

Broader organ sharing won't harm liver transplant recipients

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Dr. Gentry.

New research shows that broader sharing of deceased donor livers will not significantly increase cold ischemia time (CIT)—the time the liver is in a cooled state outside the donor suggesting that this is not a barrier to broader sharing of organs.

However, findings published in *Liver Transplantation*, a journal of the American Association for the Study of Liver Diseases and the International Liver Transplantation Society, do indicate that broader sharing of organs will significantly increase the percentage of donor organs that are transported by flying rather than driving.

The ongoing shortage of livers available for transplantation continues to be a concern in the U.S., impacting some geographic areas more than others. Recent allocation policy changes seek to address organ shortages and reduce geographic

disparity. Livers are offered at the regional level first to candidates most at risk of death (status 1) and those with Model for End-Stage Liver Disease (MELD) a score of 35 or more before being offered to local wait list candidates.

"Shortages and geographic inequity of organs available for transplant have required the [liver](#) transplant community to reassess the allocation policy in the U.S., and even broader sharing of organs may be needed," explains Dr. Sommer Gentry with the United States Naval Academy in Annapolis, Md. "One concern with broader sharing is that transport times may increase and affect CIT, which could impair organ quality."

For the present study, the team first surveyed all organ procurement organizations to verify use of helicopters for transporting liver allografts, if a central facility was used to recover the organ, and at what distance the mode of transportation changed from driving to flying. Using the Scientific Registry of Transplant Recipients, researchers identified 111 centers that performed at least one adult liver transplant along with hospitals that recovered at least one of the 1284 deceased donor livers recovered in 2010. There were 809 public, private, and military owned airports used for organ transports.

A detailed model of driving, helicopter, or airplane and transport times between all hospitals was constructed. Results show that the median transport time estimated for regionally shared livers was two hours compared to 1 hour for livers used within the local area. The model-predicted transport mode was flying for 90% of livers shared at the regional level and 22% for locally allocated organs.

The median CIT was seven hours for livers shared regionally versus six hours for those used in the local area. Transport time comprised about 21% of CIT and variation in transport time accounted for roughly 15% of CIT variation. "Our findings indicate

that non-transport factors impact CIT much more than transport time," concludes Dr. Gentry. "Broader sharing of livers will not have much effect on CIT or negatively impact the [liver transplant](#) recipient, but will significantly increase the number of organs transported by flying."

More information: "Impact of Broader Sharing on Transport Time for Deceased Donor Livers." Sommer E Gentry, Eric KH Chow, Corey E Wickliffe, Allan B Massie, Tabitha Leighton and Dorry L Segev. Liver Transplantation; (DOI: [10.1002/lt.23942](https://doi.org/10.1002/lt.23942))

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