



Quality Enhancement Research Initiative

Stroke  
Indianapolis, IN

QUERI Fact Sheet

December 2008

## QUERI currently focuses on nine conditions that are prevalent and high-risk among veterans: Chronic Heart Failure, Diabetes, HIV/Hepatitis, Ischemic Heart Disease, Mental Health, Polytrauma and Blast-Related Injuries, Spinal Cord Injury, Stroke, and Substance Use Disorders.

Stroke is the third leading cause of death in the United States, accounting for more than 1 of every 15 deaths. More than 700,000 persons experience a new or recurrent stroke each year, resulting in an approximate cost of \$58.6 billion. On average, every 45 seconds an American has a stroke, every 3 minutes someone dies of stroke, 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 new strokes 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.

### Stroke Quality Enhancement Research Initiative

The mission of the VA HSR&D Stroke Quality Enhancement Research Initiative (Stroke-QUERI) is to reduce the risk of stroke and to foster system, provider and patient processes that result in the best possible outcomes for veterans with stroke. This mission is accomplished by focusing on three core clinical goals: 1) Promote recommended outpatient risk factor modification practices to reduce the risk of stroke, 2) Improve inpatient stroke care quality to reduce stroke morbidity and mortality, and 3) Ensure that veterans with stroke receive appropriate and timely interventions to promote stroke recovery.

### Stroke-QUERI Projects and Findings

The Stroke-QUERI has successfully partnered with VA's Office of Quality and Performance (OQP) and VA's Patient Care Services (PCS) to promote ongoing development and assessment of stroke performance measures. The earliest work took place in rehabilitation, with the development of the Functional Independence Measurement Performance Indicator for all hospitalized veterans with stroke, traumatic brain injury, or amputation. More recently, the Stroke-QUERI has worked with OQP, PCS, ONS, and others to measure inpatient stroke care quality. This OQP Stroke Special Project is providing data about key evidence-practice gaps in risk factor management and inpatient stroke care. We continue to work with the above offices and with clinical leaders in the field to feedback stroke performance data to the field and to strategically plan our activities in response to these data. Our future plans are to repeat measurement with OQP in FY10 and to identify

and promote the most appropriate of these indicators for ongoing stroke performance measurement.

### Additional Stroke-QUERI Findings and New Projects

In April, VISN 11 Network Leaders partnered with key leaders in the national Stroke-QUERI to coordinate the initial Stroke Summit, Collaborative Learning Session I. Multidisciplinary provider teams from the Ann Arbor, Battle Creek, Danville, Detroit, Fort Wayne, Indianapolis, Marion, and Saginaw VA Medical Centers participated in this three-day learning workshop in Indianapolis to gain knowledge and skills based on the philosophy of Lean Six Sigma.

This implementation targets the following two JCAHO indicators for the management of our veterans with acute stroke: 1) patients with ischemic or hemorrhagic stroke who undergo screening for dysphagia with a simple valid bedside testing protocol before being given any food, flu-

### The Stroke-QUERI Executive Committee

Each QUERI Executive Committee is led by a research expert and a clinician. The research coordinator for Stroke-QUERI is **Linda Williams, MD**; the clinical coordinator is **Dawn Bravata, MD**, and the co-clinical coordinator is **Linda Hershey, MD**. The membership of the Stroke-QUERI Executive Committee is: **David Matchar, MD** (Chair); Bradley Doebbeling, MD, MSc; Pamela Duncan, PhD; Thomas Kent, MD; Sarah Krein, PhD, RN; Dennis Milne; Brian Mittman, PhD; Eugene Oddone, MD; Diana Ordin, MD; Don and Jan Prether; Robert Ruff, MD; Marita Titler, PhD, RN; and Barbara Vickrey, MD, MPH.

ids, or medication by mouth; 2) ischemic stroke patients with LDL >100 or LDL not measured, or on cholesterol-reducer prior to admission, who are discharged on cholesterol reducing drugs. Additionally, each team is implementing standard acute stroke order sets and will be measuring the sustainability of their interventions on a continuum.

We plan to evaluate process changes and the implementation and sustainability of acute stroke care practices. The Stroke-QUERI Implementation Coordinators are providing biweekly site coaching to assist sites with implementation and sustainability. In addition, we plan to employ mixed methods to understand the depth of implementation and the associated barriers and facilitators.

### **Adapting tools to implement stroke risk management**

We also continue to focus efforts on modification of stroke risk factors for primary and secondary stroke prevention. Work in this area has, over time, coalesced into our strategy to identify veterans at high risk for stroke, either first or recurrent stroke, and to develop IT tools and self-management programs to improve care.

Beginning in FY07, the Stroke-QUERI has directed significant energy and resources toward further defining and prioritizing our work in:

#### **Risk factor management**

We have used RRP's to define current practices in risk factor education post-stroke and to understand how information about risk factors is communicated.

#### **In-hospital stroke management**

One of our long-term goals has been to develop a stroke scorecard so that the quality of VA stroke care could be accurately assessed at a facility level over time. As stated earlier, we began this effort in FY06 with OQP and conducted baseline assessment of national inpatient stroke care in FY07. This work will continue in FY08-FY10.

#### **Rehabilitation and recovery**

Initial Stroke QUERI focus in improving stroke recovery included development and national implementation of a performance measure assessing whether rehabilitation was considered for all veterans admitted with stroke (the FIM performance measure). Due to continued high success in achieving this measure nationally, the FIM measure was transitioned to a supporting indicator in FY07 and continues to be monitored by OQP/PM&R. We also worked to develop telehealth dialogues related to rehabilitation and post-stroke care. This led to our ongoing project evaluating the use of existing IT tools to promote access and quality of rehabilitation post-stroke.

Similarly, RRP funding in FY07 led to an ongoing project evaluating the cost and quality of different care delivery systems for providing post-stroke rehabilitation in the VA.

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## **THE QUERI PROCESS**

QUERI utilizes a six-step process to diagnose gaps in performance and identify and implement interventions to address them:

- 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 information for Stroke-QUERI:**

Laurie Plue, MA  
Acting Administrative Coordinator  
Tel: 317-988-2258  
E-mail: [lplue@iupui.edu](mailto:lplue@iupui.edu)

### **Contact for general QUERI information:**

Linda McIvor, MHS, MS  
QUERI Program Manager  
Health Services Research  
and Development Service  
Tel: (202) 461-1516  
E-mail: [linda.mcivor@va.gov](mailto:linda.mcivor@va.gov)

**For more information about the QUERI program in general, and to link to all of the individual QUERI Centers, please go to [www.queri.research.va.gov](http://www.queri.research.va.gov)**