

NYU Stern School of Business
Department of Information, Operations & Management Sciences
OPERATIONS MANAGEMENT RESEARCH SEMINAR

TOPIC: Determining the Optimal Configuration of Hospital Inpatient Rooms in the Presence of Isolation Patients

SPEAKER: Tolga Tezcan (Rochester)

DATE: Wednesday, October 8, 2014

TIME: 9:30 AM - 10:30 AM

PLACE: KMC 4-80

ABSTRACT

We study the optimal configuration of hospital inpatient rooms with private and semiprivate rooms when some of the patients have infectious diseases and need to be isolated. We assume that the demand is random and seasonal. We propose a computationally efficient solution procedure that is based on a stochastic program that uses asymptotic approximations for the system performance under different admission policies and show its accuracy for large systems. Using our model, we study the appropriateness of the recent trends in hospital design calling for 100% private rooms. We show that even with isolation patients such an extreme approach could result in a significant degradation in the access of patients to hospital beds.

Joint work with Edieal Pinker from Yale University.

BIO

Tolga Tezcan is an associate professor of operations management at the Simon School of Business, University of Rochester. He holds a Ph.D. degree in Industrial and Systems Engineering from Georgia Institute of Technology. His current research interests are focused in asymptotic analysis and robust control of queuing systems arising in applications in services and healthcare.