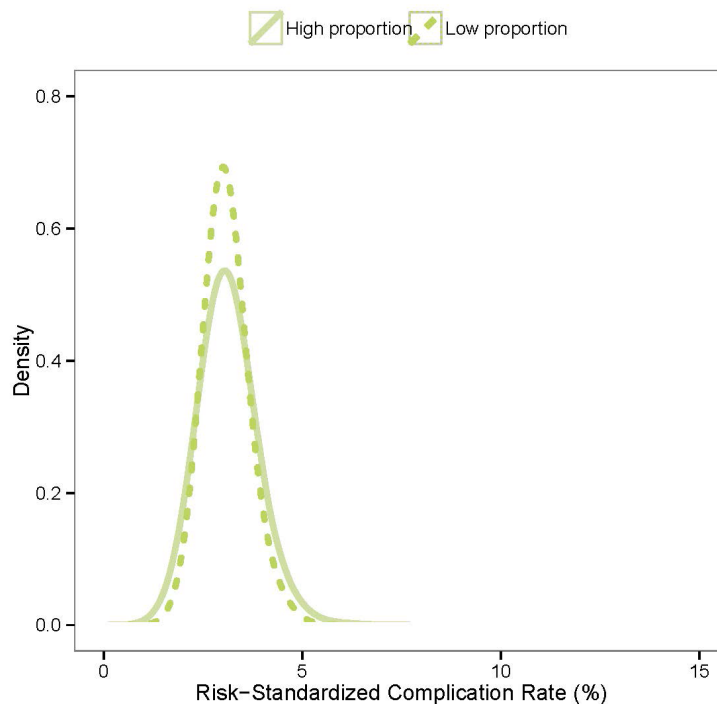


► **Performance on the elective primary total hip arthroplasty and/or total knee arthroplasty complication measure:** Hospitals that serve high and low proportions of African-American patients.

The Centers for Medicare & Medicaid Services (CMS) periodically investigates select hospital practices that may impact a hospital's performance on the following complication measure: hospital-level risk-standardized complication rate (RSCR) following elective primary total hip arthroplasty (THA) and/or total knee arthroplasty (TKA) [1]. The THA/TKA complication measure includes Medicare fee-for-service (FFS) beneficiaries aged 65 or older and assesses the occurrence of significant medical and/or surgical complications within 7 to 90 days, depending on the complication, from the date of admission for elective primary THA/TKA. Medical and surgical complications include: acute myocardial infarction (AMI), pneumonia, or sepsis/septicemia during the index admission or within 7 days from the date of admission; surgical site bleeding, pulmonary embolism or death during the index admission or within 30 days from the date of the index admission; or mechanical complications, periprosthetic joint infection, or wound infection during the index admission or within 90 days of the index admission [2]. The THA/TKA complication measure has been publicly reported on [Hospital Compare](#) since 2013 [3, 4]. In Fiscal Year 2019, the THA/TKA complication measure will be included in the HVBP program [5].

FIGURE I. Distributions of THA/TKA RSCRs (%) for hospitals with the lowest and highest proportions of African-American patients, April 2012–March 2015.



Variation in RSCRs reflects differences in performance among hospitals; lower RSCRs suggest better quality and higher RSCRs suggest worse quality. To understand how caring for African-American patients might impact a hospital's RSCR, we examined RSCRs among hospitals with high and low proportions of African-American patients. We compared the THA/TKA RSCRs for the 279 hospitals with the lowest proportion of African-American Medicare FFS patients (0% of a hospital's Medicare FFS patients) to the 279 hospitals with the highest proportion of African-American Medicare FFS patients ($\geq 19.2\%$ of a hospital's Medicare FFS patients) for the April 2012 – March 2015 reporting period. We defined hospitals with the lowest and highest proportions of African-American patients as those that fall within the lowest and highest deciles of all hospitals with 25 or more qualifying admissions. The proportion of African-American Medicare FFS patients for each hospital was determined using the Medicare Part A Inpatient Claims from 2014 [2]. All hospitals with 0% African-American patients were included in the lowest decile. To ensure accurate assessment of each hospital, the THA/TKA complication 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 specified complications [2].

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TABLE I. Distributions of THA/TKA RSCRs (%) for hospitals with the lowest and highest proportions of African-American patients, April 2012–March 2015.

	THA/TKA RSCR (%)	
	Lowest proportion (0%) African-American patients; n=279	Highest proportion (\geq 19.2%) African-American patients; n=279
Maximum	4.6	6.0
90%	3.6	3.8
75%	3.3	3.4
Median (50%)	3.0	3.1
25%	2.8	2.7
10%	2.6	2.5
Minimum	2.1	1.9

The median THA/TKA RSCR for hospitals with the lowest proportion of African-American patients was 3.0% (interquartile range [IQR]: 2.8%-3.3%; Figure 1 and Table 1). The median THA/TKA RSCR for hospitals with the highest proportion of African-American patients was 3.1% (IQR: 2.7%-3.4%; Figure 1 and Table 1).

Hospitals with the lowest proportion of African-American patients had a median THA/TKA RSCR that was 0.1 percentage points lower than hospitals with the highest proportion.

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. Dorsey, K., Grady, J., Suter, L. G., et al. 2016 Procedure-Specific Measure Updates and Specifications Report Hospital-Level Risk-Standardized Complication Measure: Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA) – Version 5.0. <https://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=Qnet-Public%2FPage%2FQnetTier4&cid=1228772782693>. 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. 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, 2 2016.

5. Hospital Value-Based Purchasing (HVBP) Overview. QualityNet website. <https://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnet-Tier2&cid=1228772039937>. Accessed March 1, 2016.