

Cardiothoracic surgeons projected to be in short supply by 2025

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Health and population trends could increase demand for cardiothoracic surgeons in the United States far greater than the supply - diminishing and delaying care, according to a report in *Circulation: Journal of the American Heart Association*.

A study undertaken by the Association of American Medical Colleges' (AAMC) Center for Workforce Studies found that the demand for cardiothoracic surgery services is projected to increase by 46 percent by 2025 (compared to 2005), while the supply of these [surgeons](#) is expected to decrease 21 percent during that period.

The supply for cardiothoracic surgeons (physicians specially trained in surgeries of the heart and chest) is already dwindling, said Irving L. Kron, M.D., senior author of the study and Chair of Surgery and professor in the division of thoracic and cardiovascular surgery at the University of Virginia Health Sciences Center.

"The number of active cardiothoracic surgeons has fallen for the first time in 20 years," Kron said. "In 2007, 33 percent of available thoracic surgery fellowship positions went unfilled in the National Resident Matching Program. Surveys of residents in training in cardiothoracic surgery indicated that many were having difficulty finding employment after completing five years of general surgery training, followed by two years of a cardiothoracic surgery fellowship."

This could be, in part, because use of [coronary artery bypass](#) grafting

(CABG) - the most common procedure performed by cardiothoracic surgeons - is declining (down 28 percent from 1997-2004). Meanwhile cardiac stent placement, performed by cardiologists rather than surgeons, is increasing (up 121 percent from 1997-2004.)

"Stenting is a much less invasive procedure than open-heart surgery and can be performed by an interventional cardiologist," he said. "However, it is not always a suitable substitute for CABG. Furthermore, patients with stents may ultimately end up needing CABG down the road, although there is still limited data on long-term outcomes."

The elderly are far more likely to need heart surgery, despite the decrease in CABG, thus increasing the need for cardiothoracic surgeons as the population continues to age.

Kron and colleagues projected the supply and demand for cardiothoracic surgeons by analyzing the general population, as well as workplace shifts in the cardiothoracic surgeon population. They used simulation models to predict what might happen in various scenarios.

"The U.S. population is growing by 25 million a decade and the over-65 population is projected to double between 2000 and 2030," Kron said. "Even if there were an immediate increase in the number of residents entering training, we would likely still see an overall decline in the supply of cardiothoracic surgeons over the next 20 years."

A shortage of these specialists could result in patients experiencing significant waiting time before getting needed surgeries. This could potentially lead to unnecessary complications and deaths.

In general, population groups with less access to medical care, especially early care, tend to have poorer health outcomes; so, these populations could suffer most. And though there are some non-surgical options for

treating cardiac patients, the shortfall of cardiothoracic surgeons comes at a time when cardiologists will likely be in short supply as well, according to the paper.

The impending shortage of cardiothoracic surgeons is an "important threat," said Timothy Gardner, M.D., immediate past president of the American Heart Association, a cardiac thoracic surgeon and Medical Director for the Center for Heart and Vascular Health, Christiana Care Health System, Newark, Del.

"It is the American Heart Association's mission to promote the cardiovascular health of the population and effectively treat people with cardiac conditions," he said. "If the supply of key specialists, such as heart surgeons, declines, that could impact the health of the population and physicians' abilities to effectively treat people with heart disease."

Source: American Heart Association ([news](#) : [web](#))

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