

Emily K. Roberts, PhD

College of Public Health Curriculum Vitae

Department of Biostatistics

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March 2026

Educational and Professional History

Degrees Earned

- 2016 BA in Mathematics/Psychology, Coe College, Cedar Rapids, Iowa
- 2018 MS in Biostatistics, University of Michigan, Ann Arbor, Michigan
- 2022 PhD in Biostatistics, University of Michigan, Ann Arbor, Michigan
Mentors: Michael Elliott (Advisor), Mentors: Michael Elliott (Advisor) Jeremy Taylor (Advisor), Dissertation: Causal Inference Methods and Intermediate Endpoints in Randomized Clinical Trials (PhD Dissertation)

Employment History

- 2013 Summer Trainee, Coe College Research in Mathematics Program, Cedar Rapids, Iowa
- 2014 Summer Trainee, Columbia Summer Institute in Biostatistics, New York City, New York
- 2015 Summer Trainee, Harvard Summer Program in Biostatistics and Computational Biology, Boston, Massachusetts
- 2016 - 2017 National Institutes of Health Cancer Training in Biostatistics Grant Trainee, University of Michigan, Ann Arbor, Michigan
- 2016 - 2022 Fellow and Graduate Student Research Assistant, University of Michigan, Ann Arbor, Michigan
- 2022 - Present Assistant Professor, Biostatistics, University of Iowa/College of Public Health, Iowa City, Iowa

Honors and Awards

- 2015 Coe College Hunt Award in Mathematics
- 2012 - 2016 Dean's List, Coe College
- 2016 Phi Beta Kappa, Mortar Board, Psi Chi, Alpha Lamda Delta, Phi Kappa Phi
- 2016 University of Michigan School of Public Health Regent's Fellowship Award
- 2016 Barry Goldwater Honorable Mention
- 2016 R.J. McElroy Fellowship
- 2018 - 2019 Travel Award-Rackham Graduate Travel Grant
- 2019 Michigan Institute of Data Science Travel Grant
- 2019 SAMSI Travel Grant

2020	School of Public Health Unsung Hero Award
2020	Telomere Network Analysis Award and Travel Grant
2016 - 2021	National Science Foundation Graduate Research Fellowship Program
2021	University of Michigan Department of Biostatistics Excellence in Research Honorable Mention
2021	Telomere Network Analysis Award and Travel Grant
2021 - 2022	University of Michigan Rackham Predoctoral Fellowship
2021 - 2022	Travel Award-Rackham Graduate Travel Grant
2022	UI Women in Statistics and Data Science Travel Grant
2023	Junior Faculty Opportunity Award, College of Public Health, Iowa City, Iowa
2023	ASA Lifetime Data Science Paper Award, American Statistical Association
2023	New Faculty Research Award, College of Public Health, Iowa City, Iowa
2024	Formation of Causal Inference Collaboratory Award
2024	ASA Outstanding Chapter Service Award, ASA
2025	Carol Gleich Travel Award, University of Iowa
2025	Delta Omega Honorary Society in Public Health, University of Iowa
2025	College of Public Health Teaching Award, University of Iowa, Iowa City, Iowa

Teaching

Course Teaching

University of Iowa

Spring 2023	Causal Inference, BIOS:6650:0001, Credit Hours: 3, Enr: 20, Percent of Course: 50.0%
Fall 2023	Introductory Longitudinal Data Analysis, BIOS:6310:0001, Credit Hours: 3, Enr: 34, Percent of Course: 100.0%
Spring 2024	Causal Inference, BIOS:6650:0001, Credit Hours: 3, Enr: 20, Percent of Course: 50.0%
Fall 2024	Introductory Longitudinal Data Analysis, BIOS:6310:0001, Credit Hours: 3, Enr: 27, Percent of Course: 100.0%
Spring 2025	Causal Inference, BIOS:6650:0001, Credit Hours: 3, Enr: 15, Percent of Course: 50.0%
Fall 2025	Introductory Longitudinal Data Analysis, BIOS:6310:0001, Credit Hours: 3, Enr: 37, Percent of Course: 100.0%
Spring 2026	Causal Inference, BIOS:6650:0001, Credit Hours: 3, Enr: 29, Percent of Course: 50.0%

Other Institutions

2014 - 2016	Kids on Course Elementary Math Tutor, Harrison Elementary
2015 - 2016	Mathematics Help, Coe College Mathematics Department
2015 - 2016	SAS Teaching Assistant, Coe College Psychology Department

2018 - 2019	Girls Who Code Data Science Summer Experience Facilitator/Teacher, University of Michigan, Ann Arbor Chapter
2019	Biostatistics Tutor for Stochastic Processes, University of Michigan

Scholarship/Professional Productivity

Publications or creative works

Peer-reviewed papers and journal articles

1. **Roberts, E. K.** (2015). Mission of Hope Action Research: Analyzing and understanding local homeless. (Vols. 4). pp. 1-26. Undergraduate Journal of Service Learning and Community-Based Research. [DOI: 10.56421/ujslcbcr.v4i0.225](https://doi.org/10.56421/ujslcbcr.v4i0.225).
2. East, E. G., Gast, K. M., Kuzon, W. M., **Roberts, E. K.**, Zhao, L. & Jorns, J. M. (2017). Clinicopathologic findings in female-to-male gender-affirming breast surgery. (Vols. 71). (6), pp. 859-865. Histopathology. [DOI: 28657118](https://doi.org/10.1093/hp/71.6.859). [PMID: 28657118](https://pubmed.ncbi.nlm.nih.gov/28657118/).
3. Muller, K. E., **Roberts, E. K.**, Zhao, L. & Jorns, J. M. (2018). Isolated atypical lobular hyperplasia diagnosed on breast biopsy: Low upgrade rate on subsequent excision with long-term follow-up. (Vols. 142). (3), pp. 391-395. Archives of Pathology & Laboratory Medicine. [DOI: 10.5858/arpa.2017-0155-OA](https://doi.org/10.5858/arpa.2017-0155-OA). [PMID: 29160721](https://pubmed.ncbi.nlm.nih.gov/29160721/).
4. Kahn, J. M., Cole, P. D., Blonquist, T. M., Stevenson, K., Jin, Z., Barrera, S., Davila, R., **Roberts, E. K.**, Neuberg, D. S., Athale, U. H., Clavell, L. A., Laverdiere, C., Leclerc, J., Michon, B., Schorin, M. A., Welch, J. J., Sallan, S. E., Silverman, L. B. & Kelly, K. M. (2018). An investigation of toxicities and survival in Hispanic children and adolescents with ALL: Results from the Dana-Farber Cancer Institute ALL Consortium protocol 05-001. (Vols. 65). (3), pp. 10.1002/pbc.26871. Pediatric Blood & Cancer. [DOI: 10.1002/pbc.26871](https://doi.org/10.1002/pbc.26871). [PMID: 29090520](https://pubmed.ncbi.nlm.nih.gov/29090520/). [PMCID: PMC5766393](https://pubmed.ncbi.nlm.nih.gov/PMC5766393/).
5. East, E., Gabbeart, M., **Roberts, E. K.**, Zhao, L. & Jorns, J. (2018). A rapid triage protocol to optimize cold ischemic time for breast resection specimens. (Vols. 34). pp. 94-97. Annals of Diagnostic Pathology. [DOI: 10.1016/j.anndiagpath.2018.02.010](https://doi.org/10.1016/j.anndiagpath.2018.02.010). [PMID: 29661737](https://pubmed.ncbi.nlm.nih.gov/29661737/).
6. Siontis, B., **Roberts, E. K.**, Zhao, L., McHugh, J. B., Owen, D., Baker, L. H., Biermann, J. S., Schuetze, S. & Chugh, R. (2019). Radiation-associated versus sporadic osteosarcoma: A single-institution experience. (Vols. 35). (15), pp. 11018. Journal of Clinical Oncology. [DOI: https://ascopubs.org/doi/abs/10.1200/JCO.2017.35.15_suppl.11018](https://doi.org/10.1200/JCO.2017.35.15_suppl.11018).
7. Geer, M., **Roberts, E. K.**, Shango, M., Till, B. G., Smith, S. D., Abbas, H., Hill, B. T., Kaplan, K., Barr, P. M., Caimi, P., Stephens, D. M., Lin, E., Herrera, A. F., Rosenbaum, E., Amengual, J. E., Boonstra, P. S., Devata, S., Wilcox, R. A., Kaminski, M. S. & Phillips, T. J. (2019). Multicentre retrospective study of intravascular large B-cell lymphoma treated at academic institutions within the United States. (Vols. 186). (2), pp. 255-262. British Journal of Haematology. [DOI: 10.1111/bjh.15923](https://doi.org/10.1111/bjh.15923). [PMID: 31044423](https://pubmed.ncbi.nlm.nih.gov/31044423/). [PMCID: PMC8989046](https://pubmed.ncbi.nlm.nih.gov/PMC8989046/).
8. Needham, B. L., Salerno, S., **Roberts, E. K.**, Boss, J., Allgood, K. L. & Mukherjee, B. (2019). Do black/white differences in telomere length depend on socioeconomic status?. (Vols. 65). (4), pp. 287-312. Biodemography and Social Biology. [DOI: 10.1080/19485565.2020.1765734](https://doi.org/10.1080/19485565.2020.1765734). [PMID: 33243026](https://pubmed.ncbi.nlm.nih.gov/33243026/). [PMCID: PMC7703670](https://pubmed.ncbi.nlm.nih.gov/PMC7703670/).
9. East, E., **Roberts, E. K.**, Zhao, L. & Jorns, J. (2019). Repeat biomarker status in breast resection specimens with controlled cold ischemic time. (Vols. 152). (6), pp. 766-774. American Journal of Clinical Pathology. [DOI: 10.1093/ajcp/aqz105](https://doi.org/10.1093/ajcp/aqz105). [PMID: 31338514](https://pubmed.ncbi.nlm.nih.gov/31338514/).
10. Hanks, J. E., Kovatch, K. J., Ali, S. A., **Roberts, E. K.**, Diurham, A. B., Smith, J. D., Bradford, C. R., Malloy, K. M., Boonstra, P. S., Lao, C. D. & McLean, S. A. (2020). Sentinel lymph node biopsy in head and neck melanoma; Long-term outcomes, prognostic value, and accuracy. (Vols. 162). (4), pp. 520-529.

- Otolaryngology - Head and Neck Surgery. [DOI: 10.1177/0194599819899934](https://doi.org/10.1177/0194599819899934). [PMID: 32041486](https://pubmed.ncbi.nlm.nih.gov/32041486/). [PMCID: PMC8012010](https://pubmed.ncbi.nlm.nih.gov/PMC8012010/).
11. **Roberts, E. K.** & Zhao, L. (2021). A Bayesian mixture model to estimate changepoints in ordinal predictors. (Vols. 18). (1), pp. 57-72. *International Journal of Biostatistics*. [DOI: 10.1515/ijb-2020-0151](https://doi.org/10.1515/ijb-2020-0151). [PMID: 33823087](https://pubmed.ncbi.nlm.nih.gov/33823087/). [PMCID: PMC9156335](https://pubmed.ncbi.nlm.nih.gov/PMC9156335/).
 12. Sun, Y., Patel, A., SantaLucia, K., **Roberts, E. K.**, Zhao, L., Kaye, L., Rao, L. & Bachman, M. A. (2021). Measurement of klebsiella intestinal colonization density to assess infection risk. (Vols. 6). (3), pp. e0050021. *mSphere*. [DOI: 10.1128/mSphere.00500-21](https://doi.org/10.1128/mSphere.00500-21). [PMID: 34160234](https://pubmed.ncbi.nlm.nih.gov/34160234/). [PMCID: PMC8265666](https://pubmed.ncbi.nlm.nih.gov/PMC8265666/).
 13. **Roberts, E. K.**, Elliott, M. R. & Taylor, J. M. (2021). Incorporating baseline covariates to validate surrogate endpoints with a constant biomarker under control arm. (Vols. 40). (29), pp. 6605-6618. *Statistics in Medicine*. [DOI: 10.1002/sim.9201](https://doi.org/10.1002/sim.9201). [PMID: 34528260](https://pubmed.ncbi.nlm.nih.gov/34528260/).
 14. Vornhagen, J., **Roberts, E. K.**, Unverdorben, L., Mason, S., Patel, A., Crawford, R., Holmes, C. L., Sun, Y., Teodorescu, A., Snitkin, E. S., Zhao, L., Simner, P. J., Tamma, P. D., Rao, K., Kaye, K. S. & Bachman, M. A. (2022). Comparative genomics reveals plasmid-encoded genes associated with klebsiella infection in colonized patients. (Vols. 13). (1), pp. 4459. *Nature Communications*. [DOI: 10.1038/s41467-022-31990-1](https://doi.org/10.1038/s41467-022-31990-1). [PMID: 35915063](https://pubmed.ncbi.nlm.nih.gov/35915063/). [PMCID: PMC9343666](https://pubmed.ncbi.nlm.nih.gov/PMC9343666/).
 15. **Roberts, E. K.**, Gu, T., Mukherjee, B. & Fristche, L. (2022). Estimating COVID-19 vaccination effectiveness using electronic health records of an academic medical center in Michigan. (Vols. 1). (1), pp. 100015. *American Journal of Preventative Medicine (FOCUS)*. [DOI: https://doi.org/10.1016/j.focus.2022.100015](https://doi.org/10.1016/j.focus.2022.100015).
 16. **Roberts, E. K.**, Boss, J., Mukherjee, B., Salerno, S., Zota, A. & Belinda, N. (2022). Persistent organic pollutant exposure contributes to Black/White differences in leukocyte telomere length in the National Health and Nutrition Examination Survey. (Vols. 12). (1) *Scientific Reports*. [DOI: 10.1038/s41598-022-24316-0](https://doi.org/10.1038/s41598-022-24316-0).
 17. **Roberts, E. K.**, Elliott, M. R. & Taylor, J. M. (2023). Solutions for surrogacy validation with longitudinal outcomes for a gene therapy. (Vols. 79). (3), pp. 1840-1852. *Biometrics*. [DOI: 10.1111/biom.13720](https://doi.org/10.1111/biom.13720). [PMID: 35833874](https://pubmed.ncbi.nlm.nih.gov/35833874/).
 18. **Roberts, E. K.**, Elliott, M. R. & Taylor, J. M. (2023). Surrogacy Validation for Time-to-Event Outcomes with Illness-Death Frailty Models. *Biometrical Journal*. [DOI: 10.1002/bimj.202200324](https://doi.org/10.1002/bimj.202200324). [PMID: 37776057](https://pubmed.ncbi.nlm.nih.gov/37776057/).
 19. Tanaka, T., **Roberts, E.K.**,* Platt, J.* (2024). Revisiting the Effect of Acute-on-Chronic Liver Failure on Post-Liver Transplant Survival. *Hepatology Communications*.
 20. **Roberts, E. K.**, Luo, L., Mondul, A.M., Banerjee, M., Veenstra, C.M., Mariotto, A.B., Schipper, M.J., He, K., Taylor, J.M.G., Brouwer, A. (2024). Time-Varying Associations of Patient Characteristics with Cancer Survival: An Analysis of SEER Data Across 14 Cancer Sites, 2004-2017. *Cancer Causes and Control*. [DOI: doi.org/10.1007/s10552-024-01888-y](https://doi.org/10.1007/s10552-024-01888-y)
 21. Cai, J., Wissler Gerdes, E. O., Mahoney, C., Brown, G. D., Clark, J., Charlton, M. E., **Roberts, E.K.**, McKelvey, B.A., Wiggins, C.L., Meisner, A.W., Christian W.J., Huang, B., Oleson, J.J., Nash, S.H., Koyle, C. (2025). Understanding Users in Small Area Cancer Mapping: Insights from the Early Stages of a User-Centered Design Process. *Advances in Cartography and GIScience of the ICA*.
 22. Salerno, S., **Roberts, E.K.**, Needham, B., McCormick, T., Mukherjee, B., Shi, X. (2025). What's the Weight? Estimating Controlled Outcome Differences in Complex Surveys for Health Disparities Research. *Statistics in Medicine*.
 23. Sursely, A.M., Nash, S.H., Sadler, A. G., **Roberts, E.K.**, Torner, J.C., Platt, J.M. (2025). Exploring Contextual Details in Suicide Precipitating Circumstances: A Qualitative Content Analysis of National Violent Death Reporting System (NVDRS) Narrative Reports. *Journal of Psychiatry and Brain Science*.
 24. Sursely, A.M., **Roberts, E.K.**, Nash, S.H., Sadler, A.G., Torner, J.C., Platt, J.M. (2025). Crisis Circumstances in US Suicide Deaths: Latent Class Analysis of National Violent Death Reporting System Data from 2013-2021. *American Journal of Preventative Medicine*.
 25. Smith, M.J., **Roberts, E.K.**, Charlton, M.E., Oleson, J.J. (2025). Incorporating Small-area Estimation into Mediation Analyses with Areal Datasets. *Spatial and Spatio-temporal Epidemiology*.

26. Williams, P.A., **Roberts, E.K.**, Nguyen, Q.A., Rahmouni, K. (2025). Identifying Unimodal Finite Mixture Models in Data Sets Using Distribution Shifting – A Novel Approach. *Results in Engineering*.
27. Tanaka, T., **Roberts, E.K.**, Platt, J., Axelrod, D. (2025). Longitudinal Assessment of Performance Status in U.S. Liver Transplantation: National Trends and Survival Implications. *Transplantation Direct*.
28. Abrahamowicz, M., Beauchamp, M.E., **Roberts, E.K.**, Taylor, J.M.G. (2025). Revisiting the Hazards of Hazard Ratios Through Simulations and Case Studies. *European Journal of Epidemiology*.
29. Yu-Hsiang, W., McMurray, B., Hoth, K.F., Caraher, K., Oleson, J., **Roberts, E.**, Dunn, C. (2025). Factors Associated with Auditory Lifestyle of Adult Cochlear Implant Users. *Journal of Speech, Language, and Hearing Research*.
30. Cherwin, C., Hoang, J., **Roberts, E.K.**, Mangalam, A. (2025). Gut Microbiome and Symptom Burden in Obese and Non-Obese Women Receiving Chemotherapy for Breast Cancer. *Biological Research for Nursing*.

Abstracts

1. Kahn, J., Barrera, S., Davila, R., **Roberts, E. K.**, Jin, Z., Stevenson, K., Blonquist, T. M., Neuberg, D. S., Athale, U. H., Clavell, L. A., Cole, P., Laverdiere, C., Michon, B., Schorin, M. A., Welch, J. J., Sallan, S. E., Silverman, L. B. & Kelly, K. K. (2015). Higher incidence of treatment-related toxicities in non-Hispanic patients undergoing therapy for newly diagnosed pediatric acute lymphoblastic leukemia on Dana-Farber Cancer Institute ALL Consortium Protocol 05-001. (Vols. 126). (3), pp. 248. *Blood*. DOI: <https://doi.org/10.1182/blood.V126.23.248.248>.
2. East, E. G., Gast, K., Kuzon, W., **Roberts, E. K.**, Zhao, L. & Jorns, J. M. (2017). Clinicopathologic findings in female to male gender reassignment surgery. *Laboratory Investigation*.
3. Siontis, B., **Roberts, E. K.**, Zhao, L., McHugh, J. B., Owen, D., Baker, L. H., Biermann, J. S., Schuetze, S. & Chugh, R. (2017). Radiation-associated versus sporadic osteosarcoma: A single-institution experience. pp. Meeting Abstract 2017 ASCO Annual Meeting. *Journal of Clinical Oncology*. DOI: <https://doi.org/10.3389/fonc.2019.0152>.
4. Greer, M., Shango, M., Till, B. G., Smith, S. D., Abbas, H., Hill, B. T., Kaplan, J., Barr, P. M., Caimi, P., Stephens, D. M., Lin, E., Herrera, A. F., Rosenbaum, E., Amengual, J. E., **Roberts, E. K.**, Boonstra, P. S., Devata, S., Wilcox, R. A., Kaminski, M. S. & Phillips, T. J. (2017). Multicenter retrospective study of features and outcomes of patients with intravascular DLBCL treated at academic institutions within the United States. (Vols. 130). (Supplement 1), pp. 377. *Blood*. DOI: https://doi.org/10.1182/blood.V130.Suppl_1.377.377.

Other Publications

1. **Roberts, E.K.** (2022). Ph.D. Dissertation: Causal Inference Methods and Intermediate Endpoints in Randomized Clinical Trials. Advisors: Drs. Jeremy Taylor and Michael Elliott.

Research Interests/Current Projects

- Bayesian Methods
- Longitudinal Data
- Oncology
- Survival Analysis
- Biomarkers
- Causal Inference
- Clinical Trial Design

Grants and Contracts

Active (Funded)

1. VA IPA VACO funded Identification of demographic, clinical, and genetic profiles for suicidal behavior in US Veterans; US Department of Veterans Affairs, Iowa City Veterans Affairs Medical Center; Roberts, Emily (Principal Investigator)
 - No Contract #
 - Feb 1, 2024 - Jan 31, 2025
 - Amount: \$32,508.00, 20% effort
2. IDPH Screening Data Management; Iowa Department of Public Health, Center for Disease Control; Roberts, Emily K (Co-Investigator), Oleson, Jacob J (Principal Investigator)
 - 5884NB90 / PUHE-CCI-25-702
 - Aug 1, 1995 - Jun 29, 2025
 - Amount: \$8,607,120.00, 3% effort
 - Breast and Cervical Cancer Early Detection Program, Data and Entry Analysis; WISEWOMAN Enhanced Design, Data Entry and Analysis; Data Management subcontract. Subcontract studies design, data management, and analysis on this project.
3. Internal Award: Formation of a Causal Inference Collaborative Group; University of Iowa Institute for Public Health Practice, Research, and Policy; Roberts, Emily (Principal Investigator)
 - No Contract #
 - Aug 1, 2024 - Jul 31, 2025
 - Amount: \$74,231.00, 5% effort
4. NN111: A Phase-2, Double-Blind, Randomized Controlled Trial to Evaluate the Activity and Safety of Inebilizumab in Anti-NMDA Receptor Encephalitis; University of Utah, National Institutes of Health; Roberts, Emily (Co-Investigator), Coffey, Christopher (Principal Investigator)
 - 10057564-02-IOWA / U01 NS120901
 - Sep 15, 2021 - Aug 31, 2027
 - Amount: \$1,433,333.00, 5% effort
5. A Phase-2b, Double-Blind, Randomized Controlled Trial to Evaluate the Activity and Safety of Inebilizumab in Anti-N-methyl-D-aspartate receptor (NMDAR) Encephalitis and Assess Markers of Disease; University of Utah, National Institutes of Health; Roberts, Emily (Co-Investigator), Clardy, Stacey (Principal Investigator)
 - U01 NS120901
 - Sep 15, 2021 - Aug 31, 2027
 - Amount: \$3,970,523.00
6. Network for Excellence in Neuroscience Clinical Trials (NeuroNEXT) - DCC; NIH/NINDS; Roberts, Emily K (Co-Investigator), Coffey, Christopher S (Principal Investigator)
 - U01 NS077352
 - Sep 30, 2011 - Aug 31, 2028
 - Amount: \$32,365,611.00, 25% effort
 - The University of Iowa provides infrastructure to facilitate rapid development and implementation of protocols for conducting clinical trials in neuroscience. The infrastructure is designed to accommodate dynamically changing requirements that naturally occur in clinical trials (both planned and unplanned). The DCC provides more rapid evaluation of promising treatments in neuroscience and will be a model that can be replicated across a number of studies and diseases.

Not Funded

1. Causal Inference Approaches for Surrogate Endpoints and Optimal Design of T1D Clinical Trials; Breakthrough T1D; Roberts, Emily (Principal Investigator)
 - 2025
 - Amount: \$112,192.00, 10% effort

Under Review

1. Identifying Influences to Symptom Burden During Chemotherapy: Gastrointestinal Microbiome as a Mediator for GI Inflammation and GI Symptom Severity in Women with Breast Cancer; National Institutes of Health; Roberts, Emily (Co-Investigator), Cherwin, Catherine (Principal Investigator)
 - R01 CA297177
 - 2025
 - Amount: \$2,353,246.00, 15% effort
2. Addressing the Social Outcomes of Prolonged Antibiotic Treatment (SOPAT) to Reduce Disparities in Limb-Threatening Bone Infections; National Institutes of Health; Roberts, Emily (Co-Investigator), Carvour, Martha (Principal Investigator)
 - R01 NR021467
 - 2025
 - Amount: \$3,876,041.00, 10% effort

Presentations

Invited Lectures

Aug 2022	Roberts, E. K. Causal Inference Methods to Validate Surrogate Endpoints with Time-to-Event Data. Presented at Banff International Research Workshop: Statistical Challenges in the Identification, Validation, and Use of Surrogate Markers, Banff, Alberta, Canada.
Oct 2022	Roberts, E. K. Surrogacy Validation for Time-to-Event Outcomes in Prostate Cancer with Illness-Death Models. Presented at Biostatistics in Cancer Seminar, University of Michigan, Ann Arbor, Michigan.
Dec 2022	Roberts, E. K. Surrogacy Validation Using Illness-Death Models and Principal Stratification Methods. Presented at Center for Causal Inference Seminar, University of Pennsylvania, Philadelphia, Pennsylvania.
Jan 2023	Roberts, E. K. Causal Inference Methods to Validate Surrogate Endpoints for Prostate Cancer Trials. Presented at Joint Mathematics Meetings, Math Alliance, Boston, Massachusetts.
Feb 2023	Roberts, E. K. Causal Inference and Surrogate Endpoint Validation Using Principal Stratification Methods. Presented at Department of Statistics Seminar, University of Iowa, Iowa City, Iowa.
Feb 2023	Roberts, E. K. Investigating Surrogate Endpoints for Diabetes Clinical Trials. Presented at Frontiers in Obesity, Diabetes, and Metabolism Seminar, University of Iowa, Iowa City, Iowa.
Feb 2023	Roberts, E. K. Causal Inference and Surrogate Endpoint Validation using Principal Stratification Methods. Presented at Department of Statistics and Actuarial Science Colloquium Series, University of Iowa, Iowa City, Iowa.

- Jun 2023 Roberts, E. Causal Inference and Surrogacy Validation with Illness-Death Models. Presented at ICSA.
- Jun 2023 Roberts, E. Surrogacy Validation with Illness-Death Models and Principal Stratification Methods. Presented at WNAR.
- Aug 2023 Roberts, E. Discussion on Surrogate Markers: Identification, Use, and Challenges. Presented at Joint Statistical Meetings.
- Sep 2023 Roberts, E. A Causal Inference Approach for Surrogate Marker Evaluation with Mixed Models. Presented at University of Austin, Texas Department of Statistics and Data Sciences.
- Sep 2023 Roberts, E. Causal Inference Methods to Validate Surrogate Endpoints with Time-to-Event Data. Presented at at University of Minnesota Department of Biostatistics Seminar.
- Mar 2024 Roberts, E. A Causal Inference Approach for Surrogate Marker Evaluation with Mixed Models. Presented at ENAR.
- Oct 2024 Roberts, E. Estimation and Interpretation of Time-varying Effects of Tumor and Patient Factors in Cancer Survival Studies. Presented at University of Kentucky, Department of Epidemiology and Biostatistics.
- Oct 2024 Roberts, E. Using Principal Stratification for Surrogate Evaluation with Mixed Models. Presented at IDWSDS.
- Nov 2024 Roberts, E. A Journey in Biostatistics and Causal Inference. Presented at Coe College Math Colloquium.
- Mar 2025 Roberts, E. *Causal Inference and Combining Sources of Evidence in Diabetes Studies*. Presented at University of Iowa Frontiers in Obesity, Diabetes, and Metabolism Seminar.
- May 2025 Roberts, E. *Methods for Surrogate Endpoint Validation with Illness-Death Frailty Models in Cancer Clinical Trials*. Presented at Lifetime Data Science (LIDS) Conference.
- Oct 2025 Roberts, E. *Incorporating Patient Characteristics for Surrogate Marker Evaluation with Time-to-Event Endpoints*. Presented at International Day of Women in Statistics and Data Science, Virtual.

Oral Presentations

- 2014 Roberts, E. K. Evaluation of the CARING Preschool Program. Presented at Coe College Mathematics Department Colloquium, Coe College, Cedar Rapids, Iowa.
- 2014 Roberts, E. K. Roommate Matching by Design: A Computational Approach and Analysis. Presented at Coe College Psychology Symposium, Coe College, Cedar Rapids, Iowa.
- 2015 Roberts, E. K. Differential Outcomes by SES in Children Undergoing Treatment for Acute Lymphoblastic Leukemia. Presented at Coe College Mathematics Department Colloquium, Coe College, Cedar Rapids, Iowa.
- 2015 Roberts, E. K. Differential Outcomes by SES in Children Undergoing Treatment for Acute Lymphoblastic Leukemia. Presented at Rice University Gulf Coast Undergraduate Research Symposium, Rice University, Houston, Texas.
- 2015 Evaluation of the CARING Preschool Program. Presented at Coe College Research Symposium, Coe College, Cedar Rapids, Iowa.

- Apr 2015 Roberts, E. K. Differential Outcomes by SES in Children Undergoing Treatment for Acute Lymphoblastic Leukemia. Presented at Harvard Pipelines into Biostatistics Symposium, Harvard University School of Public Health, Cambridge, Massachusetts.
- Apr 2015 Roberts, E. K. Mission of Hope Action Research. Presented at Coe College Research Symposium, Coe College, Cedar Rapids, Iowa.
- 2016 Roberts, E. K. Differential Outcomes by SES in Children Undergoing Treatment for Acute Lymphoblastic Leukemia. Presented at Nebraska Conference for Undergraduate Women in Mathematics, University of Nebraska-Lincoln, Lincoln, Nebraska.
- Apr 2016 Roberts, E. K. Roommate Matching by Design: A Computational Approach and Analysis. Presented at Coe College Research Symposium, Coe College, Cedar Rapids, Iowa.
- Feb 2020 Roberts, E. K. Incorporating Subgroups in a Surrogate Endpoint Setting. Presented at Michigan Student Symposium for Interdisciplinary Statistical Sciences (MSSISS) Annual Symposium, MSSISS/University of Michigan, Ann Arbor, Michigan. Received "Best Speed Oral Presentation" Presentation/Poster Award
- Mar 2020 Roberts, E. K. Incorporating Subgroups in a Surrogate Endpoint Setting. Presented at ENAR, International Biometric Society, Nashville, Tennessee.
- Dec 2020 Roberts, E. K. Exposure to Carcinogens and Racial Differences in Leukocyte Telomere Length: Mediation Analysis of Race and Environmental Exposures. Presented at Telomere Research Network Conference, Tulane University School of Medicine, Virtual.
- Feb 2021 Roberts, E. K. Exposure to Carcinogens and Racial Differences in Leukocyte Telomere Length: Mediation Analysis of Race and Environmental Exposures. Presented at Data for Public Good Symposium, Michigan Institute of Data Science/University of Michigan, Virtual.
- Feb 2021 Roberts, E. K. Validating Surrogate Endpoints with Longitudinal Outcomes. Presented at Michigan Student Symposium for Interdisciplinary Statistics Symposium, University of Michigan, Virtual. Received "Best Speed Oral Presentation" Presentation/Poster Award
- Mar 2021 Roberts, E. K. Incorporating Baseline Covariates to Validate Surrogate Endpoints with a Constant Biomarker under Control Arm. Presented at ENAR Spring Meeting, International Biometric Society, Virtual.
- May 2021 Roberts, E. K. Incorporating Baseline Covariates to Validate Surrogate Endpoints with a Constant Biomarker under Control Arm. Presented at Society for Clinical Trials Annual Meeting, Society for Clinical Trials, Virtual.
- Jul 2021 Roberts, E. K. Incorporating Baseline Covariates to Validate Surrogate Endpoints with a Constant Biomarker under Control Arm. Presented at International Society for Clinical Biostatistics Annual Conference, International Society for Clinical Biostatistics, Lyon, France.
- Oct 2021 Roberts, E. K. Surrogacy Validation with Longitudinal Outcomes for a Gene Therapy. Presented at Seminar Presentation, FDA, Washington, District of Columbia.
- Nov 2021 Roberts, E. K. Surrogacy Validation with Longitudinal Outcomes for a Gene Therapy. Presented at Seminar Presentation, St. Jude's Children's Hospital, Memphis, Tennessee.
- Nov 2021 Roberts, E. K. Surrogacy Validation with Longitudinal Outcomes for a Gene Therapy. Presented at Seminar Presentation, University of Michigan, Ann Arbor, Michigan.

- Dec 2021 Roberts, E. K. Surrogacy Validation with Longitudinal Outcomes for a Gene Therapy. Presented at Seminar Presentation, Vanderbilt University, Nashville, Tennessee.
- Jan 2022 Roberts, E. K. Adapting Causal Ideas from Surrogacy Validation of Intermediate Endpoints to Futility Analysis in Clinical Trials. Presented at Seminar Presentation, St. Jude Children's Hospital, Memphis, Tennessee.
- Jan 2022 Roberts, E. K. Surrogacy Validation with Longitudinal Outcomes for a Gene Therapy. Presented at Seminar Presentation, University of Minnesota, Minneapolis, Minnesota.
- Jan 2022 Roberts, E. K. Surrogacy Validation with Longitudinal Outcomes for a Gene Therapy. Presented at Seminar Presentation, University of Iowa, Iowa City, Iowa.
- Apr 2022 Roberts, E. K. Causal Inference Methods to Validate Surrogate Endpoints in Clinical Trials. Presented at Joint Mathematics Meetings, American Mathematical Society, Virtual.
- Aug 2022 Roberts, E. K. Surrogacy Validation with Longitudinal Outcomes for a Gene Therapy. Presented at Joint Statistical Meetings, American Statistical Association, Washington, District of Columbia.
- Oct 2022 Roberts, E. K. Surrogacy Validation with Longitudinal Outcomes for a Gene Therapy. Presented at Women in Statistics and Data Science Conference, Women in Statistics and Data Science, St. Louis, Missouri.
- Aug 2023 Roberts, E. Using Clinical Trial Data to Evaluate Intermediate Endpoints for Futility Analysis. Presented at ACTStat Annual Meeting.
- Aug 2023 Roberts, E. Surrogacy Validation for Time-to-Event Outcomes with Illness-Death Models. Presented at Joint Statistical Meeting, Lifetime Data Science Paper Award.
- Aug 2024 Roberts, E. Combining Levels of Clinical Trial Data to Evaluate Intermediate Endpoints for Futility Analysis. Presented at JSM.
- Feb 2025 Roberts, E. Introduction to Causal Inference. Presented at University of Iowa Center for Social Science Innovation, Iowa City, IA.
- Mar 2025 Roberts, E. Small Sample Size Clinical Trial Analysis Using External Data with Longitudinal Measures. Presented at ENAR.
- Aug 2025 Roberts, E. *Formation of a University's Causal Inference Collaboratory*. Presented at JSM.
- Mar 2026 Roberts, E. Mixed Models and Causal Inference in Clinical Trials. Presented at Thomas Jefferson University, Philadelphia, PA.
- Apr 2026 Roberts, E. *Mixed Models and Causal Inference in Clinical Trials*. Presented at University of Louisville, Louisville, KY.

Posters

- Apr 2014 Roberts, E. K. Roommate Matching by Design: A Computational Approach and Analysis. Presented at Coe College Research Symposium, Coe College, Cedar Rapids, Iowa.
- Jul 2014 Roberts, E. K. Evaluation of the CARING Preschool Program. Presented at Columbia University Symposium, Columbia University, New York, New York.
- Feb 2019 Roberts, E. K. Association of Telomere Length and Race: SES as a Potential Effect Modifier. Presented at Data for Public Good Symposium, Michigan Institute for Data Science/University of Michigan, Ann Arbor, Michigan.

- Mar 2019 Roberts, E. K. A Bayesian Mixture Model to Estimate the Effect of an Ordinal Predictor. Presented at ENAR Spring Meeting, International Biometric Society, Philadelphia, Pennsylvania.
- Mar 2019 Roberts, E. K. A Bayesian Mixture Model to Estimate the Effect of an Ordinal Predictor. Presented at MSSISS Symposium, Michigan Student Symposium for Interdisciplinary Statistics/University of Michigan, Ann Arbor, Michigan.
- Jun 2019 Roberts, E. K. Incorporating Subgroups in a Surrogate Endpoint Setting. Presented at Michigan Rogel Cancer Center Spring Symposium, University of Michigan Health, Ann Arbor, Michigan.
- Aug 2019 Roberts, E. K. Incorporating Subgroups in a Surrogate Endpoint Setting. Presented at Joint Statistical Meetings, American Statistical Association, Denver, Colorado.
- Nov 2019 Roberts, E. K. Incorporating Subgroups in a Surrogate Endpoint Setting. Presented at MIDAS Symposium, Michigan Institute of Data Science/University of Michigan, Ann Arbor, Michigan.
Received "Most Likely to Make and Impact in the Field" Award
- Dec 2019 Roberts, E. K. Incorporating Subgroups in a Surrogate Endpoint Setting. Presented at SAMSI Causal Inference Workshop, Statistical and Applied Mathematical Sciences Institute/Duke University, Durham, North Carolina.
- Nov 2020 Roberts, E. K. Validating Surrogate Endpoints with Longitudinal Outcomes. Presented at MIDAS Annual Symposium, Michigan Institute for Data Science/University of Michigan, Virtual.
- Aug 2021 Roberts, E. K. Validating Surrogate Endpoints with Longitudinal Outcomes. Presented at Joint Statistical Meetings, American Statistical Association, Virtual.
Speed Talk
- Sep 2021 Roberts, E. K. Incorporating Longitudinal Outcomes and Baseline Covariates to Validate Surrogate Endpoints. Presented at ASA Biopharmaceutical Section Regulatory-Industry Statistics Workshop, American Statistical Society Biopharmaceutical Section in cooperation with the FDA Statistical Association, Virtual.
- Dec 2021 Roberts, E. K. Mediation Analysis of Race and Environmental Exposures on Telomere Length using Data from the National Health and Nutrition Examination Survey (1999-2002). Presented at Telomere Research Network Conference, Tulane University School of Medicine, New Orleans, Louisiana.
- May 2022 Roberts, E. K. Evaluating Intermediate Clinical Endpoints for Futility Analysis in Clinical Trials. Presented at SCT Annual Meeting, Society for Clinical Trials, San Diego, California.
Received Best Poster Award
- May 2022 Roberts, E. K. Surrogacy Validation with Longitudinal Outcomes for a Gene Therapy. Presented at The 5th STAT4Onc Annual Symposium, National Cancer Institute, Virtual.
Received 2nd Place Poster Prize
- Aug 2022 Roberts, E. K. Surrogacy Validation with Longitudinal Outcomes for a Gene Therapy. Presented at ACTStat Annual Meeting, The Association for Clinical and Translational Statisticians, Washington, District of Columbia.
- Aug 2024 Roberts, E. Causal Inference and Counterfactual Random Effects for Trials with Repeatedly Measured Endpoints. Presented at JSM Invited Poster.
- May 2025 Roberts, E. *Formation of a University's Causal Inference Collaboratory*. Presented at Society for Causal Inference Conference.

Service

Professional Service

Professional Organizations

2023 - 2025	Chapter Representative, Iowa Chapter American Statistical Association
2021 - Present	American Statistical Association, Member
2021 - Present	Eastern North American Region/International Biometric Society, Member
2021 - Present	Society for Clinical Trials, Member
2021 - Present	Caucus for Women in Statistics, Member
2023 - Present	Regional Advisory Board and Poster Judge, ENAR International Biometric Society, Member

Journal Reviews/Referee Manuscripts

2020 - 2021	Undergraduate Journal of Public Health
2018 - Present	PLOS-ONE
2020 - Present	The Lancet - EClinicalMedicine
2020 - Present	The Lancet Psychiatry
2022 - Present	International Journal of Biomathematics
2022 - Present	Environmental Research, Reviewer, Publications
2022 - Present	Biostatistics
2022 - Present	JAMA Open
2022 - Present	Statistics in Medicine
2022 - Present	Communications in Statistics - Case Studies and Data Analysis
2022 - Present	Journal of Clinical Medicine
2022 - Present	Biometrics
2022 - Present	The American Statistician, Reviewer, Publications
2023 - Present	Health Services and Outcomes Research Methodology
2023 - Present	Annals of Applied Statistics

Review Panels

2017 - 2022	Fellowship Funding Seminars/University of Michigan, Member
2017 - 2022	Big Data Summer Institute/University of Michigan, Interested and Admitted Student Days, Member
2022	Alumni Career Panel for University of Michigan Biostatistics 70+ Anniversary Celebration, Chair
2022	Coe College Women in STEM Seminar, Member
2022	BIRS-CMO Surrogate Markers Workshop on Assumptions, Sensitivity, and Robustness, Chair

2023 Research Grant, Alzheimer's Association, Reviewer, Grant Proposals

Organize Conferences, Sessions, etc.

2022 - 2023 Conference Organizing Committee, ACTSTAT, Co-Organizer

Other

2022 Coe College Panel Session on Grad School Season

2023 - Present Joint Mathematics Meetings Math Alliance Panel, Member

2024 - Present IPHPRP Case Competition Team Mentor

University, College, Department Service

College

Nov 2023 - Present Epidemiology Faculty Search Committee, Iowa City, Iowa, Member

Department

Aug 2022 - Present Biostatistics Admissions and Student Recruitment Committee, Member

Aug 2022 - Present Ladies in UI Biostatistics, Mentor