

Stroke

Stroke is the third leading cause of death in the United States, accounting for more than 1 of every 15 deaths in the United States. More than 700,000 persons experience a new or recurrent stroke each year, resulting in an approximated cost of \$58.6 billion. On average, every 45 seconds an American has a stroke, every 3 minutes someone dies of stroke in this country, and 15%-30% of stroke survivors have serious, long-term disability.

The Veterans Health Administration (VHA) estimates that 15,000 veterans are hospitalized for stroke each year with a new stroke costing an estimated \$111 million for acute inpatient care, \$75 million for post-acute inpatient care, and \$88 million for follow-up care over 6 months post-stroke.

The mission of the Stroke Quality Enhancement Research Initiative (Stroke QUERI) is to employ the QUERI process (see back page) to reduce stroke risk and maximize the functional status and quality of life of veterans with stroke by systematically implementing clinical research findings and evidence-based guidelines into routine clinical practice.

The Stroke QUERI was established in March 2004 with leadership from Dr. Pamela Duncan, PhD, PT (Research Coordinator) and Dr. Linda Williams, MD (Clinical Coordinator). The Stroke QUERI has four major goals :

(1) Improve overall compliance with the Department of Veteran Affairs and the Department of Defense (VA/DoD) clinical practice guidelines for the

management of stroke rehabilitation; (2) Ensure that a plan for rehabilitation is considered for all stroke patients; (3) Reduce the risk of stroke recurrence by assuring appropriate anticoagulation of stroke patients with atrial fibrillation; and (4) Reduce the physical, emotional, and social burden of depression after stroke.

Stroke QUERI and Implementation 2004

In April 2003, the VA/DoD released new guidelines for the management of post-acute stroke and stroke rehabilitation. The guidelines were developed to assist facilities in implementing processes of care that are evidence-based and designed to achieve maximum functionality and independence, and improve patients' and their families' quality of life. These guidelines were developed using evidence-based methodology that integrated the best evidence with clinical expertise. There were 13 recommendations with the highest evidence. At this time, the VHA National Clinical Practice Guidelines Council (NCPGC) has given the guidelines the highest level of endorsement for implementation system-wide.

The VHA Employee Education System (EES) rolled out a system-wide

education program directed at guideline implementation in February 2004.

The most important goal of the VA/DoD Clinical Practice Guideline for the Management of Stroke Rehabilitation is to provide a scientific evidence-base for practice interventions and evaluations. Implementation of the guidelines should provide facilities a structured approach to post-stroke care, and assure that veterans who suffer a stroke will have access to comparable care, regardless of geographic location.

The guidelines will serve as a blueprint that clinicians can use to determine best interventions and timing of care for their patients, better stratify stroke patients, reduce readmission, and optimize healthcare utilization. If followed, the guideline is expected to improve multiple measurable patient outcome domains. The Stroke QUERI will evaluate education programs designed to enhance implementation.

A long-range goal of the Stroke QUERI is to assess whether or not improvement in access to rehabilitation improves stroke patients' outcomes.

The Stroke QUERI Executive Committee

Each QUERI Executive Committee is co-chaired by a research expert and a clinician. The Research Coordinator for Stroke QUERI is **Pamela W. Duncan, PhD**, and the Clinical Coordinator is **Linda Williams, MD**. Stroke QUERI's Executive Committee includes additional experts in the field of stroke: John Booss, MD; Lawrence M. Brass, MD; Bonny J. Collins, MPH; Stephan D. Fihn, MD, MPH, FACP; Ellen Magnis, MBA; Clifford Marshall, MS; George A. Mensah, MD, FACC, FACP, FAHA, FESC; Patricia Ryan, MS, RN; Barbara J. Sigford, MD, PhD; and Peter Woodbridge, MD, MBA

Additional Stroke QUERI Findings and New Projects

Here are a few of the exciting new areas of Stroke QUERI research:

(1) The discrepancy between current and recommended practice results for anticoagulation of patients with atrial fibrillation may be attributable to a number of factors, among them the demanding nature of warfarin dosing and monitoring. Due to the complexities of warfarin dosing and monitoring, barriers to appropriate anticoagulation are multifaceted and may include organizational, provider, and patient factors. At this time, we do not have a clear picture of the patterns of post-stroke anticoagulation use in VA or the quality of anticoagulation use (as measured by time spent in target range for INR). The Stroke QUERI will measure and diagnose quality and performance gaps in anticoagulation of veterans with atrial fibrillation and stroke. Specifically, they will describe existing practice patterns in VA and variations from best practices for anticoagulation.

(2) Several community-based studies have demonstrated that Post-Stroke Depression (PSD) is under-diagnosed and under-treated, but the patterns of PSD diagnosis

and treatment in the VA are largely unknown. The Stroke QUERI will facilitate the measurement and diagnosis of quality and performance gaps for detecting and managing PSD. Led by Dr. Linda Williams, a group of Stroke QUERI investigators from Veterans Integrated Service Networks (VISN) 8 and 11 recently received funding for an Implementation Planning Grant-“Implementing Evidence in the Detection and Treatment of Post-Stroke Depression.” The eventual goal of this project is to extend the implementation of the existing primary care depression performance measure to improve the screening, diagnosis, and appropriate treatment of depression in veterans with recent stroke.

(3) A long-term goal of the Stroke QUERI will be to expand the scope of the research portfolio to include other secondary prevention measures and early phases of stroke care. The Stroke QUERI encourages investigators working in the field of stroke to contact either the Research or Clinical Coordinators of the new Stroke QUERI Coordinating Centers.

Quality Enhancement Research Initiative

QUERI currently focuses on nine conditions that are prevalent and high-risk among veteran patients: Chronic Heart Failure, Colorectal Cancer, Diabetes, HIV/AIDS, Ischemic Heart Disease, Mental Health, Spinal Cord Injury, Stroke, and Substance Use Disorders.

The QUERI Process

The QUERI process includes six steps:

- 1) identify high-risk/high volume diseases or problems;
- 2) identify best practices;
- 3) define existing practice patterns and outcomes across VA and current variation from best practices;
- 4) identify and implement interventions to promote best practices;
- 5) document that best practices improve outcomes; and
- 6) document that outcomes are associated with improved health-related quality of life.

Contact for general QUERI Information

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VA's Research and Development QUERI website: www.hsr.d.research.va.gov/queri/

Stroke QUERI direct web link: www.va.gov/stroke-queri