

Long-Term Survivorship Care After Cancer Treatment: A New Emphasis on the Role of Rehabilitation Services

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The National Cancer Policy Forum (NCPF) of the National Academies of Sciences, Engineering, and Medicine (formerly the Institute of Medicine) regularly convenes experts to discuss strategies needed to address high-priority policy issues in cancer research and care delivery. The published proceedings and reports from these meetings include evidence-based recommendations intended to guide stakeholders towards impactful policy changes. NCPF reports have historically driven changes in clinical care pathways, cancer care delivery standards, and payment models, and they have raised awareness of the care needs of individuals with cancer. Cancer rehabilitation has historically languished in its presence within these reports.

Since the first NCPF report, *Ensuring Quality Cancer Care*,¹ published in 1999, there has been greater awareness of the long-term functioning and well-being of individuals with cancer. The 2006 NCPF report, *From Cancer Patient to Cancer Survivor: Lost in Transition*, was the first to broadly identify rehabilitation as part of cancer survivorship care,² and a subsequent report in 2013, *Delivering High Quality Cancer Care*,³ emphasized the role that rehabilitation providers play as part of a coordinated oncology care team in optimizing a patient's recovery from treatment.

These reports have spawned further efforts among US stakeholders to redesign cancer rehabilitation care delivery to better meet the needs of patients. In 2011, the American Cancer Society convened an interdisciplinary team of stakeholders to develop a Prospective Surveillance Model (PSM) as a best practice framework for cancer rehabilitation.⁴ The PSM specifies that rehabilitation services should be provided to patients at the time of diagnosis and continue through treatment and beyond, using a team approach that is integrated with oncology care. This model has subsequently been refined⁵ and recommended by expert groups, most notably by a panel convened by the National Institutes of Health Rehabilitation Medicine Department, as a way to improve the quality of cancer rehabilitation care.⁶

Building on the previous NCPF survivorship recommendations and informed by these stakeholder initiatives, *Long-Term Survivorship Care After Cancer Treatment: Proceedings of a Workshop*,⁷ published in May 2018, offers the most specific recommendations related to cancer rehabilitation services to date. The

recommendations, outlined in the Figure, provide specific guidance for improving cancer treatment-related symptom management and highlight the critical role of rehabilitation services in this regard. The recommendations suggest including rehabilitation providers as members of the care planning team from the point of diagnosis and throughout the duration of the cancer care plan to minimize treatment-related long-term toxicities and morbidity, maintain and restore function, and maximize independence.

NCPF panelists specifically suggest that survivorship care that lacks appropriate rehabilitation services could lead to unnecessary long-term physical and psychological suffering. The report also recommends *prehabilitation* for certain patients who could benefit from interventions before antineoplastic therapy begins. Better integration of both prehabilitation and rehabilitation services is consistent with the recommendations of the aforementioned National Institutes of Health panel, which included: "1) Provide rehabilitation screening and assessment as part of a comprehensive cancer care plan, from diagnosis throughout the course of illness and recovery, to address the functional needs of patients; and, 2) In selected cancers, offer rehabilitation services pretreatment to optimize tolerance to surgery and adjuvant treatment, minimize toxicity, and improve outcomes."⁶ The new NCPF report also addresses the need to augment cancer survivorship content in education and training for all members of the cancer care team, including rehabilitation specialists.

Call to Action

In the United States today, there are over 15 million people living with a current or previous cancer diagnosis,⁸ all at increased risk for adverse functional outcomes related to treatment of their disease. Over 50% of individuals surviving cancer report physical performance limitations and >10% report problems with mental health.^{9,10} Moreover, cancer survivors consistently report that their health and functional status negatively impact their ability to participate fully in life roles.¹⁰ Although evidence supports the positive impact of rehabilitation strategies on physical functioning in this population,¹¹⁻¹⁵ 40% of persons with a cancer diagnosis report not receiving rehabilitation care to address physical impairments.¹⁶

Targeted efforts are needed by the physical therapy profession to accelerate the integration of rehabilitation

- Disseminate evidence-based practice guidelines to manage cancer symptoms and treatment side effects.
- Integrate evidence-based psychosocial services into care for cancer survivors and caregivers and improve access to behavioral and mental health services.
- Provide evidence-based interventions to cancer survivors with persistent fatigue or sleep problems (e.g., exercise, cognitive behavioral therapy, sleep hygiene measures, psychoeducation).
- Use cancer rehabilitation to maintain and restore function, reduce symptom burden, maximize independence, and improve quality of life.
- Offer cancer rehabilitation services to certain patients prior to initiating cancer treatment to minimize toxicity and morbidity.

Figure.

National Cancer Policy Forum recommendations for improving symptom management and rehabilitation.

services into the oncology care continuum to effectively impact long-term survivorship care, as suggested by the NCPF report and aligned with expert consensus. Sufficient care for cancer survivors can be improved by: (1) implementing prospective functional screening and assessment as a model for oncology rehabilitation care; (2) increasing opportunities for specialized education and training in oncology for the physical therapy workforce; and (3) augmenting the current evidence base by promoting health services-focused rehabilitation research to understand the impact of prospective functional morbidity screening, triage, and interventions during cancer treatment and their impact on long-term survivorship.

Prospective Functional Screening and Assessment Model

The need for functional performance baseline testing, ongoing screening, assessment, and intervention for functional recovery is an often-cited gap in cancer care.^{17,18}

Remedying this gap will require a shift from episodic, postoperative rehabilitation models in favor of an approach aligned with secondary prevention care.¹⁹ Ideally, rehabilitation services are integrated at the point of diagnosis to assess an individual's baseline functional performance status and inform the cancer care plan. Interval functional screening and reassessment then continue throughout medically directed treatment to identify and manage clinically meaningful declines in function. In some individuals, prehabilitation care may be indicated and can be prescribed upon baseline examination. The variable and dynamic nature of cancer treatment necessitates ongoing interval assessment over the lifespan based on risk for, and presentation of, treatment-related functional morbidity. Prospective functional assessment is recommended in a new guideline from the American Society of Clinical Oncology to assess vulnerabilities in older adults receiving chemotherapy.²⁰

The PSM is a proposed framework for this approach,^{4,5,21} as it leverages rehabilitation providers to proactively manage anticipated short- and long-term functional morbidity.

This prospective model will require physical therapists to extend their clinical skills in screening, risk assessment, and triage. Health care administrators will need to view rehabilitation services differently in all care settings to facilitate greater awareness and implementation of this proactive model of care to support oncology services. The American Physical Therapy Association and its constituents will need to advocate for different payment structures that recognize this model.

Specialized Education and Training for the Professional Workforce

Health care providers need oncology-specific knowledge and skills to provide effective care for this population.³ Physical therapists as cancer care team members will need an expanded understanding of treatment toxicities as well as the skill set to provide appropriate screening for and management of these conditions. To develop such a workforce, stakeholders in physical therapist education should encourage augmentation of the oncology curriculum content in entry-level physical therapy education programs.

Postgraduate education and training programs are also needed to produce a workforce with sufficiently specialized knowledge and skills in oncological competencies. In 2016, the American Physical Therapy House of Delegates passed RC 8-16 adopting oncological physical therapy as an area of specialization. This action codified a Description of Specialty Practice, which outlines the knowledge areas, professional roles, responsibilities, and values, and the patient management practice expectations of the oncological clinical specialist. The Description of Specialty Practice will be foundational in outlining the content of physical therapy residency

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programs that will teach the clinical competencies needed to treat this population. These avenues for education should follow the construct set forth by the PSM to facilitate provider skills that support screening, risk stratification, interval assessment, and intervention for functional decline. Providing training in this context also enables development of the professional roles and values required for proactive cancer care planning, including participation in tumor board care plan meetings, leading initiatives through a health system's cancer care committee, and participation on oncology-based care teams.

Promoting Health Services-Focused Research

Comprehensive research evaluating the clinical effectiveness and cost-effectiveness of rehabilitation models in cancer care is needed. Although evidence supports rehabilitation care interventions for individuals with cancer; particularly supervised exercise and therapist-delivered interventions,^{15,22} there is a critical need for systematic research to evaluate the impact of rehabilitation on long-term functional improvements,¹⁸ specifically to identify if early rehabilitation strategies that remediate impairment translate to improved long-term outcomes such as participation in daily life, attainment of social roles, resumption of life roles, and return to work or school. Although some data have explored the economic impact of early rehabilitation in breast cancer,^{12,23} comprehensive evaluation of the economic impact of rehabilitation strategies on the greater cancer population is needed.

Evidence-based prospective models are being deployed in practice,^{21,24,25} and some early evidence suggests that prehabilitation and PSM are feasible,^{26,27} with potential for cost savings and health care utilization improvements,^{23,28} but further rigorous evaluation is needed. Entities such as the Center on Health Services Training and Research and the Foundation for Physical Therapy could make concerted efforts to foster preliminary research in these areas.

Summary

The 2018 report from the NCPF on long-term survivorship care introduces an unprecedented opportunity for the physical therapy profession to take bold steps in clinical practice, education, and research to improve long-term cancer survivorship. The profession should recognize and move towards greater integration of physical therapy services into cancer care, leveraging a prospective surveillance approach. Stakeholders in physical therapy professional education and research should seek to further develop resources that support this paradigm shift. The historic impact of past NCPF reports cannot be understated as an impetus for driving change in health care services for cancer patients. Rehabilitation providers, and physical therapists in particular, should recognize and

seize this opportunity to move towards better integration of rehabilitation into oncology care.

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