

KRYSTAL LAU

Department of Economics and Public Policy & Centre for Health Economics and Policy Innovation
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EDUCATION

- 2015 – Present Ph.D. Candidate in Health Economics
Expected: 09/2020 Imperial College Business School, London, United Kingdom
Thesis Title: The Economics of Influenza Pandemics and Vaccination Behavior
Research Interests: Pandemics, Behavioral Economics, Health Policy, Big Data
- 2013 – 2015 MSc. Bioscience and Health Policy, Rice University
2009 – 2013 BSc. Biochemistry & Cell Biology; Health Care Policy, Rice University

PUBLICATIONS & WORKING PAPERS

- **Lau K**, Hauck K, Miraldo M, (2018). Excess influenza hospital admissions and costs due to the 2009 H1N1 pandemic in England. *Health Economics*. 28(2), 175-188. doi: 10.1002/hec.3834.
- **Lau K**, Miraldo M, Galizzi M, Hauck K. Social Norms and Free-Riding in Influenza Vaccine Decisions: An Online Experiment. (Under review at Journal of Health Economics)
- **Lau K**, Dorigatti I, Hauck K, Miraldo M. Mapping the pandemic patient pathway: Estimates of hospitalization, severity, and mortality rates from the 2009 H1N1 pandemic and 2010/11 post-pandemic influenza season in England. (Under review at BMC Medicine)
- Joint estimation of self and other risk taking under parental and child influenza vaccination decisions (working).
- Optimization of England's National Health Service to minimize mortality and costs due to the COVID-19 pandemic (working).
- Socio-demographic and political characteristics of the anti-vaccination movement on Twitter (working).

EMPLOYMENT EXPERIENCE

- 09/2015 – Present **Imperial College Business School, London, United Kingdom**
Doctoral Student, Health Economics
- Determined the health and economic impact of pandemic influenza H1N1 on hospitals in England using big hospital data and seasonal ARIMA modelling
 - Measured the effect of social norm messaging on influenza vaccination intention using experimental economics design and multivariate linear regressions, probit, logistic and double hurdle modelling techniques
 - Jointly estimate the dual risk-taking by parents when making influenza vaccine decisions for themselves and their children using random forest and LASSO machine learning techniques and recursive bivariate probits
 - Mapping the patient pathway from H1N1 incidence to hospitalization during the pandemic and post-pandemic influenza season in England
 - Determining socio-demographic and political profile characteristics of anti-vaccination social media users via web-scraped Twitter data and unsupervised learning methods
- 10/2016 – Present **Imperial College Business School, London, United Kingdom**
Teaching Assistant/Lecturer
- Conduct tutorial lectures for 100+ students on introductory economics both face-to-face and online in the following programs: MSc Management, MSc International Management, MSc International Health Management, MSc Economics & Strategy for Business, Master's Public Health, MBA online, BSc Engineering online
 - Lecturer – Introduction to Time Series (Executive MSc Health Policy); Behavioral Economics (Global Master's Public Health)
- 02/2020 – Present **Partnerships for Global Development, London, United Kingdom**
Consultant, Data Analyst
- Perform quantitative and qualitative analysis on data collected by the ministry to assess the impact of various health and nutrition education interventions and farming diversity evaluations on farmers, children, and communities
- 05/2015 – 09/2015 **Network of Behavioral Health Providers, Houston, TX, USA**
Data Analyst and Evaluation Specialist

- Consulted on the Greater Houston Behavioral Health Affordable Care Act (BHACA) Initiative via 1) creating a comprehensive behavioral health screening outcomes measures directory and 2) designing and analyzing surveys to create evaluation reports for clients to assess their readiness for US healthcare reform

05/2014 – 05/2015 **Imperial College London, London, United Kingdom**
Wagoner Foreign Study Fellow/Visiting Researcher with Dr. Katharina Hauck

- Estimated characteristics of ambulatory care sensitive condition patients using U.S. emergency department electronic health records

AWARDS, SCHOLARSHIPS, AND FELLOWSHIPS

2019	Dean's Awards for: "Inspiring Brilliant Minds" and "Pioneering Practical Solutions", Imperial College Business School
2019	"Best Poster Design" and "Top Scoring Abstract" awards, Immunization Economics Pre-Conference Session, 13 th International Health Economics Association Congress
2019, 2020	Shortlisted for "Best Graduate Teaching Assistant" award, Imperial College London
2015 – Present	PhD Scholarship, Imperial College Business School
2014	James T. Wagoner Foreign Study Fellowship, Rice University

CONFERENCE PRESENTATIONS AND INVITED TALKS

2020	University of Duisberg – Essen: CINCH & RWI Joint Economics Seminar, Essen, DE
2019	University of Oxford: HERC Health Economics Seminar, Oxford, UK
2019	13 th International Health Economics Association Congress, Basel, CH
2019	8 th Conference of the American Society of Health Economists, Washington DC, USA
2019	Imperial College London: Health Economics Seminar, London, UK
2019	The Forum Policy Engagement Seminar, Imperial College London, UK
2018	5 th European Health Economics Association PhD Student Conference, Catania, IT
2018	12 th European Health Economics Association Conference, Maastricht, NL
2018	University of Oxford: International Health Congress, Oxford, UK
2018	Imperial College London: Hospital Episode Statistics Conference, London, UK
2018	Public Involvement Workshop, Public Health England, London, UK
2017	12 th International Health Economics Association Congress, Boston, MA, USA
2016	Imperial College London: Health Economics Seminar, London, UK
2016	Health Economists' Study Group Meeting, Gran Canaria, ES

LEADERSHIP EXPERIENCE

04/2018 – Present	Founding Member & Chair, Imperial Network for Vaccine Research (INVaR) Early Career Researcher Committee
09/2018 – Present	Deputy Chair of Academics & Advisor to the Chair, Dean Student Advisory Council, Imperial College Business School
09/2016 – 09/2019	Chair, Student-Staff Committee, Imperial College Business School

SKILLS AND LANGUAGES

Programming: Stata (advanced), Python (intermediate), R (intermediate)

Languages: English (native), French & Mandarin (elementary)

REFERENCES

Marisa Miraldo

Associate Professor in Health Economics
 Department of Economics and Public Policy
 Imperial College Business School
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Katharina Hauck

Reader in Health Economics
 Department of Infectious Disease Epidemiology
 Imperial College London, School of Public Health
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