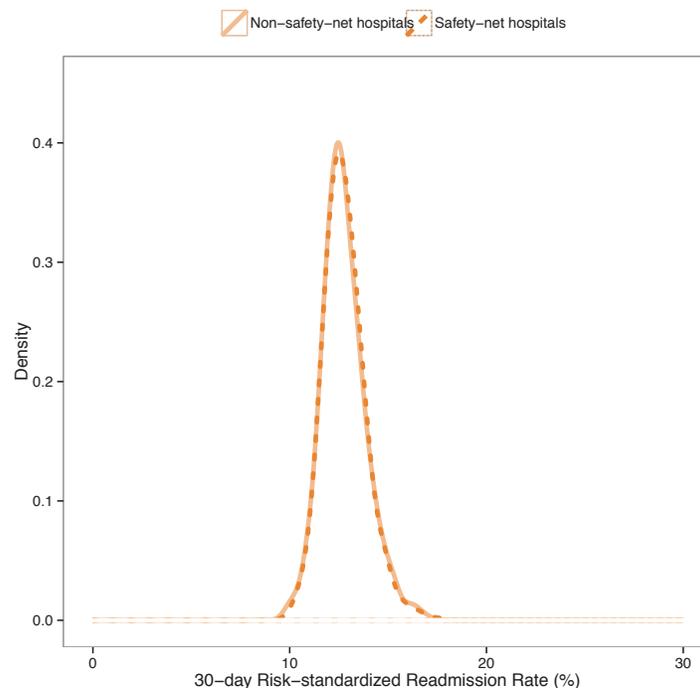


► Performance on the stroke readmission measure by hospital characteristics: **safety-net status, teaching status, and urban or rural location.**

The Centers for Medicare & Medicaid Services (CMS) periodically investigates select hospital characteristics that may impact a hospital's performance on the following readmission measure: hospital-level 30-day risk-standardized readmission rate (RSRR) following acute ischemic stroke [1]. The stroke readmission measure includes Medicare fee-for-service (FFS) beneficiaries aged 65 or older [2]. The stroke readmission measure assesses unplanned readmissions for any reason within 30 days of discharge from a hospital stay for stroke [2]. Patients can be readmitted to the same hospital or to a different hospital [2]. The stroke readmission measure has been publicly reported on [Hospital Compare](#) since 2014 [3].

FIGURE I Distributions of hospital RSRRs (%) for stroke by safety-net status, July 2011-June 2014.



Variation in RSRRs reflects differences in performance among hospitals; lower RSRRs suggest better quality, and higher RSRRs suggest worse quality. To understand the impact of hospital safety-net status, teaching status, and urban or rural location, we examined RSRRs among hospitals with these characteristics with 25 or more qualifying discharges. Therefore, we evaluated the stroke RSRRs for a total of 2,733 hospitals by comparing 552 safety-net hospitals against 2,181 non-safety-net hospitals, 992 teaching hospitals against 1,741 non-teaching hospitals, and 2,495 urban hospitals against 238 rural hospitals for the July 2011 – June 2014 reporting period.

Safety-net hospitals are defined as those committed to caring for populations without stable access to care, specifically public hospitals or private hospitals with a Medicaid caseload greater than one standard deviation above their respective state's mean private hospital Medicaid caseload [4]. Teaching Hospitals provide post-graduate education for physicians completing residency and fellowship [4]. Urban and rural hospitals are defined by hospital self-identification [4].

Prepared for CMS by Yale New Haven Health Services Corporation (YNHHSC) Center for Outcomes Research and Evaluation (CORE) September 2015

HOSPITAL CHARACTERISTICS

To ensure accurate assessment of each hospital, the stroke readmission measure uses a statistical model to adjust for key differences in patient risk factors that are clinically relevant and that have a strong relationship with the readmission outcome [2].

FIGURE 2 Distributions of hospital RSRRs (%) for stroke by teaching status, July 2011-June 2014.

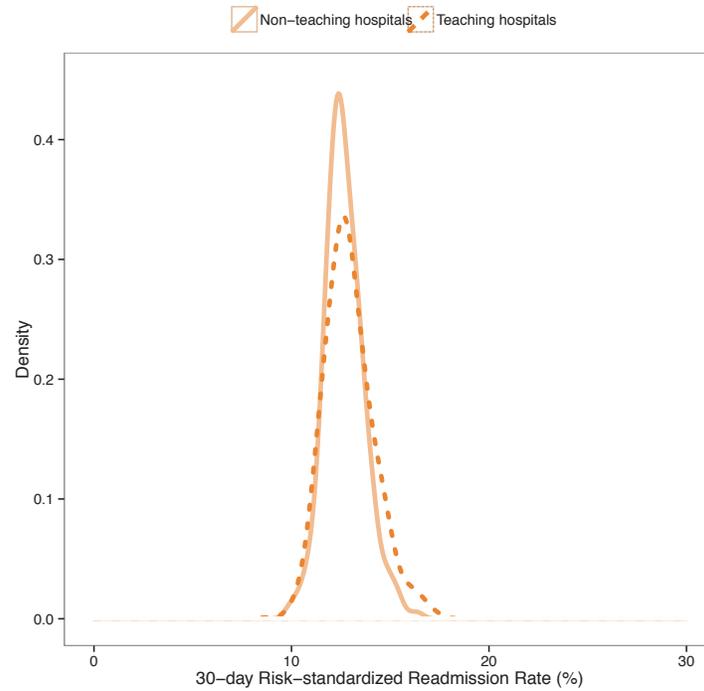


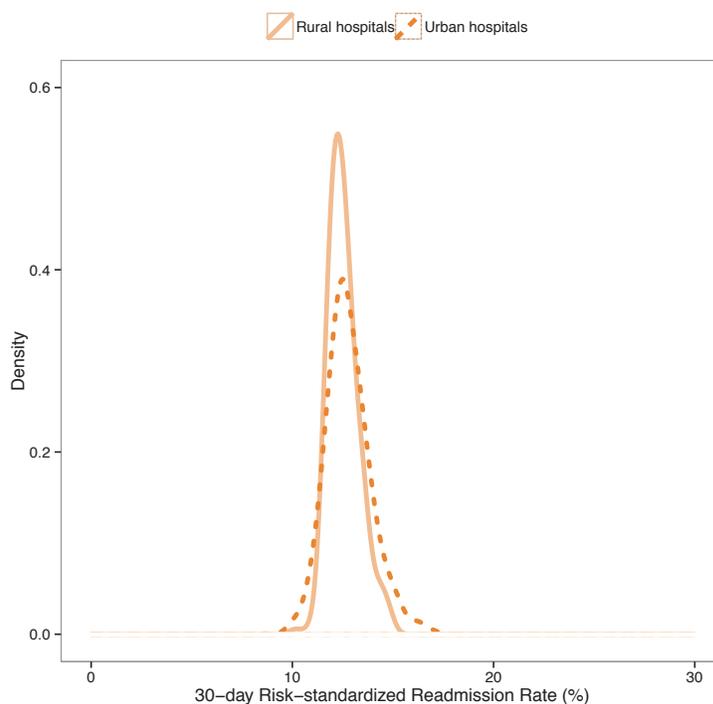
TABLE I Distributions of hospital RSRRs (%) for stroke overall, by safety-net status, teaching status, and urban or rural location, July 2011-June 2014.

	Stroke RSRR (%)						
	Overall; n=2733	Safety-net hospitals; n=552	Non-safety-net hospitals; n=2181	Teaching hospitals; n=992	Non-teaching hospitals; n=1741	Urban hospitals; n=2495	Rural hospitals; n=238
Maximum	17.5	17.5	17.5	17.5	16.5	17.5	14.9
90%	14.2	14.1	14.2	14.6	14.0	14.3	13.6
75%	13.4	13.4	13.4	13.6	13.3	13.4	13.0
Median (50%)	12.6	12.7	12.6	12.8	12.6	12.7	12.4
25%	12.0	12.1	12.0	12.1	12.0	12.0	12.0
10%	11.5	11.6	11.5	11.5	11.5	11.5	11.7
Minimum	8.7	10.0	8.7	8.7	9.7	8.7	10.1

Prepared for CMS by Yale New Haven Health Services Corporation (YNHHSC) Center for Outcomes Research and Evaluation (CORE) September 2015

The median stroke RSRR for all hospitals was 12.6% (interquartile range [IQR]: 12.0%-13.4%; Table 1). The median stroke RSRR for safety-net hospitals was 12.7% (IQR: 12.1%-13.4%) and for non-safety-net hospitals was 12.6% (IQR: 12.0%-13.4%; Figure 1 and Table 1). The median stroke RSRR for teaching hospitals was 12.8% (IQR: 12.1%-13.6%) and for non-teaching hospitals was 12.6% (IQR: 12.0%-13.3%; Figure 2 and Table 1). The median stroke RSRR for urban hospitals was 12.7% (IQR: 12.0%-13.4%) and for rural hospitals was 12.4% (IQR: 12.0%-13.0%; Figure 3 and Table 1).

FIGURE 3 Distributions of hospital RSRRs (%) for stroke by urban or rural location, July 2011-June 2014.



Safety-net hospitals had a median stroke RSRR that was 0.1 percentage points higher than non-safety-net hospitals, teaching hospitals had a median stroke RSRR that was 0.2 percentage points higher than non-teaching hospitals, and urban hospitals had a median stroke RSRR that was 0.3 percentage points higher than rural hospitals.

1. Medicare Hospital Quality Chartbook 2014: Performance Report on Outcome Measures. Prepared by Yale New Haven Health Services Corporation Center for Outcomes Research and Evaluation for the Centers for Medicare and Medicaid Services 2014; <http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/HospitalQualityInits/Downloads/Medicare-Hospital-Quality-Chartbook-2014.pdf>. Accessed 16 June 2015.

2. Dorsey K, Grady J, Desai N, et al. 2015 Condition-Specific Measures Updates and Specifications Report Hospital-Level 30-Day Risk-Standardized Readmission Measures: Acute Myocardial Infarction – Version 8.0, Heart Failure – Version 8.0, Pneumonia – Version 8.0, Chronic Obstructive Pulmonary Disease – Version 4.0, Stroke – Version 4.0; <https://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier4&cid=1219069855841>. Accessed 26 June 2015.

3. “Hospital Inpatient Prospective Payment Systems for Acute Care Hospitals, Final Rule.” Federal Register / 22 August 2014; <http://federalregister.gov/a/2014-18545>. Accessed 16 June 2015.

4. AHA Annual Survey Database Fiscal Year 2013; <http://www.ahadataviewer.com/book-cd-products/aha-survey/>. Accessed 26 June 2015.

Prepared for CMS by Yale New Haven Health Services Corporation (YNHHSC) Center for Outcomes Research and Evaluation (CORE) September 2015