

New research finds signal of decreased early post transplant survival in new heart transplant system

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In an analysis of the new heart organ allocation system for transplant patients in the U.S., researchers have identified a signal of a decrease in heart transplant survival rates. The study, "An Early Investigation of Outcomes with the 2018 Donor Heart Allocation System in the United States," is published as a rapid communication in the *Journal of Heart and Lung Transplantation*.

For the first time in over a decade, modifications were made to the U.S. donor [heart](#) allocation system in October of 2018, aimed at better distinguishing the most medically urgent heart [transplant](#) candidates. The old system, in place since 2005, led to overcrowding of the list, prolonged waiting times and consequent inequity in allocation across geographic regions. The new system was envisioned to allow more equitable organ allocation while providing an overall benefit to patients awaiting heart transplantation.

"This is an early trend, however, it is concerning," said lead author Rebecca Cogswell, MD, who is an assistant professor at the University of Minnesota Medical School's Department of Medicine in the Division of Cardiology and medical director of mechanical circulatory support with M Health Fairview. Cogswell and colleagues at the U of M and several institutions across the U.S., including Brigham and Women's Hospital and Harvard Medical School, undertook an early look at outcomes as a result of the new allocation system.

"This early look is similar to the kind of surveillance that occurs in large clinical trials to ensure safety," Cogswell explained.

The authors found that the changed allocation system has resulted in an increase of sicker patients being transplanted with greater frequency as intended, however, unintended consequences are emerging. Organs are being retrieved from longer distances, and fewer patients supported on durable left ventricular assist devices are receiving heart transplants in the U.S.

"The increase in mortality appears to be driven by the fact that patients who are receiving hearts are sicker than in the previous system," Cogswell reported.

The researchers found the waitlist mortality has decreased in the new system. Cogswell explained, "As waitlist mortality in the previous system was relatively low, the absolute impact of this reduction in waitlist mortality is small compared to the increase in death after transplantation that we are observing in this early examination of the new system."

"If these early observations of a substantial decline in heart transplant survival persist, and we certainly hope that they do not, several programs will be under stress for their very survival," said Mandeep R. Mehra, MD, senior author of this study, who is executive director of the Center for Advanced Heart Disease at Brigham and Women's Hospital and a professor of Medicine at Harvard Medical School.

Cogswell stated that more data will be needed to confirm these trends and to inform policy changes.

"As a community, we have a responsibility to look at this data at regular intervals to determine if we need to implement changes sooner rather than later," Cogswell emphasized.

More information: Rebecca Cogswell et al. An Early Investigation of Outcomes with the New 2018 Donor Heart Allocation System in the United States, *The Journal of Heart and Lung Transplantation* (2019). DOI: [10.1016/j.healun.2019.11.002](https://doi.org/10.1016/j.healun.2019.11.002)

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