

**DEPARTMENT OF MANAGEMENT SCIENCE AND STATISTICS  
RESEARCH SEMINAR SERIES**

**Friday, Nov. 4  
2 – 3 p.m. (CST)**

**Meeting Link: <https://utsa.zoom.us/j/92770038854>  
Meeting ID: 927 7003 8854**



**Dr. Christopher J. Chen**  
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***“The Role of Physician Integration in Alternative Payment Models:  
The Case of the Comprehensive Joint Replacement program”***

**Abstract**

In the U.S., physicians are increasingly integrating horizontally as well as vertically, while payment models are simultaneously transitioning away from fee-for-service towards alternative payment models (APM). While both are known to alter providers’ financial incentives and affect cost and quality individually, their interactions have potential consequences for regulation of provider integration and APM design and evaluation. In this paper, we empirically examine the role of both horizontal and vertical integration of orthopedic surgeons in driving heterogeneity in the impact of the Comprehensive Joint Replacement (CJR) alternative payment program. Using a quasi-experimental difference-in-difference-in-differences approach, we find CJR hospitals with high horizontal and vertical integration see an increase in both hospital costs and risk-adjusted complication rates of 3.17% & 1.18, respectively, while others see either a decrease or no change in these measures. Moreover, we present evidence showing

integration affects physician care decisions regarding length-of-stay and discharge disposition that explain the changes in costs and quality. Our findings provide novel insights into provider integration and clinical decisions that are relevant for policymakers, payors, and healthcare providers.

**Short Bio**

*Dr. Christopher Chen is an assistant professor in the Operations, Decisions & Technologies department at the Kelley School of Business, Indiana University, and a research fellow with the Center for the Business of Life Sciences. Chris's research interests lie in the interface of operations management and finance. Specifically, he studies the operational impact of regulatory changes under financial constraints with applications in supply chains and healthcare.*

*Christopher Chen received his PhD in Management Science & Operations at London Business School, advised by S. Alex Yang and Nicos Savva. Prior to the PhD, Chris was a consultant in portfolio optimization for the US Department of Defense as well as various intelligence agencies with Booz Allen Hamilton. Chris received a master's degree in computer science and statistics from George Washington University and a bachelor's degree in economics and biochemistry from Dartmouth College.*