Stroke Outcome Measures

AMERICAN HEART ASSOCIATION POSITION
The American Heart Association/American Stroke Association (AHA/ASA) opposes the stroke 30-day mortality and 30-day readmission measures proposed for adoption by the Centers for Medicare & Medicaid Services (CMS) and recommends that CMS not include the measures in the 2014 Inpatient Prospective Payment System (IPPS) final rule. The measures are inadequately designed and fail to account for stroke severity. As a result, their use will mischaracterize the quality of stroke care being delivered by hospitals and ultimately harm patients requiring acute stroke treatment. AHA/ASA is willing to work with CMS to develop stroke readmission and mortality measures that are adjusted for stroke severity using the NIH Stroke Scale.

BACKGROUND
In the 2014 IPPS proposed rule, CMS proposed to include two stroke outcome measures for use in the FY 2016 Hospital Inpatient Quality Reporting (IQR) program. Both measures were developed by Yale New Haven Health Services Corporation/Center for Outcomes Research and Evaluation (YNHHSC/CORE) as part of a contract with CMS. These measures are:

• Hospital 30-day, All-Cause Risk-Standardized Rate of Mortality Following an Admission for Acute Ischemic Stroke (Stroke Mortality) Measure; and
• Hospital 30-day, All-Cause Risk-Standardized Rate of Readmission Following Acute Ischemic Stroke (Stroke Readmission) Measure.

CMS proposes adopting the two measures even though they have not been endorsed by the National Quality Forum (NQF). Both measures were submitted to NQF for evaluation and endorsement; however, because of significant concerns raised by AHA/ASA, physician groups, members of the NQF Neurology Steering Committee, and others, NQF voted against endorsing the stroke readmission measure and CMS voluntarily withdrew the other (mortality) measure from NQF consideration. According to NQF, CMS withdrew the mortality measure “in order to reevaluate their approach to risk adjustment.” CMS, however, has proposed including the same measures in the Medicare IQR program without significant modification. While we acknowledge CMS’s legal authority to adopt measures without NQF endorsement, we have grave concerns about CMS selectively exercising this authority, especially for measures that have recognized flaws and for which so many stakeholders have voiced significant concern.

THE PROPOSED MEASURES ARE FLAWED
AHA/ASA supports the creation and implementation of measures that lead to quality improvement. However, we also concur with a statement made in a recent Robert Wood Johnson Foundation paper, that flawed quality measurement approaches that do not accurately differentiate, erode stakeholder and public trust and undermine the larger quality improvement enterprise.1 If measurement is going to bring about true quality improvement and gain the support of physicians, hospitals, and patients, it is imperative that measures accurately and fairly characterize the quality of care delivered, and do not inadvertently create incentives to avoid caring for the sickest patients.

The proposed stroke readmission and mortality measures are flawed because they do not account for stroke severity, and therefore, do not appropriately account for risk. Stroke severity, as measured by the National Institutes of Health Stroke Scale (NIHSS), is the single most important determinate of 30-day outcomes for acute ischemic stroke, having more discriminatory power than all other variables combined.2
Because the proposed stroke mortality and readmission measures do not adjust for stroke severity, the measures will not accurately measure the quality of care and could mischaracterize hospital performance, worsen health disparities, undermine stroke systems of care, and ultimately harm patient care.

**Mischaracterize Hospital Performance:** A recent study that used a risk model almost identical to the mortality measure proposed by CMS found that 58 percent of hospitals identified as having “better than” or “worse than” expected risk-standardized mortality would be reclassified to “as expected mortality” if the measure did not include an adjustment for stroke severity.\(^2\) For example, stroke centers, which are the most qualified to treat patients with severe strokes and treat more of these patients than other facilities, may appear to have a low performance rating simply because patients with severe strokes are more likely to die. This could result in significant financial ramifications for these hospitals, and could create incentives for them to avoid treating the sickest patients.

**Worsen Health Disparities:** According to a recent study, patients living in impoverished areas have more severe strokes—in fact, they are twice as likely to have a severe stroke.\(^3\) Safety-net hospitals that care for significantly larger numbers of poor stroke patients are at risk of being disproportionally impacted by a measure that does not account for stroke severity.

**Harm Patient Care by Undermining Stroke Systems of Care:** Stroke systems of care are designed to ensure that stroke patients get the timely, appropriate treatment they require by transporting patients to the hospital or stroke center best equipped to care for the patient. However, the proposed measures may encourage hospitals to select or “cherry pick” patients with mild or moderate strokes, and discourage stroke centers from accepting transfers of patients who have the severest strokes. “Cherry picking” patients may allow hospitals to improve their performance rating, especially since the mortality and readmissions data will be publicly posted on the Hospital Compare website, and may eventually impact payment amounts.

**BETTER MEASURES ARE POSSIBLE**

According to the IPPS proposed rule, CMS proposed adopting the two YNHHSC/CORE measures because no other feasible and practical stroke readmission and mortality measures are available. AHA/ASA is sympathetic with CMS’s desire to adopt outcome measures for stroke, but adopting flawed measures simply because they are the only measures currently available can undermine the credibility of quality measures overall. Better measures that adjust for stroke severity can be constructed in a reasonable time frame and should include adjustments for stroke severity using the NIH Stroke Scale; this could be accomplished in several ways. For example, the addition of ICD-10 codes would allow for the capture of this information via administrative data. Many hospitals already collect and voluntarily report NIH Stroke Scale scores to patient registries; in fact, among hospitals participating in AHA’s Get With The Guidelines-Stroke, NIHSS was voluntarily collected for 74 percent of acute ischemic stroke patients in 2012. A similar proportion of Medicare beneficiaries with acute ischemic stroke have NIH Stroke Scale information documented.\(^4\) Additionally, the Veterans Administration now requires the documentation of stroke severity via the NIH Stroke Scale in all of its facilities.

**OTHERS SHARE OUR CONCERNS**

AHA/ASA is not alone in its concerns with the proposed stroke measures. Other organizations expressed their concerns to NQF when the measures were under consideration, including:

- America’s Health Insurance Plans
- American Academy of Neurology
- American Academy of Physical Medicine and Rehabilitation
- American Association of Neurological Surgeons
- American College of Physicians
- Paul Coverdell National Acute Stroke Program