Jennifer Feder Bobb, PhD

Curriculum Vitae

(Updated January 3, 2025)

Biographical and educational information

Jennifer F. Bobb, PhD
Associate Scientific Investigator
Biostatistics Division, Kaiser Permanente Washington Health Research Institute (KPWHRI)
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https://www.kpwashingtonresearch.org/our-research/our-scientists/bobb-jennifer-f

Affiliate Associate Professor
Department of Biostatistics, University of Washington

PhD Biostatistics, Johns Hopkins Bloomberg School of Public Health, 2012
BA Mathematics, *summa cum laude*, Washington University in St. Louis, 2006

Professional positions

Current

Associate Scientific Investigator, Biostatistics Division, Kaiser Permanente Washington Health Research Institute, September 2020–present

Affiliate Associate Professor, Department of Biostatistics, University of Washington, July 2022–present

Prior

Affiliate Assistant Professor, Department of Biostatistics, University of Washington, April 2017–June 2022

Assistant Scientific Investigator, Biostatistics Division, Kaiser Permanente Washington Health Research Institute (formerly Group Health Research Institute), July 2015–September 2020

Research associate, Department of Biostatistics, Harvard T.H. Chan School of Public Health (Harvard Chan School), 2013–2015

Postdoctoral fellow, Department of Biostatistics, Harvard Chan School, 2012–2013

Research assistant, Department of Biostatistics, Johns Hopkins Bloomberg School of Public Health, 2008–2011

Student software developer, R Project for Statistical Computing, Google Summer of Code, 2011

Data analyst, Career Services and Disability Support Office, Johns Hopkins Bloomberg School of Public Health, 2008–2010

Professional honors

Committee of Presidents of Statistical Societies (COPSS) Emerging Leader Award, 2024

Mentee (Danyang Li) recipient of ENAR Distinguished Student Paper Award, 2024

NIEHS Paper of the Year, 2015

Junior Researcher Travel Award, Women in Statistics Conference, 2014

John M. Chambers Statistical Software Award, ASA Section on Statistical Computing, 2012

Statistics in Epidemiology Young Investigator Award, ASA Section on Statistics in Epidemiology, 2011

Louis I. and Thomas D. Dublin Award for the Advancement of Epidemiology and Biostatistics, Johns Hopkins Bloomberg School of Public Health, 2011

First place, Delta Omega Biostatistics Poster Competition, Johns Hopkins Bloomberg School of Public Health, 2011

Sommer Scholar, Johns Hopkins Bloomberg School of Public Health, 2007–2011

NIH Environmental Biostatistics Training Grant, 2007–2011

Washington University Dean's Scholarship, 2002–2006

Sigma Xi, scientific research honorary, 2006

NSF Research Experience for Undergraduates, Summers 2004, 2005

Memberships

American Statistical Association
Western North American Region, International Biometric Society

Organizational service, KPWHRI

Committee on Student hiring – Identifying Opportunities for Process Improvement, 2023-present
Biostatistics Committee on promoting work culture in the hybrid era, 2022–present
Biostatistics Journal Club organizer, 2016–2023
Search committee for investigator biostatistician, 2020
Search committee for collaborative biostatistician hire, 2018
Orientation mentor for new faculty, 2018
Evaluation committee member for opportunistic hire, 2016

Other professional service

National service (see also 'Special national responsibilities' below)

Conference Session Organizer, International Conference for Health Policy Statistics, 2025
Byar Award Committee, ASA Biometrics Section, 2023, 2024
Conference Session Organizer, Join Statistical Meetings, 2023, 2024
Program Chair for 2022 ENAR Spring Meeting, ASA Biometric Section, Fall 2021
Proposal reviewer, Harvard-NIEHS Center Pilot Project, 2020
Conference Session Organizer, 3rd Seattle Symposium on HealthCare Data Analytics, 2018

Local service and involvement, UW

Admissions committee member (MS students), Department of Biostatistics, 2022
Grader, PhD applied exam, Department of Biostatistics, 2018–2019
PhD applied exam committee member, Department of Biostatistics, 2018

Local service and involvement, prior institutions

Co-organizer, Complex Mixtures Analysis Working Group, 2012–2014, Harvard Chan School
Organizer, Student Journal Club, Department of Biostatistics, Johns Hopkins Bloomberg School of Public Health, 2009–2010

Special national responsibilities

Elected to 3-year position as Chair-Elect/Chair/Past-Chair, Biometrics Section of the American Statistical Association, 2023/2024/2025

Invited member, Committee on Funded Research, American Statistical Association, 2019–2024

Grant reviewer, Special Emphasis Panel/Scientific Review Group Review of a PPG-P01 grant application, *National Heart Lung and Blood Institute, NIH*, October 2023

Proposal Reviewer, Walter A. Rosenblith New Investigator Award, Health Effects Institute (HEI), 2023

Grant reviewer, Combined Children and Youth and Adolescent Alcohol Merit Review panel (Cycle 1, 2023), *Patient-centered Outcomes Research Institute (PCORI)*, 2023

Grant reviewer, Assessment of Prevention, Diagnosis, and Treatment Options Merit Review panel (Cycle 3, 2021), *PCORI*, 2022

Invited member, Regional Advisory Board, West North Atlantic Region of the International Biometric Society, 2016–2018

Editorial responsibilities

Associate Editor, *Biostatistics*, Feb. 2017–present

Reviewer (Full peer review history available on Web of Science), selected journals:

American Journal of Epidemiology
Annals of Applied Statistics
Biometrics
Biostatistics
BMJ
Environmental Health Perspectives
Epidemiology
International Journal of Epidemiology
JAMA
JASA
Journal of Agricultural, Biological, and Environmental Statistics
Journal of the Royal Statistical Society (Series A; Series C)
Nature Climate Change
Statistics in Medicine
Statistical Methods in Medical Research
The American Statistician

Research funding

Ongoing projects

Co-investigator, *Effectiveness of teen suicide prevention with confidential care: An implementation study across 30 primary care clinics*; 1R01MH133566 (PI: Lapham), NIMH; Direct Costs: $1,194,071; 0.10 FTE, 2024–2027

Co-investigator, *Systematic Implementation of Patient-Centered Care for Alcohol Use Trial: Beyond Referral to Treatment (Options trial).* R01AA031231 (MPIs: Bradley, Lapham) NIAAA; Direct Costs: $2,176,969, 0.15 FTE, 2023–2028.

Co-investigator,*PROUD Secondary Papers - PRimary care Opioid Use Disorders Treatment (PROUD) Trial (CTN-0074).* UG1 DA040314 (PI: Bradley), NIDA; Direct Costs: $137,884, 0.05 FTE, 2022–2024.

Co-investigator, *CTN Secondary Papers - Health Systems Node of the NIDA Clinical Trials Network*, UG1 DA040314 (MPIs: Campbell, Bradley), NIDA; Direct Costs: $171,008, 0.10 FTE, 2024–2025.

Co-investigator, *Comparative Effectiveness and Safety of Metabolic/Bariatric Surgery, GLP-1, and SGLT-2 Medications for Patients with Obesity and Type 2 Diabetes*, R01DK135515 (MPIs; Arterburn, McCoy), NIDDK; Direct Costs: $2,148,824, 0.10 FTE, 2024–2027

Co-investigator, *Adult Changes in Thought (ACT) Research Program*, 1U19AG066567-01A1 (PI: McEvoy), NIA; Direct costs: $46,398,494, 0.02 FTE, 2021–2026

Multiple principal investigator, *SeattleStatSummer for Biomedical Data Science Research Training*, R25LM014210 (mPIs: Othus [Contact PI], Bobb, Chowning), NLM; 0.05 FTE, 2022–2027

Co-investigator, *Center for Dissemination and Implementation At Stanford (C-DIAS)*, 1P50DA054072 (PI: McGovern; KPWHRI Project PI: Glass), NIDA; Direct Costs: $2,270,077; 0.05–0.15 FTE, 2022–2027

Co-investigator, *Health Systems Node of the NIDA Clinical Trials Network*, UG1 UG1DA040314 (PI: Campbell, Bradley, Weisner), NIDA; Direct Costs: $744,593; 0.10 FTE, 2020–2025

Co-investigator, *Patient-centered team-based primary care to treat opioid use disorder, depression, and other conditions* (PC^2Too), U01 MH121949 (PI: DeBar, Bradley), NIMH; Direct Costs: $11,457,273, 0.10–0.15 FTE, 2019–2024

Co-investigator, *Understanding practical alcohol measures in primary care to prepare for measurement-based care: scaled EHR Measures of alcohol use and DSM-5 alcohol use disorder (AUD) symptoms*, R21AA028073/R33 (PI: Hallgren), NIAAA; Direct Costs: $745,144, 0.10 FTE, 2019–2024

Co-investigator, *Digital treatments for opioids and other substance use disorders (DIGITS) in primary care: Observational Analysis of Adaptions to the Intervention*, R01DA047954 (PI: Glass), NIDA; Direct Costs: $2,504,751, 0.10–0.20 FTE, 2019–2024

Co-investigator, *Digital treatments for opioids and other substance use disorders (DIGITS) in primary care: trial supplement*, 3R01DA047954-05S1 (PI: Glass), NIDA; Direct Costs: $235,962, 0.10 FTE, 3/1/23–2/28/25

Co-investigator, *PRimary care Opioid Use Disorders Treatment (PROUD) Trial* (CTN-0074). UG1 DA040314 (PI: Bradley), NIDA; Direct Costs: $11,885,123, 0.10 FTE, 2017-2024

Completed projects

Co-investigator, *Moving to Health: How changing built environments impact weight and glycemic control*, R01 DK114196 (PI: Arterburn), NIDDK; Direct Costs: $2,157,999; 0.20 FTE, 9/1/2017–

6/30/2023.

Co-investigator (PI, KPWHRI subcontract), *New causal inference methods for cluster randomized trials with post-randomization selection-bias*, (PI: Li), PCORI; Direct Costs: $115,333, 0.10 FTE, 2020–2022

Co-investigator, *Psychological benefits and potential pathogen transmission in hospitalized pediatric oncology patients receiving therapy dog visits: a randomized controlled trial*, R21 HD091877-01 (PI: Chubak), NICHD; Direct Costs: $342,090; 0.05–0.10 FTE, 5/1/2017–4/30/2019 Key Personnel: HIPPO. R21 HD091877.

Co-investigator, *Integration of firearm suicide prevention tools in health care settings: patient-reported access to firearms and decision aid for securing firearms*, Kaiser Permanente Firearm Injury Prevention Taskforce Award (PI: Richards); Direct Costs: $113,939, 0.05 FTE, 2019–2021

Co-investigator, *Integrating Addiction Research in Health Systems: the Addiction Research Network*, UG1 DA040314 (PI: Campbell, Bradley, Weisner), NIDA; Direct Costs: $713,143; 0.10 FTE, 2015–2020

Co-investigator, *Evaluation of the Risk of Neural Tube Defects Among Live Births Exposed to Maternal Prescription Opioids During Early Pregnancy using MEPREP*, Food and Drug Administration, Direct Costs: $470,212; 0.20 FTE, 2016–2019

Co-investigator (PI, KPWHRI subcontract), *Cardiovascular Health and Air Pollution: A National Study*, R01 ES024332-01A1 (PI: Zanobetti), NIEHS; Direct Costs: $59,084; 0.08 FTE, 2025–2019

Co-investigator, *Alzheimer's Disease patient registry (ADPR/ACT)*, U01 AG006781 (PI: Larson, Crane), NIA; Direct Costs: $10,329,826; 0.10 FTE, 2015–2018

Co-investigator, *Integrating Addiction Research in Health Systems: the Addiction Research Network (ARN) - Supplement*, UG1 DA040314 (PI: Campbell, Bradley, Weisner), NIDA; Direct Costs: $299,007; 0.15 FTE, 2015–2017

Co-investigator, *Alcohol-related care and outcomes for outpatients with HIV in a national VA cohort*, R21 AA022866 (PI: Bradley, Williams), NIAAA; Direct Costs: $274,168; 0.10 FTE, 2015–2017

Co-investigator, *Elective induction of labor and pregnancy outcomes*, R01 HD071986 (PI: Dublin, Getahun), NICHD; 0.15 FTE, 2013–2017

Principal investigator, *Developing statistical software for estimating the joint effects of multiple risk factors*, GHRI Directors Project Resource Fund; Direct Costs: $2,970; 0.00 FTE, 2015–2016

Principal investigator, *A statistical approach for estimating the health effects of air pollution mixtures on multiple outcomes simultaneously*, HSPH-NIEHS Center Pilot Project P30ES000002; Direct Costs: $22,000; 2015–2016

Co-investigator, *Vulnerability and Adaptation to Heat and Air Pollution in a Changing Climate*, R21 ES022585 (PI: Dominici), NIEHS, 2013–2015

Postdoctoral fellow, *Air Pollution and Pregnancy Outcome in New York City*, R01 ES019955 (PI: Savitz), NIEHS, 2011–2015

Teaching and mentoring responsibilities

Teaching

Short courses

Bobb JF, Shortreed SM, Coley RY. "Statistical methods for electronic health record data," American Causal Inference Conference, Seattle, WA, 2024

Bobb JF, Coley RY. "Statistical methods for electronic health record data," International Conference for Health Policy Statistics (ICHPS), Scottsdale, AZ, 2023

Bobb JF, Shortreed SM, Coley RY. "Statistical methods for electronic health record data," 6th Seattle Symposium in Biostatistics, Seattle, WA, 2020

Guest lecturer

"Use of propensity scores in (pharmaco)epidemiology research," Pharmacoepidemiology, University of Washington School of Public Health, 2018, 2020, 2022, 2024

"Pragmatic clinical trials," Advanced Health Services Methods III (HSERV 525), University of Washington School of Public Health, 2022

"Statistical methods for pragmatic trials," Methods Seminar, Mental Health Research Network T32 fellowship program, 2021, 2023

"Quantifying future mortality attributable to extreme heat under global climate change: A case study of Bayesian methodology in environmental health," Bayesian Methodology in Biostatistics, Harvard Chan School, 2012, 2013

"Bayesian methods for estimating healths risks of environmental exposures," Advanced Methods in Biostatistics IV, Johns Hopkins Bloomberg School of Public Health, 2011

Advanced Methods in Biostatistics II, Johns Hopkins Bloomberg School of Public Health, 2010

Design of Clinical Experiments, Johns Hopkins Bloomberg School of Public Health, 2010

Methods in Biostatistics IV, Johns Hopkins Bloomberg School of Public Health, 2009

Teaching assistant, Johns Hopkins Bloomberg School of Public Health

Advanced Methods in Biostatistics II–IV (Doctoral level), 2010–2011
Design of Clinical Experiments, 2010
Data Analysis Workshop I–II, Summers 2009, 2010
Multilevel Statistical Models in Public Health, 2009
Analysis of Longitudinal Data, 2009
Essentials of Probability and Statistical Inference I–II (Masters level), 2009
Methods in Biostatistics I–IV (Masters level), 2008–2009

Mentoring

Mentored Junior Faculty

Primary Mentor for Yu-Ru Su, 2023–present, Biostatistics Division, KPWHRI

Mentoring committee for Noorie Hyun, Biostatistics Division, 2023–present

PhD committees in non-chair roles

Phuong T. Vu, 2018–2019, Biostatistics, University of Washington

Stacy Pettigrew, 2016–2018, Environmental Health Sciences, University of Albany

Shelley Liu, 2013–2016, Biostatistics, Harvard Chan School

Mentored students

Danyang Li, 2021–present, MS student, Statistics, University of Washington (Fall 2021–Spring 2022); PhD student, Biostatistics, University of Pittsburgh (Fall 2023–present)

Isabelle Bassler, Summer 2021, undergraduate student, Fred Hutch Pathway Undergraduate Researchers program (Co-mentored with Maricela Cruz)

Stephanie Hopp, 2014–2018, Post-Baccalaureate Certificate in Pre-Medical Studies, Boston University (2014–2015); medical student, Alabama College of Osteopathic Medicine (2016–2018)

Ernesto Ulloa, Fall 2015, PhD student, Biostatistics, University of Washington

Yan Wang, 2014–2016, PhD student, Biostatistics, Environmental Health Sciences, Harvard Chan School

Elizabeth Smoot, 2014–2015, PhD, Biostatistics, Harvard Chan School

Bianca Papi, 2013–2015, MA, Biostatistics, Sapienza University of Rome

Research associates

Sungtaek Son, PhD student, Biostatistics, University of Washington, Winter 2022–Spring 2024

Hongxiang Qiu, PhD student, Biostatistics, University of Washington, 2016–2021

Yunhua Xiang, PhD student, Biostatistics, University of Washington, Fall 2017–Spring 2018

Publications (* Indicates mentored work of student; † Indicates joint first author)

Published papers in peer-reviewed journals

1. Jack HE, Berger DB, **Bobb JF**, Oliver MM, Bradley KA, Hallgren KA. Association between change in alcohol use reported during routine healthcare screening and change in subsequent hospitalization: A retrospective cohort study. *Addiction*.

2. **Bobb JF**, Mooney SJ, Cruz MF, Moudon AV, Drewnowski A, Arterburn D, Cook AJ (In press). Distributed lag models for retrospective cohort data with application to a study of built environment and body weight. *Biometrics*.

3. Weinstein ZM, Yu O, Wartko PD, Samet JH, **Bobb JF**, Braciszewski JM, Arnsten JH, Murphy MT, Horigian VE, Stotts AL, Beers D, Bradley K (2024). Does Implementation of Office Based Addiction Treatment by a Nurse Care Manager Increase the Duration of OUD Treatment in Primary Care? A Secondary Analysis of the PROUD Randomized Control Trial 265:112497. *Drug and Alcohol Dependence*. `https://doi.org/10.1016/j.drugalcdep.2024.112497`

4. Lapham GT, Hyun N, **Bobb JF**, Wartko PD, Matthews AG, Yu O, McCormack J, Lee AK, Liu DS, Samet JH, Zare-Mherjerdi M, Braciszewski JM, Murphy MT, Arnsten JH, Horigian V, Caldeiro RM, Addis M, Bradley KA (2024). Impact of nurse care management on office-based opioid use disorder treatment: Three-year outcomes from the PROUD cluster-randomized trial. *JAMA Network Open*. 7(11):e2447447. `https://doi.org/10.1001/jamanetworkopen.2024.47447`

5. Lapham G, **Bobb JF**, Luce C, Oliver MM, Hamilton LK, Hyun N, Hallgren KA, Matson TE (2024). Prevalence of cannabis use disorder among primary care patients with varying frequency of past-year cannabis use. *Journal of General Internal Medicine*. `https://doi.org/10.1007/s11606-024-09061-6`

6. Mogk J, Idu AE, **Bobb JF**, Key D, Wong ES, Palazzo L, Stefanik-Guizlo K, King D, Beatty T, Dorsey CN, Caldeiro RM, Garza Mcwethy A, Glass JE (2024). Prescription digital therapeutics for substance use disorder in primary care: a mixed methods evaluation of a pilot implementation study. *JMIR Formative Research* 2:8:e59088. `https://doi.org/10.2196/59088`

7. **Bobb JF**, Idu AE, Qiu H, Yu O, Boudreau DM, Wartko PD, Matthews AG, McCormack J, Lee AK, Campbell CI, Saxon AJ, Liu DS, Altschuler A, Samet JH, Northrup TF, Braciszewski JM, Murphy MT, Arnsten JH, Cunningham CO, Horigian VE, Szapocznik J, Glass JE, Caldeiro RM, Tsui JI, Burganowski RP, Weinstein ZM, Murphy SM, Nyun N, Bradley KA (2024). Offering nurse care management for opioid use disorder in primary care: impact on emergency and hospital utilization in a cluster-randomized implementation trial. *Drug and Alcohol Dependence*. 261:111350. https://doi.org/10.1016/j.drugalcdep.2024.111350

8. Lozano PM, **Bobb JF**, Kapos FP, Cruz M, Mooney SJ, Hurvitz PM, Anau J, Theis K, Cook AJ, Moudon AV, Arterburn D, Drewnowsky A (2024). Residential density is associated with BMI trajectories in children and adolescents: Findings from the M2H Study. *AJPM Focus*. 3(3):100225. https://doi.org/10.1016/j.focus.2024.100225

9. Rosenberg DE, Cruz MF, Mooney SJ, **Bobb JF**, Drewnowski A, Moudon AV, Cook AJ, Hurvitz PM, Lozano P, Anau J, Theis MK, Arterburn DE (2024). Neighborhood built and food environment in relation to glycemic control in people with type 2 diabetes in the Moving to Health Study. *Health & Place*. 86:103216. https://doi.org/10.1016/j.healthplace.2024.103216

10. *Qiu H, Cook AJ, **Bobb JF** (2023). Evaluating tests for cluster-randomized trials with few clusters under generalized linear mixed models with covariate adjustment: a simulation study. *Statistics in Medicine*. http://doi.org/10.1002/sim.9950

11. Wartko PD, **Bobb JF**, Boudreau DM, Matthews AG, McCormack J, Lee AK, Qiu H, Yu O, Hyun N, Idu AE, Campbell CI, Saxon AJ, Liu DS, Altschuler A, Samet JH, Labelle CT, Zare-Mehrjerdi M, Stotts AL, Braciszewski JM, Murphy MT, Dryden D, Arnsten JA, Cunningham CO, Horigian VE, Szapocznik J, Glass JE, Caldeiro RM, Philips RC, Shea M, Bart G, Schwartz RP, McNeely J, Liebschutz JM, Tsui JI, Merrill JO, Lapham GT, Addis M, PROUD Trial Collaborators, Bradley KA, et al. (2023). The PRimary Care Opioid Use Disorders treatment (PROUD) trial: a cluster-randomized implementation trial of nurse care management for opioid use disorder treatment. *JAMA Internal Medicine*. https://doi.org/10.1001/jamainternmed.2023.5701

12. Chubak J, Adler A, **Bobb JF**, Hawkes RJ, Ziebell RA, Pocobelli G, Zerr DM (2023). A randomized controlled trial of animal-assisted activities for pediatric oncology patients: psychosocial and microbial outcomes. *Journal of Pediatric Health Care*. https://doi.org/10.1016/j.pedhc.2023.09.010

13. Lapham GT, Matson TE, Bobb JF, Luce C, Oliver MM, Hamilton LK, Bradley KA (2023). Prevalence of cannabis use disorder and reasons for use among adults in a US state where recreational cannabis use is legal. *JAMA Network Open*. 6(8):e2328934. https://doi.org/10.1001/jamanetworkopen.2023.28934

14. Hallgren KA, Jack HE, Oliver M, Berger D, **Bobb JF**, Kivlahan DR, Bradley KA. Changes in alcohol consumption reported on routine healthcare screenings are associated with changes in depression symptoms (2023). *Alcohol: Clinical and Experimental Research*. https://doi.org/10.1111/acer.15075

15. Jack HE, Oliver MM, Berger DB, **Bobb JF**, Bradley KA, Hallgren KA (2023). Association between clinical measures of unhealthy alcohol use and subsequent year hospital admissions in a primary care population. Drug and Alcohol Dependence. Volume 245, 1 April 2023, 109821. https://doi.org/10.1016/j.drugalcdep.2023.109821

16. †Lee AK, †**Bobb JF**, Richards JE, Achtmeyer CE, Ludman E, Oliver M, Caldeiro RM, Parrish R, Lozano PM, Lapham GT, Williams EC, Glass JE, Bradley KA (2023). Integrating alcohol-related care into primary care as part of behavioral health integration: A cluster-randomized implementation trial. *JAMA Internal Medicine*. 183(4):319-28. https://doi.org/10.1001/jamainternmed.2022.7083

17. DeBar LL, Bushey MA, Kroenke K, **Bobb JF**, Schoenbaum M, Thompson EE, Justice M, Zatzick D, Hamilton LK, McMullen CK, Hallgren KA, Benes LL, Forman DP, Caldeiro RM, Brown RP, Campbell NL, Anderson ML, Son S, Haggstrom DA, Whiteside L, Schleyer TKL, Bradley KA (2023). A Patient-Centered Nurse-Supported Primary care-based Collaborative Care Program to Treat Opioid Use Disorder and Depression; Design and Protocol for the MI-CARE Randomized Controlled Trial. *Contemporary Clinical Trials*. 127: 107124 https://doi.org/10.1016/j.cct.2023.107124

18. Glass JE, Dorsey CN, Beatty T, **Bobb JF**, Wong ES, Palazzo L, King D, Mogk J, Stefanik-Guizlo K, Idu A, Key D, Fortney, JC, Thomas R, Garza McWethy A, Caldeiro RM, Bradley KA (2023). Study protocol for a factorial-randomized controlled trial evaluating the implementation, costs, effectiveness, and sustainment of digital therapeutics for substance use disorder in primary care (DIGITS Trial). *Implementation Science*. https://doi.org/10.1186/s13012-022-01258-9

19. Wartko PD, Qiu H, Idu AE, Yu O, McCormack J, Matthews AG, **Bobb JF**, Saxon AJ, Campbell CI, Liu D, Braciszewski JM. Baseline representativeness of patients in clinics enrolled in the PRimary care Opioid Use Disorders treatment (PROUD) trial: comparison of trial and non-trial clinics in the same health systems (2022). BMC Health Services Research. 22(1):1593.

20. Chubak J, Pocobelli G, Ziebell RA, Hawkes BS, Adler A, **Bobb JF**, Zerr DM (2023). Effects of the COVID-19 pandemic on animal-assisted activities in pediatric hospitals. *Journal of Pediatric Health Care*. https://doi.org/10.1016/j.pedhc.2022.09.011

21. Matson TE, Lapham GL, **Bobb JF**, Oliver M, Hallgren KA, Williams EC, Bradley KA (2022). Validity of the Single-Item Screen – Cannabis (SIS-C) for cannabis use disorder screening in routine care. *JAMA Network Open*. 5(11):e2239772. https://doi.org/10.1001/jamanetworkopen.2022.39772

22. Braciszewski JM, Idu AE, Yarborough BH, Stumbo S, **Bobb JF**, Bradley KA, Rossom RC, Murphy MT, Binswanger IA, Campbell CI, Glass JE, Matson TE, Lapham GT, Loree AM, Barbosa-Leiker C, Hatch MA, Tsui JI, Arnsten J, Stotts A, Horigian V, Hutcheson R, Bart G, Saxon AJ, Thakral M, Grant DL, Pflugeisen BM, Usaga I, Madziwa L, Silva A, Boudreau DM (2022). Sex differences in comorbid mental and substance use disorders among primary care patients with opioid use disorder. *Psychiatric Services*. https://doi.org/10.1176/appi.ps.202100665

23. Lapham GT, Matson TE, Carrell DS, **Bobb JF**, Luce C, Oliver MM, Ghitza UE, Hsu C, Browne KC, Binswanger IA, Campbell CI, Saxon AJ, Vandrey R, Schauer GL, Liccardo Pacula R, Horberg MA, Bailey SR, McClure EA, Bradley KA (2022). Comparison of medical cannabis use reported on a confidential survey vs documented in the electronic health record among primary care patients. *JAMA Network Open*. 5(5), pp.e2211677–e2211677.

24. Cruz M, Drewnowski A, **Bobb JF**, Hurvitz PM, Moudon AV, Cook AJ, Mooney SJ, Buszkiewicz JH, Lozano P, Rosenberg DE, Kapos F, Theis MK, Anau J, Arterburn D (2022). Residential relocation, changes in the built environment, and changes in weight gain in the Moving to Health study. *Epidemiology*. 33(5):747-755. doi:10.1097/EDE.0000000000001505.

25. Carrell DS, Cronkite DJ, Shea M, Oliver M, Luce C, Matson TE, **Bobb JF**, Hsu C, Binswanger IA, Browne KC, Saxon AJ, McCormack J, Jelstrom E, Ghitza UE, Campbell, CI, Bradley KA, Lapham GT (2022). Clinical documentation of patient-reported medical cannabis use in primary care: Toward scalable extraction using natural language processing methods. *Substance Use*

26. **Bobb JF**, Cruz MF, Mooney SJ, Drewnowski A, Arterburn D, Cook AJ (2022). Accounting for spatial confounding in epidemiological studies of individual-level exposures: an exposure penalized spline approach. *Journal of the Royal Statistical Society, Series A*. 185(3):1271–1293. urlhttps://doi.org/10.1111/rssa.12831

27. Richards JE, Boggs JM, Rowhani-Rahbar A, Kuo E, Betz ME, **Bobb JF**, Simon GE (2022). Patient-reported firearm access prior to suicide death. *JAMA Network Open*. 5(1):e2142204. doi:10.1001/jamanetworkopen.2021.42204

28. Devick KL, **Bobb JF**, Mazumdar MM, Henn BC, Bellinger DC, Christiani DC, Wright RO, Williams PL, Coull BA, Valeri L (2022). Bayesian kernel machine causal mediation analysis. *Statistics in Medicine*. 41(5):860–876. doi:10.1002/sim.9255.

29. Li F, Zizhong T, **Bobb JF**, Papadogeorgou G, Li F (2022). Clarifying selection bias in cluster randomized trials: estimands and estimation. *Clinical Trials*. 19(1):33–41. doi:10.1177/17407745211056875

30. Buszkiewicz J, **Bobb JF** , Kapos F, Hurvitz P, Arterburn D, Moudon AV, Cook AJ, Mooney SJ, Cruz M, Gupta S, Lozano P, Rosenberg DE, Theis MK, Anau J, Drewnowski A (2021). Differential associations of the built environment on weight gain by sex and race/ethnicity but not age. *International Journal of Obesity*. 45(12):2648–2656.

31. Hallgren KA, Matson TE, Oliver M, Witkiewitz K, **Bobb JF**, Lee AK, Caldeiro RM, Kivlahan DR, Bradley KA (2022). Practical assessment of alcohol use disorder in routine primary care: Performance of an Alcohol Symptom Checklist. *Journal of General Internal Medicine*. 37(8)1885–1893.

32. Chen C, Warrington JA, Dominici F, Peng RD, Esty DC, Wang Y, **Bobb JF**, Bell ML (2021). Long-term temporal trend in the association between short-term exposure to fine particulate matter and hospitalizations in older adults. *The Lancet Planetary Health*. 5(8):e534–e541.

33. Richards JE, Kuo E, Stewart C, **Bobb JF**, Mettert KD, Rowhani-Rahbar A, Betz ME, Parrish R, Whiteside U, Boggs JM, Simon GE (2021). Self-reported access to firearms among patients receiving care for mental health and substance use. *JAMA Health Forum*. Vol. 2, No. 8, e211973–e211973

34. Matson TE, Carrell DS, **Bobb JF**, Cronkite DC, Oliver MM, Luce C, Ghitza UE, Hsu CW, Campbell CI, Browne KC, Binswanger IA, Saxon AJ, Bradley KA, Lapham GT (In press). Prevalence of medical cannabis use and associated health conditions documented in electronic health records among primary care patients in Washington State. *JAMA Network Open*.

35. Buszkiewicz JH, **Bobb JF**, Hurvitz PM, Arterburn D, Moudon AV, Cook AJ, Mooney SJ, Cruz M, Gupta S, Lozano P, Rosenberg DE, Theis MK, Anau J, Drewnowski A (2021). Does the built environment have independent obesogenic power? Urban form and trajectories of weight gain. *International Journal of Obesity*. 45(9):1914-1924.

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alcohol-related care within primary care. *International Journal of Environmental Research and Public Health*. 14(9)1030. PMID: 28885557

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*Featured in a Researcher Spotlight by the Harvard T.H. Chan School of Public Health Superfund Program

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    *Featured as a Science Selection by Environmental Health Perspectives
    **Included as 'Highly cited original research' in the Extreme Weather Collection by Environmental Health Perspectives

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    *Received Statistics in Epidemiology Young Investigator Award

89. **Bobb JF**, Scharfstein DO, Daniels MJ, Collins FS, Kelada SN (2011). Multiple imputation of missing phenotype data for QTL mapping. *Statistical Applications in Genetics and Molecular Biology*. Vol. 10: Iss. 1, Article 29.

90. Peng RD, **Bobb JF**, Tebaldi C, McDaniel L, Bell ML, Dominici F (2011). Toward a quantitative estimate of future heat wave mortality under global climate change. *Environmental Health Perspectives*. 119(5):701–706.

91. Goldsmith J, **Bobb J**, Crainiceanu C, Caffo B, Reich D (2011). Penalized functional regression. *Journal of Computational and Graphical Statistics*. 20(4):830–851.

92. Eisenstat D, **Feder (Bobb) J**, Francos G, Gordon G, Redlich A (2008). Expected rank and randomness in rooted graphs. *Discrete Applied Mathematics*. 156(5):746–756.

Other peer-reviewed scholarly publications

Coull BA, **Bobb JF**, Wellenius GA, Kioumourtzoglou M, Mittleman MA, Koutrakis P, Godleski JJ. (2015). New statistical methods for analyzing multiple pollutants, sources, and health outcomes. Part I: Statistical learning methods for the effects of multiple air pollution constituents. Research report. *Health Effects Institute*. Report 183

Other non-peer reviewed scholarly publications

1. **Bobb JF**, Cook AJ, Shortreed SM, Glass JE, Vollmer WM (2019). Experimental designs and randomization schemes: designing to avoid identification bias. In: *Rethinking Clinical Trials: A Living Textbook of Pragmatic Clinical Trials*. Bethesda, MD: NIH Health Care Systems Research Collaboratory.

2. Marcum ZA, Walker R, **Bobb JF**, Sin MK, Gray SL, Bowen JD, McCormick W, McCurry SM, Crane PK, Larson EB (2019). Reply to: Comment on: Serum cholesterol and incident Alzheimer's disease: findings from the Adult Changes in Thought Study. *Journal of the American Geriatrics Society*. 67(6):1303–1305.

3. Celik S, Russell JC, Pestana CR, Lee TI, Mukherjee S, Crane PK, Keene D, **Bobb JF**, Kaeberlein M, Lee SI. DECODER: A probabilistic approach to using big data reveals Complex I as a potential Alzheimer's disease therapeutic target. bioRxiv. 2018 Jan 1:302737.

Software

1. **Bobb JF**. `bkmr`: An implementation of Bayesian kernel machine regression for estimating the joint health effects of multiple concurrent exposures. R package, >50K downloads.

2. **Bobb JF**, Zhao H, Varadhan R. `turboEM`: A suite of convergence acceleration schemes for EM and MM algorithms. R package, >60K downloads.
   *Winner of the 2012 John M. Chambers Statistical Software Award

Submitted manuscripts

1. Boudreau DM, **Bobb JF**, et al. Neural tube defect risk in relation to opioid exposure during early pregnancy

2. Berger D, Matson TE, Oliver M, Jack H, **Bobb JF**, Bradley K, Hallgren K. Associations between clinical AUDIT-C screens and HDL cholesterol are observed across primary care patient subgroups.

3. **Bobb JF**, Son S, Anderson M, DeBar L. Estimands and inference for randomized trials with intervention-dependent outcome assessment processes

4. Hyun N, Idu AE, Cook AJ, **Bobb AJ**. Increased risk of type I errors for detecting heterogeneity of treatment effects in cluster-randomized trials using mixed-effect models

5. Jack H, Berger D, **Bobb, JF**. Oliver M, Katharine KA, Hallgren K. Reductions in alcohol use over time reported during routine healthcare screening are associated with reduced risk of hospitalization in the following year

6. ***Danyang Li**, Cruz MF, Mooney SJ, Cook AJ, **Bobb JF**. Comparison of spatial spline models and matching methods to adjust for unmeasured spatial confounding for binary exposures
   *Received 2024 ENAR Distinguished Student Paper Award

Manuscripts in preparation

1.

Conferences and symposiums (Like presentations grouped)

Invited presentations

International

"Advances in Bayesian kernel machine regression for estimating the health effects of complex environmental mixtures." Symposium, *Informing environmental health policy on complex mixtures: What we need vs. what we (currently) get from machine learning methods*, International Society of Exposure Science, virtual meeting, 2021

"Bayesian kernel machine regression for estimating the health effects of multi-pollutant mixtures." International Society for Environmental Epidemiology, Basel, Switzerland, 2013

"Accounting for model uncertainty in estimating the relative risk of mortality associated with heat waves." Symposium, *Heat or heat waves? Does it matter which epidemiologists study?* International Society for Environmental Epidemiology, Barcelona, Spain, 2011

National

"Bayesian kernel machine regression for estimating the health effects of environmental mixtures: Methods, software, and practical considerations," CDC Workshop on Applied Epidemiology and Environmental Health, 2024

"Data science challenges of using electronic health record data for public health research," Department of Biostatistics and Data Science Seminar, Wake Forest University, 2022

"Bayesian kernel machine regression and causal mediation analysis for estimating the health effects of environmental mixtures." **Bobb JF**, Devick K. Environmental Mixtures Interest Group, NIEHS/NIH, 2022

"Using real-world data to inform the statistical design of the MICARE pragmatic trial," **Bobb JF**, Sungtaek Son. Mental Health Research Network, Methods Special Interest Group, 2022

"Data science challenges of using electronic health record data for public health research," Michigan Institute for Data Science (MIDAS), University of Michigan, 2022

"Accounting for spatial confounding in epidemiological studies with individual-level exposures," University of Michigan Biostatistics Series, 2021

"Pragmatic trials to improve treatment of OUD in primary care using real-world data: PROUD and MI-CARE – unique approaches and lessons learned," Bradley KE, **Bobb JF**, Wartko P, Bushey M. NIDA Clinical Trials Network Webinar Series: *Using Real World Data in Substance Use Disorder Clinical Research*, 2021

"Accounting for spatial confounding in epidemiological studies with individual-level exposures."

New York University Biostatistics Series. Webinar, 2021

University of Southern California Biostatistics Series. Webinar, 2021

"Methods to utilize longitudinal EHR and address data connected to the built environment to assess if moving to a different environment affects health." **Bobb JF**, Cook AJ.

Invited Speed Poster, ENAR Spring Meeting, Philadelphia, PA, 2019

Joint Statistical Meetings, Vancouver, Canada, 2018

"Statistical innovations in pragmatic trials of health-system implementation interventions," Glass JE, **Bobb JF**, 11th Annual Conference Science Dissemination and Implementation Health, Washington, D.C., 2018

"Statistical challenges in the design of a pragmatic trial of primary care-based treatment for opioid use disorders." 3rd Seattle Symposium on Health Care Data Analytics, Seattle, WA, 2018

"Bayesian kernel machine regression for estimating the health effects of multi-pollutant mixtures." Biostatistics Seminar, University of Rochester, 2016

"Bayesian kernel machine regression for estimating the health effects of multi-pollutant mixtures." Claus Henn B, **Bobb JF**, Valeri L, Coull BA. *Workshop: Statistical Approaches for Assessing Health Effects of Environmental Chemical Mixtures in Epidemiology Studies*, National Institute of Environmental Health Sciences, Research Triangle Park, NC, 2015

"Beyond the one-exposure, one-outcome paradigm for scientific discovery in environmental epidemiology"

Department of Biostatistics, Brown University, Providence, RI, 2015
Department of Biostatistics, University of Pennsylvania, Philadelphia, PA, 2015
Department of Biostatistics, University of Minnesota, Minneapolis, MN, 2015
Department of Statistics, North Carolina State University, Raleigh, NC, 2015
Department of Statistics and Applied Probability, University of California, Santa Barbara, 2015
Department of Biostatistics, University of Massachusetts, Amherst, MA, 2014
Group Health Research Institute, Seattle, WA, 2014
Department of Biostatistics, Columbia University, New York, NY, 2014
Department of Biostatistics, Yale University, New Haven, CT, 2014

"Statistical methods for estimating health effects of simultaneous exposure to multiple pollutants." Work-in-Progress Webinar, Clean Air Research Center, Environmental Protection Agency, 2013

Local

"Bayesian kernel machine regression for estimating the health effects of multi-pollutant mixtures"

Biostatistics Seminar Series, Fred Hutchinson Cancer Research Center, 2016
Biostatistics Seminar, University of Washington, 2016

"Accounting for uncertainty in estimating the health effects of climate change" Department of Biostatistics, Harvard Chan School, 2013

Other presentations (selected)

"Distributed lag models for retrospective cohort data with application to an EHR data study of built environment and body weight." Topic contributed session: *Novel Statistical Methods for Analyzing Complex Environmental Data and Health Impacts*. Joint Statistical Meetings, Portland, OR, 2024

"Statistical challenges of pragmatic randomized trials with intervention-dependent outcome assessment processes." American Causal Inference Conference, Seattle, WA, 2024

"Accounting for unmeasured spatial confounding via exposure-penalized splines." Topic contributed session: *Addressing complex inferential challenges with electronic health records data*. Joint Statistical Meetings, Toronto, Canada, 2023

"Incorporating statistical methods to address spatial confounding in large EHR data studies." ENAR Spring Meeting, 2020

"Statistical challenges in the design of a pragmatic trial of primary care-based treatment for opioid use disorders." 12th International Conference on Health Policy Statistics, Charleson, SC, 2018

"Identification of acute health conditions during extreme heat events." Poster, Women in Statistics Conference, Cary, NC, 2014

"Identifying the constellation of emergency health conditions most sensitive to extreme heat." Poster, ENAR Spring Meeting, Baltimore, MD, 2014

"Bayesian kernel machine regression for estimating the health effects of multi-pollutant mixtures." Joint Statistical Meetings, Montreal, Canada, 2013

"Integration and benchmarking of state-of-art convergence accelerators of the EM algorithm." Topic contributed session: *Enhancing the EM Algorithm by Leveraging Modern Advances in Computing*. Joint Statistical Meetings, San Diego, CA, 2012

"Reduced Bayesian hierarchical models: Estimating health effects of simultaneous exposure to multiple pollutants." Topic contributed session: *Statistical Challenges of Spatial Multi-Pollutant Data in Environmental Epidemiology*. ENAR Spring Meeting, Washington, DC, 2012

"Reduced Bayesian hierarchical models for high-dimensional, clustered data." Poster, Statistical Methods for Very Large Datasets Conference, Baltimore, MD, 2011

"A Bayesian model averaging approach for estimating the relative risk of mortality associated with heat waves in 105 U.S. cities."

Joint Statistical Meetings, Miami Beach, FL, 2011, recipient of Statistics in Epidemiology Young Investigator Award

ENAR Spring Meeting, Miami, FL, 2011