

May 08, 2015

Dear Editor,

Please find enclosed the edited manuscript in Word format (file name: 17696.edited).

Title: The impact of Geography on organ allocation: Beyond the distance to the transplantation center

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Name of Journal: *World Journal of Hepatology*

ESPS Manuscript NO: 17696

The manuscript has been improved according to the suggestions of reviewers:

. Format has been updated:

1. A short running title was provided.
2. A conflict of interest statement was signed by all authors and provided in a PDF format as an attachment.
3. The study was approved by the institutional review board (IRB). Given that the project is based on data from the United Network of Organ Sharing (UNOS) which is already de-identified, it was not deemed a human research project. A copy of the IRB statement is provided as an attachment.
4. The study is based on the UNOS registry, an additional informed consent from the patients does not apply.
5. The statistical review of the study was performed by a biomedical statistician. A certificate of statistical review is provided as an attachment and a sentence was added in that regard in the Methods section.
6. A Data sharing statement is added: Data sharing statement: The statistical code and dataset are available from the corresponding author at rony.ghaoui@bhs.org. There is no technical appendix. Consent was not obtained but the presented data are anonymized and were obtained from the United Network for Organ Sharing (UNOS) hence there is no risk of identification. A copy of the signed statement is provided as an attachment

7. A core tip was added to the manuscript: Geographic Information System (GIS) studies the impact of geography on many problems through statistical modeling and analysis. It has been used to guide decisions in business, government, environment, but has yet to be adopted in healthcare. Based on the UNOS database from 2003 to 2012 in one region, GIS revealed clustering of high and low rates of listing for liver transplantation in several geographic areas that could not have otherwise been predicted. This method can be adopted in different parts of the world and contribute to better allocation of resources to decrease the disparities in access to liver transplantation.
8. An Audio core tip is provided as an attachment
9. The reference numbers were placed in square brackets and superscript throughout the text
10. A Comments section was added to the Manuscript:

(1) Background

The prevalence of chronic liver disease leading to cirrhosis or end stage liver disease continues to increase worldwide given the epidemics of hepatitis C, hepatitis B as well as obesity and diabetes which contribute to non-alcoholic fatty liver disease. Without the option of liver transplantation, the vast majority of patients with decompensated cirrhosis have a dire prognosis.

(2) Research frontiers

In different parts of the world subsist disparities in access to liver transplantation given the paucity of donor, religious or financial restrictions, access to care etc. Systematic and effective ways to optimize the limited resource of organ donors is essential.

(3) Innovations and breakthroughs

Geographic Information System (GIS) studies the impact of geography on many problems through statistical modeling and analysis. It has been used to guide decisions in business, government, environment, but has yet to be adopted in healthcare. Based on the listing for liver transplantation database from the United States from 2003 to 2012 in one region, GIS revealed clustering of high and low rates of listing for liver transplantation in several geographic areas that could not have otherwise been predicted. This method can be adopted in different parts of the world and contribute to better allocation of resources to decrease the disparities in access to liver transplantation.

(4) Applications

Geography encompasses different variables that can impact access to care and public health outcomes it should be included in the decision making process of allocating resources to decrease disparity, and reveal unsuspected variables.

(5) Terminology

United Network for Organ Sharing (UNOS) is a private, non-profit organization that manages the United States organ transplant system under contract with the federal government.

(6) Peer review

11. The PubMed citation numbers and DOI citation were added to the reference list and all authors were listed.

Again, thank you for the thoughtful comments from the reviewers and editor. We believe this manuscript will be of great use to gastroenterologists, hepatologists, and those engaged in improving the care for patients with decompensated cirrhosis and hope that you will accept it for publication.

Sincerely yours,

Rony Ghaoui