Study questions validity of quality measure for stroke care

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One of the key indicators of the quality of care provided by hospitals to acute stroke victims is the percentage of patients who die within a 30-day period. A new study shows that the decisions made by patients and their families to stop care may account for as many as 40 percent of these stroke-related deaths, calling into question whether it is a valid measure of a hospital's skill in providing stroke care.

The study, which appears today in the journal *Neurology*, focuses on a quality measure proposed by the federal Centers for Medicaid and Medicare Services called the 30-day risk adjusted stroke mortality. While the measure is being developed as a part of federal health care reform, it is already commonly employed as an indicator of a hospital's quality of care on websites that evaluate hospital performance.

"It is clear that a significant component of the overall mortality score as currently constructed does not tell the whole story and is predicated on the preference of patients and their families," said University of Rochester Medical Center (URMC) neurologist Adam Kelly, M.D., lead author of the study.

The study evaluated cases of stroke patients admitted to Strong Memorial Hospital in Rochester, New York. The hospital is a part of the University of Rochester Medical Center and is certified by New York State and the Joint Commission as a stroke center. It has also received the highest level of recognition from the American Heart Association for stroke care.

In 2009, 436 people were admitted Strong Memorial with a diagnosis of ischemic stroke. Of that number, 37 (7.8 percent) either died within 30 days while in the hospital or were discharged to hospice care. Of that number, 36 patients died because of a decision by the patient or family – often in accordance with specific instructions contained in an advanced directive – to withhold or withdraw life-sustaining interventions, such as mechanical ventilation or artificial nutrition. This was often done after a trial period of these interventions to allow for potential neurological recovery.

The study authors then asked a panel of neurologists to review each case and indicate whether they believed that the patient would have survived longer than 30 days if every available medical intervention where employed on a continuous basis. The panel determined that 41 percent of the patients could have been kept alive, effectively reducing the hospital's mortality rate by 3.2 percent.

"The decision to withdraw or withhold life-sustaining measures is one of most difficult and heart-wrenching choices that a patient and their family can make," said Kelly. "The role of a physician is to help them understand the medical options before them and, ultimately, respect their desires and do what is in the best interest of the patient. Unfortunately, this method of calculating a hospital's quality of stroke care appears to contradict this patient-centered approach."

Provided by University of Rochester Medical Center