

Kevin P. Josey, Ph.D.

Assistant Professor
Department of Biostatistics & Informatics
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Education

Ph.D. Biostatistics Department of Biostatistics & Informatics, Colorado School of Public Health University of Colorado, Anschutz Medical Campus—Aurora, CO Advisors: Debashis Ghosh, PhD and Elizabeth Juarez-Colunga, PhD	August 2020
M.S. Biostatistics Department of Biostatistics & Informatics, Colorado School of Public Health University of Colorado, Anschutz Medical Campus—Aurora, CO Advisor: Deborah Glueck, PhD	December 2017
B.S. Mathematics Department of Mathematics, Regis College Regis University—Denver, CO Advisor: James Seibert, PhD	May 2015

Academic Experience

Assistant Professor Department of Biostatistics & Informatics, Colorado School of Public Health University of Colorado, Anschutz Medical Campus—Aurora, CO	August 2023–Present
Postdoctoral Fellow Department of Biostatistics, T.H. Chan School of Public Health Harvard University, Longwood Medical Campus—Boston, MA Advisors: Francesca Dominici, PhD and Rachel Nethery, PhD	July 2020–June 2023

Professional Experience

Statistical Consultant Edgewise Therapeutics—Boulder, CO	September 2025–Present
Research Statistician Seattle-Denver COIN, Eastern Colorado Health Care System U.S. Department of Veterans Affairs—Aurora, CO	October 2023–Present
Research Assistant Seattle-Denver COIN, Eastern Colorado Health Care System U.S. Department of Veterans Affairs—Aurora, CO	January 2016–June 2020

Biostatistics and Data Management Intern
Array BioPharma—Boulder, CO

May 2014–August 2014

Awards and Recognitions

Paper of the Year Mention National Institute of Environmental Health	January 2023
Paper of the Year Mention National Institute of Environmental Health	January 2021
Strother Walker Award for Outstanding PhD Student Department of Biostatistics & Informatics—Colorado School of Public Health	April 2020
Maurice Davies Award for Outstanding Student American Statistical Association—Colorado/Wyoming Chapter	April 2018
Eagle Scout Boy Scouts of America—Indian Peaks District of the Longs Peak Council	November 2007

Professional Service

PROFESSIONAL MEMBERSHIPS

American Statistical Association, Colorado/Wyoming Chapter (2016—Present); International Biometric Society, Western North American Region (2016—Present); International Society for Environmental Epidemiology (2025—Present); International Society for Pharmacoepidemiology (2025—Present); Society for Epidemiological Research (2020—Present).

INSTITUTIONAL COMMITTEES

Biostatistics Admissions Committee (2025); Biostatistics Preliminary Exam Committee (2024—2025); Biostatistics Qualifying Exam Committee (2024,2026); Environmental and Occupational Health Chair Hiring Committee (2024).

OTHER SERVICE

Biostatistics Student Association Faculty Advisor (2024—Present); Faculty Senate (2026—Present).

JOURNAL REVIEWING

American Journal of Epidemiology; Annals of Applied Statistics; Biometrics; Biostatistics; Electronic Journal of Statistics; Environmental Epidemiology; Environmental International; Environmental Research; Environmental Science & Technology; Journal of Computational and Graphical Statistics; Journal of Causal Inference; Nature Communications; New England Journal of Medicine; Proceedings of the National Academy of Sciences; Statistics in Medicine.

Talks and Posters

INVITED TALKS

- 1) “Integrating Outcome Evidence from Misaligned Studies using Control Variates”. Western North America Region of the International Biometric Society, June 2026.

- 2) "Measurement Error Corrections in Causal Inference".
 - a) Colorado School of Public Health Biostatistics Seminar, November 2023.
 - b) Oregon State University Department of Statistics, April 2024.
 - c) Columbia University Department of Biostatistics, September 2024.
 - d) Colorado State University Department of Statistics, October 2024.
 - e) UCLA Practical Causal Inference Group, November 2025.
- 3) "Bridging Efficacy and Effectiveness: A Comparison of Transporting and Emulating the SUSTAIN-6 Clinical Trial of Cardiovascular Outcomes with Semaglutide in a Veteran Population". Joint Initiative on Causal Inference, UC Berkeley, September 2025.
- 4) "Balancing Weights for Evaluating Policy Interventions". Western North America Region of the International Biometric Society Annual Meeting, June 2024.
- 5) "Average Treatment Effects for Whom?: Intersectional Risk Differences for PM_{2.5}-attributable Mortality". Kauvar Symposium at National Jewish Health, October 2023.
- 6) "Trial Emulation with Environmental Exposures". Society for Epidemiological Research Annual Meeting, June 2023.
- 7) "Modeling Exposure-Response Functions Associating Fine Particulate Matter Exposures with Health Outcomes".
 - a) University of Colorado Adult and Child Center for Outcomes Research and Delivery Science, October 2021.
 - b) University of Utah, Department of Population Health Sciences, December 2022.
 - c) University of Massachusetts Amherst, Department of Biostatistics, December 2022.
 - d) Fred Hutchinson Cancer Center Vaccine and Infectious Diseases Division, December 2022.
 - e) University of Colorado, Department of Biostatistics, January 2023.
- 8) "Transporting Observational and Experimental Treatment Effects across Populations".
 - a) Joint Initiative on Causal Inference, UC Berkeley, May 2022.
 - b) US Air Force Academy Department of Mathematical Science, October 2022.
- 9) "Excess of COVID-19 cases and deaths due to fine particulate matter exposure during the 2020 wildfires in the United States". Colorado School of Mines Emerging Scholar Seminar Series, April 2021.

CONTRIBUTED TALKS

- 1) "Real-world Cardiovascular Effects of Liraglutide: A Transportability Analysis of the LEADER Trial". International Society for Pharmacoepidemiology Annual Meeting, August 2025.
- 2) "Balancing Weights for Evaluating Policy Interventions". American Statistical Association Joint Statistical Meeting, August 2024.
- 3) "Synergistic effects of PM_{2.5} and use of corticosteroids on cardiovascular and thromboembolic events among older adults".

- a) National Studies on Air Pollution and Health Monthly Meeting, November 2021.
- b) International Society for Pharmacoepidemiology Annual Meeting, August 2022.
- 4) "Estimating a causal exposure-response function with a continuous error-prone exposure: A study of fine particulate matter and all-cause mortality". American Statistical Association Joint Statistical Meeting, August 2021.
- 5) "Extending inferences of experimental results with entropy balancing".
 - a) Western North America Region of the International Biometric Society Annual Meeting, June 2020.
 - b) Society for Epidemiological Research Annual Meeting, December 2020.

POSTERS

- 1) "Causal Inference with Multiple Misclassified Exposures: A Control Variate-Adjusted Calibration Weighting Approach." Society for Epidemiological Research Annual Meeting, June 2026
- 2) "A Comparison of Measurement Error Methods for Causal Inference." American Causal Inference Conference, May 2024.
- 3) "Transporting results of an observational study using calibration estimators." American Causal Inference Conference, May 2022.
- 4) "Independent and synergistic effects of systemic corticosteroid use and air pollution on thromboembolic events: A climate-drug interaction study." International Society for Pharmacoepidemiology Annual Meeting, August 2021.
- 5) "A Framework for Covariate Balance using Bregman Distances."
 - a) Atlantic Causal Inference Conference, May 2019.
 - b) Joint Statistical Meeting, August 2019.

Teaching Experience

BIOS 7731: Advanced Mathematical Statistics Fall 2026—Present
Instructor (5-10 students/semester)

BIOS 6632: Statistical Theory II Spring 2024—2026
Instructor (10-20 students/semester)

Advising

PHD DISSERTATION ADVISOR

- 1) Eduardo Romo, *Current*
- 2) Cheng-Chang Wu, *Current*
- 3) Nannan Wang (with Fuyong Xing, PhD), *Current*

MS THESIS ADVISOR

- 1) Marshall Rolle (with Yaxu Zhang, PhD), *Current*
- 2) Qingyang Du (with Mengli Xiao, PhD), *Current*

- 3) Nandini Murali, May 2025
- 4) Yonatan Wolde, May 2025

PHD DISSERTATION COMMITTEE

- 1) Jacob Fox, *Current*
- 2) Shannon Thomas (Chair), *Current*
- 3) Lei Wang, *Current*
- 4) Keith Barnatchez (Harvard University), May 2026
- 5) Zoé Haskell-Craig (New York University), May 2026
- 6) Nasim Ildiri (University of Colorado Boulder), December 2025
- 7) Shuozhi Zuo, May 2025

MS THESIS COMMITTEE

- 1) Tao Huang, *Current*
- 2) Aaron Beckwith, *Current*
- 3) Cole Hoffman, May 2025
- 4) Rindala Fayyad (Harvard University), May 2022

Grant Support

ACTIVE

- 1) **Title:** SCALE: Strategic Control of bioAerosols in Learning Environments
Source: DHHS/ARPA-H ARPA-H-SN-24-107 (Sub Poppy Health, Inc.)
Role: Sub-Award Co-Investigator (Sub-PI: Thomas Jaenisch, MD PhD)
Period: 09/2025 – 09/2030
- 2) **Title:** Extending inferences of efficacy and selection of transformative diabetes therapies in diverse populations
Source: NIDDK R01 DK141536
Role: Co-Investigator (PI: Sridharan Raghavan, MD PhD)
Period: 09/2025 – 06/2030
- 3) **Title:** Pragmatic Trial to Enhance Quality Safety, and Patient experience in COPD (Equip-COPD)
Source: PCORI PCS-2021C2-23668
Role: Sub-Award Principal Investigator (Multi-PI: David Au, MD & Lucas Donovan, MD)
Period: 10/2025 – 09/2028
- 4) **Title:** Air pollutants, heat exposure, and kidney health: A longitudinal study in women in Central America
Source: NIEHS R01 ES034042
Role: Co-Investigator (PI: Lee Newman, MD)
Period: 04/2023 – 01/2028
- 5) **Title:** Multi-year study to determine the causal link between HEPA-filtered/unfiltered indoor air quality in occupied classroom (K-12) settings and human respiratory disease outcomes
Source: Centers for Disease Control 75D30123C17606
Role: Co-Investigator (Multi-PI: Thomas Jaenisch, MD PhD & Mark Hernandez, PhD)

Period: 09/2023-10/2026

COMPLETED

- 1) **Title:** Intergovernmental Personnel Act (IPA) Agreement
Source: U.S. Department of Veterans Affairs, Eastern Colorado Health Care System
Role: Research Statistician
Period: 10/2023 – 09/2025

Publications

(⁺Denotes co-first authorship; [^]Denotes co-senior authorship; *Denotes advised student research)

JOURNAL ARTICLES

- 1) A. G. Leonhard, **K. Josey**, J. M. Castaneda, M. Chee, K. I. Duan, H. Nadeem, ... & L. M. Donovan (2026). Receipt of Glucagon-Like Peptide-1 Receptor Agonists Among Rural Patients with OSA and Excess Weight. *Annals of the American Thoracic Society*. (In Press).
- 2) L. Mock, R. C. Nethery, P. Gandhi, A. Parthasarathi, M. Rua, D. Robinson, S. Setoguchi & **K. Josey** (2026). Excess risk of heat-related hospitalization associated with temperature and PM_{2.5} among older adults. *Environmental Epidemiology*, 10(1):e451.
- 3) K. Barnatchez*, R. Nethery, B. E. Shepherd, G. Parmigiani & **K. P. Josey** (2025). Flexible and efficient estimation of causal effects with error-prone exposures: A control variates approach for measurement error. *Biometrics*, 81(4).
- 4) S. P. Huang, C. C. Su, C. Y. Lin, R. Nethery, **K. Josey**, B. Bates, ... & Y. H. Kao Yang (2025). Exposure–response to high PM_{2.5} levels for cardiovascular events in high-risk older adults in Taiwan. *Journal of the American Heart Association*, 14(24):e043306.
- 5) Z. Haskell-Craig*, **K. P. Josey**, P. L. Kinney & P. deSouza (2025). Equity in the Distribution of Regulatory PM_{2.5} Monitors. *Environmental Science & Technology*, 59(30):15843-15852.
- 6) L. M. Donovan, L. C. Feemster, M. P. Collins, E. E. Gleason, **K. Josey**, K. Duan, ... & D. H. Au (2025). Protocol for a pragmatic trial to enhance quality safety, and patient experience in chronic obstructive pulmonary disease (EQuIP-COPD). *Contemporary Clinical Trials*, 107961.
- 7) A. G. Leonhard, J. McDowell, K. D. Hoerster, S. Hayes, F. Picazo, J. M. Castaneda, ... & L. M. Donovan (2025). Receipt of Weight Management Services Among Patients with OSA and Obesity. *CHEST Pulmonary*, 100156.
- 8) J. M. Castaneda, A. Leonhard, L. J. Spece, K. I. Duan, B. N. Palen, J. A. Chen, ... & L. M. Donovan (2025). Incidence and Predictors of Long-term Hypnotic Receipt among Patients with Chronic Obstructive Pulmonary Disease. *Annals of the American Thoracic Society*, 22(6):863–871.
- 9) J. O. Klompaker, F. Laden, F. Dominici, P. James, **K.P. Josey**, J. Kaufman, ... & J.E. Hart (2024). Long-term exposure to air pollution, greenness and temperature and survival after a nonfatal myocardial infarction. *Environmental Pollution*, 124236.
- 10) A. Visaria, E. Kang, A. Parthasarathi, D. Robinson, J. Read, R. Nethery, ... & Setoguchi, S. (2024). Ambient heat exposure patterns and emergency department visits and hospitalizations among

medicare beneficiaries 2008–2019. *The American Journal of Emergency Medicine*, 81, 1-9.

- 11) R. Fayyad*, **K. Josey**, P. Gandhi, M. Rua, A. Visaria, B. Bates, S. Setoguchi & R. C. Nethery (2024). Air pollution and serious bleeding events in high-risk older adults. *Environmental Research*, 118628.
- 12) A. Visaria, S. P. Huang, C. C. Su, D. Robinson, J. Read, C. Y. Lin, ... & S. Setoguchi. Ambient Heat and Risk of Serious Hypoglycemia in Older Adults with Diabetes Using Insulin in the US and Taiwan: A Cross-National Case-Crossover Study. *Diabetes Care*, dc231189, 2024.
- 13) L. M. Donovan, J.A. McDowell, A. P. Pannick, J. Pai, A. F. Bais, R. Plumley, ... & D.H. Au. Protocol for a pragmatic trial testing a self-directed lifestyle program targeting weight loss among patients with obstructive sleep apnea (POWER Trial). *Contemporary Clinical Trials*, 135, 107378, 2023.
- 14) **K. P. Josey**, R. C. Nethery, A. Visaria, B. Bates, P. Gandhi, A. Parthasarathi, ... & S. Setoguchi. Effects of PM_{2.5} and corticosteroid use on cardiovascular and thromboembolic events among older adults: Evidence of drug-environment interaction. *BMJ Open*, 13(9): e072810.
- 15) R. C. Nethery, **K. P. Josey**, P. Gandhi, J. H. Kim, A. Visaria, B. Bates & S. Setoguchi. Effects of seasonal PM_{2.5} exposure on cardiovascular and thromboembolic hospitalizations in Medicare beneficiaries with high-risk chronic conditions. *American Journal of Epidemiology*, kwad089, 2023.
- 16) **K. P. Josey**[†], S. Delaney[†], P. deSouza, X. Wu, R. Nethery, D. Braun[^], & F. Dominici[^]. (2023). Air Pollution and Mortality at the Intersection of Race and Social Class. *New England Journal of Medicine*, 388 (15): 1396-404, 2023.
- 17) **K. P. Josey**, P. deSouza, X. Wu, D. Braun & R. Nethery. Estimating a causal exposure response function with a continuous error-prone exposure: A study of fine particulate matter and all-cause mortality. *Journal of Agricultural, Biological and Environmental Statistics*, 28(1): 20-41, 2023.
- 18) **K. P. Josey**, B. M. Ringham, A. E. Barón, M. Schenkman, K. A. Sauder, K. E. Muller, D. Dabelea & D. H. Glueck. Power for balanced linear mixed models with complex missing data processes. *Communications in Statistics-Theory and Methods*, 52 (1), 46-64, 2023.
- 19) S. Zuo*, **K. Josey**, S. Raghavan, F. Yang, E. Juarez-Colunga & D. Ghosh. Transportability methods for time-to-event outcomes: Application in adjuvant colon cancer trials. *JCO: Clinical Cancer Informatics*, 6, e2200088.
- 20) **K. P. Josey**, F. Yang, D. Ghosh & S. Raghavan. A calibration approach to transportability and data-fusion with observational data. *Statistics in Medicine*, 41 (23): 4511-4531, 2022.
- 21) J. Edwards, **K. Josey**, G. Bahn, L. Caplan, J. E. B. Reusch, P. Reaven, D. Ghosh & S. Raghavan. Heterogeneous treatment effects of intensive glycemic control on major adverse cardiovascular events in the ACCORD and VADT Trials: A machine-learning analysis. *Cardiovascular Diabetology*, 21 (58): 1-11, 2022.
- 22) S. Raghavan, T. Warsavage, W. G. Liu, K. Raffle, **K. Josey**, ... & J. E. B. Reusch. Trends in timing of and glycemia at initiation of second-line type 2 diabetes treatment in US adults. *Diabetes Care*, 45 (6): 1335-1345, 2022.
- 23) S. Raghavan, **K. Josey**, G. Bahn, D. Reda, S. Basu, S. A. Berkowitz, ... & D. Ghosh. Generalizability of heterogeneous treatment effects based on causal forests applied to two randomized clinical

trials of intensive glycemic control. *Annals of Epidemiology*, 65: 101-108, 2021.

- 24) X. Zhou[†], **K. Josey**[†], L. Kamareddine, M. C. Caine, T. Liu, L. J. Mickley, M. Cooper & F. Dominici. Excess of COVID-19 cases and deaths due to fine particulate matter exposure during the 2020 wildfires in the United States. *Science Advances*, 7 (33): eabi8789, 2021. (†Denotes co-first authorship)
- 25) **K. P. Josey**, E. Juarez-Colunga, F. Yang & D. Ghosh. A framework for covariate balance using Bregman distances. *Scandinavian Journal of Statistics*, 48 (3): 790–816, 2021.
- 26) **K. P. Josey**, S. A. Berkowitz, D. Ghosh & S. Raghavan. Transporting experimental results with entropy balancing. *Statistics in Medicine*, 40 (19): 4310–4326, 2021.
- 27) S. Basu, M. Akers, S. A. Berkowitz, **K. Josey**, D. Schillinger & H. Seligman. Comparison of fruit and vegetable intake among urban low-income US adults receiving a produce voucher in 2 cities. *JAMA Network Open*, 4 (3): e211757–e211757, 2021.
- 28) J. A. Valle, **K. Josey**, A. F. Prouse, J. Zimmet & S. W. Waldo. Dual antiplatelet therapy in non-ST elevation acute coronary syndromes at Veterans Affairs Hospitals. *Heart*, 105 (20): 1575–1582, 2019.
- 29) J. A. Gutierrez, D. L. Bhatt, S. Banerjee, T. J. Glorioso, **K. P. Josey**, R. V. Swaminathan, ... & S. W. Waldo, S. V. Rao Risk of obstructive coronary artery disease and major adverse cardiac events in patients with noncoronary atherosclerosis: Insights from the Veterans Affairs Clinical Assessment, Reporting, and Tracking (CART) program. *American Heart Journal*, 213: 47–56, 2019.
- 30) A. C. Sawant, **K. Josey**, M. E. Plomondon, T. M. Maddox, A. Bhardwaj, V. Singh, ... & J. Corbelli. Temporal trends, complications, and predictors of outcomes among nonagenarians undergoing percutaneous coronary intervention: Insights from the Veterans Affairs Clinical Assessment, Reporting, and Tracking program. *JACC: Cardiovascular Interventions*, 10 (13): 1295–1303, 2017.

CONFERENCE PROCEEDINGS

- 1) K. Barnatchez*, **K. P. Josey**, R. C. Nethery, & G. Parmigiani. (2026) Debiased Machine Learning for Conformal Prediction of Counterfactual Outcomes Under Runtime Confounding. *Conference on Causal Learning and Reasoning (CLeaR 2026)*.
- 2) M. Tec, **K. Josey**, O. Mudele, & F. Dominici. (2024) Causal Estimation of Exposure Shifts with Neural Networks and an Application to Inform Air Quality Standards in the US. *Proceedings of the 30th ACM SIGKDD Conference of Knowledge Discovery and Data Mining (KDD 2024)*.

PREPRINTS

- 1) N. Murali*, K. Barnatchez, J. E. Hoppe, B. D. Wagner, K. P. Keller & **K. P. Josey** (2026). Causal Inference with Multiple Misclassified Exposures: A Control Variate-Adjusted Calibration Weighting Approach. *arXiv preprint arXiv:2606.23656*.
- 2) Y. F. Wolde*, A. M. Jensen, B. D. Wagner, J. D. Edison, M. L. Feser, M. Mahler, K. D. Deane & **K. P. Josey** (2026). Detecting change-points in preclinical rheumatoid arthritis biomarkers using Bayesian multivariate segmented regression. *medRxiv*, 2026-05.
- 3) P. deSouza, E. M. Considine, A. Shea, F. Duarte, C. Ratti, P. Huguelet, M. Sammel, Z. Haskell-Craig*, D. Braun, R. Nethery & **K. P. Josey** (2026). Evidence of Smoke-Related PM2.5 on

Menstrual Cycle Health: A Prospective, Observational Study Using Multi-Country Data From a Mobile Health App. *SSRN*, 6745159.

- 4) A. Dye-Robinson[†], **K. P. Josey**[†], D. Jaramillo, M. Dally, L. Krisher, J. Butler-Dawson, K. Villarreal, ... & L.S. Newman (2026). Policy-Relevant Causal Approach to Assessing the Impact of Occupational Heat and Airborne Particulate Matter Exposure on Acute Kidney Function in Guatemalan Sugarcane Workers. *medRxiv*, 2026-03.
- 5) **K. P. Josey**, W. Liu, T. Warsavage, M. Medici, K. Kvist, C. G. Derington, ... & S. Raghavan (2025). Real-world cardiovascular effects of liraglutide: transportability analysis of the LEADER trial. *medRxiv*, 2025-05.
- 6) F. J. Bargagli-Stoffi, E. Landry, **K. P. Josey**, K. De Beckker, J. E. Maldonado, & K. De Witte (2025). Transporting Predictions via Double Machine Learning: Predicting Partially Unobserved Students' Outcomes. *arXiv preprint arXiv:2509.12533*.
- 7) K. Barnatchez*, **K. P. Josey**, N. S. Hejazi, B. E. Shepherd, G. Parmigiani, & R. Nethery (2025). Efficient Estimation of Causal Effects Under Two-Phase Sampling with Error-Prone Outcome and Treatment Measurements. *arXiv preprint arXiv:2506.21777*.
- 8) P. deSouza, S. B. Tan, Z. Haskell-Craig, K. Hohsfield, ... & J. J. Lee (2025). Two Places, One Problem: How Segregation at Home and Work Shapes Pollution Exposure. *Research Square*, 7115011.
- 9) E. Cruz-Cortes, **K. P. Josey**, F. Yang, D. Ghosh (2023). An Empirical Process Framework for Covariate Balance in Causal Inference. *arXiv preprint arXiv:2301.00889*.

❖ Last modified on July 1st, 2026 ❖