

Professional Appointments

12/2024 – Assistant Professor (Tenure-Track)
Department of Epidemiology, UTHealth Houston School of Public Health (Brownsville, TX)

Education and Training

10/2022 – 10/2024 Postdoctoral Fellow, Department of Epidemiology, George Washington Milken Institute School of Public Health (Washington, DC)

09/2020 – 09/2022 Doctor of Philosophy (PhD), Population Health Sciences (Epidemiology), Department of Epidemiology, Harvard T.H. Chan School of Public Health (Boston, MA)

09/2018 – 05/2020 Master of Health Science (MHS), Epidemiology, Department of Epidemiology Johns Hopkins Bloomberg School of Public Health (Baltimore, MD)

09/2014 – 05/2018 Bachelor of Arts (BA), Computer Science (minors: Biology, Chemistry), Duke University Trinity School of Arts and Sciences (Durham, NC)

Teaching Experience

07/2023 – 08/2024 Limited Service Faculty (Teaching), Department of Epidemiology, George Washington Milken Institute School of Public Health
Course(s): Social Epidemiology – Structural Inequalities in Health in the U.S.

03/2021 – 07/2022 Teaching Fellow, Harvard T.H. Chan School of Public Health (Boston, MA)
Course(s): Fundamentals of Epidemiology, Topics in Epidemiology of Aging, Global Cardiovascular Disease Prevention, Linear and Longitudinal Regression

09/2021 – 12/2021 Head Teaching Fellow, Harvard T.H. Chan School of Public Health (Boston, MA)
Course(s): Core Principles of Biostatistics and Epidemiology for Public Health Practice

Research Support

2025 – 2026 UTHealth Houston Institute on Aging Translational Aging Research (Direct Costs: \$20,000)

Peer-Reviewed Publications

*First Author (*Equally Contributing)*

1. **Liu C**, Bennett EE, Lynch KM, Xu X, Park ES, Ying Q, Smith RL, Stewart JD, Whitsel EA, Kaufman JD, Stapp EK, Power MC. Pre- and post-move exposure to air pollution and neighborhood socioeconomic status. *Science of the Total Environment*. In Press.
2. **Liu C**, Ma Y, Hofman A, Waziry R, Koton S, Pike JR, Windham BG, Power MC, Sharrett AR, Gottesman RF. Educational Attainment and Dementia: Mediation by Mid-Life Vascular Risk Factors. *Ann Neurol*. 2023 Jul;94(1):13-26. doi: 10.1002/ana.26647. Epub 2023 Apr 27. PMID: 36966451.
3. **Liu C**, Murchland AR, VanderWeele TJ, Blacker D. Eliminating racial disparities in dementia risk by equalizing education quality: A sensitivity analysis. *Soc Sci Med*. 2022 Nov;312:115347. doi: 10.1016/j.socscimed.2022.115347. Epub 2022 Sep 12. PMID: 36162365; PMCID: PMC9990698.
4. **Liu C***, Gu HQ*, Yang X, Yang KX, Xiong YY, Wang CJ, Zhao XQ, Meng X, Wang YL, Liu LP, Li ZX, Wang YJ. Pre-stroke dementia and in-hospital outcomes in the Chinese Stroke Center Alliance. *Ann Transl Med*. 2022;10(19). doi: 10.21037/atm-22-723
5. **Liu C***, Nagarajan N*, Assi L, Jiang K, Powell D, Pedersen E, Rosman L, Villavisanis D, Carlson MC, Swenor BK, Deal JA. Assessment of hearing and vision impairment in cohort studies collecting cognitive data in older adults [published online ahead of print, 2022 Feb 1]. *Alzheimers Dement*. 2022;10.1002/alz.12575. doi:10.1002/alz.12575
6. **Liu C**, Badana AB, Fabius C, Burgdorf J, Roth DL, Haley WE. Systematic Review and Meta-Analysis of Racial and Ethnic Differences in Dementia Caregivers' Well-Being. *The Gerontologist*. 2021;6(5):e228-e243. doi:10.1093/geront/gnaa028

7. **Liu C**, Roth DL, Gottesman RF, Sheehan OC, Blinka MD, Howard VJ, Judd SE, Cushman M. Change in Life's Simple 7 Measure of Cardiovascular Health After Incident Stroke: The REGARDS Study. *Stroke*. 2021;52(3):878-886. doi:10.1161/STROKEAHA.120.030836
8. **Liu C**, Fabius CD, Howard VJ, Haley WE, Roth DL. Change in Social Engagement among Incident Caregivers and Controls: Findings from the Caregiving Transitions Study. *Journal of Aging and Health*. 2021;33(1-2):114-124. doi:10.1177/0898264320961946
9. **Liu C**, Marino VM, Howard VJ, Haley WE, Roth DL. Positive Aspects of Caregiving for Incident and Long-Term Caregivers: Role of Social Engagement and Distress. *Aging Ment Health*. 2021. doi: 10.1080/13607863.2021.2000935
10. **Liu C**, Prvu-Bettger J, Sheehan OC, Huang J, Roth DL. Association of formal and informal care with health-related quality of life and depressive symptoms: findings from the Caring for Adults Recovering from the Effects of Stroke study. *Disabil Rehabil*. 2021;43(8):1092-1100. doi:10.1080/09638288.2019.1650965
11. **Liu C**, Marino VM, Sheehan OC, Huang J, Roth DL, Haley WE. Association between caregiver tasks of engagement and self-report healthcare utilization after stroke: a mixed-methods study. *Topics in Stroke Rehabilitation*. 2020;27(1):1-7. doi:10.1080/10749357.2019.1659640
12. **Liu C**, Shao S, Liu C, Bennett GG, Bettger JP, Yan LL. Academia-industry digital health collaborations: A cross-cultural analysis of barriers and facilitators. *Digital Health*. 2019;5:1-9. doi:10.1177/2055207619878627

Coauthor

1. Eswaran S, Knopman DS, Koton S, Kucharska-Newton AM, Liu AC, **Liu C**, Lutsey PL, Mosley TH Jr, Palta P, Sharrett AR, Sullivan KJ, Walker KA, Gottesman RF, Groechel RC. Psychosocial Health and the Association Between Cerebral Small Vessel Disease Markers With Dementia: The ARIC Study. *Stroke*. 2024 Oct;55(10):2449-2458. doi: 10.1161/STROKEAHA.124.047455. Epub 2024 Aug 28. PMID: 39193713.
2. Bennett EE, **Liu C**, Stapp EK, Gianattasio KZ, Zimmerman SC, Wei J, Griswold ME, Fitzpatrick AL, Gottesman RF, Launer LJ, Windham BG, Levine DA, Fohner AE, Glymour MM, Power MC. Target Trial Emulation Using Cohort Studies: Estimating the Effect of Antihypertensive Medication Initiation on Incident Dementia. *Epidemiology*. 2025 Jan 1;36(1):48-59. doi: 10.1097/EDE.0000000000001802. Epub 2024 Oct 1. PMID: 39352756; PMCID: PMC11598662.
3. Groechel RC, Liu AC, **Liu C**, Knopman DS, Koton S, Kucharska-Newton AM, Lutsey PL, Mosley TH Jr, Palta P, Sharrett AR, Walker KA, Wong DF, Gottesman RF. Social relationships, amyloid burden, and dementia: The ARIC-PET study. *Alzheimers Dement (Amst)*. 2024 Apr 2;16(2):e12560. doi: 10.1002/dad2.12560. PMID: 38571965; PMCID: PMC10988116.
4. Ma Y, Zhang Y, Coresh J, Viswanathan A, Sullivan KJ, Walker KA, **Liu C**, Lipsitz LA, Selvin E, Sharrett AR, Gottesman RF, Blacker D, Hofman A, Windham BG, Juraschek SP. Orthostatic Blood Pressure Change, Dizziness, and Risk of Dementia in the ARIC Study. *Hypertension*. 2023;80:00–00. DOI: 10.1161/HYPERTENSIONAHA.123.21438.
5. Bennett EE, Song Z, Lynch KM, **Liu C**, Stapp EK, Xu X, Park ES, Ying Q, Smith RL, Stewart JD, Whitsel EA, Mosley TH, Wong DF, Liao D, Yanosky JD, Szpiro AA, Kaufman JD, Gottesman RF, Power MC. The association of long-term exposure to criteria air pollutants, fine particulate matter components, and airborne trace metals with late-life brain amyloid burden in the Atherosclerosis Risk in Communities (ARIC) study. *Environ Int*. 2023 Sep 17;180:108200. doi: 10.1016/j.envint.2023.108200. Epub ahead of print. PMID: 37774459.
6. Global Burden of Disease Long COVID Collaborators (includes **Liu C**). Estimated Global Proportions of Individuals With Persistent Fatigue, Cognitive, and Respiratory Symptom Clusters Following Symptomatic COVID-19 in 2020 and 2021. *JAMA*. Published online October 10, 2022. doi:10.1001/jama.2022.18931
7. Wang C, Gu HQ, Zhang X, Zhao X, Jiang Y, Liang L, Li H, Bettger J, Meng X, Dong K, Wangqin R, Yang X, Wang M, **Liu C**, Liu L, Fonarow GC, Schwamm LH, Xian Y, Wang Y, Li Z, Wang Y. Temporal Trends and Rural-urban Disparities in Cerebrovascular Risk Factors, In-Hospital Management, and Outcomes in Ischemic Strokes in China From 2005 to 2015: A Nationwide Serial Cross-sectional Survey. *Stroke and Vascular Neurology* 2022;svn-2022-001552. doi: 10.1136/svn-2022-001552
8. Wang H, Gu H, Zhou Q, Jiang Y, Yang X, Wang C, Zhao X, Wang Y, Liu L, Meng X, Li H, **Liu C**, Li Z, Wang Y, Jiang Y. Thrombolysis, Time-to-Treatment and In-Hospital Outcomes Among Young Adults with Ischemic Stroke in China: Findings from a Nationwide Registry Study in China. *BMJ Open* 2022; 12: e055055. doi: 10.1136/bmjopen-2021-055055
9. Blinka MD, **Liu C**, Sheehan OC, Rhodes D, Roth DL. A qualitative analysis of family caregiver perspectives from the Caregiving Transitions Study. *Age and Ageing*. 2022;51(2):afab266. doi:10.1093/ageing/afab266

10. Gu HQ, Wang C, Yang C, **Liu C**, Wang X, Zhao X, Wang Y, Liu L, Meng X, Jiang Y, Li H, Wang Y, Li Z. Sex Differences in Vascular Risk Factors, In-Hospital Management, and Outcomes of Patients with Acute Ischemic Stroke in China. *Eur J Neurol*. 2021. doi:10.1111/ene.15124
11. Gu HQ, Yang KX, Yang X, Wang CJ, Lyu TJ, Zhao XQ, Wang YL, Liu LP, **Liu C**, Li H, Jiang Y, Wang YJ, Li ZX. Guideline-directed low-density lipoprotein management in high-risk ischemic stroke or transient ischemic attack admissions in China from 2015 to 2019. *Ann Transl Med*. 2021;9(15):1224. doi:10.21037/atm-21-1467
12. Xu J, Zhao M, Vrosgou A, Wen N, **Liu C**, Zhang H, Ding C, Roth NW, Pan Y, Liu L, Wang Y, Wang Y, Bettger JP. Barriers to medication adherence in a rural-urban dual economy: a multi-stakeholder qualitative study. *BMC Health Serv Res*. 2021;21(1):799. doi:10.1186/s12913-021-06789-3
13. Gu H, Yang X, Wang C, Zhao X, Wang Y, Liu L, Meng X, Jiang Y, Li H, **Liu C**, Wangqin R, Fonarow G, Schwamm LH, Xian Y, Li X, Wang Y. Clinical Characteristics, Management, and In-Hospital Outcomes in Patients With Stroke or Transient Ischemic Attack in China. *JAMA Netw Open*. 2021;4(8):e2120745. doi:10.1001/jamanetworkopen.2021.20745
14. Gu H, Yang X, Wang C, Rao Z, Zhao X, Wang Y, Liu L, Meng X, Jiang Y, Li H, **Liu C**, Xiong Y, Fonarow G, Wang D, Xian Y, Li H, Wang Y. Assessment of Trends in Guideline-Based Oral Anticoagulant Prescription for Patients With Ischemic Stroke and Atrial Fibrillation in China. *JAMA Netw Open*. 2021;4(7):e2118816. doi:10.1001/jamanetworkopen.2021.18816
15. Sheehan OC, Bettger JP, Huang J, **Liu C**, Rhodes JD, Clay OJ, Roth DL, Dhamoon M. Racial differences in persistence to secondary prevention medication regimens after ischemic stroke [published online ahead of print, 2021 Jul 1]. *Ethn Health*. 2021;1-13. doi:10.1080/13557858.2021.1943321
16. Zhang L, Shi J, Pan Y, Li Z, Wang Y, Yan H, **Liu C**, Liu L, Meng X, Wang Y. Secondary Prevention Medication Persistence and Prognosis of Acute Ischemic Stroke or Transient Ischemic Attack. *Stroke Vasc Neurol*. 2021;svn-2020-000471. doi: 10.1136/svn-2020-000471.
17. Harris Walker G, Oyesanya TO, Hurley A, Sandhu S, **Liu C**, Mulla M, Bettger JP. Recovery experiences of younger stroke survivors who are parents: A qualitative content analysis. *J Clin Nurs*. 2021;30(1-2):126-135. doi:10.1111/jocn.15529
18. Ding L, **Liu C**, Li Z, Wang Y. Incorporating Artificial Intelligence Into Stroke Care and Research. *Stroke*. 2020;51(12):e351-e354. doi:10.1161/STROKEAHA.120.031295
19. Roth DL, Haley WE, Sheehan OC, **Liu C**, Clay OJ, Rhodes JD, Judd SE, Dhamoon M. Depressive Symptoms After Ischemic Stroke: Population-Based Comparisons of Patients and Caregivers With Matched Controls. *Stroke*. 2020;51(1):54-60. doi:10.1161/STROKEAHA.119.027039
20. Gu HQ, **Liu C**. Clinical prediction models: evaluation matters. *Ann Transl Med*. 2020;8(4):72. doi:10.21037/atm.2019.11.143
21. Bettger JP, **Liu C**, Gandhi DBC, Sylaja PN, Jayaram N, Pandian JD. Emerging Areas of Stroke Rehabilitation Research in Low- and Middle-Income Countries: A Scoping Review. *Stroke*. 2019;50(11):3307-3313. doi:10.1161/STROKEAHA.119.023565
22. Gu HQ, Yang X, Rao ZZ, Wang CJ, Zhao XQ, Wang YL, Liu LP, **Liu C**, Li H, Li ZX, Wang YJ; on behalf of China National Stroke Registries Investigators. Disparities in outcomes associated with rural-urban insurance status in China among inpatient women with stroke: a registry-based cohort study. *Ann Transl Med*. 2019;7(18):426. doi:10.21037/atm.2019.08.125
23. Yang XM, Rao Z, Gu H, Zhao X, Wang C, Liu L, **Liu C**, Wang Y, Li Z, Xiao R, Wang Y. Atrial fibrillation known before or detected after stroke share similar risk of ischemic stroke recurrence and death. *Stroke*. 2019;50(5):1124-1129. doi:10.1161/STROKEAHA.118.024176.
24. Gu H, Rao Z, Yang X, Wang C, Zhao X, Wang Y, Liu L, Wang C, **Liu C**, Li H, Li Z, Xiao R, Wang Y. Use of Emergency Medical Services and Timely Treatment Among Ischemic Stroke. *Stroke*. 2019; 50(3):1013-1016. doi:10.1161/STROKEAHA.118.024232.
25. Gu H, **Liu C**, Li D. %ggBaseline: a SAS macro for analyzing and reporting baseline characteristics automatically in medical research. *Ann Transl Med*. 2018; 6(16): 326-337. doi:10.21037/atm.2018.08.13
26. Lin Y, Li Z, **Liu C**, Wang Y. Towards precision medicine in ischemic stroke and transient ischemic attack. *Front Biosci (Landmark Ed)*. 2018;23:1338-1359.

First-Author Conference Abstracts

Oral Presentations and Symposiums

1. **Liu C**, Ma Y, Hofman A, Waziry R, Koton S, Pike JR, Windham BG, Power MC, Sharrett AR, Gottesman RF. Educational Attainment and Dementia Risk: Mediation by Vascular Risk Factors at Mid-Life in the Atherosclerosis Risk in Communities (ARIC) Study. AHA EPI|Lifestyle 2022, March 1-4, 2022. Chicago, IL. Abstract published in *Circulation*.

2. **Liu C**, Marino VM, Howard VJ, Haley WE, Roth DL. Positive Aspects of Caregiving for Incident and Long-Term Caregivers: Role of Social Engagement and Distress. Gerontological Society of America 2021, November 10-14, 2021. *Innovation in Aging*.
3. **Liu C**, Roth DL, Sheehan OC, Blinka MD, Gottesman R. Stroke Survivors Experience Greater Decline in Life's Simple 7 Score for Cardiovascular Health Over 10-Year Follow-Up. International Stroke Conference 2020, February 19-21, Los Angeles, CA. *Stroke*.
4. **Liu C**, Badana AB, Fabius C, Burgdorf J, Roth DL, Haley WE. Systematic Review and Meta-Analysis of Racial/Ethnic Differences in Dementia Caregiver Well-Being. Gerontological Society of America (GSA) 2019 Annual Scientific Meeting. November 13-17, 2019. Austin, TX. *Innovation in Aging*.
5. **Liu C**, Nagarajan N, Assi L, Jiang K, Powell D, Villavisanis D, Swenor BK, Deal JA. Assessment of Hearing or Vision Impairment in Studies Collecting Cognitive Data in Older Adults. In Symposium, "Bias and Missing Data: Representation of older adults with sensory impairment in epidemiologic studies". Gerontological Society of America 2020, November 4-6, 2020, Online. *Innovation in Aging*.
6. **Liu C**, Fabius CD, Howard VJ. Changes in social engagement for incident caregivers compared to controls. In Symposium, "The Longitudinal Effects of Becoming a Family Caregiver: The Caregiving Transitions Study". Gerontological Society of America 2020, November 4-6, 2020, Online. *Innovation in Aging*.
7. **Liu C**, Shao S, Liu C, Bettger JP, Yan L. Academia-Industry Digital Health Collaborations: A Cross-Cultural Analysis of Barriers and Facilitators. Consortium of Universities in Global Health. Chicago, IL. March 8-10, 2019. *Lancet Global Health*.
8. **Liu C**, Bettger JP, Sheehan OC, Huang J, Roth DL. Association of Formal and Informal Caregiving with Stroke Patient Outcomes: Findings from the Caring for Adults Recovering from the Effects of Stroke (CARES) Study. 11th World Stroke Congress 2018, October 17-20, Montreal, QC. *Int J Stroke*.

Poster Presentations

1. **Liu C**, Bennett EE, Lynch KM, Stapp E, Xu X, Park ES, Ying Q, Smith RL, Steward JD, Whitsel EA, Kaufman JD, Power MC. Pre-post-move exposure to air pollution and neighborhood socioeconomic status. Society for Epidemiologic Research 2023, June 12-16, 2022, Portland, OR.
2. **Liu C**, Ma Y, Hofman A, Power MC, Palta P, Rebholz CM, Pike JR, Mosley T, Sharrett AR, Glymour MM, Gottesman RF. Educational disparities in dementia prevention: Do diet and physical activity strategies benefit everyone? Society for Epidemiologic Research 2022, June 12-16, 2022, Portland, OR.
3. **Liu C**, Murchland AR, VanderWeele TC, Blacker D. Eliminating Racial Disparities in Dementia Risk by Equalizing Education Quality: A Sensitivity Analysis. Society for Epidemiologic Research 2022, June 14-17, 2022, Chicago, IL.
4. **Liu C**, Gu HQ, Yang X, Yang KX, Xiong YY, Wang CJ, Zhao XQ, Meng X, Wang YL, Liu LP, Li ZX, Wang YJ. Pre-stroke dementia and in-hospital outcomes in the Chinese Stroke Center Alliance. Gerontological Society of America 2020, November 4-6, 2020, Online. *Innovation in Aging*.
5. **Liu C**, Williams NL, Simmons T, Chandra N, Rouf R, Gaddis A, Gomez Y, Gottesman RF. Cognitive Impairment and Self-Care Among Congestive Heart Failure Patients in an Outpatient Clinic. Gerontological Society of America 2020, November 4-6, 2020, Online. *Innovation in Aging*.
6. **Liu C**, Marino VR, Sheehan OC, Huang J, Haley WE, Roth DL. Association between caregiver tasks of engagement and self-report healthcare utilization after stroke: a mixed-methods study. American Heart Association Quality of Care & Outcomes Research. Arlington VA. April 5-6, 2019. *Circulation*.
7. **Liu C**, Duan W, Liu L, Wang Y, Pan Y, Meng X, Wang C, Xian Y, Yang Q, Li Z, Wang Y, Bettger JP. Rehabilitation Provider Type Influences Functional Outcome and Survival of Acute Ischemic Stroke Patients with Severe Neurological Deficits: Findings from the China National Stroke Registry II. International Stroke Conference 2018, January 24, 2018, Los Angeles, CA. *Stroke*.