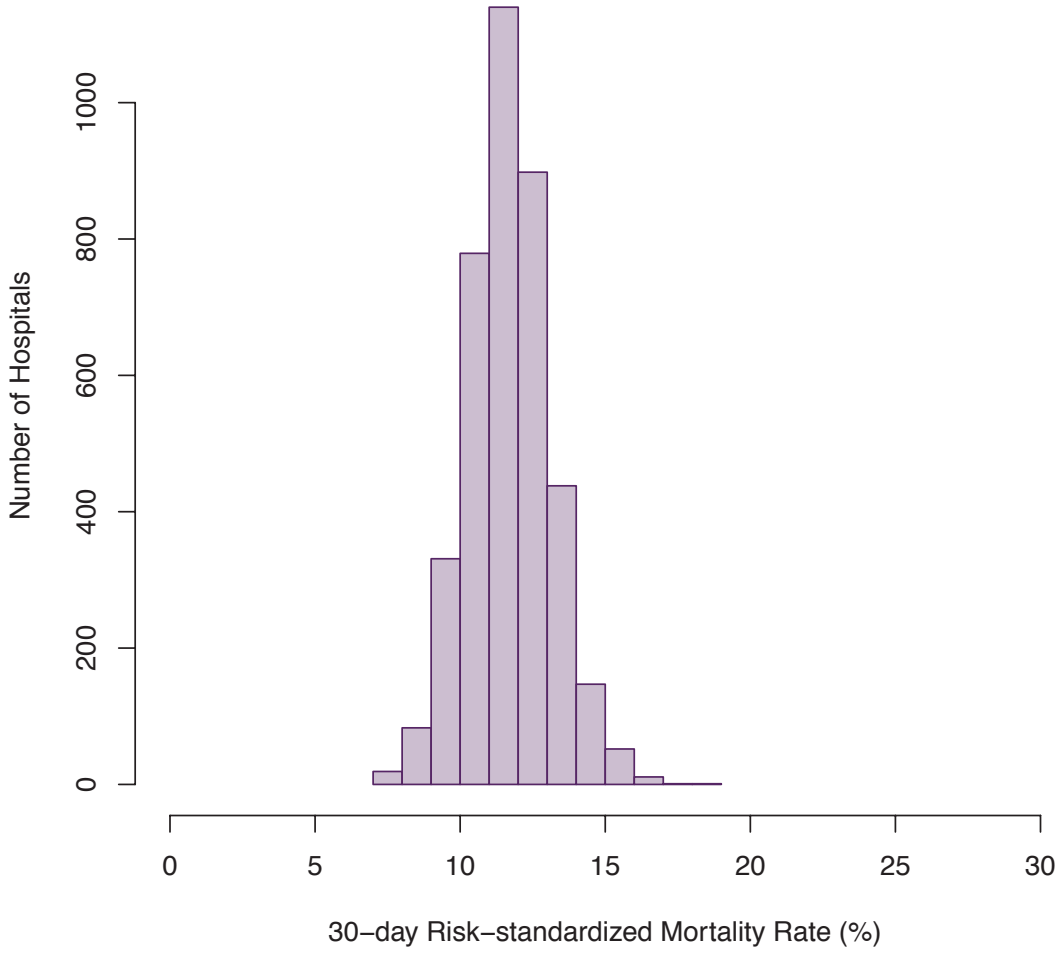
Variation in 30-day mortality rates across hospitals following admission for heart failure.

The Centers for Medicare & Medicaid Services (CMS) periodically provides a comprehensive overview of national 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 *Distribution of hospital RSMRs (%) for heart failure, July 2011-June 2014.*



Variation in heart failure RSMRs reflects differences in performance among hospitals; wider distributions suggest more variation in quality, and narrower distributions suggest less variation in quality. To determine the extent of variation present in the heart failure mortality measure, we examined hospital RSMRs for the July 2011 – June 2014 reporting period. To ensure accurate assessment of each hospital, the measure uses a statistical model to adjust for key differences in patient risk factors that are clinically relevant and that have strong relationships with the mortality outcome [2].

TABLE 1 *Distribution of hospital RSMRs (%) for heart failure, July 2011-June 2014.*

	Distribution of heart failure RSMRs (%)
Maximum	18.5
90%	13.5
75%	12.6
Median (50%)	11.6
25%	10.8
10%	9.9
Minimum	7.2

Hospital RSMRs for heart failure were normally distributed and centered at 11.6%. The hospitals that were at the 25th and 75th percentile had a 1.8 percentage point difference in performance. The absolute difference between the 10th and 90th percentiles was 3.6 percentage points. Figure 1 and Table 1 display the distribution of RSMRs for hospitals with 25 or more qualifying admissions.

While half of hospitals had RSMRs within a 1.8 percentage point range around the median hospital's RSMR, the absolute difference in RSMRs across all hospitals was 11.3 percentage points. This supports continued opportunities for improvement.

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.