

# Study finds public reporting of heart-bypass surgery outcomes in California has not reduced access

April 21 2010

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New UC Davis research has found that patients scheduled to undergo coronary artery bypass graft (CABG) surgery in California were just as ill in 2003 — when public reporting of performance data for this particular surgery began — as in 2006, evidence that "report cards" did not cause doctors or hospitals to turn away sicker patients.

The study, published in the April 2010 issue of the *Annals of Thoracic Surgery*, also found that despite similar patient profiles, death rates for [patients](#) in the highest risk group for CABG showed a 26 percent decline in relative risk during that same timeframe.

"Our findings suggest no evidence of a negative impact in California from public reporting of hospital outcomes following CABG operations," said Zhongmin Li, assistant professor of cardiovascular medicine and lead author of the study. "This is very reassuring, since there was some fear at first that this system would reduce access to this important surgery for high-risk patients."

In 2003, the California Legislature mandated public reporting of CABG operative mortality in all nonfederal hospitals and of surgeons who perform the procedure. Operative mortality is defined as death occurring in the hospital after CABG regardless of length of stay, or death occurring after [hospital discharge](#) within 30 days of the operation.

It was hoped that public disclosure of hospital and surgeon performance would motivate lower-performing providers to find ways to optimize their outcomes. Another goal was to give patients easy access to data they could use in selecting CABG providers. Many worried, however, that public report cards would lead hospitals or surgeons to deny care to the riskiest patients in order to improve their rankings.

CABG, indicated for patients with narrowed or blocked coronary arteries due to atherosclerosis, was in 2003 one of the most commonly performed major surgeries in the United States and is still considered the "gold standard" treatment for severely blocked arteries. During the procedure, diseased arteries are bypassed using grafts from other blood vessels. The procedure typically takes about four hours to perform and involves a five- to seven-day hospital stay if there are no complications.

"There's always a worry from medical professionals that report cards don't reflect the higher risk factors of some of the patients they see," said Ezra A. Amsterdam, a UC Davis professor of [cardiovascular medicine](#) and senior investigator on the study. "Fortunately, this study accounts for individual patient risks so that hospitals that serve the sickest patients are not unfairly graded if their death rates are higher because of that."

Using data reported to the CABG Outcomes Public Reporting Program, the investigators applied a complex formula of 25 variables to estimate preoperative risk for each patient, based on the number and severity of risk factors, including age, race, body mass index, and existing medical conditions and physiologic measures. Under this formula, the calculated predicted risk of death from CABG in 2003 and 2006 improved but was not statistically different (3.06 percent and 3.05 percent, respectively). Overall death rates from the procedure did improve significantly - from 2.90 percent in 2003 and 2.22 percent in 2006.

According to J. Nilas Young, chief of cardiothoracic surgery at UC Davis and one of the study authors, reasons for the improvement in the death rate can be attributed to advances in surgical techniques along with improved anesthesiology, preoperative and postoperative care.

"There were several new approaches to bypass surgery and technologies introduced in the study timeframe — and even through today — that help improve outcomes for patients," said Young.

Another study outcome showed that the number of CABG procedures decreased significantly among California nonfederal hospitals and surgeons between 2003 and 2006, from 21,276 to 15,647. Caseload reductions were found regardless of performance ranking - a trend Li attributes to the ongoing transition to the use of stents, which can be inserted earlier in the disease process to widen arterial pathways without surgery.

"This study bears very good news for patients," said Li. "It indicates that access to medical care has not decreased, patients have more options and CABG has become an even safer procedure."

Provided by University of California - Davis

Citation: Study finds public reporting of heart-bypass surgery outcomes in California has not reduced access (2010, April 21) retrieved 3 May 2024 from <https://medicalxpress.com/news/2010-04-heart-bypass-surgery-outcomes-california-access.html>

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