

Effective management of acute stroke is critical for better outcomes. Joint Commission on Accreditation of Healthcare Organizations (JCAHO) indicators for managing patients with acute stroke cover a variety of interventions, but two specific goals were the subject of a recent collaborative care learning session.

This learning session was unique in that it applied the Lean Six Sigma methodology to the JCAHO indicators for 1) Simple bedside testing protocol for dysphagia (difficulty swallowing) in patients with stroke prior to receiving food, fluids, or oral medications; and 2) ensuring that, when discharged, ischemic stroke patients who should be on cholesterol-lowering medications are receiving appropriate therapies. Stroke-QUERI is using the tool of choice for process transformation – Lean Six Sigma, which involves the following basic concepts:

- *Identify the processes most important to delivering customer value.*
- *Map these processes*
- *Identify the bottlenecks/constraints in the value stream.*
- *Apply variation reduction through the Six Sigma equations.*

VISN 11 Acute Stroke Care Collaborative Using Lean Six Sigma to Redesign System and Practice Changes

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 3-day learning workshop in Indianapolis to gain knowledge and skills based on the philosophy of Lean Six Sigma.

Heather Woodward-Hagg, MS, a Systems Engineer, facilitated the teams with Lean methodology as they interactively tailored the implementation of acute stroke care interventions for each site with the assistance of implementation coordinators Teresa Damush, PhD, Ginger Daggett, MSN, RN, and Laurie Plue, MA.

This implementation targets the following 2 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, fluids, 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.

VA Stroke Champions Kim Monnell, MD, Bay Pines Medical Center, and Dawn Bravata, MD, Linda Williams, MD, and Becky Chapman, SLP, Roudebush Medical Center, shared knowledge related to stroke, national guidelines, JCAHO acute stroke indicators, and evidence-based practices of dysphagia screening/management. The VA Stroke QUERI Center Implementation Coordinators are providing biweekly site coaching to assist sites with implementation and sustainability.

We plan to evaluate process changes and the implementation and sustainability of acute stroke care practices. In addition, we plan to employ mixed methods to understand the depth of implementation and the associated barriers and facilitators.

How Do I Learn More?

If you are interested in learning more about this project, please contact:

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Web Resources

For more information about the Stroke-QUERI Center, visit their website at:

www1.va.gov/stroke-queri

For more information about the QUERI program in general, visit the national QUERI website at:

www.hsrdr.research.va.gov/queri

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**, and the clinical coordinator is **Dawn Bravata, MD**. This executive committee includes experts in the fields of stroke and implementation science. The membership of the Stroke-QUERI Executive Committee includes: **David Matchar, MD** (Chair); Bradley Doebbeling, MD, MSc; Pamela Duncan, PhD, PT; **Linda Hershey, MD** (Co-Clinical Coordinator); Thomas Kent, MD; Sarah Krein, PhD, RN; Dennis Milne; Brian Mittman, PhD; Lynnette Nilan, RN, EdD; Eugene Oddone, MD; Diana Ordin, MD; Don and Jan Prether; Robert Ruff, MD; Barbara Sigford, PhD, MD; and Marita Titler, PhD, RN, FAAN.