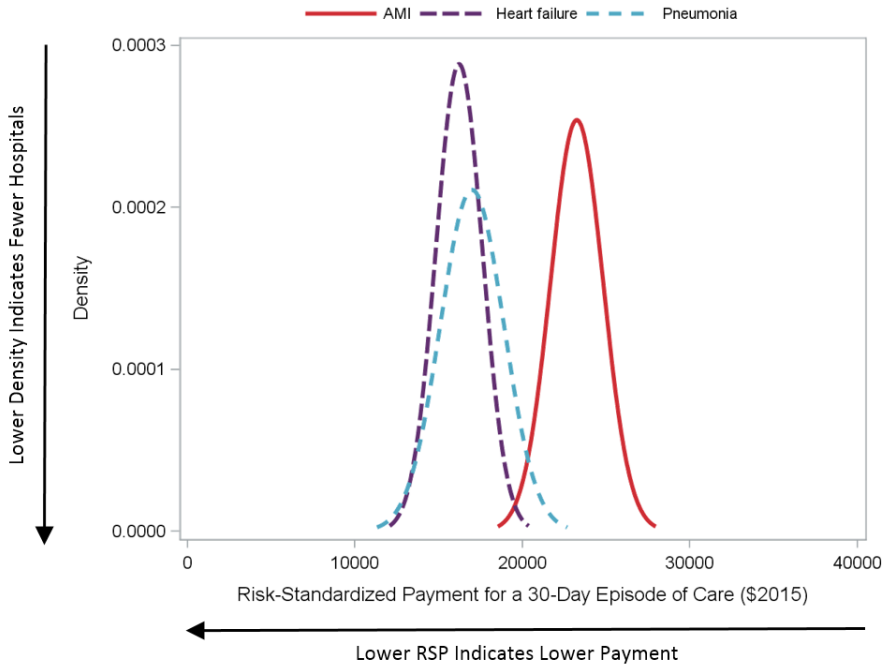
Variation in risk-standardized payments across hospitals for a 30-day episode of care following admission for acute myocardial infarction, heart failure, and pneumonia.

The Centers for Medicare & Medicaid Services (CMS) evaluates the distribution of measure results 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 payment measures assess 30-day episode-of-care payments that begin with an index admission for acute myocardial infarction (AMI), heart failure, and pneumonia [1]. The measures include admissions for Medicare fee-for-service (FFS) beneficiaries aged 65 or older. These measures capture payments across multiple care settings, services, and supplies (this includes inpatient, outpatient, skilled nursing facility, home health, hospice, physician/clinical laboratory/ambulance services, durable medical equipment, prosthetics/orthotics, and supplies). To isolate payment variation that reflects practice patterns rather than factors unrelated to clinical care, geographic differences and policy adjustments in payment rates for individual services are removed from the total payment for that service. Standardizing the payment in this way allows for comparison across hospitals based solely on payments for decisions related to clinical care. However, it's important to note that the AMI, heart failure, and pneumonia payment measure results alone are not indicators of quality. For 2016 public reporting, the pneumonia payment measure cohort has been expanded to include aspiration pneumonia and non-severe sepsis patients.

CMS began publicly reporting risk-standardized payments (RSPs) associated with a 30-day episode of care for AMI in 2014; and for heart failure and pneumonia in 2015 [2]. Publicly reported measure results are updated annually on the *Hospital Compare* website. The AMI and heart failure payment measures will be included in the Hospital Value-Based Purchasing (HVBP) Program beginning in 2021 [3,4].

FIGURE I. *Distributions of hospital RSPs ($2015) for AMI, heart failure, and pneumonia, July 2013-June 2016.*



Variation in RSPs reflects different patterns in care decisions and resource utilization (for example, treatment, supplies, or services) among hospitals for a hospital's patients both at the hospital and after they leave. Wider distributions suggest more variation in payments, and narrower distributions suggest less variation in payments. To determine the extent of variation present in these measures, we examined hospital RSPs for the July 2013 – June 2016 reporting period. 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 payment outcome [1]. Additionally, for this reporting period, all payments were inflation-adjusted to 2015 dollars.

TABLE I. *Distributions of hospital RSPs ($2015) for AMI, heart failure, and pneumonia, July 2013-June 2016.*

	Distribution of RSPs ($2015)		
	AMI	Heart Failure	Pneumonia
Number of hospitals	2,328	3,623	4,201
Maximum	29,443	21,819	26,601
90%	25,202	18,062	19,264
75%	24,275	17,044	18,009
Median (50%)	23,209	16,108	16,927
25%	22,218	15,273	15,818
10%	21,347	14,555	14,720
Minimum	13,294	11,652	10,778

Hospital RSPs for AMI, heart failure, and pneumonia were normally distributed and centered at $23,209, $16,108, and $16,927, respectively (Figure 1 and Table 1). Additionally, hospital RSPs were distributed over an interquartile range of $2,057, $1,771, and $2,191, respectively (Table 1).

For the AMI, heart failure, and pneumonia payment measures, half of the hospitals have RSPs within $2,057, $1,771, and $2,191 of the median hospital RSP for each measure. Additionally, the range in RSPs for the AMI, heart failure, and pneumonia payment measures was $16,149, $10,167, and $15,823, respectively. This demonstrates that there is variation in payment for AMI, heart failure, and pneumonia episodes of care.

1. Jaymie Simoes, Jacqueline N. Grady, Jo DeBuhr, et al. 2017 Measure Updates and Specifications Report Hospital-Level Risk-Standardized Payment Measures: Acute Myocardial Infarction – Version 6.0 Heart Failure – Version 4.0 Pneumonia – Version 4.0 Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA) – Version 3.0. https://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier4&cid=1228774267858. 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 2017. 81 FR 56761. Federal Register website. https://www.federalregister.gov/d/2016-18476. Published August 22, 2016. Effective October 1, 2016. Accessed March 1, 2017.