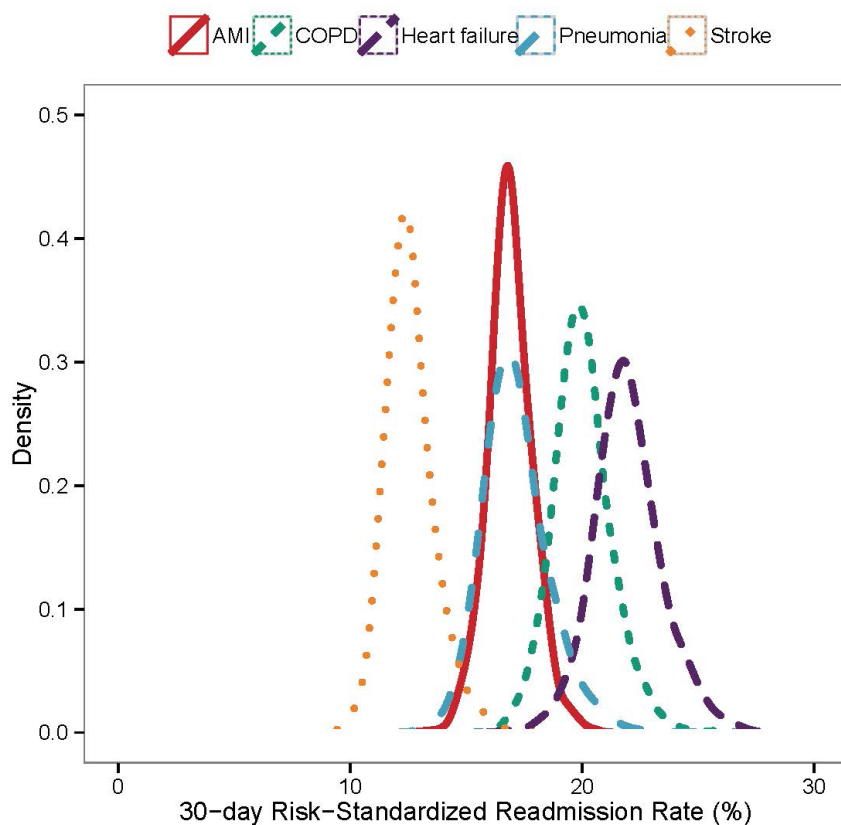


HOSPITAL CHARACTERISTICS

► Variation in 30-day readmission rates across hospitals following hospitalizations for acute myocardial infarction, chronic obstructive pulmonary disease, heart failure, pneumonia, and acute ischemic stroke.

The Centers for Medicare & Medicaid Services (CMS) periodically provides a comprehensive overview of national performance on measures of readmission following hospitalizations for specific medical conditions [1]. The condition-specific readmission measures assess unplanned readmissions for any reason within 30 days of the date of discharge from hospitalizations for acute myocardial infarction (AMI), chronic obstructive pulmonary disease (COPD), heart failure, pneumonia, or acute ischemic stroke [2]. Patients can be readmitted to the same hospital or to a different hospital [2]. The measures include Medicare fee-for-service (FFS) beneficiaries aged 65 or older [2]. CMS began publicly reporting 30-day risk-standardized readmission rates (RSRRs) following hospitalizations for AMI, heart failure, and pneumonia in 2009; and for COPD and stroke in 2014 [3]. Publicly reported measure results are updated annually on the [Hospital Compare](#) website. For 2016 public reporting, the pneumonia readmission measure cohort has been expanded to include aspiration pneumonia and non-severe sepsis patients [2]. The AMI, heart failure, and pneumonia readmission measures have been included in the Hospital Readmissions Reduction Program (HRRP) since October 2012, and the COPD readmission measure has been included in HRRP since Fiscal Year 2015 [4].

FIGURE I. Distributions of hospital RSRRs (%) for AMI, COPD, heart failure, pneumonia, and stroke, July 2012-June 2015.



Variation in RSRRs 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 these measures, we examined hospital RSRRs for AMI, COPD, heart failure, pneumonia, and stroke in the July 2012-June 2015 reporting period. We included hospitals with 25 or more qualifying cases. To ensure accurate assessment of each hospital, the measures use a statistical model to adjust for key differences in patient risk factors that are clinically relevant and that have strong relationships with the readmission outcome [2].

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TABLE I. Distributions of hospital RSRRs (%) for AMI, COPD, heart failure, pneumonia, and stroke, July 2012-June 2015.

	Distribution of RSRRs (%)				
	AMI	COPD	Heart Failure	Pneumonia	Stroke
Maximum	20.6	26.1	31.3	24.8	17.7
90%	18.2	21.6	23.9	19.0	14.0
75%	17.5	20.7	22.8	17.9	13.1
Median (50%)	16.9	19.9	21.9	17.0	12.5
25%	16.3	19.2	21.0	16.2	11.9
10%	15.7	18.5	20.2	15.5	11.3
Minimum	13.1	16.0	16.3	12.9	9.1

Hospital RSRRs for AMI, COPD, heart failure, pneumonia, and stroke were normally distributed and centered at 16.9%, 19.9%, 21.9%, 17.0%, and 12.5%, respectively (Figure 1 and Table 1). Additionally, hospitals were distributed over an interquartile range (IQR) of 1.2, 1.5, 1.8, 1.7, and 1.2 percentage points, respectively (Table 1).

For the AMI, COPD, heart failure, pneumonia, and stroke readmission measures, half of the hospitals have RSRRs within 1.2, 1.5, 1.8, 1.7, and 1.2 percentage points of the median hospital RSRR for each measure. Additionally, the range in RSRRs for the AMI, COPD, heart failure, pneumonia, and stroke readmission measures was 7.5, 10.1, 15.0, 11.9, and 8.6 percentage points, respectively. This demonstrates that there are continued opportunities for improvement.

1. 2015 Medicare Hospital Quality Chartbook. Prepared by Yale New Haven Health Services Corporation Center for Outcomes Research and Evaluation for the Centers for Medicare and Medicaid Services. <https://www.cms.gov/medicare/quality-initiatives-patient-assessment-instruments/hospitalqualityinits/outcomemeasures.html>. Accessed March 1, 2016.

2. Karen Dorsey, Jacqueline N. Grady, Nihar Desai, et al. 2016 Condition-Specific Measures Updates and Specifications Report Hospital-Level 30-Day Risk-Standardized Readmission Measures: Acute Myocardial Infarction – Version 9.0, Chronic Obstructive Pulmonary Disease – Version 5.0, Heart Failure – Version 9.0, Pneumonia – Version 9.0, Stroke – Version 5.0; <https://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier4&cid=1219069855841>. Accessed May 9, 2016.

3. Hospital Inpatient Quality Reporting (IQR) Program Overview. QualityNet website. <https://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier2&cid=1138115987129>. Accessed March 1, 2016.

4. Hospital Readmissions Reduction Program (HRRP) Overview. QualityNet website. <https://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier2&cid=1228772412458>. Accessed March 1, 2016.

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