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Original Article

A Cross-Sectional Survey to Understand the Perception of Cancer Rehabilitation Amongst Healthcare Providers in a Rural Community

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Abstract

With an aging population and the continued advancement of cancer therapies, the number of cancer survivors continues to increase at an unprecedented rate. Both cancer patients and survivors present with a complex symptomatology and unique functional impairments. Although there has been great effort to include cancer rehabilitation as a part of standard oncology care, more work is necessary to increase the reach of these services, particularly in rural area such as the West Texas community. This study is the first cross-sectional survey illustrating the perception amongst a variety of healthcare providers throughout different specialties located in a rural community in the United States without access to a cancer rehabilitation specialist or program.

Healthcare providers in this study acknowledge that incorporating rehabilitation services into cancer care may positively impact quality of life for patients with cancer. Structural barriers and medical complexity potentially hinder collaborative efforts amongst oncology and rehabilitation. Increasing awareness of cancer rehabilitation in this community can lead to more conversations amongst providers and their patients – the first step in improving access for this patient population.

Keywords: cancer, rehabilitation, healthcare providers, quality of life

Background

With an aging population and the continued advancement of cancer therapies, the number of cancer survivors is projected to be over 22 million by 2030 with an overall estimated 67% 5-year survival rate.[1] Due to the nature of the disease as well as treatment side effects, cancer patients and survivors often present with complex symptomatology with the most common symptoms including fatigue, neuropathy, and lymphedema. [(2-5)] Overall, functional impairments are estimated to affect 33-73% of patients with and survivors of cancer. [6,7] Many oncologists are not equipped to treat the functional deficits and disabilities faced by the ever-growing population of patients

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with cancer.[8] Care provided by a Physical Medicine and Rehabilitation (PM&R) specialist provides a holistic approach including preventative, restorative, supportive, and palliative care to ameliorate functional ability, increase independence, and improve quality of life for these patients.[8,9]

One of the leading causes of emotional distress in cancer survivors is physical disability, demonstrating that the unmet need for rehabilitation is quite detrimental to this population.[10] More so, rehabilitation has the potential to increase patient return to work, decrease the economic burden of cancer care, and improve patient quality of life.[11] A major challenge associated with treating patients with cancer is that these patients can be extremely medically complex beyond just their functional impairments.[12] As of 2020, there were only seven cancer rehabilitation fellowship programs in the country, and therefore, most oncologists are not interacting with physiatrists specifically trained to treat patients with cancer.[13] Overall, there is a training deficit and a lack of awareness of rehabilitation services for this patient population.

Although there has been great effort to include cancer rehabilitation as a part of standard oncology care via large professional groups such as the American Cancer Society and the National Comprehensive Cancer Network, more work is necessary to increase the reach of these services, particularly in rural area such as the West Texas community. Multiple prior studies have involved surveying specific groups of healthcare providers in urban or professional settings regarding perceptions of cancer rehabilitation.(14-18) The studies have generally demonstrated that, independently, different types of providers perceive the potential of cancer rehabilitation to be positive but also see multifactorial barriers in incorporating this type of care into oncology practice.(14-18) However, no study to date has analyzed perspectives of cancer rehabilitation amongst a healthcare community without a cancer rehabilitation specialist nor involved healthcare professionals who are not routinely active in cancer care. Patients with cancer could benefit in multiple respects from the inclusion of rehabilitation services as part of their care, including improved day-to-day physical functionality as well as a reduction in symptom burden.[19] This will be the first cross-sectional survey illustrating the perception amongst a variety of healthcare providers throughout different specialties located in a rural community in the United States without access to a cancer rehabilitation specialist or program.

Objectives/Hypothesis

The primary objective of this study is to explore differences in perception of cancer rehabilitation amongst various healthcare provider types (physicians vs advanced practice providers vs therapists vs social workers) across a span of medical specialties (i.e. Family Medicine, Internal Medicine, Pediatrics, etc.) in a rural community. The secondary objective is to better understand whether the root of access barriers for cancer rehabilitation in a rural community is primarily structural, educational, or financial.

Based on anecdotal data, the working hypothesis is that those providers with the highest percentage of respondents reporting that rehabilitation services have a positive

impact on patients with cancer include physicians, PTs, and OTs as they are the providers that generally have the most experience and training regarding rehabilitation medicine and management. Based on both prior literature and anecdotal data, the working hypothesis is that more providers in academic settings (vs non-academic settings) will report an attitude that rehabilitation is a necessary component of oncology-related care as there is a reported association between an academic setting and more patients with cancer being referred to inpatient rehabilitation.[14] Similarly, more providers with <5 years of experience (vs >5 years of experience) will report an attitude that rehabilitation is a necessary component of oncology-related care as there is an association between more reported clinical experience and a lower likelihood of referring patients with cancer for inpatient rehabilitation amongst oncologists and physiatrists.[14]

Methods

The study was deemed exempt from formal Institutional Review Board (IRB) review by the Lubbock IRB. The primary method for data collection will be survey responses.[20] Volunteer participants working as healthcare providers in the Texas Tech Physicians Network and Covenant Health Network received a survey via a QR code link. The survey was distributed to healthcare providers by Jodi Goldman and Dr. John Norbury from August 2022 to March 2023 during clinical rotations. The survey was composed of 22 multiple-choice questions as well as a consent statement which must be agreed to by the participant to proceed with the survey. The responses were anonymized. Participants input the last five digits of their phone number which then became the string of numbers associated with their responses. Six questions were focused on demographics, and 16 questions explored the perception of cancer rehabilitation with most responses reflecting a Likert Scale. There was a section at the end where participants could choose to leave comments about cancer rehabilitation, the survey, or the study. The survey underwent a process of expert validation to ensure content validity. A panel of cancer rehabilitation specialists, who have also published cross-sectional survey data on similar topics, from Atrium Health Carolinas Rehabilitation conducted an expert review of the survey questions. They assessed if the survey was clear and easy to understand, lacked important questions regarding the perception of cancer rehabilitation, and was relevant to the field of cancer rehabilitation. The survey was developed with the assistance of the Texas Tech University Health Science Center Information Technology Department and provided through Qualtrics.

Participants included healthcare providers including attending physicians, resident physicians, registered nurses/nurse practitioners (RN/NP), physician assistants (PA), physical therapists (PT), occupational therapists (OT), speech-language pathologists (SLP), case managers, and social workers in the Texas Tech Physicians Network and Covenant Health Network. Healthcare providers were recruited via email sent by a second-year medical student and a general physiatrist. Participants must be a(n) attending physician, resident physician, RN/NP, PA, PT, OT, SLP, case manager, or social worker registered with Texas Tech Health Physicians or Covenant Health Network in Lubbock, TX. If participants did not complete the entirety of the survey, they were excluded from the study.

Thirty-eight healthcare providers and

learners in various specialties have completed the survey. The cohort consisted of physical therapists (21%), occupational therapists (8%), registered nurses (16%), physicians (42%), case managers/social workers (5%), and other healthcare workers (8%). Sixty-six percent of respondents were female and 34% were male, and 68% identified as white, 13% as Hispanic, 11% as other. Forty-five percent of respondents had less than 5 years of experience as a healthcare provider, 26% had 5-10 years of experience, 16% had 10-15 years of experience, and 13% had greater than 20 years of experience. Fifty-three percent of respondents identified as working in an academic environment and 47% identified as working in a non-academic environment. Detailed descriptive statistics are outlined in Table 1.

Table 1. Descriptive statistics of healthcare providers participating in the survey

	All participants (n=38)
Age, median (range), year	34 (22-77)
Sex	
Male	13 (34)
Female	25 (66)
Race	
White	26
Black	3
Hispanic	5
Other	4
Healthcare Profession	
Physician	16 (42)
Registered Nurse	6 (16)
Physical Therapist/ Occupational Therapist	11 (29)
Case Manager/Social Worker	2 (5)
Other	3 (8)
Years of Experience	
<5	17 (45)
5-10	10 (26)
10-20	6 (18)
>20	5 (13)
Practice Setting	
Academic	20 (53)
Non-academic	18 (47)

All participants (100%) acknowledged that they care for patients with cancer. Ninety-seven percent of respondents agreed that rehabilitation providers should receive some level of training for treating patients with cancer, 89% agreed that it is necessary for these patients to receive screening on functional impairment, 84% agreed that oncologists should include rehabilitation as part of the treatment discussion, and 94% agreed that a rehabilitation healthcare provider should be included as part of the oncology team. However, 79% agreed that there are currently barriers to providing these patients with inpatient rehabilitation services. Lastly, 100% agreed that rehabilitation care could provide a smoother return to society, yet 68% believed this patient population is currently underserved by rehabilitation services. Overall relevant survey response data is shown in Figure 1.

Thirty percent of physicians, PTs, and OTs strongly agreed that a healthcare provider trained in rehabilitation services should be included as part of the oncology care team, while 70% agreed. Fifty-five percent of all other types of healthcare providers strongly agreed that a healthcare provider trained in rehabilitation services should be included as part of the oncology care team, while 36% agreed and 9% remained neutral. Forty-eight percent of physicians, PTs, and Ots strongly agreed that patients would experience a smoother return to society if they were receiving rehabilitation care, while 52% agreed. Fifty-five percent of all other types of healthcare providers strongly agreed that patients would experience a smoother return to society if they were receiving rehabilitation care, while 45% agreed. Thirty percent of healthcare providers in an academic setting strongly agreed that a rehabilitation provider is a necessary component of the oncology care team while 65% agreed and 5% remained

neutral. Forty-four percent of healthcare providers in a non-academic setting strongly agreed that a rehabilitation provider is a necessary component of the oncology care team while 50% agreed and 6% remained neutral. Of those providers with less than five years of experience, 35% strongly agreed that a rehabilitation provider is a necessary component of the oncology care team while 59% agreed and 6% remained neutral. Of those providers with more than five years of experience, 38% strongly agreed that a rehabilitation provider is a necessary component of the oncology care team while 57% agreed and 5% remained neutral.

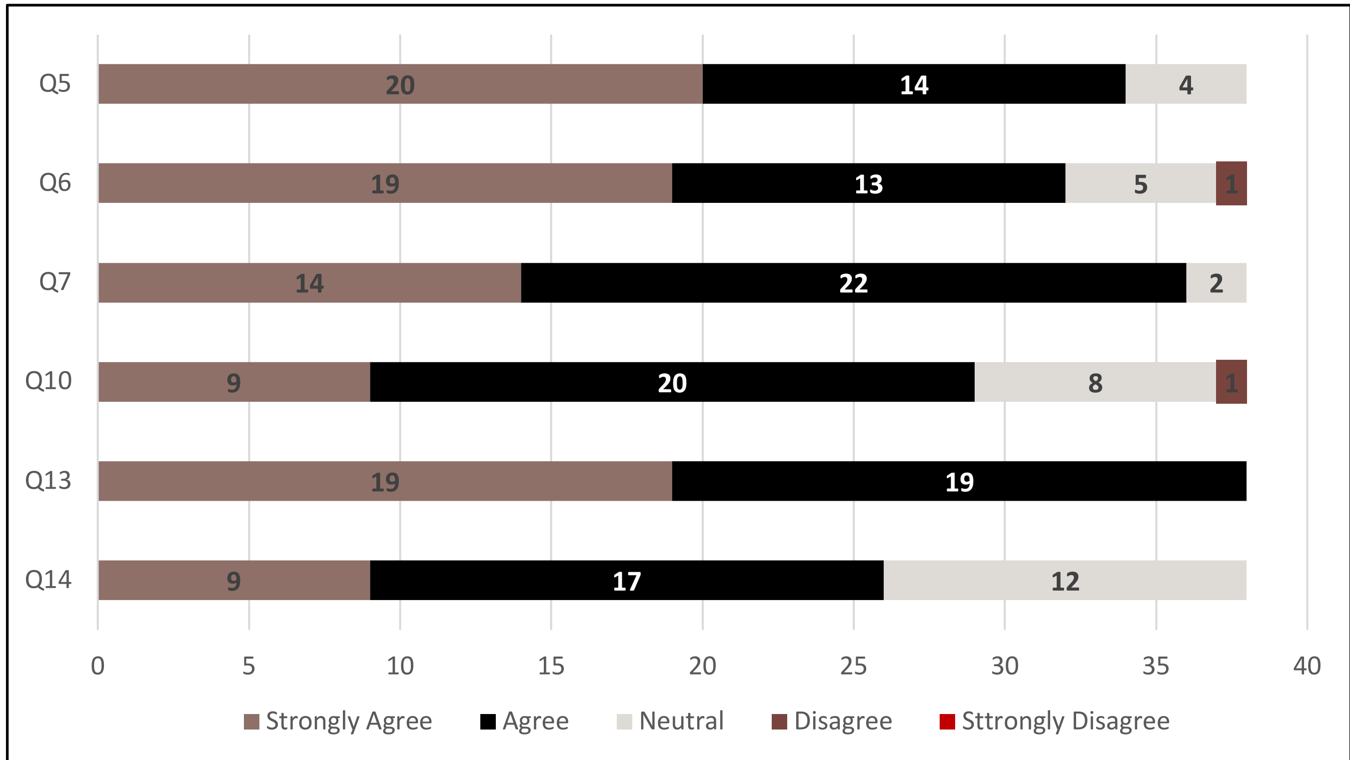

Figure 1. Relevant Survey Responses

Q5) It is necessary for patients with cancer to receive a routine screening for cancer- or therapy-related impairments
Q6) Oncologists should include a discussion of rehabilitation during a patient's initial appointment
Q7) A healthcare provider trained in rehabilitation services should be included as a necessary component of the oncology healthcare team
Q10) There are currently barriers to providing patients with cancer inpatient rehabilitation services
Q13) Patients in remission or under surveillance for disease progression could have a smoother return to society if they were receiving rehabilitation care
Q14) Patients with cancer are currently underserved by inpatient rehabilitation facilities

Considering the cohort consists of volunteer participants, the results will demonstrate a degree of bias. Because West Texas can be a relatively transient community, some healthcare providers may have experiences in more urban regions where cancer rehabilitation services are provided. This can lead to biased responses if these providers have witnessed the impacts of cancer rehabilitation themselves and removes the innovation of surveying providers in a community that does not have a cancer rehabilitation program. Secondly, surveys are inherently flawed as respondents may not interpret questions as the study designers intended. Lastly, this project is attempting to access the opinions of a large cohort which, particularly with surveys, can be quite challenging as historically response rates from physicians for web-based surveys are low, around 35%.[21]

Conclusion

Healthcare providers in this study acknowledge that incorporating rehabilitation services into cancer care may positively impact the quality of life for patients with cancer. Interestingly, more healthcare provider types other than physician, PT, and OT and those working in non-academic settings strongly agreed that a provider trained in rehabilitation should serve on the oncology care team, while there was no difference in perception between those with less than and greater than five years of experience. Structural barriers and medical complexity potentially hinder collaborative efforts amongst oncology and rehabilitation. Increasing awareness of cancer rehabilitation in this community can lead to more conversations among providers and their patients – the first step in improving access for this patient population.

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