Phone-Based Rehab Helps People With Advanced Cancer Stay Independent

Even small changes in physical fitness can make it possible for people to maintain their quality of life as cancer progresses.

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As cancer progresses, it often leads to physical disability and pain that can threaten a person's independence and devastate their quality of life.

Yet most people with advanced cancer don't receive physical therapy or engage in exercise that can help maintain function, said Andrea Cheville, MD, a rehabilitation physician at the Mayo Clinic in Rochester, MN. For these patients, she said, small changes in physical fitness can mean the difference between being able to live independently and losing one's independence, and may also affect their ability to receive certain treatments.

An NCI-funded clinical trial led by Cheville found that a 6-month physical rehabilitation program delivered by telephone modestly improved function and reduced pain for people with advanced cancer. The telerehabilitation program also reduced the time patients spent in hospitals and long-term care facilities such as nursing homes.

"Overall, the study findings add to the growing evidence that low-tech interventions can effectively improve the delivery of supportive cancer care services," wrote Manali Patel, MD, MPH, of the Stanford University School of Medicine, in a commentary on the study. Embracing these low-tech approaches "may be a smart move … to improve patient-reported outcomes and keep patients at home," she concluded.

The findings, published April 4 in JAMA Oncology, also "reiterate the importance of supportive care for patients, and particularly for patients with advanced cancer," said Karen Mustian, PhD, MPH, of the University of Rochester's Wilmot Cancer Institute, who was not involved with the study.

"We need to think of new and creative ways to be able to support patients, their care providers, and their family members [in] the process of managing cancer," Mustian said.

Physical Therapy for Patients With Advanced Cancer

Various factors explain why many people with advanced stages of cancer don't receive physical therapy or other rehabilitation services.

It’s often hard to find physical therapists or other professionals with the specialized training needed to work with people with advanced cancer. Also, these patients may have difficulty traveling to a specialty center for care, Cheville said.

Furthermore, she said, patients may feel too overwhelmed by the disease and its treatments to seek such care.

And, Patel said, “Oncologists and other health care providers may also be reluctant to refer patients with cancer, especially those with advanced cancer, to physical therapy” due to concerns that the patient may be too debilitated to benefit from such a program or could even be harmed by it.

Patel, an oncologist who mainly sees patients with advanced stages of cancer, said the new findings would change her practice. That includes being more likely to refer eligible patients for physical therapy and to consider physical therapy as “a way to also provide symptom relief from pain without having to rely on pain medications alone,” including opioids, she said.

Remotely Delivered Care

For the trial, dubbed COPE, Cheville and her colleagues enrolled 516 adults (257 women and 259 men) with advanced-stage cancer and moderate functional impairment. People with moderate impairment can independently get around their home and, to a more limited extent, their communities, and manage activities of daily living such as grocery shopping, but they do so with some difficulty. The average age of study participants was approximately 66 years.

To assess the value of a telerehabilitation program that addressed function and pain, patients eligible for the trial—all of whom had been seen at one of the three Mayo Clinic medical centers (in Minnesota, Arizona, or Florida)—were randomly assigned to one of three groups.

Those in the control group (group 1) continued their usual care and activities. Those in group 2 received an individualized telerehabilitation program delivered by a physical therapist with extensive experience in cancer rehabilitation—referred to as a fitness care manager. They also received targeted rehabilitation to manage pain. Those in group 3 received the individualized telerehabilitation program plus medication-based pain management coordinated by a nurse.

At the time of enrollment, fitness care managers phoned group 2 and group 3 participants to discuss symptoms, identify goals, and discuss any physical impairments and barriers to staying active.

With supervision from a rehabilitation physician (Cheville), fitness care managers instructed patients in a simple set of strength training exercises using resistance bands and a walking program that used a pedometer to track steps. The fitness care managers monitored patients’ progress and coordinated with their primary clinical team.

When needed, patients were referred to a local physical therapist to fine-tune their exercise

programs or address physical impairments in consultation with the fitness care manager.

All participants were monitored for function, pain, and quality of life using short questionnaires that they could opt to answer either online or by telephone.

Modest but Meaningful Improvements With Telerehabilitation

Over the 6-month study period, group 2 participants (the telerehabilitation-only group) reported improvements in function, pain, and quality of life compared with patients in the control group.

The researchers expected that group 3 participants, who received telerehabilitation plus medication-based pain management, would see the greatest improvement in pain. But to their surprise, pain control was similar in groups 2 and 3. Also unexpectedly, telerehabilitation alone was most effective in improving function, and quality of life was not markedly better in group 3 than in the control group.

Telerehabilitation was associated with fewer and shorter hospitalizations, and hospitalized telerehabilitation participants were more likely than those in the control group to be discharged from the hospital to home, rather than to a long-term care facility.

Although the changes in function seen with telerehabilitation alone were modest, they were clinically meaningful, Cheville said.

“Even a [small] change can correlate with the ability to get in and out of a chair independently, go up stairs on your own, or get in and out of a car without help. These changes can make the difference between going home from the hospital rather than going to a nursing home,” she said.

Cheville’s team has some ideas as to why patients in group 2 fared better overall than those in group 3 and plans to explore this question in future studies.

Cancer Therapies Alone Aren’t Enough

“One of the key lessons we learned from our study is the importance of helping patients to understand that cancer care isn’t only about treating the cancer. We need to strategically care for the person as well” to assure their well-being, Cheville said. “Convincing patients that they need to take ownership for maintaining muscle strength and protecting their ability to function is very important.”

“We shouldn’t underestimate the power of implementing telephone-based supportive care services, as was done in this study,” Mustian emphasized. “We have not really adopted those models in cancer care much.”

One question that remains is whether health insurance would cover such services and, if not, whether the telerehabilitation approach is cost effective for health care providers, Patel noted in her commentary. Indeed, Cheville said, she and her colleagues are preparing to submit a paper

that analyzes the program's cost-effectiveness.

Even without that information, the improvements in outcomes shown by the study "may be enough [for cancer care providers] to consider integration of collaborative telerehabilitation into routine cancer care," Patel wrote.

Another key limitation of the study is that most of the participants were non-Hispanic whites who had in-home caregivers. So it's unclear whether the telerehabilitation approach can be generalized to other patient populations.

"Our next steps will involve taking what we've learned and engaging representatives from other communities to find out how we can make [this approach] better and tailor it so that it's embraced by other patient populations," Cheville said. "We see that as a critical need."

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