

CURRICULUM VITAE

Susan Marlene Shortreed
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1. BIOGRAPHICAL INFORMATION:

Susan M Shortreed, Ph.D.
Senior Investigator and Investigator Manager
Biostatistics Division, Kaiser Permanente Washington Health Research Institute
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Affiliate Professor
Department of Biostatistics, University of Washington

2. EDUCATION:

University of Washington, Seattle, WA, USA

Ph.D., Department of Statistics

Graduation: December 2006

Dissertation Topic: Learning in Spectral Clustering

Advisor: Marina Meilă

M.S., Department of Statistics

Graduation: December 2004

University of Michigan, Ann Arbor, MI, USA

B.S., Department of Statistics

Graduation: June 2001

Minor: Mathematics

High honors

3. LICENSURE:

Not applicable

4. PROFESSIONAL POSITIONS:

Senior Investigator and Investigator Manager Aug 2022 - Present
Biostatistics Division, Kaiser Washington Health Research Institute, Seattle, WA

Affiliate Professor Jul 2021 - Present
Department of Biostatistics, University of Washington, Seattle, WA

Senior Investigator Sept 2019 - Aug 2022
Biostatistics Unit, Kaiser Washington Health Research Institute, Seattle, WA

Affiliate Associate Professor Jun 2015 - Jun 2021
Department of Biostatistics, University of Washington, Seattle, WA

Associate Investigator Mar 2017 - Aug 2019
Biostatistics Unit, Kaiser Washington Health Research Institute, Seattle, WA

Associate Investigator May 2014 - Mar 2017
Biostatistics Unit, Group Health Research Institute, Seattle, WA

Affiliate Assistant Professor Apr 2013 - Jun 2015
Department of Biostatistics, University of Washington, Seattle, WA

Assistant Investigator Nov 2010 - Apr 2014
Biostatistics Unit, Group Health Research Institute, Seattle, WA

Post-doctoral Research Fellow School of Computer Science, McGill University, Montreal, QC, CAN	Jan 2009 - Oct 2010
Research Scientist Dept of Epidemiology and Preventive Medicine, Monash University, Melbourne, VIC, Australia	Jan 2007 - Dec 2008
Research Assistant Department of Statistics, University of Washington, Seattle, WA, USA	Jan 2004 - Sep 2006
Summer Associate RAND, Pittsburgh, WA, USA	Jun 2003 - Dec 2003
Research Assistant Center for Statistics in the Social Sciences, University of Washington, Seattle, WA, USA	Jun 2002 - Dec 2003

5. HONORS, AWARDS, and SCHOLARSHIPS:

Elected Fellow of the American Statistical Association, 2022
 Elected Fellow of the American Association for the Advancement of Science, 2020
 Recipient of KPWHRI Faculty Mentoring award, 2020
 Nominated for KPWHRI Mentoring award, 2013, 2018, 2020
 Biometrics Highlighted Paper for Atlantic Causal Inference Conference 2018
 Invited participant in American Statistical Association's Sense About Science Media Training and Public Communication Workshop 2016
 Invited participant to Statistical and Applied Mathematical Sciences Institute Ideas Lab 2015
 VIGRE Travel Grant for Neural Information Processing Systems Conference, 2005
 VIGRE Travel Grant for Uncertainty in Artificial Intelligence Conference, 2005
 NSF Vertical Integration for Graduate Research and Education (VIGRE) Fellow, 2001-02, 2003-05
 Center for Statistics and the Social Sciences Blalock Fellow, 2001

6. PROFESSIONAL ACTIVITIES

National committee member:

Methods Core Lead, Mental Health Research Network, 2019-present
 Member, ASA section on Statistics in Epidemiology Mentoring Committee, 2018-2020
 Chair-Elect, Chair, Past-Chair, ASA section on Statistics in Epidemiology, 2016, 2017, 2018
 Secretary/Treasurer, ASA section on Statistics in Epidemiology, 2012 - 2015
 Member, PCORI's Methods Work Group for missing and inconsistent data issues in large data networks, 2015

Data safety and monitoring committees:

Effectiveness of Task Shifting to Peer Delivery of Behavioral Activation for Depression among Pregnant Women (PI: Dimidjian)
 Targeted intensive case management of Veterans at risk of suicide post inpatient hospitalization (PI: Weinstock and Kessler)

Editorial activities:

Editorial Board, Observational Studies, 2017-Present
 Associate Editor, Journal of the Royal Statistical Society, Series C, 2016-2019

Referee for:

Journals

American Journal of Epidemiology
 Biometrics
 Contemporary Clinical Trials
 Epidemiology
 Journal of the American Statistical Association

Journal of Causal Inference
 Statistics in Medicine
 MDM Policy & Practice
 Pharmacoepidemiology and Drug Safety
 PLoS One

Conferences

International Conference on Machine Learning 2021 Workshop: The Neglected Assumptions in Causal Inference, 2021
 Neural Information Processing Systems 2005, 2007, 2009, 2010, 2011, 2012
 Conference on Artificial Intelligence and Statistics 2007, 2009, 2010, 2011, 2012
 European Symposium on Algorithms 2006
 International Conference on Machine Learning 2007
 SIAM International Conference on Data Mining 2005
 Conference on Knowledge Based Computer Systems 2004

Ad hoc reviewer for research proposals from granting agencies

National Institute of Mental Health, Practice-Based Suicide Prevention Research Centers (P50), Oct 2021
 National Institute of Mental Health, Exploratory Clinical Trials of Mind and Body Interventions, Jul 2021
 PCORI Assessment of Prevention, Diagnosis, and Treatment Options (deferred) Cycle 1 2020
 National Institute of Mental Health, Pragmatic and Implementation Studies for the Management of Pain to Reduce Opioid Prescribing (PRISM), Spring 2020
 National Institutes of Mental Health, ad hoc review panel for mental health services study section Winter, 2020
 National Institutes of Mental Health, Pharmacological and Device-Based Interventions Spring 2020
 National Institute of Mental Health, Pragmatic and Implementation Studies for the Management of Pain to Reduce Opioid Prescribing (PRISM), Spring 2019
 National Institutes of Mental Health, ad hoc review panel Spring 2019
 PCORI's Medication-assisted treatment deliver for pregnant women with substance use disorders involving prescription opioid and/or heroin, Fall 2018
 National Institutes of Mental Health, Clinical Trial Effectiveness, Spring, Fall 2018
 Institute of Education Sciences, Research Networks Focused on Critical Problems of Policy and Practice in Special Education, 2018
 National Institutes of Mental Health, Addressing Suicide Research Gaps: Understanding Mortality Outcomes, 2018
 Institute of Translational Health Sciences, University of Washington; Research Innovation Awards, 2016.
 Patient-Centered Outcomes Research Institute (PCORI); Large Pragmatic Clinical Trials, Winter 2015 PFA; Spring 2015 PFA; Fall 2015
 Patient-Centered Outcomes Research Institute (PCORI); Assessment of Prevention, Diagnosis, and Treatment Options, Spring 2014 PFA; Summer 2014 PFA; Fall 2020
 Medical Research Council, United Kingdom
 The Netherlands Organisation for Health Research and Development

Methodology consultant, Large Pragmatic Clinical Studies, PCORI 2017, 2018, 2020, 2021

Professional Memberships:

American Statistical Association (ASA)
 ASA Biometrics Section
 ASA Health Policy Section
 ASA Justice, Equity, Diversity, and Inclusion (JEDI) Outreach Group
 ASA Mental Health Statistics Section
 ASA Statistics in Epidemiology Section
 ASA Statistical Learning and Data Mining Section
 American Association for the Advancement of Science (AAAS)

 AAAS Section on Statistics

 International Biometric Society, Western North American Region
 Society for Clinical Trials
 Society for Causal inference

7. BIBLIOGRAPHY:

a) Peer-reviewed research articles, reverse chronological order

1. **Shortreed SM**, Walker RL, Johnson E, Wellman R, Cruz M, Ziebell R, Coley RY, Yaseen ZS, Dharmarajan S, Penfold RB, Ahmedani BK, Rossom RC, Beck A, Boggs JM, Simon GE. (in press) Detailed temporal predictors with complex modeling does not improve health records-based suicide risk prediction. *Nature Digital Medicine*.
2. Coley RY, Liao Q, Simon N, **Shortreed SM**. (in press) Empirical evaluation of internal validation methods for prediction in large-scale clinical data with rare-event outcomes: a case study in suicide risk prediction. *BMC Medical Research Methodology*
3. Rose EJ, Moodie EEM, **Shortreed SM** (in press) Monte Carlo sensitivity analysis for unmeasured confounding in dynamic treatment regimes. *Biometrical Journal*
4. *‡Bian Z, Moodie EEM, **Shortreed SM**, Bhatnagar S. (in press) Variable selection in regression-based estimation of dynamic treatment regimes. *Biometrics*.
5. Cheetham C, **Shortreed SM**, Avalos LA, Reynolds K, Holt VL, Easterling TR, Portugal C, Zhou H, Neugebauer RS, Bider Z, Idu A, Dublin S. (2022) Identifying Hypertensive Disorders of Pregnancy, a Comparison of Two Epidemiological Definitions. *Frontiers in Cardiovascular Medicine, section Hypertension*. 9:1006104
6. Cruz M, **Shortreed SM**, Richards JE, Coley RY, Yarborough BJ, Walker RL, Johnson E, Ahmedani BK, Rossom R, Coleman KJ, Boggs JM, Beck AL, Simon GE. (2022) Machine learning prediction of suicide risk does not identify patients without traditional risk factors. *Journal of Clinical Psychiatry*. 83(5):21m14178
7. Simon GE, **Shortreed SM**, Rossom RC, Beck A, Clarke GN, Whiteside U, Richards JE, Penfold RB, Boggs JM, Smith J (2022) Effect of offering care management or online dialectical behavior therapy skills training vs usual care on self-harm among adult outpatients with suicidal ideation: a randomized clinical trial. *Journal of the American Medical Association*. 327(7):630-638.
8. † Simon GE, **Shortreed SM**, Boggs JM, Clarke GN, Rossom RC, Richards JE, Beck A, Ahmedani BK, Coleman KJ, Bhakta B, Stewart CC, Sterling S, Schoenbaum M, Coley RY, Stone M, Mosholder AD, Yaseen ZS. (2022) Accuracy of ICD-10-CM encounter diagnoses from health records for identifying self-harm events. *Journal of the American Medical Informatics Association*. ocac144.
9. †Dublin S, Idu A, Avalos LA, Cheetham TC, Easterling TR, Chen L, Holt VL, Nance N, Bider-Canfield Z, Neugebauer RS, Reynolds K, Badon SE, **Shortreed SM**. (2022) Maternal and neonatal outcomes of antihypertensive treatment in pregnancy: a retrospective cohort study. *PLOS One*. 17(5): e0268284.
10. Moodie EEM, Coulombe J, Danieli C, Renoux C, **Shortreed SM** (2022) Privacy-preserving estimation of an optimal individualized treatment rule: A case study in maximizing time to severe depression-related outcomes. *Lifetime Data Analysis*. 25:512-542

11. **Shortreed SM**, Gray R, Akosile MA, Walker RL, Fuller S, Temposky L, Fortmann SP, Albertson-Junkans L, Floyd JS, Bayliss EA, Harrington LB, Lee MH, Dublin S. (2022) Increased COVID-19 infection risk drives racial and ethnic disparities in severe COVID-19 outcomes. *Journal of Racial and Ethnic Health Disparities*.
12. †Muench J, Hoopes M, Mayhew M, Pisciotta M, **Shortreed SM**, Livingston CJ, Von Korff M, DeBar LL. (2022) Reduction of long-term opioid prescribing for back pain in Oregon community health centers after a state Medicaid policy change. *Journal of the American Board of Family Medicine*. 35(2):352-369.
13. ‡*Wu J, Galanter N, **Shortreed SM**, Moodie EEM. (2022) Ranking tailoring variables for constructing individualized treatment rules: an application to schizophrenia. *Journal of the Royal Statistical Society: Series C* 71(2):309-330.
14. †Penfold RB, Whiteside U, Johnson EE, Stewart CC, Oliver MM, **Shortreed SM**, Beck A, Coleman KJ, Rossom RC, Lawrence JM, Simon GE. (2021) Utility of Item 9 of the Patient Health Questionnaire in the Prospective Identification of Adolescents at Risk of Suicide Attempt. *Suicide and Life Threatening Behavior* 51(5):854-863 .
15. †Simon GE, **Shortreed SM**, DeBar LL. (2021) Zelen design clinical trials: Why, when, and how. *Trials* 22, 541.
16. †Walker RL, **Shortreed SM**, Ziebell RA, Johnson E, Boggs JM, Lynch FL, Daida YG, Ahmedani BL, Rossom R, Coleman KJ, Simon GE. (2021) Evaluation of electronic health record-based suicide risk prediction models on contemporary data. *Applied Clinical Informatics* 12(4):778–87.
17. †Penfold RB, Johnson E, **Shortreed SM**, Ziebell RA, Lynch FL, Clarke GN, Coleman KJ, Waitzfelder BE, Beck AL, Rossom RC, Ahmedani BK, Simon GE. (2021) Predicting Suicide Attempts and Suicide Deaths Among Adolescents Following Outpatient Visits. *Journal of Affective Disorders* 294:39-47
18. †Coley RY, Johnson E, Simon GE, Cruz M, **Shortreed SM**. (2021) Racial/Ethnic Disparities in the Performance of Prediction Models for Death by Suicide After Mental Health Visits. *Journal of the American Medical Association Psychiatry* 78(7):726–734.
19. †Coley RY, 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):1375–88.
20. †Dublin S, Walker RL, Floyd JS, **Shortreed SM**, Fuller S, Albertson-Junkans L, Harrington LB, Greenwood-Hickman MA, Green BB, Psaty BM. (2021) Renin-angiotensin-aldosterone system inhibitors and COVID-19 infection or hospitalization: a cohort study. *Am J Hypertension*. 34(4):339–47.
21. ‡Coulombe J, Moodie EEM, **Shortreed SM**, Renoux C. (2021) Can the risk of severe depression-related outcomes be reduced by tailoring the antidepressant therapy to patient characteristics? *American Journal of Epidemiology* 190(7):1210–9.
22. †Simon GE, Matarazzo BB, Walsh CG, Smoller JW, Boudreaux ED, Yarborough BH, **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.

23. ‡Zheng Y, Corley DA, Doubeni C, Halm E, **Shortreed SM**, Barlow WE, Zauber A, Tosteson TD, Chubak J. (2020) Analyses of preventive care measures with incomplete historical data in electronic medical records: An example from colorectal cancer screening. *The Annals of Applied Statistics* 14(2):1030–44.
24. †Carrell DS, Ramaprasan A, Scull G, Mackwood M, Johnson E, Cronkite DJ, Bear A, Hansen K, Green CA, Hazlehurst B, Janoff SL, Coplan PM, DeVeugh-Geiss A, Grigaiva CG, Liang C, Enger CL, Lange J, **Shortreed SM**, Von Korff M. (2020) Measuring problem prescription opioid use among patients receiving long-term opioid analgesic treatment: development and evaluation of an algorithm for use in EHR and claims data. *Journal of Drug Assessment* 9(1):97-105.
25. ‡**Shortreed SM** and Simon GE. Can predictive analytics improve the design of pragmatic clinical trials? (2020) *Clinical Trials* 17(4):394–401.
26. †Chen L, **Shortreed SM**, Easterling T, Cheetham TC, Reynolds K, Avalos LA, Kaminen A, Holt V, Neugebauer R, Akosile M, Nance N, Bider-Canfield Z, Walker RL, Badon SE, Dublin S. (2020) Identifying hypertension in pregnancy using electronic medical records: The importance of blood pressure values. *Pregnancy Hypertension* 19:112-118.
27. †Richards JE, **Shortreed SM**, Simon GE, Penfold RB, Glass JE, Ziebell R, Williams EC. (2020) Short-term risk of suicide attempt associated with patterns of patient-reported alcohol use determined by routine AUDIT-C among adults receiving mental healthcare. *Gen Hosp Psychiatry* 62:79-86.
28. †Simon GE, **Shortreed SM**, Johnson E, Rossom RC, Lynch FL, Ziebell R, Penfold RB. (2019) What health records data are required for accurate prediction of suicidal behavior? *Journal of the American Medical Informatics Association* 26(12):1458–65.
29. †Richards JE, Hohl S, Whiteside U, Ludman EJ, Grossman D, Simon G, **Shortreed SM**, Lee AK, Parrish R, Shea M, Caldeiro R, Penfold R, Williams EC. (2019) If You Listen, I Will Talk: The Experience of Being Asked about Suicidality during Routine Primary Care. *J Gen Intern Med* 34(10):2075–82.
30. †Simon GE, **Shortreed SM**, Coley RY, Penfold RB, Rossom RC, Waitzfelder BE, Sanchez K, Lynch FL, (2019) Assessing and minimizing re-identification risk in research data derived from healthcare records. *eGEMS* 7(1):6.
31. *†Chen L, Pocobelli G, Yu O, **Shortreed SM**, Osmundson SS, Fuller S, Wartko PD, McCulluch D, Warwick S, Newton K, Dublin S. (2019) Early pregnancy hemoglobin A1C and pregnancy outcomes: a population-based study. *American Journal of Perinatology* 36(10):1045–53.
32. Simon GE, **Shortreed SM**, Rossom RC, Penfold RB, Sperl-Hillen JM, O’Conner P. (2019) Principles and procedures for data and safety monitoring in pragmatic clinical trials. *Trials* 20:690–8.
33. ‡**Shortreed SM**, Rutter CM, Cook AJ, Simon GE. (2019) Improving pragmatic clinical trial design by using real-world data. *Clinical Trials*.
34. †‡**Shortreed SM**, Cook AJ, Coley YR, Bobb JF, Nelson JC. (2019) Challenges and opportunities for using big clinical data to advance medical science *American Journal of Epidemiology*.

35. †Simon GE, Yarborough BJ, Rosson RC, Lawrence JM, Lynch FL, Waitzfelder BE, Ahmedani BK, **Shortreed SM**. (2019) Self-reported suicidal ideation predicts suicidal behavior in outpatient receiving psychotic disorder diagnosis. *Psychiatric Services*,70:176-83.
36. †Dublin S, Walker RL, **Shortreed SM**, Ludman EJ, Sherman KJ, Hansen RN, Thakral M, Saunders K, Parchman ML, Von Korff M. (2019) Impact of initiatives to reduce prescription opioid risks on medically attended injuries in people using chronic opioid therapy. *Pharmacoepidemiology and Drug Safety*,28(1):90-6.
37. †Von Korff M, Saunders K, Dublin S, Walker R, Thakral M, Sherman KJ, Ludman E, Hansen RN, Parchman M, **Shortreed SM**. (2019) Impact of chronic opioid therapy risk reduction initiatives on opioid overdose. *Journal of Pain*,20(1):108-117.
38. †Coleman KJ, Johnson E, Ahmedani BK, Beck A, Rossom RC, **Shortreed SM**, Simon GE. (2019) Predicting suicide attempts for racial and ethnic groups of patients during routine clinical care. *Suicide and Life-Threatening Behavior*,49(3):724–34.
39. †Simon GE, Johnson E, Lawrence JM, Rossom RC, Ahmedani B, Lynch FM, Beck A, Waitzfelder B, Ziebell R, Penfold RB **Shortreed SM**. (2018) Predicting suicide attempts and suicide deaths following outpatient visits using electronic health records. *The American Journal of Psychiatry*, 175(10):951–60.
40. †Thakral M, Walker R, Saunders K, **Shortreed SM**, Parchman M, Hansen R, Dublin S, Sherman KJ, Von Korff M. (2018) Impact of opioid dose reduction initiatives on chronic opioid therapy patients at higher risk for opioid-related adverse outcomes. *Pain Medicine*, 19(12):2450–8.
41. †Thakral M, Walker RL, Saunders K, **Shortreed SM**, Parchman M, Hansen RN, Ludman E, Sherman KJ, Dublin S, Von Korff M. (2018) Comparing pain and depressive symptoms of chronic opioid therapy patients receiving dose reduction and risk mitigation initiatives to usual care. *Journal of Pain*, 19(1):111–20
42. †Berger D, Lapham GT, **Shortreed SM**, Hawkins EJ, Rubinsky AD, Williams EC, Achtmeyer CE, Kivlihan DR, Bradley KA. (2018) Increasing rates of documented alcohol counseling in primary care: more counseling or just more documentation? *Journal of General Internal Medicine*, 33(3):268-74.
43. †Sherman KJ, Walker RL, Sauders K, **Shortreed SM**, Parchman M, Hansen RN, Thakral M, Ludman EJ, Dublin S, Von Korff M. (2018) Doctor-patient trust among chronic pain patients on chronic opioid therapy after opioid risk reduction initiatives: a survey. *J American Board of Family Practice*, 31(4):578-87.
44. † Simon GE, Johnson E, Stewart C, Rossom RC, Beck A, Coleman KJ, Waitzfelder B, Penfold RB, Operskalski B, **Shortreed SM**. (2018) Does patient adherence to antidepressant medication actually vary between physicians? *Journal of Clinical Psychiatry*, 79(3).
45. †Williams EC, Lapham GT, Bobb J, Rubinsky AD, Catz S, **Shortreed SM**, Bensley KM, Bradley KA. (2017) Documented brief intervention not associated with resolution of unhealthy alcohol use one year later among VA Patients Living with HIV *Journal of Substance Abuse Treatment*, 78:8-14
46. †Zeber JE, Coleman KJ, Fischer H, Yoon T, Ahmedani BK, Beck A, Hubley S, Imel Z, Rossom RC, **Shortreed SM**, Stewart C, Waitzfelder BE, Simon GE. (2017) The impact of

- race and ethnicity on rates of return to psychotherapy for depression. *Depression and Anxiety*, 34(12):1157-1163.
47. †Von Korff M, Walker RL, Saunders K, **Shortreed SM**, Thakral M, Parchman M, Hansen RN, Ludman E, Sherman KJ, Dublin S. (2017) Prevalence of prescription opioid use disorder among chronic opioid therapy patients after health plan opioid dose and risk reduction initiatives. *International Journal of Drug Policy*, 46:90-8
 48. †Simon GE, **Shortreed SM**, Johnson E, Beck A, Coleman KJ, Rossom RC, Whiteside U, Operskalski B, Penfold RB. (2017) Between-visit changes in suicidal ideation and risk of subsequent suicide attempt. *Depression and Anxiety*, 34(9):794-800.
 49. ‡**Shortreed SM**, Ertefaie A. (2017) Outcome-adaptive lasso: variable selection for causal inference. *Biometrics*, 73(4):1111-22.
 50. †Penfold RB, Stewart C, Simon GE, **Shortreed SM**, Johnson E, Rossom RC, Operskalski B, Beck A. (2017) Antidepressant Use by youth with minimal or mild depression: evidence from 3 health systems. *Pediatric Quality and Safety*, 2(2):e017
 51. †Williams EC, Lapham GT, **Shortreed SM**, Rubinsky AD, Bobb J, Bensley KM, Catz S, Richards J, Bradley KA. (2017) Among patients with unhealthy alcohol use, those with HIV are less likely than those without to receive evidence-based alcohol-related care: a national VA study. *Drug and Alcohol Dependence*, 174:113-120.
 52. †Von Korff M, **Shortreed SM**, LeResche LA, Saunders KW, Rosenberg R, Thielke S, Turner JA. (2017) A longitudinal study of depression among middle-aged and senior patients initiating chronic opioid therapy *Journal of Affective Disorders*, 211:136-143.
 53. †Hansen RN, Walker RL, **Shortreed SM**, Dublin S, Saunders K, Ludman EJ, Von Korff M. (2017) Impact of an opioid risk reduction initiative on motor vehicle crash risk among chronic opioid therapy patients. *Pharmacoepidemiology and Drug Safety*, 26(1):47-55.
 54. †Thielke S, **Shortreed SM**, Saunders KW, Turner JA, LeResche LA, Von Korff M. (2017) A prospective study of predictors of long-term opioid use among patients with chronic non-cancer pain. *Clinical Journal of Pain*, 33(3):198-204.
 55. †Von Korff M, Turner JA, **Shortreed SM**, Saunders KW, Rosenberg D, Thielke S, LeResche LA. (2016) Timeliness of care planning upon initiation of chronic opioid therapy for chronic pain. *Pain Medicine*, 17(3):511-20.
 56. †Simon GE, Beck A, Rossom RC, Richards J, Kirlin B, King D, Shulman L, Ludman EJ, Penfold R, **Shortreed SM**, Whiteside U. (2016) Population-based outreach versus care as usual to prevent suicide attempt: study protocol for a randomized controlled trial. *Trials*, 17(1):452.
 57. †Turner JA, **Shortreed SM**, Saunders KW, LeResche LA, Thielke S, Von Korff M. (2016) Does association of opioid use with pain and function differ by fibromyalgia/widespread pain status? *PAIN*, 175(18):2208-16
 58. †**Shortreed SM**, Johnson E, Rutter CM, Kaminei A, Wernli KJ, Chubak J. (2016) Cohort restriction based on prior enrollment: examining potential biases in estimating cancer and mortality risk. *Observational Studies*, 2:51-64.
 59. †Rosson RC, **Shortreed SM**, Coleman KJ, Beck A, Waitzfelder BE, Stewart C, Ahmedani BK, Zeber JE, Simon GE. (2016) Antidepressant adherence across diverse populations and

healthcare settings. *Depression and Anxiety* 33(8):765-74.

60. †Balderson BH, McCurry SM, Vitiello MV, **Shortreed SM**, Rybarczyk BD, Keefe FJ, Von Korff M. (2016) Information without Implementation: A practical example for developing a best practice education control group. *Behavioral Sleep Medicine*, 14(5):514-27.
61. ‡Moodie EEM, Karran J, **Shortreed SM**. (2016) A case study of SMART attributes: A qualitative assessment of generalizability, retention rate, and trial quality. *Trials*, 14:242
62. †Simon GE, Coleman KJ, Rossom RC, Beck A, Oliver M, Johnson E, Whiteside U, Operskalski B, Penfold RB, **Shortreed SM**, Rutter R. (2016) Risk of suicide attempt and suicide death following completion of the Patient Health Questionnaire depression module in community practice. *Journal of Clinical Psychiatry*, 77(2):221–227.
63. ‡Ertefaie A, **Shortreed SM**, Chakraborty B. (2016) Q-learning residual analysis: application to the effectiveness of sequences of antipsychotic medications for patients with schizophrenia. *Statistics in Medicine*, 35(13); 2221–34.
64. †Turner JA, **Shortreed SM**, Saunders K, LeResche L, Von Korff M. (2016) Association of levels of opioid use with pain and activity interference among patients initiating chronic opioid therapy: A longitudinal study. *PAIN*, 154(4):849–57.
65. †Von Korff M, Dublin S, Walker RL, Parchman M, **Shortreed SM**, Hansen R N, Saunders K. (2016) The impact of opioid risk reduction initiatives on high-dose opioid prescribing for chronic opioid therapy patients. *The Journal of Pain*, 17(1):101–10
66. †**Shortreed SM**, Von Korff M, Thielke S, LeResche LA, Saunders KW, Rosenberg D, Turner JA. (2016) Electronic health records to evaluate and account for non-response bias: A survey of patients using chronic opioid therapy *Observational Studies*, 2:24-38
67. †Simon GE, Rossom RC, Beck A, Waitzfelder BE, Coleman KJ, Stewart C, Operskalski B, Penfold RB, **Shortreed SM**. (2015) Antidepressants are not over-prescribed for mild depression. *Journal of Clinical Psychiatry*, 76(12):1627–1632
68. †LeResche L, Saunders K, Dublin S, Thielke S, Merrill JO, **Shortreed SM**, Campbell C, Von Korff MR. (2015) Sex and age differences in global pain status among patients using opioids long-term for chronic non-cancer pain. *Journal of Women's Health*, 24(8):629-35.
69. †Saunders KW, **Shortreed SM**, Von Korff M, Thielke S, Turner JA, LeResche LA. (2015) Evaluation of health plan interventions to influence chronic opioid therapy prescribing. *The Clinical Journal of Pain*, 31(8):820-9.
70. †Lapham GT, Rubinsky AD, **Shortreed SM**, Hawkins EJ, Richards J, Williams EC, Berger D, Chavez LJ, Kivlahan DR, Bradley KA. (2015) Comparison of provider-documented and patient-reported brief intervention for unhealthy alcohol use in VA outpatients *Drug and Alcohol Dependence*, 153:159-66
71. †Friesen MC, **Shortreed SM**, Wheeler DC, Burstyn I, Vermeulen R, Pronk A, Colt JS, Baris D, Karagas MR, Schwenn M, Johnson A, Armenti KR, Silverman DT, Yu K. (2015) Using hierarchical cluster models to systematically identify groups of jobs with similar occupational questionnaire response patterns to assist rule-based expert exposure assessment in population-based studies. *Annals of Occupational Hygiene*, 15(4):155-66

72. †Turner JA, Saunders K, **Shortreed SM**, LeResche L, Riddell K, Rapp SE, Von Korff M. (2014) Chronic opioid therapy urine drug testing in primary care in an integrated group practice: Prevalence and predictors of aberrant results. *Journal of General Internal Medicine*, 29(12):1663-71.
73. ‡**Shortreed SM**, Laber E, Stroup TS, Pineau J, Murphy SA. (2014) A multiple imputation strategy for sequential multiple assignment randomized trials. *Statistics in Medicine*, 33(24):4202-14.
74. ‡Nelson JC, **Shortreed SM**, Yu O, Peterson D, Baxter R, Fireman B, Lewis N, McClure D, Weintraub E, Jackson L. (2014) Integrating database knowledge and epidemiological design to improve the implementation of data mining methods to evaluate vaccine safety in large healthcare databases. *Statistical Analysis and Data Mining*, 7(5):337-51.
75. †Friesen MC, Locke SJ, Zaebst D, Viet S, **Shortreed S**, Chen YC, Koh DH, Pardo L, Schwartz KL, Davis FG, Stewart PA, Colt JS, Purdue MP. (2014) Using machine learning to efficiently use multiple experts to assign occupational lead exposure estimates in a case-control study. *Occup Environ Med*. 71 Suppl 1:A25-6.
76. †McClure JM, Peterson S, Derry H, Riggs K, St. John J, Nair V, An L, **Shortreed SM**. (2014) Exploring the ‘active ingredients’ of an online smoking intervention: A randomized factorial trial. *Nicotine & Tobacco Research*, 16(8):1129-39.
77. †Vitiello VM, McCurry SM, **Shortreed SM**, Baker LD, Rybarczyk BD, Von Korff M. (2014) Short-term improvement in insomnia symptoms predicts long-term improvements in sleep, pain, and fatigue in older adults with comorbid osteoarthritis and insomnia. *Pain*, 155(8):1547-54.
78. †McCurry SM, **Shortreed SM**, Von Korff M, Balderson BH, Baker LD, Rybarczak BD, Vitiello MV. (2014) Who benefits from CBT for insomnia in primary care? Important patient selection and trial design lessons from longitudinal results of the lifestyles trial. *Sleep*, 37(2):299-308.
79. †Turner JA, Saunders K **Shortreed SM**, Rapp SE, Thielke S, LeResche LA, Riddell K, Von Korff M. (2014) Chronic opioid therapy risk reduction initiative: Impact on urine drug testing rates and results. *Journal of General Internal Medicine*, 29(2):305-11.
80. †Von Korff M, **Shortreed SM**, Saunders KW, LeResche LA, Berlin JA, Stag P, Turner JA. (2014) Comparison of prognostic risk stratification item sets. *The Journal of Pain*, 15(1):81-9.
81. †**Shortreed SM**, Bogart A, McClure J. (2013) Using multiple imputation to accommodate time-outs in online interventions. *Journal of Medical Internet Research*, 15(11):e252.
82. †LeResche LA, Turner JA, Saunders KW, **Shortreed SM**, Von Korff M. (2013) Psychophysical tests as predictors of back pain chronicity in primary care. *The Journal of Pain*, 14(12):1663-70.
83. †Turner JA, **Shortreed SM** Saunders KW, LeResche LA, Berlin JA, Von Korff M. (2013) Optimizing prediction of back pain outcomes. *Pain*, 154(8):1391.
84. †Thielke SM, Turner JA, **Shortreed SM**, Saunders K, LeResche L, Campbell CI, Weisner CC, Von Korff M. (2013) Do patient-perceived pros and cons of opioids predict sustained higher-dose use? *Clinical Journal of Pain*, 30(2):93-101.

85. ‡**Shortreed SM**, Peeters A, Forbes A. (2013) Estimating the effect of cumulative adult-life physical activity on CVD and mortality: evidence from the Framingham Heart Study. *Heart*, 99:(9) 649-54.
86. †Vitiello VM, McCurry SM, **Shortreed SM**, Balderson BH, Baker LD, Keefe FJ, Rybarczyk BD, Von Korff M. (2013) Cognitive-behavioral treatment for comorbid insomnia and osteoarthritis pain in primary care: the lifestyles randomized controlled trial. *Journal of the American Geriatrics Society (JAGS)*, 61(6):947-56.
87. †McClure JB, **Shortreed SM**, Bogart A, Derry H, Riggs K, St. John J, Nair V, An L. (2013) The effect of program design on engagement with an internet-based smoking intervention: A randomized multiphase optimization strategy screening experiment. *Journal of Medical Internet Research*, 15(3):e69.
88. †Wheeler DC, Burstyn I, Vermeulen R, Yu K, **Shortreed SM**, Pronk A, Stewart PA, Colt JS, Baris D, Silverman D, Friesen MC.(2013) Inside the black box: uncovering the latent decision rules used in case-by-case expert assessment of occupational exposure in case-control studies. *Occupational and Environmental Medicine*, 70(3):203-10.
89. †McClure JB, Derry H, Riggs KR, Westbrook EW, St. John J, **Shortreed SM**, Bogart TA, An L. (2012) Questions about Quitting (Q2): Design and methods of a multiphase optimization strategy (MOST) randomized screening experiment for an online, motivational smoking cessation intervention. *Contemporary Clinical Trials*, 33(5):1094-102.
90. ‡**Shortreed SM** and Moodie EEM. (2012) Estimating the optimal dynamic antipsychotic treatment regime: Evidence from the sequential multiple assignment randomized CATIE Schizophrenia Study. *Journal of the Royal Statistical Society, Series C*, 61(4):577-99.
91. ‡**Shortreed SM**, Laber E, Lizotte DL, Stroup S, Pineau J, Murphy SA. (2011) Informing sequential clinical decision-making through reinforcement learning: an empirical study. *Machine Learning*, 84(1):109-36.
92. †Abdullah A, Stowlwinder J, **Shortreed SM**, Wolfe R, Stevenson C, Walls H, de Courten M, Peeters A. (2011) The duration of obesity and the risk of type-2 diabetes. *Public Health Nutrition*, 14(1):119-26.
93. †Brennan SL, Cicuttinia FM, **Shortreed SM**, Forbes A, Stuckey SL, Wluka AE. (2010) Women lose patella cartilage at a faster rate than men: A 4.5year cohort study of subjects with knee OA. *Maturitas*, 67(3):270-4.
94. ‡**Shortreed SM** and Forbes A. (2010) Missing data in the exposure of interest and marginal structural models: A simulation study based on the Framingham Heart Study. *Statistics in Medicine*, 29(4):431-43.
95. †Urquhart DM, **Shortreed S**, Davis SR, Cicuttini FM, Bell R. (2009) Are low levels of low back pain Intensity and disability associated with reduced wellbeing in women? *Climacteric*, 12(3):266-75.
96. †Botlero R, Davis SR, Urquhart D, **Shortreed S**, Bell R. (2009) Age-specific prevalence of, and factors associated with, different types of urinary incontinence in community-dwelling Australian women assessed with a validated questionnaire. *Maturitas*, 62(2):134-9.
97. †Magliano DJ, Shaw JE, **Shortreed SM**, Nusselder WJ, Liew D, Barr ELM, Zimmet PZ, Peeters A. (2008) Lifetime risk and projected population prevalence of diabetes. *Diabetologia*,

51(12):2179-86.

98. ‡**Shortreed S**, Handcock M and Hoff P. (2006) Positional estimation within the latent space model for networks. *Methodology: European Journal of Research Methods for the Behavioral and Social Sciences*, 2(1):24-33.
99. †**Shortreed S** and Meilă M. (2005) Unsupervised spectral learning. Published in *proceedings of 21st Conference in Uncertainty in Artificial Intelligence*, edited by Fahiem Bacchus and Tommi Jaakkola.
100. ‡ Meilă M, **Shortreed S**, and Liang X. (2005) Regularized spectral learning. Published in *proceedings of Conference in Artificial Intelligence and Statistics*, edited by Robert Cowell and Zoubin Ghahramani.

*papers of a student or post-doc I mentored

† follows author-order convention that recognizes author contribution by first author, second author, last (senior) author, third author, fourth author, etc.

‡ follows author-order convention that lists authors purely in order of contribution, that is: first, second, ... last; with first the most contribution and last author the least contribution.

γ invited paper contribution.

c) Books and book chapters:

Invited book chapters:

1. Hanuise, S and **Shortreed SM** (2017) On the use of electronic health records for comparative effectiveness research. Contributed to *Methods for Comparative effectiveness research*, edited by Gatsonis, C and Morton, SC. CRC Press.
2. **Shortreed SM**, Laber E, Pineau J, Murphy SA. (2016) Imputing missing data from sequential multiple assignment randomized trials. Contributed to *Adaptive Treatment Strategies in Practice: Planning Trials and Analyzing Data for Personalized Medicine*, edited by Moodie, EEM and Kosorok, MR. American Statistical Association and the Society of Industrial and Applied Mathematics.

d) Other Non-peer-reviewed scholarly publications:

1. Jones J, Ertefaie A, and **Shortreed SM**. (in press) Rejoinder to “Reader reaction to ‘Outcome-adaptive Lasso: Variable selection for causal inference’ by Shortreed and Ertefaie (2017)” *Biometrics*, .
2. **Shortreed SM** and Moodie EMM. (2020) Comment: Automated analyses: Because we can, does it mean we should? *Statistical Science*, 35(3):499-502.
3. Simon GE, **Shortreed SM**, Boggs JM, Clarke GN, Rossom RC, Richards JE, Beck A. (2020) Estimating the Number of Self-Harm Events Not Identified by Encounter Diagnoses in Health Records. *medRxiv*.
4. Simon GE, **Shortreed SM** and Coley RY. (2019) Positive Predictive Values and Potential Success of Suicide Prediction Models. *JAMA Psychiatry*. 76(8):868-869.
5. 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. <http://rethinkingclinicaltrials.org/chapters/design/experimental-designs-randomization-schemes-top/designing-to-avoid-identification-bias/>.

6. Rutter CM and **Shortreed SM** (2012) Writing a clinically appraised topic is a team sport. *Academic Radiology*, 9(7):777-8.
7. **Shortreed S** and Forbes A (2007) Inverse probability weighted estimation of the marginal odds ratio: correspondence regarding 'The performance of different propensity score methods for estimating marginal odds ratios.' *Statistics in Medicine*, 27(26):5556-9.

8. PATENTS AND OTHER INTELLECTUAL PROPERTY:

Not Applicable

9. FUNDING HISTORY:

a) Funded Projects

1. Identifying Optimal Antibiotic Regimens to Treat Urinary Tract Infections During Pregnancy (R01HD107083); total direct costs: 2,600,000; PI: Anne Butler; Eunice Kennedy Shriver National Institute of Child Health & Human Development; role: Co-investigator and lead Biostatistician, 0.10 FTE; 8/1/2022 - 4/30/2027
2. Innovative methods to reduce racial and ethnic disparities in suicide risk prediction (R01MH125821); total direct costs: \$1,136,381; PI: Coley; National Institute of Mental Health; role: Co-Investigator, 0.10 FTE; 01/01/2022 - 12/31/2025
3. Robust methods for missing data in electronic health records-based research (1R01DK128150-01); total direct costs: PI: Hanuiese; National Institute of Diabetes and Digestive and Kidney Diseases; total direct costs: ;role: Co-Investigator and Site PI, 0.10 FTE; 04/12/2021 - 03/31/2025
4. Comparing the Effectiveness of Two Approaches to Preventing Severe Hypoglycemia (IHS-2019C3-17889); total direct costs: \$2,052,824; PI: Ralston; Patient-Centered Outcomes Research Institute; role: Co-Investigator and lead Biostatistician, 0.05 FTE; 11/1/2020 - 11/30/2024
5. Buprenorphine Effect on Suicidal Behavior (3U19MH121738-02S2); PI: Simon; National Institute of Mental Health; total direct costs: \$577,080; Co-investigator and lead Biostatistician, 0.10 FTE; 9/17/2020 - 8/31/2021
6. Potential for Repurposing Currently Approved Medications to Fight COVID-19: A Proof-of-Concept Study (R220071); total direct costs: \$190,543; Co-investigator and lead Biostatistician, 0.10 FTE; 6/1/2020 - 6/30/2021
7. Mental Health Research Network III (5U19MH121738); PI: Simon; National Institute of Mental Health; total direct costs: \$8,710,543 ; Analytic Methods Core Lead and Administrative Core Co-investigator, 0.175 FTE; 9/23/2019 - 6/30/2024
8. Effects of Medical Products on Suicidal Ideation and Behavior (HHSF223201810201C); PI: Simon; Federal Drug Agency; total direct costs: \$4,899,783; Co-investigator, 0.20 FTE; 9/30/2018 - 9/29/2021
9. Predictive Modeling: The Role of Opioid Use in Suicide Risk (R01 DA0477724); PI: Yarborough; National Institute of Mental Health; total direct costs: \$117,409; Co-investigator, 0.05; FTE; 8/15/2018 - 6/30/2021
10. Improved tailoring of depression care using customized clinical decision support (R01MH114873); PI: Moodie & Shortreed; National Institute for Mental Health; total direct costs: \$1,000,000; PI, 0.30; 7/1/2018 - 4/30/2022

11. Mental Health Research Network: Computational Modeling to Predict Suicidal Behavior (3U19MH092201-07S1); PI: Simon; National Institute for Mental Health; total direct costs: \$402,830; Co-investigator, 0.10 FTE; 7/1/2017 - 6/30/2019
12. Stat Core Opioid PMR 1B (None); PI: McBurnie; Campbell Alliance, Ltd (now InVentive); total direct costs: \$2,932,221; Site PI and Statistical Coordinating Center Co-Lead, 0.25 FTE; 10/1/2016 – 11/30/2018.
13. Evaluation of risk of neural tube defects among live births exposed to maternal prescription opioids during early pregnancy (None); PI: Toh; Federal Drug Administration; total direct costs: \$470,212; Co-investigator, 0.10 FTE, 9/30/2016 - 9/28/2019
14. Mental Health Research Network: Development of a Population-Based Risk Calculator for Suicidal Behavior (U19 MH092202-05S1); PI: Simon; National Institute for Mental Health; total direct costs: \$438,545; Co-investigator, 0.15 FTE, 7/1/2015 - 6/30/2017
15. Moderate Hypertension in Pregnancy: Safety and Effectiveness of Treatment (R01 HD082141-02); PI: Dublin; National Institute of Child Health and Human Development; total direct costs: \$3,972,752; Co-investigator, 0.30 FTE, 7/1/2015 - 6/30/2019
16. Alcohol-Related Care & Outcomes for Outpatients with HIV in a National VA Cohort (R21 AA022866); PI: Bradley, Williams; National Institute of Alcohol Abuse and Alcoholism; total direct costs: \$286,668; Co-investigator, 0.10 FTE, 5/1/2014 - 4/30/2016.
17. Computable Algorithms for Identifying Opioid Abuse and Addiction (None); PI: Carrel; Campbell Alliance, Ltd; total direct costs: \$872,441; Co-investigator, 0.15 FTE; 5/1/2015 – 4/31/2016.
18. Pragmatic Trial of Population-based Programs to Prevent Suicide Attempt (UH3 MH007755-02); PI: Simon; National Institute of Mental Health; total direct costs: \$5,186,260; Co-investigator, 0.15 FTE; 9/16/2014 – 7/31/2018.
19. Mental Health Network II (U19 MH092201); PI: Simon; National Institutes of Mental Health; total direct costs: \$4,618,497; Co-investigator, 0.05 FTE; 8/1/2014 - 6/30/2019.
20. Examining Longitudinal Change in BMI for Youth Treatment with Second Generation Antipsychotic Medications (HHSF223200910006I); PI: Penfold; Federal Drug Administration; total direct costs: \$225,000; Co-investigator, 0.05 FTE; 07/01/2014 - 12/31/2015.
21. Evaluation of Group Health's Multi-faceted Chronic Opioid Therapy Risk Reduction Initiative (213-109.001); PI: Von Korff; Pfizer; total direct costs: \$120,858; Co-Investigator, 0.10 FTE; 05/01/2014 - 04/30/2015
22. Evaluation of a Health Plan Initiative to Mitigate Chronic Opioid Therapy Risks (IHS-1306-02198); PI: Von Korff; Patient-Centered Outcomes Research Institute (PCORI); total direct costs \$1,279,579; Co-Investigator, 0.20 FTE; 05/01/2014 - 04/30/2017
23. Evaluation of Quality Measures for Brief Alcohol Interventions (AA020894-01A1); PI: Bradley; National Institute on Alcohol Abuse and Alcoholism; total direct costs: \$255,161; Co-investigator, 0.15 FTE; 07/05/2012-12/30/2014
24. Suicidal Ideation Onset Following Antidepressant Initiation (SRG-0-008-11); PI: Penfold; American Foundation for Suicide Prevention; total direct costs \$74,997 ; Co-investigator, 0.12 FTE; 10/01/2012-01/31/2015
25. Treatment Patterns and Clinical Outcomes Associated with Augmentation Therapy in Major Depressive Disorder (CN138-673); PI: Penfold; Grant from Bristol Meyers Squibb; total direct costs; \$103,120 ;Co-investigator, 0.20 FTE; 02/01/2012 - 08/31/2012
26. Studying Colorectal Cancer Effectiveness of Screening Strategies (U54CA163261); PI: Rutter; National Cancer Institute; total direct costs: \$3,572,022; Co-investigator, 0.25 FTE; 09/20/2011-05/31/2016
27. Practice Variation in High-and Low-value Treatments for Mood Disorders: Mental Health Research Network: A Population-Based Approach to Transform Research (U19 MH092201); PI Simon; National Institute of Mental Health; total direct costs \$584,157 ; Co-investigator, 0.10 FTE; 09/24/2010-07/31/2014

28. Transition to Long-Term Opioid Use among Older Adults with Chronic Pain (1R01AG034181); PI: Von Korff; National Institute on Aging; total direct costs \$2,158,133; Co-investigator, 0.25 FTE; 05/15/2010-04/30/2015
29. Optimizing an Online Motivational Tobacco Cessation Program (R01 CA138598); PI: McClure; National Cancer Institute; total direct costs \$1,728,487; Co-investigator, 0.10 FTE; 03/01/2009-12/31/2013
30. Cognitive Behavioral Therapy for Arthritis Pain and Insomnia in Older Adults (R01AG031126); PIs: Vitiello, Von Korff and McCurry; National Institute on Aging; total direct costs \$992,432; Co-investigator, 0.25 FTE; 09/01/2008-07/31/2014
31. Learning Adaptive Treatment Strategies in Mental Health (R01MH080015); PI: Murphy; National Institute of Mental Health; Post-doctoral Research Fellow, 1.00 FTE; 5/1/2007-4/30/2012
32. Vaccine Safety Datalink (VSD) (200-2002-00732); PI: Jackson; Centers for Disease Control and Prevention (CDC); Co-investigator, 0.20 FTE; 10/01/2002 - 09/19/2012

10. CONFERENCES and SYMPOSIUMS: (Like presentations grouped; * indicates invited presentation)

1. *Risk prediction models for suicide prevention research. Melbourne University, School of Population and Global Health (12/2022)
2. *Ranking Tailoring Variables for Constructing Individualized Treatment Rules. Invited JSM presentation (8/2022)
3. *Invited PCT Grand Rounds, NIH Collaboratory: Population-based outreach to prevent suicidal behavior among outpatients reporting frequent suicidal ideation (9/2021)
4. **Emerging statistical challenges and opportunities in mental health research* Invited JSM 2021 session (8/2021)
5. **Pragmatic trial design using electronic health records data* CTN Webinar Series: Using Real World Data in Substance Use Disorder Clinical Research (7/2021)
6. **Ranking tailoring variables for constructing individualized treatment rules* Statistics 2021 Canada conference (7/2021)
7. **Performance of suicide risk prediction models: comparing random forest, logistic regression (with lasso) and neural networks* FDA OSE Safety Seminar (7/2021)
8. **Using predictive analytics to design a suicide prevention trial* Australian Alliance (12/2020)
9. **Using real-world data to improve trial design* 12th annual Penn Conference on Statistical Issues in Clinical Trials (4/2019)
10. *Validating a Computable Phenotype: Should Results Change a Trial's Pre-Specified Primary Outcome?* NIH Collaboratory Grand Rounds (11/2018)
11. **Using EHR data to design pragmatic clinical trials* Joint Statistical Meetings, Vancouver, BC (7/2018)
12. **Using EHR data to target suicide prevention care* Joint International Society of Clinical Biostatistics and Australian Statistical Conference, Melbourne, VIC (8/2018)

13. **Using EHR data to target suicide prevention care* Eastern North American Region of the International Biometric Society, Atlanta, GA (3/2018)
14. *Bringing machine learning to the point of care to inform suicide prevention* NIH Collaboratory Grand Rounds (10/2017)
15. *Bringing machine learning to the point of care to inform suicide prevention* Kaiser Permanente Washington Health Research Institute, Seattle, WA (9/2017)
16. **Leveraging Electronic Medical Records to Better Target Suicide Prevention* IMPACT IV Symposium, Raleigh, NC, (11/2016)
17. **Using EHR data in Epidemiology research* Guest Lecture, Epidemiology 528, Department of Epidemiology, University of Washington, (11/2016)
18. **Outcome-adaptive lasso: variable selection for causal inference*, Workshop on Discovery of causal structure in high dimensions, Montreal, QC (6/2018)
19. **Outcome-adaptive lasso: variable selection for causal inference* Atlantic Causal Inference Conference, Pittsburgh, PA (5/2018). Invited presentation as the highlighted *Biometrics* paper
20. **Outcome-adaptive lasso: variable selection for causal inference* Fred Hutchinson Cancer Research Center, Seattle, WA, (12/2016)
21. **Data-adaptive variable selection 2nd* Seattle Symposium on Health Care Data Analytics, Seattle, WA, (10/2016)
22. **Variable selection for Causal inference* Causal inference working group, Biostatistics Department, University of Washington, Seattle, WA, (1/2016)
23. **Variable selection for causal inference*, Conference of the Western North American Region of the International Biometric Society, Honolulu, HI, USA (6/2014)
24. **Variable selection for causal inference*, Simon Fraser University, Burnaby, BC, USA (4/2014)
25. **Health science research using data collected from electronic health records - depression disparities*, Annual Biomedical Research Conference for Minority Students, Seattle, WA, (11/2015)
26. **Health science research using data collected from clinical care*, Data Science to Data Sense Symposium, Sponsored by the Fred Hutchinson Cancer Research Center, Seattle, WA, (05/2015)
27. **Constructing dynamic treatment regimes*, Program in Health Economics and Outcomes Methodology, Seattle, WA, (01/2015)
28. *Integrating Multiple Imputation and the Bootstrap*, Joint statistical meetings, Boston, MA (8/2014)
29. **Framework for Integrating Multiple Imputation and the Bootstrap*, Fred Hutchinson Cancer Research Center, Seattle, WA, USA (12/2013)
30. **Marginal Structural Modeling to Estimate the Effect of Long-term Physical Activity on Cardiovascular Disease and Mortality*, Group Health Research Institutes, Seattle, WA, USA (09/2013)
31. *Multiple Imputation Strategy for Sequential Multiple Assignment Randomized Trials*, Joint Statistical Meetings, Montreal, QC, CAN (08/2013)

32. *Data Mining for Adverse Events in the Vaccine Safety Datalink Collaboration*, Joint Statistical Meetings, San Diego, CA, USA (08/2012)
33. **Accommodating Missing Data when Constructing Dynamic Treatment Regimes*, International Chinese Statistical Association, Applied Statistics Symposium, Boston, MA, USA (6/2012)
34. **Estimating the Optimal Dynamic Antipsychotic Treatment Regime: Evidence from the CATIE Schizophrenia Study*, Annual meeting for the Society of Clinical Trials, Miami, FL, USA (05/2012)
35. *Introduction to Sequential Multiple Assignment Randomized Trials*, UW Biostatistics, Clinical Trials Working Group, Seattle, WA, USA (3/2012)
36. **Constructing Dynamic Treatment Regimes: Evidence from the Clinical Antipsychotic Trials of Intervention and Effectiveness*, Monash University, Department of Epidemiology and Preventive Medicine, Melbourne, VIC, Australia (12/2011)
37. **The Role of Data Mining in Post-licensure Vaccine Safety Surveillance*, 2011 International Workshop on Pharmacoepidemiology and Biostatistics, Seattle, WA, USA (12/2011)
38. **Multiple Imputation Strategy for Sequential Multiple Assignment Randomized Trials*, University of Washington, Department of Biostatistics, Seattle, WA, USA (10/2011)
39. **Introduction to Semiparametric Theory*, McGill University, Reinforcement Learning Lab, Montreal, QC, CAN (10/2010)
40. **Learning the Similarity Matrix for Spectral Clustering*, 5th Workshop on Reinforcement Learning, Barbados (03/2010)
41. *Using Reinforcement Learning to Inform Clinical Decision Making, some practical considerations*, McGill University, Reinforcement Learning Lab, Montreal, QC, CAN (03/2010)
42. **Estimating Optimal Dynamic Treatment Regimes: An Application to Schizophrenia*, Group Health Research Institute, Seattle, WA, USA (03/2010)
43. *Missing Data Methods in Epidemiologic Studies*, Joint Statistical Meetings, Washington, DC, USA (08/2009)
44. **Learning the Similarity Matrix for Spectral Clustering*, Colloque de statistique de Montréal, SRM/ISM/GERAD, Montreal, QC, CAN (03/2009)
45. **Introduction to Spectral Clustering and Variable Weighting*, McGill University, Reinforcement Learning Lab, Montreal, QC, CAN (01/2009)
46. **Estimating the Reduction in Cardiovascular Disease Mortality Risk Due to Long Term Physical Activity in the Framingham Heart Study*, American Heart Association Scientific Sessions, New Orleans, LA, USA (11/2008)
47. **Estimating Causal Effects from Epidemiological Data*, Monash University, Department of Epidemiology and Preventive Medicine, Melbourne, VIC, Australia (10/2008)

48. **Practical Issues in Fitting Marginal Structural Models to Estimate the Effect of Lifestyle Risk Factors on Disease* , Australian Statistical Conference, Melbourne, VIC, Australia (06/2008)
49. **Using Graphs to Learn from Data*, Cambridge University, Statistics Lab, Centre for Mathematical Sciences, Remote connection from Melbourne, VIC, Australia to Cambridge, UK (02/2008)
50. **Learning in Spectral Clustering*, University of Washington, Statistics Department, Seattle, WA, USA (11/2006)
51. **Learning in Spectral Clustering*, National Institute for Statistical Sciences, Raleigh, NC, USA (03/2006)
52. **Learning in Spectral Clustering*, AT&T Bell Labs, Middletown, PA, USA (03/2006)
53. **Learning in Spectral Clustering*, University of California Los Angeles, Statistics Department, Los Angeles, CA, USA (03/2006)
54. *Regularized Spectral Learning* , University of Washington, Statistics Department, Seattle, WA, USA (06/2005)
55. *Spectral Energy Minimization for Semi-Supervised Learning*, University of Washington, Un-supervised Learning Working Group, Seattle, WA, USA (05/2005)
56. *Unsupervised Learning in Spectral Clustering*, Unsupervised Learning Working Group, University of Washington, Seattle, WA, USA (10/2004)
57. *Positional Estimation within the Latent Space Model for Networks*, University of Washington, Students in Statistics and the Social Sciences, Seattle, WA, USA (05/2004)
58. *Latentnet an R package*, University of Washington, Social Networks Working Group, Seattle, WA, USA (10/2003)
59. *Applying the Latent Space Model to Social Networks*, University of Washington, Statistics Department, Seattle, WA, USA (06/2003)

* invited presentation

11. PROFESSIONAL SERVICE:

Panelist at Technology Access Foundation's Women in Science Symposium, 04/2015

Conference session chairs

Developing and deploying prediction models to inform clinical care session of 2018 KPWHRI

Data Analytics Symposium

Organized and Chaired *Methods for prediction and inference using electronic health records data* session of 2018 KPWHRI Data Analytics Symposium

Joint Statistics Meetings, 2013, 2014

Annual meeting of the Society of clinical trials, 2012

Local service and involvement, GHRI/KPWHRI

Chari collaborative biostatistician search 2022

Organizer for peer-mentoring program within the Biostatistics Unit 2015-2012

Member of collaborative biostatistician search 2020

Chair of collaborative biostatistician search 2018

Co-chair of investigator biostatistician search 2017-2018

Member of Committee on Scientific Excellence and Engagement, 6/2012 - 9/2015

Member of Biostatistics Investigator Search Committee, 2013, 2014, 2017

Organizer for Junior Investigator Group (JIG), 12/2010 - 1/2014

Volunteered at Group Health Annual Meeting, 10/2012

Member of Biostatistician (non-investigator) search committee, 2011, 2020

- Member of Strategic Planning and Development Interdisciplinary Involvement Committee,
01/2012 - 03/2012
Member of Committee to assess biostatistics help request process, 04/2011 - 09/2011
- Local service and involvement, Department of Biostatistics, University of Washington
Grader for UW Department of Biostatistics PhD Applied Statistics Examination, 2013, 2021
- Local service and involvement, McGill University
Founder and organizer of reading group on causal inference, 2009-2010
Biweekly reading group discusses current papers on causal inference methodology and applications of these methods.
Multidisciplinary group, members include students, post-docs and professors from biostatistics, epidemiology, statistics and computer science.
Founder and Organizer of reading group on semi-parametric modelling, 2009-2010

12. TEACHING HISTORY:

- Curating clinical data for research purpose. Guest lecturer, Health Services 525 March 2022
- Using clinical data to conduct observational studies. Guest lecturer, Health Services 525 April 2022
- Introduction to marginal structural models. Guest lecturer, Epidemiology 528 May 2022
Epidemiology Department, University of Washington
- Designing and analyzing observational studies using data collected from clinical care Guest lecturer, Health Services 525 April 2020
Department of Health Systems and Population Health , University of Washington
- Data curation in studies using clinical data for research. Guest lecturer, Health Services 525 March 2022
Department of Health Systems and Population Health , University of Washington
- Short course on using electronic health records data for research, Co-taught 11/15/2020
6th Seattle Symposium in Biostatistics: Precision Health in the Age of Data Science
Seattle, WA, University of Washington
- Independent study, Biostatistics Graduate student Nina Galanter Spring 2020
- Guest lecturer, Epidemiology 528 May 2020
Epidemiology Department, University of Washington
Marginal structural models: example physical activity and CVD
- Guest lecturer, Epidemiology 528 May 2020
Epidemiology Department, University of Washington
Using data collected during clinical care for epidemiological research
- Guest lecturer, Epidemiology 533 May 2016
Epidemiology Department, University of Washington
Use of Propensity score in pharmaco(epidemiology) research
- Guest lecturer, Biostat 111 Jun 2015
Biostatistics Department, University of Washington
Using data collected during clinical care to prevent suicide attempts and death

Instructor	Aug 2007 - Nov 2007
Biostatistics Collaboration of Australia, Linear Models Teaching Assistant	Feb 2007 - May 2007
Biostatistics Collaboration of Australia, Probability and Distribution Theory	
Tutor	Sept 2003 - Dec 2006
Statistics Tutoring Center, Department of Statistics, University of Washington	
Teaching Assistant	Jan 2002 to Dec 2006
Department of Statistics, University of Washington	
Undergraduate introductory statistics course for non majors, Fall 2006	
Graduate level non parametric statistics course, Spring 2006	
Undergraduate introductory statistics course, Fall 2003	
Undergraduate introductory statistics course for non majors, Winter 2002	

13. ADVISING and FORMAL MENTORING:

- a) PhD Dissertation, chair: Not applicable
- b) Masters Theses, chair: Not applicable
- c) Mentored Scientists and Postdocs:
 - Individuals currently mentored
 - Yates Coley, PhD, Primary KPWHRI mentor 2/2020 - present. CATALyst K12 Scholar mentoring committee member, 1/2019- 1/2020.
 - Maricela Cruz, PhD, KPWHRI co-mentor 2/2020 - present
 - M Ablisola Idu, MS, KPWHRI co-mentor , 4/2021- present.
 - Aruna Kamineni, PhD, KPWHRI co-mentor , 6/2020- present.
 - Gwen Lapham, PhD, KPWHRI mentoring committee member, 1/2019- present.
 - Brian Williamson, PhD, Primary KPWHRI mentor 4/2022 - present.
 - Individuals mentored previously
 - Lu Chen, PhD. Group Health Foundation Postdoc; primary co-mentor, 9/2016-7/2018
 - Mentoring programs
 - Mentor through American Statistical Association's Diversity Mentoring Program, 8/2020 - present
 - Mentor through Washington State Opportunity Scholarship SHINE program, 2016
- d) MS Committees in non-chair roles: Not applicable
- e) PhD Committee in non-chair roles:
 - Zeyu Bian, PhD in Biostatistics, Department of Epidemiology, Biostatistics, and Occupational Health, McGill Univeristy, expected 2022
 - Julie Richards, Department of Health Services, University of Washington, 2019
 - Elisa Sheng, Department of Biostatistics, University of Washington, 2015
- f) Other Mentoring
 - Research Advisor for Nina Galentar, graudate student research assistant, 3/2020-present
 - Research Advisor for Jiacheng Wu, graudate student research assistant, 9/2018-3/2020
- g) Academic Advising: Not applicable
- h) KPWHRI Biostatistics Unit Supervision
 - Chloe Krakauer, PhD, 3/2021-present
 - Eric Johnson, MS, 10/2014-10/2016, 5/2022 - present
 - Linn Abraham, MS, 3/2021-present

Laura Ichikawa, MS, 3/2021-present

Melissa Anderson, MS, 6/2017-2020, 5/2022 - present

Noorie Hyun, PhD 11/2021 - present

Jane Lange, PhD, 2013-2015

Jing Zhuo, MS, 3/2021-4/2022

Julia Smith, MS, 3/2021-3/2022

Rod Walker, MS, 10/2014-3/2020, 3/2021-5/2022

Rob Wellman, MS, 3/2021-5/2022

14. OTHER PERTINENT INFORMATION AS NEEDED:

Not applicable