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

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| 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

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| 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: 4th), 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 | **Warren Winkelstein Award For Excellence in Epidemiological Research**, UC Berkeley |
| 2021 | **Outstanding Graduate Student Instructor Award**, UC Berkeley |
| 2017 | **Global Citizenship Award**, Macalester College |
| 2013 – 2017 | **Dean's List**, Macalester College |
| 2016 | **Gamma Theta Upsilon International Geography Honor Society** |
| 2016 | **Hildegard Binder Johnson Award**, Macalester College |

## PUBLICATIONS

**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;dci230003. doi:10.2337/dci23-0003

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

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

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

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

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

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

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

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

## Manuscripts in submission

3.  **Gao X,** Padilla D, Mujahid MS, Corburn J. Evaluating Advance Peace in Fresco, 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)

# PRESENTATIONS

## 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 47th 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

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

### 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

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

## SERVICE & PROFESSIONAL AFFLIATIONS

### 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

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

### Software and programming

**Advanced**    R, ArcGIS
**Proficient**    STATA, SAS, python