

# STS Public Reporting Online



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## STS CABG Composite Score

The STS CABG composite score is calculated using a combination of 11 measures of quality divided into four broad categories or domains. The first domain is risk-adjusted mortality, and the second domain is risk-adjusted major morbidity, which represents the percentage of patients who leave the hospital with none of the five most serious complications (often referred to as morbidities) of CABG—reoperation, stroke, kidney failure, infection of the chest wound, or prolonged need to be supported by a breathing machine, or ventilator. Overall, based on data from the STS National Database, about 85 percent of patients are discharged with no such complications. The third domain measures the percentage of CABG procedures that include the use of at least one of the arteries from the underside of the chest wall—the internal mammary (or internal thoracic) artery— for bypass grafting. This artery has been shown to function much longer than vein grafts, which can become blocked over time. The final domain measures how often all of the four medications believed to improve a patient's immediate and long-term outcomes were prescribed. Those drugs include beta-blocking drugs prescribed pre-operatively, as well as aspirin (or similar drugs to prevent graft clotting), and additional beta-blockers and cholesterol-lowering medicines prescribed at discharge. Importantly, the 11 individual measures and the overall composite measure methodology are all endorsed by the National Quality Forum and have undergone careful scrutiny by quality measure experts.

STS Public Reporting Online lists participants' scores for each of the four domains and the STS CABG overall composite score. Each of these numerical scores can be compared with the average scores for all participants in the Database. Participants also have a star rating. The star rating calculation begins by assuming all providers are average and then determines statistically if there is at least a 99 percent probability that the performance of any specific provider is lower than average (one star) or higher than average (three star). For the several years that STS has been calculating these scores, about 10-15 percent of all Adult Cardiac Surgery Database participants have been one-star, about 10-15 percent have been three-star, and the remainder have been two-star, or average programs.

Finally, it is important to understand that these scores compare the results of a hospital or surgical practice/group with those of an average hospital or practice participating in the Database and treating patients with the same mix of severity of illness. Even when the results are risk-adjusted, it is not necessarily appropriate to compare directly the scores of individual hospitals or surgical groups to each other, especially if they treat markedly different kinds of patients. In addition, a surgical group may practice at more than one hospital, and more than one surgical group may practice at a given hospital.



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