

Improved survival rates for mitral valve heart surgery patients

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Patients with mitral regurgitation, a type of valvular heart disease common in the elderly, are living longer after surgery, Yale School of Medicine researchers report in the journal *Circulation: Cardiovascular Quality and Outcomes*.

Surgery that replaces or repairs the mitral valve remains the definitive therapy for symptomatic [mitral regurgitation](#), but surgery carries considerable risks of mortality and complications such as infection and [renal failure](#). Led by John A. Dodson, M.D., a postdoctoral fellow in cardiology and geriatrics at Yale School of Medicine, the researchers found that short- and long-term mortality decreased in all subgroups of age, sex, and race, although it remained higher in female and non-white [patients](#) compared with male and white patients in all years studied.

Dodson and his team represent the NIH Heart, Lung and Blood Institute Center for [Cardiovascular Outcomes](#) Research (CCOR) at Yale University as well as the Yale University School of Medicine. They analyzed the 30-day and one-year mortality rate in 157,032 U.S. Medicare fee-for-service patients 65 years or older undergoing mitral valve surgery from 1999 to 2008.

"Mortality declined significantly at both 30 days and one year," said Dodson. "30-day mortality decreased from 8.1% to 4.2% from 1999 to 2008, a relative decline of 48%, while one-year mortality decreased from 15.3% in 1999 to 9.2% in 2008, a relative decline of 40%."

Dodson added that the overall rate of mitral valve surgery declined by 9% during the study period. Patients who were very elderly - 85 years of age or older - made up an increasing proportion of all patients undergoing mitral valve surgery (8.8% in 1999 to 12.7% in 2008). Surgery was also more commonly performed in male and white patients than in female and nonwhite patients.

"The marked reduction in mortality after mitral [valve surgery](#) over time is an encouraging trend for cardiac surgery," said Dodson. "Although our study was not designed to identify causes for the reduction in mortality, several factors may be responsible, including improved surgical techniques, and lower rates of post-operative complications."

"There remain differences in the rate of [mitral valve surgery](#) performed, and [mortality](#) outcomes, among sex and race subgroups that deserve further investigation," he added.

Dodson has been nominated for an American Heart Association Quality of Care and Outcomes Research (QCOR) Young Investigator Abstract Award, and the publication his paper is timed to coincide with his presentation at the QCOR meeting.

More information: [doi: 10.1161/CIRCOUTCOMES.112.966077](https://doi.org/10.1161/CIRCOUTCOMES.112.966077)

Provided by Yale University

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