CURRICULUM VITAE

Lee Kennedy-Shaffer, PhD

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Contact Information:

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School: Yale School of Public Health

Education:

09/2009 - 05/2013	BS, Yale University, Mathematics, New Haven, CT
08/2016 - 05/2018	MA, Harvard University, Biostatistics, Cambridge, MA
08/2016 - 05/2020	PhD, Harvard University, Biostatistics, Cambridge, MA

Career/Academic Appointments:

05/2020 - 07/2020	Postdoctoral Fellow, Center for Communicable Disease Dynamics and Department of Epidemiology, Harvard T.H. Chan School of Public Health, Boston, MA
09/2020 - 06/2024	Assistant Professor, Mathematics and Statistics, Vassar College, Poughkeepsie, NY

Professional Honors & Recognition:

International/National/Regional

2018	JSM Contributed Presentation Award, Third Place, American Statistical Association Biopharmaceutical Section
2019	Thomas C. Chalmers Student Scholarship, Finalist, Society for Clinical Trials
2022	Statistical Excellence in Early Career Writing, Royal Statistical Society/Significance Magazine
2024	Reproducible Research Competition, Open-Track Methods Winner, Carnegie Mellon Sports Analytics Conference
2026	Conference Fellow, Center for Aging and Policy Studies (CAPS)–Center for Policy Research (CPR), Syracuse University

Other

2018	Certificate of Distinction in Teaching: BST 216, Harvard University

2019	Certificate of Distinction in Teaching: GENED 1129, Harvard University
2019	Certificate of Distinction in Teaching: BIOSTAT 232, Harvard University

Grants/Clinical Trials History:

Current Grants

Agency:	National Institute of Allergy and Infectious Disease
I.D.#:	25-005066
Title:	Uncovering the biological drivers of variance in Aedes aegypti vector competence
P.I.:	Douglas Brackney
Role:	Statistician
Percent effort:	10%
Total costs:	$65,333.00 (of which $26,435.00 indirects)
Project period:	12/01/2025 - 11/30/2027

Agency:	National Heart Lung and Blood Institute
I.D.#:	7R25HL161795-04
Title:	Transforming Analytical Learning in the Era of Big Data: A Summer Institute in Biostatistics and Data Science
P.I.:	Bhramar Mukherjee
Role:	Co-Investigator
Percent effort:	3%
Total costs:	$734,205.00
Project period:	07/01/2024 - 05/31/2027

Agency:	Centers for Disease Control and Prevention
I.D.#:	NU50CK000644
Title:	Connecticut Emerging Infections Program at Yale
P.I.:	Linda Niccolai
Role:	Investigator
Percent effort:	5%
Total costs:	$11,676,000.00
Project period:	01/01/2024 - 12/31/2028

Past Grants

Agency:	National Institute of Allergy and Infectious Diseases
I.D.#:	F31AI147745
Title:	Biostatistical Methods for Infectious Diseases Study Design
P.I.:	Lee Kennedy-Shaffer
Role:	PI
Percent effort:	N/A
Total costs:	-
Project period:	09/01/2019 - 05/31/2020

Agency:	Society for Thoracic Surgeons
I.D.#:	N/A
Title:	The Thoracic Surgery Foundation, 2025 Catalyst Award for Data Access
P.I.:	Paul Feingold
Role:	Statistician
Percent effort:	N/A
Total costs:	$10,000.00
Project period:	02/01/2025 - 10/30/2025

Pending Grants

Agency:	National Human Genome Research Institute
I.D.#:	GRANT14528653
Title:	Ethical, Legal, and Social Implications of the Data Science Foundations of Genetics and Genomics Research
Role:	Principal Investigator
Percent effort:	20%
Total costs:	$100,000.00
Project period:	07/01/2026 - 06/30/2028

Invited Speaking Engagements, Presentations & Workshops Not Affiliated With Yale:

International/National

1. "Baseball's 'Natural' Experiment: Statistical Excellence in Early Career Writing". Royal Statistical Society International Conference, Aberdeen, Scotland, September 2022. (Oral Presentation)
2. "Vaccine Efficacy Against Transmission: Statistical and Epidemiological Considerations". International Biometric Society, Western North America Region, Anchorage, AK, June 2023. (Oral Presentation)
3. "Teaching the difficult past of statistics to improve the future". Journal of Statistics and Data Science Education/CAUSE Webinar Series, Webinar, October 2023. (Lecture)
4. "Quasi-experiments in epidemiology: Difference-in-differences, synthetic control, and staggered adoption designs". Society for Epidemiologic Research Annual Meeting, Austin, TX, June 2024. (Demonstration)
5. "Panel data methods to evaluate the impact of rule changes". Carnegie Mellon University, Carnegie Mellon Sports Analytics Conference, Pittsburgh, PA, November 2024. (Oral Presentation)
6. "Evaluating rule changes using quasi-experimental designs". Connecticut Statistical Data Science Lab, Connecticut Sports Analytics Symposium, New Haven, CT, April 2025. (Oral Presentation)
7. "Quasi-experiments in epidemiology: Staggered adoption difference-in-differences and synthetic control methods". Society for Epidemiologic Research, Society for Epidemiologic Research Annual Meeting, Boston, MA, June 2025. (Demonstration)
8. "Using historical materials in the modern statistics and data science classroom". Pacific Institute for the Mathematical Sciences, International Centre for Mathematical Sciences, PIMS-ICMS Big Data Before Data Science Conference, Vancouver, BC, December 2025. (Oral Presentation)

9. "Estimands, assumptions, and the challenges of evaluating policies: Lessons from staggered adoption". Victorian Centre for Biostatistics (ViCBiostat) Seminar Series, Webinar Series Sponsored By University Consortium in Victoria, Australia, March 2026. (Oral Presentation)
10. "The statistical limits of the "Laboratories of Democracy". Center for Aging and Policy Studies and Center for Policy Research, Syracuse University, CAPS-CPR Conference, Syracuse, NY, June 2026. (Oral Presentation)

Regional

1. "A generalized difference-in-differences estimator for causal inference with staggered treatment adoption". University of Illinois, Department of Statistics, Champaign, IL, September 2024. (Lecture)
2. "Measuring the population health impact of vaccines: Statistical and epidemiological challenges". Oxford University, Pandemic Sciences Institute, Oxford University Virtual Seminar, October 2024. (Lecture)

Peer-Reviewed Presentations Given at Meetings Not Affiliated With Yale:

International/National

1. **Kennedy-Shaffer L** . Stepped-wedge designs as target trials for quasi-experiments. Current Developments in Cluster Randomised Trials and Stepped Wedge Designs, Birmingham, ENG, November 2025. (Oral Presentation)
2. **Kennedy-Shaffer L** . Synthetic control analyses in outbreaks: Challenges and opportunities. Epidemics, San Diego, CA, November 2025. (Poster Presentation)

Professional Service:

Journal Services

Editorial boards

2024 - Present Statistical Editor, Nature Medicine
2024 - Present Associate Editor, Epidemiologic Methods

Professional Organizations

American Statistical Association History of Statistics Interest Group (Program Chair)

2019 - 2020 Chair, American Statistical Association History of Statistics Interest Group (Program Chair)

American Statistical Association, Committee of Representatives to AAAS

2025 - Present Committee Member, American Statistical Association, Committee of Representatives to AAAS

Bibliography:

Peer-Reviewed Original Research

1. Charles Z, Farber M, Johnson C, **Kennedy-Shaffer L** . Nonpositive Eigenvalues of Hollow, Symmetric, Nonnegative Matrices. SIAM Journal On Matrix Analysis And Applications 2013, 34: 1384-1400. DOI: 10.1137/130904624 .
2. Charles Z, Farber M, Johnson C, **Kennedy-Shaffer L** . The relation between the diagonal entries and the eigenvalues of a symmetric matrix, based upon the sign pattern of its off-diagonal entries. Linear Algebra And Its Applications 2013, 438: 1427-1445. DOI: 10.1016/j.laa.2012.09.014 .
3. Charles Z, Farber M, Johnson C, **Kennedy-Shaffer L** . Nonpositive eigenvalues of the adjacency matrix and lower bounds for Laplacian eigenvalues. Discrete Mathematics 2013, 313: 1441-1451. DOI: 10.1016/j.disc.2013.03.010 .
4. **Kennedy-Shaffer L** . When the Alpha is the Omega: P-Values, "Substantial Evidence," and the 0.05 Standard at FDA. Food And Drug Law Journal 2017, 72: 595-635. PMID: 30294197 , PMCID: PMC6169785 .
5. **Kennedy-Shaffer L** . Before $p < 0.05$ to Beyond $p < 0.05$: Using History to Contextualize p-Values and Significance Testing. The American Statistician 2019, 73: 82-90. PMID: 31413381 , PMCID: PMC6693672 , DOI: 10.1080/00031305.2018.1537891 .
6. **Kennedy-Shaffer L** , de Gruttola V, Lipsitch M. Novel methods for the analysis of stepped wedge cluster randomized trials. Statistics In Medicine 2019, 39: 815-844. PMID: 31876979 , PMCID: PMC7247054 , DOI: 10.1002/sim.8451 .
7. **Kennedy-Shaffer L** , Hughes M. Sample size estimation for stratified individual and cluster randomized trials with binary outcomes. Statistics In Medicine 2020, 39: 1489-1513. PMID: 32003492 , PMCID: PMC7247053 , DOI: 10.1002/sim.8492 .
8. **Kennedy-Shaffer L** , Lipsitch M. Statistical Properties of Stepped Wedge Cluster-Randomized Trials in Infectious Disease Outbreaks. American Journal Of Epidemiology 2020, 189: 1324-1332. PMID: 32648891 , PMCID: PMC7604531 , DOI: 10.1093/aje/kwaa141 .
9. Kahn R, **Kennedy-Shaffer L** , Grad Y, Robins J, Lipsitch M. Potential Biases Arising From Epidemic Dynamics in Observational Seroprotection Studies. American Journal Of Epidemiology 2020, 190: 328-335. PMID: 32870977 , PMCID: PMC7499481 , DOI: 10.1093/aje/kwaa188 .
10. Vercammen K, Moran A, Soto M, **Kennedy-Shaffer L** , Bleich S. Decreasing Trends in Heavy Sugar-Sweetened Beverage Consumption in the United States, 2003 to 2016. Journal Of The Academy Of Nutrition And Dietetics 2020, 120: 1974-1985.e5. PMID: 32981886 , DOI: 10.1016/j.jand.2020.07.012 .
11. Accorsi E, Qiu X, Rumpler E, **Kennedy-Shaffer L** , Kahn R, Joshi K, Goldstein E, Stensrud M, Niehus R, Cevik M, Lipsitch M. How to detect and reduce potential sources of biases in studies of SARS-CoV-2 and COVID-19. European Journal Of Epidemiology 2021, 36: 179-196. PMID: 33634345 , PMCID: PMC7906244 , DOI: 10.1007/s10654-021-00727-7 .
12. **Kennedy-Shaffer L** , Baym M, Hanage W. Perfect as the enemy of good: tracing transmissions with low-sensitivity tests to mitigate SARS-CoV-2 outbreaks. The Lancet Microbe 2021, 2: e219-e224. PMID: 33748803 , PMCID: PMC7954468 , DOI: 10.1016/s2666-5247(21)00004-5 .
13. **Kennedy-Shaffer L** . Land Does Not Vote. Neither Do Percentages. Significance 2021, 18: 4-5. DOI: 10.1111/1740-9713.01499 .

14. **Kennedy-Shaffer L** , Qiu X, Hanage W. Snowball Sampling Study Design for Serosurveys Early in Disease Outbreaks. American Journal Of Epidemiology 2021, 190: 1918-1927. PMID: 33831177 , PMCID: PMC8083564 , DOI: 10.1093/aje/kwab098 .
15. Hay J, **Kennedy-Shaffer L** , Kanjilal S, Lennon N, Gabriel S, Lipsitch M, Mina M. Estimating epidemiologic dynamics from cross-sectional viral load distributions. Science 2021, 373: eabh0635. PMID: 34083451 , PMCID: PMC8527857 , DOI: 10.1126/science.abh0635 .
16. Lau Y, Tsang T, **Kennedy-Shaffer L** , Kahn R, Lau E, Chen D, Wong J, Ali T, Wu P, Cowling B. Joint Estimation of Generation Time and Incubation Period for Coronavirus Disease 2019. Journal Of Infectious Diseases 2021, 224: 1664-1671. PMID: 34423821 , PMCID: PMC8499762 , DOI: 10.1093/infdis/jiab424 .
17. **Kennedy-Shaffer L** , Kahn R, Lipsitch M. Estimating Vaccine Efficacy Against Transmission via Effect on Viral Load. Epidemiology 2021, 32: 820-828. PMID: 34469363 , PMCID: PMC8478108 , DOI: 10.1097/ede.0000000000001415 .
18. **Kennedy-Shaffer L** , Hughes M. Power and sample size calculations for cluster randomized trials with binary outcomes when intracluster correlation coefficients vary by treatment arm. Clinical Trials 2021, 19: 42-51. PMID: 34879711 , PMCID: PMC8883478 , DOI: 10.1177/17407745211059845 .
19. Sheen J, Haushofer J, Metcalf C, **Kennedy-Shaffer L** . The required size of cluster randomized trials of nonpharmaceutical interventions in epidemic settings. Statistics In Medicine 2022, 41: 2466-2482. PMID: 35257398 , PMCID: PMC9111156 , DOI: 10.1002/sim.9365 .
20. **Kennedy-Shaffer L** . Baseball's Natural Experiment. Significance 2022, 19: 42-45. DOI: 10.1111/1740-9713.01691 .
21. Joshi K, Rumpler E, **Kennedy-Shaffer L** , Bosan R, Lipsitch M. Comparative performance of between-population vaccine allocation strategies with applications for emerging pandemics. Vaccine 2023, 41: 1864-1874. PMID: 36697312 , PMCID: PMC10075509 , DOI: 10.1016/j.vaccine.2022.12.053 .
22. **Kennedy-Shaffer L** . Public Health Impacts of Vaccines for COVID-19 and Beyond: Opportunities to Overcome Technical and Regulatory Barriers for Randomized Trials. American Journal Of Public Health 2023, 113: 778-785. PMID: 37104734 , PMCID: PMC10262256 , DOI: 10.2105/ajph.2023.307302 .
23. Feingold P, Bryan D, Kuckelman J, **Kennedy-Shaffer L** , Wang V, Deeb A, Wee J, Jaklitsch M, Marshall M. Anastomotic Stricture After Minimally Invasive Esophagectomy. The Annals Of Thoracic Surgery 2023, 116: 712-719. PMID: 37244601 , DOI: 10.1016/j.athoracsur.2023.05.013 .
24. **Kennedy-Shaffer L** . Teaching the Difficult Past of Statistics to Improve the Future. Journal Of Statistics And Data Science Education 2023, 32: 108-119. DOI: 10.1080/26939169.2023.2224407 .
25. **Kennedy-Shaffer L** . Quasi-experimental methods for pharmacoepidemiology: difference-in-differences and synthetic control methods with case studies for vaccine evaluation. American Journal Of Epidemiology 2024, 193: 1050-1058. PMID: 38456774 , PMCID: PMC11228849 , DOI: 10.1093/aje/kwae019 .
26. Sheen J, **Kennedy-Shaffer L** , Levy M, Metcalf C. Design of field trials for the evaluation of transmissible vaccines in animal populations. PLOS Computational Biology 2025, 21: e1012779. PMID: 39899630 , PMCID: PMC11790233 , DOI: 10.1371/journal.pcbi.1012779 .
27. **Kennedy-Shaffer L** . An Undergraduate Course on the Statistical Principles of Research Study Design. The American Statistician 2025, 79: 520-528. DOI: 10.1080/00031305.2025.2509664 .

28. Lu X, **Kennedy-Shaffer L** , Shabanova V. SWCRTsimulator: A simulation-based platform for power estimation in stepped wedge cluster randomized trials with interval-censored outcomes. SoftwareX 2025, 31: 102288. PMID: 41036414 , PMCID: PMC12483528 , DOI: 10.1016/j.softx.2025.102288 .
29. **Kennedy-Shaffer L** , Kennedy A. Spillovers and effect attenuation in firearm policy research in the United States. American Journal Of Epidemiology 2025, 194: 3402-3406. PMID: 41047722 , DOI: 10.1093/aje/kwaf220 .
30. **Kennedy-Shaffer L** . The Effects of Major League Baseball's Ban on Infield Shifts: A Quasi-Experimental Analysis. The American Statistician 2025, ahead-of-print: 1-11. DOI: 10.1080/00031305.2025.2552283 .

Commentaries, Editorials and Letters

1. Kennedy-Shaffer L. Rapid Response: Assumption of independence between LFT results and infectiousness, given PCR results, may not hold. Rapid Response to BMJ 2022;376:e066871. BMJ March 2022. https://www.bmj.com/content/376/bmj-2021-066871/rr-1.
2. Kennedy-Shaffer L. Review 1: "Viral load dynamics of SARS-CoV-2 Delta and Omicron variants following multiple vaccine doses and previous infection." Rapid Reviews: COVID-19 May 2022. DOI:10.1162/2e3983f5.80a2172a.
3. Kennedy-Shaffer L. Reviewer Report: "Characterising the persistence of RT-PCR positivity and incidence in a community survey of SARS-CoV-2." Wellcome Open Research August 2022. DOI:10.21956/wellcomeopenres.19611.r52063.
4. Kennedy-Shaffer L. Review of: "Measuring the efficacy of a vaccine during an epidemic." Qeios May 2023. DOI:10.32388/VZ07WE.
5. Feingold P, **Kennedy-Shaffer L** , Wee J, Jaklitsch M, Marshall M. Supporting the Use of Institutional Data to Improve Outcomes. The Annals Of Thoracic Surgery 2023, 117: 875-876. PMID: 37827350 , DOI: 10.1016/j.athoracsur.2023.09.045 .
6. **Kennedy-Shaffer L** . Probably Overthinking It. The Mathematical Intelligencer 2024, 46: 403-405. DOI: 10.1007/s00283-024-10349-y .
7. Kennedy-Shaffer L. Review 2: "Parallel trends in an unparalleled pandemic: difference-in-differences for infectious disease policy evaluation." Rapid Reviews: Infectious Diseases May 2024. DOI:10.1162/2e3983f5.7efdeb76.
8. Kennedy-Shaffer L. Review: "The health and employment effects of employer vaccination mandates". Rapid Reviews: Infectious Diseases January 2025. DOI:10.1162/2e3983f5.6cd00cbf.