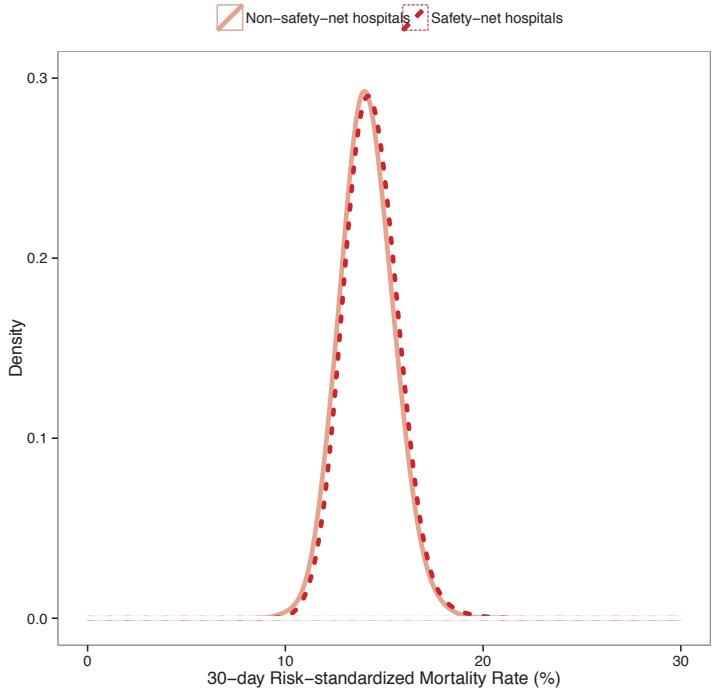
Performance on the acute myocardial infarction mortality measure by hospital characteristics: **safety-net status, teaching status, and urban or rural location.**

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 acute myocardial infarction (AMI) [1]. The AMI mortality measure includes Medicare fee-for-service (FFS) and Veterans Health Administration (VA) beneficiaries aged 65 or older [2]. The AMI mortality measure assesses death from any cause within 30 days of a hospital admission for AMI, regardless of whether the patient dies while still in the hospital or after discharge from the hospital [2]. The AMI 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 AMI 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 AMI RSMRs for a total of 2,427 hospitals by comparing 446 safety net hospitals against 1,981 non-safety-net hospitals, 959 teaching hospitals against 1,468 non-teaching hospitals, and 2,307 urban hospitals against 120 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 AMI 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 *Distribution of hospital RSMRs (%) for AMI by teaching status, July 2011-June 2014.*

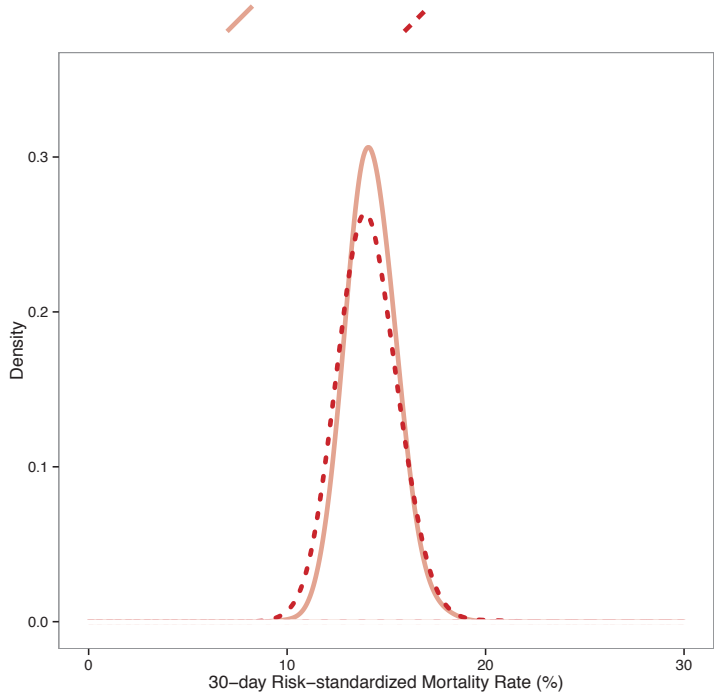
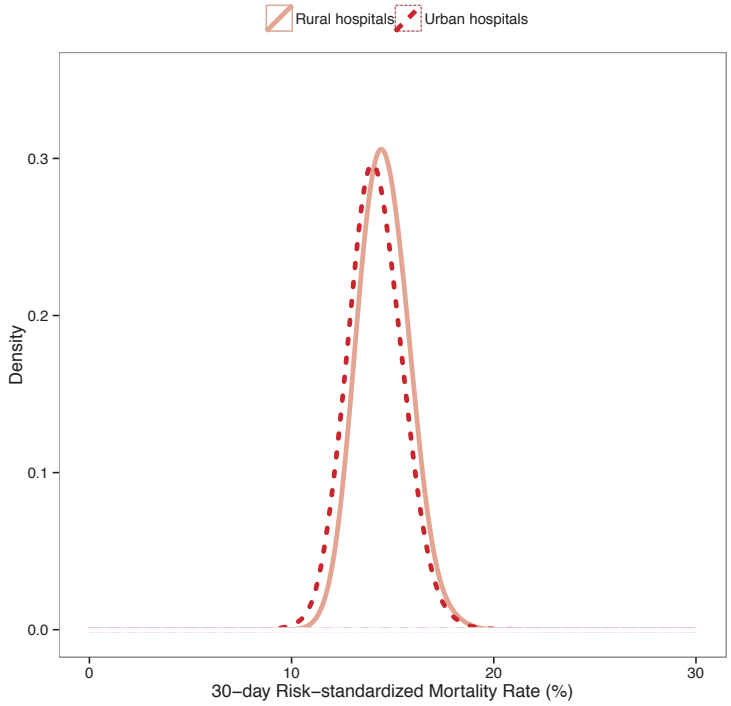


TABLE I *Distribution of hospital RSMRs (%) for AMI overall, by safety-net status, teaching status, and urban or rural location, July 2011-June 2014.*

	AMI RSMR (%)						
	Overall; n=2427	Safety-net hospitals; n=446	Non-safety-net hospitals; n=1981	Teaching hospitals; n=959	Non-teaching hospitals; n=1468	Urban hospitals; n=2307	Rural hospitals; n=120
Maximum	20.6	19.5	20.6	20.6	18.9	20.6	17.8
90%	15.8	15.8	15.8	15.8	15.7	15.8	15.9
75%	15.0	15.1	15.0	15.0	15.0	15.0	15.3
Median (50%)	14.1	14.2	14.1	14.0	14.2	14.1	14.5
25%	13.4	13.6	13.3	13.2	13.5	13.3	13.9
10%	12.6	13.0	12.5	12.3	12.8	12.5	13.4
Minimum	9.9	11.4	9.9	10.0	9.9	9.9	12.3

The median AMI RSMR for all hospitals was 14.1% (interquartile range [IQR]: 13.4%-15.0%; Table 1). The median AMI RSMR for safety-net hospitals was 14.2% (IQR: 13.6%-15.1%) and for non-safety-net hospitals was 14.1% (IQR: 13.3%-15.0%; Figure 1 and Table 1). The median AMI RSMR for teaching hospitals was 14.0% (IQR: 13.2%-15.0%) and for non-teaching hospitals was 14.2% (IQR: 13.5%-15.0%; Figure 2 and Table 1). The median AMI RSMR for urban hospitals was 14.1% (IQR: 13.3%-15.0%) and for rural hospitals was 14.5% (IQR: 13.9%-15.3%; Figure 3 and Table 1).

FIGURE 3 *Distribution of hospital RSMRs (%) for AMI by urban or rural location, July 2011-June 2014.*



Safety-net hospitals had a median AMI RSMR that was 0.1 percentage points higher than non-safety-net hospitals, teaching hospitals had a median AMI RSMR that was 0.2 percentage points lower than non-teaching hospitals, and urban hospitals had a median AMI RSMR that was 0.4 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/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 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.