

Title: Impact of Regulation on Deceased-Donor Liver Offer Acceptance: A Framework and Analysis

Speaker: Prof. Subham Akshat, University of Houston

Area: DS

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Abstract:

Organ transplantation is a life-saving therapy. In the United States (U.S.), around three patients die every day awaiting a liver transplant. Thus, it is important to make the best use of the limited supply of organs. The post-transplant outcomes at transplant programs in the U.S. are publicly reported every six months in the form of program-specific reports. These reports are used by insurance companies to make business decisions and direct patients to programs with superior outcomes. Historically, the Centers for Medicare and Medicaid Services (CMS), the largest single-payer of transplant services in the U.S. used these reports to regulate the programs, low performers risked losing their contract with CMS.

We study the systematic impact of CMS regulations on the deceased-donor liver organ-offer acceptance behavior of a transplant program. We develop a novel empirical framework that jointly models the patient-centric considerations (exclusive to optimizing acceptance decisions to maximize the utility in the form of survival chances) and regulatory considerations (to avoid the risk of regulatory scrutiny). We use approximately five years data (March 2014 to December 2018) on the candidates' decisions on organ offers to estimate the parameters.

In this talk, I will present our findings on a transplant program's offer acceptance behavior, and interesting insights that have not been documented before. Toward the end, I will talk about the implications and future steps.

Speaker Profile:



“Shubham” Akshat is an Assistant Professor in the Department of Decision & Information Sciences at the C.T. Bauer College of Business, University of Houston. His research primarily concerns improving resource allocation in the public sector using data-driven frameworks. He works in liver-organ transplantation (healthcare) and the child welfare system. He earned a Ph.D. in Operations Management from the University of Maryland, College Park, and a Bachelor of Technology in Production & Industrial Engineering from the Indian Institute of Technology, Delhi.

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