University of Chicago Booth School of Business

Operations Management/Management Science Workshop

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Title: HIV and STIs among Young MSM and the Operational Issues of Expanding Testing

Abstract:

I discuss the health policy conclusions one can draw from a detailed and validated agent-based network simulation model of HIV, gonorrhea, and chlamydia spread among young men who have sex with men (YMSM) in Chicago. I focus on racial disparities and the operational issues of expanding HIV and STI testing such as combined testing, cost-effectiveness, roll-out speed, and uptake behavior. This is joint work with Ekkehard Beck, Michelle Birkett, and Brian Mustanski from Northwestern.

Time permitting, I will also discuss more theoretical work on dynamic networks where the edges change over time. First, the growth of forward reachable sets, the set of nodes that can be reached from an initial seed in a dynamic network. This is a natural extension of connected component measures to dynamic networks and an upper bound on disease transmission. This is joint work with Li Wang and Martina Morris from the University of Washington. Second, the optimal timing of cross-sectional network samples in longitudinal network studies.
This is joint work with Ekkehard Beck.

The main topic extends upon a previous paper, which can be consulted at this link:
http://users.iems.northwestern.edu/~armbruster/Beck2015JAIDS.pdf