

# The Hong Kong University of Science and Technology

Dept of Information System, Business Statistics  
and Operations Management

Seminar Announcement

## Reevaluating Readmission Reduction Policies: The Role of Telehealth and Latent Patient Health Status

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**Naveen Jindal School of Management**  
**University of Texas at Dallas**

**Date** : 23 June 2016 (Thursday)  
**Time** : 10:30 am - 12:00 noon  
**Venue** : Room 4047, LSK Business Building



**Abstract:** We study the effect of unobserved patient health status on patient readmission rates and the impact of telehealth on patient health status. We develop a hidden Markov model to represent the evolving latent health status of a patient to model its impact on readmissions. Drawing on a large, inpatient panel dataset of Congestive Heart Failure patient visits along with data on telehealth usage from the American Hospital Association, we find that usage of telehealth application exerts a positive impact only on patients who are in poor health states, while this impact diminishes as patients' health improves. Our results also show that less healthy patients tend to incur significantly higher readmission rates compared to healthier patients. These results suggest that nonclinical factors, such as patients' latent (unobserved) health status, can impact readmission rates significantly. Our results suggest that focusing solely on hospital readmission rates may yield myopic policies.

**Bio:** Indranil Bardhan is Professor and Area Coordinator of Information Systems programs in the Naveen Jindal School of Management at the University of Texas at Dallas. Dr. Bardhan's current research focuses on healthcare analytics, and involves close collaboration with the University of Texas Southwestern Medical Center in Dallas. He teaches in the MBA, Executive MBA, and MS programs at UT Dallas. He has served as Associate and Senior Editor at *Information Systems Research* and *Production & Operations Management*, respectively, and currently serves as Senior Editor at *MIS Quarterly*, and has served as conference and track chair at several major conferences. He holds a Ph.D. in Management Science and Information Systems from the McCombs School of Business at the University of Texas at Austin.