

Deaths increase under new heart donor system, research team finds

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Deaths following heart transplants have increased in the year after a new allocation system was put in place to reduce wait times and prioritize donor organs for the sickest patients.

The finding by Dr. Rebecca Cogswell at the University of Minnesota and colleagues is a preliminary look at the effect of the new system for

deciding which [donor hearts](#) go where, but it could result in changes.

"We as a community felt there might be some decrease in survival ... but I think the level of this drop-off is startling," said Cogswell, a cardiologist who published the analysis in the *Journal of Heart and Lung Transplantation* along with colleagues at the U and from Massachusetts, Michigan, Ohio and South Carolina.

Survival at least six months after [heart transplants](#) decreased from 93.4% under the previous system to 77.9% under the system that replaced it in October 2018, the researchers found.

A decline was somewhat expected because the United Network for Organ Sharing, or UNOS, implemented a new system that prioritized [donor](#) hearts for sicker patients who were more at risk for complications after their transplants.

The old system gave "high priority" status to a wide range of patients, from emergency patients whose hearts were no longer pumping enough blood, to stable patients using [mechanical devices](#) at home to keep their hearts functioning.

The new system broke that group into three tiers, with the emergency patients going to the top of the list. While timing is crucial—only about four to six hours can pass between the removal of a heart from a dying donor and its transplant into a patient—the new rules also prevented local hospitals from getting priority access to nearby organs if other transplant centers in the region had patients in greater need.

Cogswell's analysis showed a benefit of the new system: a decline in patients dying on the heart transplant waiting list. However, it was outweighed by the increase in post-transplant deaths. If [current trends](#) continue, the researchers predicted 38 fewer deaths on the waiting list

but 388 more post-transplant deaths over six months in the new system.

A written reaction from UNOS said the new allocation system was created to specifically reduce waitlist mortality and hasn't been measured before against post-transplant outcomes.

"Rather, it has been the responsibility of individual centers to optimize individual candidates and identify candidates likely to do well following a [heart](#) transplant," the statement said.

Cogswell said the new system for allocating donor hearts was needed because the old rules existed before the broad use of so-called "bridge to [transplant](#)" devices such as the left-ventricular assist device, or LVAD, which helps failing hearts pump blood until they can be replaced.

She agreed that the data might not suggest a need to change the new allocation system, but rather to tell doctors that they need to be more conservative in deciding when to prioritize the limited supply of donor hearts for emergency cases. Some of those patients might have better chances if first receiving assist devices and then undergoing transplants later when they are stable.

Heart transplants in Minnesota have increased from 64 in 2014 to 81 so far this year, according to the U.S. Organ Procurement and Transplantation Network. Cogswell said the state might have been a beneficiary of the new rules that placed patient need over geography. Transplants also have increased nationally due in part to the opioid-addiction epidemic, which has increased the number of donor-eligible deaths.

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