

## MEMORANDUM

**TO:** NQF Consensus Standards Approval Committee  
**CC:** The Centers for Medicare and Medicaid Services;  
The Society of Thoracic Surgeons  
**FROM:** YNHSC Center for Outcome Research and Evaluation  
**DATE:** Monday, December 29, 2014  
**SUBJECT:** Response to Surgery Standing Committee Phase 1 Project Appeals letters regarding Measure 2558: Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate (RSMR) Following Coronary Artery Bypass Graft (CABG) Surgery

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We deeply appreciate the concerns expressed in the submitted appeal letters. In brief, the stated concerns are that:

- a performance measure of 30-day mortality might influence providers to withhold comfort care or fail to appropriately transition patients to comfort care during the post-operative period, and
- focusing solely on mortality may perpetuate non-patient-centered care and CMS should consider additionally measuring patient-reported outcomes.

We appreciate these concerns and the recommendation to measure alternate outcomes such as patient-reported outcomes. However, we believe there is current benefit achieved by measuring 30-day mortality following CABG surgery. Mortality rates following CABG surgery are not insignificant and vary across hospitals. For example, in January 2009 – September 2011 Medicare FFS data, the median hospital-level risk-standardized mortality rate after CABG was 3.1% and ranged from 1.5% to 9.3%. Even within a single state (New York),<sup>1</sup> the observed in-hospital/30-day all-cause, hospital-level mortality rate was 1.81% and ranged from 0.0% to 5.6% among patients who were discharged after CABG surgery (without any other major heart surgery earlier in the hospital stay). The risk-adjusted mortality rate in New York ranged from 0.0% to 8.2%. These rates suggest wide variation and that there is room for improvement. An all-cause mortality measure for patients who undergo CABG surgery will provide hospitals with an incentive to reduce mortality through improved coordination of perioperative care and discharge planning. This is further supported by the success of registry-based mortality measures in reducing CABG mortality rates. For example, California reports that CABG mortality in that state has steadily declined from 2.9% in 2003, the first year of mandatory reporting of their state registry measure, to 2.2% in 2008.<sup>2</sup> The Society of Thoracic Surgeons has also documented decreasing 30-day mortality rates after isolated CABG among their registry participants.<sup>3</sup>

Not only does NQF Measure #2558: Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following CABG Surgery provide an important and patient-centered signal of care quality reflected by the mortality outcome itself, but it is harmonized with the paired readmission measure, NQF Measure #2515: Hospital 30-Day, All-Cause, Risk-Standardized Readmission Rate (RSRR) Following CABG Surgery,

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<sup>1</sup> New York State Department of Health. Adult Cardiac Surgery in New York State 2006-2008 2010:54.

<sup>2</sup> California CABG Outcomes Reporting Program. The California Report on Coronary Artery Bypass Graft Surgery: 2007-2008 Hospital and Surgeon Data 2011:119.

<sup>3</sup> Shahian DM, O'Brien SM, Sheng S, et al. Predictors of Long-Term Survival Following Coronary Artery Bypass Grafting Surgery: Results from The Society of Thoracic Surgeons Adult Cardiac Surgery Database (The ASCERT Study). *Circulation* 2012; 125(12):1491-500.

to ensure that the full spectrum of perioperative care and care coordination can be assessed while simultaneously ensuring CMS can monitor for unintended consequences of measurement. To our understanding, published data are mixed regarding whether measurement will, in fact, influence physician behavior to withhold comfort care. In the appeal from Dr. Margaret Schwarze is an article,<sup>4</sup> authored by Dr. Schwarze and colleagues, that states “there was no difference in reported concern about performance measures between surgeons who withdrew and did not withdraw life-supporting therapy (25% vs 27%,  $P = 0.54$ )”. We also note that a recent Cochrane review concluded “Evidence that the public release of performance data may have an impact on the behaviour of healthcare professionals or organisations is lacking.”<sup>5</sup>

Regarding Ms. Rebecca Aslakson’s and others’ recommendation to use patient-reported outcomes to replace or supplement mortality measurement, at this time patient-reported outcomes are not routinely collected and thus cannot currently be used in a reliable manner for national measurement programs. Further, process measures unfortunately do not correlate closely with clinical outcomes and thus cannot fully supplant outcome measures. Until appropriate patient-reported outcome metrics are widely available, we believe there is greater good achieved by measuring CABG mortality than by not measuring this outcome at all. We also note that The Society of Thoracic Surgeons’ Measure #0119: Risk-Adjusted Operative Mortality for CABG has been reporting CABG mortality for several years without apparent harm.<sup>6</sup>

Overall, according to our clinical expert consultants and Technical Expert Panel, patients who are undergoing CABG surgery likely have a reasonable expectation of surviving more than 30-days beyond their surgery or physicians would not offer such an invasive procedure nor would patients likely consent to this procedure if their primary goal of care was comfort and not survival. According to The Society of Thoracic Surgeons data, more than 95% of isolated CABG patients are alive at one-year.<sup>7</sup>

CMS has heard the concerns voiced in the appeals letters and takes these concerns under consideration throughout the lifecycle of the measures. As with all of its measures, CMS reevaluates measures on an annual basis, including annual and comprehensive reevaluations through the NQF. This ongoing reevaluation provides an opportunity for continued monitoring for potential unintended consequences of measurement, including increases in post-30-day mortality or hospice enrollment. In their response to the appeals letters, The Society of Thoracic Surgeons has made a similar commitment.

We would also like to bring to the attention of the Committee that that our response applies to the Society of Thoracic Surgeons’ Measure #0119: Risk-Adjusted Operative Mortality for CABG, with which Measure 2558: Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following CABG Surgery is harmonized to the extent possible given their different data sources and their complementary but distinct goals to assess mortality throughout different post-operative settings and time periods. We continue to support the endorsement of both CABG mortality measures in order to provide any stakeholder who implements the measures scientifically rigorous instruments to continue progress towards clinical data-based measurement and ultimately to achieve better patient care and outcomes.

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<sup>4</sup> Schwarze ML, Redmann AJ, Brasel KJ, Alexander GC. The Role of Surgeon Error in Withdrawal of Postoperative Life Support. *Annals of Thoracic Surgery* 2012; 256(1):10-15.

<sup>5</sup> Ketelaar N, Faber MJ, Flottorp S, Rygh LH, Deane KOH, Eccles MP. Public release of performance data in changing the behaviour of healthcare consumers, professionals or organisations. *Cochrane Database Syst Rev.* 2011; (11): CD004538.

<sup>6</sup> Shahian DM, O'Brien SM, Sheng S, et al. Predictors of Long-Term Survival Following Coronary Artery Bypass Grafting Surgery: Results from The Society of Thoracic Surgeons Adult Cardiac Surgery Database (The ASCERT Study). *Circulation* 2012; 125(12):1491-500.

<sup>7</sup> Shahian DM, O'Brien SM, Sheng S, et al. Predictors of Long-Term Survival Following Coronary Artery Bypass Grafting Surgery: Results from The Society of Thoracic Surgeons Adult Cardiac Surgery Database (The ASCERT Study). *Circulation* 2012; 125(12):1491-500.