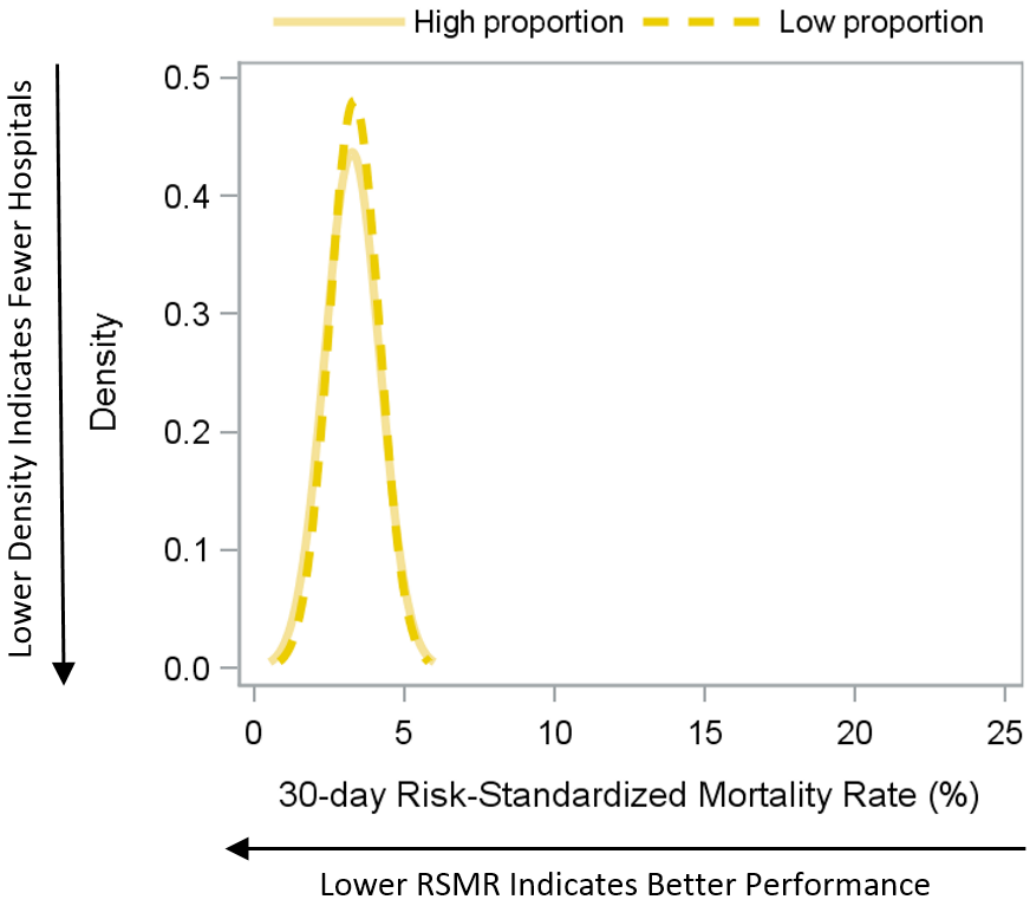
Performance on the isolated coronary artery bypass graft surgery mortality measure: Hospitals that serve high and low proportions of African-American patients.

The Centers for Medicare & Medicaid Services (CMS) evaluates hospital performance in relation to the proportion of African-American patients served 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 isolated coronary artery bypass graft (CABG) mortality measure includes Medicare fee-for-service (FFS) beneficiaries aged 65 or older and assesses the occurrence of death for any cause within 30 days after the procedure date for CABG surgery [1]. "Isolated" CABG procedures are those performed without concomitant high-risk cardiac and non-cardiac procedures, such as valve replacement [1].

CMS began publicly reporting risk-standardized mortality rates (RSMRs) following isolated CABG surgery in 2015 [2]. Publicly reported measure results are updated annually on the *Hospital Compare* website. The CABG mortality measure will be included in the Hospital Value-Based Purchasing (HVBP) Program beginning in 2022 [3, 4].

FIGURE I. *Distributions of isolated CABG RSMRs (%) for hospitals with low and high proportions of African-American patients, July 2013-June 2016.*



Variation in RSMRs reflects differences in performance among hospitals; lower RSMRs suggest better quality, and higher RSMRs suggest worse quality. To understand how caring for African-American patients might impact a hospital's RSMR, we examined RSMRs among hospitals with high and low proportions of African-American patients. We compared the CABG RSMRs for the 103 hospitals with ≤0.6% African-American Medicare FFS patients to the 104 hospitals with ≥21.0% African-American Medicare FFS patients for the July 2013 – June 2016 reporting period. We defined hospitals with low and high proportions of African-American patients as those that fall within the lowest and highest deciles of all hospitals with 25 or more qualifying discharges (N= 1,038). The proportion of African-American Medicare FFS patients for each hospital was determined using the Medicare Part A Inpatient Claims from 2015. All hospitals with 0% African-American patients were included in the lowest decile. To ensure accurate assessment of each hospital, the CABG mortality measure uses a statistical model to adjust for key differences in patient risk factors that are clinically relevant and that have a strong relationship with the mortality outcome [1].

TABLE I. *Distributions of isolated CABG RSMRs (%) for hospitals with low and high proportions of African-American patients, July 2013-June 2016.*

	CABG RSMR (%)	
	Hospitals with low proportions (≤ 0.6%) of African-American patients n = 103	Hospitals with high proportions (≥ 21.0%) of African-American patients n = 104
Maximum	5.3	6.1
90%	4.5	4.5
75%	4.0	3.8
Median (50%)	3.2	3.1
25%	2.7	2.7
10%	2.4	2.1
Minimum	1.6	1.7

The median CABG RSMR for hospitals with low proportions of African-American patients was 3.2% (interquartile range [IQR]: 2.7%-4.0%). The median CABG RSMR for hospitals with high proportions of African-American patients was 3.1% (IQR: 2.7%- 3.8%; Figure 1 and Table 1).

Hospitals with low proportions of African-American patients had a median CABG RSMR that was 0.1 percentage points higher than that of hospitals with high proportions.

1. Jaymie Simoes, Jacqueline N. Grady, Jo DeBuhr, et al. 2017 Procedure-Specific Measure Updates and Specifications Report Hospital-Level 30-Day Risk-Standardized Mortality Measure: Isolated Coronary Artery Bypass Graft (CABG) Surgery – Version 4.0. 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 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.