

# DAVID M. KLINE, PH.D.

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## EDUCATION

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### **The Ohio State University**

Ph.D. Biostatistics 2015

Advisors: Dr. Rebecca Andridge and Dr. Eloise Kaizar

M.S. Statistics 2012

### **Messiah College**

B.A. Mathematics 2010

Minors: Statistics, Business Administration

## POSITIONS

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**Associate Professor** (with tenure) 2024-present

Department of Biostatistics and Data Science, Division of Public Health Sciences  
Wake Forest University School of Medicine

**Associate Professor** (secondary) 2024-present

Department of Epidemiology and Prevention, Division of Public Health Sciences  
Wake Forest University School of Medicine

**Interim Vice Chair** 2024-present

Department of Biostatistics and Data Science, Division of Public Health Sciences  
Wake Forest University School of Medicine

**Affiliate Faculty** 2022-present

Department of Statistical Sciences  
Wake Forest University

**Assistant Professor** (secondary) 2022-2024

Department of Epidemiology and Prevention, Division of Public Health Sciences  
Wake Forest University School of Medicine

**Assistant Professor** (tenure track) 2021-2024

Department of Biostatistics and Data Science, Division of Public Health Sciences  
Wake Forest University School of Medicine

**Assistant Professor** (courtesy) 2019-2021

Division of Biostatistics, College of Public Health  
The Ohio State University

**Assistant Professor** (tenure track) 2018-2021

Center for Biostatistics, Department of Biomedical Informatics, College of Medicine  
The Ohio State University

**Adjunct Assistant Professor** 2017-2019

Division of Biostatistics, College of Public Health  
The Ohio State University

**Research Scientist** 2015-2018

Center for Biostatistics, Department of Biomedical Informatics, College of Medicine  
The Ohio State University

## AWARDS

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2023 Top 10 Research Paper Award, Wake Forest University Division of Public Health Sciences	2024
2022 Top 10 Research Paper Award, Wake Forest University Division of Public Health Sciences	2023
Excellence in Teaching Award, The Ohio State University Department of Biomedical Informatics	2020
The CSP 2015 Best Student Poster Award Runner-Up, American Statistical Association	2015
Lester R. Curtin Award, American Statistical Association	2014
University Fellowship, The Ohio State University	2010-2011
Lubrizol Fellowship, The Ohio State University	2010
The Honor Society of Phi Kappa Phi, The Ohio State University	2010
Mathematics Department Honors, Messiah College	2010
Who's Who Among Students in American Universities and Colleges	2010
Sigma Zeta National Science and Mathematics Honor Society, Messiah College	2008-2010
Honors Program, Messiah College	2006-2010

## PEER REVIEWED PUBLICATIONS

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\* indicates trainee, † indicates co-first author, ‡ indicates corresponding author

- [1] M.S. Bulthuis, S.J.M. van Leeuwen, R.Z. Thomas, L.L.A. van Gennip, H.M. Whiteside, S. Isom, **D. Kline**, A.M.G.A. Laheij, J.E. Raber-Durlacher, B. Hasséus, J. Johansson, A.J. Hovan, M.T. Brennan, I. von Bültzingslöwen, M.D.N.J.M. Huysmans, and N.M.A. Blijlevens. Subjective oral dryness following haematopoietic cell transplantation: a report from the Orastem study. *Transplantation and Cellular Therapy*, 2024. In press.
- [2] A.T. Estadt\*, B.N. White, J.M. Ricks, K.E. Lancaster, S. Hepler, W.C. Miller, and **D. Kline**. The impact of fentanyl on state and county-level psychostimulant and cocaine overdose death rates by race in Ohio from 2010-2020: A time series and spatio-temporal analysis. *Harm Reduction Journal*, 2024. In press.
- [3] S.A. Hepler, K.A. Kaufeld, **D. Kline**, A. Greene, and M.E. Gorris. Estimating coccidioidomycosis endemicity while accounting for imperfect detection using spatio-temporal occupancy modeling. *American Journal of Epidemiology*, 2024. In press.
- [4] S.P. Carmichael II, P.K. Chandra, J.W. Vaughan, **D. Kline**, E.H. Ip, J.B. Holcomb, and A.J. Atala. Prevention of post-operative adhesions: Model development and pilot outcomes of human placental stem cell-based and hyaluronic acid hydrogel interventions. *Transfusion*, 2024. In press.
- [5] R. Ortiz, K.N. Kershaw, S. Zhao, **D. Kline**, G. Brock, S. Jaffee, S.H. Golden, G. Ogedegbe, J. Carroll, T.E. Seeman, and J.J. Joseph. Evidence for the association between adverse childhood family environment, child abuse, and caregiver warmth and cardiovascular health across the lifespan: The coronary artery risk development in young adults (cardia) study. *Circulation: Cardiovascular Quality and Outcomes*, page e009794, 2024. In press.
- [6] A.M. South, V.C. Giammattei, K.W. Bagley, C.Y. Bakhoun, W.H. Beasley, M.B. Bily, S. Biswas, A.M. Bridges, R.L. Byfield, J.F. Campbell, R. Chanchlani, A. Chen, L. D’Agostino McGowan, S.M. Downs, G.M. Fergeson, J.H. Greenberg, T.A. Hill-Horowitz, E.T. Jensen, M. Kallash, M. Kamel, S.G. Kiessling, **D. Kline**, J.R. Laisure, G. Liu, J. Londeree, C.B. Lucas, S.S. Mannemuddhu, K. Mao, J.M. Misurac, M.O. Murphy, J.T. Nugent, E.A. Onugha, A. Pudupakkam, K.M. Redmond, S. Riar, C.B. Sethna, S. Siddiqui, A.L. Thumann, S.R. Uss, C.L. Vincent, I.V. Viviano, M.J. Walsh, B.D. White, R.P. Woroniecki, M. Wu, I. Yamaguchi, E. Yun, and D.J. Weaver Jr. The Study of the Epidemiology of Pediatric Hypertension Registry (SUPERHERO): Rationale and Methods. *American Journal of Epidemiology*, page kwae116, 2024.
- [7] A.M. Stino, N. Bumma, R. Smith, L. Davalos, J. Allen, J.C. Ye, M. Pianko, E. Campagnaro, C. Fierro, A. Awad, B. Murdock, M. Pietrzak, G. Loszanski, **D. Kline**, Y. Efebera, and B. Elsheikh. Lenalido-

mid in the treatment of anti-myelin associated glycoprotein neuropathy - A Phase 1 study to identify the maximum tolerated dose. *European Journal of Neurology*, 31(3):e16164, 2024.

- [8] J. Wang\*, D. Bernson, E.A. Erdman, J. Villani, R. Chandler, **D. Kline**, L.F. White, and J.A. Barocas. Intersectional inequities and longitudinal prevalence estimates of opioid use disorder in Massachusetts 2014-2020: a multi-sample capture-recapture analysis. *The Lancet Regional Health - Americas*, 2024. In press.
- [9] P. Belany, M.L. Kackley, S. Zhao, B. Kluwe, A. Buga, C. Crabtree, D. Nedungadi, **D. Kline**, G. Brock, O.P. Simonetti, J.S. Volek, and J.J. Joseph. Effects of Hypocaloric Low-Fat, Ketogenic and Ketogenic & Ketone Supplement diets on Aldosterone and Renin. *The Journal of Clinical Endocrinology & Metabolism*, 2023. In press.
- [10] S.P. Carmichael II\*, **D. Kline**, N.T. Mowery, P.R. Miller III, J.W. Meredith, and A.D. Hanchate. Geographic variation in operative management of adhesive small bowel obstruction. *Journal of Surgical Research*, 286:57–64, 2023.
- [11] Q. Dong, **D. Kline**, and S.A. Hepler. A Bayesian spatio-temporal model to optimize buprenorphine in North Carolina. *Statistics and Public Policy*, 10(1):2218448, 2023.
- [12] A.T. Estadt\*, W.C. Miller, **D. Kline**, B.M. Whitney, A.M. Young, P.T. Korthuis, T.J. Stopka, J. Feinberg, W.A. Zule, M.T. Pho, P.D. Friedmann, R.P. Westergaard, K.V. Eagen, A. Seaman, J. Ma, V.F. Go, and K.E. Lancaster. Associations of hepatitis c virus (HCV) antibody positivity with opioid, stimulant, and polysubstance injection among people who inject drugs (PWID) in rural U.S. communities. *International Journal of Drug Policy*, 2023. In press.
- [13] J.J. Joseph, B. Kluwe, S. Zhao, **D. Kline**, D. Nedungadi, G. Brock, W.A. Hsueh, and S.H. Golden. The association of aldosterone and endothelin-1 with incident diabetes among African Americans: The Jackson Heart Study. *Endocrine and Metabolic Science*, page 100128, 2023.
- [14] J.J. Joseph, A. Williams, R.A. Azap, S. Zhao, G. Brock, **D. Kline**, J.B. Odei, R. Foraker, M. Sims, L. Brewer, D.M. Gray II, and T.S. Nolan. The role of sex in the association of socioeconomic status with cardiovascular health in Black Americans: The Jackson Heart Study. *Journal of the American Heart Association*, 2023. In press.
- [15] D. Kegelmeyer, R. Minarsch, S.K. Kostyk, **D. Kline**, R. Smith, and A.D. Kloos. Use of a robotic walking device for home and community mobility in Parkinson disease: A randomized controlled trial. *Journal of Neurologic Physical Therapy*, 2023. In press.
- [16] V. Kesireddy, B. Kluwe, N. Pohlman, S. Zhao, Y. Tan, **D. Kline**, G. Brock, J.B. Odei, V.S. Effoe, J.B. Echouffo Tcheugui, R.R. Kalyani, M. Sims, H.A. Taylor, M. Mongraw-Chaffin, E. Akhabue, and J.J. Joseph. The role of aldosterone and ideal cardiovascular health in incident diabetes: The Jackson Heart Study. *American Journal of Preventive Cardiology*, page 100466, 2023.
- [17] **D. Kline**, L.A. Waller, E. McKnight, A.E. Bonny, W.C. Miller, and S.A. Hepler. A dynamic spatial factor model to describe the opioid syndemic in Ohio. *Epidemiology*, 2023. In press.
- [18] **D. Kline**<sup>†</sup>, A.M. Bunting<sup>†</sup>, S.A. Hepler, A. Rivera-Aguirre, N. Krawczyk, and M. Cerdá. State-level history of overdose deaths involving stimulants in the United States, 1999-2020. *American Journal of Public Health*, 113(9):991–999, 2023.
- [19] B. Kluwe, N. Pohlman, V. Kesireddy, S. Zhao, Y. Tan, **D. Kline**, G. Brock, J.B. Odei, V.S. Effoe, J.B. Echouffo Tcheugui, R.R. Kalyani, M. Sims, H.A. Taylor, M. Mongraw-Chaffin, E. Akhabue, and J.J. Joseph. The role of aldosterone and ideal cardiovascular health in incident cardiovascular disease: The Jackson Heart Study. *American Journal of Preventive Cardiology*, page 100494, 2023.
- [20] J. Kwon, **D. Kline**, and S.A. Hepler. A spatio-temporal hierarchical model to account for temporal

misalignment in American Community Survey explanatory variables. *Spatial and Spatio-temporal Epidemiology*, 46:100593, 2023.

- [21] K. Lang, T.J. Atchison, P. Singh, **D. Kline**, J. Odei, J. Flaherty, J. Smyer, S. Day, and C. Hebert. Describing the monthly variability of hospital-onset *Clostridioides difficile* during early COVID-19 using electronic health record data. *Infection Control & Hospital Epidemiology*, 2023. In press.
- [22] G. Lee, B. Kluwe, S. Zhao, **D. Kline**, D. Nedungadi, G.N. Brock, J.B. Odei, V. Kesireddy, N. Pohlman, M. Sims, V.S. Effoe, W. Wu, R.R. Kalyani, G.S. Wand, J. Echouffo-Tcheugui, S.H. Golden, and J.J. Joseph. Adiposity, aldosterone and plasma renin activity among African Americans: The Jackson Heart Study. *Endocrine and Metabolic Science*, page 100126, 2023.
- [23] E.R. McKnight, Q. Dong, D.L. Brook\*, S.A. Hepler, **D. Kline**, and A.E. Bonny. A descriptive study on opioid misuse prevalence and office-based buprenorphine access in Ohio prior to the removal of the Drug Addiction Treatment Act of 2000 waiver. *Cureus*, 15(3):e36903, 2023.
- [24] M.F. Rayo, D. Faulkner\*, **D. Kline**, T.A. Thornhill, S. Malloy, D. Della Vella, D.A. Morey, N. Zhang, and G.S. Gonsalves. Using bandit algorithms to maximize SARS-CoV-2 case-finding: Evaluation and feasibility study. *JMIR Public Health and Surveillance*, 9(1):e39754, 2023.
- [25] S.D. Rhodes, A.E. Tanner, J. Alonzo, L. Mann-Jackson, J.W. Chaffin, M. Garcia, H.J. Erb, A.D. Sucaldito, R.E. Rachel, J. Stafford, L. Russell, P.H. Weil, M.S. Eldin Jibriel, T. McGuire, A.M. Wilkin, S.K. Aguilar-Palma, and **D. Kline**. Using ENGAGED for CHANGE to develop a multicultural intervention to reduce disparities among sexual and gender minorities in Appalachia. *Progress in Community Health Partnerships for Health: Research, Education, and Action*, 2023. In press.
- [26] J. Santaella-Tenorio, S. Hepler, A. Rivera-Aguirre, **D. Kline**, and M. Cerdá. Estimation of opioid misuse prevalence in New York State counties, 2007-2018. A Bayesian spatio-temporal abundance model approach. *American Journal of Epidemiology*, 2023. In press.
- [27] A.D. Sucaldito, A.E. Tanner, L. Mann-Jackson, J. Alonzo, M. Garcia, J.W. Chaffin, R.E. Faller, T. McGuire, M.S. Jibriel, S. Mertus, **D. Kline**, L. Russell, J. Stafford, L. Refugio Aviles, P.H. Weil, A.M. Wilkin, and S.D. Rhodes. Exploring individual and contextual factors associated with sexual risk and substance use among underserved GBQMSM and transgender and nonbinary persons in South Central Appalachia. *AIDS Education and Prevention*, 35(6):495–506, 2023.
- [28] J. Wang\*, N.J. Doogan, K. Thompson, D. Bernson, D. Feaster, J. Villani, R. Chandler, L.F. White, **D. Kline**, and J.A. Barocas. Massachusetts prevalence of opioid use disorder estimation revisited: Comparing a Bayesian approach to standard capture–recapture methods. *Epidemiology*, 34(6):841–849, 2023.
- [29] C.J. Bressler\*, L. Malthaner, N. Pondel\*, M.M. Letson, **D. Kline**, and J.C. Leonard. Identifying children at risk for maltreatment using emergency medical services’ data: An exploratory study. *Child Maltreatment*, 2022. In press.
- [30] E.F. Coccaro, T. Drossos, **D. Kline**, S. Lazarus, J.J. Joseph, and M. de Groot. Diabetes distress, emotional regulation, hba1c in people with diabetes and a controlled pilot study of an emotion-focused behavioral therapy intervention in adults with type 2 diabetes. *Primary Care Diabetes*, 16(3):381–386, 2022.
- [31] S.A. Hepler, K.A. Kaufeld, K. Benedict, M. Toda, B.R. Jackson, X. Liu, and **D. Kline**. Integrating public health surveillance and environmental data to model presence of *Histoplasma* in the United States. *Epidemiology*, 2022. In press.
- [32] S.A. Hepler<sup>†</sup>, **D. Kline**<sup>†</sup>, A. Bonny, E. McKnight, and L.A. Waller. An integrated abundance model for estimating county-level prevalence of opioid misuse in Ohio. *Journal of the Royal Statistical Society Series A*, 2022. In press.

- [33] E. Hill\*, J. Watson, D.M. Cohen, **D. Kline**, A.L. Schwaderer, and J. Spencer. Novel urine biomarkers to distinguish UTI from culture-negative pyuria. *Pediatric Nephrology*, 37(2):385–391, 2022.
- [34] J. Hu, **D. Kline**, A. Tan, S. Zhao, G. Brock, L.C. Mion, J.T. Efird, D. Wang, M. Sims, B. Wu, M. Mongraw-Chaffin, and J.J. Joseph. Association between social determinants of health and glycemic control among African American people with type 2 diabetes: The Jackson Heart Study. *Annals of Behavioral Medicine*, 56(12):1300–1311, 2022.
- [35] N. Jamieson\*, M. Akande, T. Karsies, R.M. Smith, **D. Kline**, and S.P. Spencer. Respiratory pathogen detection in pediatric patients intubated for presumed infection. *Pediatric Emergency Care*, 38(1):e398–e403, 2022.
- [36] J.J. Joseph, A. Rajwani, D. Roper, S. Zhao, **D. Kline**, J. Odei, G. Brock, J.B. Echouffo-Tcheugui, R.R. Kalyani, A.G. Bertoni, V.S. Effoe, M. Sims, W. Wu, G.S. Wand, and S.H. Golden. Associations of Cardiometabolic Multimorbidity With All-Cause and Coronary Heart Disease Mortality Among Black Adults in the Jackson Heart Study. *JAMA Network Open*, 5(10):e2238361, 2022.
- [37] **D. Kline**, A. Hyder, E. Liu, M. Rayo, S. Malloy, and E. Root. A Bayesian spatio-temporal now-casting model for public health decision-making and surveillance. *American Journal of Epidemiology*, 191(6):1107–1115, 2022.
- [38] T. Moore, **D. Kline**, M. Palettas, and T. Bodine. Fall prevention with the smart sock system reduces hospital fall rates. *Journal of Nursing Care Quality*, 2022. In press.
- [39] R. Ortiz, S. Zhao, **D. Kline**, G. Brock, J. Carroll, T.E. Seeman, S. Jaffee, J.S. Berger, S.H. Golden, M. Carnethon, and J.J. Joseph. Childhood environment early life stress, caregiver warmth, and associations with cortisol diurnal curve: The coronary artery risk development in young adults (CARDIA) study. *Psychoneuroendocrinology*, page 106008, 2022.
- [40] J.C. Shrodes, A. Williams, T.S. Nolan, J.N. Radabaugh, A. Braun, **D. Kline**, S. Zhao, G. Brock, J.A. Garner, C.K. Spees, and J.J. Joseph. Feasibility of cooking matters for diabetes: A 6-week randomized, controlled cooking and diabetes self-management education intervention. *Journal of the Academy of Nutrition and Dietetics*, 2022. In press.
- [41] T.N. Townsend, L.K. Hamilton, A. Rivera-Aguirre, C.S. Davis, J.R. Pamplin II, **D. Kline**, K.E. Rudolph, and M. Cerdá. Using an inverted synthetic control method to estimate effects of recent overdose Good Samaritan Laws, overall and by black/white race. *American Journal of Epidemiology*, 2022. In press.
- [42] T. Townsend<sup>†</sup>, **D. Kline**<sup>†</sup>, A. Rivera-Aguirre, A.M. Bunting, P.M. Mauro, B.D.L. Marshall, S.S. Martins, and M. Cerdá. Racial/ethnic and geographic trends in combined stimulant/opioid overdoses, 2007-2019. *American Journal of Epidemiology*, 191(4):599–612, 2022.
- [43] A. Norris Turner, **D. Kline**, A. Norris, W.G. Phillips, E. Root, J. Wakefield, Z. Li, S. Lemeshow, M. Spahnie, A. Luff, Y. Chu, M.K. Francis, M. Gallo, P. Chakraborty\*, M. Lindstrom, G. Lozanski, W. Miller, and S. Clark. Prevalence of current and past COVID-19 in Ohio adults. *Annals of Epidemiology*, 67:50–60, 2022.
- [44] A. Williams, J.C. Shrodes, J.N. Radabaugh, A. Braun, **D. Kline**, S. Zhao, G. Brock, T.S. Nolan, J.A. Garner, C.K. Spees, and J.J. Joseph. Outcomes of cooking matters for diabetes: A 6-week randomized, controlled cooking and diabetes self-management education intervention. *Journal of the Academy of Nutrition and Dietetics*, 2022. In press.
- [45] A. Williams, S. Zhao, G. Brock, **D. Kline**, J.B. Echouffo Tcheugui, V.S. Effoe, A.G. Bertoni, E.D. Michos, I.H. de Boer, B. Kestenbaum, S.H. Golden, and J.J. Joseph. Vitamin D, parathyroid hormone, glucose metabolism and incident diabetes in the Multi-Ethnic Study of Atherosclerosis. *BMJ Open Diabetes Research and Care*, 10(5):e002931, 2022.

- [46] W.D. Arnold, S. Severyn, S. Zhao, **D. Kline**, M. Linsenmayer, K. Kelly, M. Tellez, A. Bartlett, S. Heintzman, J. Reynolds, G. Sterling, T. Weaver, K. Rajneesh, A.H.M. Burghes, S.J. Kolb, and B. Elsheikh. Persistent neuromuscular junction transmission defects in adults with spinal muscular atrophy treated with nusinersen. *BMJ Neurology Open*, 3(2):e000164, 2021.
- [47] D.L. Brook\*, A.T. Hetrick\*, S.R. Chettri, C.A. Schalkoff, A.L. Sibley, K.E. Lancaster, V.F. Go, W.C. Miller, and **D. Kline**. The relationship between Hepatitis C virus rates and office-based buprenorphine access in Ohio. *Open Forum Infectious Diseases*, 8(6):ofab242, 2021.
- [48] M.M. Donneyong, M.A. Fischer, M.A. Langston, J.J. Joseph, P.D. Juarez, P. Zhang, and **D. Kline**. Examining the drivers of racial/ethnic disparities in non-adherence to antihypertensive medications and mortality due to heart disease and stroke: a county-level analysis. *International Journal of Environmental Research and Public Health*, 18(23):12702, 2021.
- [49] B. Elsheikh, S.J. Kolb, S. Zhao, **D. Kline**, M. Linsenmayer, K. Kelly, M. Tellez, A. Bartlett, S. Heintzman, J. Reynolds, G. Sterling, T. Weaver, K. Rajneesh, S. Severyn, and W.D. Arnold. Safety, tolerability, and effect of nusinersen treatment in ambulatory adults with 5q-SMA. *Frontiers in Neurology*, 12:816, 2021.
- [50] B. Elsheikh, S. Severyn, S. Zhao, **D. Kline**, M. Linsenmayer, K. Kelly, M. Tellez, A. Bartlett, S. Heintzman, J. Reynolds, G. Sterling, T. Weaver, K. Rajneesh, S.J. Kolb, and W.D. Arnold. Safety, tolerability, and effect of nusinersen in non-ambulatory adults with spinal muscular atrophy. *Frontiers in Neurology*, 12:542, 2021.
- [51] G.S. Gonsalves, J.T. Copple, A.D. Paltiel, E.P. Fenichel, J. Bayham, M. Abraham, **D. Kline**, S. Malloy, M. Rayo, N. Zhang, D. Faulkner\*, D. Morey, F. Wu, T. Thornhill, S. Iloglu, and J.L. Warren. Maximizing the efficiency of active case-finding for SARS-CoV-2 using bandit algorithms. *Medical Decision Making*, 41(8):970–977, 2021.
- [52] S. Hepler, L. Waller, and **D. Kline**. A multivariate spatio-temporal change point model of opioid overdose deaths in Ohio. *Annals of Applied Statistics*, 15(3):1329–1342, 2021.
- [53] J.J. Joseph, B. Kluwe, J.B. Echouffo-Tcheugui, S. Zhao, G. Brock, **D. Kline**, J.B. Odei, R.R. Kalyani, D.P. Bradley, W.A. Hsueh, M. Sims, and S.H. Golden. Association of adiposity with incident diabetes among black adults in the Jackson Heart Study. *Journal of the American Heart Association*, 10(18):e020716, 2021.
- [54] J.J. Joseph, N.K. Pohlman, S. Zhao, **D. Kline**, G. Brock, J.B. Echouffo-Tcheugui, M. Sims, V.S. Effe, W. Wu, R.R. Kalyani, G.S. Wand, W.A. Hsueh, M. Abdalla, D. Shimbo, and S.H. Golden. The association of serum aldosterone and plasma renin activity with ambulatory blood pressure: The Jackson Heart Study. *Circulation*, 143(24):2355–2366, 2021.
- [55] **D. Kline** and S. Hepler. Estimating the burden of the opioid epidemic for adults and adolescents in Ohio counties. *Biometrics*, 77(2):765–775, 2021.
- [56] **D. Kline**, Y. Ji, and S. Hepler. A multivariate spatio-temporal model of the opioid epidemic in Ohio: A factor model approach. *Health Services and Outcomes Research Methodology*, 21:42–53, 2021.
- [57] **D. Kline**, Z. Li, Y. Chu, J. Wakefield, W.C. Miller, A. Norris Turner, and S.J. Clark. Estimating seroprevalence of SARS-CoV-2 in Ohio: A Bayesian multilevel poststratification approach with multiple diagnostic tests. *Proceedings of the National Academy of Sciences*, 118(26):e2023947118, 2021.
- [58] **D. Kline**, Y. Pan\*, and S. Hepler. Spatio-temporal trends in opioid overdose deaths by race for counties in Ohio. *Epidemiology*, 32(2):295–302, 2021.
- [59] B. Kluwe, R. Ortiz, J.B. Odei, S. Zhao, **D. Kline**, G. Brock, J.B. Echouffo-Tcheugui, J. Lee, S. Lazarus, T. Seeman, P. Greenland, B. Needham, M.R. Carnethon, S.H. Golden, and J. Joseph. The association of cortisol curve features with incident diabetes among Whites and African Americans:

The coronary artery risk development in young adults (CARDIA) study. *Psychoneuroendocrinology*, 123:105041, 2021.

- [60] B. Kluwe, S. Zhao, **D. Kline**, R. Ortiz, G. Brock, J.B. Echouffo-Tcheugui, M. Sims, R.R. Kalyani, S.H. Golden, and J.J. Joseph. Adiposity measures and morning serum cortisol in African Americans: Jackson Heart Study. *Obesity*, 29(2):418–427, 2021.
- [61] S.W. Linakis\*, J.K. Lloyd, **D. Kline**, J.F. Holmes, R.M. Stanley, and J.C. Leonard. Field triage of children with abdominal trauma. *Trauma*, 23(1):55–63, 2021.
- [62] M. Sotos Prieto, S. Zhao, **D. Kline**, G. Brock, H. Gooding, J. Mattei, F. Rodriguez-Artalejo, Y.I. Min, E. Rimm, K.L. Tucker, and J.J. Joseph. Application of a lifestyle-based score to predict cardiovascular risk in African Americans: The Jackson Heart Study. *Journal of Clinical Medicine*, 10(11):2252, 2021.
- [63] K.A. Battisti\*, D.M. Cohen, T. Bourgeois, **D. Kline**, S. Zhao, and M.S. Iyer. A paucity of code status documentation despite increasing complex chronic disease in pediatrics. *Journal of Palliative Medicine*, 23(11):1452–1459, 2020.
- [64] R. Karamians, R. Proffitt, **D. Kline**, and L.V. Gauthier. Effectiveness of virtual reality- and gaming-based interventions for upper extremity rehabilitation poststroke: A meta-analysis. *Archives of Physical Medicine and Rehabilitation*, 101(5):885 – 896, 2020.
- [65] A.P. Meyer, J. Roggenbuck, S. Lorusso, J. Kissel, R.M. Smith, **D. Kline**, and W.D. Arnold. Genotype-phenotype correlations and characterization of medication use in inherited myotonic disorders. *Frontiers in Neurology*, 11:593, 2020.
- [66] A. Moberly, K. Vasil, J. Baxter, B. Klammer, **D. Kline**, and C. Ray. Comprehensive auditory rehabilitation in adults receiving cochlear implants: a pilot study. *Laryngoscope Investigative Otolaryngology*, 5:911–918, 2020.
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## INVITED PUBLICATIONS

**D. Kline**. Strengthening a solid foundation: The role of spatial epidemiology within contemporary epidemiology. *Epidemiology*. 2024. In press.

S.P. Carmichael and **D. Kline**. Categories of Evidence and Methods in Surgical Decision-Making. *Surgical Clinics of North America*, 103(2):233-245, 2023.

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## OTHER PUBLICATIONS

**D. Kline**, E. Kaizar, N. Minich, T. Stancin, H.G. Taylor, S. Wade, and K. Yeates. [Meta-analysis for studying psychological and social effects of pediatric traumatic brain injury: existing studies and methods](#), 2017.

J. Rumberger, C. Hollenbeak, and **D. Kline**. [Potential costs and benefits of smoking cessation](#). *American Lung Association*, 2010.

## RESEARCH SUPPORT

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### Ongoing Support

#### *Principal Investigator*

- NIH R01 (PI: **D. Kline** and S. Hepler) 2021-2025  
Spatio-temporal methods for surveillance of the opioid syndemic  
Role: MPI (30% effort)

#### *Co-Investigator/Biostatistician*

- The Duke Endowment (PI: D. Stamilio and E. Jensen) 2024-2026  
Evaluation of a Health System Integrated Model for Postpartum Education and Support in Rural Populations – NEST Rural  
Role: Co-I (7% effort)
- The Duke Endowment (PI: E. Jensen) 2023-2024  
Assessment of a postpartum, remote blood pressure monitoring intervention for reduction in disparities in hypertensive-associated readmissions and healthcare costs  
Role: Co-I (10% effort)
- NIH U24 (PI: M.C.B. Adams) 2022-2027  
WF DISC: Navigating Data Solutions for Chronic Pain and Opioid Use Disorder  
Role: Consultant (5% effort)
- NIH UL1 (PI: D. McClain) 2022-2024  
Wake Forest Clinical and Translational Science Award  
Role: Biostatistician (10% effort)
- NIH R01 (PI: S. Rhodes and A. Tanner) 2021-2025  
Harnessing the Power of Peer Navigation and mHealth to Reduce Health Disparities in Appalachia  
Role: Co-I (10% effort)
- Lab Directed Research and Development (LANL) (PI: K. Kaufeld) 2021-2024  
Assessing environmental and health impacts of airborne particulates  
Role: Co-I (7% effort)
- AHRQ R01 (PI: C. Hebert and E. Root) 2020-2024  
GeoHAI: A novel geographic tool for Hospital Acquired Infection visualization and assessment  
Role: Co-I (20% effort)

### Completed Support (last 5 years)

#### *Principal Investigator*

- NIH R21 (PI: **D. Kline** and S. Hepler) 2018-2021  
A Bayesian Spatio-Temporal Approach for Estimating County-Level Opioid Misuse Rates in Ohio  
Role: MPI (21% effort)

#### *Co-Investigator/Biostatistician*

- NIH R01 (PI: E. Coccaro) 2020-2021  
Aggression and SEIP: Neural Correlates During Alcohol Intoxication  
Role: Co-I and Lead Biostatistician (5% effort)
- ODH Contract (PI: E. Seiber) 2020-2021  
COVID Monitoring Team, Economic Analysis, and Ohio COVID-19 Assessment of Prevalence (OCAP)  
Role: Co-I (25% effort)

- Michael J. Fox Foundation for Parkinson's Research (PI: A. Kloos) 2019-2021  
Use of a computerized walking device in the home to improve home and community mobility in people with Parkinson disease  
Role: Co-I and Lead Biostatistician (3% effort)
- NIH R01 (PI: S. He) 2019-2021  
Neural encoding and auditory processing of electrical stimulation in pediatric cochlear implant users  
Role: Co-I and Lead Biostatistician (5% effort)
- NIH UM1 (PI: R. Jackson) 2019-2020  
Optimizing HEALing in Ohio Communities  
Role: Co-I (10% effort)
- Biogen (PI: B. Elsheikh) 2018-2020  
Characterizing longitudinal outcomes in adults with SMA treated with Nusinersen  
Role: Biostatistician (5% effort)
- Cure SMA/Families of SMA (PI: B. Elsheikh) 2018-2020  
Determine the motor unit response following SMN restoration in late onset spinal muscular atrophy  
Role: Biostatistician (5% effort)
- Mentor*
- NIH F30 (PI: D. Brook) 2020-2024  
Buprenorphine, Hepatitis C Virus and Their Relationship in Rural US Populations  
Role: Mentor (0% effort)
- NIH F31 (PI: A. Hetrick) 2022-2024  
The effect of opioids, stimulants, and the simultaneous use of both on hepatitis C (HCV) cascade of care in rural communities in the United States  
Role: Mentor (0% effort)

## PRESENTATIONS

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† indicates co-presenter

### Invited Presentations

- B. Bailey, **D. Kline**, and K. Tan. From numbers to impact: The role of statistics outreach programs. WebENAR, ENAR, June 2024.
- E. Duchesneau† and **D. Kline**†. Beyond the OR: Slicing data for surgical research. Acute Care Surgery Residents and Fellows Seminar, Department of Surgery, Wake Forest University School of Medicine, February 2024.
- **D. Kline**. Piecing together a puzzle: Using multiple data sources to better understand the opioid epidemic. Division of Public Health Sciences Grand Rounds, Wake Forest University School of Medicine, January 2024.
- **D. Kline**. Operating under uncertainty: Statistical thinking in the early stages of the COVID-19 pandemic. Department of Statistical Sciences Colloquium, Wake Forest University, November 2023.
- **D. Kline**. Piecing together a puzzle: Using multiple data sources to better understand the opioid epidemic. Center for Clinical Outcomes Research and Public Health Seminar, Emory University, November 2023.
- **D. Kline**. A spatio-temporal factor model to describe the opioid syndemic in Ohio. TADA Journal Club "Unplugged", Emory University, November 2023.
- **D. Kline**. An integrated abundance model for estimating county-level prevalence of opioid misuse in Ohio. Department of Epidemiology and Biostatistics Seminar, Drexel University Dornsife School of Public Health, May 2023.

- **D. Kline.** Estimating Seroprevalence of SARS-CoV-2 in Ohio: A Bayesian Multilevel Poststratification Approach with Multiple Diagnostic Tests. ENAR Spring Meeting, March 2023.
- **D. Kline.** Stop fooling yourself: A guide to improve research. Acute Care Surgery Residents and Fellows Seminar, Department of Surgery, Wake Forest University School of Medicine, December 2022.
- **D. Kline.** Prepare and organize data for collaboration. BERD: Lunch and Learn, Clinical and Translational Science Institute, Wake Forest University School of Medicine, September 2022.
- **D. Kline.** An integrated abundance model for estimating county-level prevalence of opioid misuse in Ohio. Division of Biostatistics Seminar, Thomas Jefferson University, July 2022.
- G. Gonsalves<sup>†</sup>, **D. Kline**<sup>†</sup>, and M. Rayo<sup>†</sup>. An Adaptive Approach to Surveillance of SARS-CoV-2. Forsyth County Department of Public Health, June 2022.
- **D. Kline.** Integrating Public Health Surveillance and Environmental Data to Model Presence of *Histoplasma* in the United States. Department of Epidemiology and Prevention, Wake Forest University School of Medicine, June 2022.
- G. Gonsalves<sup>†</sup>, **D. Kline**<sup>†</sup>, and M. Rayo<sup>†</sup>. An Adaptive Approach to Surveillance of SARS-CoV-2. Wake County Department of Health and Human Services, January 2022.
- **D. Kline.** Operating under uncertainty: Disease surveillance of COVID-19. Fall Virtual Speaker Event, American Statistical Association Columbus Chapter, November 2021.
- G. Gonsalves<sup>†</sup>, **D. Kline**<sup>†</sup>, S. Malloy<sup>†</sup>, and M. Rayo<sup>†</sup>. An Adaptive Approach to Surveillance of SARS-CoV-2. SCRUM: Strategy and Technical Discussion, Resolve to Save Lives, September 2021.
- **D. Kline.** A Bayesian Spatio-Temporal Abundance Model for Surveillance of the Opioid Epidemic. Department of Biostatistics and Data Science Seminar, Wake Forest University School of Medicine, September 2021.
- **D. Kline.** Uncertainty and the Response to COVID-19. Statistics Colloquia, Amherst College, April 2021.
- **D. Kline.** Estimating Seroprevalence of SARS-CoV-2 in Ohio: A Bayesian Approach with Multiple Diagnostic Tests. Department of Biostatistics Seminar, Wake Forest University School of Medicine, February 2021.
- A. Norris Turner<sup>†</sup> and **D. Kline**<sup>†</sup>. Estimating the prevalence of past and current COVID-19 in Ohio. Institute for Population Research Seminar Series, The Ohio State University, February 2021.
- **D. Kline.** Uncertainty and the Response to COVID-19. 8th Annual Scientific Meeting, The Ohio State University Center for Clinical and Translational Science, January 2021.
- **D. Kline.** A Bayesian Spatio-Temporal Abundance Model for Surveillance of the Opioid Epidemic. Department of Biostatistics Seminar, Boston University, January 2021.
- **D. Kline.** Uncertainty and the Response to COVID-19. Department of Biomedical Informatics Seminar, The Ohio State University. October 2020.
- **D. Kline**, Y. Ji, and S. Hepler. A multivariate spatio-temporal model of the opioid epidemic in Ohio: A factor model approach. International Conference on Health Policy Statistics, January 2020.
- **D. Kline.** Using spatial statistics to assess the opioid epidemic in Ohio. Department of Mathematics and Statistics Colloquia, Wake Forest University, November 2019.
- **D. Kline.** Spatio-temporal analysis of histoplasmosis surveillance data to inform understanding of geographic risk. Byrd Polar and Climate Research Center Seminar, The Ohio State University, October 2019.
- **D. Kline** and S. Hepler. A spatial factor model approach for assessing the opioid epidemic in Ohio. New England Statistics Symposium, May 2019.
- **D. Kline.** A spatial factor model approach for assessing the opioid epidemic in Ohio. Division of Biostatistics Seminar, The Ohio State University, March 2019.

- **D. Kline.** A Joint Model of Opioid Treatment Admissions and Deaths for Adults and Adolescents in Ohio Counties. Department of Biomedical Informatics Seminar, The Ohio State University. August 2018.
- **D. Kline.** A joint spatial model of opioid associated deaths and treatment admissions in Ohio. Division of Epidemiology Research Day, The Ohio State University, May 2018.
- **D. Kline.** A joint spatial model of opioid associated deaths and treatment admissions in Ohio. Department of Mathematics, Physics, and Statistics Seminar, Messiah College, April 2018.
- **D. Kline.** A joint spatial model of opioid associated deaths and treatment admissions in Ohio. Division of Adolescent Medicine Seminar, Nationwide Children's Hospital, September 2017.

### Panel Discussions

- D. Estep<sup>†</sup>, J. Kohlschmidt<sup>†</sup>, S. Fofana<sup>†</sup>, **D. Kline<sup>†</sup>**, and S. Lin<sup>†</sup>. Florence Nightingale Day Inspires Students to Pursue Statistics and Data Science - A Panel Discussion. Panelist at the Joint Statistical Meetings, August 2024.
- R. Alexander<sup>†</sup>, S. Biswas<sup>†</sup>, D. Estep<sup>†</sup>, **D. Kline<sup>†</sup>**, J.K. Kohlschmidt<sup>†</sup>, and S. Lin<sup>†</sup>. Florence Nightingale Day. Panelist at International Day of Women in Statistics and Data Science, October 2023.
- J. Hartzel<sup>†</sup>, **D. Kline<sup>†</sup>**, A. Klopp<sup>†</sup>, and E. Wichert<sup>†</sup>. Careers in Mathematics: Alumni Panel. Panelist at Messiah University Department of Computing, Mathematics, and Physics, February 2022.
- S. Malloy<sup>†</sup>, A. Hyder<sup>†</sup>, **D. Kline<sup>†</sup>**, M. Rayo<sup>†</sup>, and E. Root<sup>†</sup>. Briefing: Monitoring COVID-19 in Ohio & at Ohio State. Panelist at The Ohio State University Infectious Diseases Institute Virtual COVID-19 Symposium, December 2020.
- E. Griffith<sup>†</sup>, **D. Kline<sup>†</sup>**, and J. Sharp<sup>†</sup>. Consulting in the Statistical Sciences: A Department of Biostatistics Mini-Symposium. Panelist at Harvard School of Public Health, March 2018.
- S. Kalicin<sup>†</sup>, A. Kaur<sup>†</sup>, **D. Kline<sup>†</sup>**, D. Morganstein<sup>†</sup>, and L. Stork<sup>†</sup>. How Can Mentoring Help with the Practice of Statistics: A Panel Discussion. Panelist at the Conference on Statistical Practice, February 2015.

### Contributed Presentations

- **D. Kline**, W. Miller, A. Bonny, E. McKnight, L. Waller, and S. Hepler. A spatio-temporal factor model to describe the opioid syndemic in Ohio. Contributed Paper at the ENAR Spring Meeting, March 2024
- **D. Kline**, W. Miller, A. Bonny, E. McKnight, L. Waller, and S. Hepler. A spatio-temporal factor model to describe the opioid syndemic in Ohio. Contributed Paper at the Joint Statistical Meetings, August 2023
- **D. Kline**, S. Hepler, A. Bunting, A. Rivera-Aguirre, N. Krawczyk, and M. Cerdá. State-level evolution of overdose deaths involving stimulants in the United States, 2000-2020. Contributed talk at NYU Polysubstance Use Symposium, October 2022.
- **D. Kline.** A spatio-temporal factor model to describe the opioid syndemic in Ohio. Contributed talk at GEOMED 2022, October 2022.
- **D. Kline**, S. Hepler, N. Krawczyk, M. Cerdá, and L. Waller. A multivariate multiple change point model to describe opioid overdose deaths across the United States. Contributed Paper at the ENAR Spring Meeting, March 2022.
- **D. Kline**, Z. Li, Y. Chu, J. Wakefield, W.C. Miller, A. Norris Turner, and S. Clark. Estimating Sero-prevalence of SARS-CoV-2 in Ohio: A Bayesian Approach with Multiple Diagnostic Tests. Contributed Paper at the ENAR Spring Meeting, March 2021.
- **D. Kline**, L. Waller, and S. Hepler. A Bayesian spatio-temporal abundance model for surveillance of the opioid epidemic. Contributed Paper at the Joint Statistical Meetings, August 2020.

- **D. Kline**, L. Waller, and S. Hepler. A Bayesian spatio-temporal abundance model for surveillance of the opioid epidemic. Contributed Paper at the ENAR Spring Meeting, March 2020.
- **D. Kline**, Y. Ji, and S. Hepler. A multivariate spatio-temporal model of the opioid epidemic in Ohio: A factor model approach. Contributed Speed Presentation at the Joint Statistical Meetings, July 2019.
- **D. Kline** and S. Hepler. A joint model of opioid treatment admissions and deaths for adults and adolescents in Ohio counties. Contributed Paper at the ENAR Spring Meeting, March 2019.
- **D. Kline** and S. Hepler. A joint model of opioid treatment admissions and deaths for adults and adolescents in Ohio counties. Contributed Speed Presentation at the Joint Statistical Meetings, July 2018.
- **D. Kline**, S. Hepler, A. Bonny, and E. McKnight. A spatial factor model approach for assessing the opioid epidemic in Ohio. Poster at ENAR Spring Meeting, March 2018.
- **D. Kline** and S. Hepler. Opioid treatment admissions and deaths for adults and adolescents in Ohio counties. Poster at International Conference on Health Policy Statistics, January 2018.
- **D. Kline**, S. Hepler, E. McKnight, and A. Bonny. A Spatio-Temporal Joint Model of Opioid Overdose Deaths and Treatment Seeking in Ohio Counties. Contributed Speed Presentation at the Joint Statistical Meetings, August 2017.
- **D. Kline** and J. Caterino. A Case Study in Evaluating Diagnostic Tests Without a Gold Standard: From Kappa to Bayesian Latent Class Modeling. Poster at ENAR Spring Meeting, March 2017.
- **D. Kline**, R. Andridge, and E. Kaizar. Two-Level Joint Model for Imputing Subject-Level Variables of Mixed Type. Contributed Speed Presentation at the Joint Statistical Meetings, August 2016.
- **D. Kline**, R. Andridge, and E. Kaizar. Comparing Multiple Imputation Methods for Systematically Missing Subject-Level Data. Contributed Paper at ENAR Spring Meeting, March 2015.
- **D. Kline**, R. Andridge, and E. Kaizar. Multiple Imputation for Missing Data in Longitudinal Research Synthesis: Identifying and Overcoming Assumptions in Software. Poster at the Conference on Statistical Practice, February 2015.
- **D. Kline**, R. Andridge, and E. Kaizar. Comparing Multiple Imputation Methods for Correlated Data. Poster at the Statistics & Biostatistics Graduate Student Poster Session at The Ohio State University, September 2014.
- **D. Kline**, R. Andridge, and E. Kaizar. Comparing Multiple Imputation Methods for Correlated Data. Contributed Paper at the Joint Statistical Meetings, August 2014.
- **D. Kline**, R. Andridge, and E. Kaizar. Comparing Multiple Imputation Methods for Correlated Data. Poster at The Ohio State-Cleveland Clinic-Case Western Reserve Biostatistics Symposium, April 2014.

## COLLABORATION

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### National Collaborative Working Groups

- Invited participant, Challenges in Mathematical and Computational Modeling of Complex Systems, Banff International Research Station for Mathematical Innovation and Discovery, December 2019.  
*Purpose: The purpose of this conference was to share scientific information with other researchers and scientists and to promote international communication in the field of mathematics.*
- Fellow, Data Science Innovation Lab Challenges in Rural Health and Environmental Exposures, NIH BD2K Training Coordinating Center, June 2019.  
*Purpose: The BD2K Training Coordinating Center organized a Data Science Innovation Lab to foster the development of new interdisciplinary teams via a facilitated and mentored format to tackle the challenges associated with the analysis, modeling, and visualization of large-scale data sets associated with the biomedicine of rural health.*

## **Collaborative Relationships**

### *Wake Forest University School of Medicine*

- Co-leader, Spatial and Environmental Statistics in Health Lab 2023-present
- Full Member, Center for Addiction Research 2021-present
- Full Member, Maya Angelou Center for Health Equity 2021-present

### *The Ohio State University*

- Neuroscience Research Institute, The Ohio State University 2015-2021
- Comprehensive Cancer Center, The Ohio State University 2015-2021
- Division of Emergency Medicine, Nationwide Children's Hospital 2015-2020
- Ross Center for Brain Health and Performance, The Ohio State University 2017-2019
- Division of Neurosurgery, Nationwide Children's Hospital 2016-2018
- Center for Clinical and Translational Science, The Ohio State University 2016-2018

## **TEACHING EXPERIENCE**

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### **Courses Taught**

#### *Wake Forest University*

- Statistical Modeling (THSS 732):  
Spring 2023, Spring 2024

#### *The Ohio State University*

- Rigorous and Reproducible Design and Data Analysis (BMI 8150):  
Spring 2020
- Elementary Statistics (STAT 135):  
Spring 2012, Fall 2012

### **Guest Lectures**

#### *Wake Forest University School of Medicine*

- Addictive Disorders Seminar Series (ARCH 722):  
1/26/2023

#### *Wake Forest University*

- Bayesian Analysis (STA 720):  
10/20/2021

#### *The Ohio State University*

- Biostatistical Collaboration (PUBHBIO 7245):  
4/10/2017, 3/19/2018, 2/26/2019, 2/18/2020, 2/16/2021
- Introduction to Biomedical Informatics (BMI 5710):  
11/16/2020

### **Journal Clubs Led**

#### *The Ohio State University*

- Population Health Informatics and Biostatistics Journal Club:  
Fall 2019, Spring 2020, Fall 2020, Spring 2021

#### *Nationwide Children's Hospital*

- Pediatric Emergency Medicine Fellows' Journal Conference:  
2016-2017, 2017-2018

## **Teaching Assistant**

### *The Ohio State University*

- Group Studies in Biostatistics (PUBHBIO 7194):  
May 2014
- Applied Longitudinal Analysis (PUBHBIO 7230):  
Spring 2014
- Design and Analysis of Studies in the Health Sciences II (PUBHBIO 6211):  
Spring 2013
- Applied Logistic Regression (PUBHBIO 7220):  
Fall 2013
- Elementary Statistics (STAT 1350):  
Fall 2011, Winter 2012, Fall 2012

### *Messiah College*

- Calculus I (MATH 111):  
Fall 2009
- Calculus II (MATH 112):  
Spring 2010

## **ACADEMIC SERVICE**

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### **Committees**

#### *College*

- Member, Faculty Representative Council Communications Subcommittee, Wake Forest University School of Medicine, 2022-2023
- Member, Clinical Scientific Review Committee, The Ohio State University Comprehensive Cancer Center, 2016-2021

#### *Department*

- Chair, Faculty Recruitment Committee, Wake Forest University School of Medicine Department of Biostatistics and Data Science, 2023-2024
- Member, Executive Committee, Wake Forest University School of Medicine Department of Biostatistics and Data Science, 2023-2024
- Member, Seminar Organizing Committee, Wake Forest University School of Medicine Department of Biostatistics and Data Science, 2022-present
- Member, Faculty Recruitment Committee, Wake Forest University School of Medicine Department of Epidemiology and Prevention, 2022-2023
- Member, Twitter Committee, Wake Forest University School of Medicine Department of Biostatistics and Data Science, 2021-present
- Member, Faculty Recruitment Committee, Wake Forest University School of Medicine Department of Biostatistics and Data Science, 2021-2022
- Member, BMI Leadership Council, The Ohio State University Department of Biomedical Informatics, 2020-2021
- Chair, Student Engagement Committee, The Ohio State University Department of Biomedical Informatics, 2019-2021
- Member, Graduate Studies Coordinating Committee, The Ohio State University Department of Biomedical Informatics, 2019-2021
- Member, Fellowship Scholarly Oversight Committee, Nationwide Children's Hospital Division of Emergency Medicine, 2015-2019



## Data and Safety Monitoring Committee

- Executive Secretary, CAMELLIA Cohort: A longitudinal study to understand sexual health and prevention among women in Alabama (MPI: L. Elopre and L. Matthews), 2023-present

## PROFESSIONAL SERVICE

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### Consultation

- Invited participant, Opioid Overdose Modeling Discussion with NIDA. National Institute on Drug Abuse, May 2024.
- Invited participant, Incorporating Intervention Effectiveness in Opioid Systems Modeling: An HHS Interagency Collaboration, Duke-Margolis Center for Health Policy and United States Food and Drug Administration, October 2020.  
*Purpose: This meeting will support continued interagency collaboration and aims to facilitate the exchange of information about priority data needs and initial findings from modeling efforts.*
- Member, Comprehensive Monitoring Team, Ohio Department of Health, 2020-2021  
*Purpose: This team is tasked with consulting on the development of a syndromic surveillance and outbreak detection system to detect potential future COVID-19 outbreaks in Ohio.*
- Invited participant, Data Needs in Opioid Systems Modeling: An HHS Interagency Collaboration, United States Food and Drug Administration, April 2019.  
*Purpose: The meeting brought together modeling teams, federal partners, data experts, and other stakeholders to foster a broad community of modeling expertise.*

### Grant Reviews

- Member, NIH Population and Public Health Approaches to HIV/AIDS (PPAH) Study Section, 2024-2028
- Reviewer, CTSA KL2 Program, 2024
- Ad hoc Reviewer, NIH Population and Public Health Approaches to HIV/AIDS (PPAH) Study Section, 2023
- Reviewer, NIH NIDA Special Emphasis Panel, HEAL Initiative: Understanding polysubstance use and improving service delivery to address polysubstance use, 2022
- Reviewer, CTSI BERD, Statistical/Novel Methods Pilot Award, 2022
- Ad hoc Reviewer, NIH Population and Public Health Approaches to HIV/AIDS (PPAH) Study Section, 2021
- Reviewer, Pediatric Emergency Medicine Clinical Research Committee Concepts for Multicenter Research, 2018
- Reviewer, NIH NIEHS Special Emphasis Panel, Powering Research through Innovative Methods for mixtures in Epidemiology (PRIME), 2017

### Editorial Positions

- Editorial Board, *Epidemiology*, 2022-present

### Article Reviews

#### *Journal (Frequency)*

- *American Journal of Epidemiology* (1), *Annals of Applied Statistics* (3), *Biometrical Journal* (1), *BMC Medical Research Methodology* (1), *CPT: Pharmacometrics and Systems Pharmacology* (1), *Developmental Cognitive Neuroscience* (1), *Drug and Alcohol Dependence* (1), *Epidemiology* (17), *Health Services and Outcomes Research Methodology* (1), *International Journal of Drug Policy* (3), *Journal of Educational and Behavioral Statistics* (1), *Journal of Neurotrauma* (1), *Journal of Substance Abuse*

*Treatment* (1), *Journal of Survey Statistics and Methodology* (1), *Journal of the American Statistical Association* (3), *Medical Education Online*(1), *Paediatric and Perinatal Epidemiology* (1), *PLOS One* (3), *STAT* (1), *Statistical Methods in Medical Research* (1), *Statistics in Biopharmaceutical Research* (1)

#### *Technical Report*

- [Spatial Analysis Report](#). Demographic and Health Surveys Program, United States Agency for International Development (USAID)

#### **Committees**

- Member, Organizing Committee, Florence Nightingale Day at Wake Forest, 2022-present
- Member, Organizing Committee, Emerging Methods in Translational Science: Contemporary Challenges in Prediction Modeling, 2022 CTSI Methods Conference, 2022
- Member, Florence Nightingale Day for Statistics and Data Science Board of Directors, 2021-present
- Member, ENAR Regional Advisory Board, 2021-2023
- Member, HPSS Mentorship Studio Planning Committee, American Statistical Association Health Policy Statistics Section, 2021-2022
- Member, Florence Nightingale Day Committee, American Statistical Association & Caucus for Women in Statistics, 2019-2021
- Member, The Ohio State-Cleveland Clinic-Case Western Reserve Biostatistics Symposium Planning Committee, 2020-2021
- Member, Scientific Advisory Committee, Great Lakes Node of the Pediatric Emergency Care Applied Research Network (PECARN), 2019-2020

#### **Conference Activities**

- Judge, Wake Forest DataFest, American Statistical Association, 2024.
- Chair, Session on “Translational Research and Science.” ENAR Spring Meeting, 2024.
- Poster Competition Judge, ENAR Poster Competition, ENAR Spring Meeting, 2024.
- Member, ENAR Distinguished Student Paper Award Committee, ENAR Spring Meeting, 2024.
- Poster Competition Judge, ENAR Poster Competition, ENAR Spring Meeting, 2023.
- Chair, Session on “Statistical Learning for Decision Support.” Joint Statistical Meetings, 2022.
- Chair, Session on “Dynamic Treatment Regimens.” ENAR Spring Meeting, 2021.
- Judge, Poster Session, 2021 OSUCOM Trainee Research Day, 2021.
- Moderator, Breakout Session on “Climate and Public Health.” Byrd Center Symposium on Climate Change, 2020.
- Chair, Session on “Advances in Resource Allocation for Epidemic Control: Estimation, Optimization, and Counterfactuals.” Joint Statistical Meetings, 2020.
- Organizer, Session on “Leveraging existing data on the opioid epidemic to quantify risk and inform policy.” International Conference on Health Policy Statistics, 2020.
- Program Committee Member, IEEE International Conference on Bioinformatics and Biomedicine, 2019.
- Chair, Session on “Joint Modeling of Longitudinal And Survival Data.” Joint Statistical Meetings, 2019.
- Co-organizer and Chair, Session on “Statistics and informatics: Stronger together.” ENAR Spring Meeting, 2018.

#### **ADVISING**

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**Wake Forest University**  
*M.S. Committee Member*

- Ashley Mullan, Statistics, 2024  
Thesis: Adjusting for covariate misclassification to quantify the relationship between diabetes and local access to healthy food
- Chenhui Qui, Statistics, 2024  
Thesis: Statistical considerations for evaluating opioid-related policies in North Carolina
- Alexander Ivanov, MD, Translational Health System Science, 2022  
Capstone: Cardiovascular Diseases and Risk Factors as Predictors of SARS-CoV-2 Seroconversion
- Samuel Carmichael II, MD, Translational Health System Science, 2021  
Capstone: Geographic Variation in Operative Management of Adhesive Small Bowel Obstruction

### **Boston University**

*Ph.D. Dissertation Committee Member*

- Jianing Wang, Biostatistics, 2023  
Dissertation: Methods for Size Estimation of Hidden Population Using Large-Scale Health Data

### **The Ohio State University**

*M.S. Thesis Advisor*

- Yuhan Pan, Biomedical Informatics, 2020  
Thesis: Examining Opioid-related Overdose Events in Dayton, OH using Police, Emergency Medical Services and Coroner's Data

*Ph.D. Dissertation Committee Member*

- Yuhan Pan, Epidemiology, current
- Angela Estadt, Epidemiology, 2023  
Dissertation: The effect of opioids, stimulants, and the use of both on hepatitis C virus (HCV) infection, testing, and treatment in rural communities in the United States
- Payal Chakraborty, Epidemiology, 2022  
Dissertation: Analysis of 2019 Ohio Disease Intervention Specialist (DIS) Data for Syphilis Using Natural Language Processing (NLP) Methods
- Daniel Brook, Epidemiology, 2022  
Dissertation: Hepatitis C Virus Vulnerability, Testing, and Prevention among People Who Use Drugs in Southern Appalachian Ohio

*M.S. Thesis Committee Member*

- Anqi Liu, Biostatistics, 2018  
Thesis: Modeling of the Patient Flow Process in the Pediatric Emergency Department and Identification of Relevant Factors

*MPH Culminating Project Committee Member*

- Nida Viqar, Biomedical Informatics, 2021  
Culminating Project: Informing Development of a Mobile Health Application for Outpatient Parenteral Antibiotic Therapy
- Nicholas Pondel, Biomedical Informatics, 2019  
Culminating Project: A Framework for Creating Structured Data from Mixed Free-Text and Categorical Data: Repurposing Emergency Medical Services Data for the Assessment of Child Maltreatment Risk

*MPH Practicum Preceptor*

- Daria Faulkner, Health Behavior and Health Promotion, 2021  
Practicum Project: Implementation of Bandits Algorithm in COVID-19 Active Surveillance Program
- Sophia Padgett, Epidemiology, 2021  
Practicum Project: Bandit Algorithm Public Health Practice Project

- Amanda Bleichrodt, Epidemiology, 2021  
Practicum Project: The Bandit Algorithm Project

### **Nationwide Children's Hospital**

*Pediatric Emergency Medicine Fellowship Committee Member*

- Colleen Bressler, MD, 2019  
Project: Characteristics of Neighborhoods Where Emergency Medical Services Encounter Children at Risk for Maltreatment
- Katherine Battisti, MD, 2019  
Project: A Paucity of Code Status Documentation Despite Increasing Complex Chronic Disease in Pediatrics
- Elaise Hill, MD, 2019  
Project: Novel urine biomarkers to distinguish UTI from culture-negative pyuria
- Nathan Jamieson, MD, 2019  
Project: Respiratory Pathogen Detection in Pediatric Patients Intubated for Presumed Infection
- Jordee Wells, MD, 2019  
Project: Trends in adolescent birth and abortion rates from 2000 - 2014 across the United States
- Seth Linakis, MD, 2018  
Project: Field triage of children with abdominal trauma
- Tracy Wagner, MD, 2018  
Project: A Quality Improvement Initiative to Increase the Number of Pediatric Resident Laceration Repairs
- Renas Almubarak, MD MPhil, 2018  
Project: Somali Use of the Pediatric Emergency Department

### **PROFESSIONAL MEMBERSHIPS**

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International Society for Bayesian Analysis, 2018-present  
 International Biometric Society, Eastern North American Region (ENAR), 2014-present  
 American Statistical Association, 2007-present  
 The Ohio Academy of Science, 2018-2021