

Jacob E. Simmering

Academic Address

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EDUCATION

PhD, Pharmaceutical Socioeconomics University of Iowa, Iowa City, IA	2011 - Expected May 2016
MS, Epidemiology University of Iowa, Iowa City, IA	2010 - 2013
BA, Chemistry Grinnell College, Grinnell, IA	2005 - 2009

PROFESSIONAL EXPERIENCE

<i>Graduate Research Assistant</i> College of Pharmacy, University of Iowa	May 2011 - Present
<i>Graduate Teaching Assistant</i> College of Pharmacy, University of Iowa	August 2011 - December 2014
<i>Graduate Research Assistant</i> College of Public Health, University of Iowa	September 2010 - May 2011

HONORS

- University of Iowa, College of Pharmacy Dissertation Semester Fellowship, 2015
- American Foundation for Pharmaceutical Education Pre-Doctoral Fellowship Renewal, 2014
- Jakobsen Conference 3rd Place in Biological and Health Sciences, 2014
- American Foundation for Pharmaceutical Education Pre-Doctoral Fellowship, 2013
- Interdisciplinary Health Sciences Poster Session Best Poster Award, 2013
- Interdisciplinary Health Sciences Poster Session Best Poster Award, 2012
- Department of Epidemiology Scholarship for Academic Excellence, 2011

METHODOLOGY AND TECHNICAL SKILLS

- Statistical Methods: Time series analysis, large/big data, machine learning
- Statistical Software: R, SAS, Python
- Other Technical Skills: Web scrapping, Amazon Web Services/cloud computing, SQL
- Other Software: L^AT_EX MS Office, HTML, Markdown

ACTIVE RESEARCH AREAS

- Child Health - Influenza-like illness as an externality of well-child office visits
- Networks - Diffusion and control of infectious diseases on a network of inpatient transfers
- Readmissions - Modeling risk of 30 day readmissions for chronic diseases with unobserved heterogeneity
- Weather and Infectious Diseases - Exploring local weather effects on hospitalization for a variety of infectious diseases

TEACHING

- Instructor, **Drug Literature Evaluation**, University of Iowa College of Pharmacy, 2014-2015. Developed and presented two weeks of lectures and one week of lab on case-control methods in pharmacy to approximately 110 third year pharmacy students.
- Instructor, **Introduction to Research Methods**, University of Iowa College of Pharmacy, 2014. Produced and delivered two lectures on epidemiological methods such as case-control, cohort and cross-sectional studies to a group of graduate students in health services research.

PUBLICATIONS

- **JE Simmering**, LA Polgreen, D Campbell, JE Cavanaugh, PM Polgreen. Hospital Transfer Network Structure as a Risk Factor for *Clostridium difficile* Infection. *Infection Control and Hospital Epidemiology* 2015.
- **JE Simmering**, LA Polgreen, JE Cavanaugh, PM Polgreen. Temporal Association Between ILI Visits and Well Child Exams. *Infection Control and Hospital Epidemiology* 2014.
- **JE Simmering**, LA Polgreen, PM Polgreen. Web Search Query Volume as a Measure of Pharmaceutical Utilization and Changes in Behavior. *Research in Social and Administrative Pharmacy* 2014.
- AM O'Brien, BM Hanson, SA Farina, JY Wu, **JE Simmering**, SE Wardyn, BM Forshey, ME Kulick, DB Wallinga, TC Smith. MRSA in Conventional and Alternative Retail Pork Products. *PLoS-ONE* 2012.

WORKING PAPERS

- **JE Simmering**, LA Polgreen, AP Comellas, JE Cavanaugh, PM Polgreen. Identifying Patients with COPD at High Risk of Readmission.
- **JE Simmering**, F Tang, LA Polgreen, JE Cavanaugh, PM Polgreen. Trends in Urinary Tract Infection Incidence and Cost.
- **JE Simmering**, F Tang, LA Polgreen, JE Cavanaugh, PM Polgreen. Seasonal Intensity in Urinary Tract Infection Varies by Age and Sex.
- **JE Simmering**, LA Polgreen, JE Cavanaugh, PM Polgreen. Temperature as a Risk Factor for Urinary Tract Infections.
- **JE Simmering**, LA Polgreen, PM Polgreen. Interaction between Temperature and Humidity as a Risk Factor for Legionellosis.
- HL Erickson, **JE Simmering**, RR Butler, LA Polgreen, AP Comellas, PM Polgreen. Downward Trend in Inferior Vena Cava (IVC) Filter Use Following a Safety Alert.

CONFERENCES

- **JE Simmering**, F Tang, LA Polgreen, JE Cavanaugh, PM Polgreen. Trends in Urinary Tract Infection Incidence and Seasonality. IDWeek 2015, October 2015 (Poster).
- **JE Simmering**, DR Campbell, LA Polgreen, PM Polgreen. Temperature as a Risk Factor for Hospitalizations for Urinary Tract Infection. University of Iowa Health Sciences Research Week Student Poster Session, March 2015 (Poster).
- **JE Simmering**, DR Campbell, LA Polgreen, PM Polgreen. Temperature as a Risk Factor for Hospitalizations for Urinary Tract Infection. University of Iowa Jakobsen Conference for Graduate Research 2014, March 2015 (Oral Presentation).
- **JE Simmering**, DR Campbell, LA Polgreen, PM Polgreen. Hospital Transfer Network Structure as a Risk Factor for *C. difficile* Infections. Midwest Social and Administrative Pharmacy Conference 2014, July 2014 (Oral Presentation).
- **JE Simmering**, DR Campbell, LA Polgreen, PM Polgreen. Hospital Transfer Network Structure as a Risk Factor for *C. difficile* Infections. American Society of Healthcare Economists Conference 2014, June 2014 (Oral Presentation).
- **JE Simmering**, DR Campbell, LA Polgreen, PM Polgreen. Hospital Transfer Network Structure as a Risk Factor for *C. difficile* Infections. University of Iowa Interdisciplinary Health Research Student Poster Session, April 2014 (Poster).
- **JE Simmering**, DR Campbell, LA Polgreen, PM Polgreen. Hospital Transfer Network Structure as a Risk Factor for *C. difficile* Infections. University of Iowa Health Sciences Research Week Student Poster Session, March 2014 (Poster).
- **JE Simmering**, DR Campbell, LA Polgreen, PM Polgreen. Hospital Transfer Network Structure as a Risk Factor for *C. difficile* Infections. University of Iowa Jakobsen Conference for Graduate Research 2014, March 2014 (Oral Presentation).
- **JE Simmering**, DR Campbell, LA Polgreen, PM Polgreen. Hospital Transfer Network Structure as a Risk Factor for *C. difficile* Infections. IDWeek 2013, October 2013 (Oral Presentation).
- **JE Simmering**, PM Polgreen, A Saftlas. Is Influenza a Risk Factor for Preeclampsia? Evidence from the Novel 2009 H1N1 Pandemic. University of Iowa Department of Epidemiology Research Poster Session, April 2013 (Poster).
- **JE Simmering**, LA Polgreen, PM Polgreen. Using Search Volume for the Surveillance of Medication Prescribing. University of Iowa Interdisciplinary Health Research Student Poster Session, April 2013 (Poster).
- **JE Simmering**, LA Polgreen, PM Polgreen. Using Search Volume for the Surveillance of Medication Prescribing. International Society for Disease Surveillance Conference Meeting, December 2012 (Poster).
- **JE Simmering**, C Yang, E Foster, AC Miller, B Urick, LA Polgreen, PM Polgreen. Adverse Drug Events, Utilization and Knowledge Diffusion: 'Insights' from Search Volume. Midwest Social and Administrative Pharmacy Conference, August 2012 (Oral Presentation).
- **JE Simmering**, LA Polgreen, PM Polgreen. Not So Well Children: Temporal Association of Well-Child Office Visits and Influenza-like Illness. American Society of Health Economists Conference, June 2012 (Oral Presentation).
- **JE Simmering**, LA Polgreen, PM Polgreen. Not So Well Children: Temporal Association of Well-Child Office Visits and Influenza-like Illness. University of Iowa Interdisciplinary Health Research Student Poster Session, April 2012 (Poster).
- **JE Simmering**, LA Polgreen, PM Polgreen. Not So Well Children: Temporal Association of Well-Child Office Visits and Influenza-like Illness. University of Iowa Health Sciences Research Week Student Poster Session, March 2012 (Poster).
- AC Miller, **JE Simmering**, B Urick, LA Polgreen. Using web search data to measure diffusion of information after changes in pharmaceutical knowledge. American Pharmacists Association Annual Meeting, March 2012 (Poster).
- **JE Simmering**, C Yang, E Foster, LA Polgreen, PM Polgreen. Adverse drug events: 'Insights' from Google search volume. International Society for Disease Surveillance Conference, December 2011 (Oral Presentation).

- C Yang, **JE Simmering**, P Srinivasan, LA Polgreen, PM Polgreen. Early detection of adverse drug events using the full text of letters to the editor. International Society for Disease Surveillance Conference, December 2011 (Oral Presentation).