

CURRICULUM VITAE

Lee Kennedy-Shaffer, PhD

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Contact Information:

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School: Yale School of Medicine

Education:

09/2009 - 05/2013 BS, Yale University, Mathematics, New Haven, CT
xxxx - 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

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: 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

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

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)

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)

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

- 2019 - 2020 Program Committee, American Statistical Association History of Statistics Interest Group

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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://pubmed.ncbi.nlm.nih.gov/30294197/) , [PMCID: PMC6169785](https://pubmed.ncbi.nlm.nih.gov/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](https://pubmed.ncbi.nlm.nih.gov/31413381/) , [PMCID: PMC6693672](https://pubmed.ncbi.nlm.nih.gov/PMC6693672/) , [DOI: 10.1080/00031305.2018.1537891](https://doi.org/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](https://pubmed.ncbi.nlm.nih.gov/31876979/) , [PMCID: PMC7247054](https://pubmed.ncbi.nlm.nih.gov/PMC7247054/) , [DOI: 10.1002/sim.8451](https://doi.org/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. *The 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](#) .

Peer-Reviewed Original Research In Press

1. Sheen JK, Kennedy-Shaffer L, Levy MZ, Metcalf CJE. Design of field trials for the evaluation of transmissible vaccines in animal populations. *PLoS Comput Biol* 2025, 21: e1012779. [PMID: 39899630](#) , [DOI: 10.1371/journal.pcbi.1012779](#).

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.