

Changes to distribution of livers for transplant proposed

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Transplantation specialists have proposed changes to the allocation and distribution of organs used for liver transplants. The recommended policy modifications take into account the scarcity of available organs, ensuring rapid allocation and delivery of the organ to those most in need in order to reduce mortality for waitlisted patients. Details of the proposed model are available in the September issue of *Liver Transplantation*, a journal published by Wiley-Blackwell on behalf of the American Association for the Study of Liver Diseases.

A number of diseases affect [liver function](#), including [hepatitis B](#) and C, nonalcoholic [fatty liver disease](#), and autoimmune [liver](#) disease. The severity of liver disease ranges from mild to more severe forms that are life-threatening. When the liver fails (end stage liver disease) and patient life is at risk for death, transplantation is the recommended option. However, the scarcity of donor organs is one of the greatest concerns for transplantation candidates and a challenge for clinicians who treat them. According to the Organ Procurement and Transplant Network (OPTN) there are more than 16,000 Americans on the waiting list to receive a liver as of August 2011.

The current model in the U.S. defines allocation as the order of patients on a particular waiting list. Since 2002, the transplantation community has used the Model for Endstage [Liver Disease](#) (MELD) score and length of time on waiting list to rank patients for allocation of the available liver. Distribution is the determination of the area to which a [donor liver](#) will be offered, and uses a local, regional, national system to

distribute available livers for transplant. The OPTN donation service area that is assigned to the organ procurement organization is the designated "local" region using this system.

In an examination of the allocation and distribution of livers for transplantation, the authors reviewed the system currently used to determine which patients receive organs for transplant and provided alternative models to promote a more equitable distribution. "Given the disparity between supply and demand of deceased donor livers, there will always be differences of opinion as to which patient should be transplanted first," said lead author Kenneth Washburn, M.D., with the University Transplant Center, a partnership of The University of Texas Health Science Center at San Antonio and one of its primary clinical partners, the University Health System. "Any system that redistributes organs from low-need to high-need areas will not please all stakeholders," he added.

The authors note that most deaths on the waiting list occur in patients with low MELD scores—the largest patient group on the list—and allocating organs to this group would not reduce the overall death rate due to the low and unpredictable individual mortality risk. Since the largest number of deaths on the waiting list cannot be prevented through organ allocation, the authors suggest a system should focus on patients with higher MELD scores who have the greatest risk of death.

Based on prior feedback from involved stakeholders, small incremental changes to the current system would be the best method for making allocation policy improvements. One potential next step, according to the authors, is moving from a "share 15" regional model to a "national 15" sharing model which would direct donated livers to waitlist patients with MELD score of 15 at the regional then national level before candidates at the local level whose MELD score is less than 15 would be offered a liver.

Another incremental change the authors propose is regional sharing for the sickest patients with high MELD scores (> 35). Redistribution of donated livers to this patient group results in a decrease in waitlist mortality for these patients who have the highest risk of death while awaiting a transplant. "We suggest focusing on amendments to organ distribution that decrease waitlist deaths with the least amount of additional sharing of livers and minimizes the distance the organs travel," recommends Dr. Washburn.

More information: "Liver Allocation and Distribution: Possible Next Steps." Kenneth Washburn, Elizabeth Pomfret and John Roberts. Liver Transplantation; Published Online: August 22, 2011 ([DOI: 10.1002/lt.22349](https://doi.org/10.1002/lt.22349)) Print Issue Date: September 2011.

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