Jason A. Roy, PhD

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Current Professional Appointments

RUTGERS SCHOOL OF PUBLIC HEALTH   2018-Present
Professor (with tenure) of Biostatistics
Chair, Department of Biostatistics and Epidemiology

RUTGERS BIOSTATISTICS AND EPIDEMIOLOGY SERVICES CENTER (RUBIES)
        2018-Present
A biostatistical support center for Rutgers Biomedical & Health Sciences
Director

Previous Professional Appointments

CENTER FOR CAUSAL INFERENCE   2016-2022
A research center at the University of Pennsylvania
Founding Co-Director

UNIVERSITY OF PENNSYLVANIA   2013-2018
Associate Professor
Department of Biostatistics, Epidemiology, and Informatics

UNIVERSITY OF PENNSYLVANIA   2016-2018
Associate Program Chair
Biostatistics Program, Graduate Group in Epidemiology and Biostatistics

UNIVERSITY OF PENNSYLVANIA   2009-2013
Assistant Professor
Department of Biostatistics, Epidemiology, and Informatics

GEISINGER HEALTH SYSTEM   2007-2009
Research Investigator

UNIVERSITY OF ROCHESTER   2003-2007
Assistant Professor
Department of Biostatistics and Bioinformatics

BROWN UNIVERSITY   2000-2003
Assistant Professor
Center for Statistical Sciences

Education

University of Michigan, Ann Arbor, MI	2000
PhD in Biostatistics (Advisor: Xihong Lin)	

University of Michigan, Ann Arbor, MI	1997
MS in Biostatistics	

Eastern Michigan University, Ypsilanti, MI	1995
BS in Actuarial Science and Economics	

Awards and Honors

- Causality in Statistics Education Award, American Statistical Association, 2021
- Fellow, American Statistical Association, 2019
- New Jersey Health Foundation Excellence in Research Award, 2019
- Graduate Program in Biostatistics Teaching Award, Department of Biostatistics and Epidemiology, University of Pennsylvania Perelman School of Medicine, 2011
- David P. Byar Young Investigator Award, ASA Biometrics Section, 2002
- Student Travel Award, ENAR Spring Meeting, 2000

Professional Organizations, Societies, and Service

Editorial Boards
Associate Editor, *Biometrical Journal*, 2004-2014.
Associate Editor, *Journal of the Royal Statistical Society, Series C*, 2016-2018.
Associate Editor, *Journal of the American Statistical Association,* 2015-2018.
Associate Editor, *Pharmacoepidemiology and Drug Safety*, 2011-2018.
Associate Editor, *Observational Studies*, 2014-2021.
Associate Editor, *Statistics in Medicine*, 2020-2021.
Associate Editor, *Biometrics*, 2015-present.
Associate Editor, *Statistical Science*, 2018-present.
Executive Editorial Board, *Observational Studies*, 2021-present.

Invited or Elected Leadership Positions
Member, Scientific Planning Committee for the AHRQ Methods Symposium, Philadelphia, 2011.
ENAR Program Committee, At-Large Member, Orlando, FL, 2013.
Biometrics Section Representative to 2014 ENAR Program, Committee, Baltimore, MD, 2014.
Biostatistics Representative for the ASA Caucus for Academic Representatives, 2020.
Chair-Elect, Council of Sections Governing Board, American Statistical Association, 2021.
Chair, Council of Sections Governing Board, American Statistical Association, 2022.
Co-Chair, North American Biostatistics Chairs Executive Committee, 2022.

Member, Nominations Committee, ENAR, 2022.
Member, Committee on Nominations, American Statistical Association, 2023.
Past-Chair, Council of Sections Governing Board, American Statistical Association, 2023.

Member

American Statistical Association (ASA) (Member of Sections: Biometrics; Biopharmaceutical; Health Policy Statistics; Bayesian Statistical Science; Statistics in Epidemiology), 2000-present.
International Biometric Society (ENAR), 2000-present.
International Society for Bayesian Analysis, 2019-present.

Review and Advisory Committees

Reviewer, Health Care Technology and Decision Sciences (HCTDS) Study Section, AHRQ, 2002.
Reviewer, Methodology, Measurement and Statistics section, National Science Foundation, 2002.
NIH Special Emphasis Panel ZRG1HOP-D(50R), "Supplements for Methodological Innovations in the Behavioral and Social Sciences", 2004.
NIH Special Emphasis Panel ZA11GSM-M(M1), "International Collaborations in Infectious Disease Research", 2005.
NIH Special Emphasis Panel ZA11GSMMJ1, "Tropical Medicine Research Centers", 2006.
NIH Special Emphasis Panel ZDE1-RW-03, 2007.
Reviewer, Methodology, Measurement, and Statistics Section. National Science Foundation, 2009.
NIH Special Emphasis Panel ZDE1 MH (25). National Institute of Dental and Craniofacial Research: "Small Research Grants for Data Analysis and Statistical Methodology", 2009.
NIH Special Emphasis Panel ZRG1 ETTN-A (58), 2009.
Special Emphasis Panel ZDE1 VH (07). National Institute of Dental and Craniofacial Research, 2009.
Special Emphasis Panel ZDE1 LK (25). National Institute of Dental and Craniofacial Research, 2010.
NSF-Census Research Network advisory panel, 2011.
Ad-hoc member, Patient Centered Outcomes Research Institute (PCORI), Committee to establish standards in the prevention and handling of missing data in observational and experimental patient centered outcomes research, 2012.
Methodology Consultation Review Panel, PCORI, 2014.
Special Emphasis Panel ZDE1 JR 23, National Institute of Dental and Craniofacial Research, 2014.
Site Visit Team, NSF-Census Research Network, 2015.
NIH, Community Influences on Health Behavior (CIHB) Study Section, 2015.
Advisory Panel on Clinical Trials (CTAP) Post-Award Expert Advisory Subcommittee, 2015.
NIH, Special Emphasis Panel, ZRG1 PSE-B (57) and ZRG1 PSE-U (07), 2015.
NIH, Special Emphasis Panel, NIDCR Secondary Data Analysis, ZDE1 GZ (04), 2017.
National Science Foundation, Statistics B Review Panel (Member), 2017.
PCORI, Cycle 3 2016 Merit Review, Assessment of Prevention, Diagnosis and Treatment Options (Methodology expert reviewer), 2017.
NIH, Special Emphasis Panel, NIDCR Secondary Data Analysis, ZDE1 GZ 13, 2019.
Member of Educational Advisory Committee, ENAR, Nashville, TN, 2020.

NIH, Special Emphasis Panel, ZNS1 SRB-G, 2019-present.

Professional and Academic Service

Conference Activities
Organizer, Invited Session, Joint Statistical Meeting, Seattle, WA, 2006.
Organizer, Invited Session, Joint Statistical Meeting, Salt Lake City, UT, 2007.
Organizer, Invited Session, Atlantic Causal Inference Conference, New York University, NY, 2010.
Organizer, Invited Session, Joint Statistical Meetings, Miami, FL, 2011.
Organizer, Invited Session, International Biometric Conference, Florence, Italy, 2014.
Organizer, Invited Session, Conference on Computational and Methodological Statistics (CMStatistics), Seville, Spain, 2016.
Organizer, Invited Session, International Biometric Conference, Victoria, BC Canada, 2016.
Organizer, Invited Session, CMStatistics, London, UK, 2017.
Co-Organizer, Invited Session, ENAR, Atlanta, GA, 2018.
Co-Organizer, Invited Session, Joint Statistical Meetings, Washington, DC, 2022.

Departmental and University Committees
National:
External Review Committee for the Program Alignment Review (PAR) for the Department of Epidemiology and Biostatistics at Drexel University, 2019.
External Tenure, Appointments, and Promotions reviewer:
> Brown University
> Case Western Reserve University
> Emory University
> Harvard University
> Johns Hopkins University
> NYU School of Medicine
> Simon Fraser University
> Texas A&M University
> University of Florida
> University of Maryland
> University of Michigan
> University of Rochester
> University of Wisconsin
> Wayne State University

Brown University
Seminar Organizer, Center for Statistical Sciences, 2001-2002.
Member, Postdoctoral Search Committee, Center for Gerontology and Health Care Research, 2001-2002.

University of Rochester
Director of Master of Science Program in Medical Statistics, Department of Biostatistics and

Computational Biology, 2004-2007.
Member, Pediatrics Scientific Review Committee, Department of Pediatrics, 2004-2007.
Co-organizer, Pediatric Clinical Research Working Group, Department of Pediatrics, 2004-2007.
Member, Curriculum Committee, 2005-2007.
Chair of Advanced (open book) Examination, Department of Biostatistics and Computational Biology, 2006.

University of Pennsylvania
Member, Graduate Program Admissions Committee, Division of Biostatistics, 2010-2015.
Awards Committee, Department of Biostatistics, Epidemiology, and Informatics, 2010-2018.
Member, Junior Faculty Committee, Division of Biostatistics, 2010-2013.
Member, Qualifying Exam Committee, Division of Biostatistics, 2011-2015.
At-Large Member of Executive Committee, Graduate Group in Epidemiology and Biostatistics, 2015-2018.
Co-Chair, Examinations Committee, Graduate Group in Epidemiology and Biostatistics, 2015-2017.
Member of Committee on Appointments and Promotions (COAP), Department of Biostatistics, Epidemiology, and Informatics, 2015-2018.
Co-Chair, Curriculum Committee, Division of Biostatistics, 2015-2016.
Member, Academic Advising Committee, Graduate Group in Epidemiology and Biostatistics, 2015-2018.
Member, Curriculum Committee, Division of Biostatistics, 2016-2017.
Member, Faculty Recruitment Committee, Division of Biostatistics, 2016-2018.
Chair, Curriculum Committee, Graduate Group in Epidemiology and Biostatistics, 2017-2018.

Rutgers University
Member, Executive Committee, Rutgers School of Public Health, 2018-present.
Member, Research and Doctoral Committee, 2020-present.
Member, Team Science Advisory Board, New Jersey Alliance for Clinical and Translational Science (NJ ACTS), 2020-present.
Member, Scientific Review Board, Rutgers Biomedical and Health Sciences, 2022-present.

Grants and Funding

Current Funding
PCORI, Statistical Methods for Optimizing Dynamic Patient-level Treatment and Monitoring Strategies, 10/1/2022-9/30/2025, Role: Co-PI.

5UL1TR003017-02 (PI: Panettieri), *The New Jersey Alliance for Clinical and Translational Science* (NJ ACTS), 03/11/19 - 02/29/24, Role: Co-Investigator.

NIH/NCATS, New Jersey Alliance for Clinical and Translational Science (RADxUP Supplement - NJ HEROES TOO), 9/1/2020 - 8/31/2024, Role: Co-Investigator

T32NS115700-01A1 (PI: Mouradian), *Training in Translating Neuroscience to Therapies*, 7/1/2021 - 6/30/2026, Role: Biostatistical mentor

R33 AG068931-01A1 (PI: Jarrin), Advanced Development and Utilization of Assembled Aging Trajectory Files from Multiple Datasets, 5/1/2021 - 4/30/2024, Role: Co-Investigator.

R61HD105619 (PI: Kleinman), *COVID-19 Network of Networks Expanding Clinical and Translational Approaches to Predict Severe Illness in Children* (CONNECT to Predict SIck Children), 1/1/2021 - 11/30/2022, Role: Co-Investigator.

PCORI ME-2020C3-21199 (PI: Bailey), *Development, Evaluation and Dissemination of Semantic Data Quality Standards for Multi-Center Clinical Research Studies and Networks*, 1/1/2022 - 3/31/2025, Role: Co-Investigator.

R01AI158911 (PI: Blaser), *Cohort and Biomarkers for COVID-19 Severity, Natural History, and Reinfection*, 9/17/2021 - 8/31/2024, Role: Co-Investigator.

Past Funding

R01-GM-112327 (PI: Roy): *Non-Parametric Bayesian Methods for Causal Inference*, NIGMS, $272,575 (annual), 09/10/2014 - 06/30/2019, Role: PI.

R01-CA206465 (PI: Justice, A. and Lo Re, V.), *HIV and Aging Mechanisms for Hepatocellular Cancer,* 07/01/16 - 05/31/21, Role: Co-Investigator (PI of subcontract).

U01AI122285-05S1 (PI: Blazer, M.), NIAID Extension of Investigator-Initiated Clinical Trials-COVID SUPPLEMENT, 05/01/20-04/30/21, Role: Co-Investigator.

U01-DK060990 (PI: Feldman, M.): *Continuation of the Chronic Renal Insufficiency Cohort (CRIC) Study (Phase III)*, NIDDK, $1,634,607 (annual), 05/2016 - 04/2018, Role: Co-Investigator.

P30-ES013508 (PI: Penning, T.): *Center of Excellence in Environmental Toxicology*, NIH, $1,000,000, 04/2015 – 06/2018, Role: Co-Investigator.

1R01-DK104730 (PI: Anderson, A.): *Measures of Fibrosis and Clinical Outcomes in Chronic Kidney Disease*, $597,490 (annual), 04/2015 - 06/2018, Role: Co-Investigator.

5R21-AI124868-02 (PI: Lo Re III): *Risk of Liver Complications with Hepatitis B Viremia During Tenofovir-Based ART*, $209,206, 02/2016 - 01/2018, Role: Co-Investigator.

R18-HL116285 (PI: Apter): *A Patient Advocate to Improve Real-World Asthma Management for Inner City Adults*, NIH, 06/2016 - 05/2017, Role: Co-Investigator.

FDA / Harvard Pilgrim Health Care Institute (PI: Raebel), *Analytic Methods for Using Laboratory Test Results in Active Database Surveillance*, 02/2014 - 11/2015, Role: Lead Biostatistician / PI of subcontract.

PCORI (PI: Lewis): *Patient Valued Comparative Effectiveness of Corticosteriods Versus Anti-TNF Alpha Therapy for Inflammatory Bowel Disease*, 09/2013 - 12/2016, Role: Co-Investigator.

5R01-HL116832 (PI: Stewart), *Early Detection of Heart Failure via The Electronic Health Record in Primary Care*, 12/2012 - 03/2016, Role: Co-Investigator / PI of subcontract.

R01-DK090385 (PI: Joffe): *Selective & Future Ignorability in Casual Inference*, NIH, 08/2012 - 07/2015, Role: Co-Investigator.

R01-HS018589: *Comparative Effectiveness Of Ace Inhibitors For African Americans*, 01/2012 - 07/2012, Role: PI of subcontract.

R01-HS018372 (PI: Lo Re III): *Clinical Prediction of Hepatotoxicity & Comparative Hepatic Safety Of Medications*, 09/2010 - 07/2015, Role: Co-Investigator.

U01-DK060990 (PI: Feldman): *Continuation of the Chronic Renal Insufficiency Cohort (Phase II),* NIDDK, 05/2010 - 04/2014, Role: Co-Investigator.

RC1-AA019186 (PI: Hogan): *New Approaches to Mediation Analysis Using Causal Inference Methods*, 09/2009 - 08/2011, Role: Co-Investigator / PI of subcontract.

AHRQ Task Order 3 (PI: Shah): *Bridging Knowledge Gaps in the Comparative Effectiveness of ACE Inhibitors & ARBs*, 09/2008 - 03/2010, Role: PI of subcontract.

R01-CE001615 (PI: Carr): Optimizing Trauma Systems Planning Using Interactive Web-Based Mapping Tools, 07/2009 - 06/2013, Role: Co-Investigator.

R01- DK082551 (PI: Stewart): *Natural History of Stress, Urge and Mixed Urinary Incontinence in Women*, 07/2009-06/2012, Role: Co-Investigator.

R01-HL098332 (PI: Lande): *Neurocognitive Function in Children with Hypertension*, 12/2004-02/2007, Role: Co-Investigator.

CDC (PI: Szilagyi): *Rochester Center for Adolescent Immunization Research*, 09/2004-02/2007, Role: Co-Investigator.

R01-HL-79457 (PI: Hogan): *Analyzing Complex Longitudinal Data in Behavior Sciences*, 08/2004-07/2007, Role: Co-Investigator / PI of subcontract.

NIH/NIDCR 5P01DE013539 (PI: Melvin): *Molecular Basis of Idiopathic Dry Mouth*, 08/2004-03/2005, Role: Co-Investigator.

R01-AI-50505 (PI: Hogan): *Analyzing Multiple Process Data in Studies of HIV/AIDS*, 09/2001-06/2004, Role: Co-Investigator.

DHHS (PI: Mor), *Nursing Home Care at the End-of-Life: Cost & Quality*, 09/2000-09/2002, Role: Co-Investigator.

Teaching and Mentoring

Courses
BC216: Applied Regression Analysis, Brown University, 2001.
BC216: Applied Regression Analysis, Brown University, 2002.
BC296: Special Topics: Regression for Multivariate Data, Brown University, 2002.
BC216: Applied Regression Analysis, Brown University, 2003.
BST463: Introduction to Biostatistics, University of Rochester, 2003.
BST463: Introduction to Biostatistics, University of Rochester, 2004.
BST512: Topics in Statistical Inference: Causal Inference, University of Rochester, 2006.
BST464: Applied Linear Regression, University of Rochester, 2006.
BSTA 790, Causal Inference in Biomedical Research (22 students), University of Pennsylvania.
BSTA 771, Applied Bayesian Statistical Analysis (4 students), University of Pennsylvania
BSTA 621, Inference I (8 students), University of Pennsylvania, 2012.
EPID 802/803, Fundamentals of Biostatistics in Practice (36 students), University of Pennsylvania, 2013.
BSTA 771, Applied Bayesian Statistical Analysis (14 students), University of Pennsylvania, 2014.
BSTA 621, Inference I (6 students) , University of Pennsylvania, 2015.
BSTA 771 Applied Bayesian Analysis (8 students), University of Pennsylvania, 2016.
BIST 0626, Applied Survival Data Analysis (21 students), Rutgers University.
BSTA 790, Causal Inference in Biomedical Research (22 students), University of Pennsylvania, 2017.
BIST 0626, Applied Survival Data Analysis (21 students), Rutgers University, 2019.
BIST 0551, Applied Regression Analysis (17 students), Rutgers University, 2019.
BIST 0721, Advanced Bayesian Inference (4 students), Rutgers University, 2020.
BIST 0714, Intermediate Biostatistics (10 students), Rutgers University, 2020.
BIST 0650, Applied Longitudinal Data Analysis (24 students), Rutgers University, 2021.
BIST 0714, Intermediate Biostatistics (11 students), Rutgers University, 2022.
BIST 0721, Advanced Bayesian Inference (4 students), Rutgers University, 2022.
BIST 0714, Intermediate Biostatistics (10 students), Rutgers University, 2023.

Online Courses

Creator and Instructor of *A Crash Course in Causality*, Coursera, (4.7/5.0 rating; over 36,000
   enrolled) https://www.coursera.org/learn/crash-course-in-causality/

Short Courses, Workshops, and Tutorials

Organizer of, and Instructor at, *Causal Inference & Big Data Summer Institute, 2017, 2018.*

Instructor (with Michael Daniels) of full day short course on Bayesian Nonparametric Methods,
   Joint Statistical Meetings, Vancouver, BC, 2018.

Workshop on Causal Inference. Chicago Section of the American Statistical Association,
   Chicago, IL, 2019.

Co-organizer and instructor for Causal Inference Summer Institute, New Brunswick, NJ, 2019.

Workshop, "Machine Learning to Improve Causal Inference in Pharmacoepidemiology,"
   International Conference on Pharmacoepidemiology and Therapeutic Risk Management
   (ICPE), Philadelphia, PA, August 2019.

Tutorial on instrumental variables, Deming Conference, Atlantic City, NJ, December 2019.

Instructor, Virtual Causal Inference Workshop, Center for Causal Inference, 2020.

Workshop on Bayesian Regression Trees, Nonclinical Biostatistics Conference, 2021.

Bayesian Regression Trees, Harvard Catalyst, 2022.

Bayesian Regression Trees, FDA, October 2022.

Bayesian Nonparametric Methods for Causal Inference (with Michael Daniels and Antonio
   Linero), International Society for Bayesian Analysis, Montreal, 2022.

Bayesian Nonparametric Methods for Causal Inference (with Michael Daniels and Antonio
   Linero), ENAR, Nashville, TN, 2023.

Research Advising/Mentoring

Postdoctoral Fellows

Kirsten Lum, Division of Biostatistics, University of Pennsylvania, 2015-2017.

Andrew Spieker, Center for Causal Inference, University of Pennsylvania. Co-mentor (with
Nandita Mitra and Dylan Small), 2016-2018.

Yaoyun (Vincent) Tan, Department of Biostatistics and Epidemiology, Rutgers University,
2018-2020.

Doctoral Students

Lola Luo (2011-2013), Biostatistics, University of Pennsylvania. Dissertation co-advisor (with Dylan Small).

Erica Billig (2014-2017), Biostatistics, University of Pennsylvania. Dissertation co-advisor (with Michael Levy).

Bret Zeldow (2015-2017), Biostatistics, University of Pennsylvania. Dissertation advisor.

Arman Oganisian (2017-2021), Biostatistics, University of Pennsylvania. Dissertation co-advisor (with Nandita Mitra).
- Saul Winegrad Award for Outstanding Dissertation, University of Pennsylvania, Biomedical Graduate Studies
- ENAR Distinguished Student Paper Award
- International Conference on Health Policy Statistics (ICHPS) Travel Award

Yaqian (Angela) Zhou (2018-2022), Biostatistics, University of Pennsylvania. Dissertation co-advisor (with Nandita Mitra).

Wenxuan Xiong (2019-present), Rutgers University. Dissertation advisor.

Weiyi Xia (2020-present), Biostatistics, Rutgers University. Dissertation co-advisor (with Haiqun Lin).

Chang Xu (2020-present), Biostatistics, Rutgers University. Dissertation co-advisor (with Tobias Gerhard).

Master's Degree Students

MS in Biostatistics, University of Rochester, Thesis Advisor: Michael Passarelli (2005), Jacqueline Campbell (2006), Eva Culakova (2006)

MS in Clinical Epidemiology (MSCE), Unversity of Pennsylvania, Biostatistics Mentor: Keri Donaldson (2011-), Mike Mullen (2011-2013), Hillary Hernandez-Trujillo (2011-2015), Matthew Denker (2011-), Emily Stanton (2012-), Delaram Safarpour (2014-), Jenna Streicher (2017-), Nadim Mahmud (2017-), Joanna Rhodes (2017-)

MS in Health Policy (MSHP), University of Pennsylvania: Josh Hilton (2011)

MS in Biostatistics, University of Pennsylvania, Thesis Advisor: Bret Zeldow (2015), Thomas Jemielita (2015), Arman Oganisian (2018)

Peer Reviewed Publications

Journal Articles
*Indicates publications for which one of Dr. Roy's students or post-doctoral fellows is the first author

1. **Roy J**, Lin X: Latent variable models for longitudinal data with multiple continuous outcomes. <u>Biometrics</u> 56(4): 1047-54, 2000.

2. **Roy J**, Lin X: Analysis of multivariate longitudinal outcomes with nonignorable dropouts and missing covariates: changes in methadone treatment practices. <u>Journal of the American Statistical Association</u> 97(457): 40-52, 2002.

3. Teno JM, Mor V, DeDilva D, Kabumoto G, **Roy J**, Wetle T: Use of feeding tubes in nursing home residents with severe cognitive impairment. <u>Journal of the American Medical Association</u> 287(24): 3211-2, 2002.

4. Lemak C, Alexander J, **Roy J**: Why do drug treatment organizations use contingent staffing arrangements? An analysis of market and social influences. <u>Journal of Health and Science Behavior</u> 44(2): 180-97, 2003.

5. Lemon SC, **Roy J**, Clark MA, Friedman PD, Rakowski W: Classification and regression tree analysis in public health: methodological review and comparison with logistic regression. <u>Annals of Behavioral Medicine</u> 26(3): 172-81, 2003.

6. Mitchell SL, Teno JM, **Roy J**, Kabumoto G, Mor V: Clinical and organizational factors associated with feeding tube use among nursing home residents with advanced cognitive impairment. <u>Journal of the American Medical Association</u> 290(1): 73-80, 2003.

7. Mor V, Angelelli J, Jones R, **Roy J**, Moore T, Morris J: Inter-rater reliability of nursing home quality indicators in the US. <u>BMC Health Services Research</u> 3(1): 20, 2003.

8. **Roy J**, Lin X, Ryan L: Scaled marginal model for multiple continuous outcomes. <u>Biostatistics</u> 4(3): 371-83, 2003.

9. **Roy J**: Modeling longitudinal data with nonignorable dropouts using a latent dropout class model. <u>Biometrics</u> 59(4): 829-36, 2003.

10. Hogan JW, **Roy J**, Korkontzelou C: Handling dropout in longitudinal studies. <u>Statistics in Medicine</u> 23(9): 1455-97, 2004.

11. Lemon SC, Rakowski W, Clark MA, **Roy J**, Friedman P.: Variations in influenza vaccination among the elderly. <u>American Journal of Health Behavior</u> 28(4): 352-60, 2004.

12. Miller SC, Intrator O, Gozalo P, **Roy J**, Barber J, Mor V: Government expenditures at the end of life for short- and long-stay nursing home residents: differences by hospice enrollment status. <u>Journal of the American Geriatrics Society</u> 52(8): 1284-92, 2004.

13. Teno JM, Kabumoto G, Wetle T, **Roy J**, Mor V: Daily pain that was excruciating at some time in the previous week: prevalence, characteristics, and outcomes in nursing home

residents. <u>Journal of the American Geriatrics Society</u> 52(5): 762-7, 2004.

14. McConnochie KM, Wood NE, Kitzman HJ, Herendeen NE, **Roy J**, Roghmann KJ: Telemedicine reduces absence due to illness in urban child care: evaluation of an innovation. <u>Pediatrics</u> 115(5): 1273-82, 2005.

15. **Roy J**, Lin X.: Missing covariates in longitudinal data with informative dropouts: bias analysis and inference. <u>Biometrics</u> 61(3): 837-46, 2005.

16. **Roy J**, Mor V.: The effect of provider-level ascertainment bias on profiling nursing homes. <u>Statistics in Medicine</u> 24(23): 3609-29, 2005.

17. Teno JM, Mor V, Ward N, **Roy J**, Clarridge B, Wennberg JE, Fisher ES.: Bereaved family member perceptions of quality of end-of-life care in US regions with high and low utilization of intensive care unit care. <u>Journal of the American Geriatrics Society</u> 53(11): 1905-11, 2005.

18. Wu N, Miller SC, Lapane K, **Roy J**, Mor V: Impact of cognitive function on assessments of nursing home resident's pain. <u>Medical Care</u> 43(9): 934-9, 2005.

19. Wu N, Miller SC, Lapane K, **Roy J**, Mor V: The quality of the quality indicator of pain derived from the Minimum Data Set (MDS). <u>Health Services Research</u> 40(4): 1197-216, 2005.

20. Allen S, Resnik L, **Roy J**: Promoting independence for wheelchair users: the role of home accommodations. <u>The Gerontologist</u> 46(1): 115-23, 2006.

21. Camenga DR, Klein JD, **Roy J**: The changing profile of the American adolescent smoker: implications for prevention programs and tobacco interventions. <u>Journal of Adolescent health</u> 39(1): 120.e1-10, 2006.

22. Lande MB, Carson NL, **Roy J**, Meagher C: Effects of childhood primary hypertension on carotid intima media thickness: a matched controlled study. <u>Hypertension</u> 48(1): 40-4, 2006.

23. **Roy J**, Alderson D, Hogan JW, Tashima KT: Conditional inference methods for incomplete Poisson data with endogenous time-varying covariates: emergency department use among HIV-infected women. <u>Journal of the American Statistical Association</u> 101(474): 424-34, 2006.

24. Szilagyi PG, Griffin MR, Shone LP, Barth R, Zhu Y, Schaffer S, Ambrose S, **Roy J**, Poehling KA, Edwards KM, Walker FJ, Schwartz B.: The impact of conjugate pneumococcal vaccination on routine childhood vaccination and primary care use in 2 counties. <u>Pediatrics</u> 118(4): 13941402, 2006.

25. Grunier A, Mor V, Weitzen S, Truchil R, Teno J, **Roy J**: Where people die: a multi-level

approach to understanding influences on site of death in America. <u>Medical Care Research and Review</u> 64(4): 351-78, 2007.

26. Laroia N, Phelps DL, Roy J.: Double wall versus single wall incubator for reducing heat loss in very low birth weight infants in incubators. <u>The Cochrane Database of Systematic Reviews</u> 18(2): CD004215, 2007.

27. McConnochie KM, Tan J, Wood NE, Herendeen NW, Dick AW, Kitzman HJ, **Roy J**, Roghmann KJ.: Acute illness utilization patterns before and after telemedicine in childcare for inner-city children: a cohort study. <u>Telemedicine and e-Health</u> 13(4): 381-90, 2007.

28. **Roy J**: Latent class models and their application to missing data patterns in longitudinal studies. <u>Statistical Methods in Medical Research</u> 16(5): 441-56, 2007.

29. Gantz M, **Roy J**, Guillet R: Analyzing retrospective data with time-varying exposure: a cautionary tale of H2 blockers in ELBW neonates. <u>Journal of Perinatology</u> 25(2): 93-100, 2008.

30. **Roy J**, Daniels M: A general class of pattern mixture models for nonignorable dropout with many possible dropout times. <u>Biometrics</u> 64(2): 538-45, 2008.

31. **Roy J**, Hogan JW, Marcus BH: Principal stratification with predictors of compliance for randomized trials with two active treatments. <u>Biostatistics</u> 9(2): 277-89, 2008.

32. Stewart WF, Wood C, Reed ML, **Roy J**, Lipton RB: Cumulative lifetime migraine incidence in females and males. <u>Cephalagia</u> 28(11): 1170-8, 2008.

33. Wu N, Mor V, **Roy J**: Resident, nursing home and state factors affecting the reliability of publicly reported quality measures. <u>American Journal of Medical Quality</u> 24(3): 229-40, May-Jun 2009.

34. Narang S, **Roy J**, Stevens TP, Butler-O'Hara M, Mullen CA, D'Angio CT: Risk factors for umbilical venous catheter-associated thrombosis in very low birth weight infants. <u>Pediatric Blood and Cancer</u> 52(1): 75-9, 2009.

35. **Roy J**, Stewart WF: Estimation of age-specific incidence rates from cross-sectional survey data. <u>Statistics in Medicine</u> 29(5): 588-96, Feb 2010.

36. Wu J, **Roy J**, Stewart WF: Prediction modeling using EHR data: challenges, strategies, and a comparison of machine learning approaches. <u>Medical Care</u> 48(6): 106-13, Jun 2010.

37. Gilfillan RJ, Tomcavage J, Rosenthal MB, Davis DE, Graham J, **Roy J**, Pierdon S, Bloom Jr F, Graf T, Goldman R, Weikel K, Hamory B, Paulus RA, Steele Jr GD.: Value and the Medical Home model: effects of transformed primary care on the health care of medicare beneficiaries. <u>The American Journal of Managed Care</u> 16(8): 607-14, Aug 2010.

38. **Roy J**, Stewart WF: Methods for estimating remission rates from cross-sectional survey data: application and validation using data from a national migraine study. <u>American Journal of Epidemiology</u> 173(8): 949-55, Apr 2011.

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Books

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5. Stewart WF, Roy J, Sun J, Ebadollahi S.: Clinical Utility of Machine Learning and Longitudinal EHR Data. In Machine Learning in Healthcare Informatics. Dua S, Acharya U, Dua P. (eds.). Springer, Page: 209-227, 2014.

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Invited Lectures (since 2010)

"Sensitivity analysis for comparative effectiveness research using electronic health records data," WNAR, Seattle, WA, June 2010.

"Statistical methods for estimating age-specific incidence and remission rates from cross-sectional survey data," Division of Biostatistics and Epidemiology, Weill Cornell Medical College, New York, NY, June 2010.

"Methodological controversies from comparative effectiveness (CE) studies using claims vs. electronic health record (EHR) data," International Conference Pharmacoepidemiology & Therapeutic Risk Management. Brighton, England, August 2010.

"Hierarchical models for causal comparisons of drug effectiveness from administrative data with partially missing confounding variables," Causal Inference in Health Research conference, Montreal, Canada, May 2011.

"Missing data: definitions, methods and caveats," AHRQ DEcIDE Method's webinar, June 2011.

 "Hierarchical models for causal comparisons of drug effectiveness from healthcare data with partially missing confounding variables," International Society of Clinical Biostatistics, Ottawa, Canada, August 2011.

"Hierarchical models for causal comparisons of drug effectiveness from administrative data with partially missing confounding variables," Division of Biostatistics, New York University, New York, NY, March 2012.

"Bias in case-crossover studies due to accumulation / disequilibrium of therapies for chronic diseases", DEcIDE Methods Symposium, Agency for Healthcare Research and Quality, Gaithersburg, MD, June 2012.

"Statistical methods for dealing with non-random observation of laboratory data in EHRs", ENAR, Miami, FL, March 2015.

"Bayesian Nonparametric Causal Models for Point Treatments," Atlantic Causal Conference, Philadelphia, PA, May 2015.

"A Bayesian nonparametric approach to marginal structural models for point treatments and a continuous outcome." ASA Princeton-Trenton Chapter Spring Symposium, Real World Evidence: Opportunities, Challenges and Approaches, Rutgers University, NJ, June 2015.

"Analytic methods for using laboratory test results in database surveillance," International Conference on Pharmacoepidemiology & Therapeutic Risk Management (ICPE), Boston, MA, August 2015.

"Statistical challenges with using large healthcare databases for postmarketing safety studies," UMBC-Stanford Workshop on Clinical Trials and Regulatory Science, University of Maryland, Baltimore, MD, September 2015.

"A Bayesian nonparametric approach to marginal structural models for point treatments and a continuous outcome," University of Texas, Austin, TX, February 2016.

"A Bayesian nonparametric approach to marginal structural models for point treatments and a continuous outcome," ENAR, Austin, TX, March 2016.

"A Bayesian nonparametric model for estimating causal drug effects from electronic medical records with informative missing data," International Society for Bayesian Analysis (ISBA) World Meeting, Sardinia, Italy, June 2016.

"A new approach to causal inference using Bayesian nonparametric methods," International Biometric Conference (IBC), Victoria, BC Canada, July 2016.

"Bayesian nonparametric methods for causal inference with missing at random confounders," Johns Hopkins University, Baltimore, MD, September 2016.

"Flexible Bayesian methods for causal inference and missing data in pharmacoepidemiology," Department of Quantitative Health Sciences, University of Massachusetts Medical School, Worcester, MA, September 2016.

"Bayesian nonparametric methods for causal inference with missing at random confounders," International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2016), Seville, Spain, December 2016.

"An introduction to Bayesian nonparametric methods for causal inference in pharmacoepidemiology," Biopharmaceutical Section of the American Statistical Association, web-based lecture, February 2017.

"Confounding," FDA certificate program, Washington DC, February 2017.

"Bayesian nonparametric methods for causal inference," The 1st International Conference on Econometrics and Statistics (EcoSta 2017), Hong Kong, June 2017.

"Using multiple source data from electronic medical records to recover longitudinal outcomes - a Bayesian nonparametric approach," CEN-ISBS Joint Conference on Biometrics & Biopharmaceutical Statistics, Vienna, Austria, August 2017.

"A Bayesian nonparametric modeling approach to the identification of outcomes derived from EHR laboratory data", University of Florida, Department of Statistics, Gainseville, FL, November 2017.

"A Bayesian nonparametric modeling approach to the identification of outcomes derived from EHR laboratory data," CMStatistics, London, December 2017.

"Bayesian nonparametric methods for causal inference and prediction," University of Miami, Miami, FL, April 2018.

"Causal inference using a Bayesian nonparametric model with informative priors on sensitivity parameters," Joint Statistical Meetings, Vancouver, Canada, August 2018.

"Subject-specific functional prediction from electronic health records using an enriched Dirichlet process mixture model," Department of Statistics, Rutgers University, September 2018.

"Subject-specific functional prediction from electronic health records using an enriched Dirichlet process mixture model," Department of Biostatistics, University of Michigan, September 2018.

"Subject-specific functional prediction from electronic health records using an enriched Dirichlet process mixture model," CMStatistics, Pisa, Italy, December 2018.

"Subject-specific functional prediction from electronic health records using an enriched Dirichlet process mixture model," Department of Epidemiology and Biostatistics, Memorial Sloan-Kettering Cancer Center, New York, January 2019.

ICERM TRIPODS workshop on "Models and Machine Learning for Causal Inference and Decision Making in Health Research," Brown University, Providence, RI, January 2019.

"Bayesian nonparametric models with faster algorithms for estimating causal effects," ENAR, Philadelphia, PA, March 2019.

"Flexible models for time-dependent causal mediation," Economics and Statistics Conference, Taipei, Taiwan, June 2019.

Bayesian Causal Inference Workshop, Ohio State University, Columbus, OH, June 2019.

Discussant, "Using large healthcare databases and modern statistical methods to impact health policy," Joint Statistical Meetings, Denver, CO, July 2019.

"Functional clustering methods for extracting features from EHR biomarker history data," Department of Biostatistics and Medical Informatics, University of Wisconsin, September 2019.

"Functional clustering methods for extracting features from EHR biomarker history data," ICSA International Conference, Hangzhou, China, December 2019.

"Machine learning to improve causal inference in pharmacoepidemiology," ISPE McGill Student Chapter, Montreal Canada, February 2020.

"Bayesian nonparametric models to address positivity assumption violations in causal inference," ENAR (virtual), March 2020.

"Joint Bayesian nonparametric models for survival times and medical costs," Joint Statistical Meetings (virtual), August 2020.

"Machine learning in pharmacoepidemiology," Mini-Symposium, International Society for Clinical Biostatistics (virtual), August 2020.

"The impact of positivity assumption on causal inference using Bayesian nonparametric methods," CMStatistics, London, UK, December 2021.

"Bayesian nonparametric methods for causal mediation," EcoSta, Kyoto, Japan, June 2022.

"Bayesian nonparametric methods for causal inference," International Society for Clinical Biostatistics, Newcastle, UK, August 2022.

"A Bayesian semiparametric model for sequential treatment decisions in continuous time," BAYES 2022: Bayesian Biostatistics, Bethesda MD, October 2022.

Discussant, "Bayesian machine learning for decision-making with incomplete information," ENAR, Nashville, TN, 2023.