

Promoting Self-Management in Stroke Survivors Using Health Information Technology

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Summary: Stroke survivors have a greater prevalence of the vascular risk factors of hypertension (HTN), diabetes mellitus, and elevated cholesterol than does the general population. They are thus at high risk of post-stroke hospital readmissions for recurrent stroke, heart attacks, and heart failure. Two-thirds of stroke survivors have residual disabilities and are frequently dependent on caregivers for transportation to and from clinic visits. Interventions to improve medication compliance and reduce caregiver burden may reduce hospital readmissions, improve outcomes, and ultimately decrease costs of medical care for stroke survivors.

This project demonstrates the use of an online health management tool for self-management tasks and medication therapy management (MTM) for HTN control in stroke survivors. The study design is a two-group parallel randomized controlled trial with the intervention group assigned to the online health management tool and the control group assigned to usual care. Stroke survivors in the intervention group self-measure blood pressure (BP) and upload the information into the American Heart Association Heart360 online health management tool. BP measurements are reviewed weekly by a provider and MTM advice is provided online. The control group receives the American Stroke Association booklet on the relationship between high BP and stroke as well as a home BP monitor.

Specific Aims:

- Examine system usability by stroke survivors and/or their caregivers for self-management tasks including daily BP monitoring, communication with providers, and medication management. **(Ongoing)**
- Characterize rates of HTN control into guideline recommended ranges at 3 months after enrollment in the online health management tool group versus the usual care group. **(Upcoming)**
- Examine rates of adherence to antihypertensive medications at 3 months after enrollment in the intervention versus control groups. **(Upcoming)**

2012 Activities: Dr. Lakshminarayan and her team received institutional review board approval. Additionally, the research team began setting up multiple systems for the intervention and data collection elements of the study. Dr. Lakshminarayan has nearly completed negotiations with Verizon to provide hardware for the study. The team has also been working with the Clinical and Translational Science Institute at the University of Minnesota to determine which secure database system is best for data collection. The project team is currently holding meetings every other week and is developing the BP management protocols. A patient recruitment structure has been identified and the next phase of the project will be

recruiting patients to participate. Focus groups to gather information on ease of participating have already been conducted, but it remains to be seen if recruitment will pose a challenge.

As last self-reported in the AHRQ Research Reporting System, activities are completely on track and project budget spending is on target.

Preliminary Impact and Findings: The project has no findings to date.

Target Population: Adults, Chronic Care*, Hypertension, Stroke

Strategic Goal: Develop and disseminate health IT evidence and evidence-based tools to support patient-centered care, the coordination of care across transitions in care settings, and the use of electronic exchange of health information to improve quality of care.

Business Goal: Implementation and Use

**This target population is one of AHRQ's priority populations.*