

# Multiple Sclerosis Clinical Video Telehealth (MS-CVT) for Neurology Follow-up Care and Tele-rehabilitation into the Home

A. Kunce, J. Fritz, M. Wallin, J. Haselkorn, et. al.

Veterans Rural Health Resource Center-Togus; Office of Rural Health, U.S. Department of Veterans Affairs

## Background

It is estimated that the Veterans Health Administration (VHA) cares for more than 28,000 Veterans who have been diagnosed with Multiple Sclerosis (MS)<sup>1</sup>. Nearly 45 percent of these patients live in rural or highly rural areas. This geographic distance can be a significant barrier to individuals who need to access health care, especially for subspecialty care in the U.S. Department of Veterans Affairs (VA). Almost half of Veterans who live in rural areas, hours from their nearest VA Medical Center, or need to contend with geographic barriers. Veterans with MS facing these obstacles often require a companion, such as a family member, friend or a paid caregiver for help. The cumbersome process of getting to medical appointments is a disincentive to obtaining health services that minimize secondary impairments and promote functional independence. Tele-rehabilitation is an expanding health care delivery model that shows improvements in functional status and high patient acceptance<sup>2</sup>. Physical activity positively impacts mobility, mood, fatigue, sleep, cognition and other secondary impairments that limit health and function in MS. Clinical Video Telehealth (CVT) is one form of distance technology that eliminates geographic barriers and connects Veterans to subspecialty providers they might not be able to access otherwise. The VA Office of Rural Health initiated a pilot study on the use of distance technology to improve access to care in the North Florida/South Georgia Veterans Health System catchment area. As a result of this pilot study, a demonstration project combining CVT for MS follow-up care and home tele-rehabilitation was initiated in October 2015.

This particular Rural Promising Practice program brings specialty-focused physical therapy into the home of Veterans with MS to promote mobility and physical activity as well as functional independence.

## References

1. Culpepper, WJ. Unpublished
2. Joseph Finkelstein, MD, et al. Home-based physical tele-rehabilitation in patients with multiple sclerosis. JRRD. Vol. 45,. Nov. 9, 2008

## Objective

The purpose of this project is to expand specialty care via CVT from neurology-only care into physical medicine and rehabilitation for the care of Veterans with MS experiencing challenges gaining access to physical therapy. The objective is to develop the cross-disciplinary relationships necessary to evaluate and implement Rural Promising Practices in neurology, physical medicine and rehabilitative care to rural Veterans in their homes. The extension and implementation of CVT for rehabilitative care has the potential to improve quality of life and maintain functional independence in Veterans with MS. Secondly, maintenance of current function or increased functional capacity through rehabilitation has the potential to decrease caregiver burden and overall health care costs during the course of the disease.

## Equipment

Multiple types of communication devices, including Android-based tablets, iPads and motion sensor monitors approved by the VA Office of Telehealth were used and evaluated for connectivity and usability.

There is a minimum requirement of Wi-Fi and/or 4G connectivity capability for all equipment. All communication was Health Insurance Portability and Accountability Act (HIPAA)-compliant and took place through the VA's secure network.

## Methodology

Sixty veterans (n=10/site) with progressive MS and mild to moderate disability are currently being enrolled in a dual CVT neurology/CVT rehabilitation program. Participants undergo a face-to-face medical assessment by an MS specialist, functional assessment by a licensed physical therapist, education on the plan of care, and training to use the device. Veterans and caregivers are assessed at the beginning of the program using standardized measures as well as self-reported quality of life and satisfaction with CVT. In addition, a satisfaction survey is given to assess both Veteran and caregiver ease of use. Enrollees receive a minimum of six weeks of twice weekly individualized physical therapy using CVT.

## Outcomes

Participants reported their average travel time and round trip (RT) mileage to access health care and specialty services at their closet VA Medical Centers during the initial in-person visit. These participants reported high satisfaction due to accessing care from home, with one participate saying, "It really changed my life. I could do the exercises because I wasn't already tired from driving to the VA." Clinical Video Telehealth decreased no-show rates and increased motivation to participate in therapy. Providers also reported high levels of satisfaction using CVT at home and usability of rehabilitation software.

### MS-CVT Outcome Results

<b>Total Number Veterans</b>	63
<b>Total Number Miles Saved</b>	30,004
<b>Reimbursable Travel Saved</b>	\$12,693.00

- Satisfaction with CVT was >95 percent for both patient and provider
- Saved an average of 605 hours in travel time round trip per session
- 231 CVT visits have been conducted through mid-June 2017

## Discussion

The goal of this project is to improve the continuum of care as well as enhance access and health care delivery to Veterans with MS living in rural communities or experiencing access limitations. The project allows for coordination and collaboration between the neurology and physical medicine specialty services to maintain the continuum of care. The emerging information from this project has implications for individuals living in rural areas with neurological conditions who have difficulty accessing health care. Access is increased in areas where fee-based care is unavailable or face-to-face Veteran care would require significant roundtrip travel for one 45 minute therapy appointment. The project decreased missed appointments and no-show rates in the multi-disciplinary clinic.

## Innovation

Utilization of the tools and models within this project aim to improve the continuum of care and enhance access and delivery to Veterans with MS living in rural communities or experiencing access limitations. Results from this demonstration project can be used to address other neurologic, neurodegenerative diseases that would benefit from an integration of neurologic and rehabilitative care.

## Participating Sites

Six collaborative sites that previously participated in the MS-CVT-Neurology follow-up were recruited for the tele-rehabilitation project: Baltimore, Maryland; Buffalo, New York; Gainesville and Lake City, Florida; Seattle, Washington; and Washington, D.C. The collaborative group includes directors of the Veterans Rural Health Resource Center in Togus, Maine, and the VA Multiple Sclerosis Centers of Excellence - East and West. Additional sites in Charleston, South Carolina; East Orange, New Jersey; Honolulu, Hawaii, Guam, American Samoa and Long Beach, California were added in fiscal year 2017. Adding Cincinnati, Ohio, New Orleans, LA, St. Louis and Columbia, MO in 2018.



## Contact Information

[Amy.Kunce@va.gov](mailto:Amy.Kunce@va.gov)

[Jina.Fritz@va.gov](mailto:Jina.Fritz@va.gov)

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VA Office of Rural Health.  
Visit [www.ruralhealth.va.gov](http://www.ruralhealth.va.gov) to learn more