

'Virtual' house calls comparable to in-person care for people with Parkinson's disease, study finds

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A small study of 20 people with Parkinson's disease suggests that "virtual house calls" using Web-based video conferencing provide clinical benefits comparable to in-person physician office visits, while saving patients and their caregivers time and travel.

"It appears we can use the same technology Grandma uses to chat with her grandson to provide her with valuable medical care in her home," says study leader Ray Dorsey, M.D., M.B.A., an associate professor of neurology at the Johns Hopkins University School of Medicine. "If this proof-of-concept study is affirmed, the findings open the door to a new era where anyone anywhere can receive the care she needs."

A report on the study, conducted by researchers at Johns Hopkins and the University of Rochester Medical Center is being published online in *JAMA Neurology*.

Dorsey cautions that wider use of virtual house calls is not without hurdles. For example, under current Medicare rules, physicians are not reimbursed for providing remote care directly into the home. There are also licensing issues.

Doctors may not treat patients in states in which they are not licensed, so that means a patient from, say, Delaware, could come to Johns Hopkins in Baltimore for treatment, but a Johns Hopkins physician could not

conduct a virtual house call with that same patient without a Delaware medical license.

"Reimbursement and licensure issues are trailing innovation and, if anything, act as a hindrance," Dorsey says. "There's really a disconnect."

For the study, Dorsey and his colleagues at Johns Hopkins and the University of Rochester Medical Center enrolled 20 of their Parkinson's disease (PD) patients who had home Internet access. Nine were randomly selected to receive three virtual house calls, while 11 were scheduled for three in-person visits to a physician's office over the course of seven months.

Roughly the same number of patients made their scheduled visits (one in-person patient missed a visit because of a car accident on the way to the appointment), and quality-of-life changes did not differ between the two groups. The researchers also found that the care was no better—but no worse—for those seen "virtually" or in person.

They also found that, compared to in-person visits, each telemedicine visit saved participants and their caregivers on average 100 miles of travel and three hours of time.

PD is a disorder of the brain that leads to shaking (tremors), slowness of movement, stiffness and difficulty walking. PD usually develops after age 50 and is one of the most common nervous system disorders of the elderly, affecting an estimated 500,000 Americans. That number is expected to nearly double over the next generation, Dorsey notes.

Research has shown that 42 percent of Medicare beneficiaries with PD did not receive care from a neurologist in the first four years after diagnosis, and that patients who don't see a neurologist are 20 percent more likely to die in the first six years after diagnosis. In addition,

Dorsey notes, such patients are 14 percent more likely to fracture a hip and 21 percent more likely to be placed in a nursing home in the first year after diagnosis. And he says money saved by preventing the need for hospitalization and skilled nursing care would more than make up for the small reimbursement costs to neurologists who conduct virtual house calls.

"Physician visits are a rounding error to Medicare in the economic scheme of things," says Dorsey, director of the Johns Hopkins [Parkinson's Disease](#) and Movement Disorders Center.

Dorsey says that virtual [house calls](#) may be especially important for people who live far from large medical centers where specialists are more likely to practice.

Over the Web, neurologists can perform nearly all of the tests that would be done in a regular office visit for a Parkinson's patient, he says. The physician can watch the patient walk, observe tremors, check the rate at which the patient blinks and assess facial expressions—all measures of the slowing of movement. The principal test that cannot be done is one that assesses stiffness in the arms.

Only larger studies can affirm the comparability and effectiveness of telemedicine, Dorsey says, along with the value to people with other diseases.

Provided by Johns Hopkins University School of Medicine

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