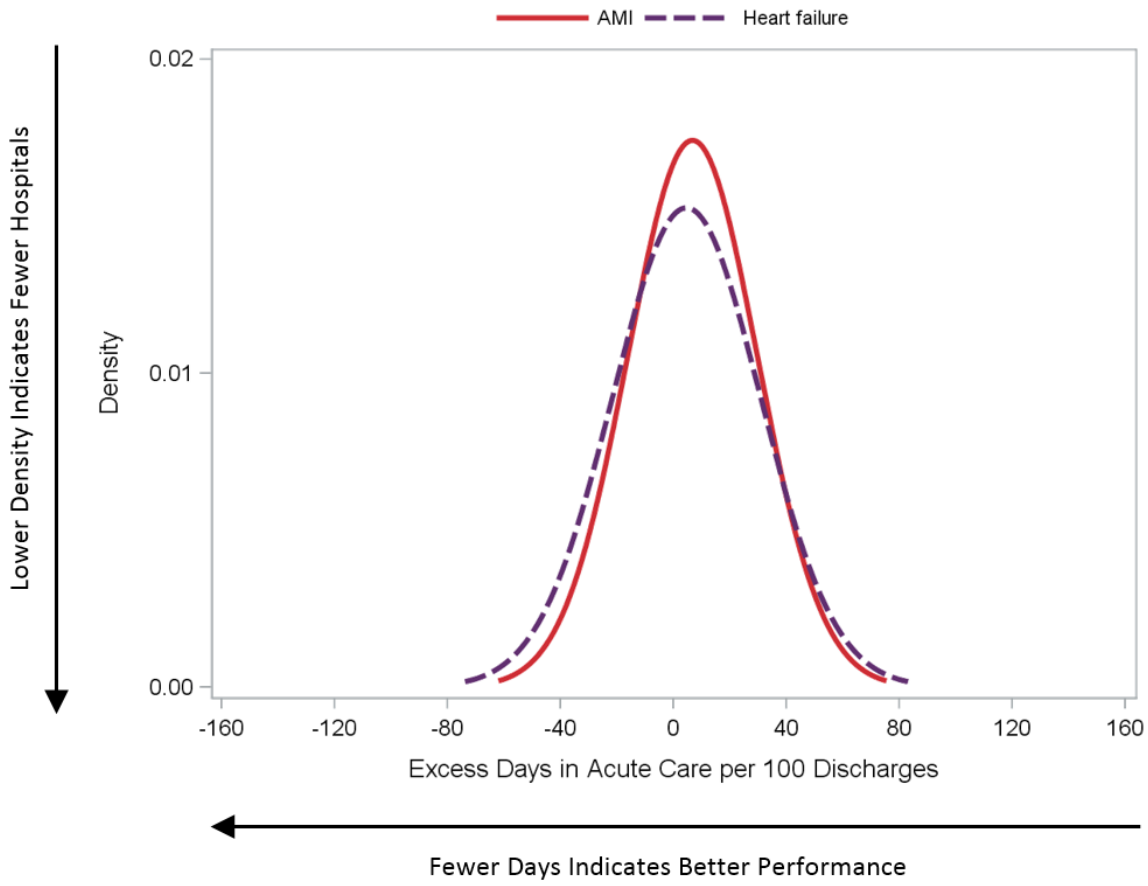
▶ Variation in excess days in acute care across hospitals in the 30 days following hospitalizations for acute myocardial infarction and for heart failure.

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 condition-specific acute myocardial infarction (AMI) and heart failure excess days in acute care (EDAC) measures count the number of additional (or fewer) risk-adjusted days a hospital's patients spend in an emergency department, a hospital observation unit, or a hospital inpatient unit during the 30 days following a hospitalization for AMI or heart failure, respectively, compared to an average hospital [1]. The measures report the EDAC for each hospital per 100 discharges to be analogous with the existing readmission measures. The measures include Medicare fee-for-service (FFS) beneficiaries aged 65 or older.

CMS began publicly reporting 30-day risk-standardized EDAC measure results for AMI and heart failure in 2017 [2]. Publicly-reported measure results are updated annually on the *Hospital Compare* website.

FIGURE I. *Distributions of hospital EDAC per 100 discharges for AMI and heart failure July 2013-June 2016.*



Variation in EDAC 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 EDAC for AMI and heart failure in 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 have strong relationships with the EDAC outcome [1]. After risk-adjustment:

- A negative EDAC indicates that a hospital's patients spent fewer days in acute care than expected;
- An EDAC of zero indicates that a hospital's patients spent the expected number of days in acute care;
- A positive EDAC indicates that a hospital's patients spent more days in acute care than expected.

TABLE I. *Distributions of hospital EDAC per 100 discharges for AMI and heart failure, July 2013-June 2016.*

Distribution of EDAC per100 discharges (days)

	AMI	Heart Failure
Maximum	141.1	154.9
90%	35.5	37.9
75%	19.3	19.8
Median (50%)	5.5	3.0
25%	-8.5	-13.3
10%	-19.9	-27.0
Minimum	-59.2	-63.5

Hospitals' EDAC per 100 discharges for AMI and heart failure were normally distributed and centered at 5.5 and 3.0 days, respectively (Figure 1 and Table 1). Additionally, hospitals' EDAC were distributed over an interquartile range (IQR) of 27.8 and 33.1 days, respectively (Table 1).

For the AMI and heart failure EDAC measures, half of the hospitals have EDACs within 27.8 and 33.1 days of the median hospital EDAC for each measure. Additionally, the range in EDACs per 100 discharges for AMI and heart failure was 200.3 and 218.4 days, respectively. This demonstrates that there are continued opportunities for improvement.

1. Jaymie Simoes, Jacqueline N. Grady, Jo DeBuhr, et al. 2017 Condition-Specific Measures Updates and Specification Report Hospital-Level 30-Day Risk-Standardized Excess Days in Acute Care Measures: Acute Myocardial Infarction – Version 2.0 Heart Failure – Version 2.0. https://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier3&cid=1228775310037. 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.