

Tianze Jiao, PhD

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Education

Postdoctoral fellow, Epidemiology, Biostatistics & Occupational Health 2021

McGill University, Montreal, QC, Canada

Main Project Title: A personalized dynamic blood pressure control plan for cardiovascular disease prevention among patients with hypertension at low cardiovascular disease risk

Supervisor: Robert W. Platt, Ph.D.

PhD, Pharmacotherapy Outcomes Research & Health Policy 2017

University of Utah, Salt Lake City, UT, USA

Thesis Title: Investigation of the Optimal Timing of Treatment Change to Maximize the Delay of Onset Mucoïd Pseudomonas aeruginosa Pulmonary Infection in Pediatric Cystic Fibrosis Patients

Committee: Diana I. Brixner*, Ph.D., R.Ph (chair), Theodore G. Liou**, M.D., Vanessa Stevens*, Ph.D., David C. Young*, Pharm.D., Yue Zhang**, Ph.D.

* Department of Pharmacotherapy, College of Pharmacy, University of Utah

** Internal Medicine, University of Utah

BSc, Major: Pharmacy, Minor: Economics 2011

China Pharmaceutical University, Nanjing, P.R. China

Honors and Awards

International Society for Pharmacoepidemiology Scholarship 2020, 2021

The Outstanding Contribution of Peer Reviewer for Value in Health 2017

A Student Research Grant from International Society for Pharmacoeconomics and Outcomes Research

(ISPOR) Real World Evidence Task Force: \$1,000 (USD) 2016/6-2016/8

The Associated Students of the University of Utah, Travel Award: \$400 (USD) 2016

The Highest Performing Peer Reviewer for Journal of Managed Care and Specialty Pharmacy

2015, 2020

The Associated Students of the University of Utah, Travel Award: \$400 (USD) 2015

Funded Grant

Canadian Institutes of Health Research (CIHR) – Project Grant

PI: Kristian B. Filion

Co-investigator(s): Tianze Jiao (*led grant application: generated research idea, shaped objectives, drafted proposal*), Antonios Douros, Robert W. Platt

“A personalized dynamic blood pressure control plan for cardiovascular disease prevention among patients with hypertension at low cardiovascular disease risk”

\$191,250 (CAD)

2020 – 2022

Teaching Experience

Co-instructor – Confounding in Pharmacoepidemiology: Modern Control Techniques Summer 2019 & Summer 2021
Co-instructor – Drug Regimen Review and Real-World Evidence Clerkship Fall 2015
Teaching assistant – Pharmacotherapy Outcomes Research II Spring 2014

Mentoring Experience

Directed a series of international research projects 2013/09-2015-06
– Number of Mentorees: 8
– Responsibilities: Taught and guided Pharm.D. students to understand statistical analyses, to explain and present those results in the national conferences

Para-Professional Activities

Committee Memberships

Member of the Organizing Committee of the 7th Annual Postdoctoral Research/Career Day

ALL UNIVERSITIES IN QUEBEC, CANADA

Leader of the academic session 2019/11-2020/12

- Planned, organized and hosted the academic panel
- Supported the entrepreneurial panel

Member of the Association of Postdoctoral Fellows in McGill University

MCGILL UNIVERSITY, MONTREAL, QC, CANADA

Chair 2018/09-2020/08

Member

2018/02-2018/09

- Applied grants for a series of postdoctoral events and seminars
- Planned, organized and hosted a series of postdoctoral events and seminars

Member of the ISPOR Student Network Educational Committee

2014/09-2015/08

- Assisted in the inception and implementation of educational webinar, team building activities for all international ISPOR student chapters

Member of the ISPOR Student Chapter

UNIVERSITY OF UTAH, SALT LAKE CITY, UT, USA

President 2014/09-2015/08

Vice President 2013/04-2014/08

Member 2012/09-2013/03

- Applied and acquired funding for student chapter

- Led the team and collaborated with other chapters to organize seminars, team building activities

Member of Professional Societies

Society for Epidemiologic Research 2019-Present

International Society for Pharmacoepidemiology 2018-Present

International Society for Pharmacoeconomics and Outcomes Research 2012-Present

Peer Reviewer for Journal

ClinicoEconomics and Outcomes Research 2015/07-Present

Drug, Healthcare and Patient Safety	2015/07-Present
Value in Health	2015/06-Present
Journal of Managed Care & Specialty Pharmacy	2015/06-Present

Active Participant at National and International Conferences 2013-Present

International Society for Pharmacoeconomics and Outcomes Research

International Society for Pharmacoepidemiology

Atlantic Causal Inference Conference

Society for Epidemiologic Research

Managed Care & Specialty Pharmacy

Society for Medical Decision Meeting

American Heart Association

Canadian Cardiovascular Congress

Publications and Presentations

Peer-reviewed Journals:

1. **Jiao T**, Platt RW, Douros A, Filion KB. Is the Intensive Blood Pressure Control plan better? Emulating SPRINT among Patients with Hypertension in an observational database in United Kingdom. (In preparation)
2. **Jiao T**, Schnitzer ME, Forget A, Blais L. Predicting the Progression of COPD among Adult Patients in Real Time: A Machine Learning Prediction Model with Drug Adherence. (In preparation)
3. **Jiao T**, Zhang Y, Brixner D, Stevens V, Young D, Liou T. Prescription Patterns for the Use of Chronic Medications for Lung Health Maintenance among Patients with Cystic Fibrosis in the United States. (In preparation)
4. **Jiao T**, Stevens V, Young D, Liou T, Brixner D, Zhang Y. Investigation of the Optimal Timing of Treatment Change to Maximize the Delay of Onset Mucoïd *Pseudomonas aeruginosa* Pulmonary Infection in Pediatric Cystic Fibrosis Patients (In preparation)
5. **Jiao T**, Platt RW, Douros A, Filion KB. Use of a Statistical Adaptive Treatment Strategy Approach for Emulating Randomized Controlled Trials Using observational Data: The Example of Blood Pressure Control Strategies for the Prevention of Cardiovascular Events Among Individuals with Hypertension at High Cardiovascular Risk. (Submitted to American Journal of Epidemiology on Nov 2021)
6. **Jiao T**, Schnitzer ME, Forget A, Blais L. Identifying Asthma Patients at High Risk of Exacerbation in Real Time: A Machine Learning Model. (Submitted to American Journal of Respiratory and Critical Care Medicine on June 2021)
7. **Jiao T**, Platt RW, Douros A, Filion KB. Prescription Patterns for the Use of Antihypertensive Drugs for Primary Prevention among Patients with Hypertension in the United Kingdom. American Journal of Hypertension. Am J Hypertens, Aug 2021; hpab 137.

8. Racine G, Forget A, Moullec G, **Jiao T**, Blais L, Lemiere C. Predictors of asthma control and exacerbations: a real-world study. *J Allergy Clin Immunol Pract*. July 2021; 9(7):2802-2811.e2.
9. Bellows BK, Kuo KL, Biltaji E, Singhal M, **Jiao T**, Cheng Y, McAdam-Marx C. Real-world Evidence in Pain Research: A Review of Data Sources. *J Pain Palliat Care Pharmacother*. Sep 2014; 28(3):294-304.
10. Biskupiak JE, Ghate SR, **Jiao T**, Brixner D. Cost Implications of Formulary Decisions on Oral Anticoagulants in Nonvalvular Atrial Fibrillation. *Journal of Managed Care Pharmacy*. Nov-Dec 2013; 19(9):789-798.
11. Lin J, **Jiao T**, Biskupiak JE, McAdam-Marx C. Application of Electronic Medical Record Data for Health Outcomes Research: A Review of Recent Literature. *Expert Review of Pharmacoeconomics & Outcomes Research*. Apr 2013; 13(2):191-200.
12. Bellows BK, Dahal A, **Jiao T**, Biskupiak J. A Cost-utility Analysis of Pregabalin versus Duloxetine for the Treatment of Painful Diabetic Neuropathy. *Journal of Pain & Palliative Care Pharmacotherapy*. Jun 2012; 26(2):153-164.

Abstracts:

* Indicates oral presentation by Jiao T

** Indicates poster presentation by Jiao T

1. ****Jiao T**, Douros A, Platt RW, Filion KB. Target blood pressure levels and the risk of major adverse cardiovascular events among patients with hypertension at low cardiovascular disease risk. Accepted at the International Conference on Pharmacoepidemiology & Therapeutic Risk Management All Access (Virtual Event) Aug 23-25, 2021
2. ****Jiao T**, Platt RW, Douros A, Filion KB. Prescription Patterns for the Use of Antihypertensive Drugs for Primary Prevention among Patients with Hypertension in the United Kingdom. Presented at the International Conference on Pharmacoepidemiology & Therapeutic Risk Management All Access (Virtual Event) Sep 16-17, 2020
3. ***Jiao T**, Zhang Y, Liou TG, Stevens V, Young DC, Brixner DI. The optimal treatment regime to delay the onset of mucoid *Pseudomonas aeruginosa* pulmonary infection on pediatric Cystic Fibrosis patients. Presented at the International Society for Pharmacoeconomics and Outcomes Research 22nd Annual International Meeting. Boston, MA. May 20-24, 2017.
4. Nyman H, **Jiao T**, Raphael K, Low C, Greene T, Witt D, LaFleur J. Agreement between CKD-EPI and Cockcroft-gault equations for determining drug doses in a hospitalized population. Presented at the American Association of Colleges of Pharmacy Annual Meeting 2016. Anaheim, CA. July 23-27, 2016.
5. ****Jiao T**, Biskupiak J, Ye X, Unni S, Dowd C, Fink A, Feng I, Erdo J, Brixner D. Development of a linked database for Cystic Fibrosis research by integrating a patient registry with administrative claims data. Presented at the International Society for Pharmacoeconomics and Outcomes Research 21th Annual International Meeting. Washington, DC. May 21-25, 2016. *Value in Health* 2016; Vol 19(3): A81.

6. Biskupiak J, Unni S, **Jiao T**, Ye X, Dowd C, Fink A, Feng I, Erdo J, Brixner D. Evaluation of a linked database for Cystic Fibrosis research on clinical, demographic and resource use variables. Presented at the American Managed Care & Specialty Pharmacy Annual Meeting 2016. San Francisco, CA. Apr 19-22, 2016.
7. Cheng Y, **Jiao T**, Willson TM, Reese T, Stoddard GJ, LaFleur J. Bisphosphonates for fracture prevention in males-a systematic review and meta-analysis. Presented at the International Society for Pharmacoeconomics and Outcomes Research 20th Annual International Meeting. Philadelphia, PA. May 16-20, 2015. Value in Health 2015; Vol 18(3): A154.
8. ****Nyman HA, Jiao T, Raphael K, Low C, Witt D, LaFleur J.** Agreement between kidney function estimates for drug dosing in a hospitalized veteran population. Presented at the National Kidney Foundation 2015 spring clinical meetings. Dallas, TX. Mar 25-29, 2015.
9. Wright HZ, Lee SC, Wright S, **Jiao T**. Outreach in Armenia: chronic disease awareness, prevention and management. Annals of Global Health. Feb 2015; 81(1):103-104.
10. Wright HZ, Woods S, Irvine W, Hovhannisyan M, **Jiao T**. Know your diabetes! Assessing knowledge of type II diabetes complications and prevention in Armenia. Annals of Global Health. Feb 2015; 81(1):123.
11. Wright HZ, Leishman E, Chapman D, Hovhannisyan M, **Jiao T**. Identifying disparity to improve outcomes: diabetes-related knowledge assessment among primary health care providers in Armenia. Annals of Global Health. Feb 2015; 81(1):179.
12. Pocoski J, Lin PL, Hong W, Kelkar SS, **Jiao T**, Du EX, Humphries TJ, Xie J. Associations between joint damage and quality of life among patients with severe Hemophilia A in the 3-year SPINART trial. Presented at the 56th American Society of Hematology Annual Meeting and Exposition. San Francisco. Dec 6-9, 2014. Blood 2014; Vol 124(21):200.
13. ****Jiao T, Stenehjem D, Brixner D.** Cost effectiveness analysis of antidepressants on breast cancer patients: a Markov modeling study. Presented at the International Society for Pharmacoeconomics and Outcomes Research 6th Asia Pacific Conference. Beijing, China. Sep 6-9, 2014. Value in health 2014; Vol 17(7): A735.
14. Wright HZ, Warner ZC, Johnston W, Hovhannisyan M, **Jiao T**. Diabetes in Armenia: assessing population knowledge and awareness of type II diabetes. Annals of Global Health. Jun 2014; 80(3):243.
15. ****Jiao T, Brixner D.** Cost-effectiveness analysis of the threshold for initial hypertension treatment- a Markov study evaluating JNC8 guidelines. Presented at the International Society for Pharmacoeconomics and Outcomes Research 19th Annual International Meeting. Montreal, Canada. May 31-June 4, 2014. Value in health 2014; Vol 17(3): A117
16. Willson TM, Cheng Y, **Jiao T**, Stoddard GJ, LaFleur J. Bisphosphonates for fracture prevention in males: a systematic review and meta-analysis. Presented at the 9th Annual Utah health services research conference. Salt lake city, UT. Apr 30, 2014.

17. Stenehjem D, **Jiao T**, Brixner DI. Economic analysis of alternative genetic tests for BRCA1 and BRCA2 mutations. Presented at the 31st Miami breast cancer conference. Miami, FL. Mar 2014.
18. Stenehjem D, **Jiao T**, Rhien T, Bellows BK, Kaldate RR, Jones J, Brixner DI. Literature review and assessment to populate a decision-analytic model evaluating a novel prognostic in early lung cancer. Presented at the International Society for Pharmacoeconomics and Outcomes Research 16th Annual European Congress. Dublin, Ireland. Nov 2013. Value in Health 2013; Vol 16(7): A589-590.
19. **Jiao T**, Liou TG, Young D, Brixner DI. A comparison of demographic and clinical variables of Down syndrome patients in Utah and the United States. Presented at the International Society for Pharmacoeconomics and Outcomes Research 16th Annual European Congress. Dublin, Ireland. Nov 2013. Value in Health 2013; Vol 16(7): A589-590.
20. ****Jiao T**, Goodman M, Brixner DI. Are Utah and United States Down syndrome patients different? Western Pharmacoeconomics Conference. Tucson, AZ. Mar 2013.
21. Lin J, **Jiao T**, Biskupiak JE, McAdam-Marx C. Application of electronic medical record data for health outcomes research: a review of recent literature. Presented at the 8th Annual Utah health services research conference. Salt lake city, UT. Feb 25, 2013.
22. Bellows BK, Dahal A, **Jiao T**, Biskupiak JE. A cost-utility analysis of pregabalin vs. duloxetine in painful diabetic neuropathy. Presented at the International Society for Pharmacoeconomics and Outcomes Research 17th Annual International Meeting. Washington, D.C. Jun 2012. Value in Health 2012; Vol 15(4): A181.

Invited Lectures & Seminars

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| 2019 | An Application of Dynamic Treatment Regime: The Optimal Treatment Regime to Delay the Onset of Muroid <i>Pseudomonas aeruginosa</i> Pulmonary Infection on Pediatric Cystic Fibrosis Patients
–McGill Pharmacoepidemiology Working Group, Montreal, QC |
| 2019 | Getting the Best Out of Your Supervisor
–Skills Development Office, McGill University, Montreal, QC |
| 2018 | The Optimal Treatment Regime to Delay the Onset of Muroid <i>Pseudomonas aeruginosa</i> Pulmonary Infection on Pediatric CF Patients: An Application of Dynamic Treatment Regime
–Seminar series, Department of Clinical Epidemiology, Jewish General Hospital, Montreal, QC |
| 2017 | The Optimal Treatment Regime to Delay the Onset of Muroid <i>Pseudomonas aeruginosa</i> Pulmonary Infection on Pediatric CF Patients: An Application of Dynamic Treatment Regime
–Seminar series, Department of Pathology, School of Medicine, University of Utah, Salt Lake City, UT |

- Invited talk, Department of Orthopedics, School of Medicine, University of Utah, Salt Lake City, UT
- Invited talk, Vaccine and Infectious Disease Division, Fred Hutchinson Cancer Research Center, Seattle, WA

- 2016 Dynamic Treatment Regime: Introduction and Investigation Using Dynamic Marginal Structural Model
 - Causal inference research group, School of Medicine, University of Utah, Salt lake city, UT
- 2016 Introduction on Dynamic Treatment Regimes
 - Seminar series, College of Pharmacy, University of Utah, Salt Lake City, UT
- 2014 Pros and Cons, A Comparison of Varied Propensity Score Methods
 - Causal inference research group, School of Medicine, University of Utah, Salt Lake City, UT
- 2014 Health Utility Values in Hemophilia: Do bleeds matter? Predicting the EQ-5D Utility Values from Demographic Variables and Clinical Outcome Measures in Patients with Hemophilia A.
 - Final presentation of summer internship, Bayer Healthcare, Whippany, NJ

Technical Skills

- Strong experience on complicated study design, and advanced biostatistics
- High-level proficiency with the SAS, R, and STATA Statistical Software
- High-level proficiency with the R, Excel, and TreeAge Economic Simulation Software
- Strong data management skills on administrative healthcare database, insurance claims database and patient registry (Clinical Practice Research Datalink, Nationwide Veterans Health Administration database, Régie de l'assurance maladie du Québec, the University of Utah Hospital Enterprise Data Warehouse, Cystic Fibrosis Foundation Patient Registry and Inovalon's MORE²)
- Microsoft Windows operating systems and Macintosh/Linux Operating Systems (OS X)
- Microsoft Office Suite software including Excel, PowerPoint, Word
- Literature searches using PubMed, Ovid, Medline, EMBASE, CINAHL, Cochrane, and Clinicaltrials.gov databases
- Knowledge of GDP, GMP regulations

Professional Experience

Manager in Real World Evidence

2021- 2021

CHEORS, MONTREAL, QC

- Generated research ideas, helped the client to design studies and chose the appropriate statistical approach.
- Managed databases and analyzed data for academic projects.
- Summarized results, wrote manuscripts and other deliverables for academic projects.
- Designed SOP.

- Guided trainees to identify appropriate methods for their research questions.

Epidemiologic and Statistical Consultant

2017-2020

SCHOOL OF MEDICINE, UNIVERSITY OF UTAH, SALT LAKE CITY, UT

- Generated research ideas and helped the group to design studies
- Managed databases and analyzed data for academic projects.
- Summarized results, wrote manuscripts and other deliverables for academic projects.
- Guided residents to identify appropriate methods for their research questions.

Graduate Research Assistant

2011-2017

COLLEGE OF PHARMACY, UNIVERSITY OF UTAH, SALT LAKE CITY, UT

- Wrote proposals and prepared relative documents for grant applications.
- Managed databases and analyzed data for academic and industry projects.
- Built economic modeling (Markov and micro-simulation) to support clinical decision-makings.
- Summarized results, wrote manuscripts and other deliverables for academic and industry projects.
- Guided Ph.D. and Pharm.D. students in rotation to identify appropriate methods for their research questions.

Research Assistant

2013-2017

SALT LAKE CITY VETERAN AFFAIRS, SALT LAKE CITY, UT

- Wrote analysis plans, and determined the inclusion criteria and outcomes.
- Requested data from Veteran Affairs (VA) database.
- Used VINCI system to manage database and conduct analyses.
- Visualized results, and wrote manuscripts.

Summer internship

Summer 2015

GLOBAL HEALTH ECONOMICS OUTCOMES RESEARCH, BAYER HEALTHCARE, WHIPPANY, NJ

- Led an independent project to investigate the association between frequency of lab test and QoL.
- Supported mentor identifying the best study design to differentiate products' treatment effects with alternatives.
- Applied varied tools to quantify values and treatment effects of products to enhance reimbursement, and supported the design of marketing strategy to increase market share.