

Patients aren't healthier, but bypass is safer than in 1999

MAY 13, 2011 | [Reed Miller](#)

AATS Philadelphia, PA – Today's primary CABG patients are much more likely to survive stroke free than they were in 1999, even though they are not healthier today than they were then, the [Society of Thoracic Surgeons \(STS\) surgery database](#) shows [1].

Dr Andrew W ElBardissi (Brigham and Women's Hospital, Boston, MA) presented an analysis of 1 475 545 CABG cases in the STS database from 1999 to 2009 at the [American Association for Thoracic Surgery \(AATS\) 2011 Annual Meeting](#).

Patients undergoing CABG in 2009 at the end of the decade were younger, more often male, more ethnically diverse, and more often obese than patients undergoing CABG in 1999. The percent of CABG patients with hypercholesteremia went from around 60% to 84% and hypertension jumped from 71% to 85% between 1999 and 2009.

However, the growth of those risk factors was largely offset by the dramatic improvement in the smoking rate among CABG patients during the decade, from near 60% in 1999 to 30% in 2009. Also, more patients were on aspirin, beta blockers, ACE inhibitors, and statins, and there has been a dramatic increase in the use of the [left internal mammary artery](#) for coronary revascularization (72% in 1999 vs 90% in 2008, $p < 0.0001$) since 1999.

So while the overall predicted mortality of these patients based on the 1999 models has remained statistically constant at around 2.5%, the observed mortality rate over this period declined significantly from 2.6% in 1999 to 1.9% in 2008 ($p < 0.0001$), a relative risk reduction of 31%. The study also found significant reductions in reoperation for bleeding and sternal-wound infections. When patients undergoing salvage and emergency operations were excluded, mortality decreased from 2.3% to 1.6%.

Also, while the patients' predicted stroke risk based on the 1999 models has stayed around 1.5%, the observed incidence of postoperative stroke decreased significantly, from 1.6% in 1999 to 0.9% in 2008 ($p < 0.0001$), a relative risk reduction of 25%. When patients undergoing salvage and emergency operations were excluded, the stroke rate decreased from 1.5% to 1.1%.

"These data should serve as a benchmark for all interventional and surgical revascularization techniques," ElBardissi said.

ElBardissi reports no conflicts of interest.

Source

1. ElBardissi AW, Aranki SF, Sheng S, et al. Trends in isolated coronary artery bypass grafting: an analysis of the STS adult cardiac surgery database. Association for Thoracic Surgery 2011 Annual Meeting; May 9, 2011; Philadelphia, PA. Abstract available [here](#).

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