

# CURRICULUM VITAE

Rebecca Yates Coley

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## 1. Educational and Biographical Information

Rebecca Yates Coley, PhD  
Assistant Investigator  
Biostatistics Unit,  
Kaiser Permanente Washington Health Research Institute (KPWHRI),  
Kaiser Foundation Health Plan of Washington  
1730 Minor Avenue, Suite 1600  
Seattle, WA 98101-1448  
Email: [rebecca.y.coley@kp.org](mailto:rebecca.y.coley@kp.org)

A.B., Environmental Science and Policy, Duke University, Durham, NC, 2006

M.S., Biostatistics, University of Washington, Seattle, WA, 2010

Ph.D., Biostatistics, University of Washington, Seattle, WA, 2014

Dissertation: *Bayesian Hierarchical Frailty Models for Heterogeneity in Risk*

Advisor: Dr. Elizabeth R. Brown

## 2. Professional Positions

2018-present	Affiliate Assistant Professor, Department of Biostatistics, University of Washington Seattle, Washington
2016-present	Assistant Investigator, Biostatistics Unit, KPWHRI (Formerly Group Health Research Institute), Seattle, Washington
2014-2016	Postdoctoral Research Fellow, Department of Biostatistics, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD
2012-2014	Research Assistant, Microbicide Trials Network, Fred Hutchinson Cancer Research Center, Seattle, WA
2008-2012	Research Assistant, Northwest Practice-Based Research Collaborative in Evidence-Based Dentistry, School of Dentistry, University of Washington, Seattle, WA
2006-2008	Associate in Research, Children's Environmental Health Initiative, Nicholas School of the Environment, Duke University, Durham, NC

### 3. Professional Honors

2021	Faculty Mentoring Award, Nominee, KPWHRI
2021	Paper of the Year, Health Care Services Research Network
2017	Extraordinary Scientific Contributor, KPWHRI
2015	Top performing team, Prostate Cancer DREAM Challenge
2015	Honorable Mention, Poster Competition, Patrick C. Walsh Prostate Research Day, Baltimore, MD
2014	Travel Award, Women in Statistics Conference, Cary, NC
2013	Junior Researcher Travel Award, Objective Bayes Workshop, Durham, NC
2013	Best Student Poster, Faculty Selection, Department of Biostatistics, University of Washington, Seattle, WA
2013	Winner, Oral Presentation, Student Paper Competition, Western North American Region of the International Biometrics Society (WNAR) Annual Meeting, Los Angeles, CA
2013	Runner-up, Written Paper, Student Paper Competition, WNAR Annual Meeting, Los Angeles, CA
2008-2012	National Institutes of Health Predoctoral Trainee in Oral Health and Epidemiology, University of Washington, Seattle, WA
2003, 2005	Dean's List, Duke University, Durham, NC

### 4. Memberships

American Statistical Association (ASA)

Sections: Bayesian Statistical Science; Biometrics; Health Policy Statistics; Justice, Equity, Diversity, and Inclusion (JEDI) Outreach Group; LGBTQ+ Advocacy Committee; Mental Health Statistics; Statistical Learning and Data Sciences; Statistics in Epidemiology

International Biometric Society, Western North America Region

## 5. Organizational Service, KPWHRI

2020-present	Advanced Analytics Advisory Board, KPWA Business Intelligence
2020-2021	Project Lead, Improving Equity, Inclusion, and Diversity in Hiring
2020-2021	Equity Team
2017-2020	Data and Informatics Strategy Committee
2017-2018	Co-chair, Faculty investigator search committee
2017-2018	Coordinator, Scientific seminars series
2017	Organizer, Junior Investigators Support Team
2017	Mentoring award selection committee
2017	Collaborative biostatistician search committee

## 6. Other Professional Service

### a) National Committee Member:

2022 Communications Committee Chair, ASA Justice, Equity, Diversity, and Inclusion Outreach Group

### b) Conference session organizer

- 2022 “Equity in innovation: Should race and ethnicity be included in clinical prediction models?” Topic-contributed session, Joint Statistical Meetings (JSM)
- 2020 “Promoting hiring practices that advance equity, diversity, and inclusion”, Panel session, Women in Statistics and Data Science (WSDS) conference.
- 2020 “Fairness and equity in clinical risk prediction: healthcare data for the public good”, Invited session, JSM.
- 2019 “Health disparities: Women in statistics making a difference”, Invited session, WSDS.
- 2018 3<sup>rd</sup> Seattle Symposium in Health Care Data Analytics, Co-organizer
- 2017 “Networking among junior statisticians: Peer mentoring and strategies to promote one another” and “Playing in everyone’s backyard: Stories of success, lessons learned, and advice for productive and enjoyable collaborations”, Invited panel sessions, WSDS
- 2017 “Towards a learning health system: methods and strategies for data-driven healthcare”, Invited session, Health Policy Section, JSM.
- 2017 “Statistical methods in medicine”, Invited session, International Society for Business and Industrial Statistics (ISBIS)
- 2016 “Learning health systems: from ideas to reality”, Roundtable, Health Policy Section, JSM

- 2016 “Innovative Bayesian methods for missing data”, Invited session, International Society for Bayesian Analysis (ISBA)
- 2014 “Statistical challenges in HIV prevention”, Invited session, WNAR

**c) Local service and involvement, Department of Biostatistics, University of Washington**

- 2020-2021 Member, Equity, Inclusion, and Diversity Committee
- 2016-2017 Faculty advisor Student seminar series (Fall 2016, Fall 2017)
- 2013-2014 Student representative, Educational Policy and Teaching Evaluation/Curriculum Committee

**7. Special National Responsibilities**

Ad hoc reviewer for research proposals from granting agencies:

PCORI Assessment of Diagnosis, Prevention, and Treatment Options; Spring 2019, Spring 2020, Summer 2020, Fall 2021

PCORI Phased Large Awards in Comparative Effectiveness Research (PLACER); Spring 2021, Spring 2022

**8. Editorial Responsibilities**

Editorial activities

- 2021-present Editorial Board, Statistical Reviewer, Journal of the American Medical Informatics Association

Referee for: (past 10 years)

Journals: American Journal of Epidemiology; American Journal of Psychiatry; Biostatistics; Biometrics; BJU International; British Journal of Psychiatry; Cancer Epidemiology, Biomarkers and Prevention; Crisis: The Journal of Crisis Intervention and Suicide Prevention; Journal of the American Statistical Association; Journal of Clinical Psychiatry; Journal of Psychiatric Research; Journal of the National Comprehensive Cancer Network; New England Journal of Medicine; Psychiatric Research; Scientific Reports; Statistics in Medicine; Statistics in Public Policy

Conferences:

- 2022 Program Committee, Fairness, Accountability, and Transparency (FAcCT) Conference
- 2019 Program representative for ASA’s Biometrics Section, Eastern North American Region of the International Biometrics Society (ENAR) Annual Meeting

## 9. Research Funding

### a) Funded projects

1. Principal Investigator (0.25 FTE): *Innovative methods to reduce racial and ethnic disparities in suicide risk prediction*. R01 MH125831 (PI: Coley) NIMH; Direct costs: \$1,136,381. 1/1/2022-12/31/2025.
2. Co-Investigator (0.05 FTE): *Low-Cost Detection of Dementia Using Electronic Health Records Data: Validation and Testing of the eRADAR Algorithm in a Pragmatic, Patient-Centered Trial*. R01 AG069734 (MPIs: Dublin, Barnes) NIA; Direct funds: \$4,136,047. 9/30/2020-5/31/2025.
3. Co-Investigator (0.15 FTE); *Identifying and Supporting Patients with Undiagnosed Dementia Using the EHR Risk of Alzheimer's and Dementia Assessment Rule (eRADAR): A Pilot Clinical Trial*. R01 AF067427 (MPIs: Dublin, Barnes) NIA; Total direct funds: \$3,098,307. 7/15/2020-4/30/2024.
4. Co-Investigator (0.15 FTE); *Leveraging Machine Learning to Improve Risk Prediction for Chemotherapy Induced Neuropathy*. R01 CA249127 (MPIs: Adams, Chubak) NCI; Direct costs (KPWHRI subcontract): \$525,810. 6/1/2020-5/31/2024.
5. Co-Investigator (0.05 FTE); *Effects of Medical Products on Suicidal Ideation and Behavior—Real World Evidence*. HHSF 223201810201C (PI: Simon) FDA. Direct costs: \$2,024,297. 9/30/2018-5/31/2022.
6. Co-Investigator (0.15 FTE): *Risk-based Breast Cancer Screening and Surveillance in Community Practice- Statistical Coordinating Center*. P01 CA154292. (PI: Miglioretti) NCI; Direct costs: \$1,803,148; 7/1/2017-5/31/2022.
7. Co-Investigator (0.20 FTE); Learning Health Systems; PI: Lozano; Kaiser Permanente Washington; Direct costs (2021): \$1,934,508; 6/1/2017-12/31/2021.
8. Co-Investigator (0.20 FTE): *PCORnet Bariatric Study*. OBS 1505-30683 (PI: Arterburn) PCORI; Direct costs: \$4,054,622; 2/1/2016-2/28/2022.

### b) Completed projects

1. Co-Investigator (0.20 FTE): *A Targeted Approach to a Safer Use of Antipsychotics in Youth*. HHSN 271201600002C (PI: Penfold). NIMH; Direct costs: \$7,218,997. 4/25/2016-12/24/2021.
2. Co-Investigator (0.20 FTE): *Comparative Effectiveness of Breast Cancer Screening and Diagnostic Evaluation by Extent of Breast Density*. PCD 1504-30370 (PI: Miglioretti) PCORI; 9/1/2016-1/31/2021.
3. K12 Fellow (0.75 FTE): *Consortium for Applied Training to Advance the Learning Health System with Scholars/Trainees*. K12 HS026369 (MPIs: Buist, Lozano) AHRQ; 1/1/2019-12/31/2020.
4. Co-Investigator (0.20 FTE): *Mental Health Research Network: Computation Modeling to Predict Suicide Behavior*. 3U19 MH092201-07S1 (PI: Simon) NIMH; 7/1/2017-6/30/2019.
5. Co-Investigator (0.20 FTE): *Feedback-Informed Care* (PI: Simon) Garfield Foundation; 2017-2018.
6. Co-Investigator (0.20 FTE): *Bayesian Hierarchical Models for the Design and Analysis of Studies to Individualize Healthcare* (PI: Zeger) PCORI; 6/1/2015-5/31/2018.

7. Instructor (0.20 FTE): *Data Analysis and Visualization Practicum for Individualized Health*. Johns Hopkins University Center for Educational Resources; 8/1/2015-5/13/2016.
8. Postdoctoral Research Fellow (0.50 FTE): *Stochastic Models of Prostate Cancer Screening and Treatment Decisions* (PI: Zeger) Patrick C. Walsh Prostate Cancer Research Fund; 8/18/2014-6/30/2016.
9. Graduate Student Research Assistant (0.50 FTE): *Microbicide Trials Network- Statistical and Data Management Center* (PI: Brown) NIAID; 9/16/2012-9/15/2014.

## 10. Teaching and Mentoring Responsibilities

### a) Instructor

Statistics 599: Consulting, Department of Statistics, University of Washington, Spring 2021.  
Public Health Studies AS.280.423: Data Visualization for Individualized Health, Department of Public Health Studies, Johns Hopkins University. Spring 2016.

### b) Teaching assistant

Biostatistics 140.711: Advanced Data Science, Department of Biostatistics, Johns Hopkins University, Fall 2015.

Biostatistics 514/7: Applied Biostatistics, Department of Biostatistics, University of Washington, Fall 2013.

Biostatistics 571: Regression Methods for Dependent Data, Department of Biostatistics, University of Washington, Winter 2011.

Biostatistics 570: Regression Methods for Independent Data, Department of Biostatistics, University of Washington, Fall 2010.

Statistics 101: Introduction to Statistical Inference, Department of Statistics, Duke University, Fall 2005-Spring 2006.

### c) Other teaching

#### Short courses

Statistical methods for electronic health record data. 6<sup>th</sup> Seattle Symposium in Biostatistics, Virtual. Co-Instructor. November 2020.

How to make a picture worth a thousand words: Effectively communicating your research results using statistical graphics. SER Annual Meeting short course, Seattle, WA. Co-Instructor. June 2017.

#### Guest lecturer

Predictive analytics for EHR data. Mental Health Research Network T32 Post-doctoral Fellowship Program, Henry Ford Health System. Virtual. October 28, 2021.

Health Services 523: Advanced Health Services Research Methods 1- Large Public Databases and Big Data, Department of Health Services, University of Washington, Seattle, WA, Guest lecturer on clinical prediction models and health disparities, December 2, 2020.

Biostatistics 540: Analysis of Longitudinal Data, Department of Biostatistics, University of Washington, Seattle, WA, Guest Lecturer on joint modeling for latent class prediction, April 19, 2017.

**d) Mentored junior faculty**

2020-present Eric Johnson, Collaborative Biostatistician II, KPWHRI. (Primary mentor)

**e) Masters theses, chair**

2020 Qinqing Liao, MS Biostatistics, University of Washington, Seattle, WA

**f) Other mentoring and supervising**

2019-2021 Ernesto Ulloa de Perez, Graduate Research Assistantship Supervisor, Department of Biostatistics, University of Washington, Seattle, WA

2019-2020 Laura Ichikawa, Collaborative biostatistician, Supervisor, KPWHRI

2018-2019 Adam Elder, Graduate Research Assistantship Supervisor, Department of Biostatistics, University of Washington, Seattle, WA

2015-2016 Aaron Fisher, Graduate Research Assistantship Supervisor, Department of Biostatistics, Johns Hopkins University, Baltimore, MD

Senior biostatistician on projects with collaborative biostatisticians: Kara Haugen, Abisola Idu, Eric Johnson, Julia Smith, Rod Walker, Rob Wellman

## 11. Publications

\*Denotes mentored work of student

†Denotes contribution as lead statistician

‡Denotes contribution as primary analyst

^Indicates co-first author

**a) Peer-reviewed research articles**

1. **Coley RY<sup>†‡</sup>**, Bogg JM, Beck A, Simon GE. (2021) Predicting outcomes of psychotherapy for depression with electronic health record data. *Journal of Affective Disorders Reports*. 6:100198. doi:10.1016/j.jadr.2021.100198.
2. **Coley RY<sup>†</sup>**, Walker RL, Cruz M, Simon GE, Shortreed SM. (2021) Clinical risk prediction models and informative cluster size: Assessing the performance of a suicide risk prediction algorithm. *Biometrical Journal*. 63(7):1375-1388. doi:10.1002/bimj/20200199.
3. Simon GE, Matarazzo BB, Walsh CG, Smoller JW, Boudreaux ED, Yarborough BJ, Shortreed SM, **Coley RY**, Ahmedani BK, Doshi RP, Harris LI, Schoenbaum M. (2021) Reconciling statistical and clinicians' predictions of suicide risk. *Psychiatric Services*. 72(5):555-562. doi:10.1176/appi.ps.202000214.

4. **Coley RY<sup>†</sup>**, Johnson E, Simon GE, Cruz M, Shortreed SM. (2021) Racial/ethnic disparities in the performance of prediction models for death by suicide following mental health visits. *JAMA Psychiatry*. 78(7):726-734. doi:10.1001/jamapsychiatry.2021.0493.  
Media coverage: Reuters Health, Psych News, APA Monitor, Medscape, Healio, MedPage Today, and Verywell Health  
Award: 2021 Health Care Services Research Network Paper of the Year
5. Penfold RB, Thompson EE, Hilt RJ, Kelleher KJ, Schwartz N, Beck A, Clarke GN, Ralston JD, Hartzler AL, **Coley RY<sup>‡</sup>**, Akosile M, Vitiello B, Simon GE. (2020) Contemporary Clinical Trials. Safer use of antipsychotics in youth (SUAY) pragmatic trial protocol. 99:106184. doi: 10.1016/j.cct.2020.106184.
6. Lowry KP<sup>^</sup>, **Coley RY<sup>^†‡</sup>**, Miglioretti DM, Kerlikowske K, Henderson LM, Onega T, Sprague BL, Lee JM, Herschorn S, Tosteson ANA, Rauscher G, Lee CI. (2020) Screening performance of digital breast tomosynthesis vs digital mammography in community practice by patient age, screening round, and breast density. *JAMA Network Open*. 3(7):e2011792. doi:10.1001/jamanetworkopen.2020.11792.
7. McTigue K, Wellman R, Nauman E, Anau J, **Coley RY<sup>‡</sup>**, Odo A, Tice J, Coleman K, Courcoulas A, Pardee R, Sengwee T, Janning C, Williams N, Cook A, Sturtevant J, Horgan C, Arterburn D, PCORnet Bariatric Study Collaborative. (2020) Comparing the 5-year diabetes outcomes of sleeve gastrectomy and gastric bypass: the PCORnet Bariatric Study. *JAMA Surgery*. 155(5):e200087. doi:10.1001/jamasurg.2020.0087.
8. **Coley RY<sup>†‡</sup>**, Boggs JM, Beck A, Hartzler AL, Simon GE. (2020) Defining success in measurement-based care for depression: A comparison of common metrics. *Psychiatric Services*. 71(4): 312-218. doi 10.1176/appi.ps.201900295.
9. Sprague BL, **Coley RY<sup>†‡</sup>**, Kerlikowske K, Rauscher GH, Henderson LM, Onega T, Lee CI, Herschorn SD, Tosteson AN, Miglioretti DL. (2020) Assessment of Radiologist Performance in Breast Cancer Screening Using Digital Breast Tomosynthesis vs Digital Mammography. *JAMA Network Open*. 3(3):e201759. doi 10.1001/jamanetworkopen.2020.1759.
10. Courcoulas A, **Coley RY<sup>†‡</sup>**, McTigue K, Tavakkoli A, Wellman R, Williams N, Coleman KJ, Anau J, Pardee R, Toh S, Janning C, Cook A, Arterburn D, PCORnet Bariatric Study Collaborative. (2020) Interventions and operations 5 years after bariatric surgery in a cohort from the US National Patient-Centered Clinical Research Network Bariatric Study. *JAMA Surg*. 155(3):194-204. doi:10.1001/jamasurg.2019.5470.
11. Shortreed SM, Cook AJ, **Coley RY**, Bobb JF, Nelson JC. (2019) Challenges and opportunities for using big clinical data to advance medical science. *American Journal of Epidemiology*. 188(5):851-861. doi 10.1093/aje/kwy292.
12. Simon GE, Shortreed SM, **Coley RY**, Penfold RB, Rossom RC, Waitzfelder B, Sanchez K, Lynch FL. (2019) Assessing and minimizing re-identification risk in research data derived from healthcare records. *eGEMS*. 7(1). doi10.5334/egems.270.
13. Huntley JH, **Coley RY<sup>‡</sup>**, Carter HB, Radhakrishnan A, Krakow M, Pollack CE. (2018) Clinical evaluation of an individualized risk prediction tool for men on active surveillance for prostate cancer. *Oncology*. 121:118-124. doi 10.1016/j.urology.2018.08.021.
14. Toh S, Wellman RD, **Coley RY**, Horgan C, Sturtevant J, Moyneur E, Janning C, Pardee R, Coleman KJ, Arterburn D, McTigue K, Anau J, Cook AJ. (2018) Combining distributed regression and propensity scores. *Clinical Epidemiology*. 10: 1773-1786. doi 10.2147/clep.s178163.



15. Arterburn D, Wellman R, Emiliano A, Smith SR, Odegaard AO, Murali S, Williams N, Coleman KJ, Courcoulas A, **Coley RY**<sup>‡</sup>, Anau J, Pardee R, Toh S, Janning C, Cook A, Sturtevant J, Horgan C, McTigue K, PCORNet Bariatric Study Collaborative. (2018) Comparative effectiveness of bariatric procedures for weight loss: A retrospective cohort study. *Annals of Internal Medicine*. 169(11): 741-750. doi 10.7236/M17-2786.
  16. Inge TH, **Coley RY**<sup>†‡</sup>, Bazzano LA, Xanthakos SA, McTigue K, Arterburn D, Williams N, Wellman R, Coleman KJ, Courcoulas A, Desai NK, Anau, J, Pardee R, Toh SD, Hanning C, Cook A, Sturtevant SM, Horgan C, Zebrick A, Michalsky M, PCORnet Bariatric Study. (2018) Comparative effectiveness of bariatric procedures among adolescents: the PCORnet bariatric study. *Surgery for Obesity and Related Diseases*. 4(9): 1374-1386. doi 10.1016/j.soard.2018.04.002.
  17. Toh S, Rasmussen-Torvik LK, Harmata EE, Pardee R, Saizan R, Malanga E, Sturtevant JL, Horgan CE, Anau J, Janning CD, Wellman RD, **Coley RY**<sup>‡</sup>, Cook AH, Courcoulas AP, Coleman KJ, Williams NA, McTigue KM, Arterburn D, McClay J, PCORnet Bariatric Surgery Collaborative. (2017) The National Patient-Centered Clinical Research Network (PCORnet) Bariatric Study cohort: Rationale, methods, and baseline characteristics. *JMIR Research Protocols*. 6(12):e222. doi 10.2196/resprot.8323.
  18. **Coley RY**<sup>†‡</sup>, Zeger SL, Mamawala M, Fisher AJ, Pienta KJ, Carter HB. (2017) Prediction of the pathological Gleason Score (PGS) to inform a personalized management program for prostate cancer. *European Urology*. 72(1): 135-141. doi 10.1016/j.eururo.2016.08.005.
  19. **Coley RY**<sup>†‡</sup>, Fisher AJ, Mamawala M, Carter HB, Pienta KJ, Zeger SL. (2017). A Bayesian Hierarchical Model for Prediction of Latent Health States from Multiple Data Sources with Application to Active Surveillance of Prostate Cancer. *Biometrics*. 73(2): 625-634. doi 10.1111/biom.12577.
  20. \*Deng D, Du Y, Zhicheng J, Rao K, Wu Z, Zhu Y, **Coley RY**<sup>‡</sup>. (2016) Predicting prostate cancer survival: A multiple imputation-assisted super learning approach. *F1000 Research*. 5:2672. doi10.12688/f1000research.8268.
- Award: Top performing team, Prostate Cancer DREAM Challenge
21. **Coley RY**<sup>†‡</sup>, Brown ER. (2016) Estimating effectiveness in HIV prevention trials with a Bayesian hierarchical compound Poisson frailty model. *Statistics in Medicine*. 35: 2609-2634. doi 10.1002/sim.6884.
- Award: WNAR 2013 student paper competition runner-up
22. Murnane PM, Brown ER, Donnell D, **Coley RY**, Mugo N, Mujugira A, Celum C, Baeten JM. (2015) Estimating efficacy in a randomized trial with product non-adherence: application of multiple methods to a trial of pre-exposure prophylaxis for HIV prevention. *American Journal of Epidemiology*. 82: 848-856. doi10.1093/aje/kwv202.
  23. Farjo N, Turpin D, **Coley RY**<sup>†‡</sup>, Feng J. (2015) Characteristics and fate of orthodontic articles submitted for publication: An exploratory study of the American Journal of Orthodontics and Dentofacial Orthopedics. *American Journal of Orthodontics and Dentofacial Orthopedics*. 147: 680-690. doi 10.1016/j.ajodo.2015.01.020.
  24. Delaney S, **Coley RY**<sup>†‡</sup>, Brown Z. (2015) 5- Anhydroglucitol: A new predictor of neonatal birth weight in diabetic pregnancies. *European Journal of Obstetrics & Gynecology and Reproductive Biology*. 189: 55-58. doi 10.1016/j.ejogrb.2015.03.021.

**b) Accepted peer-reviewed papers in press**

1. \*Ulloa-Pérez E, Blasi PR, Westbrook EO, Lozano P, Coleman KF, **Coley RY**<sup>†‡</sup>. “Pragmatic randomized study of targeted text message reminders to reduce missed clinic visits.” *The Permanente Journal*.
2. Coughlin JW, Elizabeth N, Willman R, **Coley RY**<sup>†‡</sup>, McTigue KM, Coleman KJ, Jones DB, Lewis KH, Tobin JN, Wee CC, Fitzpatrick SL, Desai JR, Murali S, Morrow EH, Rogers AM, Wood GC, Schlundt DG, Apovian CM, Duke MC, McClay James C, Soans R, Nemr R, Williams N, Courcoulas A, Holmes JH, Anau J, Toh S, Sturtevant JL, Horgan CE, Cook AJ, Arterburn DE, PCORnet Bariatric Study Collaborative. (2022) Postoperative depression status and 5 year metabolic bariatric surgery outcomes in the PCORnet Bariatric Study Cohort. *Annals of Surgery*.

#### c) Other peer-reviewed scholarly publications

1. Courcoulas AP, **Coley RY**, Arterburn D. (2020) Evidence-based and patient-centered decisions regarding bariatric surgery—Reply. (Letter to the editor) *JAMA Surgery*. doi 10.1001/jamasurg.2020.1530.
2. **Coley RY**, Boggs JM, Simon GE. (2020) Measuring outcome of depression: it is complicated. (Letter to the editor) *Psychiatric Services*. 71(5): 528. doi 10.1176/appi.ps.71502.
3. Simon GE, Shortreed SM, **Coley RY** (2019). Positive predictive values and potential success of suicide prediction models. (Letter to the editor) *JAMA Psychiatry*. 76(8):868-869. doi 10.1001/jamapsychiatry.2019.1516.
4. Murnane PM, **Coley RY**, Baeten JM. (2015) Response to: Every good randomization deserves observation. (Letter to the editor) *American Journal of Epidemiology*. 182: 861-862. doi 10.1093/aje/kwv201.

#### d) Other non-peer-reviewed scholarly publications

1. \*Fisher AJ, **Coley RY**, Zeger SL. (2015) Fast Out-of-Sample Predictions from Bayesian Hierarchical Models of Latent Health States. arxiv: 1510.08802. Available at: <https://arxiv.org/abs/1510.08802>.

#### e) Submitted manuscripts

1. **Coley RY**<sup>†‡</sup>, Liao Q, Simon N, Shortreed SM. Empirical evaluation of internal validation methods for prediction in large-scale clinical data with rare-event outcomes: a case study in suicide risk prediction.
2. **Coley RY**<sup>†‡</sup>, Smith JJ, Karliner L, Lee SJ, Fuller S, Lam R, Barnes DE, Dublin SD. External validation of the eRADAR risk score for detecting undiagnosed dementia in two real-world healthcare systems.

## 12. Presentations (Like presentations grouped)

### Invited seminars

“Do clinical prediction models perpetuate health disparities?: Assessment of racial and ethnic disparities in suicide prediction models”

Department of Biostatistics, The Ohio State University. Virtual. March 2022

Kaiser Permanente Center for Safety and Effectiveness Research (CESR) Artificial Intelligence Seminar Series. Virtual. December 2020

“A data science framework for learning health systems.” Henry Ford Health System Cancer Grand Rounds. Detroit, MI. December 2018

“Lead with Statistics: A statistician’s role in learning health systems and the delivery of data-driven health care.” Association of Clinical and Translational Statisticians (ACTStat) annual meeting. Vancouver, BC, Canada. July 2018

“Precision Medicine, Learning Health Systems, and Improving Surveillance of Low Risk Prostate Cancer”

Fred Hutchinson Cancer Research Center Biostatistics Seminar, Seattle, WA. October 2017

Department of Biostatistics, University of Washington, Seattle, WA. October 2017

Group Health Research Institute, Seattle, WA, February 2016

Center for Cancer Statistics, Mayo Clinic, Rochester, MN, February 2016

Department of Biomedical Data Science, Stanford University, Palo Alto, CA, February 2016

RAND Corporation, Santa Monica, CA, February 2016

Biostatistics Research Branch, NIAID, Rockville, MD, February 2016

Department of Biostatistics, Johns Hopkins University, Baltimore, MD, January 2016

Division of Biostatistics, Department of Healthcare Policy and Research, Cornell Weill School of Medicine, New York, NY, January 2016

Data Science Affinity Group, Fred Hutchinson Cancer Research Center, Seattle, WA, October 2015

“Optimizing Surveillance of Low Risk Prostate Cancer.” Pacific Northwest Specialized Program of Research Excellence (SPORE), Fred Hutchinson Cancer Research Center, Seattle, WA, October 2015

“Estimating effectiveness in HIV prevention trials with a compound Poisson frailty model.” Department of Biostatistics, Johns Hopkins University, Baltimore, MD, March 2014

#### Invited meeting presentations

“Empirical evaluation of internal validation methods for estimating optimism error in high-dimensional EHR data with rare-event outcomes.” Joint Statistical Meetings (JSM) Annual Meeting. Virtual. August 2021

“Fairness in clinical prediction: assessing racial and ethnic disparities in performance of a suicide risk prediction model.” JSM. Virtual. August 2020.

“Racial and ethnic fairness in clinical prediction with application to suicide risk”

Women in Statistics and Data Sciences (WSDS). Bellevue, WA. October 2019

JSM. Denver, CO. July 2019

“Biostatistical considerations for suicide risk prediction.” Research Priorities for Risk Algorithm Applications in Healthcare Settings to Improve Suicide Prevention. NIMH, Bethesda, MD. June 2019

“Racial and ethnic fairness in suicide risk prediction.” Research Priorities for Risk Algorithm Applications in Healthcare Settings to Improve Suicide Prevention. NIMH, Bethesda, MD. June 2019

“A data science framework for learning health systems.” 3<sup>rd</sup> Seattle Symposium for Healthcare Data Analytics. Seattle, WA. October 2018

“Predicting suicide risk: Statistical methods for using EHR data to inform mental health care.” JSM. Vancouver, BC, Canada. July 2018

“Informed health decisions through creating a learning ecosystem: Application to active surveillance of low risk prostate cancer.” Precision Medicine World Conference. Mountain View, CA. January 2018

“Individualized Decision Support for Men on Active Surveillance.” CISNET Prostate Cancer Modeling Symposium. National Cancer Institute, Rockville, MD. November 2017

“Development and implementation of a data-driven clinical support tool for low risk prostate cancer.” Johns Hopkins University Statistical Symposium, Baltimore, MD. September 2017

“Statisticians leading the way: Advocating for learning health systems and collaborating effectively with clinical stakeholders.” JSM Annual Meeting, Baltimore, MD. July 2017

“A data science framework for learning health systems.” International Society for Business and Industrial Statistics Meeting, Yorktown Heights, NY. June 2017

“Precision Medicine: Statistical Methods to Improve Patient Outcomes and Support Value-Based Care,” Eastern North American Region of the International Biometrics Society (ENAR) Annual Meeting, Washington, DC. March 2017

“Individualized Medicine and Informative Missingness: A Bayesian Approach to Personalized Prostate Cancer Care.” International Society of Bayesian Analysis Annual Meeting, Sardinia, Italy. June 2016

“Active Surveillance Modeling and Decision-Making at Johns Hopkins.” Cancer Intervention and Surveillance Monitoring Network (CISNET) Prostate Cancer Meeting, National Cancer Institute, Bethesda, MD, November 2015

“Electronic Medical Records for Individualized Health: Application to Low Risk Prostate Cancer.” JSM, Seattle, WA, August 2015

“Optimizing Surveillance of Low Risk Prostate Cancer.” ENAR, Miami, FL, March 2015

“Latent class approach to modeling frailty in HIV prevention trials.” WANR, Honolulu, HI, June 2014

#### Local seminars

“Do clinical prediction models perpetuate health disparities?: Assessment of racial and ethnic disparities in suicide prediction models”

Department of Biostatistics, University of Washington. Virtual. October 2021

University of Washington Surgical Outcomes Research Center. Virtual. March 2021

KPWHRI. Virtual. March 2021

“Race and ethnicity in analysis of health care data: reflections from KPWHRI Researchers”. Co-presentation with Chubak J, Gray R, Zeibell R, Cruz M. KPWHRI. Virtual. September 2021

“Standing on the shoulders of giants: Conducting research when you wish you didn’t have to stand on those guys’ shoulders.” Co-presented with Anau J, Grafton J, Wernli K. KPWHRI. Seattle, WA. June 2018

“How to make a picture worth a thousand words: Effectively communicating your research results using statistical graphics”

Program in Health Economics and Outcomes Methodology (PHEnOM) seminar series. Comparative Health Outcomes, Policy, Economics (CHOICE) Institute. University of Washington. Seattle, WA. April 2018

Co-presentation with Jackson M. KPWHRI, Seattle, WA. July 2017

“Precision Medicine, Learning Health Systems, and Improving Surveillance of Low Risk Prostate Cancer.” University of Washington Department of Biostatistics Seminar, Seattle, WA. October 2017

“Effective Data Visualization in Practice: Examples from KPWHRI.” Co-presentation with Bobb J, Cahill C, Fuller S, Gray M, Ichikawa L. KPWHRI Scientific Seminar series, Seattle, WA. October 2017

“Prediction of the Cancer State to Inform a Personalized Management Program for Prostate Cancer.” Grand Rounds, Department of Urology, Johns Hopkins School of Medicine, Baltimore, MD. April 2016

“Optimizing Surveillance of Low Risk Prostate Cancer: An Application of Precision Medicine and Learning Health Systems at Johns Hopkins.” Data Science Interest Group, Johns Hopkins Medicine, Baltimore, MD, November 2015

“Statistical Methods for Individualized Health: Improving Surveillance of Low Risk Prostate Cancer.” Grand Rounds, Department of Biostatistics, Johns Hopkins University, Baltimore, MD, September 2015

“Heterogeneity in risk: Effects on randomized clinical trial data analysis.” Oral Health Sciences Seminar, University of Washington, Seattle, WA, May 2012