**HOSPITAL CHARACTERISTICS**

▶ Performance on the heart failure mortality 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 mortality measure: hospital-level 30-day risk-standardized mortality rate (RSMR) following heart failure [1]. The heart failure mortality measure includes Medicare fee-for-service (FFS) and Veterans Health Administration (VA) beneficiaries aged 65 or older [2]. The heart failure mortality measure assesses death from any cause within 30 days of hospital admission for heart failure, regardless of whether the patient dies while still in the hospital or after discharge from the hospital [2]. The heart failure mortality measure has been publicly reported on Hospital Compare since 2007 and has been included in the Hospital Value-Based Purchasing (HVBP) Program since 2013 [3].

FIGURE I *Distributions of hospital RSMRs (%) for heart failure by safety-net status, July 2011-June 2014.*
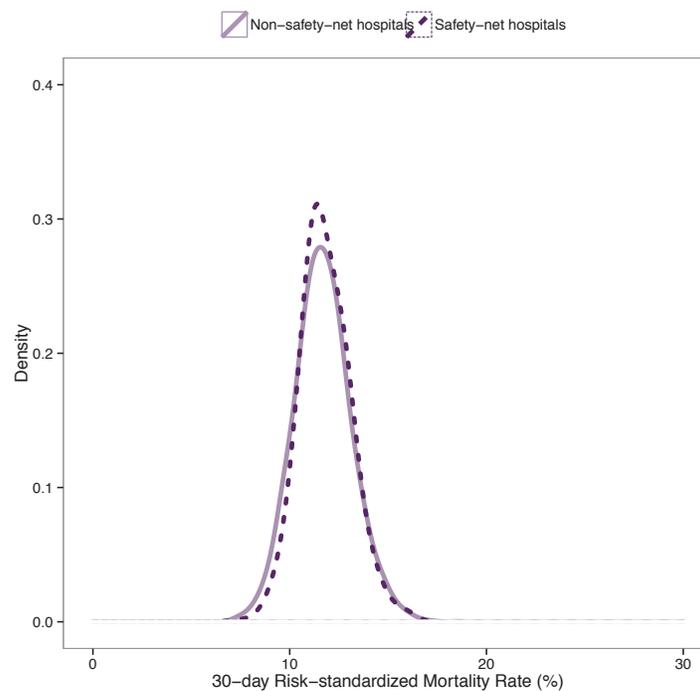
Variation in RSMRs reflects differences in performance among hospitals; lower RSMRs suggest better quality, and higher RSMRs suggest worse quality. To understand the impact of hospital safety-net status, teaching status, and urban or rural location, we examined RSMRs among hospitals with these characteristics with 25 or more qualifying admissions. Therefore, we evaluated the heart failure RSMRs for a total of 3,716 hospitals by comparing 955 safety-net hospitals against 2,761 non-safety-net hospitals, 1,088 teaching hospitals against 2,628 non-teaching hospitals, and 3,007 urban hospitals against 709 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].

To ensure accurate assessment of each hospital, the heart failure mortality 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 mortality outcome [2].

FIGURE 2 *Distributions of hospital RSMRs (%) for heart failure by teaching status, July 2011-June 2014.*
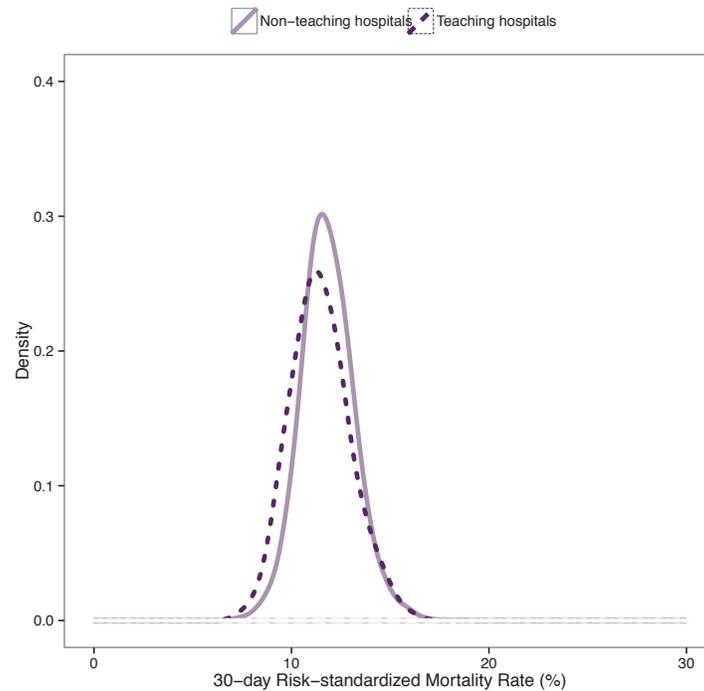

TABLE 1 *Distributions of hospital RSMRs (%) for heart failure overall, by safety-net status, teaching status, and urban or rural location, July 2011-June 2014.*

	Heart failure RSMR (%)						
	Overall; n=3716	Safety-net hospitals; n=955	Non-safety-net hospitals; n=2761	Teaching hospitals; n=1088	Non-teaching hospitals; n=2628	Urban hospitals; n=3007	Rural hospitals; n=709
Maximum	18.5	16.4	18.5	16.5	18.5	18.5	15.9
90%	13.5	13.4	13.6	13.5	13.5	13.5	13.6
75%	12.6	12.7	12.6	12.4	12.7	12.6	12.8
Median (50%)	11.7	11.7	11.7	11.3	11.8	11.6	11.9
25%	10.8	11.0	10.8	10.4	11.0	10.7	11.3
10%	10.0	10.3	9.9	9.6	10.2	9.8	10.7
Minimum	7.2	7.2	7.2	7.2	7.2	7.2	8.3

The median heart failure RSMR for all hospitals was 11.7% (interquartile range [IQR]: 10.8%-12.6%; Table 1). The median heart failure RSMR for safety-net hospitals was 11.7% (IQR: 11.0%-12.7%) and for non-safety-net hospitals was 11.7% (IQR: 10.8%-12.6%; Figure 1 and Table 1). The median heart failure RSMR for teaching hospitals was 11.3% (IQR: 10.4%-12.4%) and for non-teaching hospitals was 11.8% (IQR: 11.0%-12.7%; Figure 2 and Table 1). The median heart failure RSMR for urban hospitals was 11.6% (IQR: 10.7%-12.6%) and for rural hospitals was 11.9% (IQR: 11.3%-12.8%; Figure 3 and Table 1).

FIGURE 3 *Distributions of hospital RSMRs (%) for heart failure by urban or rural location, July 2011-June 2014.*
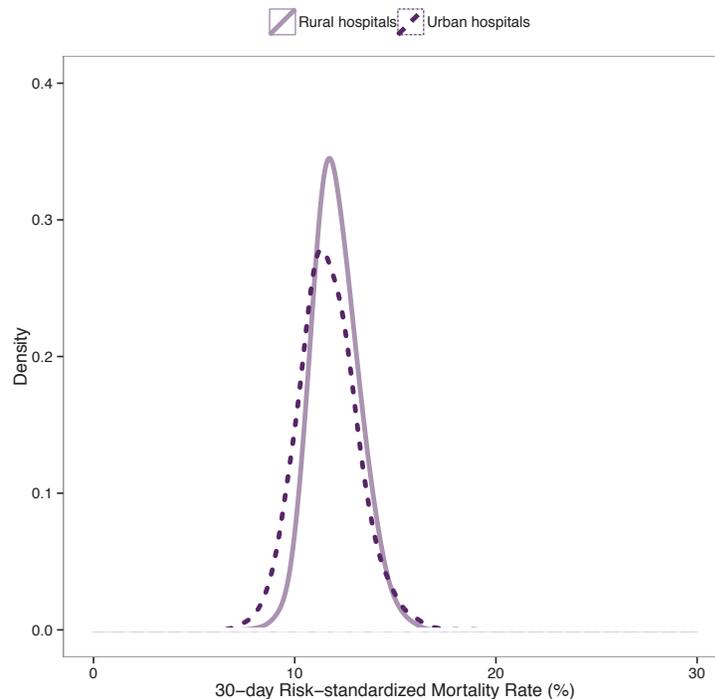
Safety-net hospitals had a median heart failure RSMR that was equal to that of non-safety-net hospitals, teaching hospitals had a median heart failure RSMR that was 0.5 percentage points lower than non-teaching hospitals, and urban hospitals had a median heart failure RSMR that was 0.3 percentage points lower 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/Hospi-talQualityInits/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 Mortality Measures: Acute Myocardial Infarction – Version 9.0, Heart Failure – Version 9.0, Pneumonia – Version 9.0, Chronic Obstructive Pulmonary Disease – Version 4.0, Stroke – Version 4.0; https://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier4&cid=1163010421830. 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.