

## **SHENYI JIANG**

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### **EDUCATION**

Ph.D., Economics, Boston University, Boston MA, May 2010 (expected)  
Dissertation Title: *Essays on Hospital Technology Adoption and Optimal Health Insurance Design*  
Dissertation Committee: Randall P. Ellis, Marc Rysman and C.T. Albert Ma

M.A., Economics, Boston University, Boston, MA, 2006  
B.A., Economics, Wuhan University, Wuhan, Hubei, China, 2001  
B.S., Mathematics, Wuhan University, Wuhan, Hubei, China, 2001

### **FIELDS OF INTEREST**

Health Economics, Industrial Organization, Empirical Microeconomics

### **TEACHING EXPERIENCE**

Teaching Fellow, Microeconomics, Department of Economics, Boston University, Fall 2006 and Fall 2007  
Teaching Assistant, Advanced Microeconomics (Master Level), Boston University, Fall 2005 and Spring 2006

### **WORK EXPERIENCE**

Research Assistant for Professor Randall P. Ellis, Boston University, Spring 2007, Spring 2008, Spring 2009  
Summer Intern, Agency for Healthcare Research and Quality, June-August, 2007  
Program Administrative Manager, Wuhan University International EMBA, Wuhan University, Hubei, China, 2001-2004

### **FELLOWSHIPS AND AWARDS**

Special Research Fellowship, Boston University, Spring 2008 and Fall 2009  
Student Research Award (travel grant), Institute for Economic Development, Boston University, July 2007 and July 2009  
Dean's Fellowship, Boston University, 2004--present

### **REFEREE EXPERIENCE**

*The American Journal of Managed Care, The Journal of Risk and Insurance*

**LANGUAGES:** Fluent in English, Native in Chinese

**COMPUTER SKILLS:** SAS, GAUSS, Stata, Scientific WorkPlace, Microsoft Office

**CITIZENSHIP/VISA:** CHINA/F-1 VISA

**PUBLICATIONS/SUBMITTED PAPERS**

“Effects of Market Competition Force on Hospital Costs and Quality Performance in the Post-Managed Care Era” (with Joanna Jiang and Bernard Friedman), Submitted, 2009.

**WORKING PAPERS**

“Efficiency, Hospital System Membership and Technology Adoption Decisions” (Job Market Paper) 2009.

“Optimal Health Insurance for Multiple Goods and Time Periods” (with Randall P. Ellis and Willard G. Manning), in preparation for submission, 2010.

“Does Service Level Spending Show Evidence of Selection across Health Plan Types?” (with Randall P. Ellis and Tzu-Chun Kuo), in preparation for submission, 2010.

**WORK IN PROGRESS**

“System Membership and MRI Adoption: A Dynamic Analysis”

“Multitasking and Payment Incentives” (with Randall P. Ellis and Michael Luca)

**CONFERENCES AND PRESENTATIONS**

BU/Harvard/MIT Health Seminar, Kennedy School of Government, Harvard University, April 2007

International Health Economics Association (iHEA), Copenhagen, Denmark, July 2007

International Health Economics Association (iHEA), Beijing, China, July 2009

Boston University Dissertation Workshop, November 2009

**REFERENCES**

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### **Efficiency, Hospital System Membership and Technology Adoption Decisions (Job Market Paper)**

Local hospital systems, in which multiple hospitals within the same geographic market share common ownership, have been growing in the US in recent years. Policymakers are interested in whether local systems can generate production efficiency that might help offset the price effect of consolidation. One possible source of efficiency might be through coordination of costly technology. The paper addresses this question by examining MRI adoption. I build up a structural model to incorporate market competition as well as collaboration among local hospital members. The model is estimated by the nested pseudo likelihood algorithm. I find system hospitals without local partners behave similarly to independent hospitals and both are associated with higher MRI adoption rates. System hospitals with local partners in general have lower adoption rates and this effect is stronger the closer they are located to local system members who have already adopted the technology. This suggests that local but not remote system hospitals might exploit economies of scale by reducing duplicate equipments, and that local hospital acquisitions can potentially reduce costs.

### **Optimal Health Insurance for Multiple Goods and Time Periods** *(with Randall P. Ellis and Willard G. Manning)*

This paper reexamines the efficiency-based arguments for optimal health insurance, extending the classic analysis to consider both multiple treatment goods and multiple time periods. Using a utility-based framework, we reconfirm the conventional tradeoff between risk aversion and moral hazard for insuring treatment goods. Multiple goods and multiple time periods raise issues of complementarity and of correlated losses that affect the choice of optimal insurance. Substitutes and positively correlated demands over goods or time are shown to reduce optimal cost shares on treatment. In a multi-period model, savings complicate the optimal insurance rules but positively serially correlated errors generally imply improved coverage is desirable. Further, the presence of positively correlated uncompensated costs provides a further rationale for reducing cost sharing on the covered services. Using insurance claims data we examine the empirical relevance of the contemporaneous correlations across goods, and correlations over time using three broad aggregates of health treatment spending: inpatient, outpatient, and pharmaceuticals. Our model provides a rationale for covering pharmaceuticals more fully than is implied by static models, because it is relatively highly correlated over time, especially with high deductibles.

### **Does Service Level Spending Show Evidence of Selection across Health Plan Types?** *(with Randall P. Ellis and Tzu-Chun Kuo)*

Patterns of service-level spending in capitated managed care plans differ from those in traditional non-managed care health plans. Using disaggregated commercial insurance claims from the Thomson-Reuters MarketScan database, we calculate the selection index, a measure of the profitability of service rationing, for four types of health plans: unmanaged FFS, plus PPO, POS and HMO managed care plans. We find that all four plan types have similar incentives to distort services, and that DCG/HCC risk adjusted premiums reduces that incentive by about 40%. Plans types differ not on incentives but on their ability to react to incentives. Spending on services predicted to be more tightly rationed are proportionally lower in managed care plans than non-managed care plans. Health plans are shown to have a stronger incentive to ration care by type of service than by provider specialty or place of service.