

Telemedicine expands reach of care for Parkinson's patients

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A unique and innovative telemedicine project is providing distant nursing home patients with Parkinson's disease access to neurologists at the University of Rochester Medical Center. A pilot study of the project - the results of which were released this month at the International Congress of Parkinson's Disease and Movement Disorders in Paris - demonstrates that the system can improve the quality of life and motor function of patients.

"This study shows that we can effectively deliver care for Parkinson's patients via [telemedicine](#)," said University of Rochester neurologist Ray Dorsey, M.D. "This system enables us to reach and provide a high level of care to patients who might otherwise not have access to a specialist."

Dorsey and his colleague Kevin Biglan, M.D. oversee the project and divide patient responsibilities between them. The effort is a joint initiative between University of Rochester Medical Center and the Presbyterian Home for Central New York in New Harford, a 250 bed nursing home near Utica and about 150 miles from Rochester.

When the nursing home opened in 2001, it was the first in the nation to offer specialized care to people with Parkinson's and other movement disorders in a nursing home setting. For years, the Parkinson's patients at the home would typically make 10 trips a year to Syracuse, Albany or Rochester to see a movement disorders specialist. Tony Joseph, the administrator of the Presbyterian Home says that these trips were exhausting for the home's elderly patients. "I knew there had to be a

better way," said Joseph.

Joseph knew of Dorsey and Biglan through their work with the Parkinson Support Group of Upstate New York and approached them to seek their help in devising a solution. They struck an approach that utilized telemedicine to conduct patient visits that otherwise would have been burdensome or not possible for patients.

The expertise for such a project already existed in the Medical Center. The University of Rochester has one of the largest Movement and Inherited Neurological Disorders programs in the nation with more than 10 physicians and has been designated a Center of Excellence by the National Parkinson Foundation and the Huntington's Disease Society of America.

The Medical Center has also been an innovator in the field of telemedicine. The system employed for the project was built on a technological backbone developed at the University of Rochester and is used to conduct remote pediatric and dental evaluations on patients in schools, day care centers, and other locations. The system is essentially low tech, low cost solution and consists of a laptop, software, and a web camera that allows the physicians to interact with and visually assess patients.

While such remote evaluations have their limitations, Parkinson's disease was an ideal candidate for such a system. "Parkinson's is a very visual disease," said Biglan. "You don't necessarily have to physically touch patients to understand how they are doing."

Patients are brought to a room in the nursing home with a flat screen television so they can see the physicians. All the doctors in Rochester require on their end is a computer equipped with a web camera. Telemedicine "visits" are just like regular office visits and consist of an

update on the patient's health, a review of medications, any potential complications, and a standardized motor skills evaluation (balance, gait, coordination, and stiffness) conducted by the physician with the assistance of a trained nurse at the Presbyterian Home. At the end of the visit, recommendations are discussed with the patient and faxed to the nursing home.

An initial pilot project, funded by the Presbyterian Home, followed 14 patients for 6 months and then evaluated the outcomes of those who received telemedicine care with those who did not. The study found that telemedicine patients had significant improvements in quality of life and motor function. In addition, those receiving telemedicine had trends toward higher satisfaction with their care.

The project with the Presbyterian Home was so successful that Joseph decided to continue funding the effort for another year with the help of a grant from New York State. Dorsey and Biglan also hope to expand the project to other nursing homes in upstate New York. One of the key obstacles to the wider adaption of telemedicine for Parkinson's and other diseases is payment for services. While studies of other projects have shown that telemedicine can reduce the overall cost of care, current reimbursement is limited to specific regions (for example, it excludes New Hartford as not sufficiently rural) and generally does not cover the cost of care provided.

If broadly adopted, telemedicine has the potential to reshape the way individuals with Parkinson's disease think about their care and, ultimately, where to live. Currently, people often have to live near medical centers to receive the specialty care they need. Telemedicine has the potential to change that. In addition, telemedicine can facilitate the participation of individuals in clinical trials by reducing the travel and time burden on participants and their caregivers.

"The number of people with Parkinson's will double over the next 25 years," said Biglan. "This should be a wake up call to the medical community and government to invest in innovative ways to bring care to this population. Telemedicine represents a tremendous opportunity to expand access to specialized care and improve the quality of life of patients regardless of where they live."

Source: University of Rochester Medical Center ([news](#) : [web](#))

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