

Project Team

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The Need

The veteran population continues to age rapidly, with consequent increases in care needs. Shorter lengths of stay in the hospital have resulted in a steady rise in the prevalence of secondary complications, difficulties using prescribed AT and wheelchairs, a greater likelihood of subsequent hospitalizations, and a considerable increase in difficulties with ADLs. New ways are needed to manage this growing population's care without compromising VHA's standard of high quality of care. The use of Telerehabilitation (TR) to provide home assessments and follow-up training in prescribed equipment, compared to sending a therapist to the patient's home, could save considerable time and expense, particularly when patients live in remote locations, as is the case for many veterans.

The Research Questions

Primary Research Question: Over the 9-month study period, does the TR group have greater improvement in function (physical function on the telephone version of the Functional Independence Measure [FONEFIM]) than a Usual Care group?

Secondary Research Question 1. Over the 9-month study period, does the TR group have greater improvement in disability (disability on the Late Life Function and Disability Instrument) than a Usual Care group?

Secondary Research Question 2. Over the 9-month study period, does the TR group have greater improvement in falls-related self-efficacy (the Falls Self Efficacy Scale) than a Usual Care group?

Secondary Research Question 3. Over the 9-month study period, does the TR group have greater improvements in patient satisfaction (the Stroke Specific Patient Satisfaction with Care Scale) than a Usual Care group?

Secondary Research Question 4. Over the 9-month study period, do patients discharged from VAMCs without an RBU have greater response to the TR intervention than those from VAMCs with an RBU?

Systems-Research Tools

This is a Phase II, 2-arm, 4-site Randomized Controlled Trial (RCT). Subjects will be recruited from 4 VA facilities that differ in the presence of a Rehabilitation Bed Unit (RBU), but are otherwise fairly similar (Tampa, Minneapolis, Durham, and Atlanta VAMCs). The Richard Roudebush VAMC will be the coordinating center. A total of 120 veterans with recent onset of ischemic or hemorrhagic stroke who are discharged to the community will be randomly assigned to one of two groups: (a) TR; and (b) Usual Care. We will use a randomized block design, blocking based on presence or absence of an RBU. Randomization will be by centrally-sealed allocation upon discharge to the community. Dependent variables will be measured at baseline, 3-, 6-, and 9-months and analyzed with a repeated measures mixed model.

Project Overview

Stroke patients clearly benefit from intensive, coordinated, inpatient care. At the same time, there is considerable interest in ways to reduce hospital lengths of stay. Early discharge rehabilitation programs require coordinated, well-organized home-based rehabilitation, and lack of sufficient information about the home setting impedes successful rehabilitation. Unfortunately, resources for in-home rehabilitation are limited. The purpose of the proposed study is to examine a Tele-rehabilitation (TR) intervention that uses tele-health technology to improve outcomes of stroke patients after discharge to home. The primary aim is to determine the effect of TR on physical function, and secondarily to determine the effect on disability, falls-related self-efficacy, and patient satisfaction.

The Impact on Veterans

Stroke is one of the most disabling and costly impairments of adulthood in the United States. Over 700,000 Americans suffer a stroke each year and approximately 4,800,000 are living in the community with residual disability⁴⁰. In the VA, health care costs for the 11,000 veterans hospitalized with a new stroke are estimated to be \$111 million for acute inpatient care, \$75 million for post-acute inpatient care, and \$88 million for follow-up care in the first 6-months post-stroke. Stroke is one of the six Special Emphasis Populations in the VA (see Public Law 104-262). The VHA notes the specific needs of stroke veterans in the VA Strategic Plan, Goal 3 of which is to enhance, preserve, and restore patient function for Special Emphasis Populations, and Strategy 10 being to coordinate acute, chronic, and rehabilitative care to improve patient functioning. Thus, the development of new techniques for improving physical function is of high importance in the VA. Our findings are likely to result in improved methods for functional assessment and more effective and efficient rehabilitation strategies. TR has potential applicability to other rehabilitation patient populations (e.g., poly-trauma, spinal cord injury), and it has potential utility for community-dwelling older veterans with mobility disability. Results of this study may support the creation of national partnerships to implement more efficient and effective approaches to coordination of care when transitioning from hospital to home.

Department of Veterans Affairs

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Indiana University-Purdue University at Indianapolis
Center for Health Services & Outcomes Research
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National Stroke QuERI Coordinating Center
<http://www1.va.gov/stroke-QuERI/>

Assertive Community Treatment (ACT) Center of Indiana
www.psych.iupui.edu/ACTCenter

Center for Assessment Mechanisms and Management of Pain (CAMMP)



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