

Yale researchers see decline in hospitalizations for serious heart infection

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Hospitalizations for endocarditis, a deadly heart infection that disproportionately affects older heart patients, have declined in recent years despite recommendations for limited use of antibiotics to prevent the illness. These findings were recently published by Yale School of Medicine researchers in the *Journal of the American College of Cardiology*.

Endocarditis is the most serious infection of the cardiovascular system, and the risk increases with surgical procedures. Past studies showed a marked increase in endocarditis [hospitalization rates](#) during the 1990s. As a preventative measure, many clinicians routinely prescribed antibiotics before dental procedures, and gastrointestinal and other types of surgeries.

While endocarditis risk factors, such as [rheumatic heart disease](#), have declined recently, the risk has increased for those with [cardiac pacemakers](#) and prosthetic valves. In addition, the American Heart Association narrowed the [use of antibiotics](#) for endocarditis to only a subgroup of patients undergoing dental procedures.

In light of these changes, the Yale research team, led by first author Behnood Bikdeli, M.D., postdoctoral associate in [cardiovascular medicine](#) at the Yale Center for Outcomes Research and Evaluation, assessed the annual rates of endocarditis hospitalization and the related outcomes among 262,658 Medicare patients aged 65 and older from 1999 through 2010.

The study showed an increase in endocarditis hospitalizations from 1999 to 2005. However from 2006 to 2010, the team saw no increase, but instead noticed a decline. "We were surprised to see reduced rates of endocarditis hospitalizations during this time period," said Bikdeli who is also an internal medicine resident at Yale. "This downward trend was consistent in all major study subgroups, but certain subgroups, including black participants, had higher hospitalization rates and worse outcomes in the study period."

Bikdeli said this racial disparity in outcomes, as well as reasons for the overall decline in hospitalizations, should be investigated further. He added, "We would ideally like to see comparative effectiveness studies, such as randomized trials, to test antibiotics' efficacy, but due to the expense and the minimal potential effects of antibiotics, such a study would be unlikely in the near future. Therefore, surveillance investigations such as ours are particularly important to monitor the disease and outcomes."

"Clinicians should consider the risks and benefits of antibiotic-use on a case-by-case basis and should share the information with their patients for appropriate decision making," Bikdeli concluded.

More information: *Journal of the American College of Cardiology*
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