

**UNIVERSITY OF ROCHESTER
SCHOOL OF MEDICINE AND DENTISTRY
CURRICULUM VITAE**

PERSONAL INFORMATION

Name: Xueya Cai

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EDUCATION

Ph.D. Biostatistics, SUNY Buffalo, 2008

M.A. Biostatistics, SUNY Buffalo, 2006

B. Medicine Maternal and Child Health, Shanghai Medical University, China, 1997

ACADEMIC APPOINTMENTS

2015 – Present Research Associate Professor (primary)
Department of Biostatistics and Computational Biology, University of Rochester

2018 – 2019 Research Associate Professor (secondary)
Department of Ophthalmology

2015 – 2018 Statistician (IPA)
Canandaigua VA Medical Center. 400 Fort Hill Avenue. Canandaigua, NY, 14244

2011 – 2015 Research Assistant Professor
Department of Biostatistics and Computational Biology, University of Rochester

2009 – 2011 Research Assistant Professor
Department of Internal Medicine, University of Iowa Carver College of Medicine

2008 – 2009 Assistant Professor
Division of Biostatistics, Indiana University School of Medicine

2005 – 2008 Research Assistant
Division of Infectious Disease, Buffalo VA Medical Center

2004 – 2005 Research Assistant
Department of Biostatistics, SUNY Buffalo

2003 – 2004 Research Assistant
Periodontal Disease Research Center (PDRC), SUNY at Buffalo

1997 – 2001 Assistant Professor
Department of Biostatistics, Shanghai Medical University, China

1999 – 2001 Biostatistician (Part-time)
Shanghai Sunline Data Scientific Processing Company, China

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

Member of the American Statistical Association (2005-present)
Member of the International Chinese Statistical Association (2012-present)
Member of the International Biometric Society (2008)
Member of the American Public Health Association (2004)
Member of the Academy Health (2010)

HONORS AND AWARDS

2018 Research to Prevent Blindness/American Academy of Ophthalmology Award for IRIS Registry Research
2011 Delta Omega Honorary Society in Public Health
2006 Award for Outstanding PhD's student.
Department of Biostatistics, SUNY Buffalo
2005 Sidney Adelman Award for Outstanding Master's Student.
Department of Biostatistics. SUNY Buffalo
2004 Prize for the Outstanding Student Poster.
Bayesian Approach and Power Analysis for Temporal Gene Expression Data for the Treatment of IFN in Relapsing Multiple Sclerosis Patients. Buffalo Center for Biomedical Computing Retreat/Symposium

PROFESSIONAL ACTIVITIES

2008: Vice-president of Central Indiana Chapter
2017 – 2020: Associate Editor. Health Services and Outcome Research Methodology
2021 – present: Editor in Chief. Health Services and Outcome Research Methodology

RESEARCH REVIEW

Health Services and Outcome Research Methodology, Annals of Applied Statistics, PLoS ONE
Journal of Applied Statistics, Communication in statistics – Simulation and Computation, Medical
Care, International Journal of Biostatistics, International Journal for Quality in Health Care,
Journal of General Internal Medicine, Journal of Thoracic and Cardiovascular Surgery, Nurse
Aging, Clinical Experimental Immunology

EDUCATIONAL CONTRIBUTIONS:

- Committee member: Joyce A Smith, Ph.D. in School of Nursing. 2013
- Lecturing
 - BME221: Biomedical Computation & Statistics. 2017 (4 credits). Guest lecture
 - BST467: Applied Statistics in the Biomedical Sciences 2014-2020. (3 credits).
Descriptive statistics, hypothesis testing, and regression analysis. Students: PhD
students in Biosciences. Credit: 3
 - PM463: Introduction to Mathematical Statistics 2012-2014 (3 credits). Probability
and distributions, multivariate distributions, statistical inference, maximum
likelihood methods, Bayesian statistics. Students: PhD students in the Division of
Health Policy and Outcome Research. Credit: 3

- PM464: Introduction of Linear Regression Analysis 2012 (3 credit). Maximum likelihood estimation (MLE), generalized linear model. Students: PhD students in the Division of Health Policy and Outcome Research. Credit: 3
- 173:161: Introduction to Patient-Oriented Research: Hands-on Data Analysis 2010 (3 credits) Data manipulation using SAS, descriptive statistics, hypothesis testing, regression analysis, and survival analysis. Students: Graduate students in biomedical areas, medical fellows, and junior Faculty members. Credit: 3
- BIOS651: Biostatistics I 2009 (3 credits) Data description and presentation techniques, probability and probability distribution, sampling distribution, statistical inference, analysis of categorical data, analysis of variance, correlation, and simple linear regression analysis. Students: Graduate students in biomedical areas, medical fellows, and junior Faculty members. Credit: 3
- Principles of Biostatistics 1997-2001 (4 credits) Descriptive statistics, probability, hypothesis testing, and power analysis. Students: Medical students. Credit:4
- Clinical Trial Design and Statistical Analysis 2000 (1 credit) Clinical trial design, randomization, ethics in clinical trials, sample size calculation, quality control, and reporting. Students: Medical students. Credit: 1

RESEARCH INTEREST:

Health services research methodology, machine learning, missing data analysis, Bootstrap sampling, Generalized Linear Models, Mixed/Hierarchical Models, and Clinical Trials.

RESEARCH ACTIVITIES:

Active Grants:

NIH/RFA-AG-20-037 PI: Yue Li 9/1/2020 – 8/31/2023
Impact of state HCBS generosity on dementia outcomes and disparities
Role: Co-Investigator 12% FTE

The goals of this proposal are (Aim 1) to determine the impact of state HCBS generosity on differences in health outcomes between community-living ADRD and non-ADRD patients, and (Aim 2) to determine the impact of state HCBS generosity on rural-urban, racial/ethnic, and income disparities in health outcomes among community-living ADRD patients

Wilmot Cancer Institute PI: Paula Cupertino 6/1/2020 – present
Role: Statistician 25% FTE

1U01AI152011-01 PI: Lisa Beck 04/06/2020 – 3/31/2027
Biomarker Identification, Viral Susceptibility and Management in S. Aureus Colonized AD Patients.
Role: Co-Investigator 5% FTE

This grant proposal will determine the impact of the pathogen, Staphylococcus aureus (which is commonly present on the skin of atopic dermatitis patients), on systemic inflammation (measured in the circulation), response to treatments, and viral skin infections in atopic dermatitis patients. Lastly, we have designed experiments to determine if a bacterium called Cutibacterium acnes, commonly present on the skin of healthy individuals and remarkably reduced in atopic dermatitis patients, may function to suppress the growth of the pathogen, Staphylococcus aureus.

5R01NS105479-02 PI: Michael Benetar 09/01/2019 – 08/31/2023
Pre-symptomatic Familiar ALS (PRE-FALS) Study – Prelude to a Treatment Trial
Role: Co-Investigator 15% FTE

Amyotrophic lateral sclerosis (ALS) is a fatal neurodegenerative disease. Therapeutic development efforts have been hampered by the relatively late stage in the disease at which treatment is initiated. As for other neurodegenerative diseases, there are powerful reasons to believe that therapeutic success is most likely to emerge from early therapeutic intervention or disease prevention efforts. Preparation for such studies requires a detailed knowledge of the pre-symptomatic stage of disease including longitudinal trajectories of biomarkers of pre-symptomatic disease and predictors of high short-term risk of phenocconversion to manifest disease. The Pre-fALS study, which is designed to answer precisely these questions, will lay the essential groundwork for ALS prevention trials, likely first in populations at genetic risk based on SOD1 and C9orf72 genetic mutations.

1R01HS026893-01 PI: Helena Temkin-Greener 07/01/2019 – 04/30/2023
Patient Safety Culture in Assisted Living: Association with Outcomes
Role: Co-Investigator 5% FTE

This project aims to identify those aspects of patient safety culture and key state regulatory policies that may impact health and safety outcomes of individuals residing in Assisted Living. Findings from this project will inform the design of better evidence-based practice and policy initiatives to improve the safety and quality in assisted living residencies.

NIH/NIMH (1RF1MH117528-01) PI: Yue Li / Xueya Cai 07/01/2018 – 8/22/2022
Suicide Death Among Older Adults Receiving Residential Long-Term Care
Role: Multiple PI 20% FTE

NIH (1 R01 MD012422-01) PI: Caroline Thirukumaran 09/20/2017 – 04/30/2021
Impact of Bundled Payment Reforms on Racial and Socioeconomic Disparities in Hip and Knee Replacement Surgeries
Role: Co-Investigator 15% FTE

The aims of our proposal are to evaluate the impact of the CJR on racial and socioeconomic disparities in utilization (Aim 1), inpatient outcomes (Aim 2), and post-acute care outcomes (Aim 3) of hip and knee replacement care. Furthermore, we will identify key mechanisms that influence CJR's impact on disparities, and investigate if the changes in outcomes and disparities that we expect to note are likely mediated by choice of post-acute care facility to which a patient is discharged (Aim 4). We will conduct rigorous longitudinal analyses to address the specific aims and test associated hypotheses. The knowledge gained from our study will inform the design of current and future bundled payment reforms such that these reforms can prevent the exacerbation of and contribute in reducing pre-existing disparities in hip and knee replacement surgeries

Completed Grants:

SMA Foundation PI: Rabi Tawil 07/01/2012 – 12/31/2020
Pediatric Neuromuscular Clinical Research Network for SMA Clinical Trials
Role: Co-Investigator 12% FTE

AHRQ (1R01 HS024923-01) PI: Yue Li 09/30/2016 – 06/30/2020
Impact of the State Policies on Nursing Home Patient Safety Culture
Role: Co-Investigator 25% FTE

This study is designed to fill a significant knowledge gap by evaluating the impact of these broad state quality-of-care policies on the development of safety culture in nursing homes. The overall

goal is to identify those aspects of state regulatory & payment policies that may foster or prevent the development of nursing home patient safety culture. To achieve this goal we will measure multiple domains of safety culture performance using the AHRQ developed and validated Nursing Home Survey on Patient Care instrument to be administered to top managers in a nationally-representative sample of nursing homes. We will employ administrative and public use data for 2016, as well as collect primary data from state officials responsible for state nursing home quality regulations and state Medicaid programs. These data will be used to construct nursing home safety culture measures, and measures of state policies, facility covariates, and market conditions. Hypotheses will be tested using multivariate instrument variable analyses and structural equation modeling performed at the nursing facility level.

American Academy of Ophthalmology PI: Xueya Cai 10/01/2018 – 02/29/2020
 Research to Prevent Blindness/American Academy of Ophthalmology Award for IRIS Registry Research
 Role: Principal Investigator 5% FTE

Department of Ophthalmology PI: Kyrstal Huxlin 01/01/18 – 12/31/2019
 Population Health of Ophthalmology
 Role: Co-Investigator 10% FTE

NIH (5 R01 AG052451-02) PI: Shubing Cai 08/15/16 – 05/31/19
 Disparities in Quality of Care for Obese Nursing Home Residents
 Role: Co-Investigator 2% FTE

Department of Orthopedics PI: James Sanders 10/01/2016 – 6/30/2019
 Growth of the Spine Children
 Role: Co-Investigator 10% FTE

ACTTION 9-account Funds (FDA) PI: Robert Dworkin 07/01/2015- 06/31/2018
 Analgesic, Anesthetic, and Addiction Clinical Trial Translations, Innovations, Opportunities, and Networks (ACTTION) Public-Private Partnership
 Role: Co-Investigator 25% FTE

Veterans Affairs PI: Tobie Olsan 07/01/15 – 6/30/18
 Factors Associated with Institutional Use by Veterans in Home-Based Primary Care
 Role: Co-Investigator

PCORI PI: Temkin-Greener 03/01/2013 – 04/30/2017
 Improving Palliative and End-of-Life Care in Nursing Homes
 \$375,723
 Role: Co-Investigator

Surgical Department PI: Flemming 07/01/2016 – 06/30/2017
 Long-term Outcomes and Cost of Robotic Abdominal and Thoracic Surgery
 Role: Co-Investigator 4% FTE

NIH (5R01 HL122424-03) PI: Steve Georas 9/26/2014 – 07/31/2018
 Epithelial Barrier Dysfunction and Mucosal Inflammation in Asthma
 Role: Co-Investigator 5% FTE

Pfizer PI: John Markman 10/1/2015 – 3/31/2018
Simplified Pain Evaluation and Communication Tool utilizing the Electronic Record (SPECTER)
Role: Co-Investigator 10% FTE

NIH 5 R01 MD007662-03 PI: Yue Li 07/01/13 – 1/31/17
Impacts of Nursing Home Competition & State Policies on Disparities in Quality
\$300,835
Role: Co-Investigator 15% FTE

SHORE PI: Katia Noyes 01/01/13 – 8/31/2016
Surgical Health Outcome Research
Role: Co-Investigator

NIH 5R01CA132950-05 PI: Debbie Ossip 09/01/09-07/31/15
Community-Partnered Tobacco Control in Underserved Dominican Republic Communities
Role: Co-Investigator

Health Resources and Services Administration (HRSA)
PI: Tobie Olsan 1/1/2012 – 12/31/2015
The Meliora Project: Advancing Quality in Long Term Care
Role: Consultant 5% FTE

NIH K01 MH080660-03, PI: Mittal 10/01/2011 – 4/30/2014
HIV Prevention among African American Women Who use Substances
Role: Co-Investigator

National Pace Association PI: Temkin-Greener 07/01/2012 – 6/30/2014
PACE Data Analysis Center Project
Role: Co-Investigator

1R01AG033202, PI: Li 01/01/2012 – 6/30/2013
Physician Referral & Mental-Disorder Related Disparities in CABG Quality
Role: Co-Investigator

5R01AG032264, PI: Li 01/01/2012 – 8/31/2013
State Nursing Home Technical Assistance Programs: Variation & Impact on Quality
Role: Co-investigator

5 R21 HL102582-02 PI: Robert Block 06/01/2010 – 05/31/2012
NIH/NHLBI
The Effects of Fish Oil and Aspirin on Cardiovascular Risk in Type 2 Diabetes
Effects of combining aspirin w/EPA + DHA supplementation on platelet function &
lysophospholipid metabolism in a clinical trial of individuals w/Type 2 Diabetes.
Role: Biostatistician

NIH/NINDS R01 NS52619, PI: McDemott 10/01/2011 – 11/30/2012
Coordination and Statistics for CoQ₁₀ in Huntington's Disease (2CARE)
Role: Co-Investigator

U/Syracuse, PI:Pesis-Katz 02/01/2010 – 12/31/2011
Upstate Health Research Network Data Security Protocol for the Analysis of NY Data

5R01HL085347 PI: Cram 07/01/2009 – 06/30/2011
Cardiac Care in Specialty and General Hospitals
Role: Co-investigator

NIH K23HL093354-01 PI: Laroche 07/01/08 – 06/30/11
Family and Community-Focused Approaches to Improving Diet and Preventing Obesity
Role: Co-Investigator

AHRQ HHS2902006000131, PI: Simonaitis 09/28/2007 – 09/30/2009
Improving Quality through Health IT: Testing the Feasibility and Assessing the Impact of Using Existing Health IT Infrastructure for Better Care Delivery
Role: Co-investigator

NIH/NIMH R24 MH080824 PI: Callahan 04/24/2008 – 03/31/2013
Indianapolis Interventions and Practice Research Infrastructure Program
Role: Co-investigator

US Dept. of Defense W81XWH-08-2-0040, PI: Krebs 07/01/2008 – 12/31/2009
Post-Traumatic Stress Disorder and Pain Comorbidity in Veterans
Role: Co-investigator

5R37AA006460 PI: Edenberg 09/01/2007 – 08/31/2009
Structure & Expression of Mammal ALC on Dehydrogenase Genes
Role: Co-investigator

AHRQ 290-04-0015 PI: Overhage 09/30/2004 – 09/29/2009
An Evolving Statewide Indiana Information Infrastructure
Role: Co-investigator

R01 MH068009 PI: Nurnberger 03/01/2005 – 02/28/2010
Adolescents at High Risk for Familial Bipolar Disorder
Role: Co-investigator

NIH /NIA 1R01AG029884 PI: Boustani 09/01/2007 – 08/30/2010
Alzheimer Screening in Primary Care: PRISM-PC Study
Role: Co-investigator

NIH/NIGMS subproject of 5P20GM67650-02, PI: Liang 09/01/2004 – 08/31/2005
Bayesian Meta-Analysis of Heterogeneous Genomic Data through Hybrid Systems.
Role: Researcher

Submitted Grants

NIH PI: Caroline Thirukumaran submitted: March 2020
Impact of Bundle Payment Reforms in Institutional Post-Acute Care Patients among Patients having Alzheimer's Disease-Related Dementia.
Role: Co-Investigator

NIH PI: Jinjiao Wang submitted: February 2020
Suicide Prediction in Home Healthcare Services.
Role: Multiple Principal Investigator

Renal Research Institute, LLC PI: Fahad Saeed submitted: December 2019
Development and Testing of a Hospital Readmission Risk Calculator for Older Adults Receiving
Maintenance Dialysis: A Pilot Study
Role: Co-Investigator

NIH PI: Larry Glance submitted: October 2019
Impact of Medicare Shared Savings Program on Disparities in Cardiovascular Care
Role: Co-Investigator

NIH PI: Jinjiao Wang submitted: October 2019
Impact of Medicare Home Healthcare Value Based Purchasing on Home Health Use, Quality
and Outcomes in Vulnerable Patients.
Role: Co-Investigator

NIH PI: Xueya Cai / Rajeev Ramchandran submitted: June 2018
Vision Health Insights from Analysis of NHATS Linked to Administrative Databases
Role: Multiple-Principal-Investigator

NIH PI: Zhengqiang Yao submitted January 2019
Target Therapy for Metastatic Breast Cancer
Role: Biostatistics Consultant

American sleep medicine foundation, PI: Michael Yurcheshen
Multi-Center, Non-Inferiority Trial Comparing Telemedicine vs. In-Person Management for
Obstructive Sleep Apnea in Rural Populations
Role: Co-Investigator

The Donaghue Foundation, PI: Yue Li
Nursing Home safety of care for residents with SMI & substance abuse
Role: Co-Investigator

NIH, PI: Steve Georas
Expression of autotaxin (ATX) and lysophosphatidic acid (LPA) in human asthma
Role: Co-Investigator

Scoliosis Research Society, PI: James Sanders
Growth of the Spine Children – a Longitudinal, Prospective Investigation.
Role: Co-Investigator

UR CTSI. PI: Xueya Cai
Causal Inference in Racial Disparity Studies with Binary Outcomes
Role: Principal Investigator

Intuitive Surgical, Inc., PI: Fergal Fleming
Long-Term Outcomes and Cost of Robotic Abdominal and Thoracic Surgery
Role: Co-Investigator

NIH, PI: Shubing Cai
Disparity in Quality of Care for Obese Nursing Home Residents
Role: Co-Investigator

NIH, PI: Geoffrey Williams
Tobacco Dependence Treatment Program for Patients at High Risk for Lung Cancer
Role: Co-Investigator

AHRQ, PI: Yue Li
Impact of state policies on nursing home patient safety culture
Role: Co-Investigator

NIH, PI: Helena Temkin-Greener
Palliative Care Consultations and Health Outcomes: Community Dwelling, Dementia, Nursing Home & Minority Patients
Role: Co-Investigator

NIH, PI: Yue Li
Nursing home organization & work environment: impact on disparity in quality
Role: Co-Investigator

NIH, PI: Yue Li
State Medicaid nursing home P4P programs & racial/ethnic disparity in quality
Role: Co-Investigator

CDC, PI: Geoffrey C. Williams.
Tobacco Dependence Treatment Program for Patients at High Risk for Lung Cancer.
Role: Co-Investigator

NIJ, PI: Paul Caccamise (LifeSpan)
Detection of Elder Financial Exploration in the Aging Services Network
Role: Co-Investigator

PCORI, PI: Christopher Ritchlin
Biosychosocial Intervention for Chronic Diseases
Role: Co-Investigator

NIH, PI: Katia Noyes
Does Quality of Care in Colorectal Cancer Mediate Disparity in Outcomes: Developing Quality Indicator
Role: Co-Investigator

NIH, PI: Steve N. Georas
Epithelial Barrier Dysfunction and Mucosal Inflammation in Asthma
Role: Co-Investigator
(Awarded but only support a biostatistics programmer due to budget cut)

NIH, R01, PI: Yue Li
Medicare mental health parity: impact on service use and spending for schizophrenia
Role: Co-Investigator

NIH R01, PI: Irena Persis-Katz
Clinical management of chronic heart failure in long-term care setting
Role: Co-investigator

NIH R01, PI: Irena Persis-Katz
Improving outcomes for nursing home residence with chronic heart failure
Role: Co-investigator

OREF: PI: James O. Sanders
Orthopaedic Research & Education Foundation
Determination of the best fusion levels in surgical adolescent idiopathic scoliosis

NIH, R21, PI: Ann Dozier
Infant feeding decision aid
Role: Co-Investigator

NIH, R01, PI: Ann Dozier
Community partnership for breastfeeding promotion and support
Role: Co-Investigator

UL1, PI: Cai
Interim monitoring of longitudinal outcomes in clinical trials

PRESENTATIONS:

1. Fahad Saeed, **Xueya Cai**, Shan Gao, Helena Temkin-Greener, Susan Ladwig, Yue Li. Development and Testing of a Hospital Readmission Risk Calculator for Older Adults Receiving Maintenance Dialysis: A Pilot Study. RPI 2021 Winter Board Meeting. March 2021 (**Invited**)
2. Lisa Beck, Mary Kate Moran, Takeshi Yoshida, Xueya Cai. Biomarker Identification, Viral Susceptibility & Management in S. Aureus Colonized AD Patients. Atopic Dermatitis Research Network (ADRN) Network Steering Committee Virtual Meeting. November 2020. (**Invited**)
3. **Xuya Cai**. Predictive Model for Risk of Refractive Error Progression in Children and Young Adults. American Academy of Ophthalmology Annual Conference. San Francisco, CA. October 2019 (**Invited**)
4. **Xueya Cai**, Michael McDermott, Jennifer Gewandter, Hua He, Robert Dworkin. Multiple Imputation for Missing Data in Analgesic Clinical Trials using Pattern Mixture Model. ICASA Applied Statistics Symposium. Chicago, IL. June 2017 (**Invited**)
5. **Xueya Cai**. Biostatistics and Evaluation of Evidence. Bellary Tract Surgery Grand Rounds, Zhongshan Hospital of Fudan University, Shanghai, China. December 2016 (**Invited**)
6. Xueya Cai. Application of Two Stage Residual Inclusion (2SRI) Model in Testing the Impact of Length of Stay on Short-term Readmission Rate. UP STAT Conference. Buffalo. April 2016 (**Session chair**)
7. **Xueya Cai**. Interim Monitoring of Longitudinal Outcomes in Clinical Trials. Department of Biostatistics, SUNY Buffalo. April 2015 (**Invited**)

8. **Xueya Cai**. Observational Data Analyses for Risk Adjustment. Department of Biostatistics, Fudan University Medical Center. Shanghai, China. July 2014 (**invited**)
9. **Xueya Cai**. An Application of Instrumental Variable Analysis in Testing the Impact of Length of Stay on Short-term Readmission Rate. Second Joint Biostatistics Symposium. Beijing, China. June 2012 (**Invited**)
10. **Xueya Cai**, Mary S. Sarrazin, Levent Bayman, Peter Cram. Uncompensated Care Provided by Hospitals with Varying Ownership Structure: Contemporary Data and Future Implications. Academy Health Annual Research Meeting, Boston, MA. June 2010
11. **Xueya Cai**, Peter Cram, Mary S. Vaughan-Sarrazin. Are Black Patients More likely to Receive Total Knee Arthroplasty in Hospitals With Higher Risk-Adjusted Complication Rates? University of Iowa Department of Medicine Research Day. March 2010
12. **Xueya Cai**, Gregory E. Wilding, Alan Hutson, Yue Li. Testing the Equality of Conditional Correlations Across Numeric Variable(s) with Heteroscedastic Data. The Joint Statistical Meeting, Washington DC, August 2009
13. Yue Li, Laurent G. Glance, **Xueya Cai**, Dana B. Mukamel. Mental Illness and Hospitalization for Ambulatory Care Sensitive Medical Conditions. AcademyHealth Annual Research Meeting, Washington DC, June 2008.
14. **Xueya Cai**, Gregory E. Wilding, Alan Hutson. Approaches for Estimating and Testing Conditional Correlations. International Biometric Society, Eastern North American Region annual meeting. Arlington, VA, March 2008.
15. Yue Li, **Xueya Cai**, Laurent G. Glance, Dana B. Mukamel. Urinary Incontinence in Community-Dwelling Older Women: Does Socioeconomic Status Affect Help Seeking and Treatment? APHA Annual Meeting, Washington DC. (Award winner: Susan B. Anthony Aetna Award for Excellence in Research on Older Women and Public Health), November 2007.
16. Yue Li, **Xueya Cai**, Laurent G. Glance, Dana B. Mukamel. Gender Differences in Healthcare-Seeking for Urinary Incontinence and the Impact of Socioeconomic Status: A Study of the Medicare Managed Care Population. AcademyHealth Annual Research Meeting, Orlando, FL, June 2007.
17. **Xueya Cai**, Gregory E. Wilding, Alan Hutson. A Generalized Linear Model Based Approach for Estimating and Testing Equality of Conditional Correlations. International Biometric Society, Eastern North American Region annual meeting. Atlanta, GA, March 2007.
18. Yulan Liang, **Xueya Cai**, Arpad Kelemen. Bayesian State Space Models for Inferring Gene Interaction Networks. Case Studies in Bayesian Statistics Workshop. Carnegie Mellon University. Pittsburgh, PA, September 2005.
19. **Xueya Cai**, Yulan Liang. Hierarchical Bayesian Analysis for Temporal Microarray Gene Expression Data. Joint Statistical Meeting. Minneapolis, MN, August 2005.
20. **Xueya Cai**, Yue Li, Juanhong Gu. Effect of Simvastatin Dose Escalation: Results from a Randomized Clinical Trial for Coronary Heart Disease (CHD) Patients with Hyperlipidemia in Mainland China. American Public Health Association Annual Meeting. Washington, DC, November 2004.

21. **Xueya Cai**, Yulan Liang. Bayesian Approach and Power Analysis for Temporal Gene Expression Data for the Treatment of IFN in Relapsing Multiple Sclerosis Patients. Buffalo Center for Biomedical Computing Retreat/Symposium. Buffalo, NY, May 2004.

PUBLICATIONS

METHODOLOGICAL RESEARCH:

1. Shi Z, Yu J, **Cai X**. The application of CMH method in categorical data in multi-center clinical trials. Journal of health statistics in China. 1999.16(3): 179-80.
2. **Cai X**, Jin P. The method and its limitation to assess agreement using Intraclass Correlation Coefficient (ICC). Journal of preventive medicine in China. 1999. 33(3): 175-76.
3. **Cai X**, Jin P. The disadvantage of effective rate analysis in patients with different illness status. Journal of health statistics in China. 2000.17(4): 250-51.
4. **Cai X**, Jin P. Estimating the confidence interval of median using Bootstrap sampling. Journal of health statistics in China. 2002.19(3): 185-86.
5. **Cai X**. Agreement analysis. In: Jin P, et. al. Medical statistical methods. Second edition. Series of public health and preventive medicine. Shanghai: Fudan Press. 2004.
6. **Cai X**. Nonparametric data analysis using CMH method. In: Liu Q, Jin P, et. al. Categorical data analysis and SAS programming. Shanghai: Fudan Press. 2002.
7. Liang Y, Tayo B, **Cai X**, Kelemen A. Differential and trajectory methods for time course gene expression data. Bioinformatics. 2005. 21: 3009-3016. PMID: PMC2574001
8. Li Y, Dick AW, Glance LG, **Cai X**, Mukamel DB. Misspecification issues in risk adjustment and construction of outcome-based quality indicators. Health services & outcomes research methodology. 2007. 7: 39-56.
9. Hutson AD, Wilding GE, **Cai X**. Bootstrap and Permutation Methods Using the SAS System. Technical Report. 2007. Department of Biostatistics, University at Buffalo.
10. Wilding GE, **Cai X** (Corresponding Author), Hutson A, Yu Z. A Linear Model Based Test for the Heterogeneity of Conditional Correlations. Journal of Applied Statistics, 2011, 38(10): 2355-2366.
11. **Cai X**, Wilding GE, Hutson A, Java J. Estimation and Testing of the Conditional Correlations Across Continuous Variable(s) for Heteroscedastic Data. Advances and Applications in Mathematical Sciences. 2012, 10(9): 191-206.
12. Wang D, **Cai X**, Tian, L. Interval Estimation for the Gini Index of Shifted Exponential Distribution under Type-II Double Censoring. Health Services and Outcomes Research Methodology. 2015 (15) 69-81.
13. **Cai X**, Gewandter JS, He H, Tuck DC, Dworkin RH, McDermott MP. Estimands and Missing Data in Clinical Trials of Chronic Pain Treatments: Advances in Design and Analysis. Pain. 2020 Oct;161(10):2308-2320. PMID: 32453131

COLLABORATIVE RESEARCH

14. Fernaays MM, Lesse AJ, Sethi S, **Cai X**, Murphy TF. Differential genome contents of nontypeable Haemophilus influenzae strains from adults with chronic obstructive pulmonary disease. *Infection and immunity*. 2006. 74:3366-3374. PMID: PMC1479259
15. Fernaays MM, Lesse AJ, **Cai X**, and Murphy TF. Characterization of igaB, a Second Immunoglobulin A1 Protease Gene in Nontypeable Haemophilus influenzae. *Infection and immunity*. 2006. 74:5860-5870. PMID: PMC1594874
16. Murphy TF, Brauer AL, Sethi S, Kilian M, **Cai X**, Lesse AJ. Haemophilus haemolyticus: a human respiratory tract commensal to be distinguished from Haemophilus influenzae. *Journal of infectious diseases*. 2007. 195:81-89. PMID: 17152011
17. Sethi S, Sethi R, Eschberger K, Lobbins P, **Cai X**, Grant JB, Murphy TF. Airway Bacterial Concentrations and Exacerbations of Chronic Obstructive Pulmonary Disease. *American journal of respiratory and critical care medicine*. 2007. 176:356-361. PMID: 17478618
18. Li Y, Glance LG, **Cai X**, Mukamel DB. Are Patients with Coexisting Mental Disorders More Likely to Receive CABG Surgery from Low-Quality Cardiac Surgeons? The Experience in New York State. *Medical care*. 2007. 45:587-593. PMID: 17571006
19. Li Y, **Cai X**, Glance LG, Mukamel DB. Gender Differences in Healthcare-Seeking Behavior for Urinary Incontinence and the Impact of Socioeconomic Status: A Study of the Medicare Managed Care Population. *Medical Care*. 2007. 45: 1116-1122. PMID: 18049354
20. Sethi S, Wrona C, Eschberger K, Lobbins P, **Cai X**, and Murphy TF. Inflammatory Profile of New Bacterial Strain Exacerbations of Chronic Obstructive Pulmonary Disease. *American Journal of Respiratory and Critical Care Medicine*. 2008. 177: 491-497. PMID: 18079493
21. Murphy TF, Brauer AL, Eschberger K, Lobbins P, Grove L, **Cai X**, Sethi S. Pseudomonas aeruginosa in Chronic Obstructive Pulmonary Disease. *American Journal of Respiratory and Critical Care Medicine*. 2008. 177: 853-860. PMID: 18202344
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UNPUBLISHED RESEARCH

1. **Cai X**, Gao S, Obudzinski S, Sanders J. Dynamic Panel Estimation in Prediction of Child Growth.(submitted)
2. Liu, H, **Cai X**. Breast Cancers with Reflex HER2 In Situ Hybridization Group 3 (Co-amplified/Polysomy) Results: Clinicopathological Features, Underlying Genomics and Follow-Up Outcomes (submitted)