Quality of Care and Outcomes for In-Hospital Ischemic Stroke: Findings From the National Get With The Guidelines-Stroke. Ethan Cumbler, Heidi Wald, Deepak L. Bhatt, Margueritte Cox, Ying Xian, Mathew Reeves, Eric E. Smith, Lee Schwamm and Gregg C. Fonarow. [Epub 11/19/13] STROKE

**Key Points:**

1. In-hospital stroke patients have lower adherence to consensus measures of quality of care compared to strokes with onset in the community.
   - Defect-free care was lower for in-hospital strokes (60.8% versus 82.0%; P<0.0001).

2. Outcomes were worse for in-hospital strokes even after adjustment for patient and hospital characteristics.
   - Odds ratio for in-hospital mortality was higher for in-hospital stroke (adjusted odds ratio 2.72; 95% confidence intervals [2.57–2.88]).

3. Time to treatment for in-hospital stroke patients who received thrombolysis was slower compared to community onset strokes.
   - Median time to IV tPA of 100 minutes for in-hospital strokes compared with 76 minutes for community-onset strokes (P<0.0001).

4. There was no evidence that appropriately selected in-hospital stroke patients experienced higher rates of intracranial hemorrhage after intravenous thrombolysis.

5. The observed gap in adherence to processes of stroke care is an important opportunity for targeted quality improvement representing potential to improve outcomes for in-hospital stroke patients.

**Lead Author:**

Ethan Cumbler, MD, FACP is an Internal Medicine and Pediatric trained Hospitalist at the University of Colorado where he serves as the Hospital Medicine Group’s Director for Scholarship. Dr. Cumbler is a pioneer in the study and practice of inter-professional team-based hospital quality improvement. His work with in-hospital stroke includes the first published study of the impact of acute in-hospital stroke response teams in the Journal of Stroke and Cerebrovascular Disease and on use of LEAN principles and system engineering to reduce in-hospital stroke evaluation times in the Journal of Hospital Medicine. Dr. Cumbler has previously published on quality of care for in-hospital stroke from the experience of the Colorado Stroke Alliance in the journal Stroke and has now published national Get With The Guidelines®-Stroke quality and outcome measures comparing in-hospital strokes to those with onset in the community. He spearheaded a QI intervention at the University of Colorado Hospital reducing treatment time for stroke patients recognized by the American Stroke Association’s Target: Stroke™ initiative and has written on the use of Positive Deviance in...
stroke in the American Journal of Medical Quality. His QI programs for in-hospital stroke serve as national models. He heads the National Stroke Association’s In-hospital Stroke QI initiative and speaks nationally on how to improve systems of hospital care for stroke patients. Dr. Cumbler received the annual National Society of Hospital Medicine Award for Team-Based Quality Improvement for his work over the years improving response to in-hospital stroke. Dr. Cumbler has particular interest in the spread of innovative tools for hospital quality improvement. He heads the Innovations Collaborative and is Chair of the Innovations for the Society of Hospital Medicine. Dr. Cumbler has been a recipient of awards for excellence in leadership, bedside manner, humanism, education, and quality improvement.

**Target: Stroke. Time Lost Is Brain Lost.** Read more about this program.

The Council on Clinical Cardiology and the Stroke Council greatly value the development of young clinical investigators. To further this effort, the councils have a limited number of seed grants for young investigators for meritorious research projects based on the data gathered from Get With The Guidelines®. See **AHA Young Investigator Database Research Seed Grant** – accepting applications until April, 30 2014 for this cycle.

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