

Editorial

An international perspective on integrating physiotherapists in oncology care

Martijn M Stuiver^{a,b}, Nicole L Stout^c, Amy M Dennett^{d,e}, Caroline M Speksnijder^{f,g,h},
Kristin L Campbellⁱ

^a Center for Quality of Life, Netherlands Cancer Institute; ^b ACHIEVE Center of Expertise, Amsterdam University of Applied Sciences, Amsterdam, Netherlands; ^c Rehabilitation Medicine Department, National Institutes of Health, Bethesda, USA; ^d Allied Health Clinical Research Office, Eastern Health; ^e La Trobe Sport and Exercise Medicine Research Centre, La Trobe University, Melbourne, Australia; ^f Department of Head and Neck Surgical Oncology; ^g Department of Oral and Maxillofacial Surgery and Special Dental Care; ^h Department of Clinical Epidemiology, Julius Center for Health Sciences and Primary Care, University Medical Centre Utrecht, Utrecht University, Utrecht, Netherlands; ⁱ Department of Physical Therapy, Faculty of Medicine, University of British Columbia, Vancouver, Canada



Introduction

Cancer and its treatments can result in impairments, which can affect multiple body systems. These impairments restrict physical functioning and participation in activities of daily living and life roles of many patients, consequently limiting their quality of life. Many such impairments are amenable to physiotherapy interventions. Numerous studies have shown beneficial effects of physiotherapy interventions – including exercise programs – on joint pain and range of motion, physical functioning, physical fitness, fatigue, and health-related quality of life.¹ However, the integration of physiotherapy services into cancer care continues to languish.^{2,3}

Recently, the Clinical Oncology Society of Australia acknowledged the importance of exercise in the cancer continuum by issuing a guideline recommending that exercise prescription be embedded as part of standard practice in cancer care, with patients referred to exercise professionals with experience in cancer care, including physiotherapists.⁴ Additionally, the National Cancer Policy Forum in the United States published recommendations for better integration of rehabilitation services into cancer care, including physiotherapy, ideally starting at the point of cancer diagnosis, in order to reduce long-term, treatment-related adverse effects and disability.⁵

Clearly, physiotherapy has an important role to play in cancer care. Are we up to this task, or do we need to step up our game? This manuscript provides international perspectives on these questions; they were obtained using an interactive plenary discussion at the first International Conference on Physiotherapy in Oncology.

International Conference on Physiotherapy in Oncology 2018

The first International Conference on Physiotherapy in Oncology (an open congress) took place in Amsterdam, June 2018. There were 280 physiotherapists representing 30 countries from African, Asian, European, and North and South American regions. The objective was to present scientific and professional developments in the field of oncology physiotherapy and enable international collaboration and idea exchange. The conference program included an interactive, plenary panel discussion with subject matter experts, representing Australia, Canada, Chile, Denmark, the Netherlands, Spain, and the United States. Panellists were queried for input on their nation's experiences and asked to identify successes and challenges in the field of oncology rehabilitation. The audience participated via an

interactive Audience Response System^a. Clear themes and relative agreement became apparent regarding the current state of affairs, challenges, and future directions for physiotherapy in oncology.

The current status of physiotherapists in oncology

Participants agreed that education for entry level to practise already enables physiotherapists to play a role in the detection and management of many cancer-related impairments (eg, pain and reduced range of motion or physical fitness) that may preclude patients from engaging in activities of daily functioning and participating in life roles. Most physiotherapists can manage these impairments and help patients adapt to functional loss or chronic symptom burden by teaching coping strategies, maximising compensation capacity, and improving ergonomics of (alternative) movement strategies. Yet, more specialised knowledge about cancer treatments and their side effects, as well as advanced skills, are desirable to support individuals with cancer in their specific needs throughout the cancer care continuum. This includes, but is not limited to, the management of lymphoedema,^{6,7} peripheral neuropathy,⁸ and cancer-related fatigue.⁹ The panel representatives identified existing, and the ongoing development of, post-graduate educational programs and Master programs to advance oncology-specific knowledge and skills. This includes board specialty examinations and accompanying credentialing. In addition, the national physiotherapy associations of several countries – including Australia, Canada, Chile, Denmark, Netherlands, and USA – have established dedicated oncology sections. There was also strong agreement that the growing evidence base for the effectiveness of physiotherapy interventions in the oncology population has helped to improve integration of rehabilitation services into cancer care.¹

Challenges for broader implementation and further advancement of oncology physiotherapy

During the panel discussion, it became clear that there are three major challenges to successful implementation of physiotherapy in cancer care, which were shared and generally agreed upon among representatives from all 30 countries. These were: costs associated with access to physiotherapy care; insufficient awareness of benefits of and lack of referral pathways to physiotherapy services for

individuals with cancer; and the need for capacity building of the physiotherapy workforce - including specialisation.

Costs

In many countries, access to physiotherapy services in cancer care is inadequate or even absent. Services provided within public healthcare systems are limited (ie, Canada, UK, and USA) or there is little third-party insurance coverage for services in other private healthcare systems. Legislative efforts have yielded marginal success, usually targeting one specific population or disease type (eg, the USA Women's Health and Cancer Rights Act) but fail to address the needs of the greater population, especially as they move beyond active medical disease treatment. Moreover, legislation does not always keep up with the rapid changes in the field of cancer care. For example, in the Netherlands, basic insurance partially covers physiotherapy-supervised exercise during adjuvant chemotherapy, based on the preceding hospital admission. However, since neo-adjuvant therapy has become the standard treatment for some cancers (eg, breast cancer), patients can no longer apply for reimbursement for the same intervention, as they have not yet been hospitalised.

While the evidence base underpinning the effectiveness of physiotherapy interventions for individuals with cancer is growing, cost-effectiveness data are currently limited to a few studies.¹⁰⁻¹² Cost containment is foremost among governments, regulators, and healthcare insurers. Physiotherapy interventions have great potential for cost mitigation through prospective rehabilitation services, and through mitigation of functional decline during and after cancer treatments. However, in the absence of evidence that demonstrates this economic benefit, payers have limited incentive to improve reimbursement for physiotherapy in cancer care.

Awareness and referral

The lack of referral pathways that engage physiotherapists in cancer care is likely a result of limited awareness of the benefits that physiotherapy can offer individuals with cancer, and of the importance of the timing of physiotherapy interventions. The limited time available in an oncology consultation may push the dialogue on rehabilitation or supportive care to the background, in favour of discussing the likelihood of survival, medical treatment planning, and pharmaceutical symptom control. Panellists asserted and participants agreed that embedding physiotherapists in cancer care clinical pathways allows easy and timely referral to physiotherapy services. Participants at the conference from a variety of countries (Qatar, USA, Iran, etc) provided examples of this model of care being implemented with great success. In addition to increasing referrals, this approach encourages a move from reactive to more proactive physiotherapy. In a traditional model of supportive care, referral or self-referral to a physiotherapist is at the discretion of the physician or the patient, and happens only once an impairment has been identified and often when it has already led to a disabling state. Adopting a more proactive approach has the potential to improve supportive cancer care.¹³ Impairments - in particular declines in exercise capacity - and symptoms such as fatigue or pain can be prevented or minimised by timely interventions. Several studies have shown that supervised exercise during active cancer treatment can reduce negative side effects, and may even improve medical treatment fidelity and survival.^{14,15} Prehabilitation and prospective surveillance are a promising area for physiotherapy, where early physiotherapeutic intervention - including exercise and routine monitoring of impairments - may lead to improved functional status and health service benefits, including reductions in length of stay and health-related expenditure.^{1,16} This may be particularly valuable for individuals at risk of a poor functional outcome due to poor baseline health status, and those with low self-efficacy, the elderly, and those who lack social support or have low health-literacy.¹⁷

Engaging physiotherapists throughout the trajectory of cancer care enables ongoing assessment of changes in physical function that

will occur due to the disease or its treatment. Functional gains and losses necessitate ongoing surveillance and guidance to manage impairments that arise, as well as to accommodate exercise prescription. This will only be achieved by incorporating physiotherapy as a standard part of the work flow of a cancer centre, and having dedicated physiotherapy staff who can provide consultative assessment and triage to the appropriate setting of care. The physiotherapist provides a unique role that complements the cancer team by providing insights on functional movement.

Capacity building and specialisation

Panellists and the audience agreed that in order to provide safe and effective interventions, physiotherapists working with individuals with cancer need to have an understanding of the mechanisms of anti-cancer therapy and how these effect physiological systems involved in human movement.¹⁸ In addition, since the majority of individuals with cancer also have one or more comorbidities, a high level of clinical reasoning is required.¹⁹ A cancer diagnosis often comes with a high psychosocial and existential burden, and many patients have anxiety or depressive symptoms, which need to be recognised and accounted for during physiotherapy treatment. Managing these issues requires high-level communication skills. Therefore, additional education in oncology is a prerequisite for physiotherapists who want to be fully capable of providing high-quality care to people with cancer. This supposition is supported by the US Institute of Medicine report *Delivering High-Quality Cancer Care*, which identifies the need for the healthcare workforce to have advanced education and training in oncology in order to optimise the quality of care for this population.²⁰

In physiotherapy practice, specialisation commonly has several levels. High-level specialists or the most advanced practice-trained individuals may primarily practise within a specialised cancer care setting, but also act as consultants to physiotherapists with lower levels of specialisation who see cancer patients in a more general inpatient medical or outpatient setting. These physiotherapists, who are capable of treating the majority of health problems associated with cancer, can consult or refer to the specialists in specific, complex cases. In the Netherlands, there are accredited Master-level postgraduate programs in oncology to advance the clinical specialty skills needed for this complex population, as well as entry-level and intermediate-level postgraduate courses. Several other countries (ie, the USA) are currently developing such programs.

Recommendations for action

The discussions at the International Conference on Physiotherapy in Oncology demonstrated that the challenges for physiotherapy in oncology care are quite similar across international boundaries. Also, they provided a starting point for improving the quality and availability of physiotherapy services for individuals with cancer. First, it is important to develop professional practice guidelines and standards for physiotherapy in oncology. Such an effort would improve awareness among physiotherapists and other healthcare providers regarding optimal care standards, and will improve consistency in care delivery and reduce unwanted practice variation. Second, physiotherapy associations should engage in advocacy to highlight inequity in healthcare services and to encourage payment schemes that support physiotherapy for individuals with cancer throughout the disease and treatment continuum. Third, addressing oncology-related problems explicitly in entry level physiotherapy education, and showing physiotherapy students how the basic principles of physiotherapy apply to issues in oncology, would create a strong foundation for advanced clinical practice and catalyse interest towards postgraduate pursuit of specialty practice in oncology. The panel further recommended that physiotherapy researchers should consider approaches to health services research that can study cost and healthcare utilisation mitigation through physiotherapy interventions.

On the levels of research and practice, enhanced international collaboration and communication between physiotherapists working

in oncology are desirable. This could be facilitated by the continuation of the International Conference on Physiotherapy in Oncology as well as through the World Confederation for Physical Therapy (WCPT) international subgroup IPT-HOPE^b. At a national level, physiotherapy associations need to make an effort to increase awareness of the potential of physiotherapy among other healthcare professionals in oncology, and develop and implement care models that are suited to their individual in-country system constraints. The World Health Organization's Vision 2030 also offers an opportunity for international collaboration to coalesce around goals that target reducing cancer-related disability in an equitable and sustainable way.

In conclusion, physiotherapists have strong foundational knowledge and skills in oncology and they are playing an increasingly important role in the management of individuals with cancer. As this field grows and matures, international collaborations towards shared goals in clinical practice, education, and research could significantly enhance the integration of physiotherapy services in the cancer care continuum and ultimately improve functional outcomes and quality of life for cancer survivors.

Footnotes: ^aAudience Response System, Mentimeter, Sweden;

^bPhysiotherapy in HIV/AIDS, Oncology, Hospice and Palliative Care.

Ethics approval: Nil.

Competing interests: Nil.

Source(s) of support: Nil.

Acknowledgements: The authors would like to thank the following persons for their intellectual input for this editorial during the panel discussion and during a discussion meeting adjacent to International Conference on Physiotherapy in Oncology: Margaret McNeely, PT, PhD (Canada) Leonie Naumann

PT, CLT (Australia); Karol Ramirez Parada PT, PhD (Chile); G. Stephen Morris, PT, PhD (USA); Morten Quist, PT, PhD (Denmark); Theo Ruitenbeek, PT, PhD (The Netherlands); Anna Campbell, PhD (United Kingdom); Christopher Barnes, DPT (USA); Paul LaStayo, PT, PhD (USA); and Manuel Arroyo-Morales, PT, PhD (Spain).

Correspondence: Martijn M Stuver, Center for Quality of Life, Netherlands Cancer Institute, the Netherlands. Email: m.stuiver@nki.nl

References

1. Stout NL, et al. *PM R*. 2017;9:S347–S384.
2. Cheville AL, et al. *Am J Phys Med Rehabil*. 2011;90:S27–S37.
3. Pergolotti M, et al. *J Geriatr Oncol*. 2015;6:194–201.
4. Cormie P, et al. *Med J Aust*. <https://doi.org/10.5694/mja18.00199> [E-pub ahead of print].
5. National Academies of Sciences, Engineering, and Medicine, Division HAM, Services BOHC, National Cancer Policy Forum. *Long-Term Survivorship Care After Cancer Treatment*. National Academies Press; 2018. <https://doi.org/10.17226/25043>.
6. Paramanandam VS, Roberts D. *J Physiother*. 2014;60:136–143.
7. Ezzo J, et al. *Cochrane Database Syst Rev*. 2015;5:CD003475.
8. Duregon F, et al. *Crit Rev Oncol Hematol*. 2018;121:90–100.
9. Dennett AM, et al. *J Physiother*. 2016;62:68–82.
10. Waart H, et al. *Eur J Health Econ*. 2017;1–12.
11. Kampshoff CS, et al. *J Cancer Surviv*. 2018;12:417–429.
12. May AM, et al. *BMJ Open*. 2017;7:e012187.
13. Cheville AL, et al. *Phys Med Rehabil Clin N Am*. 2017;28:1–17.
14. Hayes SC, et al. *Breast Cancer Res Treat*. 2017;167:505–514.
15. Courneya KS, et al. *Med Sci Sports Exerc*. 2014;46:1744–1751.
16. Stout NL, et al. *Cancer*. 2012;118:2191–2200.
17. van Waart H, et al. *Psychooncology*. 2015;25:964–970.
18. Maltser S, et al. *PM R*. 2017;9:S415–S428.
19. van der Leeden M, et al. *Disabil Rehabil*. 2018;40:486–496.
20. Committee on Improving the Quality of Cancer Care: Addressing the Challenges of an Aging Population, Board on Health Care Services, Institute of Medicine, et al. *Delivering High-Quality Cancer Care: Charting a New Course for a System in Crisis*. Levit L, Balogh E, Nass S, Ganz PA, eds. 2013. doi: [10.17226/18359](https://doi.org/10.17226/18359).