [National Comprehensive Cancer Network - Home \(nccn.org\)](http://www.nccn.org)

•Questions for the group



- What are we currently doing to increase patient physical activity in our cancer center?
- What resources do we use to assess and educate our patients?
- What new practices can we implement to encourage patient physical activity?

Goal: Avoid immobility



- Add more physical assessment questions to nursing assessments
 - Add a chapter on physical activity to our patient teaching book
 - Increase utilization of rehabilitation referrals
 - Recommend the WellFit program to our patients
 - Provide information on programs such as LiveStrong at the YMCA, group yoga, and other community services
 - Encourage patients to walk around the treatment area
 - Suggest walking partners – at home and in the clinic
- Add equipment to the treatment area:
 - Stretch bands, hand weights, exercise foot pedals
 - iPads for each chair – download chair yoga videos
 - Empower patients to stay or become active – at a time when so many things are happening to them, this is one area that they can have a level of control
 - Celebrate achievements and small wins!



Please join other ONS members in taking the ONS course: Incorporating Physical Activity into Cancer Care www.ons.org/courses/incorporating-physical-activity-cancer-care

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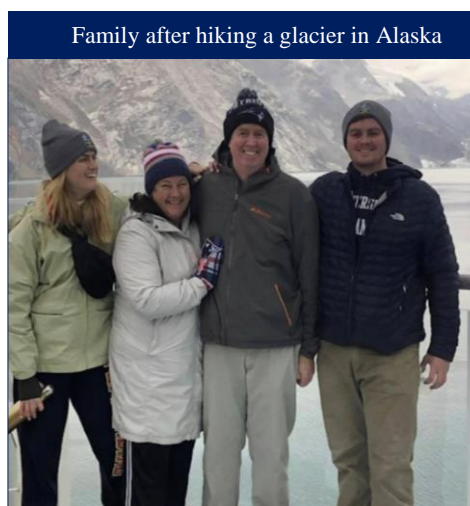
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Thank you for
your time and
attention today!



Appendix B: Self Confidence Assessment Tool

SELF CONFIDENCE ASSESSMENT: Pre-Program

Reflect upon your clinical experiences. Using the following statement, please rate the statements listed below. *“I am confident with my ability and have the confidence to perform the statement.”*

Using the rating scale: 5 = strongly agree through 1 = strongly disagree, please rate the following

	5	4	3	2	1
1. I am comfortable in discussing activity and mobility with my patients					
2. I have the tools to provide recommendations for physical activity for my patients during a treatment visit.					
3. I am prepared to make physical activity recommendations for my patients.					
4. I feel it is important to help my patients maintain their strength during their cancer treatment.					

SELF CONFIDENCE ASSESSMENT: Post-Program

Reflect upon your clinical experiences. Using the following statement, please rate the statements listed below. *“I am confident with my ability and have the confidence to perform the statement.”*

Using the rating scale: 5 = strongly agree through 1 = strongly disagree, please rate the following

	5	4	3	2	1
1. I am comfortable in discussing activity and mobility with my patients					
2. I have the tools to provide recommendations for physical activity for my patients during a treatment visit.					
3. I am prepared to make physical activity recommendations for my patients.					
4. I feel it is important to help my patients maintain their strength during their cancer treatment.					

Appendix C: Activity Evaluation

(Live Presentation) Activity Evaluation**Title: Development of a physical activity assessment and staff education for oncology nurses****Date: 9/29/22 8am-9am****Location: Oncology Clinic****Instructions:** Each participant must complete an evaluation in order to receive a contact hour certificate for this educational activity. Please be as honest and objective as possibleUsing the rating scale: **5 = strongly agree** through **1 = strongly disagree**, please rate the following:

Overall purpose/goal of this activity related to the learning objectives

	(5)	(4)	(3)	(2)	(1)
Intended Learning Outcome: participants will demonstrate an increase in comfort level and knowledge base of physical activity education and increase in physical activity for patients receiving cancer care in the oncology unit.					

Objectives/Learner's achievement of each objective: As a result of this educational activity, I am able to :	(5)	(4)	(3)	(2)	(1)
1. Identify two benefits of maintaining physical activity during and after cancer treatment.					
2. Identify two repercussions of inactivity during cancer treatment.					
3. Verbalize understanding of recommended physical activity levels.					
4. Verbalize local and national resources available to educate patients regarding physical activity needs.					
5. Identify three opportunities in our cancer center that could be implemented to increase physical activity during cancer treatment.					
I am satisfied with this program					
This program enhanced my knowledge.					
Because of this program I will change my practice, skill, attitude or performance.					
This program met my personal objectives.					

Rate the teaching expertise of each Presenter: Laurie J. Tyer, MSN, RN

	(5)	(4)	(3)	(2)	(1)
1. Is knowledgeable in content area					
2. Content is consistent with objectives					
3. Teaching strategies were appropriate for topic					
4. Teaching by this presenter was effective					

- Over -

Was there evidence of bias in this program? Yes No

Strengths of this presentation:

Areas for improvement:

Recommendations for future activities:

Recommendations for topics to be addressed in the learner-directed format: