

CONTACT INFORMATION

Vanderbilt University Medical Center
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EDUCATION

- B.S., Mathematics. Northeastern University, Boston, MA, 2011
- M.S., Biostatistics. University of Washington, Seattle, WA, 2015
- Ph.D., Biostatistics. University of Washington, Seattle, WA, 2016
- Postdoctoral Researcher, University of Pennsylvania, Department of Biostatistics, Epidemiology, and Informatics, and Center for Causal Inference, 2016–2018
- Associate Fellow, Leonard Davis Institute of Health Economics, 2017–2018

ACADEMIC APPOINTMENTS

- Assistant Professor of Biostatistics, Vanderbilt University Medical Center, 2018–

OTHER EMPLOYMENT

- Research Assistant, Beth Israel Deaconess Medical Center, 2010–2012
- Research Assistant, Collaborative Health Studies Coordinating Center, 2012–2015
- Research Assistant, Fred Hutchinson Cancer Research Center, 2015–2016

PROFESSIONAL ORGANIZATIONS

- International Biometric Society (Eastern North American Region), 2014–
- American Statistical Association, 2015–
- International Biometric Society (Western North American Region), 2015–2017

PROFESSIONAL ACTIVITIES: INTRAMURAL

University of Washington

- Student Representative, Departmental Self-Study Committee, 2012–2013
- Facilitator, University of Washington Annual TA/RA Conference, 2015
- Member, Educational Policy and Teaching Evaluation Committee, 2014–2016
- Member, Faculty/Student Relations Committee, 2015–2016

University of Pennsylvania, Department of Biostatistics, Epidemiology, and Informatics

- Member, Post-Doc Training Task Force, 2017-2018

Vanderbilt University Medical Center, Department of Biostatistics

- Founder/Organizer, Vanderbilt Causal Inference Workshop, 2018–
- Organizer, Weekly Biostatistics Seminar Series, 2018–
- Member, Faculty Search Committee, 2019–
- Member, Qualifying Exam Committee, 2019–
- Member, Selection Committee for Arbogast Collaborative Award, 2020

PROFESSIONAL ACTIVITIES: EXTRAMURAL

Committees

- Member, ENAR Distinguished Student Paper Awards Committee, 2018–2021
- Member, David P. Byar Young Investigator Award Committee, 2018–2019
- ENAR Poster Session Judge, 2019

Conference Sessions Organized and Chaired

1. Organizer and Chair: Recent Advances in Bayesian Methods for Cost and Cost-Effectiveness Analysis. ICHPS: San Diego, CA, January 2020.
2. Chair: Survival Analysis and Semi-parametric and Non-parametric Models. ENAR: Washington, D.C., March 2017.
3. Chair: Recent Developments in Observational Data. WNAR: Santa Fe, NM, June 2017.
4. Chair: Comparative Effectiveness Research. ENAR: Atlanta, GA, March 2018.

Reviewer

- *British Medical Journal* (2016)
- *Pharmacoepidemiology and Drug Safety* (2016, 2017)
- *Biostatistics* (2016, 2017)
- *American Journal of Epidemiology* (2015, 2016, 2017, 2018)
- *Journal of the American Statistical Association* (2017, 2018)
- *PLOS One* (2018)
- *Circulation: Cardiovascular Quality and Outcomes* (2018, 2019)
- *Statistics in Medicine* (2019, 2020)
- *International Journal of Biostatistics* (2017, 2019, 2020)
- *Cancer* (2020)
- *Journal of the Royal Statistical Society, Series C* (2016, 2020)
- *International Journal of Epidemiology* (2020)
- *Observational Studies* (2020)

Awards and Honors

- University of Washington Department of Biostatistics Retreat: Best Research Poster Award (as selected by incoming students), 2013
- University of Washington Department of Biostatistics: Outstanding Teaching Assistant Award, 2014
- WNAR Student Paper Competition: Most Outstanding Paper Award, 2015
- WNAR Student Paper Competition: Most Outstanding Oral Presentation Award, 2015
- Atlantic Causal Inference Conference: Ten Have Poster Presentation Award Runner-up, 2017
- Outstanding Faculty Mentor Award, Vanderbilt University Department of Biostatistics, 2020

TEACHING ACTIVITIES AND MENTORING

Instructor: Graduate Courses

University of Pennsylvania Perelman School of Medicine

- Health Policy Research 604 - Introduction to Statistics for Health Policy (Autumn 2017)
Enrollment: 24

Vanderbilt University Medical Center

- Biostatistics 6312 - Modern Regression Methods (Spring 2020)
Enrollment: 18
- Biostatistics 6312 - Modern Regression Methods (Spring 2021)
Enrollment: TBD

Instructor: Undergraduate Courses

University of Washington

- Biostatistics 311 - Regression Methods in the Health Sciences (Spring 2016)
Enrollment: 7

Instructor: Short Courses

Vanderbilt Center for Quantitative Science Summer Institute

- Introduction to Causal Inference (August 2019)

Graduate Teaching Assistantships

University of Washington

- Biostatistics 524 - Design of Medical Studies (Spring 2014)
Enrollment: 34
- Biostatistics 570 - Advanced Regression Methods I (Autumn 2014)
Enrollment: 44
- Biostatistics 571 - Advanced Regression Methods II (Winter 2015)
Enrollment: 36
- Biostatistics 524 - Design of Medical Studies (Spring 2015)
Enrollment: 38

Instructor: Massachusetts Institute of Technology Educational Studies Program

Full Courses

- Counting Principles (Summer 2009)
- Calculus AB (September 2009 - May 2010)
- Multivariable Calculus (Summer 2010)
- Counting Principles (Summer 2011)
- Calculus BC (September 2010 - May 2011)
- Calculus BC (September 2011 - May 2012)

Short Courses

- Introduction to Calculus (2008, 2009)
- Group Theory (2008, 2009)
- Number Theory (2009)
- Stochastic Processes (2009)
- Introduction to Topology (2009)
- Introduction to Real Analysis (2009)
- Complex Variables (2009, 2010)

Research Supervision

Primary Advisor

- Aaron Lee (Biostatistics MS)
- Caroline Birdrow (Biostatistics MS)
- Jamie Joseph (Biostatistics PhD)

Committee Member

- Thomas Klink (Epidemiology MPH, 2019)
- Varvara Probst (Epidemiology MPH, 2020)
- Nicholas Illenberger (Biostatistics PhD; University of Pennsylvania)

Other Advising and Mentoring

- Marlena Norwood (*Ad hoc* undergraduate honors project), 2016
Topic: Simulation studies and nonparametric bootstrapping methods
- Coleman Harris (Summer research project advisor), 2018
Topic: Causal inference and cost-effectiveness methods

RESEARCH PROGRAM

Ongoing Research

P30 CA 068485-25 (Pietenpol) NIH/NCI <i>Cancer Center Support Grant</i>	09/01/20 – 08/31/25	10% Role: Biostatistician
P50 CA 098131-18 (Pietenpol) NIH/NCI <i>SPORE in Breast Cancer</i>	08/07/03 – 07/21/24	10% Role: Biostatistician
R01 DK 100694-06 (Mayberry) NIH/NIDDK <i>Improving Medication Adherence Among Underserved Patients with Type 2 Diabetes</i>	07/14/14 – 04/30/21	10% Role: Biostatistician
K12 HL 137943-04 (Kripalani) NIH/NHLBI <i>Vanderbilt Scholars in T4 Translational Research (V-STTAR) Program</i>	09/01/17 – 08/31/22	10% Role: Biostatistician
U01 IP 001063-05-00 (Halasa) NIH/NCIRD <i>Enhanced Surveillance for New Vaccine Preventable Diseases</i>	09/01/16 – 08/31/21	5% Role: Biostatistician
U01 AI 132004-03 (Halasa) NIH/NIAID <i>High vs. Standard Dose Flu Vaccine in Adult Stem Cell Transplant Recipients</i>	07/05/17 – 06/30/20	2% Role: Biostatistician
R34 AI 150532-01 (Halasa) NIH/NIAID <i>High vs. Standard Dose Flu Vaccine in Pediatric Solid Organ Transplant Recipients</i>	06/04/20 – 05/31/21	5% Role: Co-Investigator
U01 AI 152967-01 (Halasa) NIH/NIAID <i>Comparison of High vs. Standard Dose Influenza Vaccines in Adult Solid Organ Transplant Recipients</i>	09/01/20 – 06/30/25	5% Role: Co-Investigator
R21 AI 149303-01 (Halasa) NIH/NIAID <i>Adenovirus Types and Acute Respiratory Illness Severity in Children</i>	09/01/20 – 06/30/25	3% Role: Co-Investigator

Completed Research

U01 AI 125135-03 (Halasa) NIH/NIAID <i>Comparison of High vs. Standard Dose Flu Vaccine in Pediatric Stem Cell Transplant Recipients</i>	08/19/16 – 07/31/19	Role: Biostatistician
RWJF 76037 (Schmidt, Grande, Spieker) <i>Implementation of medicaid work requirements: factors influencing physician willingness to request exemptions</i>	12/01/18 – 11/30/19	Role: Site PI
P30 DK 092986-08 (Elasy) NIH/NIDDK <i>Center for Diabetes Research Pilot & Feasibility Award</i>	08/01/18 – 07/31/19	Role: Biostatistician

ORIGINAL PUBLICATIONS

* - Indicates joint authorship.

Peer-reviewed Publications

1. Wang L, Spieker AJ, Li J, Rutkove SB. (2011). Electrical impedance myography for monitoring motor neuron loss in the SOD1 G93A amyotrophic lateral sclerosis rat. *Clinical Neurophysiology* 122(12), 2505–2511.
2. Nodera H, Spieker AJ, Sung M, Rutkove SB. (2011). Neuroprotective effects of Kv7 channel agonist, retigabine, for cisplatin-induced peripheral neuropathy. *Neuroscience Letters* 505(3), 223–227.
3. Narayanaswami P, Spieker AJ, Mongiovi P, Keel, JC, Muzin SC, Rutkove SB. (2012). Utilizing a handheld electrode array for localized muscle impedance measurements. *Muscle and Nerve* 46(2), 257–263.
4. Li J, Staats W, Spieker AJ, Sung M, Rutkove SB. (2012). A technique for performing electrical impedance myography in the mouse hind limb: data in normal and ALS SOD1 G93A animals. *PLOS One* 7(9), e45004.
5. Sung M, Spieker AJ, Narayanaswami P, Rutkove SB. (2013). The effect of subcutaneous fat on electrical impedance myography when using a handheld electrode array: the case for measuring reactance. *Clinical Neurophysiology* 124(2), 400–404.
6. Li J, Spieker AJ, Rosen GD, Rutkove SB. (2013). Electrical impedance alterations in the rat hind limb with unloading. *Journal of Musculoskeletal and Neuronal Interactions* 13(1), 37–44.
7. Spieker AJ, Narayanaswami P, Fleming L, Keel JC, Muzin SC, Rutkove SB. (2013). Electrical impedance myography in the diagnosis of radiculopathy. *Muscle and Nerve* 48(5), 800–805.
8. Sung M, Li J, Spieker AJ, Spatz J, Ellman R, Ferguson G, Bateman T, Rosen GD, Boussein M, Rutkove SB. (2013). Spaceflight and hind limb unloading induce similar changes in electrical impedance characteristics of mouse gastrocnemius muscle. *Journal of Musculoskeletal and Neuronal Interactions* 13(4), 405–411.
9. Spieker AJ, Delaney JAC, McClelland RL. (2015). Evaluating the treatment effects model for estimation of cross-sectional associations between risk factors and cardiovascular biomarkers influenced by medication use. *Pharmacoepidemiology and Drug Safety* 24(12), 1286–1296.
10. Hsi RS, Spieker AJ, Stoller ML, Jacobs DR Jr., Reiner AP, McClelland RL, Kahn AJ, Chi T, Szklo M, Sorensen MD. (2015). Coronary artery calcium score and association with recurrent nephrolithiasis: the Multi-Ethnic Study of Atherosclerosis. *Journal of Urology* 195(4), 971–976.
11. Johnson M, Pierson ER., Spieker AJ, Nielsen S, Posso S, Kita M, Buckner J, Goverman J. (2016). Distinct T cell signatures define subsets of multiple sclerosis patients. *Neurology: Neuroimmunology & Neuroinflammation* 3(5):e278.
12. Spieker AJ, Huang Y. (2017). A method to address between-subject heterogeneity for identification of principal surrogate markers in repeated low-dose challenge HIV vaccine studies. *Statistics in Medicine*, 36(26), 4167–4181.

13. Stephens-Shields AJ, Spieker AJ, Yang W, Anderson A, Drawz P, Fischer M, Sozio SM, Feldman H, Joffe M, Green T, The CRIC Study Investigators. (2017). Blood pressure and the risk of chronic kidney disease progression using multistate marginal structural models in the CRIC study. *Statistics in Medicine*, 36(25), 4071–4080.
14. Spieker AJ, Roy JA, Mitra N. (2018). Analyzing medical costs with time-dependent treatment: The nested g-formula. *Health Economics*, 27(7), 1063–1073.
15. Spieker AJ, Delaney JAC, McClelland RL. (2018). A method to account for covariate-specific treatment effects when estimating biomarker associations in the presence of endogenous medication use. *Statistical Methods in Medical Research*, 27(8), 2279–2293.
16. Wan J*, Oganisian A*, Spieker AJ, Hoffstad OJ, Mitra N, Margolis DJ, and Takeshita J. (2019). Racial/Ethnic Variation in Use of Ambulatory and Emergency Care for Atopic Dermatitis Among U.S. Children. *Journal of Investigative Dermatology*, 139(9), 1906–1913.
17. Klink T, Rankin DA, Piya B, Spieker AJ, Faouri S, Shehabi A, Williams JV, Khuri-Bulos N, Halasa NB. (2020). Evaluating the diagnostic accuracy of the WHO Severe Acute Respiratory Infection (SARI) criteria in Middle Eastern children under two years over three respiratory seasons. *PLOS One*, e0232188.
18. Nelson LA, Spieker A, Greevy R, LeStourgeon LM, Wallston KA, Mayberry LS. (2020). User engagement remains high among diverse adults during a 12-month text message-delivered diabetes support intervention. *JMIR mHealth and uHealth*, 8(7):e17534.
19. Gordetsky J, Spieker AJ, Rodriguez Pena MDC, Kamanda S, Anderson MR, Cheville J, Boorjian S, Frank I, Prieto Granada C, Comperat E, Hirsch MS, Iczkowski KA, Imblum B, Schwartz L, Giannico GA, Rais-Bahrami S. (2020). Squamous cell carcinoma of the bladder is not associated with high-risk HPV. *Urology*, 144:158–163.
20. Spieker AJ, Ko E, Roy JA, Mitra N. Nested g-computation: a causal approach to analysis of censored medical costs in the presence of time-varying treatment. (2020). *Journal of the Royal Statistical Society, Series C*, 69(5):1189–1208; [arXiv:1705.08742](https://arxiv.org/abs/1705.08742).
21. Halasa N, Piya B, Stewart LS, Rahman H, Payne DC, Woron A, Thomas L, Constantine-Renna L, Garman K, McHenry R, Chappell J, Spieker AJ, Fonnesebeck C, Batarseh E, Hamdan L, Wikswa ME, Parashar U, Bowen MD, Vinjé J, Hall AJ, Dunn JR. (2020). The changing landscape of pediatric viral enteropathogens in the post-rotavirus vaccine era. To appear in *Clinical Infectious Diseases*.
22. Haddadin Z, Batarseh E, Hamdan L, Stewart L, Piya B, Rahman H, Spieker AJ, Chappell J, Wikswa ME, Dunn JR, Payne DD, Vinjé J, Hall A, and Halasa N. (2020). Characteristics of norovirus GII.4 versus other GII norovirus genotypes in sporadic pediatric infections, Davidson County, Tennessee, USA. To appear in *Clinical Infectious Diseases*.
23. Hamdan L, Vandekar S, Spieker AJ, Rahman H, Ndi D, Lindegren ML, Markus T, Rankin DA, Aronoff DM, Schaffner W, Gaddy JA, Halasa NB. (2020). Epidemiological trends of racial disparities in early-and late-onset group B streptococcus disease in Tennessee. To appear in *Clinical Infectious Diseases*.

24. Nelson LA, Greevy R, Spieker A, Wallston KA, Elasy TA, Kripalani S, Gentry C, Bergner EM, LeStourgeon LM, Williamson SE, Mayberry LS. (2020). Effects of a tailored text messaging intervention among diverse adults with type 2 diabetes: Evidence from the 15-month REACH RCT. To appear in *Diabetes Care*.
25. Haddadin Z, Beveridge S, Fernandez K, Rankin DA, Probst V, Spieker AJ, Markus TM, Stewart LS, Schaffner W, Lindegren ML, Halasa N. (2020). Respiratory syncytial virus disease severity in young children. To appear in *Clinical Infectious Diseases*.

Invited Commentaries

26. Spieker AJ. (2019). Comment on “Penalized Spline of Propensity Methods for Treatment Comparison” by Zhou, Elliott, and Little. *Journal of the American Statistical Association*, 114(S25), 20–23.

Manuscripts Under Review or Pending Submission

27. Spieker AJ, Illenberger N, Roy J, Mitra N. Net benefit separation and the determination curve: a probabilistic framework for cost-effectiveness estimation. Re-submitted to *Statistical Methods in Medical Research*, [arXiv:1912.00039](https://arxiv.org/abs/1912.00039).
28. Spieker AJ, Greevy R, Mayberry L, Nelson L. Bounding the local average treatment effect in an instrumental variable analysis of engagement with a mobile intervention. Submitted to *The Annals of Applied Statistics*, [arXiv:2008.06473](https://arxiv.org/abs/2008.06473).
29. Illenberger N, Mitra N, Spieker AJ. A regression framework for a probabilistic measure of cost-effectiveness. Submitted to *International Journal of Biostatistics*.
30. Haddadin Z, Rankin DA, Lipworth L, Fryzek J, Suh M, Shepard D, McHenry R, Blozinski A, George S, Spieker AJ, Fernandez KN, Varjabedian R, Nelson CB, Halasa N. Clinical Characteristics and Distribution of Respiratory Viral Pathogens in Infants Across Different Clinical Settings in Nashville, TN. *Pending submission*.
31. Thota J, Spieker AJ, Rahman H, Rankin DA, Probst V, Haddadin Z, Stewart LS, Markus T, Lindegren ML, Schaffner W, Halasa NB. Comparison of Single and Multiple Viral Detection in Children Presenting with ARI in Middle Tennessee. *Pending submission*.
32. Probst V, Datyner EK, Haddadin Z, Rankin DA, Hamdan L, Rahman HK, Spieker AJ, Stewart LS, Guevara C, Yepsen E, Schmitz JE, Halasa NB. Human Adenovirus Species in Children with Acute Respiratory Illnesses at Vanderbilt Children’s Hospital. *Pending submission*.
33. Nelson LA, Spieker AJ, Kripalani S, Rothman R, Roumie C, McNaughton CD. User engagement and preferences with a text message-delivered intervention for hypertension medication adherence. *Pending submission*.
34. Nelson LA*, Spieker AJ*, Wallston K, Mayberry L, Greevy R. Statistical methods to characterize the role of engagement with interactive mobile interventions. *Pending submission*.
35. Illenberger N, Spieker AJ*, Mitra N*. A Q-learning approach to determine optimally cost-effective dynamic treatment regimes. *Pending submission*.

PRESENTATIONS

Invited Workshops

1. Computing session for propensity score methods. First Causal Inference and Big Data Summer Institute: Philadelphia, PA, July 2017.
2. Computing session for propensity score and matching methods. Second Causal Inference and Big Data Summer Institute: Philadelphia, PA, June 2018.
3. Introduction to causal inference. Causal Inference and Pharmacoepidemiology Summer Institute: Piscataway, NJ, July 2019.
4. Propensity scores: Matching and inverse probability of treatment weighting. Summer Short Course on Causal Inference, University of Pennsylvania Center for Causal Inference (Virtual), June 2020.
5. Propensity scores: Matching and inverse probability of treatment weighting. Causality in Clinical Research: What, Why, When and How, University of Pennsylvania Center for Causal Inference (Virtual), December 2020.

Invited Conference Presentations

1. Causal approaches to cost and cost-effectiveness analysis with time-dependent treatment regimes. ENAR: Atlanta, GA, March 2018.
2. Approaches to cost-effectiveness analysis based on individual monetary benefit. ENAR: Philadelphia, PA, March 2019.
3. Population-level cost-effectiveness analysis: The individual net benefit from a causal perspective. Third International Conference on Econometrics and Statistics: Taichung, Taiwan, June 2019.
4. Comment on “Penalized Spline of Propensity Methods for Treatment by Zhou, Elliott, and Little”. JSM: Denver, CO, July 2019.
5. A second-generation cost-effectiveness acceptability curve based on the Bayesian credible interval for net monetary benefit. International Conference on Health Policy Statistics: San Diego, CA, January 2020.
6. Bounds for local average treatment effects in instrumental variable analyses of mobile interventions. ICSA Applied Statistics Symposium (Virtual): December 2020.

Invited Seminars

1. Extending Heckman’s treatment effects model to allow heterogeneity in the effects of medication use. FDA Center for Drug Evaluation and Research. White Oak, MD, September 2015.
2. Understanding natural history in the presence of endogenous medication use. Weill Cornell Medical College Division of Biostatistics and Epidemiology. New York, NY, January 2016.
3. Accounting for endogenous medication use when estimating natural biomarker associations using observational data. Stanford Medicine Quantitative Sciences Unit. Palo Alto, CA, March 2016.

4. Recovering natural history: Modeling biomarker age trends in the presence of endogenous medication use. University of Pennsylvania Division of Biostatistics. Philadelphia, PA, October 2016.
5. The nested g-formula: A causal approach to analysis of medical cost data in the presence of censoring. University of Washington, Collaborative Health Studies Coordinating Center. Seattle, WA, May 2017.
6. Analyzing medical cost outcomes with time-dependent treatment. New York University Department of Population Health. New York, NY, October 2017.
7. The nested g-formula: A causal approach for analyzing medical cost outcomes. New York University Division of Biostatistics. New York, NY, January 2018.
8. The nested g-formula: A causal approach for analyzing medical cost outcomes. University of Pennsylvania Division of Biostatistics. Philadelphia, PA, January 2018.
9. The nested g-formula: A causal approach for analyzing medical cost outcomes. University of British Columbia Department of Statistics. Vancouver, BC, January 2018.
10. Analyzing medical cost outcomes with time-dependent treatment. British Columbia Children's Hospital Research Institute. Vancouver, BC, January 2018.
11. The nested g-formula: A causal approach for analyzing medical cost outcomes. University of Utah Department of Population Health. Salt Lake City, UT, February 2018.
12. Analyzing medical cost outcomes with time-dependent treatment. Huntsman Cancer Institute. Salt Lake City, UT, February 2018.
13. Analyzing medical cost outcomes with time-dependent treatment. University of Massachusetts Amherst Department of Biostatistics. Amherst, MA, February 2018.
14. The nested g-formula: A causal approach for analyzing medical cost outcomes. Vanderbilt University Department of Biostatistics Seminar. Nashville, TN, February 2018.
15. Analyzing cost outcomes with time-varying treatment: Guidance for resource allocation and health policy decisions. Drexel University Biostatistics Seminar. Philadelphia, PA, February 2018.
16. Analyzing cost outcomes with time-varying treatment: Guidance for resource allocation and health policy decisions. State University of New York at Albany Epidemiology and Biostatistics Seminar. Albany, NY, February 2018.
17. Using observational data to aggregate evidence of clinical efficacy with information on medical costs. Vanderbilt University Medical Center Biomedical Informatics Seminar. Nashville, TN, February 2019.
18. Bounding local average treatment effects in studies of engagement with mobile interventions. University of Québec at Montréal (Virutal). September 2020.
19. Bounding local average treatment effects in studies of engagement with mobile interventions. University of Pennsylvania Center for Causal Inference (Virutal). October 2020.

Contributed Conference Presentations

1. (Oral) A comparison of methods for biomarker associations with endogenous treatment. ENAR: Baltimore, MD, March 2014.
2. (Oral) Extending Heckman's treatment effects model to allow for treatment heterogeneity. WNAR: Boise, ID, June 2015. (WNAR Most Outstanding Oral Presentation Award).
3. (Oral) Extending Heckman's treatment effects model to non-additive treatment effects. Joint Statistical Meetings: Seattle, WA, August 2015.
4. (Oral) Accounting for heterogeneity when evaluating surrogate endpoints in a discrete-time survival model. ENAR: Austin, TX, March 2016.
5. (Oral) A constrained covariance modeling approach for estimation of marginal age trends in the presence of endogenous medication use. ENAR: Washington, D.C., March 2017.
6. (Poster) A nested g-computation approach for analysis of censored medical cost data. Atlantic Causal Inference Conference: Chapel Hill, NC, May 2017. (Thomas R. Ten Have Poster Session Runner-up).
7. (Oral) A nested g-computation approach to analyze medical cost outcomes in the presence of censoring. WNAR: Santa Fe, NM, June 2017.
8. (Oral) A new direction for health policy decisions based on subgroup discovery: The cost-effectiveness determination curve. Joint Statistical Meetings: Vancouver, BC, August 2018.

STATISTICAL SOFTWARE PACKAGES (R)

- `uwIntroStats`: Emerson SS, [Spieker AJ](#), Williamson BD, Hee Wai T, Lim S. Descriptive Statistics, Inference, Regression, and Plotting in an Intro Stats. Course.
- `endogenous`: [Spieker AJ](#). Classical Simultaneous Equation Models.