

HOSPITAL CHARACTERISTICS

► Variation in 30-day readmission rates across hospitals following isolated coronary artery bypass graft surgery or elective primary total hip arthroplasty and/or total knee arthroplasty.

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 procedure-specific readmission measures assess unplanned readmissions for any reason within 30 days of the date of discharge from a hospitalization for elective primary total hip arthroplasty (THA) and/or total knee arthroplasty (TKA) or isolated coronary artery bypass graft (CABG) surgery [1]. “Isolated” CABG procedures are those performed without concomitant high-risk cardiac and non-cardiac procedures, such as valve replacement. Patients can be readmitted to the same hospital or to a different hospital. The measures include Medicare fee-for-service (FFS) beneficiaries aged 65 or older.

CMS began publicly reporting 30-day risk-standardized readmission rates (RSRRs) following elective primary THA/TKA in 2013 and following isolated CABG surgery in 2015 [2]. Publicly reported measure results are updated annually on the [Hospital Compare](#) website. The THA/TKA and CABG readmission measures have been included in the Hospital Readmissions Reduction Program (HRRP) since 2015 and 2017, respectively, [3].

FIGURE 1. Distributions of hospital RSRRs (%) for CABG, July 2013 - June 2016.

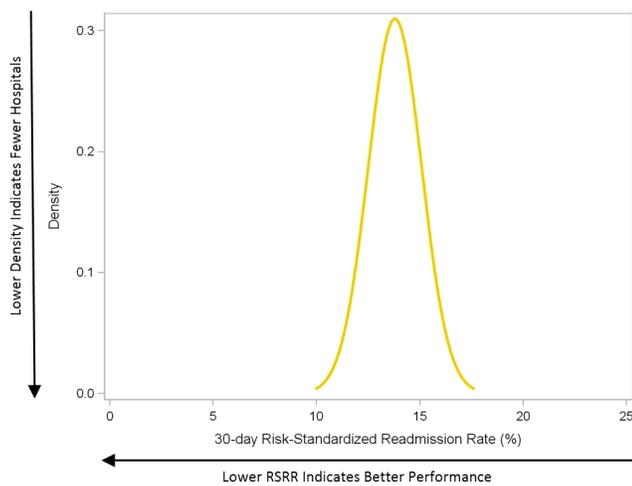
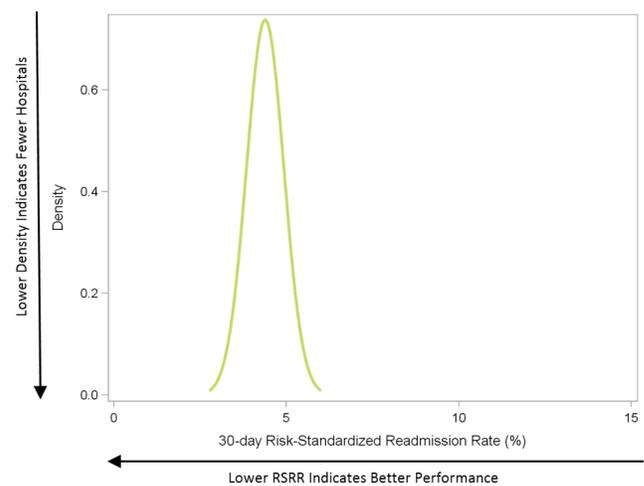


FIGURE 2. Distributions of hospital RSRRs (%) for THA/TKA, July 2013 - June 2016.



Variation in procedure-specific RSRRs 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, we examined hospital RSRRs for CABG and THA/TKA 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 that have strong relationships with the readmission outcome [1].

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TABLE 1. *Distribution of hospital RSRRs (%) for CABG, July 2013-June 2016.*

Distribution of CABG RSRRs (%) Number of hospitals 1,034	
Maximum	20.9
90%	15.4
75%	14.5
Median (50%)	13.7
25%	12.9
10%	12.2
Minimum	10.6

TABLE 2. *Distribution of hospital RSRRs (%) for THA/TKA, July 2013-June 2016.*

Distribution of THA/TKA RSRRs (%) Number of hospitals 2,811	
Maximum	7.2
90%	5.1
75%	4.7
Median (50%)	4.3
25%	4.1
10%	3.8
Minimum	2.5

Hospital RSRRs for CABG and THA/TKA were normally distributed and centered at 13.7% and 4.3%, respectively (Figure 1 and Table 1; Figure 2 and Table 2). Additionally, hospitals were distributed over an interquartile range (IQR) of 1.6 and 0.6 percentage points, respectively (Table 1 and Table 2).

For the CABG and THA/TKA readmission measures, half of the hospitals have RSRRs within 1.6 and 0.6 percentage points of the median hospital RSRR for each measure. Additionally, the range in RSRRs for the CABG and THA/TKA readmission measures was 10.3 and 4.7 percentage points, respectively. This demonstrates that there are continued opportunities for improvement.

1. Jaymie Simoes, Jacqueline N. Grady, Jo DeBuhr, et al. 2017 Procedure-Specific Measures Updates and Specifications Report Hospital-Level 30-Day Risk-Standardized Readmission Measures: Isolated Coronary Artery Bypass Graft (CABG) Surgery – Version 4.0 Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA) – Version 6.0. <https://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier4&cid=1219069855841>. 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 Readmissions Reduction Program Overview. QualityNet website. <https://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier2&cid=1228772412458>. Accessed March 1, 2017.

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