

## CURRICULUM VITAE

**XING GAO**

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**PROFESSIONAL EXPERIENCE**


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2023 – **University of California President's Postdoctoral Fellow** San Francisco, CA  
 University of California, San Francisco  
 Program on Reproductive Health and the Environment  
 Advisors: Tracey J. Woodruff, PhD, MPH and Rachel Morello-Frosch, PhD, MPH

**EDUCATION**


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2019 – 2023 **PhD, University of California, Berkeley** Berkeley, CA  
 Epidemiology  
 Dissertation: *Impact of Historical Redlining and Contemporary Gentrification on Severe Maternal Morbidity Racial and Ethnic Inequities*  
 Chair: Mahasin S. Mujahid, PhD, MS, FAHA  
 Committee Members: Amani Allen, PhD, MPH, Rachel Morello-Frosch, PhD, MPH

2017 – 2019 **MPH, University of California, Berkeley** Berkeley, CA  
 Epidemiology & Biostatistics  
 Capstone: *Segregation and Cardiovascular Risk in the Multiethnic Study of Atherosclerosis*  
 Advisor: Mahasin S. Mujahid, PhD, MS, FAHA

2013 – 2017 **BA, Macalester College** Saint Paul, MN  
 Geography & International Studies, *Magna Cum Laude*  
 Concentration: Community and Global Health  
 Advisor: Eric D. Carter, PhD, MS

**FELLOWSHIPS & GRANTS**


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2023 – 2025 **President's Postdoctoral Fellowship**, University of California, \$145,000

2021 – 2023 **F31 Ruth L. Kirschstein National Research Service Award** (impact score: 15, percentile: 4<sup>th</sup>), Eunice Kennedy Shriver National Institute of Child Health & Human Development, \$125,000

2022 **Data Science for Social Justice Workshop**, UC Berkeley, \$2,000

2022 **Student Travel Scholarship**, Society for Epidemiologic Research, \$500

2020 **Mayhew & Helen Derryberry Fellowship**, UC Berkeley, \$1,500

2018 **Public Health Alumni Scholarship Competition Fellowship**, UC Berkeley, \$1,500

2016 **Taylor Public Health Fellowship**, Macalester College, \$2,500

2016 **Summer of Service Fellowship**, Macalester College, \$2,500

## HONORS & AWARDS

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2023	<b>Warren Winkelstein Award For Excellence in Epidemiological Research</b> , UC Berkeley
2021	<b>Outstanding Graduate Student Instructor Award</b> , UC Berkeley
2017	<b>Global Citizenship Award</b> , Macalester College
2013 – 2017	<b>Dean's List</b> , Macalester College
2016	<b>Gamma Theta Upsilon International Geography Honor Society</b>
2016	<b>Hildegard Binder Johnson Award</b> , Macalester College

## PUBLICATIONS

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### Refereed journal articles

15. **Gao X**, Morello-Frosch R, Allen AM, Carmichael SL, Mujahid MS. From Redlining to Gentrification: Investigating Structural Determinants of Severe Maternal Morbidity. *JAMA Network Open*. In Press.
14. Berkowitz RL, Kan P, **Gao X**, Hailu EM, Board C, Lyndon A, Mujahid MS, Carmichael SL. Assessing the relationship between census tract rurality and severe maternal morbidity in California (1997-2018). *J Rural Health*. 2023; doi: 10.1111/jrh.12814.
13. **Gao X**, Thomas TA, Morello-Frosch R, Allen AM, Snowden JM, Carmichael SL, Mujahid MS. Neighborhood Gentrification, Displacement, and Severe Maternal Morbidity in California. *Social Science & Medicine*. 2023;334:116196. doi:10.1016/j.socscimed.2023.116196
12. **Gao X**, Berkowitz RL, Michaels EK, Mujahid MS. Traveling Together: A Roadmap for Researching Neighborhood Effects on Population Health and Health Inequities. *Am J Epidemiol*. 2023;kwad129. doi:10.1093/aje/kwad129
11. Mujahid MS, Maddali SR, **Gao X**, Oo KH, Benjamin LA, Lewis TT. The Impact of Neighborhoods on Diabetes Risk and Outcomes: Centering Health Equity. *Diabetes Care*. 2023;dc230003. doi:10.2337/dc23-0003
10. Mujahid MS, Wall-Wieler E, Hailu EM, Berkowitz RL, **Gao X**, Morris CM, Abrams B, Lydon A, Carmichael SL. Neighborhood Disinvestment and Severe Maternal Morbidity in the State of California. *American Journal of Obstetrics & Gynecology MFM*. 2023;5(6):100916. doi:10.1016/j.ajogmf.2023.100916
9. **Gao X**, Snowden JM, Tucker CM, Allen A, Morello-Frosch R, Abrams B, Carmichael SL, Mujahid MS. Remapping Racial and Ethnic Inequities in Severe Maternal Morbidity: The Legacy of Redlining in California. *Paediatric and Perinatal Epidemiology*. 2023;37(5):379–389. [Top Cited Article 2022-2023] doi:10.1111/ppe.12935
8. **Gao X**, Kershaw AN, Barber S, Schreiner PJ, Do DP, Diez Roux AV, Mujahid MS. Associations between Residential Segregation and Incident Hypertension: The Multi-

- Ethnic Study of Atherosclerosis. *JAHA*. 2022;11(3):e023084. doi: [10.1161/JAHA.121.023084](https://doi.org/10.1161/JAHA.121.023084)
7. **Gao X**, Engeda J, Moore LV, Auchincloss A, Moore K, Mujahid MS. Longitudinal Associations between Objective and Perceived Healthy Food Environment and Diet: The Multi-Ethnic Study of Atherosclerosis. *Social Science & Medicine*. 2022;292:114542. doi: [10.1016/j.socscimed.2021.114542](https://doi.org/10.1016/j.socscimed.2021.114542)
  6. Mujahid MS, **Gao X**, Tabb LP, Lewis TT. Historical Redlining and Cardiovascular Health: The Multi-Ethnic Study of Atherosclerosis. *PNAS*. 2021;118(51). doi: [10.1073/pnas.2110986118](https://doi.org/10.1073/pnas.2110986118)
  5. Berkowitz RL, **Gao X**, Michaels EK, Mujahid MS. Structurally Vulnerable Neighbourhood Environments and Racial/Ethnic COVID-19 Inequities. *Cities & Health*. 2021;5(1): S59-S62. doi: [10.1080/23748834.2020.1792069](https://doi.org/10.1080/23748834.2020.1792069)
  4. Francis SS, Enders C, Hyde R, **Gao X**, Wang R, Ma X, Wiemels JL, Selvin S, Metayer C. Spatial–Temporal Cluster Analysis of Childhood Cancer in California. *Epidemiology*. 2020;31(2):214–223. doi: [10.1097/EDE.0000000000001121](https://doi.org/10.1097/EDE.0000000000001121)
  3. Mujahid MS, Sohn EK, Izenberg J, **Gao X**, Tulier ME, Lee, MM, Yen I. Gentrification and Displacement in the San Francisco Bay Area: A Comparison of Measurement Approaches. *Int J Environ Res Public Health*. 2019;16(12). doi: [10.3390/ijerph16122246](https://doi.org/10.3390/ijerph16122246)
  2. Rappold AG, Hano MC, Prince S, Wei L, Huang SM, Baghdikian C, Sterns B, **Gao X**, Hoshiko S, Cascio WE, Diaz-Sanchez D, Hubbel B. Smoke Sense Initiative Leverages Citizen Science to Address the Growing Wildfire-Related Public Health Problem. *GeoHealth*. 2019;3(12):443–457. doi: [10.1029/2019GH000199](https://doi.org/10.1029/2019GH000199)
  1. **Gao X**, Kelley DW. Understanding How Distance to Facility and Quality of Care Affect Maternal Health Service Utilization in Kenya and Haiti: A Comparative Geographic Information System Study. *Geospat Health*. 2019;14(1). doi: [10.4081/gh.2019.690](https://doi.org/10.4081/gh.2019.690)

### Manuscripts in submission

3. **Gao X**, Padilla D, Mujahid MS, Corburn J. Evaluating Advance Peace in Fresno, California: An Interrupted Times Series Analysis of a Community-Based Gun Violence Intervention.
2. **Gao X**, Morello-Frosch R, Allen AM, Carmichael SL, Mujahid MS. Gentrification and Birth Outcomes in California.
1. Hailu EM, **Gao X**, Needham BL, Seeman T, Lewis TT, Mujahid MS. Associations between Historical and Contemporary Measures of Structural Racism and Leukocyte Telomere Length: The Multi-Ethnic Study Of Atherosclerosis (MESA)

## Manuscripts in preparation

1. **Gao X**, Hailu EM, Tabb LP, Lewis TT, Mujahid MS. Historical Redlining and Change in Blood Pressure: The Multi-Ethnic Study of Atherosclerosis.

## Other publications

2. Tamene M, Hailu EM, Berkowitz RL, **Gao X**. COVID-19, Police Violence, and the Historical Thread that Binds Them: Structural Racism as a Public Health Issue. *National Museum of American History*. 2020; (<https://americanhistory.si.edu/blog/historical-thread-binds-them>)
1. **Gao X**. Can Global Health Governance Contend with Transnational Corporate Activities? A Case Study on the Chinese Tobacco Industry. *Geography Honors Projects* [electronic article]. 2017; ([https://digitalcommons.macalester.edu/geography\\_honors/49](https://digitalcommons.macalester.edu/geography_honors/49))

## PRESENTATIONS

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### Conference presentations

6. **Gao X**, Hailu EM, Tabb LP, Lewis TT, Mujahid MS. “Historical Redlining and Change in Blood Pressure: The Multi-Ethnic Study of Atherosclerosis (MESA)” [Oral conference presentation]. American Psychosomatic Society, San Juan, PR: March 2023.
5. **Gao X**, Snowden J, Tucker C, Allen A, Morello-Frosch R, Abrams B, Carmichael S, Mujahid MS. “Remapping Racial and Ethnic Inequities in Severe Maternal Morbidities: The Legacies of Redlining in California” [Oral conference presentation]. Society for Epidemiologic Research, Chicago, IL: June 2022.
4. **Gao X**, Kershaw AN, Barber S, Schreiner PJ, Do DP, Diez Roux AV, Mujahid MS. “Longitudinal Associations between Residential Segregation and Incident Hypertension: The Multi-Ethnic Study of Atherosclerosis” [Oral conference presentation]. Society for Epidemiologic Research, Boston, MA: December 2020. Virtual due to COVID-19
3. **Gao X**, Berkowitz R, Michaels E, Mujahid MS. “A Conceptual Roadmap for Incorporating Place into Quantitative Health Research” [Poster presentation]. Interdisciplinary Association for Population Health Science, Minneapolis, MN: November 2020. Virtual due to COVID-19
2. **Gao X**, Gan, Q. “History, aims, and aspiration of the Chinese Tobacco Monopoly” [Conference oral presentation]. The 47<sup>th</sup> Union World Conference on Lung Health, Liverpool, Liverpool, United Kingdom: October 2016
1. **Gao X**. “How distance to facility and quality of care affect maternal health outcomes in urban and rural areas: a comparative case study of Kenya and Haiti using GIS.” [Conference oral presentation] American Association of Geographers, San Francisco, CA: April 2016

[Conference oral presentation] Midwest Undergraduate Geography Symposium, Saint Paul, MN: April 2016

[Conference oral presentation] National Ronald E. McNair Research Conference, Delavan, WI: October 2015

### Invited talks

4. **Gao X.** Gentrification, Environmental Inequities, and Severe Maternal Morbidity. OBGYN & Reproductive Science Health Equity Research interest Group, UC San Francisco, February 2024
2. **Gao X,** Morello-Frosch R, Allen A, Carmichael SL, Mujahid MS. From Redlined Neighborhoods to Gentrifying Spaces: A Place-Based Investigation of Racial and Ethnic Inequities in Health Outcomes.  
  
Department of Anthropology, UC Santa Barbara, February 2024  
Department of Public Health, UC Merced, November 2023
1. **Gao X,** Morello-Frosch R, Allen A, Carmichael SL, Mujahid MS. Impact of Historical Redlining and Contemporary Gentrification on Severe Maternal Morbidity Racial and Ethnic Inequities. Department of Geography, Macalester College, September 2023

### RESEARCH EXPERIENCE

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- 2017 – 2023 **Graduate Student Researcher**, PLACE Research Group, UC Berkeley  
Principal Investigator: Mahasin S. Mujahid
- Providing analytic support for multiple projects that examine relationship between neighborhood physical and social environment and health outcomes
  - Incorporated neighborhood information into electronic health records
  - Publishing manuscripts documenting the place effect on racial health disparities
- 2019 – 2023 **Graduate Student Researcher**, Advance Peace, UC Berkeley  
Principal Investigator: Jason Corburn
- Conducted statistical analysis to evaluate Advance Peace's reduction of firearm violence through literature review and methods design
  - Automated R codes to generate descriptive tables on outreach worker activities
- 2018 **Researcher**, California Department of Public Health, Richmond, CA
- Analyzed data collected by SmokeSense mobile application to assess users' exposure, health impact, and behaviors during wildfire season in 2017-2018
  - Drafted report and communicated results in branch-wide presentation
- 2017 – 2019 **Graduate Student Researcher**, Integrative Cancer Research Group, UC Berkeley  
Principal Investigators: Stephen Francis, Todd Whitehead
- Assisted R toolkit development for cluster detection of childhood cancer cases and conducted geospatial analysis on environment exposure in relation to cancer

- Created indicators that characterize neighborhood social and built environments related to maternal stress
- 2016 **Researcher**, International Union Against Tuberculosis & Lung Disease
- Researched e-cigarette use, international regulations, and tobacco monopolies
  - Attended policy meetings, WHO-organized symposium, and tobacco control public awareness campaigns
- 2015 – 2018 **Researcher**, *Excel!* Research Scholars Program, Saint Paul, MN
- Conducted independent project on how access to care affect maternal health outcomes in urban and rural areas of Kenya and Haiti
- 2015 **Researcher**, Family Tree Clinic, Saint Paul, MN
- Identified underserved populations and potential service expansion sites using GIS to improve access to community-based sexual and reproductive services.

## TEACHING EXPERIENCE

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### Course Instructor

- Spring 2022 **Epidemiology**, San Francisco State University
- Independently taught introductory undergraduate-level course on the principles and methods of epidemiology to 25 undergraduate students

### Graduate Student Instructor

- Summer 2021 **Behavioral and Social Aspects of Public Health**, Touro University
- Facilitated discussions and provided feedback for written assignments for graduate-level course on health research and practice for 30 masters students
- Spring 2021 **Epidemiologic Methods II**, UC Berkeley
- Taught introductory graduate-level course on the principles and methods of epidemiology for 70 masters and doctoral students
- Fall 2020 **Epidemiologic Methods I**, UC Berkeley
- Taught introductory graduate-level course on the principles and methods of epidemiology for 130 masters and doctoral students
- Spring 2020 **Social Epidemiology**, UC Berkeley
- Led seminar-style graduate-level course of 15 masters and doctoral students

### Guest Lecturer

- Spring 2021 Social Epidemiology, UC Berkeley, Lecture on Latin American Social Medicine
- Spring 2021 Social Epidemiology, UC Berkeley, Lecture on Causal Inference
- Spring 2020 Epidemiology, San Francisco State University, Lecture on Measures of Frequency

## ADDITIONAL TRAINING

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- 2022 **Society for Epidemiologic Research Dissertation Workshop**, Chicago, IL
- 2018 **Minority Training Program in Cancer Control Research**, UC San Francisco

## SERVICE & PROFESSIONAL AFFILIATIONS

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### Ad Hoc Reviewer

Health & Place, Public Health Reviews, AJPM Focus, American Journal of Epidemiology, Annals of Epidemiology, JAMA Open Network

### Organizational Service

2020 – 2022 Asian Women’s Circle, Board Member, UC Berkeley  
 2017 – 2022 Graduate Recruitment & Diversity Services, Student Ambassador, UC Berkeley  
 2019 Diversity, Inclusion, Community, and Equity Committee, Member, UC Berkeley  
 2014 – 2017 Asian & Pacific Islander Americans in Coalition, Cofounder, Macalester College  
 2013 – 2017 Bonner Community Scholar Program, Scholar, Macalester College

### Member

Society for Epidemiologic Research  
 International Society of Environmental Epidemiology

## MEDIA

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2023 UC Berkeley Public Health News. “50 Years After Being Outlawed, Redlining Still Drives Neighborhood Health Inequities”. <https://publichealth.berkeley.edu/news-media/research-highlights/50-years-after-being-outlawed-redlining-still-drives-neighborhood-health-inequities/>

2022 TCT MD. “Segregation Linked to Hypertension Among Black, Hispanic Individuals” <https://www.tctmd.com/news/segregation-linked-hypertension-among-black-hispanic-individuals>

2022 Medical Xpress. “Residential Segregation May Increase Risk for High Blood Pressure” <https://medicalxpress.com/news/2022-01-residential-segregation-high-blood-pressure.html>

2021 Everyday Health. “U.S. History of Housing Discrimination Still Tied to Heart Risks for Black American” <https://www.everydayhealth.com/heart-health/us-history-of-housing-discrimination-still-tied-to-heart-risks-for-black-americans/>

2020 Daily Cal. “UC Berkeley Academic Commentary Suggests COVID-19 Unequally Affects Disadvantaged Communities” <https://www.dailycal.org/2020/09/21/uc-berkeley-academic-commentary-suggests-covid-19-unequally-affects-disadvantaged-communities>

## SKILLS

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### Software and programming

**Advanced** R, ArcGIS

**Proficient** STATA, SAS, python