#### **CURRICULUM VITAE**

#### MINGSHAN LU

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#### **EDUCATION**

2003 - 2014

1997 MA/Ph.D. in Economics, Boston University

B.Eng. in Management Information System, Tshinghua University

#### ACADEMIC EXPERIENCE

2014 - date	Professor, Department of Economics, Faculty of Arts, The University of Calgary
	Adjunct Professor, Department of Community Health Sciences, Faculty of Medicine, the
	University of Calgary
	Faculty Marshau O'Drien Institute of Public Health the Heisensity of Colony

Faculty Member, O'Brien Institute of Public Health, the University of Calgary Associate Professor, Department of Economics, Faculty of Arts, The University of

Calgary

Adjunct Associate Professor, Department of Community Health Sciences, Equity

Adjunct Associate Professor, Department of Community Health Sciences, Faculty of Medicine, The University of Calgary

2012 - 2016 Visiting Professor of Economics, China Europe International Business School (CEIBS), China

2011- 2012 Visiting Associate Professor, Department of Economics, Hong Kong University of Science and Technology, Hong Kong

2004 - 2005 Visiting Associate Professor, Centre for Health Economics Research and Evaluation (CHERE), University of Technology, Sydney, Australia

1997 - 2003 Assistant Professor, Department of Economics, Faculty of Arts, The University of Calgary

1999 - 2003 Adjunct Assistant Professor, Department of Community Health Sciences, Faculty of Medicine, The University of Calgary

2002 - 2005 Population Health Investigator, Alberta Heritage Foundation for Medical Research 1999 - 2002 Population Health Investigator, Alberta Heritage Foundation for Medical Research

1997 - date Fellow, Institute of Health Economics, Alberta

#### OTHER EXPERIENCE

2015 - date	Lead, Health Economics, the Methods Hub, Alberta's Strategy for Patient Oriented
	Research (SPOR) Support Unit

2015 Consultant, The World Bank, "The China Health Study"

2001-2003 Consultant, the US National Institute on Alcohol Abuse and Alcoholism (NIAAA), on

"Provider and Client Adherence in Alcohol Abuse Treatment"

2002 Consultant, Alternative Payment Plan Subcommittee, Alberta Medical Association and

Alberta Health and Wellness, on "Capitation Review Project: Family Physician

Perspectives on Capitation Acceptability and Adoption"

1999-2000 Consultant, the US National Institute on Drug Abuse (NIDA), "Center for Managed Care

and Drug Abuse"

1993 Visiting Fellow, Prevention Effectiveness Activity, Epidemiology Program Office, National

Centre for Environmental Health, U.S. Center for Disease Control & Prevention (CDC),

Atlanta, GA

#### **MAJOR RESEARCH INTERESTS**

**Health Economics** 

Health Care Financing

Design and Impacts of Health Care Payment Systems

Risk Adjustment in Fund Allocation

Health Care Disparities/Vulnerable Populations

Patient-Centered Care

Global Health/Health Sector Reform in China

Economics of Substance Abuse and Mental Health

Complementary & Alternative Medicine (CAM) and Integrative Medicine

### **TEACHING**

Health Economics (undergraduate and graduate's level) Health care Systems, Policy and Innovations (MBA) Introductory Microeconomics Intermediate Microeconomics

#### **AWARDS AND RESEARCH GRANTS**

2022 - 2023	Societal Health Integration Project (SHIP) (Mingshan Lu, PI), Civil Society Fund,
	Government of Alberta, \$427,570

- 2021 2022 Complementary Health Integration Project (CHIP) (Mingshan Lu, PI), Mental Health and Addiction COVID-19 Community Funding grant, <u>Government of Alberta Ministry of Health</u>, \$1,399,702
- 2020 2023 The Costs and Benefits of Transitioning from ICD-10-CA to ICD-11 in Canada (Mingshan Lu, PI; Co-PI, Hude Quan, Catherine Eastwood, William Ghali, etc.), Project Grant, Canadian Institute of Health Research (CIHR), \$283,051
- 2019 2026 Paving the Way for ICD-11 Adoption to Advance Health Information (Hude Quan, PI; M. Lu etc., Program Experts), Foundation Grant, <u>Canadian Institute of Health Research</u> (CIHR), \$2,540,000
- 2018—2020 Towards Precision Cardiovascular Medicine: Integration of Patient-Reported Outcomes in Prognostic Tools Development for the Management of Acute Coronary Syndrome (Tolulope Sajobi, PI; M. Lu etc., Co-Investigators), Canadian Institute of Health Research (CIHR), \$191,251
- 2018 2021 Including Patient Voice in Healthcare System Performance: Development of Patient-Centred Care Indicators (Maria Santana, PI; M. Lu, etc. Co-Investigator), <u>Canadian</u> Institute of Health Research (CIHR), \$252,420
- 2016 2018 Measuring Healthcare System Performance: Development of Patient-Centered Care Indicators (Maria Santana, PI; M. Lu, etc. Co-Investigator), M. S.I. Foundation, \$98,000

2015 - 2016	improving Patient Centric System Performance: A systematic review of patient centric
	quality (Maria Santana, PI; M. Lu, etc. Co-Investigator), Canadian Institute of Health
	Research (CIHR), \$99,860.
2014 - 2016	Novel Statistical Methods for Skewed Data: Improving the Accuracy of Health Data
2011 2010	Analysis to Inform Health Policy and Resource Allocation (T. Sajobi, PI; M. Lu, etc. Co-
	Investigator), M.S.I. Foundation, \$97,500
2012 2015	· · · · · · · · · · · · · · · · · · ·
2013-2015	Unnecessary Hospitalization in China: Theory and Methodology on Length of Stay (J.
	Ma, PI; M. Lu, Co-Investigator), the National Natural Science Foundation of China
	(NSFC), \$80,000
2010-2012	The Economics of Children's Mental Health Care in Alberta (M. Lu, PI), Norlien
	Foundation, \$186,800
2009	Children Mental Health Seed Project (M. Lu, PI), Norlien Foundation, \$8,000
2009-2011	Evaluating Hospital Efficiency in China: Theory and Empirical Analysis (J. Ma, PI; M.
	Lu, Co-Investigator), the National Natural Science Foundation of China (NSFC), \$80,000
2006	Visiting Scientist award (hosting scientist: M. Lu), Alberta Heritage Foundation for
	Medical Research (AHFMR), \$4,500
2006	A book project on Health Care Financing, Killam Resident Fellowship, \$1,200 plus
	salary support
2006	A book project on Health Care Financing (M. Lu, PI and Academic Editor),
2000	Institute of Health Economics, \$150,000
2006	Economics of Obesity (M. Lu, PI), <u>Institute of Health Economics</u> , \$25,000
2005	Comparing Public and Private Hospitals in China: Evidence from Guangdong
2003	(K. Eggleston, PI; M. Lu, Co-Investigator), <u>The World Bank</u> - US\$10,000
2003-2005	How can we pay for population health improvements? The application of risk adjustment
2003-2003	
	models in Alberta. (M. Lu, PI), Alberta Heritage Foundation for Medical Research
	(AHFMR) and Institute of Health Economics - \$113,500
1993	2 <sup>nd</sup> Canadian Health Economics Study Group (Co-organize with Chris Auld), Conference
	Grant, Alberta Heritage Foundation for Medical Research (AHFMR), Health Canada, and
	Svare Chair Endowment, - \$18,000
2002-2004	Mental Health Policy and Economics in Canada (M. Lu, PI), Research Grant, <u>Institute of</u>
2002-2004	Health Economics - \$28,043
2002-2005	The Economics of Organization, Financing, and Provision in Health Care. Population
	Health Investigator Award, Alberta Heritage Foundation for Medical Research (AHFMR)
	- 100% salary support
2003	Public and Private Financing and Provision of Health Care: A Literature Review (M. Lu,
2003	PI), Research Grant, Institute of Health Economics - \$7,500
2000-2002	The Influence of Import/Export Adjustments on the Transfer of Patients Between
	Regions Under Capitation Funding (P. Jacobs, PI; M. Lu, Co-Investigator), Health
	Research Fund, <u>Alberta Heritage Foundation for Medical Research (AHFMR)</u> - \$105,000
1999-2002	Incentives and Accountability in Publicly-Funded Health Care: The Case of Mental
1000 2002	Health and Substance Abuse Treatment, Population Health Investigator Award, Alberta
	Heritage Foundation for Medical Research (AHFMR) - \$180,000 (in additional to 100%
	salary support)
2000 2002	• • •
2000-2002	Mental Health, Wages, and Employment (M. Lu, PI), Research Grant, <u>Institute of Health</u>

	<u>Economics</u> - \$52,148
1999-2002	Service Delivery Patterns of Persons with Severe and Persistent Mental Illness: Continuity of Care, Clinical and Economic Outcomes (C. Adair, PI; M. Lu, Co-Investigator), Research Program Award, <u>The Canadian Health Services Research Foundation (CHSRF)</u> - \$754,309
1999-2000	Does Money Matter in Health Care? The Relationship Between Health and Health Expenditures (C. Auld, PI; M. Lu, Co-Investigator), Research Grant, <u>Institute of Health Economics</u> - \$20,000
1998-1999	Incentive Regulation in Health Care Industry (M. Lu, PI), Research Grant, <u>Institute of Health Economics</u> - \$23,000
1998-1999	Payment Mechanism for Physicians (C. Auld, PI; M. Lu, Co-investigator), Research Grant, <u>Institute of Health Economics</u> - \$14,500
1997- 2000	University Research Excellence Grant, The University of Calgary - \$30,000
1998 1996	University Starter Grant, <u>The University of Calgary</u> - \$10,000 Separating the true effect from reporting effect in contracting under managed care (M. Lu, PI), Pilot Proposal Award, <u>National Institute on Drug Abuse (NIDA)</u> , Brandeis/Harvard Research Center on Managed Care and Drug Abuse Treatment, Boston, MA - US\$ 34,700
1993-1997 1992 <b>1991</b>	University Research Assistant Fellowship, <u>Boston University</u> , Boston, MA. Presidential University Graduate Fellowship, <u>Boston University</u> , Boston, MA. Yan Ming Economics and Management Fellowship, School of Economics and Management, <u>Tshinghua University</u> , Beijing, China.

### **PUBLICATION**

## **RESEARCH PAPERS**

### RESEARCH PAPERS (PEER REVIEWED)

#### A. RESEARCH PAPERS – PEER REVIEWED

- 1. **Lu, Mingshan**, 1999, Separating the True Effect from Gaming in Incentive-Based Contracts in Health Care, Special Issue on The Industrial Organization of Health Care III, *Journal of Economics & Management Strategy* 8 (3): 383-432.
- 2. **Lu, Mingshan**, 1999, The Productivity of Mental Health Care: An Instrumental Variable Approach, *Journal of Mental Health Policy and Economics* 2 (2): 59-71.
- 3. **Lu, Mingshan** and Cam Donaldson, 2000, Performance-Based Contracts and Provider Efficiency: The State of the Art, invited leading article, *Disease Management and Health Outcomes* 7 (3): 127-137.
- 4. **Lu, Mingshan**, and Thomas G. McGuire, 2002, The Productivity of Outpatient Treatment for Substance Abuse, *The Journal of Human Resources* 37 (2): 309-335.

- 5. **Lu, Mingshan**, and Ching-to Albert Ma, 2002, "Consistency in Performance Evaluation Reports and Medical Records," *Journal of Mental Health Policy and Economics* 5 (4): 141-152.
- 6. **Lu, Mingshan**, Ching-to Albert Ma, and Lasheng Yuan, 2003, Risk Selection and Matching under Performance-Based Contracting, *Health Economics* 12 (5): 339-354.
- 7. Currie, Gillian, Cam Donaldson, and **Mingshan Lu**, 2003, What Does Canada Profit from the For-Profit Debate in Health care? *Canadian Public Policy* 29 (2): 227-251.
- 8. **Lu, Mingshan**, and Ching-to Albert Ma, 2006, Financial Incentives and Gaming in Alcohol Treatment, *Inquiry* 43(1): 34-53.
- 9. Li, Bing, Hude Quan, Adrew Fong, and **Mingshan Lu**, 2006, Assessing record linkage between health care and Vital Statistics databases using deterministic methods, *BMC Health Services Research* 6: 48.
- 10. Liu, Meina, Qiujiu Zhang, **Mingshan Lu**, Churl-Su Kwon, and Hude Quan, Urban and Rural Disparity in Health Services Utilization in China, 2007, *Medical Care* 45, no. 8: 767-774.
- 11. Chatterji, Pinka, Margarita Alegria, **Mingshan Lu**, and David Takeuchi, Psychiatric Disorders and Labor Market Outcomes: Evidence from the National Latino and Asian American Study (NLAAS), NBER working paper #11893, 2007, *Health Economics* 16 (10): 1069 1090.
- 12. Savage, Elizabeth, and Mingshan Lu, Do Financial Incentives for Supplementary Private Health Insurance Reduce Pressure on the Public System? Evidence from Australia, HEN: Supplemental (Topic) 06/2007.
- 13. Ma, Jin, **Mingshan Lu**, and Hude Quan, From A National, Centrally Planned Health System To A System Based On The Market: Lessons From China, 2008, *Health Affairs* 27 (4): 937-948
- 14. Jing Shi, Meina Liu, Qiuju Zhang, **Mingshan Lu**, and Hude Quan, Male and Female Adult Population Health Status in China: A Cross-Sectional National Survey, 2008, *BMC Public Health* 8: 277.
- 15. **Lu, Mingshan**, Jing Zhang, Jin Ma, Bing Li, and Hude Quan, Child Health Insurance Coverage: A Survey among temporary and permanent residents in Shanghai, *BMC Health Services Research* 2008, 8:238.
- 16. Eggleston, Karen, **Mingshan Lu**, Congdong Li, Jian Wang, and Zhe Yang, Physician Payment Incentives, Cost and Quality of Hospital Services: Evidence from Guangdong, China, 2008, *China Labor Economics*.
- 17. Eggleston, Karen, Yu-Chu Shen, **Mingshan Lu**, Congdong Li, Jian Wang, Zhe Yang, and Jing Zhang, Soft budget constraints in China: Evidence from the Guangdong hospital industry,

- International Journal of Health Care Finance and Economics, 2009, 9(2): 233-242. DOI 10.1007/s10754-009-9067-1 http://www.springerlink.com/openurl.asp?genre=article&id=doi:10.1007/s10754-009-9067-1.
- 18. Eggleston, Karen, **Mingshan Lu**, Jian Wang, and Jing Zhang, Comparing Public and Private Hospitals in China: Evidence from Guangdong, *BMC Health Services Research* 2010, 10:76
- 19. Lien, Hsienming, **Mingshan Lu**, Ching-to Albert Ma, and Thomas G. McGuire, Treatment Progress and Patient Compliance in Alcohol Therapy, *Journal of Health Economics*, 2010, 29(2): 213-225.
- 20. Cawthorpe, D., T. C. R. Wilkes, Lindsay Guyn, Bing Li, and **M Lu**, Association of child and adolescent psychiatric and physical healthcare utilization and cost: A population-based case comparison, *The Canadian Journal of Psychiatry*, 2011, 56(8): 491-494.
- 21. Emmanuel Ngwakongnwi, Elizabeth Fradgley, **Mingshan Lu**, Hude Quan, and David Cawthorpe, Referrals, Language Proficiency, and Enrolment for Children's Mental Health Services, *Children and Youth Services Review*, 2011, 33(10): 1994-1998.
- 22. **Lu, Mingshan**, Sabine Moritz, Lindsay Sykes, Diane Lorenzetti, Sharon Strauss, and Hude Quan, A systematic review of interventions to increase cancer screening uptake among Asian women, *BMC Public Health* 2012, 12:413
- 23. Wang, Yang, Jian Wang, Elizabeth Maitland, Yaohui Zhao, Stephen Nicholas, and **Mingshan** Lu, Growing Old Before Growing Rich: Inequality in health service utilization among the midaged and elderly in Gansu and Zhejiang Provinces, China, *BMC Health Services Research* 2012, 12:302
- 24. Wilkes, T. C. R., Lindsay Guyn, Bing Li, **Mingshan Lu**, and David Cawthorpe, Association of child and adolescent psychiatric and somatic disorders: Do Population-based Utilization Study Support the Adverse Childhood Experiences Study? 2012, *the Permanente Journal* 16(2):23-26
- 25. Eggleston, Karen, Randall Ellis, and **Mingshan Lu**, Prevention and Risk Adjustment, 2012, *Canadian Journal of Economics* 45(4): 1586–1607.
- 26. Lu, Jingjing, Aiqiang Xu, Jian Wang, Li Zhang, Lizhi Song, Renpeng Li, Zhen Wang, Dawei Zhu, Guojie Zhang, Bingyu Yan, Feng Ji, Jiaye Liu, Xueqiang Fang, Shunxiang Zhang, Guihua Zhuang, and **Mingshan Lu**, Direct economic burden of hepatitis B virus related diseases: evidence from Shandong, China. *BMC Health Services Research* 2013, 13(1): 17.
- 27. Yuan, Suwei, Yan Liu, Na Li, Yunting Zhang, Zhe Zhang, Jingjing Tao, Lizheng Shi, Hude Quan, **Mingshan Lu**, and Jin Ma, Impacts of Health Insurance Benefit Design on Percutaneous Coronary Intervention Use and Inpatient Costs among Patients with Acute Myocardial Infarction in Shanghai, China, *Pharmacoeconomics* 2014, 2(3):265-75.

- 28. Xu, Junfang, Jian Wang, Ruiyun Liu, Jinshui Xing, Lei Su, Fenghua Yu, and **Mingshan Lu**. Mental Health Inpatient Treatment Expenditure Trends in China, 2005–2012: Evidence from Shandong, *Journal of Mental Health Policy & Economics* 2014, 17(4):173-82.
- 29. Lu, Mingshan, Tolulope Sajobi, Kelsey Lucyk, Diane Lorenzetti, and Hude Quan, Systematic Review of Risk Adjustment Models of Hospital Length of Stay (LOS), 2015, *Medical Care* 53(4): 355–365.
- 30. Kelsey Lucyk, **Mingshan Lu**, Tolulope Sajobi, and Hude Quan, Administrative Health Data in Canada: Lessons from History, *BMC Medical Informatics and Decision Making* 12/2015; 15(1):69.
- 31. Xu, Yuan, Ning Li, Robert P. Myers, Elijah Dixon, **Mingshan Lu**, Libo Sun, Xiaofei Zhao, and Hude Quan, Development and Validation of Automated Method for Defining Conditions Using Chinese Electronic Medical Record, *BMC Medical Informatics and Decision Making*. 2016, 16:110.
- 32. Jiang J, Beck C, James M, **Lu M**, and Quan H, Validity of Discharge Abstract Database Coding for Hypertension and Diabetes from 2002 to 2013, *CMAJ Open* 2016 Oct-Dec; 4(4): E646–E653.
- 33. Guo, Na, Tor Iversen, **Mingshan Lu**, and Jian Wang, Does the New Cooperative Medical Scheme Reduce Inequality in Catastrophic Health Expenditure in Rural China? *BMC Health Services Research* 2016; 16: 653.
- 34. Jolley, Rachel J, **Mingshan Lu**, Kimberly Manalili, Diane Lorenzetti, and Maria J Santana, A protocol for a scoping review study to identify and evaluate patient-centred quality indicators, *BMJ Open* 2017; 7(1): e013632.
- 35. Xu, Yuan, Ning Li, **Mingshan Lu**, Elijah Dixon, Robert P. Myers, Robin Walker, and Hude Quan, Comparison of Risk Adjustment Methods in Patients with Liver Disease Using Electronic Medical Record Data, *BMC Gastroenterology* 2017, 17:5 DOI: 10.1186/s12876-016-0559-4
- 36. Lucyk K, Quan H, **Lu M**, Sajobi T. Disease Groupers: What are They, How are They Used, and How Do They Compare Internationally? *Perspectives in Health Information Management* 2016; Summer. http://perspectives.ahima.org/disease-groupings-what-are-they/
- 37. Maria J. Santana, Kimberly Manalili, Rachel J. Jolley, Sandra Zelinsky, and **Mingshan Lu**, How to Practice Person-centred Care: A Conceptual Framework, November 2017, *Health Expectations*, 1-12.
- 38. Yuan Xu, Ning Li, **Mingshan Lu**, Elijah Dixon, Robert P. Myers, Rachel J. Jelley, Hude Quan, The Effects of Patient Cost Sharing on Inpatient Utilization, Cost, and Outcome, *PLoS ONE* 2018 13;13(4):e0196039. Epub 2018 Apr 13.

- 39. Xu, Junfang Xu, Jian Wang, Fenghua Yu, Ruiyun Liu, Jinshui Xing, Lei Su, and **Mingshan Lu**, Rural—urban disparities in the utilization of mental health inpatient services in China: the role of health insurance, forthcoming, *International Journal of Health Economics and Management*. <a href="https://link.springer.com/content/pdf/10.1007%2Fs10754-018-9238-z.pdf">https://link.springer.com/content/pdf/10.1007%2Fs10754-018-9238-z.pdf</a>
- 40. Ahmed S, Siad FM, Manalili K, Lorenzetti DL, Barbosa T, Lantion V, **Lu M**, Quan H, Santana MJ. How to measure cultural competence when evaluating patient-centred care: a scoping review. 2018. BMJ Open 8(7).
- 41. Doktorchik, Chelsea, Kimberly Manalili, Ruth Diaz, Rachel Jolley, **Mingshan Lu**, Hude Quan, Maria J Santana, Identifying Canadian patient-centred care measurement practices and quality indicators: a survey, 2018, *CMAJ Open* 10.9778/cmajo.20170143. vol. 6 no. 4 E643-E650
- 42. Santana MJ, Ahmed S, Lorenzetti DL, Jolley RJ, Manalili K, Quan H, **Lu M**. Measuring patient-centred system performance: a scoping review of patient-centred care quality indicators, forthcoming, *BMJ Open* 2018;0:e023596. doi:10.1136/bmjopen-2018-023596.
- 43. Wang, Meng, Colleen M. Norris, Michelle M. Graham, Maria Santana, Zhiying Liang, Oluwagbohunmi Awosoga, Danielle A Southern, Matthew T. James, Stephen B. Wilton, Hude Quan, **Mingshan Lu**, William Ghali, Merril Knudtson, and Tolulope T. Sajobi, Trajectories of perceived social support in acute coronary syndrome, 2019, *Quality of Life Research*, Volume 28, Issue 5, pp 1365–1376.
- 44. Doktorchik, Chelsea, **Mingshan Lu**, Hude Quan, Catherine Ringheim, and Catherine Eastwood, A Qualitative Evaluation of Coded Data Quality from Health Information Manager Perspectives, 2020, *Journal of the American Medical Informatics Association*, Vol. 49(1) 19–27
- 45. Sharma, Anuj, Dylan R. Pillai, **Mingshan Lu**, Cody Doolan, Jenine Leal, Joseph Kim, Aidan Hollis, Impact of Isolation Precautions on Quality of Life: A Meta-Analysis, 2020. *Journal of Hospital Infection* 105(1):35-42
- 46. Shahreen Khair, Hude Quan, Catherine Eastwood, Chelsea Doktorchik, Kevin Zhao, Tania Losev, Sharon Baker, Keith Denny, **Mingshan Lu**, Paving the Way: A Cost and Outcome Evaluation Framework for the Transition from the 10th to the 11th Version of the International Classification of Diseases, Winter 2020, *Perspectives in Health Information Management*. <a href="https://perspectives.ahima.org/paving-the-way-a-cost-and-outcome-evaluation-framework-for-the-transition-from-the-10th-to-the-11th-version-of-the-international-classification-of-disease/">https://perspectives.ahima.org/paving-the-way-a-cost-and-outcome-evaluation-framework-for-the-transition-from-the-10th-to-the-11th-version-of-the-international-classification-of-disease/">https://perspectives.ahima.org/paving-the-way-a-cost-and-outcome-evaluation-framework-for-the-transition-from-the-10th-to-the-11th-version-of-the-international-classification-of-disease/">https://perspectives.ahima.org/paving-the-way-a-cost-and-outcome-evaluation-framework-for-the-transition-from-the-10th-to-the-11th-version-of-the-international-classification-of-disease/</a>
- 47. Lawal OA, Awosoga A, Santana M, James MT, Southern DA, Wilton SB, Graham MM, Knudtson M, Lu M, Quan H, Ghali W, Norris C, Sajobi TT. Psychometric Evaluation of a Canadian Version of the Seattle Angina Questionnaire (SAQ-CAN). *Health and Quality of Life Outcomes* 2020; in press.

48. Campbell DJT, Lee-Krueger RCW, McBrien K, Anderson T, Quan H, Leung AA, Chen G, Lu M, Naugler C, Butalia S, Strategies for enhancing the initiation of cholesterol lowering medication among patients at high cardiovascular disease risk: a qualitative descriptive exploration of patient and general practitioners' perspectives on a facilitated relay intervention in Alberta, Canada. *BMJ Open* 2020;10:e038469. doi: 10.1136/bmjopen-2020-038469.

# RESEARCH PAPERS – PEER REVIEWED (SUBMITTED & WORK-IN-PROGRESS)

- 1. Khair, Shahreen, Catherine Eastwood, **Mingshan Lu**, Jennifer Jackson, A Cost Analysis of Overdose Management at a Supervised Consumption Site in Calgary, Canada, under review, Harm Reduction Journal
- 2. Xu, Yuan, et al., Comparing outcomes and healthcare utilization between new and non-persistent opioid users after curative-intent surgery for cancer: An analysis of population-based data from a universal health system. Work-in-progress.
- 3. Qaedi, Atena, **Mingshan Lu**, Winson Y. Cheung, Shiying Kong, May Lynn Quan, Yuan Xu, The association between 'compliance with colonoscopy surveillance' after primary treatment and health utilization. Work-in-progress.
- 4. Danielle A Southern, Anita Brobbey, Oluwaseyi A. Lawal, Maria J Santana, Matthew T James, Stephen B Wilton, **Mingshan Lu**, Michelle M Graham, Oluwagbohunmi Awosoga, William A Ghali, Merril L Knudtson, Hude Quan, Colleen M Norris, Lisa M. Lix, Tolulope T. Sajobi, Patient-Reported Outcomes Improves the Prediction of All-Cause Mortality in Coronary Artery Disease. Work-in-progress.
- 5. Sajobi, Tolulope, **Mingshan Lu**, Jason Jiang, Kelsey Lucyk, and Hude Quan, A Comparison of Risk Prediction Algorithms for Predicting Hospital Length of Stay, under review, *BMJ Open*.
- 6. Awosoga O, Santana M, Southern D, Brobbey A, **Lu M**, Quan H, Norris C, James M, Lix L, Sajobi TT. Estimating Longitudinal changes in health-related quality of life in coronary artery disease: a comparison of longitudinal models. Work-in-progress.
- 7. Yuan, Suwei, Wenwei Liu, **Mingshan Lu**, Fengqing Wei, Weijun Zhu, Xingmei Liu, and, Jin Ma, Impacts of An Innovative Hospital Activity-based Funding (ABF) Model with Global Budget: Empirical Evidences from Zhongshan, China, submitted to *PLoS ONE*.

### RESEARCH PAPERS (NON-PEER REVIEWED)

- 1. Emery, Herb, Chris Auld and **Mingshan Lu**, 1999, Paying for Physician Services in Canada: The Institutional, Historical and Policy Contexts, *Institute of Health Economics Working Paper* 99-6.
- 2. Lu, Mingshan, David G. Moores, Robert Reid, Sandra C. Woodhead Lyons, and Jenny X.

- Zhang. A Review of Capitation in Alberta: A Report to the APP Subcommittee of Alberta Health & Wellness and the Alberta Medical Association. July 2002.
- 3. Adair, Carol E., T. Cameron Wild, Anthony Joyce, Gerald McDougall, Alan Gordon, Norman Costigan, Craig Mitton, **Mingshan Lu**. Continuity of Mental Health Services Study of Alberta: A Research Program on Continuity of Mental Health Care. September 2003.
- 4. Eggleston, Karen, Congdong Li, **Mingshan Lu**, Jian Wang, Zhe Yang, and Jing Zhang, *Comparing Public and Private Hospitals in China: Evidence from Guangdong. A report to the World Bank.* December 10, 2005.
- 5. Eggleston, Karen, Congdong Li, **Mingshan Lu**, Jian Wang, Zhe Yang, and Jing Zhang, "Comparing Public and Private Hospitals in China: Evidence from Guangdong," Stanford University Asia Health Policy Program working paper #7, <a href="http://iis-db.stanford.edu/pubs/22507/AHPPwp7.pdf">http://iis-db.stanford.edu/pubs/22507/AHPPwp7.pdf</a>.
- 6. Chawla, Mukesh, and **Mingshan Lu**, Realigning Incentives in Purchasing and Provider Payment, In *Deepening Health Reform in China: Building High Quality and Value-based Service Delivery*, China Joint Study Partnership, 2016.

### **BOOK & BOOK CHAPTERS**

- 1. Lu, Mingshan (editor), and Egon Jonsson (series editor), 2008, "Financing Health Care: New Ideas for a Changing Society", Wiley-VCH.
- 2. **Lu, Mingshan**, 1996, "Taiwan's Experience on Hospital Privatization: Empirical Evidence," in *Taiwan Experience and Development Strategy of Both Sides of the Strait*, China Economics Press, Beijing, pp346-359.
- 3. **Lu, Mingshan**, and Lasheng Yuan, 2003, "Canadian Economics," in Chen Qien (ed.) *Canadian Social Sciences*, Chinese Academy of Social Sciences Press, Beijing, pp236-248.

#### **PRESENTATIONS**

- October 2017 Poverty Alleviation Interventions: International Experience, Forum on Precision
  Poverty Alleviation, Southwestern University of Finance and Economics Poverty Action
  Lab, Chengdu, Sichuan, China
- Sept 2017 Cost & Benefit Projection Framework for ICD-11 Implementation in Canada, Western Canadian Universities Big Data Health Conference, Banff, Canada
- August 2016 Exploring the Impact of Health Insurance on Health Care Utilization and Outcome Using Electronic Medical Record Data, the 2016 International Population Data Linkage Conference, Swansea, Wales, UK.
- August 2016 Comparison of Risk Adjustment Methods in Patients with Liver Disease Using Electronic

August 2016 Developing and Validating Electronic Medical Record Based Case Definitions for Liver Diseases and Comorbidities, the 2016 International Population Data Linkage Conference, Swansea, Wales, UK. June 2012 Hospital Information System: International Experience, Universal Health Insurance: Dream and Reality, the 8th Annual China Health Care Forum 2012, China Europe International Business School, Beijing, China April 2011 Applying Multi-Level Marketing Strategies in Health Intervention: Promoting Screening Mammogram Utilization among Ethnic Chinese Women, Chinese University of Hong Kong, Hong Kong January 2011 Health Care Financing Reform: Selected Lessons from Canada and the U.S., Business Insight, School of Business, Hong Kong University of Science & Technology, Hong Kong July 2009 Session Organizer, "Improving Hospital Accountability in China: Cost, Quality of care, and Efficiency," 7th World Congress on Health Economics, Beijing, China "The Role of Health Insurance and Patient Co-payment on Cost and Quality of Care of July 2009 AMI patients," 7th World Congress on Health Economics, Beijing, China "Child Health Insurance Coverage: A Survey among temporary and permanent residents July 2009 in Shanghai," 7th World Congress on Health Economics, Beijing, China May 2009 "A systematic review of interventions to increase cancer screening uptake among Asian women," The Canadian Association for Health Services and Policy Research (CAHSPR) Annual Conference, Calgary, Alberta Sept 2006 Conference organizer, "The Banff International Workshop on Health Care Financing", Banff, Alberta July 2005 "Psychiatric Disorders and Labor Market Outcomes: Evidence from the National Latino and Asian American Study (NLAAS)," Investing in Health: 5th World Congress, International Health Economics Association, Barcelona, Spain "Psychiatric Disorders and Labor Market Outcomes: Evidence from the National Latino January 2005 and Asian American Study (NLAAS)," 2<sup>nd</sup> Summer Workshop in Health Economics, Centre for Applied Economic Research, University of New South Wales (UNSW), Sydney, Australia Nov 2004 "Treatment Progress and Patient Compliance in Alcohol Therapy," Centre for Health Economics Research and Evaluation (CHERE), University of Technology, Sydney, Australia Nov 2004 "Psychiatric Disorders and Labor Market Outcomes: Evidence from the National Latino and Asian American Study (NLAAS)," 5th International Conference on Priorities in Health Care, Wellington, New Zealand Oct 2004 "Treatment Progress and Patient Compliance in Alcohol Therapy," Department of Economics, University of New South Wales, Sydney, Australia Sept 2004 "Financial Incentives and Gaming in Alcohol Treatment", the 26th Australian

Medical Record, the 2016 International Population Data Linkage Conference,

Swansea, Wales, UK.

	Conference of Health Economists, Melbourne, Australia
July 2003	Conference Co-Organizer, 2 <sup>nd</sup> Canadian Health Economics Study Group, Banff, Alberta
July 2003	"Performance-based Contracting in Substance Abuse Treatment: Economics Incentives", The Mental Health Evaluation & Community Consultation Unit, Department of Psychiatry, and The Centre for Health Services Policy Research, University of British Columbia, Vancouver
March 2003	"Consistency in Performance Evaluation Reports and Medical Records, "Mental Health Policy and Economics: The Value of Research", Sixth Workshop on Costs and Assessment in Psychiatry, Venice, Italy
July 2002	"Consistency in Performance Evaluation Reports and Medical Records, "Western Economic Association International's 77th Annual Conference, Seattle
July 2002	"Risk Selection and Matching under Performance-based Contracting, "Western Economic Association International's 77th Annual Conference, Seattle
June 2002	"Risk Selection and Matching under Performance-Based Contracting, "1st Canadian Health Economics Study Group Meeting, Halifax
June 2002	"Impact of Alcohol Use on Labour Market Outcomes: Evidence from Panel Data," 10 <sup>th</sup> Canadian Conference on Health Economics, Halifax
March 2002	"Consistency in Performance Evaluation Reports and Medical Records", Medical & Health Research Network, University of Hong Kong, Hong Kong
Nov 2001	"Risk Selection and Matching under Performance-Based Contracting", Department of Economics, <b>Hong Kong University of Science and Technology</b> , Hong Kong
July 2001	"Performance-based Contracting and Reporting Incentives", Third Biennial International Health Economics Association Conference: The Economics of Health,
	Within and Beyond Health Care, York, United Kingdom
June 2001	"Performance-based Contracting and Reporting Incentives", 35th Canadian Economic
May 2001	Association Annual Meetings, Montreal, Canada "Performance-based Contracting and Reporting Incentives", 9th Canadian Conference on Health Economics, CHERA/ACRES, Toronto, Canada
March 2001	"The Productivity of Outpatient Treatment for Substance Abuse", 51st International
Nov 2000	Atlantic Economic Conference, Athens, Greece "The Productivity of Outpatient Treatment for Substance Abuse", 128th Annual Meeting
July 2000	of American Public Health Association, Boston, USA  "Risk Selection and Matching under Performance-Based Contracting", 22 <sup>nd</sup> Australia  Conference of Health Fear arrists. Overseled Association
June 2000	Conference of Health Economists, Queensland, Australia "The Productivity of Outpatient Treatment for Substance Abuse", 17 <sup>th</sup> Annual meeting
June 2000	of the Association for Health Services Research (AHSR), Los Angeles, USA "The Productivity of Outpatient Treatment for Substance Abuse", 34 <sup>th</sup> Canadian
March 2000	Economic Association Annual Meetings, Vancouver, Canada  "Risk Selection and Matching under Performance-Based Contracting", 49 <sup>th</sup>
Dec 1999	International Atlantic Economic Society Conference, Munich, Germany "Risk Selection and Matching under Performance-Based Contracting", City University
Dec 1999	of Hong Kong, Department of Economics and Finance, Hong Kong "Risk Selection and Matching under Performance-Based Contracting", The University of Hong Kong, School of Economics and Finance, Hong Kong

Dec 1999	"Risk Selection and Matching under Performance-Based Contracting",
August 1999	University of British Columbia, Department of Economics, Vancouver "Separating the True Effect from Gaming in Incentive-Based Contracts in Health Care", 8th Canadian Conference on Health Economics: Exploring the Health Frontier: The
May 1999	Effect of Reform Initiatives on Canadian Health and Health Care. Edmonton, Canada "Risk Selection and Matching under Performance-Based Contracting", 33rd Canadian
	Economic Association Annual Meetings, Toronto, Canada
June 1999	"Risk Selection and Matching under Performance-Based Contracting", The
	International Health Economics Association 2 <sup>nd</sup> World Conference: Private and
	Public Choices in Health and Health Care, Rotterdam, Netherlands
May 1998	"Separating the True Effect from Gaming in Incentive-Based Contracts in Health Care",
-	32 <sup>nd</sup> Canadian Economic Association Annual Meetings, Ottawa, Canada
July 1998	"Separating the True Effect from Gaming in Incentive-Based Contracts in Health Care",
•	Health and Risk: An International Symposium, London, UK
May 1998	"Performance-based Contracting in Health Care Industry", Institute of Health
	Economics and University of Alberta Seminar, Edmonton, Canada
June 1998	"Separating the True Effect from Gaming in Incentive-Based Contracts in Health Care", 15th Annual meeting of the Association for Health Services Research (AHSR),
	Washington DC, USA
June 1998	"The Productivity of Mental Health Care: An Instrumental Variable Approach", 15 <sup>th</sup>
	Annual meeting of the Association for Health Services Research (AHSR),
	Washington DC, USA
January 1998	"Separating the True Effect from Gaming in Incentive-Based Contracts in Health Care",
-	Mental Health Workshop, Harvard University Medical School, Cambridge, USA

# OTHER PROFESSIONAL ACTIVITIES

2015 -	Member, Editorial Board, China Health Review
2013-	Associate Editor, BMC Health Services Research
2008-2012	Member, Working Group, Science-Policy-Practice Network in Children's Mental Health,
	Alberta
2004-2006	Member, Scientific Committee, Alternative Relationship Plans, Alberta Health and
	Wellness
2005-2010	Faculty Member, Health services research and economics, Faculty of 1000 Medicine,
	BioMed Central Ltd, UK
2003-2004	Member, Alberta Health and Wellness - Alberta Medical Association Alternative
	Payment Plan Evaluation Development Committee
2003	Member, Peer Review Committee, Analysis of Canadian Community Health Survey on
	Mental Health and Well Being, Canadian Institute of Health Research

# **SERVICE**

- University of Calgary: Graduate Scholarship Committee; Advisory Selection Committee, Svare University Chair in Health Economics
- University of Calgary, Department of Economics: Policy & Planning Committee, Graduate Studies Committee, Student Advisory Committee, Research Activities Committee, Special

- Events Committee, Microeconomics coordinator, Departmental Searching Committee for Svare University Chair in Health Economics; Faculty Association Departmental Representative
- University of Calgary, Department of Community Health Sciences: Search and Selection Committee for Health Economist
- University of Calgary Faculty of Arts: Faculty Representative, Faculty of Medicine Council
- Institute of Health Economics: Research Coordinating Committee

#### **SUPERVISION**

### Thesis supervision

- Guosong Wu, Postdoctoral Fellow, Institute of Health Economics. September 2021 to date.
- Atena Qaedi, M.A. (Economics, University of Calgary), "The association between 'compliance with colonoscopy surveillance' after primary treatment and healthcare utilization", completed September 2020.
- Kevin Zhao, B.HSc. Honour (Health & Society, University of Calgary), "Cost Estimation of Transitioning from ICD-10 to ICD-11 in Alberta", completed April 2019.
- Shahreen Khair, M.A. (Economics, University of Calgary), "The Economics of Big Data in Healthcare: A Case Study of the ICD-9 to ICD-10 Transition", completed October 2018.
- Jiang, Jing, M.A. (Economics, University of Calgary), "Poverty and Health in China", completed October 2019.
- Xueci, Zhao, Ph.D. (Economics, University of Calgary, co-supervise with Dr. Dan Gordon), "Essays in Health Economics", completed May 2019.
- Elham Adibnia, Ph.D. (Economics, University of Calgary, co-supervise with Dr. Jean-Francois AL Wen), completed June 2021.
- Yuan Xu, Ph.D. (Community Health Sciences, University of Calgary, co-supervise with Dr. Hude Quan), "Outcome and Resource Use of Patients with Liver Disease: Analysis of Chinese Electronic Medical Records", completed November 2016.
- Jason Jiang, MSc (Community Health Sciences, University of Calgary, co-supervise with Dr. Hude Quan), "Quality of Hospital Discharge Databases Over Time," completed September 2015.
- Fangxu Ding, MSc (Economics), "Depression Evaluation for the College Students in Mainland China", Hong Kong University of Science & Technology, completed August 2012.
- Wenhong Xue, and Xiaofei Sun, MSc (Economics), "Smoking behavior and youth smoking in China: Evidences from the China Health and Nutrition Survey (CHNS)", Hong Kong University of Science & Technology, completed June 2011.
- Zhijian Li, PhD (Economics, co-supervised with Dr. Jin Ma), "Economic Efficiency in Fund Allocation in Health Care and Hospital Efficiency Evaluation", Shanghai Jiaotong University, completed November 2012.
- Halima Mohamed, MSc (Community Health Sciences), "Assessing the Impacting of the Directly Observed Treatment Short-Course (DOTS) for the Control of Tuberculosis in DOTS-Recipient Countries: Cross-National Evidence for 1996-2006, Supervisory Committee Member, completed December 2010.
- Mahmood Zarrabi, Ph.D. (Economics), Committee Member, completed August 2010.
- Jinsheng Zhu, MEc (Economics), Ethnicity Issues and Mental health policy and economics in Canada, Supervisor, completed August 2005.
- Seija Kromm, MA (Economics), "Public versus Private Financing of Healthcare in the Market for In Vitro Fertilization Services in Canada: How Does it Effect the Welfare Function?" co-supervise

- with Curtis Eaton, completed December 2003. Currently Research Associate, Centre for Health and Policy Studies, University of Calgary
- Gwang-Soog Kee, MA (Economics), "Endogenous determination of health care expenditures and population health in Canada: 1975-1995," co-supervise with Chris Auld, completed December 2001.

# **Thesis Committee Member**

- Max Jajszczok, Ph.D. (Community Health Sciences, University of Calgary), "The impacts of investments on home and community care programs on the outcomes of home care clients within Alberta", 2020 to date.
- Alexandra Frolkis, Ph.D. (Community Health Sciences), "The evolution of surgery risk in Crohn's disease," completed May 2014.
- David Eldon Spackman, MA (Economics), "The Effects of Cost and Value Information on Embedding in Contingent Valuation", completed January 2006.
- Munsoor Ahmad Mirza, MA (Economics), "An evaluation of costs and outcomes for middle to late stage dementia residents in traditional versus specialized care environments", completed February 2003. Currently Research Analyst, Statistics Canada.
- Cailen Henry, MA (Economics), "Youth Substance Use and Human Capital Accumulation," completed December 2001.
- Daniel James Clavelle, M.Ec. (Economics), "An Evaluation of the Protected Marine Reserve (PMR) as a Solution to Overfishing in the World's Oceans," completed July 1998.

### Research supervision

- Jing Jiang, Research Analyst, "Complementary Health Integration Project", 2020 to date.
- Jinsheng Zhu, Research Associate (Institute of Health Economics), 01/06 06/06. Currently Research Associate, John Hopkins University.
- Bing Li, Research Associate (Institute of Health Economics), 04/03 01/06. Currently Research Coordinator of DIMR, Alberta Health Services.
- Munsoor Mirza, MA (Economics), A review on Medical Saving Account, 04/03 07/03. Currently Research Analyst, Statistics Canada.
- Jitian Sheu, Ph.D. (Economics, Boston University), "Consistency in Performance Evaluation Reports and Medical Records,", 09/01 08/04. Currently Assistant Professor, Chang-Gung University, Taiwan.
- Jenny Zhang, Research Assistant (Institute of Health Economics), 1/01 06/04.
- Liping Zhang, MA (Economics), Research Assistant, 05/02 09/02. Currently Health Economist, BC Ministry of Health Services.
- Jennifer Chung, MA (Economics), "International experiences on two-tier health care system," in progress, 05/01 07/03. Currently Economist, Department of Finance.
- Huaixiang Wang, MA (Economics), "Mental health and labour market outcomes using NPHS data," 05/01 01/03. Currently Vice Director, Department of Information Research, Ministry of Transportation, China.
- Guang Huang, MA (Economics), Research Assistant, 5/01 9/01.
- Wing Chan, Ph.D. (Economics, University of Alberta), "Mental health and labour market outcomes using NPHS data," 1/01 5/01.
- Sujaya Parthasarathy, Health Economist (Alberta Mental Health Board and University of Calgary), 09/2000 07/2002. Currently Health Economist, Kaiser Permanente.

Jin Chen, Ph.D. (Economics), Research Assistant, 04/00-08/00. Currently Portfolio Analyst, EPCOR. Munsoor Mirza, MA (Economics), "A literature review on mental health and labour market outcomes," 5/00-8/00. Currently Research Analyst, Statistics Canada.

Gwang-Soog Kee, MA (Economics), "Does money matter in health care? The relationship between health and health expenditures," 01/00 - 08/00.

Lei Zhang, MEc (Economics), Research Assistant, 08/99 – 08/00.

Ricardo Rangel Ruiz, MA (Economics), "Data collection on Canadian provincial health expenditures and health indicators: 1975-1999," 05/99-08/99. Currently Market Analyst, EDC Associates Ltd. Maria Laszlo, BA (Economics), Research Assistant, 05/98 – 04/99.

Louise Affleck, Research Assistant, 9/97 – 12/97. Currently Health Economist, Calgary Health Region.

#### **JOURNAL REFEREE**

Canadian Public Policy/Analyse de Politiques

Canadian Journal of Economics

Health Economics

**Health Economics Letters** 

Health Policy

Health Services Research

International Journal of Technology Assessment in Health Care

Journal of Economics & Management Strategy

Journal of Health Economics

Social Sciences & Medicine

Quarterly Journal of Economics

BMC Health Services Research

#### **GRANT REVIEW**

Canadian Institute of Health Research

National Health Research and Development Program, Health Canada

The Hampton Research Fund Committee, University of British Columbia

National Science Foundation

Max Bell Foundation

Michael Smith Foundation of British Columbia.

Social Science and Humanities Research Council of Canada

Hong Kong Research Grants Council