Matthew M. Lee

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Summary: I am a PhD candidate in Population Health Sciences at the Harvard T.H. Chan School of Public Health in the Department of Nutrition. My professional interests are focused on policies and interventions related to food systems and the environment that improve cardiometabolic outcomes, as well as the application of novel causal inference and simulation-based methods to advance population health and health equity research.

Education

Harvard T.H. Chan School of Public Health — Expected May 2024

Doctor of Philosophy (PhD) in Population Health Science, Public Health Nutrition

Thesis: Policy, Systems, and Environmental Levers to Improve Diet, Population Health, and Health Equity in the US

Paper 1: *Estimating the cost-effectiveness of expanding universal free school lunch policies in the United States*

Paper 2: *Changes in adherence to the Dietary Guidelines for Americans and weight among adolescents in the Growing Up Today Study: A prospective cohort study*

Paper 3: *Differences in diet following provision of lottery-based unconditional cash transfers during the COVID-19 pandemic in Chelsea, Massachusetts: A randomized lottery experiment*

University of California, Berkeley School of Public Health — 2019

Master of Science (MS) in Epidemiology

Thesis: *Sugar-Sweetened Beverage Consumption 3 Years After the Berkeley, California, Sugar-Sweetened Beverage Tax*

University of California, Berkeley — 2016

Bachelor of Arts (BA) in Public Health, Minors: Global Poverty, Music

Teaching

Teaching Fellow, Population Health Sciences 2000 A/B — 2020-2021, 2022

"Quantitative Research Methods in Population Health Sciences" | *Harvard Graduate School of Arts and Sciences*

- Year-long core course for first-year PhD students in the Population Health Sciences doctoral program, covering concepts in sampling, estimation and statistical inference for regression models, model selection, survival and longitudinal analyses, measurement error, causal inference and mediation, and econometrics.
- Led lab sessions and weekly office hours with original lecture slides including applications using the R programming language, development and grading of homework and exam assessments, and primary role in course evaluation and refinement during transition to online/virtual learning. Lab lectures given included material on regression, measurement error, survival analysis, causal interaction and mediation, factor analysis, and meta-analysis.

Teaching Fellow, Social and Behavioral Sciences 203/204 — 2022, 2023

"Program Implementation and Evaluation" | *Harvard T.H. Chan School of Public Health*

- Semester course on conducting community health needs assessment, program planning, implementation, and evaluation, with a particular emphasis on community engagement and applied research. Required for masters students in Social and Behavioral Sciences. Foci includes health-related intervention for individuals, communities, organizations, and local/national groups and the various challenges that researchers and practitioners encounter when conducting this work "on the ground".
- Facilitated in-class discussion on theoretical concepts and course materials, led lecture in cost effectiveness analysis and economic evaluation in the context of program planning, and provided critical feedback on student work, including a community health needs assessment and CDC *Partnerships for Improving Community Health* grant application among others.

Teaching Fellow, Nutrition 202 — 2022

"The Biological Basis of Human Nutrition" | *Harvard T.H. Chan School of Public Health, Biological Sciences in Public Health*

- Semester course on the biochemistry and metabolism of carbohydrates, fats, proteins, vitamins, and minerals in the context of human disease. Contemporary topics are emphasized. Particular emphasis is given to current knowledge of the mechanisms that may explain the role of diet in the causation and/or prevention of ischemic heart disease, diabetes, obesity, hypertension, and cancer. Required for masters and doctoral students in Nutrition.

- Coordinated weekly guest lectures and held weekly office hour review sessions on course material, led lecture in iron and copper metabolism in the context of human nutrition and health, drafted and evaluated exam questions and facilitated course feedback.

Tutor, Population Health Sciences 2000 A/B 2021-22

"Quantitative Research Methods in Population Health Sciences" | *Harvard Graduate School of Arts and Sciences*

- Hosted weekly tutoring sessions for 2-3 first-year PhD students in Population Health Sciences to support learning in PHS 2000A and B (course description above), review concepts in preparation for exams, go over solutions and concepts from problem sets, and provide mentoring on additional classes and resources.

Publications

1. **Lee, M. M.,** Poole, M. K., Zack, R. M., Fiechtner, L., Rimm, E. B., Kenney, E. L., Food Insecurity and the Role of Food Assistance Programs in Supporting Diet Quality during the COVID-19 Pandemic in Massachusetts. *Frontiers in Nutrition* **9.** issn: 2296-861X. doi:10.3389/fnut.2022.1007177 (2023).
2. Kenney, E. L., Soto, M. J., Fubini, M., Carleton, A., **Lee, M. M.,** Bleich, S. N., Simplification of Supplemental Nutrition Assistance Program Recertification Processes and Association With Uninterrupted Access to Benefits Among Participants With Young Children. *JAMA Network Open* **5,** e2230150. issn: 2574-3805 (2022).
3. Zahid, N., Pulvera, R., Madsen, K. A., **Lee, M. M.,** Ibarra-Castro, A., Falbe, J., Socioeconomic Disparities in Outdoor Branded Advertising in San Francisco and Oakland, California. *Preventive Medicine Reports* **27,** 101796. issn: 22113355 (2022).
4. **Lee, M. M.,** Kinsey, E. W., Kenney, E. L., U.S. Nutrition Assistance Program Participation and Childhood Obesity: The Early Childhood Longitudinal Study 2011. *American Journal of Preventive Medicine.* issn: 0749-3797. doi:10.1016/j.amepre.2022.02.016. https://www.sciencedirect.com/science/article/pii/S0749379722001507 (2022).
5. Vercammen, K. A., Moran, A. J., Carnethon, M. R., McClain, A. C., Pool, L. R., Kiefe, C. I., Carson, A. P., Gordon-Larsen, P., Steffen, L. M., **Lee, M. M.,** Young, J. G., Rimm, E. B., Longitudinal Analysis of Food Insufficiency and Cardiovascular Disease Risk Factors in the CARDIA Study. *American Journal of Preventive Medicine* **62,** 65–76. issn: 1873-2607 (2022).
6. **Lee, M. M.,** Altman, E., Madsen, K. A., Secular Trends in Sugar-Sweetened Beverage Consumption Among Adults, Teens, and Children: The California Health Interview Survey, 2011–2018. *Prev. Chronic Dis.* **18.** doi:10.5888/pcd18.200399 (2021).
7. Clark, O., **Lee, M. M.,** Jingree, M. L., O'Dwyer, E., Yue, Y., Marrero, A., Tamez, M., Bhupathiraju, S. N., Mattei, J., Weight Stigma and Social Media: Evidence and Public Health Solutions. *Frontiers in Nutrition* **8.** issn: 2296-861X. https://www.frontiersin.org/article/10.3389/fnut.2021.739056 (2022) (2021).
8. Falbe, J., **Lee, M. M.,** Kaplan, S., Rojas, N. A., Ortega Hinojosa, A. M., Madsen, K. A., Higher Sugar-Sweetened Beverage Retail Prices After Excise Taxes in Oakland and San Francisco. *Am J Public Health.* doi:10.2105/AJPH.2020.305602. pmid: 32437271 (2020).
9. Ponce, J., Yuan, H., Schillinger, D., Mahmood, H., **Lee, M. M.,** Falbe, J., Daniels, R., Madsen, K. A., Retailer Perspectives on Sugar-Sweetened Beverage Taxes in the California Bay Area. *Preventive Medicine Reports.* doi:10.1016/j.pmedr.2020.101129 (2020).
10. Mujahid, M. S., Sohn, E. K., Izenberg, J., Gao, X., Tulier, M. E., **Lee, M. M.,** Yen, I. H., Gentrification and Displacement in the San Francisco Bay Area: A Comparison of Measurement Approaches. *Int J Environ Res Public Health* **16.** doi:10.3390/ijerph16122246. pmid: 31242684 (2019).
11. **Lee, M. M.,** Falbe, J., Madsen, K. A., Secular Trends in Soda Consumption, California, 2011-2016. *Prev Chronic Dis* **16.** doi:10.5888/pcd16.180372. pmid: 31095919 (2019).
12. **Lee, M. M.,** Falbe, J., Schillinger, D., Basu, S., McCulloch, C. E., Madsen, K. A., Sugar-Sweetened Beverage Consumption 3 Years After the Berkeley, California, Sugar-Sweetened Beverage Tax. *Am J Public Health* **109.** doi:10.2105/AJPH.2019.304971 (2019).

Reviewer for: PLOS ONE, BMC Public Health, Scientific Reports, Frontiers in Nutrition, Preventive Medicine Reports, Public Health, International Journal of Obesity, Journal of Nutritional Science

Presentations

1. **Lee MM**, Kenney EL, Carlson K, Novick E, Portocarrero P, Rimm EB, Chen JT, Gortmaker SL, Stephenson BK, Liebman J. Impact of unconditional cash transfers on diet during the COVID-19 pandemic: A randomized lottery experiment. *American Public Health Association Annual Meeting*. (2023).
2. **Lee MM**, Gibson LA, Hua SV, Lowery CM, Paul M, Roberto CA, Lawman HG, Bleich SN, Mitra N, Kenney EL. Changes in advertising and store stocking practices among small, independent beverage retailers following a sweetened beverage excise tax in Philadelphia: A difference-in-differences study. *American Public Health Association Annual Meeting*. (2023).

3. Chapman L, Richardson S, Rimm EB, Gortmaker SL, **Lee MM**, Cohen J. Daily saturated fat and sodium content of school meals among a nationally representative sample of elementary schools in the United States. *American Public Health Association Annual Meeting*. (2023).
4. **Lee MM**, Barrett J, Kenney EL, Gouck J, Cradock AL, Long MW, Ward ZJ, Rohrer B, Gortmaker SL. Impacts of a statewide sugar-sweetened beverage excise tax in California: Projected benefits for population obesity and health equity. *American Public Health Association Annual Meeting*. (2022).
5. Kenney EL, **Lee MM**, Barrett J, Ward ZJ, Long MW, Cradock AL, Gortmaker SL. The cost-effectiveness and health equity impacts of improved nutrition standards in WIC, and the potential for maximizing WIC's benefits for population health. *American Public Health Association Annual Meeting*. (2022).

Awards & Honors

GSAS Professional Development Fund Recipient	2023
Irene M. Fredrick J. Stare Nutrition Education Fund Awardee	2022
Berkowitz Fellowship in Public Health	2021
Certificate of Distinction in Teaching, Derek Bok Center for Teaching and Learning	2021
Certificate of Distinction in Teaching, Derek Bok Center for Teaching and Learning	2020
Simon, Arpi, and Marie Simonian Research Excellence in Nutrition Prize	2020
Prajna Chair's Scholarship in Public Health Nutrition	2019
Reshetko Family Scholarship	2017

Work & Research Experience

Research Assistant — 2020-Present

Harvard T.H. Chan School of Public Health, Department of Nutrition
PI: Erica Kenney, ScD, MPH

- Led and supported data analysis, code review, and manuscript development and editing for projects related to nutrition policies aimed at addressing childhood obesity, improving food access, and reducing food insecurity – including evaluations of US nutrition assistance programs, of the Philadelphia, PA, sweetened beverage excise tax, of racial/ethnic disparities in food-related advertising to young children and their families, and of WIC benefits expansions during the COVID-19 pandemic.

Research Assistant — 2020-Present

Harvard T.H. Chan School of Public Health, Department of Social and Behavioral Sciences
PI: Steve Gortmaker, PhD, The Childhood Obesity Intervention Cost-Effectiveness Study (CHOICES)

- Supported microsimulation-based cost-effectiveness analyses related to US policy interventions and their potential long-run impacts on child and adult outcomes, including health care spending, obesity, morbidity, and mortality. Analyzed dietary and health data from representative samples including the National Health and Nutrition Examination Survey, ran and synthesized output from simulation models, validated estimates against empirical data, and developed methods to streamline post-processing of results.

Graduate Researcher — 2017-2019

UC Berkeley School of Public Health Division of Community Health Sciences
PI: Kristine Madsen, MD, MPH

- Managed evaluation of sugar-sweetened beverage (SSB) taxes in Oakland, Berkeley, and San Francisco to assess the relationship between implementation and beverage consumption, using a quasi-experimental difference-in-differences design. Supported analysis for *The Fit Study*, a three year cluster-randomized trial on the effects of BMI screening and reporting. Oversaw data collection, entry, analysis, and manuscript development and submission.
- Produced spatial data cross-linked with information from the California Department of Education, American Community Survey, and US Census for projects examining the role of targeted marketing of SSBs and the spillover effects of Physical Education related lawsuits on district PE policies in California.

Staff Research Associate — 2016-2017

UC Berkeley School of Public Health Division of Epidemiology
PI: Mahasin Mujahid, PhD, MS; Patrick Bradshaw, PhD, MS

- Managed research portfolio, including background literature reviews, Institutional Review Board (IRB) and ethics approval and documentation, accounting and finance reporting, data management, manuscript preparation and submission, and grant proposals. Provided teaching support for undergraduate-level Epidemiologic Methods course.

Research Assistant 2015-2016

UC Berkeley School of Public Health Division of Epidemiology
PI: Mahasin Mujahid, PhD, MS

- Completed detailed literature review on the impact of community change initiatives on neighborhood collective efficacy. Coded, transcribed, and analyzed qualitative data using Atlas.ti.

Research Assistant 2014-2015

UC San Francisco Pediatric Hematology & Oncology
PI: Biljana Horn, MD; Robert Goldsby, MD

- Built comprehensive pediatric bone marrow transplant patient database in collaboration with Columbia University of risk factors associated with graft failure, including pre-transplant busulfan dose relation to chimerisms.
- Extracted patient medical records using EPIC EMR system and coordinated lab discussions and meetings.

Service

Union Steward 2020-2021

Harvard Graduate Student Union

- Supported department- and university-level organizing efforts to assess student needs, gauge contract priorities, and build social support amongst incoming and continuing doctoral students in the School of Public Health.

Executive Director / Housing and Employment Coordinator 2013-2015

The Suitcase Clinic

- Oversaw all volunteers, committees, and clinics aimed at providing health and social services to homeless and low-income populations in the Bay Area, including a course on issues on homelessness for UC Berkeley students.
- Built and maintained relationships with partners including The City of Berkeley and Berkeley Free Clinic, worked effectively to secure $40,000 in funding, and initiated process for attaining 501(c)3 status. Initiated data collection and electronic services database to bolster institutional memory, and created stable budget and accounting process.

Global Poverty and Practice Fellow 2015

Makikita Quykuway

- Completed internship at Makikita Quykuway, a non-governmental organization dedicated to alleviating health and resource disparities in peri-urban informal settlements in Peru, as a recipient of the Global Poverty and Practice Fellowship from the Blum Center for Developing Economies at UC Berkeley.
- Conducted non-profit program evaluation and developed health education materials, worked in health clinics and supported child labor reduction interventions.

Skills

- Programming languages:
  - Statistical analysis (R, Stata, SAS, Python, Stan)
  - Geographic Information Systems (R)
  - Typesetting (LaTeX, R Markdown, R Sweave, Markdown)
  - Presentations (react.js, R)
- Software:
  - Qualitative analysis (Atlas.ti)
  - Reference Management (Endnote, Refworks, Zotero, Mendeley)
  - Microsoft Office/Google Suite (Microsoft Word, PowerPoint, Excel; Google Docs, Sheets, Slides)
  - Adobe Creative Suite (Photoshop, Illustrator, InDesign, Premiere, Lightroom, Bridge)
- Version control (Git/GitHub)
- Survey design (Qualtrics, Google Forms)