CURRICULUM VITAE

Qingxia (Cindy) Chen, PHD

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EDUCATION

1999 BS in Statistics, University of Science and Technology of China, Hefei, Anhui,

China

2001 MS in Statistics, University of Pittsburgh, Pittsburgh, PA

2005 PhD in Biostatistics, University of North Carolina at Chapel Hill, Chapel Hill,

NC

Dissertation: Theory and Inference for Parametric and Semiparametric Meth-

ods in Missing Data Problem

ACADEMIC APPOINTMENTS Primary

- Assistant Professor, Department of Biostatistics, Vanderbilt University School of Medicine, 2005–2013
- Associate Professor (with Tenure), Department of Biostatistics, Vanderbilt University (later Vanderbilt University Medical Center), School of Medicine, 2014–2021
- Director of Executive Data Science Program, Departments of Biostatistics and Biomedical Informatics, Vanderbilt University Medical Center, 2017-present
- Director of Biostatistics Post-Graduate Studies and Distance Learning, Departments of Biostatistics and Biomedical Informatics, Vanderbilt University Medical Center, 2017-present
- Professor (with Tenure), Department of Biostatistics, Vanderbilt University Medical Center, 2022—present
- Vice Chair of Education, Department of Biostatistics, Vanderbilt University Medical Center, 2022—present

Affiliate

 Assistant Professor, Department of Biomedical Informatics, Vanderbilt University School of Medicine, 2012–2013

- Associate Professor, Department of Biomedical Informatics, Vanderbilt University (later Vanderbilt University Medical Center), School of Medicine, 2014–2021
- Associate Professor, Department of Ophthalmology and Visual Sciences, Vanderbilt University Medical Center, 2019–2021
- Professor, Department of Biomedical Informatics, Vanderbilt University Medical Center, 2022—present
- Professor, Department of Ophthalmology and Visual Sciences, Vanderbilt University Medical Center, 2022-present

AWARDS AND HONORS

1995-1999	Outstanding Student Scholarship, University of Science and Technology of China
2004	JSM-SBSS Student Travel Award
2005	Student Travel Award, University of North Carolina at Chapel Hill
2007	SAMSI Travel Award
2007	IMS New Researcher Travel Grant
2007	ENAR New Researcher Travel Grant
2013	SAMSI Travel Award
2014	Department Method Publication Award (2013)
2015	James E Grizzle Distinguished Alumna Award, University of North Carolina at Chapel Hill
2023	Membership of Academy for Excellence in Education

EMPLOYMENT

2001	Internship in Western Psychiatric Institute and Clinics, Pittsburgh
2001-2005	Research Assistant, Department of Biostatistics, University of North Carolina at Chapel Hill
2000-2001	Research Assistant, Department of Statistics, University of Pittsburgh

PROFESSIONAL ORGANIZATIONS

2002-present	American Statistical Association
2003-present	International Biometric Society
2003-present	International Society for Bayesian Analysis
2009-present	International Chinese Statistical Association

PROFESSIONAL ACTIVITIES

Intramural

- Primary Dissertation Advisor
 - 2012-2015 (MS), Austin Marcus Lanser

Thesis: Evaluation of Method for Survival Analysis in the Presence of Extremely Few Events per Variable

Position: Statistical Programmer, Sarah Cannon Cancer Center

– 2015-2017 (MS), Zhijun Yin

Thesis: Talking About My Care: Detecting Mentions of Hormonal Therapy Adherence Behavior From an Online Breast Cancer Community

Position: Assistant Professor of Biomedical Informatics, Electrical Engineering and Computer Science, Vanderbilt University Medical Center

- 2012-2018 (PhD), David Schlueter

Dissertation: Bayesian Transformation Models for Multivariate Survival Analysis with Applications in Large Data

Position: Research Fellow, National Human Genome Research Institute (NHGRI)

- 2019-2020 (MS), Rebecca Irlmeier

Thesis: Impact of Delayed Error on Cox and Logistic Regression Models and Its Application to GWAS and PheWAS

Position: Biostatistician, Vanderbilt University Medical Center

- 2018-2022 (PhD), Elizabeth Sigworth Westerberg
 Dissertation: Improving Inferential and Computational Efficiency for Real-World Data
 Position: Associate Research Consultant, OPEN Health
- 2021-present (PhD candidate), Huiding Chen
- 2023-present (PhD candidate), Haoyang Yi

Mentees

- Dana Blakemore, MS, Biostatistician II, Department of Biostatistics (2007-2009).
- Angel An, MS, Biostatistician III, Department of Biostatistics (2007-2009).
- Xue Han, MS, Biostatistician II, Department of Biostatistics (2011-2014).
- Qi Liu, PhD student, Research Assistant, Department of Biostatistics (2011-2012).
- Hui Nian, PhD, Biostatistician III, Department of Biostatistics (2010-2015).
- Xiaoke Feng, MS, Biostatistician, Department of Biostatistics (2018-present).
- Yuhan Liu, MS, Biostatistician II, Department of Biostatistics (2019-2021).
- Andrew Guide, MS, Senior Biostatistician, Department of Biostatistics (2020-present).
- Xiangyu Ji, MS, Biostatistician, Department of Biostatistics (2022-present).

• Academic Advisor

- Nate Mercaldo, PhD candidate, Department of Biostatistics (2011-2013).
- Run Fan, MS candidate, Department of Biostatistics (2013-2015).
- Coleman Harris, MS candidate, Department of Biostatistics (2017-2019).

Haoyang Yi, PhD candidate, Department of Biostatistics (2022-present).

• Committees

- Member, Graduate Admissions Committee, Department of Biostatistics (2010-2014, 2016)
- Member, Graduate Program Committee, Department of Biostatistics (2009-2018)
- Member, Faculty Search Committee, Department of Biostatistics (2005-present)
- Member, Staff Promotion Committee, Department of Biostatistics (2013-2017)
- Member, Award Committee, Department of Biostatistics (2017, 2022)
- Member, Admissions Committee, Data Science Institute (2019-2020)
- Chair, Department Annual Retreat, Department of Biostatistics (2022)
- Member, Graduate Program Executive Committee, Department of Biostatistics (2022-Present)
- Member, Organizing Committee for Department 20th Year Anniversary, Department of Biostatistics (2023)
- Member, BFAPC Committee, Department of Biostatistics (2023-Present)
- Member, BSEC Committee, Department of Biostatistics (2023-Present)
- Member, Graduate Program Curriculum Committee, Department of Biostatistics (2023-Present)
- Member, Academy for Excellence in Education, PEP Club (2023-Present)

• Dissertation Committee

- Committee Member, Jeffrey Thomas Leegon (MS, Biomedical Informatics) (2010-2011).
- Committee Member, Naqi Ali Khan (PhD, Biomedical Informatics) (2011-2012).
- Committee Member, Zhou Yan (MS, Biomedical Informatics) (2011-2013).
- Committee Member, Yukun Chen (PhD, Biomedical Informatics) (2013-2015).
- Committee Member, Joshua Carl Smith (PhD, Biomedical Informatics) (2012-2016).
- Committee Member, Yaa Kumah-Crystal (MS, Biomedical Informatics) (2013-2017).
- Committee Member, Lucy D'Agostino McGowan (PhD, Biostatistics) (2016-2018).
- Committee Member, Dong Wang (PhD, Biomedical Informatics) (2012-present).
- Committee Member, Mark Giganti (PhD, Biostatistics) (2015-2018).
- Committee Member, Svetlana Eden (PhD, Biostatistics) (2016-2020).
- Committee Member, Alice E Toll (MS, Biostatistics) (2016-2018).
- Committee Member, Jacquelyn Neal (MS, Biostatistics) (2016-2018).
- Committee Member, Rui Wang (MS, Biostatistics) (2017-2018).
- Committee Member, Elizabeth McNeer (MS, Biostatistics) (2017-2018).
- Committee Member, Yi Zuo (PhD, Biostatistics) (2020-2022).
- Committee Member, Chiara Di Gravio (PhD, Biostatistics) (2020-present).
- Committee Member, Tianyi Sun (PhD, Biostatistics) (2021-present).

- Committee Member, Leigh Anne Tang (PhD, Biomedical Informatics) (2022-present).
- Committee Member, Joseph Vento (MS, Biomedical Informatics) (2023-present)
- Committee Member, Xiaoming Gao (DrPH, Biostatistics, University of North Carolina at Chapel Hill) (2022-present)

Extramural

• Referee (alphabetical order)

A Division of the American Mathematical Society, The American Journal of Human Genetics, Annals of Applied Statistics, Applied Mathematics and Computation, Bayesian Analysis, Biometrical Journal, Biometrics, Biometrika, Biostatistics, Canadian Journal of Statistics, Communications in Statistics - Simulation and Computation, Computational Statistics and Data Analysis, Epidemiology, Clinical Trials, Health Services and Outcomes Research Methodology, Journal of the American Statistical Association, The Lancet Child & Adolescent Health, Journal of Applied Statistics, Journal of Biomedical Informatics, Journal of Clinical Cancer Informatics, Journal of Official Statistics, Journal of the American Medical Informatics Association, Journal of the Royal Statistical Society Series C, Journal of Statistical Planning and Inference, Journal of Statistical Computation and Simulation, The Lancet Child & Adolescent Health, The Lancet Psychiatry, Lifetime Data Analysis, Mathematical Reviews, Nature Computational Science, OMICS Publishing Group, Philosophical Transactions of the Royal Society A, PLoS ONE, Scandinavian Journal of Statistics, Statistics in Biopharmaceutical Research, Statistics in Biosciences, Statistics in Medicine, Statistical Sinica, Vaccines

• Conferences

- Session Chair, Data Augmentation, EM, and Bayesian Methods with Missing Data, Joint Statistical Meeting, Minneapolis, Minnesota (August 2005)
- Session Chair, Adaptive Designs for Clinical Trials, Eastern North American Region, Miami, Florida (March 2011)
- Session Organizer and Chair, Semi-Competing Risks, Eastern North American Region, Baltimore, Maryland (April 2012)
- Session Chair, Kaleidoscope IIa, useR!, Nashville, Tennessee (June 2012)
- Session Chair, Causal Inference, International Chinese Statistical Association, Boston, Massachusetts (June 2012)
- Session Chair, The Latest Development of Adaptive Clinical Designs, International Chinese Statistical Association, Boston, Massachusetts (June 2012)
- Session Chair, Novel Developments in the Construction and Evaluation of Risk Prediction Models, Eastern North American Region, Orlando, Florida (March 2013)
- ENAR RAB Poster Award Competition Judge (March 2013)
- Session Organizer and Chair, Recent Developments in Survival Analysis, Joint Applied Statistics Symposium of International Chinese Statistical Association & Korean International Statistical Society, Portland, Oregon (June 2014)
- Session Organizer, Emerging Issues in Clinical Trials and High Dimensional Data, Eastern North American Region, Miami, Florida (March 2015)
- Session Organizer, Emerging Issues in Time-to-Event Data, International Chinese Statistical Association, Fort Collins, Colorado (June 2015)

- Session Organizer, Emerging Issues in Clinical Trials with Time-to-Event Data in the Presence of Competing Risks, Eastern North American Region, Austin, Texas (March 2016)
- Session Organizer, A Recent Development on Competing and Semi-competing Risks,
 Data Science, Precision Medicine and Risk Analysis with Lifetime Data 2017 LIDA
 Conference, Storrs, Connecticut (May 2017)
- Session Co-organizer, Modern Statistical Methods for the EHR Era, Eastern North American Region, Atlanta, Georgia (March 2018)
- Session Organizer, Modern Statistical Development for Biomedical Big Data, International Chinese Statistical Association, New Brunswick, New Jersey (June 2018)
- Session Co-organizer, Lead with Statistics: Case Studies and Methods for Learning and Improving Healthcare Through EHRs, Joint Statistical Meeting, Vancouver, Canada (July 2018)
- Session Co-organizer, Case Studies and Methods for Learning and Improving Healthcare Through EHRs, International Chinese Statistical Association, Chapel Hill, North Carolina (June 2019)
- Session Co-organizer and Chair, Recent Method Developments on Quantile Regression, International Chinese Statistical Association, Tianjin, China (July 2019)
- Session Co-organizer, Emerging Issues in EHR: Methods to Enhance Knowledge Discovery and Real World Implementation, Joint Statistical Meeting, Philadelphia, Pennsylvania (August 2020)
- Co-chair of Executive Committee, Chair of Short-course Committee, Committee of Local Committee, 2024 International Chinese Statistical Association Applied Symposium, Nashville, Tennessee (June 2024)
- Organizer and Moderator, Empowering Paths: Mentorship and Career Development for Women. 2024 International Chinese Statistical Association Applied Symposium, Nashville, Tennessee (June 2024)

• Committees

- International Chinese Statistical Association, Program Committee for 2013-2015
- International Chinese Statistical Association, Representative to 2014 Joint Statistical Meeting Program Committee
- Eastern North American Region, local organizer for 2020
- International Chinese Statistical Association Applied Statistics Symposium, Co-chair, 2024

• Editorial

- Editorial Board, ISRN Epidemiology (2012-2013)
- Associate Editor, Statistics and Its Interface (01/01/2016-present)

• Grant Reviewer

- Ad hoc reviewer for Wellcome Trust, 2015
- National Science Foundation (NSF) review panel, Statistics Program, 2017, 2019, 2022

- National Cancer Institute (NCI) review panel for UH2/UH3, 2018, 2019
- National Cancer Institute (NCI) review panel for P01, 2019
- American Heart Association Executive Peer Review, 2023

• Report/Conference Reviewer

- American Medical Informatics Association (AMIA) conference review (2017, 2018, 2019, 2020)
- Patient-Centered Outcomes Research Institute (PCORI) report review (2018)

• Consultant

Special Government Employee (SGE) for U.S. Food and Drug Administration (2017-present)

TEACHING ACTIVITIES

• Courses

- Co-teaching EPID 323: Design and Analysis with Time-to-Event Data, Department of Epidemiology, Vanderbilt University (2011 Spring).
- Teaching EPID 323-01: Design and Analysis with Time-to-Event Data, Department of Epidemiology, Vanderbilt University (2012 Spring).
- Teaching EPID 332: Advanced Methods For Epidemiology, Department of Epidemiology, Vanderbilt University (2013 Fall).
- Teaching BIOS 323: Applied Survival Analysis, Department of Biostatistics, Vanderbilt University (2012-2022).
- Co-teaching MSCI 5009-01: Biostatistics I, Master of Science in Clinical Investigation, Vanderbilt University Medical Center (2023 Fall).

Workshops

- Co-teaching An Introduction to Missing Data: Multiple Imputation, Vanderbilt Kennedy Center, Vanderbilt University (2012).
- Teaching Adjusting for Treatment Switch in Survival Analysis, Boehringer Ingelheim (2015)
- Lectures Missing Data When Can You Worry Less, Continued Education for Staff Statisticians Lecture Series, Department of Biostatistics (June 2011).
- Guest Lecture *Introduction to Survival Analysis*, BMIF-6390/CS-5891/CS-3891: Machine Learning and Natural Language Processing for Healthcare, Department of Computer Science (March 2022).
- Co-teaching Introduction to the All of Us Researcher Program, Summer Institute, Department of Biostatistics, Vanderbilt University Medical Center (2023).

RESEARCH PROGRAM

Active Funding

NSF-DMS 2410953-000 (PI: Chen/Liu) 06/15/2024 - 05/31/2025 0% NSF/DMS Role: Contact PI 20,000

Biostatistics

Conference: ICSA 2024 Applied Statistical Symposium

1R21MD019103-01 (PI: Chen/Cronin) 09/17/2023 - 03/31/2025 13-20%

NIH/NIMHD Role: Contact PI

Biostatistics

DARSaW: Developing, Assessing, and Refining Synthetic Sampling Weights to Improve Generalizability of the All of Us Research Program Data

1R01CA237895-01A1 (PI: Yang/Chen) 12/01/2019 - 11/30/2026 10-12.5% NIH/NCI Role: MPI 3,453,218

Epidemiology/Biostatistics

Time-dependent and Bidirectional Effect of Oxidative Stress - a Missing Piece of the Free Radical Theory of Cancer and its Potential Implications

1R37CA237452-01A1 (PI: Yin) 05/01/2020 - 04/30/2024 13.5-25% NCI Role: Co-Investigator 1,563,494

Biomedical Informatics

Prediction of Anti-Cancer Medication Discontinuation via Patient Portal Messages and Structured Electronic Medical Records

OT2 OD035404 * (PI: Harris/Roden) 07/06/2016 - 01/31/2024 + 15-30% Role: Co-Investigator/Biostatistics 130,831,642

Biomedical Informatics

Precision Medicine Initiative Participants Preparatory/Prototyping Initiative ("All of Us")

000 (PI: Sternberg)07/01/2016 - 06/30/202410%Research to Prevent BlindnessRole: Biostatistician575,000

Eve Institute

The VEI research enterprise focuses on translational medicine, defined as understanding mechanisms of disease to identify new therapeutic targets for imminent clinical use.

Completed Funding

U24 CA194215-01A1 (PI: Xu/Chen/Ping) 09/01/2016 - 08/31/2023 5-15% NIH/NCI Role: Site PI 3,274,448

Biomedical Informatics

Advancing Cancer Pharmacoepidemiology Research Through EHRs and Informatics

 $\begin{array}{lll} \textbf{VUMC75977/64793} \ (PI: Walsh) & 02/01/2021 - 07/31/2023 & 5\% \\ \textbf{FDA Sentinel Innovation Center} & Role: Biostatistician & 824,687 \end{array}$

Biomedical Informatics

To adapt NLP to ascertain suicidality from individual notes, validate it to predict death from suicide, and generalize the approach to secondary outcomes

^{*} Pending renewal

DoD W81XWH-17-2-0055 (PI: Rex) 09/15/2017 - 06/30/2022 5%

Department of Defense Role: Biostatistician

Ophthalmology and Visual Sciences

Quantitative Evaluation of Visual and Auditory Dysfunction and Multisensory Integration in

Complex TBI Patients

VUMC75977/64793 (PI: Walsh) 11/01/2019 – 08/31/2021 5-10%

State of TN/DoJ Role: Biostatistician

Biomedical Informatics

Overdose Predictive Modeling

Department Award (PI: Chen) 01/01/2018 - 06/30/2020 2.5-5%

Vanderbilt University Medical Center Role: PI

Biostatistics

Improving Data Quality for Time-varying Measurements in Electronic Medical Records

UNC 5-58358 # (PI: Chen) 09/01/2013-8/10/2015 10%

University of North Carolina Role: site PI

Biostatistics

Center for Innovative Clinical Trials at UNC

#: Renew annually; subaward from University of North Carolina at Chapel Hill (UNC) through the Center for Innovative Clinical Trials Served as consultant during 09/01/2008-08/31/2013.

R21 HL097334-01A2 (PI: Chen) 12/20/2010-11/30/2014 25-50%

NHLBI Role: PI

Biostatistics

A New Approach to Correct Verification Bias Using Auxiliary Information

1R01HS021496-01A1 (PI: Jackson) 07/01/2013-06/30/2019 5%

AHRQ Role: Co-Investigator

Pediatric Surgery

Personal Health Information Needs and Practices for Maternal Fetal Care

6OT2 OD023132-02 (PI: Denny) 02/24/2016 - 12/31/2018 10%

NIH/NCATS Role: Biostatistician

Biomedical Informatics

PMI Participants Preparatory/Prototyping Initiative

5UL1 TR000445-07 (PI: Bernard) 06/27/2012-05/31/2017 10%

NCRR Role: Biostatistician

Medicine

The Vanderbilt Institute for Clinical and Translational Research (VICTR)

R01 AG043419 (PI: Talbot) 06/10/2013-05/30/2016 15%

NIAID Role: Co-Investigator

Medicine

Effectiveness of the Influenza Vaccine in the Aging Population

1R01LM10828-01 (PI: Miller) 07/01/2010-09/29/2014 0-10%

NLM Role: Biostatistician

Biomedical Informatics

Evidence-based Diagnostic Tools for Translational and Clinical Research (eTfor2)

1R18HS019276-02 (PI: Rosenbloom) 09/01/2010 - 08/31/2013 10%

AHRQ Role: Co-Investigator

Biomedical Informatics

Disseminating Adapted Diabetes Evidence to Clinicians Through a Patient Portal

5R01CA141307-03 (PI: Xu) 10/01/2009 - 06/30/2013 10-15%

NHLBI Role: Biostatistician

Biomedical Informatics

An In-silico Method for Epidemiological Studies Using Electronic Medical Records

1R18HS018168-03 (PI: Johnson) 09/30/2009-07/31/2012 10%

AHRQ Role: Co-Investigator

Biomedical Informatics

My MediHealth: A Paradigm for Children-centered Medication Management

1K23 AI074830-02* (PI: Creech II) 09/04/2008-08/31/2011 2.5%

NIH/NIAID/DMID Role: Co-Investigator

Infectious Diseases

A Longitudinal Study of CA-MRSA Nasal Colonizations in College Sports Participants

5R01LM009591-03 (PI: Rosenbloom) 09/30/2008-09/29/2011 5-15%

NIH/NLM Role: Co-Investigator

Biomedical Informatics

A Framework-based Clinical Documentation Evaluation Method

290-04-0016 (PI: Frisse) 10/01/2004-09/30/2009 10%

State of Tennessee - Federal Formula Role: Co-Investigator

Biomedical Informatics

State and Regional Demonstrations of Health Information Technology

5U18 IP000184-03 (PI: Griffin) 07/01/2008-07/31/2011 5%

Centers for Disease Control Role: Co-Investigator

Preventive Medicine

Annual Estimates of Influenza Vaccine Effectiveness: Davidson County, TN

5R01HL085690-04 (PI: Darbar) 12/15/2007-11/30/2011 5-10%

NHLBI Role: Biostatistician

Cardiovascular Medicine

QT Interval Remodeling in Atrial Fibrillation

5K23AI074863-04* (PI: Talbot) 03/01/2008-02/28/2013 5-15%

NIAID Role: Co-Investigator

Infectious Diseases

Adult Flu Hospitalizations: Evaluating Diagnostic Methods and Vaccine Effectiveness

N01 AI025462 (PI: Edwards) 12/01/2005-08/31/2008 20%

NIAID Role: Co-Investigator

Vanderbilt Vaccine Research Program

Evaluation of Control Measures Against Diseases other than AIDS/VTEU

IHHSN27220080007C* (PI: Edward) 11/01/2007-10/31/2014 6.37-20%

NIAID Role: Co-Investigator

Vanderbilt Vaccine Research Program

Vaccine and Treatment Evaluation Units (VTEUs): Evaluation of Control Measures Against

Disease Other than AIDS

5P50HL081009-05 (PI: Vaughan) 05/20/2006-02/28/2012 20-34%

NHLBI Role: Co-Core Leader

Medicine Clinical Pharmacology

SCCOR in Hemostatic and Thrombotic Diseases

5R01LM007995-06 (PI: Miller) 06/15/2007 - 06/14/2010 9%

NLM Role: Co-Investigator

Biomedical Informatics

MOMENT (Monitoring for Outpatient Medication Effects and New Toxicities) in TIME

PUBLICATIONS and PRESENTATIONS

Publications

Peer-Reviewed Published or To-appear Papers

- Current and former PhD advisees and research assistants are indicated by an *
- 1. Moul D, Ombao H, Monk T, **Chen Q**, Begley A, Buysse D (2002) Masking effects of posture and sleep onset on core body temperature have distinct circadian rhythms: results from a 90-min/day protocol, *J Biol Rhythms*, 2002; 17(5): 447-62. PMID: 12375621.
- 2. Hall M, Vasko R, Buysse D, Ombao H, **Chen Q**, Cashmere D, Kupfer D, Thayer J (2004) Acute stress affects heart rate variability during sleep, *Psychosom Med*, 2004; 66(1): 56-62. PMID: 14747638.
- 3. **Chen Q**, Ibrahim JG (2006) Semiparametric models for missing covariate and response data in regression models, *Biometrics*, 2006; 62(1): 177-84. PMID: 16542244.
- Joos D, Chen Q, Jirjis J, Johnson KB (2006) An electronic medical record in primary care: impact on satisfaction, work efficiency and clinic processes, AMIA Annu Symp Proc, 2006; 394-398. PMID: 17238370.
- Dexheimer J, Jones I, Chen Q, Talbot T, Mason D, Aronsky D (2006) Providers' beliefs, attitudes, and behaviors before implementing a computerized pneumococcal vaccination reminder, Acad Emerg Med, 2006; 13(12): 1312-8. PMID: 17101730.

^{*} Funding was transferred to other faculty members because I was over-funded

- 6. **Chen Q**, Zeng D, Ibrahim JG (2007) Sieve maximum likelihood estimation for missing covariates in regression models, *J Am Statist Assoc*, 2007; 102: 1309-18.
- 7. Devin JK, Blevins LS, Verity DK, **Chen Q**, Bloodworth JR, Covington J, Vaughan DE (2007) Markedly impaired fibrinolytic balance contributes to cardiovascular risk in adults with growth hormone deficiency, *J Clin Endocrinol Metab*, 2007; 92(9): 3633-9. PMID: 17579195.
- 8. **Chen Q**, Ibrahim JG, Chen M-H, Senchaudhuri P (2008) Theory and inference for regression models with missing response and covariates, *J Multivar Anal*, 2008; 99(6): 1302-31. PMID: 19169388.
- 9. Johnson KB, Chark D, **Chen Q**, Broussard A, Rosenbloom T (2008) Performing without a net: transitioning away from a health information technology-rich training environment, *Acad Med*, 2008; 83(12): 1179-86. PMID: 19202496.
- Shinall MC, Peters TR, Zhu Y, Chen Q, Poehling KA (2008) Potential impact of acceleration of the pertussis vaccine primary series for infants , *Pediatrics*, 2008; 122(5): 1021-6. PMID: 18977982.
- 11. Halasa NB, Gerber M, **Chen Q**, Wright P, Edwards K (2008) Safety and immunogenicity of trivalent inactivated influenza vaccine in infants, *J Infect Dis*, 2008; 197(10): 1448-54. PMID: 18444800.
- 12. Devin JK, Vaughan DE, Blevins LS, **Chen Q**, Covington J, Verity DK, Young PP (2008) Low-dose growth hormone administration mobilizes endothelial progenitor cells in healthy adults, *Growth Horm IGF Res*, 2008; 18(3): 253-63. PMID: 18166495.
- 13. Zeng D, **Chen Q**, Ibrahim JG (2009) Gamma frailty transformation models for multivariate survival times, *Biometrika*, 2009; 96(2): 277-91. PMID: 24948838.
- 14. Janssen KJM, Vergouwe Y, Donders ART, Harrell FE, **Chen Q**, Grobbee DE, Moons KGM (2009) Dealing with missing predictor values when applying clinical prediction models, *Clin Chem*, 2009; 55(5):994-1001. PMID: 19282357.
- 15. Miller EK, Khuri-Bulos N, Williams JV, Shehabi AA, Faouri S, Jundi IA, **Chen Q**, Heil L, Mohamed Y, Morin L, Ali A, Halasa NB (2009) Human rhinovirus C associated with wheezing in hospitalized children in the Middle East, *J Clin Virol*, 2009; 46(1):85-9. PMID: 19581125.
- 16. Talbot HK, Poehling KA, Williams JV, Zhu Y, **Chen Q**, McNabb P, Edwards KM, Griffin MR (2009) Influenza in older adults: impact of vaccination of school children, *Vaccine*, 2009; 27(13):1923-7. PMID: 19368772.
- 17. Janssen KJM, Donders ART, Harrell FE, Vergouwe Y, **Chen Q**, Grobbee DE, Moons KGM (2010) Missing covariate data in medical research: to impute is better than to ignore, *J Clin Epidemiol*, 2010; 63(7):721-7. PMID: 20338724.
- 18. Zeng D, **Chen Q** (2010) Adjustment for missingness using auxiliary information in semiparametric regression, *Biometrics*, 2010; 66(1):115-22. PMID: 19432773.
- 19. Stenner SP, **Chen Q**, Johnson KB (2010) Impact of generic substitution decision support on electronic prescribing behavior, *J Am Med Inform Assoc*, 2010; 17(6):681-8. PMID: 20962131.

- 20. Rosenbloom S, McGregor T, **Chen Q**, An A, Hsu S, Dupont W (2010) Specialized pediatric growth charts for electronic health record systems: the example of Down Syndrome, *AMIA Annu Symp Proc*, 2010; 687-91. PMID: 21347066.
- 21. Petty T, Callahan ST, **Chen Q**, Edwards KM, Dempsey A (2010) Assessment of parental acceptance of a potential cytomegalovirus vaccine for adolescent females, *Vaccine*, 2010; 28(35):5686-90. PMID: 20600495.
- 22. Ali SA, Williams JV, **Chen Q**, Faori S, Shehabi A, Jundi EA, Khuri-Bulos N, Halasa NB (2010) Human metapneumovirus in hospitalized children in Amman, Jordan, *J Med Virol*, 2010; 82(6):1012-6. PMID: 20419816.
- 23. Khuri-Bulos N, Williams JV, Shehabi AA, Faouri S, Al Jundi E, Abushariah O, **Chen Q**, Ali SA, Vermund S, Halasa NB (2010) Burden of respiratory syncytial virus in hospitalized infants and young children in Amman, Jordan, *Scand J Infect Dis*, 2010; 42(5):368-74. PMID: 20100116.
- 24. Li J, Solus J, Chen Q, Rho YH, Milne G, Stein CM, Darbar D (2010) Role of inflammation and oxidative stress in atrial fibrillation, *Heart Rhythm*, 2010; 7(4):438-44. PMID: 20153266.
- 25. Talbot H, Griffin M, Chen Q, Zhu Y, Williams J, Edwards K (2011) Effectiveness of seasonal vaccine in preventing confirmed influenza-associated hospitalizations in community dwelling older adults, *J Infect Dis*, 2011; 203(4):500-8. PMID: 21220776.
- 26. Griffin MR, Monto AS, Belongia EA, Treanor JJ, Chen Q, Chen J, Talbot HK, Ohmit SE, Coleman LA, Lofthus G, Petrie JG, Meece JK, Hall CB, Williams JV, Gargiullo P, Berman LS, Shay DK (2011) Effectiveness of non-adjuvanted pandemic influenza A (H1N1) vaccines in preventing medically attended pandemic influenza virus associated acute respiratory illness in 4 US communities, *PLoS ONE*, 2011; 6(8):e23085. PMID: 21857999.
- 27. Johnson KB, Unertl KM, **Chen Q**, Lorenzi NM, Nian H*, Mrisse M (2011) Health information exchange usage in emergency departments and clinics: the who, what, and why, *J Am Med Inform Assoc*, 2011; 18(5):690-7. PMID: 21846788.
- 28. Gadd CS, Ho Y-X, Cala CM, Blakemore D*, **Chen Q**, Frisse M, Johnson KB (2011) Users' perspectives on the usability of a regional health information exchange, *J Am Med Inform Assoc*, 2011; 18(5):711-6. PMID: 21622933.
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- 131. Andrews HW, Lin GT, Lindsey JL, Ji X, **Chen Q**, Chomsky AS. (2024) Resident operative time as an independent predictor of early post-operative cataract surgery outcomes and supervising attending surgeon impact: a retrospective case series. *BMC Ophthalmol.* 2024 Jan 10;24(1):18. PMID: 38200502
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- 136. Song, Q., Ni, C., Warner, J.L., **Chen Q**, Song, L., Rosenbloom, S.T., Malin, B.A. and Yin, Z. Optimizing Word Embeddings for Patient Portal Message Datasets with a Small Number of Samples. *Res Sq.* 2024 May 15:rs.3.rs-4350387. doi: 10.21203/rs.3.rs-4350387/v1. PMID: 38798621 PMCID: PMC11118712.
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- 138. Zuo X, Gregoriou N, Kumar A, Shen S, Li J, Cong G, Jin E, **Chen Q**, Warner J.L., Yang P, Xu H (2024) Extracting Systemic Anticancer Therapy and Response Information from Clinical Notes following the RECIST Definition. *JCO Clinical Cancer Informatics*. Accepted.
- 139. Strayer, N., Vessels, T., Choi, K., Zhang, W., Li, Y., Sharber, B., Hsi, R.S., Bejan, C.A., Bick, A.G., Balko, J.M., Johnson, D.B., Wheless, L.E., Wells, Q.S., Shah, R., Philips, E.J., Self, W.H., Pulley, J.M., Wilkins, C.H., Chen, Q., Hartert, T., Savona, M.R., Shyr, Y., Roden, D.M., Smoller, J.W., Ruderfer, D.M., Xu, Y. Interoperability of phenome-wide multimorbidity patterns: a comparative study of two large-scale EHR systems. medRxiv [Preprint]. 2024 Mar 30:2024.03.28.24305045. doi: 10.1101/2024.03.28.24305045.

Invited Discussion

1. **Chen Q**, Harrell FE (2019) Comment: penalized spline of propensity methods for treatment comparison, *Journal of the American Statistical Association* 2019 January; 114(525):28-30.

Letters to the Editor

- 1. **Chen Q**, Nian H, Zhu Y, Talbot HK Reply to Letter to the Editor: Reply to Sullivan et al. *Vaccine* 2016; 34(39), 4647–8. PMID:27578297.
- 2. Dowling RA, Chen Q, Goldfischer E, Albala DM (2023) Reply by Authors to Editorial Commentary by Alec Koo on "Surgical Stone Treatment: Patterns May Predict Performance on Episode Based Cost Measure in the Quality Payment Program", *Urol Pract*, 2023 May 5;101097UPJ00000000000040702. doi: 10.1097/UPJ.0000000000000407.02.

Patent

- 1. Method for Differentiating Between Papilledema and Pseudopapilledema in a Subject.VU Reference No.: VU20060P1 11672N-20060P
- Scalable Risk Prediction Using Statewide Prescription Data. VU Reference No.: VU22076P1

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Presentations

Invited Presentations

- 1. Generalized Mixed Model in Splus/R, Western Psychiatric Institute and Clinic, University of Pittsburgh, PA (August 2001).
- 2. Theory and Inference for Parametric and Semiparametric Methods in Missing Data Problems, University of Connecticut, Storrs, CT (February 2005).
- 3. Theory and Inference for Parametric and Semiparametric Methods in Missing Data Problems, Vanderbilt University, Nashville, TN (March 2005).
- 4. Theory and Inference for Parametric and Semiparametric Methods in Missing Data Problems, University of Florida, Gainesville, FL (March 2005).
- 5. Theory and Inference for Parametric and Semiparametric Methods in Missing Data Problems, University of Michigan, Ann Arbor, MI (April 2005).
- 6. Small Sample and Asymptotic Relationships between Multiple Imputation, Maximum Likelihood and Fully Bayesian Methods for Missing Data in Linear Regression Models, Joint Statistical Meeting, Minneapolis, MN (August 2005).
- 7. Statistical Modeling An Example of Respiratory Syncytial Virus (RSV) Study, Meharry University, Nashville, TN (October 2008).
- 8. Sieve Maximum Likelihood Estimation for Regression Models with Covariates Missing at Random, IMS-China Conference, Weihai, Shangdong, China (July 2009).
- 9. An Alternative Double Robust Method for Estimating Population Means from Imcomplete Data, George Mason University, Fairfax, VA (April 2010).
- 10. Gamma Frailty Transformation Models for Multivariate Survival Times, National University of Singapore, Singapore (May 2010).
- 11. Estimating treatment effects with treatment switching via semi-competing risks models: an application to a colorectal cancer study, International Chinese Statistical Association, Boston, MA (June 2012).
- 12. Estimating treatment effects with treatment switching via semi-competing risks models: an application to a colorectal cancer study, University of Indianapolis, Indianapolis, IN (November 2012).
- 13. Estimating treatment effects with treatment switching via semi-competing risks models: an application to a colorectal cancer study, University of Pittsburgh, Pittsburgh, PA (November 2012).
- 14. Estimating treatment effects with treatment switching via semi-competing risks models: an application to a colorectal cancer study, The University of Texas Health Science Center at Houston, Houston, TX (January 2014).
- 15. Estimating Time-varying Effects for Overdispersed Recurrent Events Data with Treatment Switching, Joint Applied Statistics Symposium of International Chinese Statistical Association & Korean International Statistical Society, Portland, OR (June 2014).

- 16. Too Many Covariates and Too Few Cases? University of North Carolina at Chapel Hill, Chapel Hill, NC (August 2015).
- 17. Treatment Effect Estimate and Model Diagnostics with Time-Varying Treatment Switching, Eastern North American Region, Austin, TX (March 2016).
- 18. Treatment Effect Estimate and Model Diagnostics with Time-Varying Treatment Switching, International Chinese Statistical Association, Atlanta, GA (June 2016).
- 19. Joint Modeling of Longitudinal and Survival Data with Missing and Left-Censored Time-Varying Covariates, Joint Statistical Meeting, Chicago, IL (August 2016).
- 20. Quantifying the Average of the Time-varying Hazard Ratio via a Class of Transformation, Conference on Lifetime Data Science, Storrs, CT (May 2017).
- 21. Treatment Effect Estimate and Model Diagnostics with Two-way Time-Varying Treatment Switching: an application to a head and neck study, Department of Bioinformatics and Biostatistics, University of Louisville, KY (October 2017).
- 22. Learning Maternal Smoking Effect on Childhood Bronchiolitis from TennCare, Eastern North American Region, Atlanta, GA (March 2018).
- 23. Bayesian Large Scale Inference for Time to First Event of Multivariate Ordinal Survival Outcomes with Application to TennCare Cohort Study, International Chinese Statistical Association, New Brunswick, NJ (June 2018).
- 24. Improving Data Quality for Time-varying Measurements in EHRs via Dynamic Interaction: a Case Study for Growth Chart, Joint Statistical Meeting, Vancouver, Canada (July 2018).
- 25. Repurposing Statistical Tools to Improve Data Quality for Longitudinal Measurements in "EHRs: a Case Study from Growth Charter Midwest Biopharmaceutical Statistics Workshop, Indianapolis, IN (May 2019).
- 26. Treatment Effect Estimate and Model Diagnostics with Two-way Time-Varying Treatment Switching: An Application to a Head and Neck Study, LiDS, Pittsburgh, PA (May 2019).
- 27. Repurposing Statistical Tools to Improve Data Quality for Time-varying Measurements in EHRs via Dynamic Interaction: a Case Study for Growth Chart, International Chinese Statistical Association, Chapel Hill, NC (June 2019).
- 28. Discussion "Penalized Spline of Propensity Methods for Treatment Comparison", Joint Statistical Meeting, Denver, CO (July 2019).
- 29. Too Many Covariates and Too Few Cases? International Chinese Statistical Association, 2020 Applied Stat Symposium, Houston, TX (moved to virtual later) (December 2020).
- 30. Estimation of Treatment Effects and Model Diagnostics with One-way or Two-way Time-Varying Treatment Switching: Application to Cancer Studies, Bristol Myers Squibb, online (January 2021)
- 31. Co-discussion "Treatment Effect Estimate and Model Diagnostics with Two-way Time-Varying Treatment Switching: An Application to a Head and Neck Study", U.S. Food and Drug Administration, online (March 2022).

- 32. Treatment Effect Estimate and Model Diagnostics with Two-way Time-Varying Treatment Switching: An Application to a Head and Neck Study, International Chinese Statistical Association-Canada, Banff, Canada (July 2022).
- 33. Missing Data in the Baseline Health Surveys of the All of Us Research Program and the Opportunity from Multiple Information Sources, Joint Statistical Meeting, Washington, DC (August 2022).
- 34. Growing biostatistics and data science education programs: The Vanderbilt experience, Eastern North American Region, Nashville, TN (March 2023).
- 35. Cox regression is robust to inaccurate EHR-extracted event time: an application to EHR-based GWAS, The 8th Workshop on Biostatistics and Bioinformatics, Atlanta, GA (May 2023).
- 36. Treatment Effect Estimate and Model Diagnostics with Two-way Time-Varying Treatment Switching: An Application to a Head and Neck Study, The ASA Biopharmaceutical Section Regulatory-Industry Statistics Workshop, Rockville, MD (Sept 2023).
- 37. Panel discussant at "Impact of Cross-over in the Evaluation of Overall Survival in Randomized Cancer Clinical Trials", American Statistical Association Biopharmaceutical Section (Oct 2023).
- 38. Empowering Insights in the *All of Us* Research Program: A Statistical Perspective on the Transformational Role of AI and ML, 2024 Annual Symposium on Risks and Opportunities of AI in Pharmaceutical Medicine (Generative AI in Medical Research & Drug Development: Hype or Reality?) Boston, MA (June 2024).
- 39. Discussion of 'innovative and applied methods in design and analysis of oncology trials on the time-to-event endpoints'. 2024 International Chinese Statistical Association Applied Statistics Symposium. Nashville, TN (June 2024).
- 40. Unveiling the Effectiveness and Robustness of Cox Regression in EHR-Based GWAS. 13th World Gene Convention. Dublin, Ireland. (October, 2024).

Contributed Presentations

- 1. Semiparametric Models for Missing Covariates in Regression Models, Eastern North American Region Meeting, Pittsburgh, PA (March 2004).
- 2. Semiparametric Models for Missing Covariates in Generalized Linear Mixed Models, Joint Statistical Meeting, Toronto, Canada (August 2004).
- 3. Small Sample and Asymptotic Relationships between Multiple Imputation, Maximum Likelihood and Fully Bayesian Methods for Missing Data in Linear Regression Models, Eastern North American Region, Austin, TX (March 2005).
- 4. Sieve Maximum Likelihood Estimation for Missing Covariates in Regression Models, Eastern North American Region, Tampa, FL (March 2006).
- 5. Sieve Maximum Likelihood Estimation for Missing Covariates in Regression Models, Joint Statistical Meeting, Seattle, WA (August 2006).

- 6. A Bayesian Approach for Generalized Linear Model with an Explanatory Biomarker Measurement Variable Subject to Detection Limit an Application to Acute Lung Injury Eastern North American Region, Miami, FL (March 2011).
- 7. A New Approach to Adjust for Verification Bias in Assessment of Binary Diagnostic Tests Eastern North American Region, Washington DC (April 2012).
- 8. Too Many Covariates and Too Few Cases? A Comparative Study Joint Statistical Meeting, San Diego, CA (August 2012).
- 9. Too Many Covariates and Too Few Cases? A Comparative Study Eastern North American Region, Orlando, FL (March 2013).

Intramural Presentations

- 1. An Alternative Double Robustness Method for Estimating Population Means from Imcomplete Data, (October 2006).
- 2. Gamma Frailty Transformation Models for Multivariate Survival Times, (December 2009).
- 3. Too Many Covariates and Too Few Cases? A Comparative Study, (June 2011).
- 4. Estimating treatment effects with treatment switching via semi-competing risks models: An application to a colorectal cancer study, (May 2012).
- 5. Estimating Time-varying Effects for Overdispersed Recurrent Events Data with a Cross-over Design, (January 2013).
- 6. Finding the Needles in a Haystack: A Journey to Improve Data Quality in EHRS, (May 2019).

May 27, 2024