

Withholding Capacity from Strategic Patients

by

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(joint work with Yuchao Xu and Mor Armony from NYU Stern)

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The Hong Kong Polytechnic University**

(Conducted in English)

Abstract:

Common wisdom suggests that everything else being equal, seeing patients sooner rather than later is preferable. In particular health outcomes improve with reduced delay and so does patient satisfaction. At the same time, if the delay in access to care is reduced, patients may be more inclined not to show up for their appointments given that rescheduling will not result in excessive wait. We investigate how an outpatient care provider should manage capacity in the presence of such strategic behavior of patients. We find that under some circumstances, it is optimal for the service provider to withhold capacity from patients in order to elicit them to show up for their scheduled appointments.

Bio:

Nan Liu is Assistant Professor of Operations Management at Boston College Carroll School of Management. Dr. Liu studies operations management topics in service industries (e.g., health care, retail and transport). His current research seeks to resolve the central operational problem faced by many service-oriented organizations – how to match service capacity with customer demand. One particular application area of his research is health care, in which he addresses questions of how to deliver health services in a more timely, effective and efficient way. Trained as both an operations researcher and a data scientist, he draws methodological tools from stochastic modeling, optimization and statistics. Prior to joining the Carroll School of Management, he was on the faculty of Health Policy and Management Department at Columbia University, where he was the recipient of the 2014 Calderone Junior Faculty Research Prize.

Dr. Liu's research has been published in leading academic journals such as *Management Science*, *Operations Research*, *Manufacturing & Service Operations Management*, *Production and Operations Management*, *Health Services Research*, *Medical Care Research and Review*, and *Public Administration Review*. His work has been recognized by a number of research awards, such as the Winner of 2018 POMS College of Healthcare Operations Management Best Paper Competition, the Honorable Mention of 2017 Chinese Scholars Association for Management Science and Engineering Annual Conference Best Paper Competition, and the Third Place in 2013 INFORMS Junior Faculty Interest Group Paper Competition. His research findings have received coverage in popular media outlets such as *The Washington Post* and been featured as a cover story in *Crain's New York Business*.

He holds a Ph.D. in Operations Research and an M.S. in Statistics from the University of North Carolina at Chapel Hill, and a B.Eng. in Civil Engineering from Tsinghua University, Beijing, China.

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All are welcome!