

HOSPITAL CHARACTERISTICS

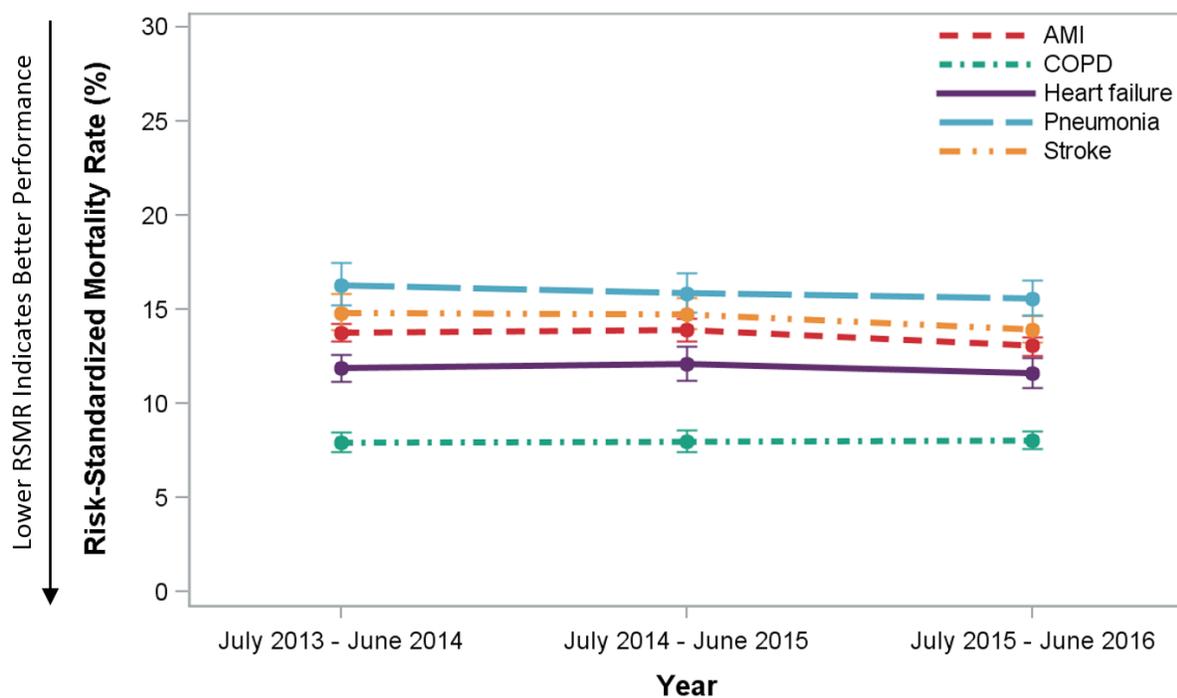
► Trends in mortality rates following admission for acute myocardial infarction, chronic obstructive pulmonary disease, heart failure, pneumonia, and acute ischemic stroke.

The Centers for Medicare & Medicaid Services (CMS) evaluates the trends in measure results over time in order to monitor patterns, changes, and potential unintended consequences in the measure results. This information allows CMS to better understand the current state of care within U.S. hospitals.

The condition-specific mortality measures assess death from any cause within 30 days of the date of hospital admissions for acute myocardial infarction (AMI), chronic obstructive pulmonary disease (COPD), heart failure, pneumonia, or acute ischemic stroke, regardless of whether the patient dies while still in the hospital or after discharge from the hospital [1]. The measures include Medicare fee-for-service (FFS) beneficiaries aged 65 or older.

CMS began publicly reporting 30-day risk-standardized mortality rates (RSMRs) following admissions for AMI and heart failure in 2007; for pneumonia in 2008; and for COPD and stroke in 2014 [2]. Publicly reported measure results are updated annually on the [Hospital Compare](#) website. The AMI, heart failure, and pneumonia mortality measures have been included in the Hospital Value-Based Purchasing (HVBP) program since 2014 [3]. The COPD mortality measure will be included in the HVBP program beginning in 2021 [3, 4].

FIGURE I. Trends in the median hospital RSMRs (%) for AMI, COPD, heart failure, pneumonia, and stroke, July 2013-June 2016.



Examining trends in hospital performance on the condition-specific mortality measures provides insight into whether hospital quality varies from year to year. To determine the trends in national performance on these measures, we examined hospitals' RSMRs for each year of the July 2013-June 2016 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 mortality outcome [1].

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TABLE I. Trends in the median hospital RSMRs (%) for AMI, COPD, heart failure, pneumonia, and stroke, July 2013-June 2016.

	Median (IQR) of Hospital RSMRs (%)		
	July 2013-June 2014	July 2014-June 2015	July 2015-June 2016
AMI	13.7 (13.3, 14.2) (1730 hospitals)	13.9 (13.3, 14.5) (1734 hospitals)	13.1 (12.6, 13.5) (1706 hospitals)
COPD	7.9 (7.4, 8.5) (2607 hospitals)	7.9 (7.4, 8.6) (2612 hospitals)	8.0 (7.6, 8.5) (2465 hospitals)
Heart Failure	11.9 (11.2, 12.6) (2691 hospitals)	12.1 (11.2, 13.0) (2660 hospitals)	11.6 (10.8, 12.4) (2582 hospitals)
Pneumonia	16.3 (15.2, 17.5) (3400 hospitals)	15.8 (14.8, 16.9) (3431 hospitals)	15.6 (14.7, 16.6) (3286 hospitals)
Stroke	14.8 (13.9, 15.8) (1828 hospitals)	14.7 (14.0, 15.6) (1817 hospitals)	13.9 (13.2, 14.7) (1768 hospitals)

The median hospital RSMR for AMI rose by 0.2 percentage points between June 2014 and June 2015 and then declined by 0.8 percentage points by June 2016 (Figure 1 and Table 1). Over this three-year period, the median hospital RSMR for COPD rose by 0.1 percentage points; the median hospital RSMR for heart failure rose by 0.2 percentage points between June 2014 and June 2015 and then declined by 0.5 percentage points by June 2016; the median hospital RSMR for pneumonia declined by 0.7 percentage points; and the median hospital RSMR for stroke declined by 0.9 percentage points (Figure 1 and Table 1). The bars on the graph in Figure 1 represent the interquartile range (IQR).

Hospital RSMRs for pneumonia and stroke declined by 0.7, and 0.9 percentage points, respectively, while COPD rose by 0.1 percentage points between June 2014 and June 2016. AMI and heart failure both rose by 0.2 percentage points between June 2014 and June 2015, and then declined by 0.8, and 0.5 percentage points, respectively, by June 2016.

1. Jaymie Simoes, Jacqueline N. Grady, Jo DeBuhr, et al. 2017 Condition-Specific Measures Updates and Specifications Report Hospital-Level 30-Day Risk-Standardized Mortality Measures: Acute Myocardial Infarction – Version 11.0 Chronic Obstructive Pulmonary Disease – Version 6.0 Heart Failure – Version 11.0 Pneumonia – Version 11.0 Stroke – Version 6.0. <https://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier4&cid=1163010421830>. Available as of April 4, 2017.

2. 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, 2017.

3. Hospital Value-Based Purchasing Overview. QualityNet website. <https://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier2&cid=1228772039937>. Accessed March 1, 2017.

4. Centers for Medicare and Medicaid Services. Hospital Inpatient Prospective Payment Systems for Acute Care Hospitals, Final Rule Fiscal Year 2016. 80 FR 49325. Federal Register website. <https://federalregister.gov/a/2015-19049>. Published August 17, 2015. Effective October 1, 2015. Accessed March 1, 2017.