

# CURRICULUM VITAE

Susan Marlene Shortreed

Updated: January 15, 2019

---

## 1. BIOGRAPHICAL INFORMATION:

Susan M Shortreed, Ph.D.  
Associate Investigator  
Biostatistics Unit, Kaiser Permanente Washington Health Research Institute  
1730 Minor Avenue, Suite 1600  
Seattle, WA 98101-1448  
Phone: +1 206-287-2088  
Email: shortreed.s@ghc.org

Affiliate Associate 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:

Associate Investigator March 2017 - Present  
Biostatistics Unit, Kaiser Washington Health Research Institute, Seattle, WA

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

Associate Investigator May 2014 - March 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 Jan 2009 - Oct 2010  
School of Computer Science, McGill University, Montreal, QC, CAN

Research Scientist Jan 2007 - Dec 2008  
Dept of Epidemiology and Preventive Medicine, Monash University, Melbourne, VIC, Australia

Research Assistant Jan 2004 - Sep 2006  
Department of Statistics, University of Washington, Seattle, WA, USA

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:

Nominated for KPWHRI Mentorship award, 2013, 2018  
Biometrics Highlighted Paper for Atlantic Causal Inference Conference 2018  
Accepted as participant in American Statistical Association's Sense About Science Media Training and Public Communication Workshop 2016  
Accepted as 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:

Member, ASA section on Statistics in Epidemiology Mentoring Committee, 2018-present  
Past-Chair, ASA section on Statistics in Epidemiology, 2018  
Chair, ASA section on Statistics in Epidemiology, 2017  
Chair-Elect, ASA section on Statistics in Epidemiology, 2016  
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)

Editorial activities:

Editorial Board, *Observational Studies*, 2017-Present  
Associate Editor, *Journal of the Royal Statistical Society, Series C*, 2016-2018

Referee for:

Journals

American Journal of Epidemiology  
Biometrics  
Canadian Journal of Statistics  
Contemporary Clinical Trials  
Journal of the American Statistical Association  
Journal of Computational and Graphical Statistics  
Journal of Education and Behavioral Statistics  
Statistics in Medicine  
NPJ Schizophrenia  
MDM Policy & Practice  
Pharmacoepidemiology and Drug Safety

Conferences

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

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  
 Medical Research Council, United Kingdom  
 The Netherlands Organisation for Health Research and Development

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

Professional Memberships:

American Statistical Association (ASA)

ASA Biometrics Section

ASA Health Policy Section

ASA Mental Health Statistics Section

ASA Statistics in Epidemiology Section

ASA Statistical Learning and Data Mining Section

International Biometric Society, Western North American Region

Society for Clinical Trials

American Association for the Advancement of Science (AAAS)

AAAS Section on Statistics

## 7. BIBLIOGRAPHY:

### a) Peer-reviewed research articles, reverse chronological order

1. † $\gamma$ **Shortreed SM**, Cook AJ, Coley YR, Bobb JF, Nelson JC. (in press) Challenges and opportunities for using big clinical data to advance medical science (*American Journal of Epidemiology*)
2. †*Simon GE*, **Shortreed SM**, *Coley RY*, *Penfold RB*, *Rosson RC*, *Waitzfelder BE*, *Sanchez K*, *Lynch FL*, (in press) *Assessing and minimizing re-identification risk in research data derived from healthcare records* eGEMS
3. ‡**Shortreed SM**, *Rutter CM*, *Cook AJ*, *Simon GE*. (in press) *Improving pragmatic clinical trial design by using real-world data*. *Clinical Trials*
4. †*Simon GE*, *Yarborough BJ*, *Rosson RC*, *Lawrence JM*, *Lynch FL*, *Waitzfelder BE*, *Ahmedani BK*, **Shortreed SM**. (in press) *Self-reported suicidal ideation predicts suicidal behavior in outpatient receiving psychotic disorder diagnosis*. *Psychiatric Services*
5. \*†*Chen L*, *Pocobelli G*, *Yu O*, **Shortreed SM**, *Osmundson SS*, *Fuller S*, *Wartko PD*, *McCulluch D*, *Warwick S*, *Newton K*, *Dublin S*. (in press) *Early pregnancy hemoglobin A1C and pregnancy outcomes: a population-based study*. *American Journal of Perinatology*
6. †*Dublin S*, *Walker RL*, **Shortreed SM**, *Ludman EJ*, *Sherman KJ*, *Hansen RN*, *Thakral M*, *Saunders K*, *Parchman ML*, *Von Korff M*. (in press) *Impact of initiatives to reduce prescription opioid risks on medically attended injuries in people using chronic opioid therapy*. *Pharmacoepidemiology and Drug Safety*

7. † 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.
8. † Coleman KJ, Johnson E, Ahmedani BK, Beck A, Rossom RC, **Shortreed SM**, Simon GE. (in press) Predicting suicide attempts for racial and ethnic groups of patients during routine clinical care. *Suicide and Life-Threatening Behavior*
9. † 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.
10. † 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.
11. † 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
12. † 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.
13. † Sherman KJ, Walker RL, Saunders 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.
14. † 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).
15. † 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
16. † 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.
17. † 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

18. †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.
19. ‡**Shortreed SM**, Ertefaie A. (2017) *Outcome-adaptive lasso: variable selection for causal inference*. *Biometrics*, 73(4):1111-22.
20. †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
21. †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.
22. †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.
23. †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.
24. †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.
25. †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.
26. †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.
27. †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
28. †**Shortreed SM**, Johnson E, Rutter CM, Kaminey 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.
29. †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.
30. †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.

31. ‡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
32. †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):221227.
33. ‡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.
34. †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.
35. †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
36. †**Shortreed SM**, Von Korff M, Thielke S, LeResche LA, Saunders KW, Rosenberg D, Turner JA. (2016) Assessing nonresponse bias with electronic health records: A survey of chronic opioid therapy patients. *Observational Studies*, 2:24–38
37. †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):16271632
38. †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.
39. †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.
40. †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
41. †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) Identifying similar exposure scenarios in occupational questionnaire responses using hierarchical cluster models. *Annals of Occupational Hygiene*, 15(4):155-66
42. †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.
43. ‡**Shortreed SM**, Laber E, Stroup TS, Pineau J, Murphy SA. (2014) Multiple imputation for sequential multiple assignment randomized trials. *Statistics in Medicine*, 33(24):420214.

44. ‡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.
45. †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.
46. †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.
47. †Vitiello VM, McCurry SM, **Shortreed SM**, Baker LD, Rybarczyk BD, Von Korff M. (2014) Improved sleep quality predicts long-term improvements in sleep, pain, and fatigue in older adults with co-morbid osteoarthritis and insomnia. *PAIN*, 155(8):1547-54.
48. †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.
49. †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.
50. †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.
51. †**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.
52. †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.
53. †Turner JA, **Shortreed SM** Saunders KW, LeResche LA, Berlin JA, Von Korff M. (2013) Optimizing prediction of back pain outcomes. *Pain*, 154(8):1391.
54. †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.
55. ‡**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.
56. †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.

57. †*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.*
58. †*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.*
59. †*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.*
60. ‡*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.*
61. ‡*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.*
62. †*Abdullah A, Stowwinder 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.*
63. †*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.*
64. ‡*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.*
65. †*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.*
66. †*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.*
67. †*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.*
68. ‡*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.*
69. †*Shortreed S and Meilä M. (2005) Unsupervised spectral learning. Published in proceedings of 21st Conference in Uncertainty in Artificial Intelligence, edited by Fahiem Bacchus and Tommi Jaakkola.*



70. ‡ 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.

## b) Other Peer-reviewed Scholarly Publications:

1. **Shortreed, SM**, Peeters, P, Forbes, A (2008) Estimating the reduction in cardiovascular disease mortality risk. Abstract in *Proceedings of the American Heart Association Scientific Sessions*, 2008. Oral presentation at American Heart Association Scientific Sessions Conference, 11/08.

## c) Books and book chapters:

Invited book chapters:

1. **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.
2. Hanuese, 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.

## d) Other Non-peer-reviewed scholarly publications:

1. Rutter CM and **Shortreed SM** (2012) Writing a clinically appraised topic is a team sport. *Academic Radiology*, 9(7):777-8.
2. **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. 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
2. 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
3. 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; 7/1/2018 - 4/30/2022

4. 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
5. 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.
6. 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
7. 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
8. 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
9. 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.
10. 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.
11. 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.
12. 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.
13. 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.
14. Evaluation of Group Healths 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
15. 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
16. 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
17. 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
18. 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
19. 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
20. 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

21. 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
22. 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
23. 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
24. 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
25. 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. *Validating a Computable Phenotype: Should Results Change a Trials Pre-Specified Primary Outcome?* NIH Collaboratory Grand Rounds (11/2018)
2. \**Using EHR data to design pragmatic clinical trials* Joint Statistical Meetings, Vancouver, BC (7/2018)
3. \**Using EHR data to target suicide prevention care* Joint International Society of Clinical Biostatistics and Australian Statistical Conference, Melbourne, VIC (8/2018)
4. \**Using EHR data to target suicide prevention care* Eastern North American Region of the International Biometric Society, Atlanta, GA (3/2018)
5. *Bringing machine learning to the point of care to inform suicide prevention* NIH Collaboratory Grand Rounds (10/2017)
6. *Bringing machine learning to the point of care to inform suicide prevention* Kaiser Permanente Washington Health Research Institute, Seattle, WA (9/2017)
7. \**Leveraging Electronic Medical Records to Better Target Suicide Prevention* IMPACT IV Symposium, Raleigh, NC, (11/2016)
8. \**Using EHR data in Epidemiology research* Guest Lecture, Epidemiology 528, Department of Epidemiology, University of Washington, (11/2016)
9. \**Outcome-adaptive lasso: variable selection for causal inference*, Workshop on Discovery of causal structure in high dimensions, Montreal, QC (6/2018)
10. \*†*Outcome-adaptive lasso: variable selection for causal inference* Atlantic Causal Inference Conference, Pittsburgh, PA (5/2018)
11. \**Outcome-adaptive lasso: variable selection for causal inference* Fred Hutchinson Cancer Research Center, Seattle, WA, (12/2016)
12. \**Data-adaptive variable selection 2<sup>nd</sup>* Seattle Symposium on Health Care Data Analytics, Seattle, WA, (10/2016)
13. \**Variable selection for Causal inference* Causal inference working group, Biostatistics Department, University of Washington, Seattle, WA, (1/2016)

14. *\*Variable selection for causal inference*, Conference of the Western North American Region of the International Biometric Society, Honolulu, HI, USA (6/2014)
15. *\*Variable selection for causal inference*, Simon Fraser University, Burnaby, BC, USA (4/2014)
16. *\*Health science research using data collected from electronic health records - depression disparities*, Annual Biomedical Research Conference for Minority Students, Seattle, WA, (11/2015)
17. *\*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)
18. *\*Constructing dynamic treatment regimes*, Program in Health Economics and Outcomes Methodology, Seattle, WA, (01/2015)
19. *Integrating Multiple Imputation and the Bootstrap*, Joint statistical meetings, Boston, MA (8/2014)
20. *\*Framework for Integrating Multiple Imputation and the Bootstrap*, Fred Hutchinson Cancer Research Center, Seattle, WA, USA (12/2013)
21. *\*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)
22. *Multiple Imputation Strategy for Sequential Multiple Assignment Randomized Trials*, Joint Statistical Meetings, Montreal, QC, CAN (08/2013)
23. *Data Mining for Adverse Events in the Vaccine Safety Datalink Collaboration*, Joint Statistical Meetings, San Diego, CA, USA (08/2012)
24. *\*Accommodating Missing Data when Constructing Dynamic Treatment Regimes*, International Chinese Statistical Association, Applied Statistics Symposium, Boston, MA, USA (6/2012)
25. *\*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)
26. *Introduction to Sequential Multiple Assignment Randomized Trials*, UW Biostatistics, Clinical Trials Working Group, Seattle, WA, USA (3/2012)
27. *\*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)
28. *\*The Role of Data Mining in Post-licensure Vaccine Safety Surveillance*, 2011 International Workshop on Pharmacoepidemiology and Biostatistics, Seattle, WA, USA (12/2011)
29. *\*Multiple Imputation Strategy for Sequential Multiple Assignment Randomized Trials*, University of Washington, Department of Biostatistics, Seattle, WA, USA (10/2011)
30. *\*Introduction to Semiparametric Theory*, McGill University, Reinforcement Learning Lab, Montreal, QC, CAN (10/2010)

31. *\*Learning the Similarity Matrix for Spectral Clustering*, 5th Workshop on Reinforcement Learning, Barbados (03/2010)
32. *Using Reinforcement Learning to Inform Clinical Decision Making, some practical considerations*, McGill University, Reinforcement Learning Lab, Montreal, QC, CAN (03/2010)
33. *\*Estimating Optimal Dynamic Treatment Regimes: An Application to Schizophrenia*, Group Health Research Institute, Seattle, WA, USA (03/2010)
34. *Missing Data Methods in Epidemiologic Studies*, Joint Statistical Meetings, Washington, DC, USA (08/2009)
35. *\*Learning the Similarity Matrix for Spectral Clustering*, Colloque de statistique de Montréal, SRM/ISM/GERAD, Montreal, QC, CAN (03/2009)
36. *\*Introduction to Spectral Clustering and Variable Weighting*, McGill University, Reinforcement Learning Lab, Montreal, QC, CAN (01/2009)
37. *\*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)
38. *\*Estimating Causal Effects from Epidemiological Data*, Monash University, Department of Epidemiology and Preventive Medicine, Melbourne, VIC, Australia (10/2008)
39. *\*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)
40. *\*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)
41. *\*Learning in Spectral Clustering*, University of Washington, Statistics Department, Seattle, WA, USA (11/2006)
42. *\*Learning in Spectral Clustering*, National Institute for Statistical Sciences, Raleigh, NC, USA (03/2006)
43. *\*Learning in Spectral Clustering*, AT&T Bell Labs, Middletown, PA, USA (03/2006)
44. *\*Learning in Spectral Clustering*, University of California Los Angeles, Statistics Department, Los Angeles, CA, USA (03/2006)
45. *Regularized Spectral Learning*, University of Washington, Statistics Department, Seattle, WA, USA (06/2005)
46. *Spectral Energy Minimization for Semi-Supervised Learning*, University of Washington, Unsupervised Learning Working Group, Seattle, WA, USA (05/2005)
47. *Unsupervised Learning in Spectral Clustering*, Unsupervised Learning Working Group, University of Washington, Seattle, WA, USA (10/2004)
48. *Positional Estimation within the Latent Space Model for Networks*, University of Washington, Students in Statistics and the Social Sciences, Seattle, WA, USA (05/2004)
49. *Latentnet an R package*, University of Washington, Social Networks Working Group, Seattle, WA, USA (10/2003)

50. *Applying the Latent Space Model to Social Networks*, University of Washington, Statistics Department, Seattle, WA, USA (06/2003)

\* invited presentation

†selected to be the highlighted paper for the Biometrics-sponsored session

## 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

Chair of collaborative biostatistician search 2018

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

Co-char 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,

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 Department of Biostatistics PhD Applied Statistics Examination, 2013

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:

Guest lecturer, Epidemiology 528 Nov 2016

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  
Department of Statistics, University of Washington

Jan 2002 to Dec 2006

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: Lu Chen, PhD

Lu Chen, PhD

- d) MS Committees in non-chair roles: Not applicable
- e) PhD Committee:

Julie Richards, Department of Health Services, University of Washington,  
Elisa Sheng, Department of Biostatistics, University of Washington, 2015

- f) Other Mentoring

Research Advisor for Jiacheng Wu, graduate student research assistant, 9/2018-present  
Supervisor for biostatisticians Rod Walker, MS (10/2014-present), Melissa Anderson, MS (6/2017-present) and Eric Johnson, MS (10/2014-10/2016)  
Supervisor for GHRI Biostatistics Unit post-doc Jane Lange, PhD; 2013-2015  
Senior statistician on projects with additional statisticians  
Mary Akosile, Melissa Anderson, Andy Bogart, Eric Johnson, Do Peterson, Onchee Yu,  
Rod Walker, Rob Wellman  
co-advisor for undergraduate student, Marcos Ginestra, School of Computer Science, McGill University, National Science and Engineering Research Council of Canada (NSERC) undergraduate, May 2009 - May 2012  
Organize KPWHRI Biostatistics Unit peer-mentoring

- g) Academic Advising: Not applicable

**14. OTHER PERTINENT INFORMATION AS NEEDED:**

Not applicable