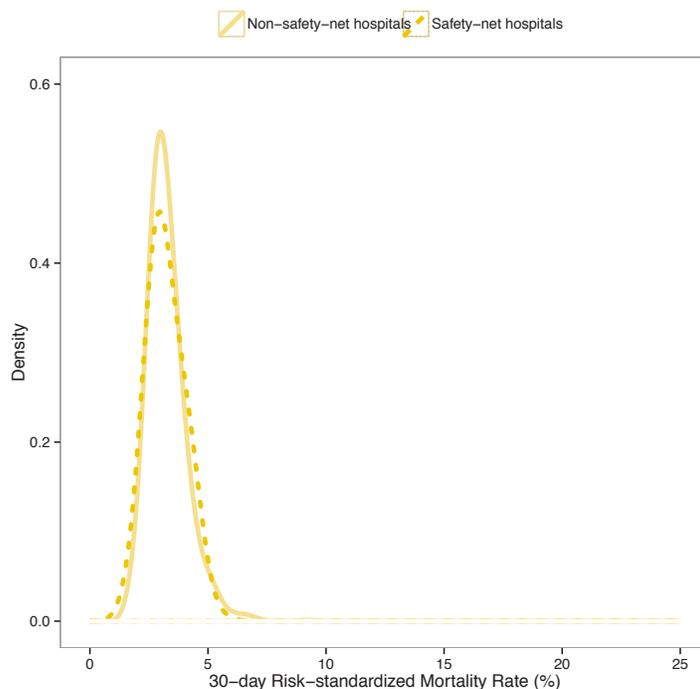


► Performance on the isolated coronary artery bypass graft surgery mortality measure by hospital characteristics: **safety-net status, teaching status, and urban or rural location.**

The Centers for Medicare & Medicaid Services (CMS) periodically investigates select hospital characteristics that may impact a hospital's performance on the following mortality measure: hospital-level 30-day risk-standardized mortality rate (RSMR) following isolated coronary artery bypass graft (CABG) surgery [1]. The CABG mortality measure includes Medicare fee-for-service (FFS) beneficiaries aged 65 or older [2]. "Isolated" CABG procedures are those performed without concomitant high-risk cardiac and non-cardiac procedures, such as valve replacement [2]. The CABG mortality measure assesses death from any cause within 30 days of a hospital admission for CABG surgery, regardless of whether the patient dies while still in the hospital or after discharge from the hospital [2]. The CABG mortality measure has been publicly reported on [Hospital Compare](#) since 2015 [3].

FIGURE I Distributions of hospital RSMRs (%) for isolated CABG by safety-net status, July 2011-June 2014.



Variation in RSMRs reflects differences in performance among hospitals; lower RSMRs suggest better quality, and higher RSMRs suggest worse quality. To understand the impact of hospital safety-net status, teaching status, and urban or rural location, we examined RSMRs among hospitals with these characteristics with 25 or more qualifying admissions. Therefore, we evaluated the CABG RSMRs for a total of 1,060 hospitals by comparing 156 safety-net hospitals against 904 non-safety-net hospitals, 603 teaching hospitals against 457 non-teaching hospitals, and 1,056 urban hospitals against 4 rural hospitals for the July 2011 – June 2014 reporting period.

Safety-net hospitals are defined as those committed to caring for populations without stable access to care, specifically public hospitals or private hospitals with a Medicaid caseload greater than one standard deviation above their respective state's mean private hospital Medicaid caseload [4]. Teaching Hospitals provide post-graduate education for physicians completing residency and fellowship [4]. Urban and rural hospitals are defined by hospital self-identification [4].

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HOSPITAL CHARACTERISTICS

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 [2].

FIGURE 2 Distributions of hospital RSMRs (%) for isolated CABG by teaching status, July 2011-June 2014.

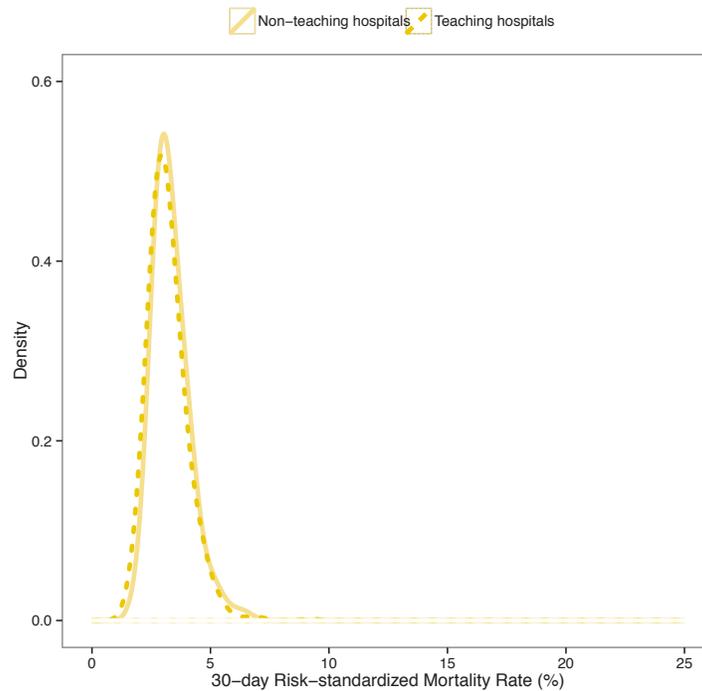


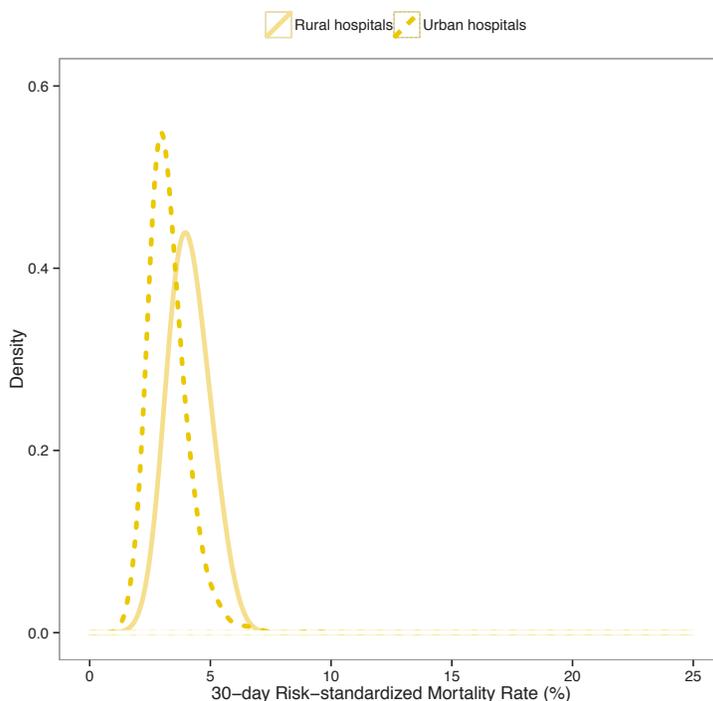
TABLE I Distributions of hospital RSMRs (%) for isolated CABG overall, by safety-net status, teaching status, and urban or rural location, July 2011-June 2014.

| | CABG RSMR (%) | | | | | | |
|--------------|--------------------|--------------------------------|---------------------------------------|---------------------------------|-------------------------------------|-------------------------------|-------------------------|
| | Overall; n=1060 | Safety-net hospitals; n=156 | Non-safety-net hospitals; n=904 | Teaching hospitals; n=603 | Non-teaching hospitals; n=457 | Urban hospitals; n=1056 | Rural hospitals; n=4 |
| Maximum | 9.2 | 5.6 | 9.2 | 9.2 | 6.6 | 9.2 | 5.0 |
| 90% | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 5.0 |
| 75% | 3.7 | 3.7 | 3.7 | 3.6 | 3.7 | 3.7 | 4.6 |
| Median (50%) | 3.1 | 3.1 | 3.1 | 3.1 | 3.2 | 3.1 | 3.9 |
| 25% | 2.7 | 2.7 | 2.7 | 2.6 | 2.8 | 2.7 | 3.7 |
| 10% | 2.4 | 2.4 | 2.4 | 2.3 | 2.5 | 2.4 | 3.6 |
| Minimum | 1.6 | 1.6 | 1.6 | 1.6 | 1.8 | 1.6 | 3.6 |

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The median CABG RSMR for all hospitals was 3.1% (interquartile range [IQR]: 2.7%-3.7%; Table 1). The median CABG RSMR for safety-net hospitals was 3.1% (IQR: 2.7%-3.7%) and for non-safety-net hospitals was 3.1% (IQR: 2.7%-3.7%; Figure 1 and Table 1). The median CABG RSMR for teaching hospitals was 3.1% (IQR: 2.6%-3.6%) and for non-teaching hospitals was 3.2% (IQR: 2.8%-3.7%; Figure 2 and Table 1). The median CABG RSMR for urban hospitals was 3.1% (IQR: 2.7%-3.7%) and for rural hospitals was 3.9% (IQR: 3.7%-4.6%; Figure 3 and Table 1).

FIGURE 3 Distributions of hospital RSMRs (%) for isolated CABG by urban or rural location, July 2011-June 2014.



Safety-net hospitals had a median CABG RSMR that was equal to that of non-safety-net hospitals, teaching hospitals had a median CABG RSMR that was 0.1 percentage points lower than non-teaching hospitals, and urban hospitals had a median CABG RSMR that was 0.8 percentage points lower than rural hospitals.

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